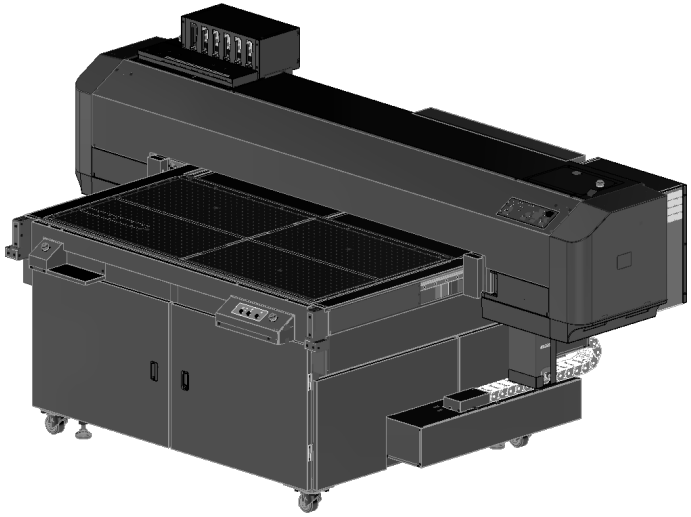
MUTOH

MAINTENANCE MANUAL

XPJ-1462UF



XPJ1462UFE-M-01

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1. Introduction

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1.1. About this manual

1.1.1. Purpose and target readers

This manual explains preparations needed before maintaining and checking operations for MUTOH Full Color Ink Jet Printer.
This manual is prepared for the maintenance personnel of this printer.
Before using this printer, fully understand the contents and directions in this manual.

TIP

index=> 1. Introduction

1.1.2. Manual notation

The following symbols are used in this manual for easier understanding of the information.

WARNING

Must be followed carefully to avoid death or serious bodily injury.

CAUTION

Must be observed to avoid slight or moderate bodily injury or damage to your equipment.

NOTE

Contains important information and useful tips on the operation of the product.

TIP

Indicates useful tips for operating or understanding the equipment.

TIP

index=> 1. Introduction

1.1.3. Manual notation

Firmware version: 0.90

TIP

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1.1.4. Establishment Date of This Document

This document was established on July 1, 2023.

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1.2. Important notice

1.2.1. Purpose and target readers

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- MUTOH INDUSTRIES LTD. shall not be liable for any damages or troubles resulting from the use of this equipment or this manual.

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1.3. Warning labels

This section explains the handling of warning label, pasting location and types.
Warning labels are attached to parts of the printer that need special caution.
Understand the locations and the descriptions of the danger associated with each label before operating the printer.

WARNING

- Follow all instructions and warnings on this manual when installing, operating, or maintaining the equipment.

NOTE

- All warning labels must be visually recognized.
  If the text or illustrations cannot be seen clearly, clean or replace the label.
- When cleaning warning labels, use cloth with water or neutral detergent.
  Do not use solvent or gasoline.
- If a warning label is damaged, lost, or cannot be recognized, replace the label.
  Location and type of warning labels
  => Operation manual and Installation manual

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1.4. Before starting maintenance

Note the following points when performing the maintenance.

WARNING

- When using this product, you must follow the safety precautions provided in following document to avoid the risks to person and damage to property.
  =>XPJ-1462UF Safety Precautions

CAUTION

- Read the installation manual and operation manual carefully before starting the operation. Otherwise, you may be injured.
  => Installation manual
  => Operation manual
- Before starting part(s) replacement, always perform following operations.
  - Turn OFF power.
  - Remove Power plug from outlet.
    Otherwise, you may suffer electric shock or system circuit may be damaged.
  - Remove any cable(s) connected to the printer.
    Otherwise, the printer may be damaged.

CAUTION

- Components in printer can be disassembled only if instructed so in this manual.
  Do not disassemble Frame components and/or other components that are not instructed.
- The printer has been assembled in MUTOH factory with extremely high precision up to 1/100mm.
  If disassembled inappropriately, normal functionality may not be restored.
- Allow sufficient space around the perimeter for maintenance work
- When removing covers to operate the product for maintenance work, be careful not to injure yourself on the drive unit, etc.

NOTE

- Perform necessary lubrication and bonding after restoration in accordance with Lubrication / Bonding of this manual.
- Pictures and illustrations are taken at development phase.
- Thus specification and procedure may not be up-to-date.

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2. Troubleshooting

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2.1. Introduction

This chapter provides information on possible causes of machine errors/damage and recovery actions.

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When the message is displayed	Trouble with an error message displayed on Operation panel when the printer is malfunctioning.	=> 2.2. Trouble without error message
When the message is not displayed	Trouble without an error message displayed on Operation panel even when the printer is malfunctioning.	=> 11. Error message lists

TIP

index=> 2. Troubleshooting

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2.2. Trouble without error message

This section describes the symptoms of errors without an error message as well as the check items and recovery actions.

=>T.B.D.

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3. Parts replacement

3. Parts replacement

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3.1. Introduction

This chapter provides information on removal and replacement of service parts.

WARNING

- When using this product, you must follow the safety precautions provided in following document to avoid the risks to person and damage to property.
  =>XPJ-1462UF Safety Precautions

CAUTION

- Read the installation manual and operation manual carefully before starting the operation. Otherwise, you may be injured.
  => Installation manual
  => Operation manual
- Before starting part(s) replacement, always perform following operations.
  - Turn OFF power.
  - Remove Power plug from outlet.
    Otherwise, you may suffer electric shock or system circuit may be damaged.
- Remove any cable(s) connected to the printer.
  Otherwise, the printer may be damaged.

CAUTION

- Components in printer can be disassembled only if instructed so in this manual.
  Do not disassemble Frame components and/or other components that are not instructed.
- The printer has been assembled in MUTOH factory with extremely high precision up to 1/100mm.
  If disassembled inappropriately, normal functionality may not be restored.
- Allow sufficient space around the perimeter for maintenance work
- When removing covers to operate the product for maintenance work, be careful not to injure yourself on the drive unit, etc.

NOTE

- Perform necessary lubrication and bonding after restoration in accordance with Lubrication/Bonding of this manual.
- Pictures and illustrations are taken at development phase.
- Thus specification and procedure may not be up-to-date.

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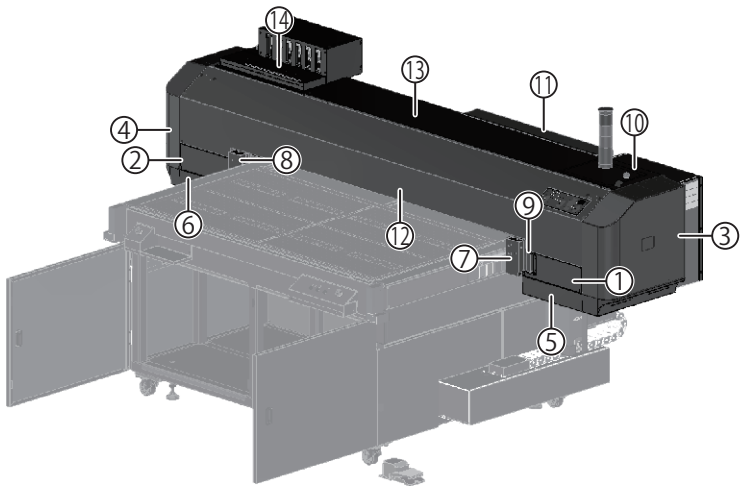
3.2. Covers-remove/assemble

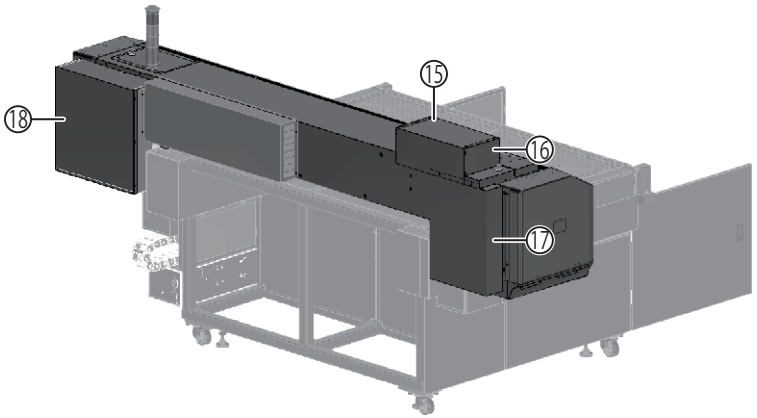
This section describes the procedures to remove and reinstall covers.

(1) Guntry section

Followings describe the list of cover parts.

No.	Contents	Reference
1	Maintenance cover R	=> 3.2.1. Maintenance cover R
2	Maintenance cover L	=> 3.2.2. Maintenance cover L
3	Side cover R	=> 3.2.3. Side cover R
4	Side cover L	=> 3.2.4. Side cover L
5	Bottom cover R	=> 3.2.5. Bottom cover R
6	Bottom cover L	=> 3.2.6. Bottom cover L
7	Leaser sensor cover R	=> 3.2.7. Leaser sensor cover R
8	Leaser sensor cover L	=> 3.2.8. Leaser sensor cover L
9	Maintenance cover R2	=> 3.2.9. Maintenance cover R2
10	Top cover lid	=> 3.2.10. Top cover lid
11	UV-LED board cover	=> 3.2.11. UV-LED board cover
12	Front cover	=> 3.2.12. Front cover
13	Top cover	=> 3.2.13. Top cover
14	CARD board cover	=> 3.2.14. CARD board cover
15	IH cover	=> 3.2.15. IH cover
16	IH cover L	=> 3.2.16. IH cover L
17	Circulation pump cover	=> 3.2.17. Circulation pump cover
18	Board box cover	=> 3.2.18. Board box cover





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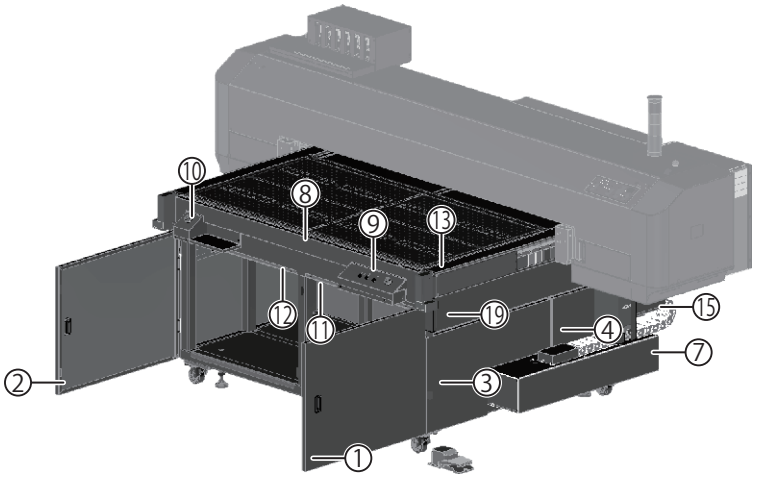
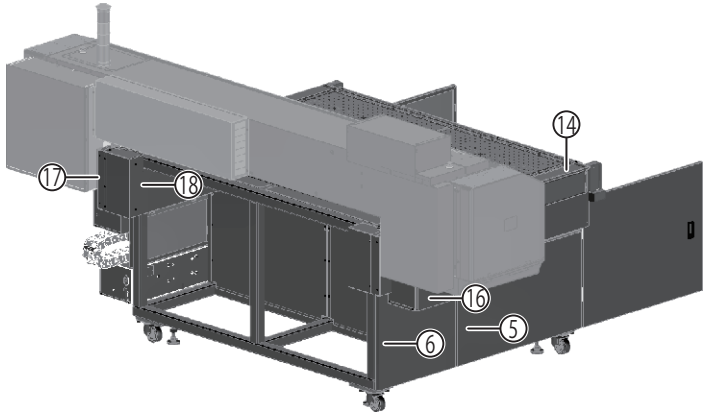
(2) Base frame section

Followings describe the list of cover parts.

No.	Contents	Reference
1	Base frame front cover R	=> 3.2.19. Base frame front cover R
2	Base frame front cover L	=> 3.2.20. Base frame front cover L
3	Base frame side cover R1	=> 3.2.21. Base frame side cover R1
4	Base frame side cover R2	=> 3.2.22. Base frame side cover R2
5	Base frame side cover L1	=> 3.2.23. Base frame side cover L1
6	Base frame side cover L2	=> 3.2.24. Base frame side cover L2
7	Base frame board cover	=> 3.2.25. Base frame board cover
8	Base frame cover F	=> 3.2.26. Base frame cover F
9	Base frame cover FR	=> 3.2.27. Base frame cover FR
10	Base frame cover FL	=> 3.2.28. Base Frame cover FL
11	Vacuum fan cover R	=> 3.2.29. Vacuum fan cover R
12	Vacuum fan cover L	=> 3.2.30. Vacuum fan cover L
13	PF rail cover R	=> 3.2.31. PF rail cover R
14	PF rail cover L	=> 3.2.32. PF rail cover L
15	PG motor cover R	=> 3.2.33. PG motor cover R
16	PG motor cover L	=> 3.2.34. PG motor cover L
17	Dust prevention unit RR cover	=> 3.2.35. Dust prevention unit RR cover
18	PF motor cover	=> 3.2.36. PF motor cover
19	Ball screw cover R	=> 3.2.37. Ball screw cover R





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(3) Other

List of other related procedure.

No.	Contents	Reference
1	Manual method of cap-out	=> 3.2.38. Manual method of cap-out
2	Manual method of gantry movement	=> 3.2.39. Manual method of gantry movement

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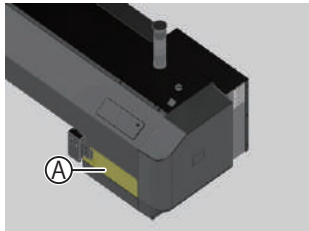
3.2.1. Maintenance cover R

A : Maintenance cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

● Procedure

1 Open front cover.
2 Open maintenance cover R.
3 Pull out fulcrum shaft.
4 Remove maintenance cover R.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Open front cover.

NOTE

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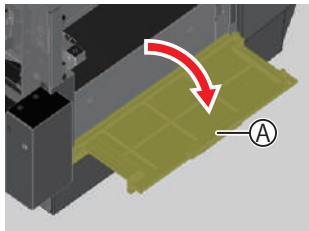
2 Open maintenance cover R.

A : Maintenance cover R

NOTE

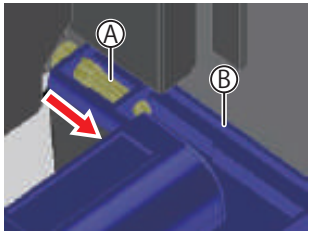
=> Operation manual



3 Pull out the fulcrum shaft.

A : Fulcrum shaft

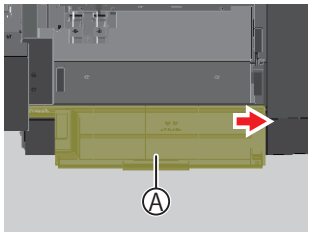
B : Maintenance cover R

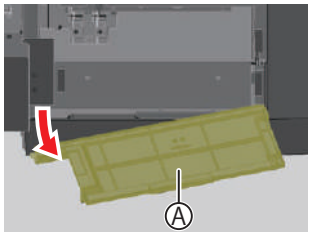


4 Remove maintenance cover R.

- Move maintenance cover R to the right.
- Remove maintenance cover R.

A : Maintenance cover R





5 Reverse the above procedure to reinstall the parts.

TIP

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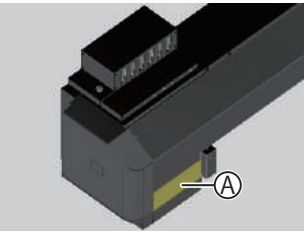
3.2.2. Maintenance cover L

A : Maintenance cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

● Procedure

1 Open front cover.
2 Open maintenance cover L.
3 Pull out fulcrum shaft.
4 Remove maintenance cover L.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Open front cover.

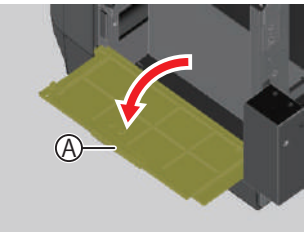
NOTE

=> Operation manual

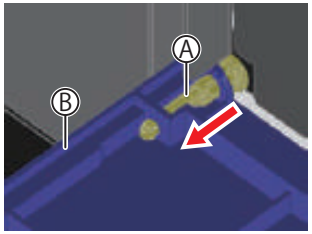
2 Open maintenance cover L.
A : Maintenance cover L

NOTE

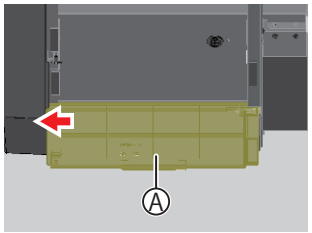
=> Operation manual

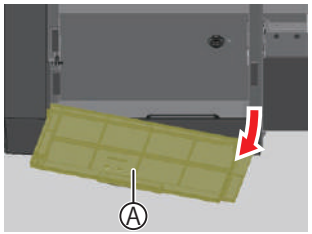


3 Pull out the fulcrum shaft.
A : Fulcrum shaft
B : Maintenance cover R



4 Remove maintenance cover L.
- Move maintenance cover L to the left.
- Remove maintenance cover L.
A : Maintenance cover L





5 Reverse the above procedure to reinstall the parts.

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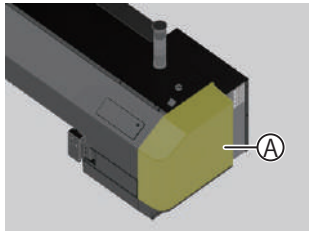
3.2.3. Side cover R

A : Side cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Open front cover.
2 Remove cover(s).
- Maintenance cover R
- Pump cover
3 Remove screw(s).(1)
- Tapping screw_M4x12 P tight bind(x5)
4 Remove screw(s).(2)
- Round head screw with split washer(polished)_M4x10(x2)
5 Remove side cover R.
6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Open front cover.

NOTE

=> Operation manual

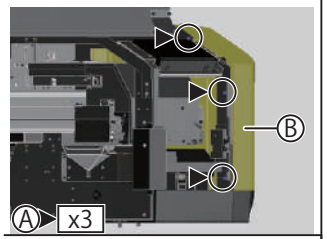
2 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover

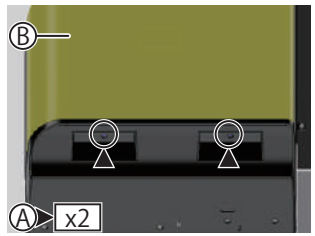
=> 3.2. Covers-remove/assemble

NOTE

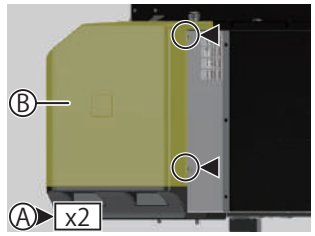
- Side cover R cannot be removed without removing the pump cover.
  => 3.7. Maintenance/drop sensor unit

3 Remove screw(s).(1)
A : Tapping screw_M4x12 P tight bind(x5)
B : Side cover R





4 Remove screw(s).(2)
A : Round head screw with split washer(polished)_ M4x10(x2)
B : Side cover R



5 Remove side cover R.

6 Reverse the above procedure to reinstall the parts.

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TIP

index=> 3. Parts replacement

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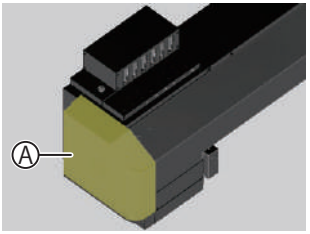
3.2.4. Side cover L

A : Side cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Open front cover.
2 Remove cover(s).
- Maintenance cover L
3 Remove screw(s).(1)
- Tapping screw_M4x12 P tight bind(x5)
4 Remove screw(s).(2)
- Tap tight S bind_M4x8(black)(x2)
5 Remove side cover L.
6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

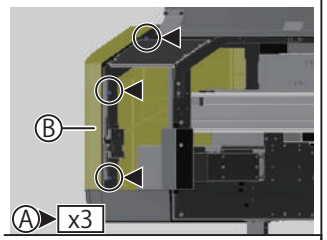
1 Open front cover.

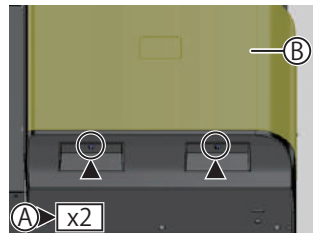
NOTE

=> Operation manual

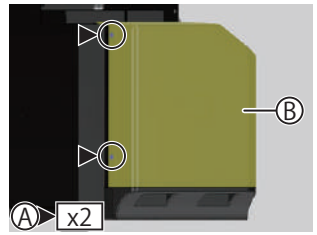
2 Remove cover(s).
- Maintenance cover L
=> 3.2. Covers-remove/assemble

3 Remove screw(s).(1)
A : Tapping screw_M4x12 P tight bind(x5)
B : Side cover L





4 Remove screw(s).(2)
A : Tap tight S bind_M4x8(black)(x2)
B : Side cover L



5 Remove side cover L.

6 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

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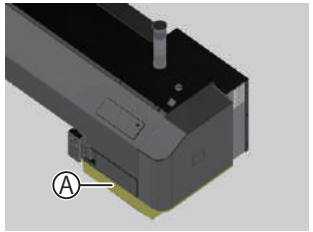
3.2.5. Bottom cover R

A : Bottom cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover R

2 Remove screw(s).(1)
- Tapping screw_M4x12 P tight bind(x2)

3 Remove screw(s).(2)
- Tapping screw_M4x10 S tight cup(x4)

4 Remove bottom cover R.

5 Reassemble bottom cover R.

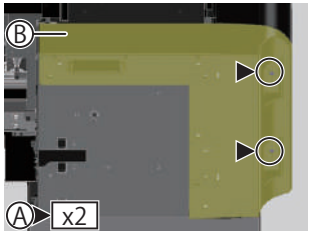
6 Reverse the above procedure to reinstall the parts.

● Procedure(details))

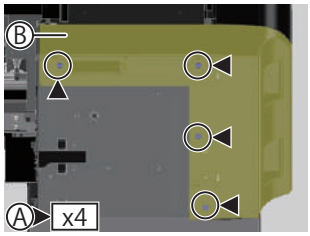
1 Remove cover(s).
- **Maintenance cover R**

=> 3.2. Covers-remove/assemble

2 Remove screw(s).(1)
A : Tapping screw_M4x12 P tight bind(x2)
B : Bottom cover R



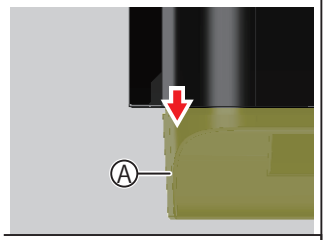
3 Remove screw(s).(2)
A : Tapping screw_M4x10 S tight cup(x4)
B : Bottom cover R

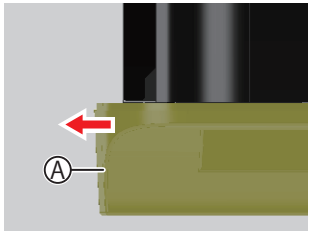


4 Remove bottom cover R.
- Move bottom cover R to the lower side.
- Pull bottom cover R forward.

A : Bottom cover R

NOTE
- Remove bottom cover R after removing bottom cover R hooks from holes in frame.
=>Refer to the diagram in step 5.





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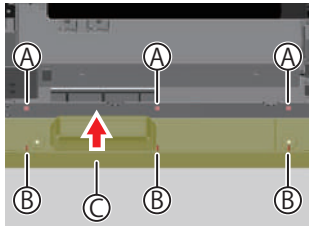
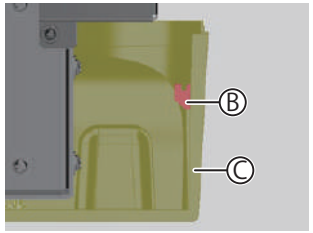
5	Reassemble bottom cover R. - Place hooks of bottom cover R into holes in frame. A : Holes in frame(x3) B : Hooks of bottom cover R(x3) C : Bottom cover R	 
6	Reverse the above procedure to reinstall the parts.	

TIP

index=> 3. Parts replacement

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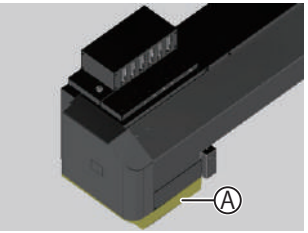
3.2.6. Bottom cover L

A : Bottom cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover L

2 Remove screw(s).(1)
- Tapping screw_M4x12 P tight bind(x2)

3 Remove screw(s).(2)
- Tapping screw_M4x10 S tight cup(x4)

4 Remove bottom cover L.

5 Reassemble bottom cover L.

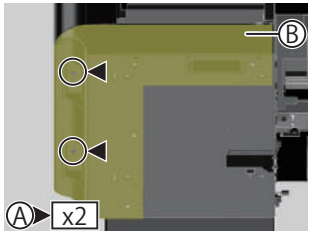
6 Reverse the above procedure to reinstall the parts.

● Procedure(details))

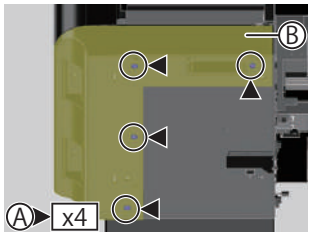
1 Remove cover(s).
- Maintenance cover L

=> 3.2. Covers-remove/assemble

2 Remove screw(s).(1)
A : Tapping screw_M4x12 P tight bind(x2)
B : Bottom cover L



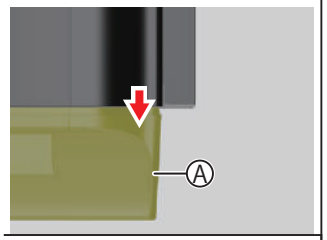
3 Remove screw(s).(2)
A : Tapping screw_M4x10 S tight cup(x4)
B : Bottom cover L

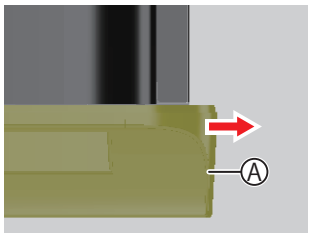


4 Remove bottom cover L.
- Move bottom cover L to the lower side.
- Pull bottom cover L forward.

A : Bottom cover L

NOTE
- Remove bottom cover L after removing bottom cover L hooks from holes in frame.
=>Refer to the diagram in step 5.





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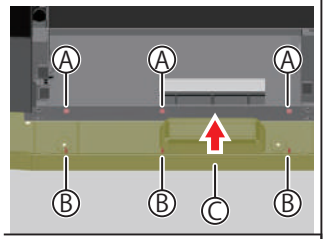
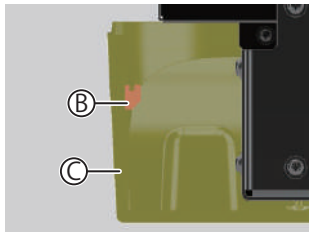
5	Reassemble bottom cover L. - Place hooks of bottom cover R into holes in frame. A : Holes in frame(x3) B : Hooks of bottom cover L(x3) C : Bottom cover L	 
6	Reverse the above procedure to reinstall the parts.	

TIP

index=> 3. Parts replacement

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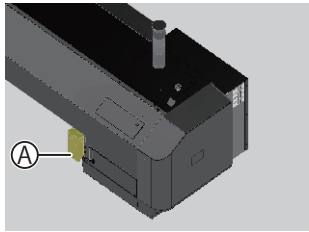
3.2.7. Leaser sensor cover R

A : Leaser sensor cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

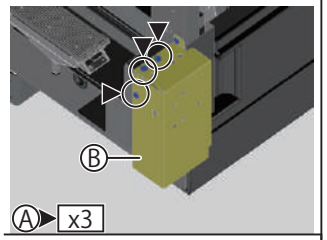
1 Move gantry.(front side)
2 Open front cover.
3 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x5)
4 Remove leaser sensor cover R.
5 Reverse the above procedure to reinstall the parts.

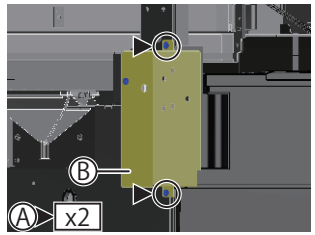
● Procedure(details)

1 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2.39. Manual method of gantry movement

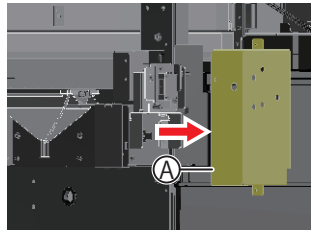
2 Open front cover.
NOTE
=> Operation manual

3 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x5)
B : Leaser sensor cover R





4 Remove leaser sensor cover R.
A : Leaser sensor cover R



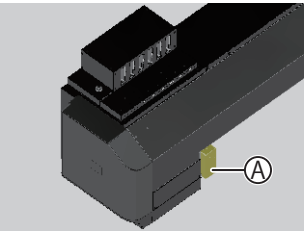
5 Reverse the above procedure to reinstall the parts.

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.2.8. Leaser sensor cover L

A : Leaser sensor cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

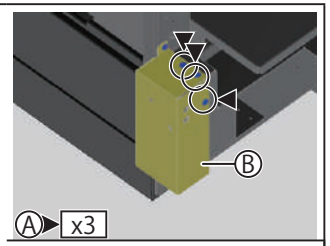
1 Move gantry.(front side)
2 Open front cover.
3 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x5)
4 Remove leaser sensor cover L.
5 Reverse the above procedure to reinstall the parts.

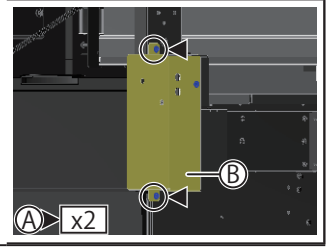
● Procedure(details)

1 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2.39. Manual method of gantry movement

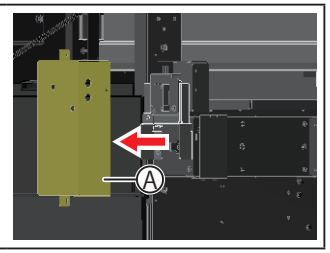
2 Open front cover.
NOTE
=> Operation manual

3 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x5)
B : Leaser sensor cover L





4 Remove leaser sensor cover L.
A : Leaser sensor cover L



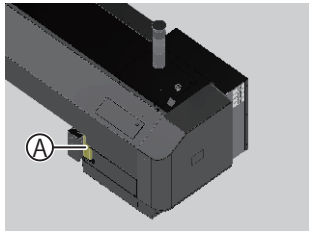
5 Reverse the above procedure to reinstall the parts.

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.2.9. Maintenance cover R2

A : Maintenance cover R2



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Open front cover.
2 Remove cover(s).
- Maintenance cover R
3 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x2)
4 Remove maintenance cover R2.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

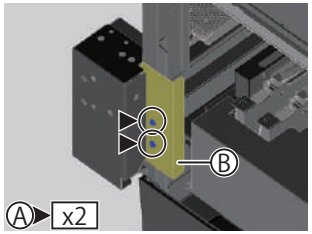
1 Open front cover.

NOTE

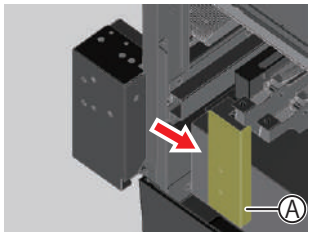
=> Operation manual

2 Remove cover(s).
- Maintenance cover R
=> 3.2. Covers-remove/assemble

3 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x2)
B : Maintenance cover R2



4 Remove maintenance cover R2.
A : Maintenance cover R2



5 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

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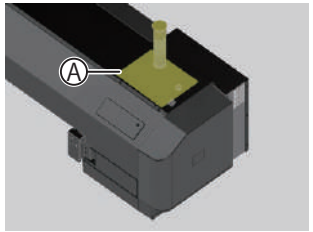
3.2.10. Top cover lid

A : Top cover lid



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

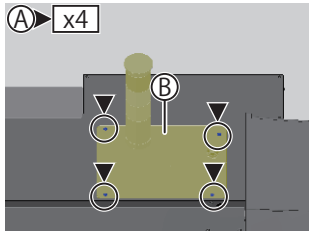
● Procedure

1 Remove screw(s).
- Tap tight S bind_M4x8(black)(x4)

2 Open top cover lid.
3 Remove cable(s).(for signal light)
4 Remove cable(s).(for emergency stop button)
5 Remove top cover lid.
6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove screw(s).
A : Tap tight S bind_M4x8(black)(x4)
B : Top cover lid

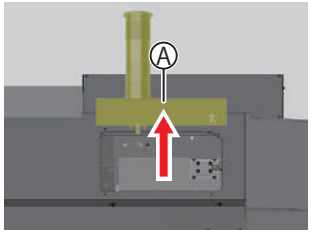


2 Open top cover lid.
- Lift top cover lid.

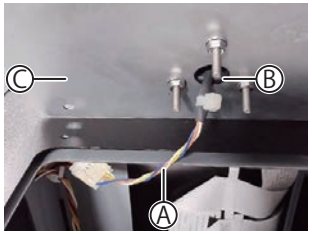
A : Top cover lid

CAUTION

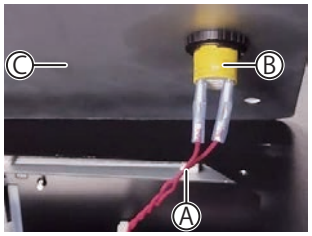
- Cables are connected to top cover lid.
  Be care not to damage cable(s).



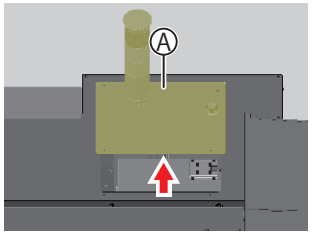
3 Remove cable(s).(for signal light)
A : Cable
B : Signal light
C : Top cover lid



4 Remove cable(s).(for emergency stop button)
A : Cable
B : Emergency stop button
C : Top cover lid



5 Remove top cover lid.
A : Top cover lid



6 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

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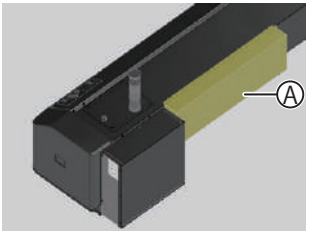
3.2.11. UV-LED board cover

A : UV-LED board cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

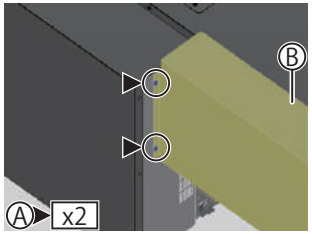
● Procedure

1 Move gantry.(rear side)
2 Remove screw(s).
- Cup screw_M3x6 Ni-3(black)(x2)
3 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x2)
4 Remove UV-LED board cover.
5 Reverse the above procedure to reinstall the parts.

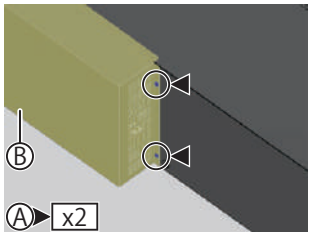
● Procedure(details)

1 Move gantry.(rear side)
- Mover gantry to rear side.
=> 3.2.39. Manual method of gantry movement

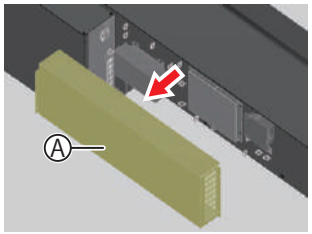
2 Remove screw(s).
A : Cup screw_M3x6 Ni-3(black)(x2)
B : UV-LED board cover



3 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x2)
B : UV-LED board cover



4 Remove UV-LED board cover.
A : UV-LED board cover



5 Reverse the above procedure to reinstall the parts.

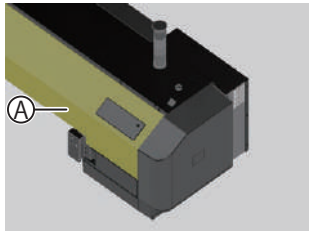
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.12. Front cover

A : Front cover



CAUTION

- This item must be handled by two or more people.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L

2 Open front cover.

3 Remove screw(s).(right side)
- Round head screw with split washer(polished)_M4x10(x2)

4 Remove screw(s). (left side)
- Round head screw with split washer(polished)_M4x10(x2)

5 Remove rotary damper.(right side)
- Tapping screw_M4x10 S tight cup(x2)

6 Remove Rotary damper.(left side)
- Tapping screw_M4x10 S tight cup(x2)

7 Remove front cover shaft.(right side)

8 Remove front cover shaft.(left side)

9 Remove ground spring.(right side)

10 Remove ground spring.(left side)

11 Remove front cover.

12 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L

=> 3.2. Covers-remove/assemble

NOTE

- Side cover R cannot be removed without removing the pump cover.
  => 3.7. Maintenance/drop sensor unit

2 Open front cover.

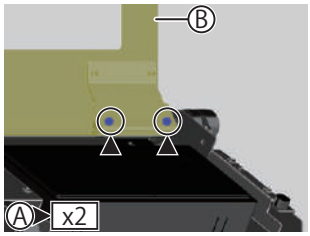
NOTE

=> Operation manual

3 Remove screw(s).(right side)

A : Round head screw with split washer(polished)_ M4x10(x2)

B : Front cover

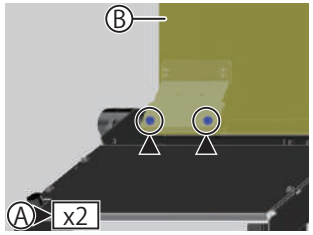


CONFIDENTIAL

4 Remove screw(s).(left side)

A : Round head screw with split washer(polished)_ M4x10(x2)

B : Front cover



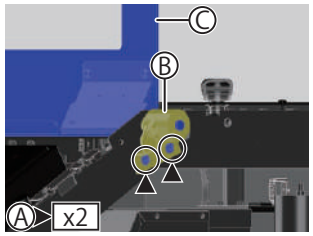
5 Remove rotary damper.(right side)

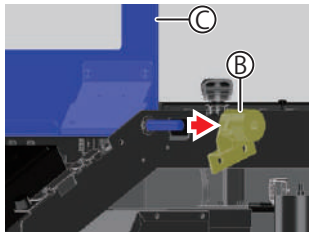
- Remove screw(s).(x2)
- Remove rotary damper.

A : Tapping screw_M4x10 S tight cup(x2)

B : Rotary damper(right side)

C : Front cover





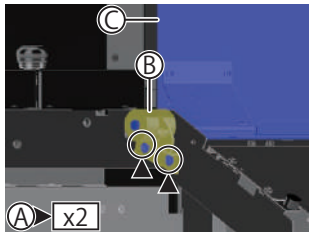
6 Remove rotary damper.(left side)

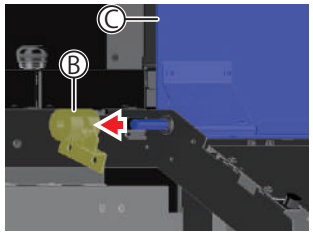
- Remove screw(s).(x2)
- Remove rotary damper.

A : Tapping screw_M4x10 S tight cup(x2)

B : Rotary damper(left side)

C : Front cover





7 Remove front cover shaft.(right side)

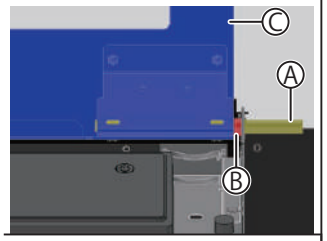
A : Front cover shaft(right side)

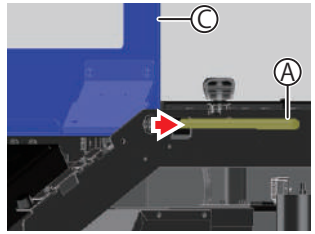
B : Ground spring(right side)

C : Front cover

NOTE

- Do not lose ground spring.





8 Remove front cover shaft.(left side)

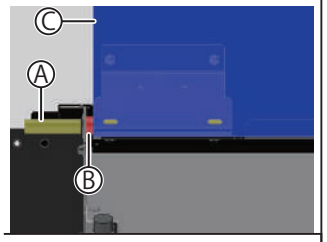
A : Front cover shaft(left side)

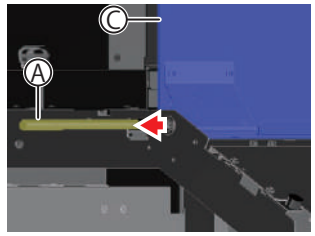
B : Ground spring(left side)

C : Front cover

NOTE

- Do not lose ground spring.

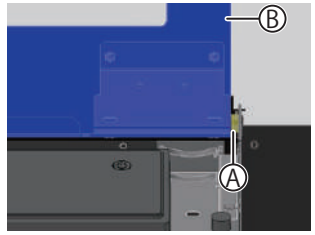




9 Remove ground spring.(right side)

A : Ground spring(right side)

B : Front cover



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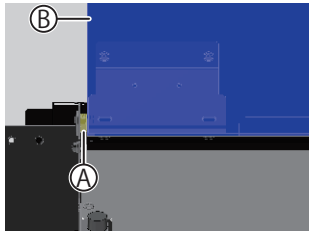
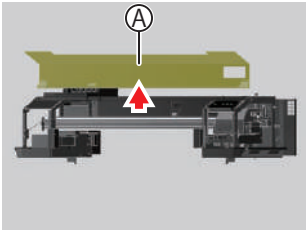
10	Remove ground spring.(left side) A : Ground spring(left side) B : Front cover	
11	Remove front cover. A : Front cover	
12	Reverse the above procedure to reinstall the parts.	

TIP

index=> 3. Parts replacement

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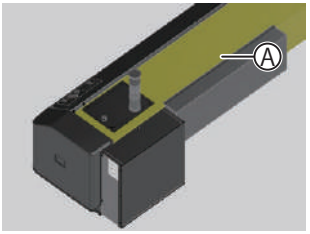
3.2.13. Top cover

A : Top cover



CAUTION

- This item must be handled by two or more people.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L
- Top cover lid
- UV-LED board cover
- Front cover

2 Remove screw(s).(front side)
- Tap tight S bind_M4x8(black)(x4)

3 Move gantry.(rear side)

4 Remove power supply board (for UV-LED).

5 Remove UV-LED board.

6 Remove cable(s).(board box side)

7 Remove cable(s).(cable guide side)

8 Move cable(s) into cable guide.

9 Remove screw(s).(rear side)
- Tap tight S bind_M4x8(black)(x11)

10 Remove top cover.

11 Install top cover.

12 Install screw(s).(rear side)
- Tap tight S bind_M4x8(black)(x11)

13 Move gantry.(front side)

14 Install screw(s).(front side)
- Tap tight S bind_M4x8(black)(x4)

15 Move cable(s) out of cable guide.

16 Move gantry.(rear side)

17 Install clamp.(x2)

18 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L
- Top cover lid
- UV-LED board cover
- Front cover

=> 3.2. Covers-remove/assemble

NOTE

- Side cover R cannot be removed without removing the pump cover
  => 3.7. Maintenance/drop sensor unit

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2 Remove screw(s).(front side)

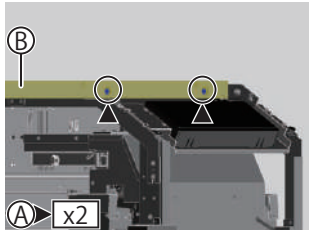
A : Tap tight S bind_M4x8(black)(x4)

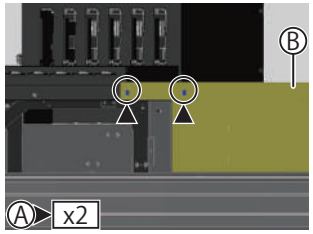
B : Front cover

NOTE

- If screws are difficult to remove, move gantry to front side.

=> 3.2.39. Manual method of gantry movement





3 Move gantry.(rear side)

- Mover gantry to rear side.

=> 3.2.39. Manual method of gantry movement

4 Remove power supply board (for UV-LED).

- Remove cables connected to board box.
- Remove power supply board(for UV-LED).

=> 3.11. Cover/LED indicator light

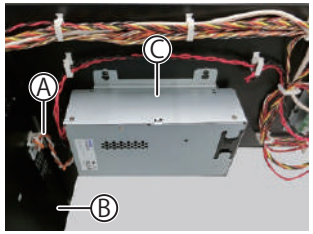
A : Cable

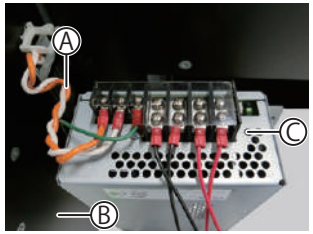
B : Board box

C : Power supply board(for UV-LED)

NOTE

- Remove the board for safety of removed top cover.





5 Remove power supply board (for UV-LED).

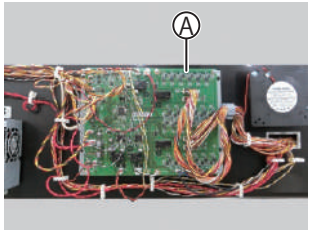
- Remove all cable(s).
- Remove UV-LED board.

=> 3.11. Cover/LED indicator light

A : UV-LED board

NOTE

- Remove the board for safety of removed top cover.



6 Remove cable(s).(board box side)

- Remove cables connected to board box.

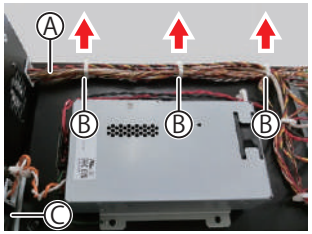
A : Cable(s)

B : Clamp(x3)

C : Board box

NOTE

- Remove cable together with clamp.

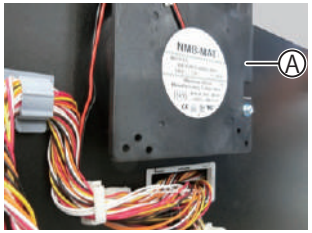


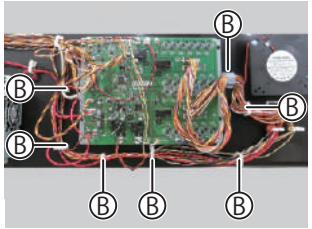
7 Remove cable(s).(cable guide side)

- Remove cable from exhaust fan.
- Remove cable(s) from clamp.

A : Exhaust fan

B : Clamp





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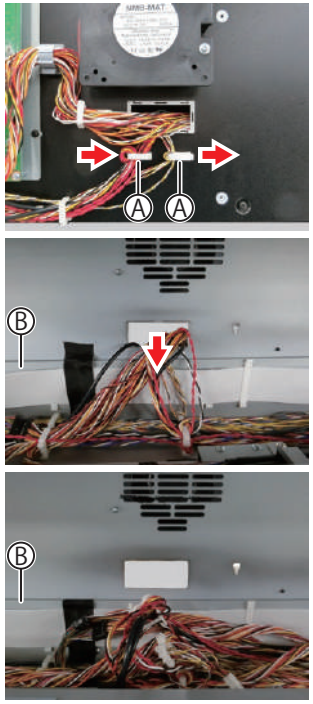
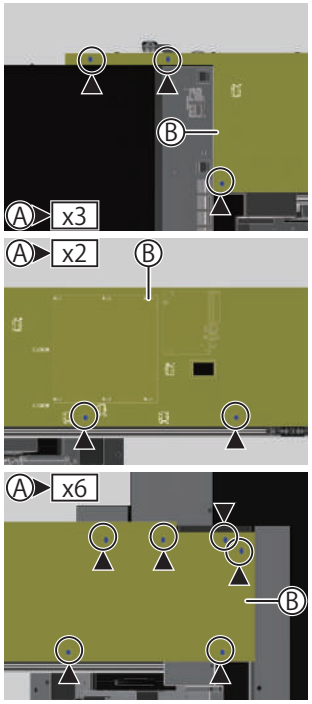
8 Move cable(s) into cable guide.
- Remove clamp.(x2)
- Move cable(s) into cable guide.

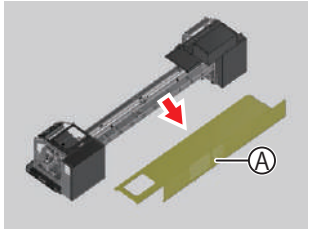
A : Clamp(x2)
B : Cable guide



9 Remove screw(s).(rear side)
A : Tap tight S bind_M4x8(black)(x11)
B : Front cover

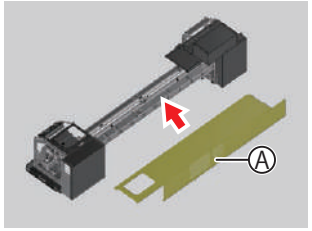


10 Remove top cover.
A : Top cover



11 Install top cover.
A : Top cover

CAUTION
- Be careful not to damage cable(s).
- Be careful not to pinch cable(s).



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12 Install screw(s).(rear side)
- Tap tight S bind_M4x8(black)(x11)

NOTE
- Refer to step.9.

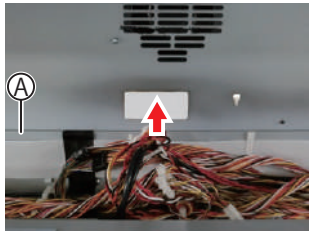
13 Move gantry.(front side)
- Mover gantry to front side.

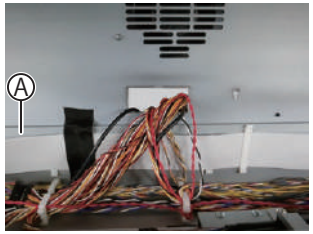
=> 3.2.39. Manual method of gantry movement

14 Install screw(s).(front side)
- Tap tight S bind_M4x8(black)(x4)

NOTE
- Refer to step.2.

15 Move cable(s) out of cable guide.
A : Cable guide

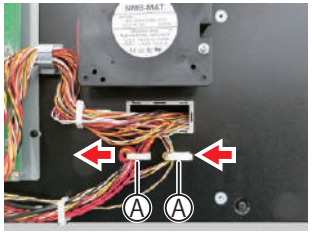




16 Move gantry.(rear side)
- Mover gantry to rear side.

=> 3.2.39. Manual method of gantry movement

17 Install clamp.(x2)
A : Clamp(x2)



18 Reverse the above procedure to reinstall the parts.

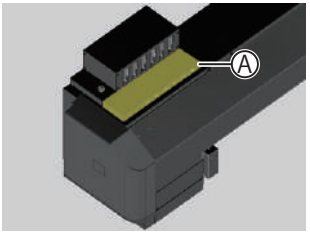
CAUTION
- Be careful not to connect the cables incorrectly.

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.2.14. CARD board cover

A : CARD board cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x4)

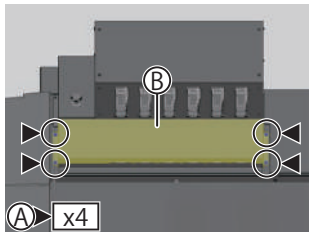
2 Remove cable(s).

3 Remove CARD board cover.

4 Reverse the above procedure to reinstall the parts.

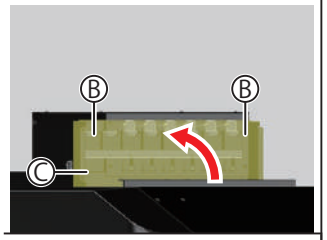
● Procedure(details)

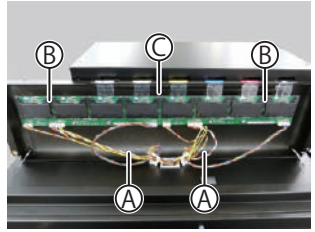
1 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x4)
B : CARD board cover



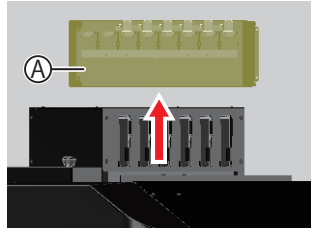
2 Remove cable(s).
- Lift CARD board cover.
- Remove cable(s).

A : Cable(x6)
B : CARD board(x2)
C : CARD board covoer





3 Remove CARD board cover.
A : CARD board cover



4 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

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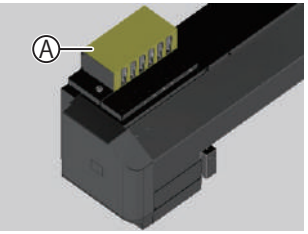
3.2.15. IH cover

A : IH cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x12)

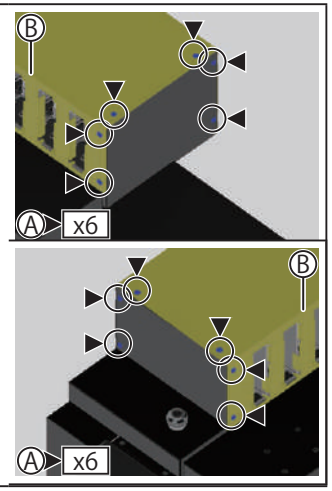
2 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x1)

3 Remove IH cover.

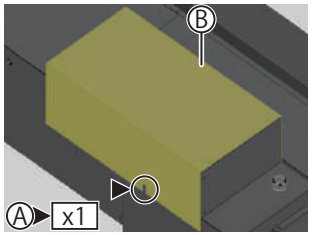
4 Reverse the above procedure to reinstall the parts.

● Procedure(details)

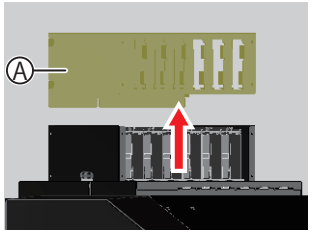
1 Remove screw(s).(1)
A : Tapping screw_M3x6 S tight cup(black)(x12)
B : IH cover



2 Remove screw(s).(2)
A : Tapping screw_M3x6 S tight cup(black)(x1)
B : IH cover



3 Remove IH cover.
A : IH cover



4 Reverse the above procedure to reinstall the parts.

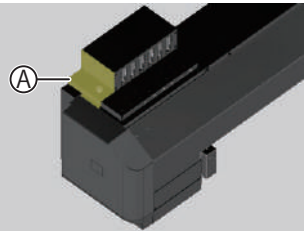
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.16. IH cover L

A : IH cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x8)

2 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x1)

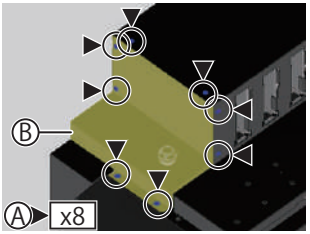
3 Remove cable(s).

4 Remove IH cover L.

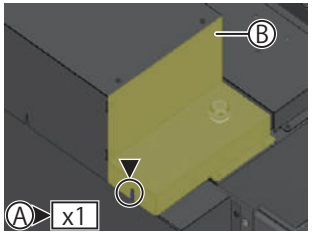
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove screw(s).(1)
A : Tapping screw_M3x6 S tight cup(black)(x8)
B : IH cover L

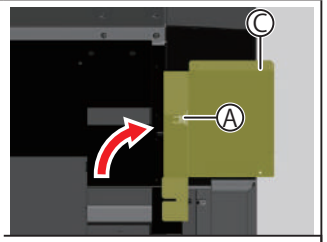


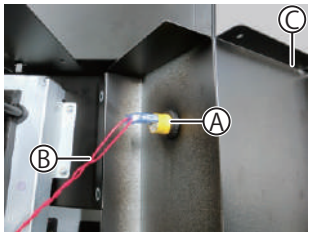
2 Remove screw(s).(2)
A : Tapping screw_M3x6 S tight cup(black)(x1)
B : IH cover L



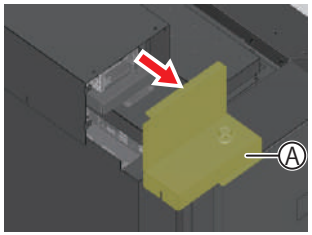
3 Remove cable(s).
- Lift IH cover L.
- Remove cable(s).

A : Emergency stop button
B : Cable(x2)
C : IH cover L





4 Remove IH cover L.
A : IH cover L



5 Reverse the above procedure to reinstall the parts.

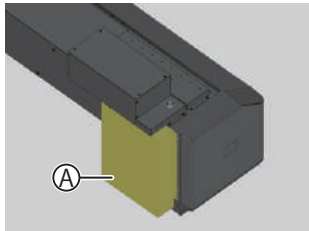
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.17. Circulation pump cover

A : Circulation pump cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- IH cover
- IH cover L

2 Remove screw(s).
- Tap tight S bind_M4x8(black)(x5)

3 Remove circulation pump cover.

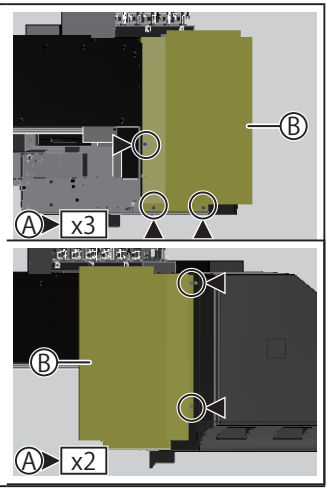
4 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- IH cover
- IH cover L

=> 3.2. Covers-remove/assemble

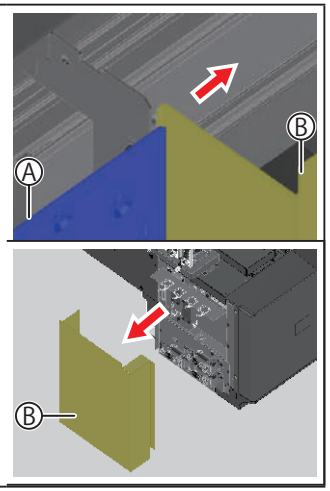
2 Remove screw(s).(1)
A : Tap tight S bind_M4x8(black)(x5)
B : Circulation pump cover



3 Remove circulation pump cover.
- Move circulation pump cover to right side.
- Remove circulation pump cover.

A : Top cover
B : Circulation pump cover

NOTE
- The circulation pump cover is overlapped with the top cover.
When removing the circulation pump cover, move it to the right side before removing it.



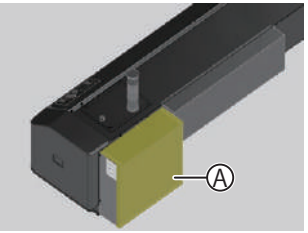
4 Reverse the above procedure to reinstall the parts.

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.2.18. Board box cover

A : Board box cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

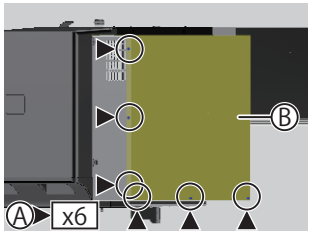
1 Remove screw(s).
- Cup screw_M3x6 Ni-3(black)(x14)

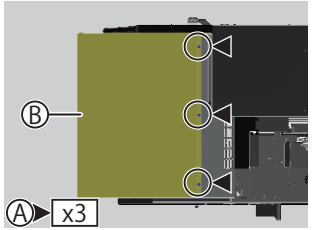
2 Remove board box cover.

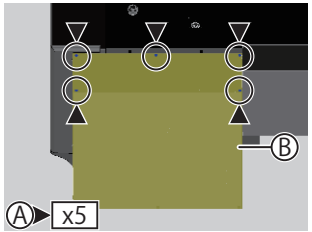
3 Reverse the above procedure to reinstall the parts.

● Procedure(details)

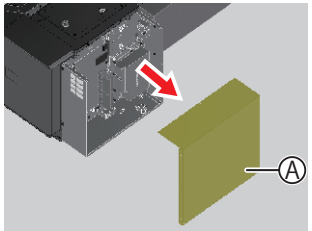
1 Remove screw(s).(1)
A : Cup screw_M3x6 Ni-3(black)(x14)
B : Board box cover







2 Remove board box cover.
A : Board box cover



3 Reverse the above procedure to reinstall the parts.

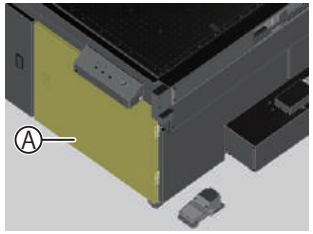
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.19. Base frame front cover R

A : Base frame front cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

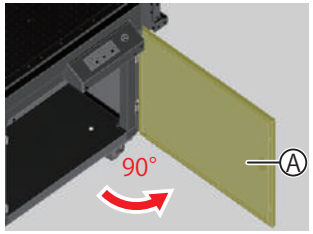
● Procedure

1 Open base frame front cover R.
2 Remove base frame front cover R.
3 Install base frame front cover R.

● Procedure(details)

1 Open base frame front cover R.
- Open base frame front cover R 90 degrees.

A : Base frame front cover R

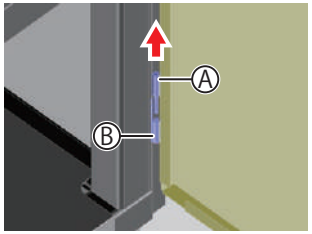


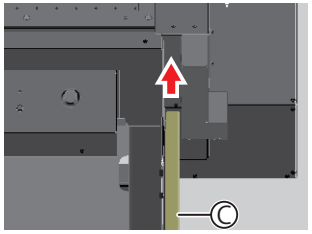
2 Remove base frame front cover R.
- Pull the hinge of base frame front cover R off the hinge of base frame.(x2)
- Remove base frame front cover R.

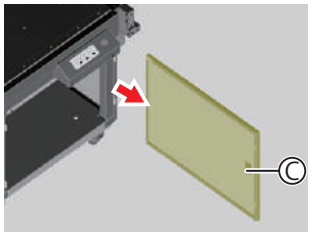
A : Hinge of base frame(x2)
B : Hinge of base frame front cover R(x2)
C : Base frame front cover R

CAUTION

- The hinge cannot be released unless base frame front cover R is opened 90 degrees.







3 Install base frame front cover R.

NOTE

=> Installation manual (Startup guide)

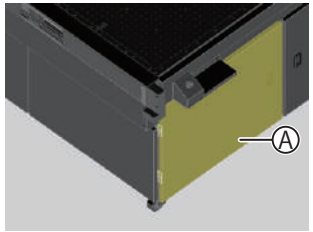
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.20. Base frame front cover L

A : Base frame front cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

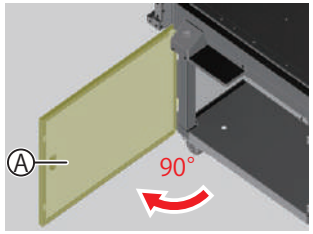
● Procedure

1 Open base frame front cover L.
2 Remove base frame front cover L.
3 Install base frame front cover L.

● Procedure(details)

1 Open base frame front cover L.
- Open base frame front cover L 90 degrees.

A : Base frame front cover L

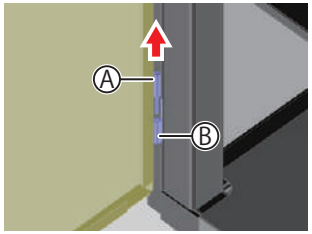


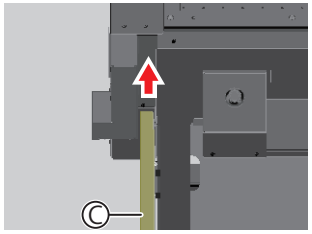
2 Remove base frame front cover L.
- Pull the hinge of base frame front cover L off the hinge of base frame.(x2)
- Remove base frame front cover L.

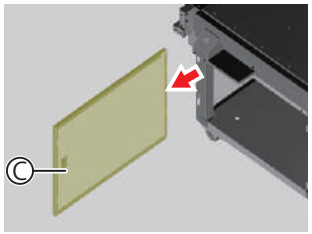
A : Hinge of base frame(x2)
B : Hinge of base frame front cover L(x2)
C : Base frame front cover L

CAUTION

- The hinge cannot be released unless base frame front cover L is opened 90 degrees.







3 Install base frame front cover L.

NOTE

=> Installation manual (Startup guide)

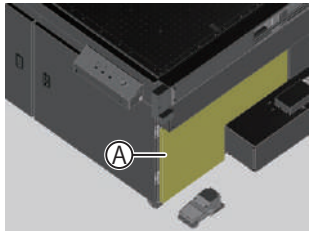
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.21. Base frame side cover R1

A : Base frame side cover R1



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

● Procedure

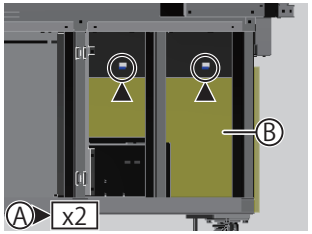
1 Remove base frame side cover R1.
2 Install base frame side cover R1.

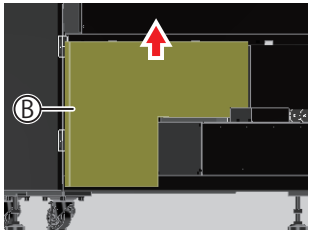
● Procedure(details)

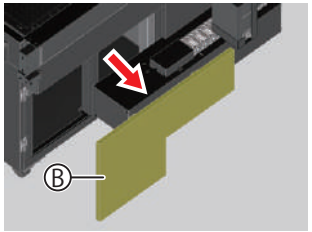
1 Remove base frame side cover R1.
- Move base frame side cover R1 to upper side.
- Remove base frame side cover R1.

A : Hook of base frame side cover R1(x2)
B : Base frame side cover R1

NOTE
- The hooks are removed by moving base frame side cover R1 to upper side.
- Base frame side cover R1 is fixed to base frame by magnets.







2 Install base frame side cover R1.

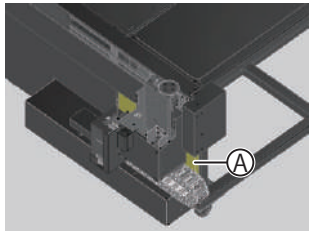
NOTE
=>Installation manual (Startup guide)

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.2.22. Base frame side cover R2

A : Base frame side cover R2



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

● Procedure

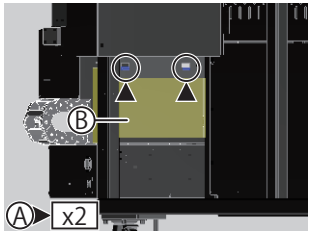
1 Remove base frame side cover R2.
2 Install base frame side cover R2.

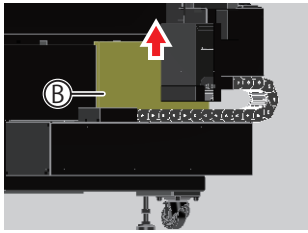
● Procedure(details)

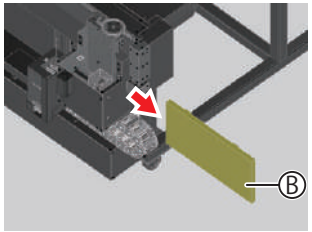
1 Remove base frame side cover R2.
- Move base frame side cover R2 to upper side.
- Remove base frame side cover R2.

A : Hook of base frame side cover R2(x2)
B : Base frame side cover R2

NOTE
- The hooks are removed by moving base frame side cover R2 to upper side.
- Base frame side cover R2 is fixed to base frame by magnets.







2 Install base frame side cover R2.

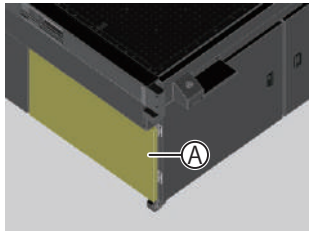
NOTE
=> Installation manual (Startup guide)

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.2.23. Base frame side cover L1

A : Base frame side cover L1



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

● Procedure

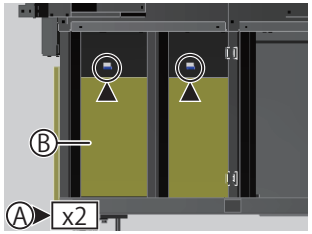
1 Remove base frame side cover L1.
2 Install base frame side cover L1.

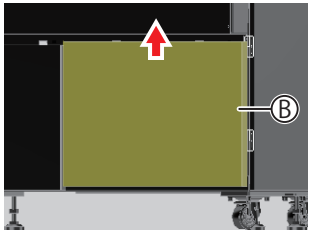
● Procedure(details)

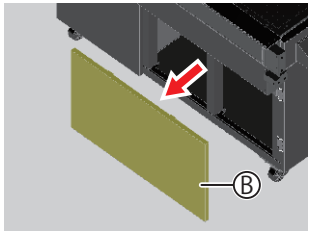
1 Remove base frame side cover L1.
- Move base frame side cover L1 to upper side.
- Remove base frame side cover L1.

A : Hook of base frame side cover L1(x2)
B : Base frame side cover L1

NOTE
- The hooks are removed by moving base frame side cover L1 to upper side.
- Base frame side cover L1 is fixed to base frame by magnets.







2 Install base frame side cover L1.

NOTE

=> Installation manual (Startup guide)

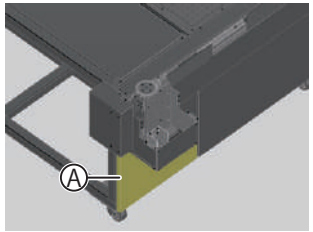
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.24. Base frame side cover L2

A : Base frame side cover L2



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
-	-	-

● Procedure

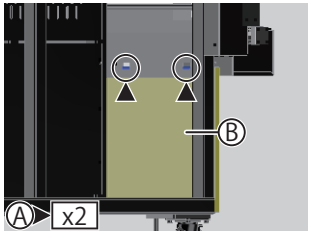
1 Remove base frame side cover L2.
2 Install base frame side cover L2.

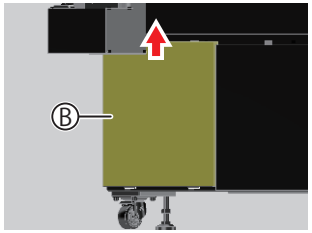
● Procedure(details)

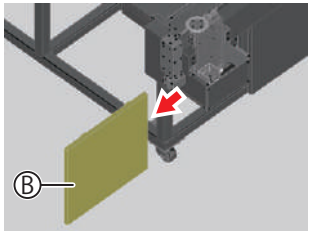
1 Remove base frame side cover L2.
- Move base frame side cover L2 to upper side.
- Remove base frame side cover L2.

A : Hook of base frame side cover L2(x2)
B : Base frame side cover L2

NOTE
- The hooks are removed by moving base frame side cover L2 to upper side.
- Base frame side cover L2 is fixed to base frame by magnets.







2 Install base frame side cover L2.

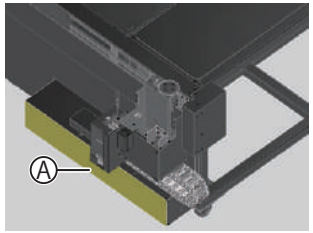
NOTE
=> Installation manual (Startup guide)

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.2.25. Base frame board cover

A : Base frame board cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Base frame side cover R1

2 Remove screw(s).
- Tap tight S bind_M3x6(black)(x6)

3 Loosen screw(s).
- Tap tight S bind_M3x6(black)(x5)

4 Remove base frame board cover.

5 Install base frame board cover.

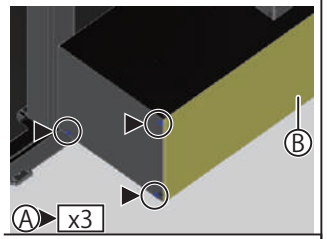
6 Reverse the above procedure to reinstall the parts.

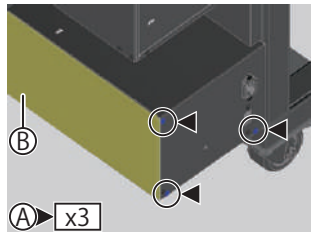
● Procedure(details)

1 Remove cover(s).
- Base frame side cover R1

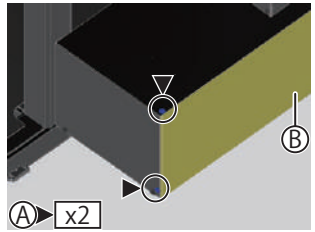
=> 3.2. Covers-remove/assemble

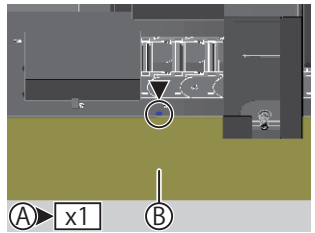
2 Remove screw(s).
A : Tap tight S bind_M3x6(black)(x6)
B : Base frame board cover

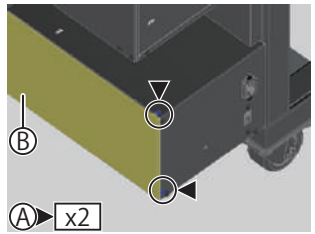




3 Loosen screw(s).
A : Tap tight S bind_M3x6(black)(x5)
B : Base frame board cover







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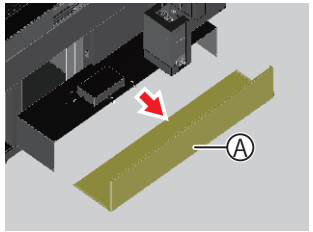
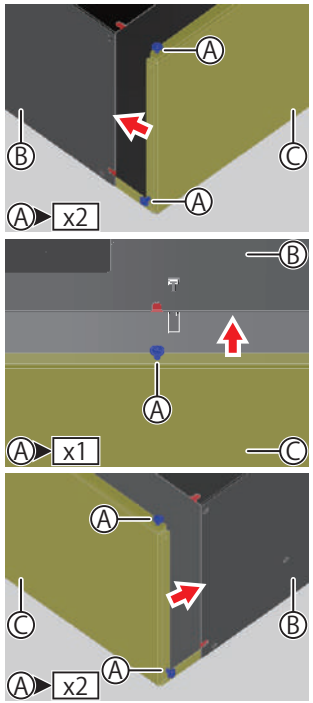
4	Remove base frame board cover. A : Base frame board cover	
5	Install base frame board cover. - Hook base frame board cover screws into base frame board box. (x5) - Tighten screw(s).(x5) A : Tap tight S bind_M3x6(black)(x5) B : Base frame board box C : Base frame board cover	
6	Reverse the above procedure to reinstall the parts.	

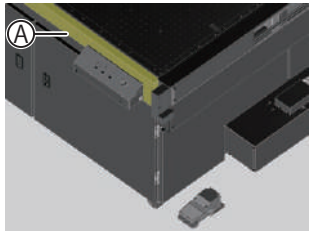
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.26. Base frame cover F

A : Base frame cover F



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L

2 Remove screw(s).(1)
- Baind small screw_M4x8(black)(x2)

3 Remove screw(s).(2)
- Tap tight S bind_M3x6(black)(x6)

4 Remove base frame cover F.

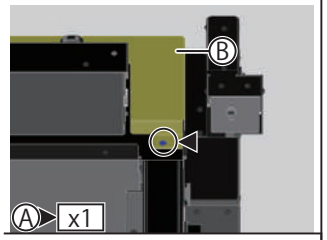
5 Reverse the above procedure to reinstall the parts.

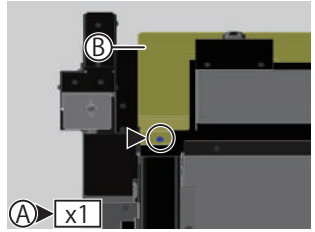
● Procedure(details)

1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L

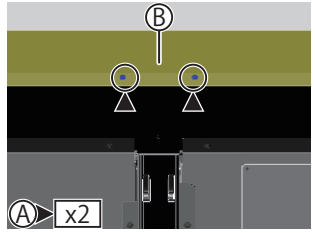
=> 3.2. Covers-remove/assemble

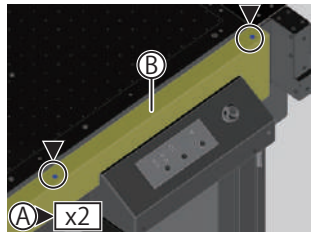
2 Remove screw(s).(1)
A : Baind small screw_M4x8(black)(x2)
B : Base frame cover F

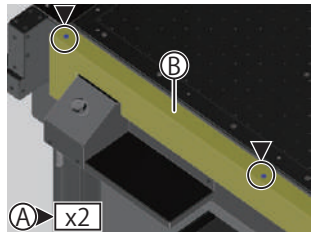




3 Remove screw(s).(2)
A : Tap tight S bind_M3x6(black)(x6)
B : Base frame cover F







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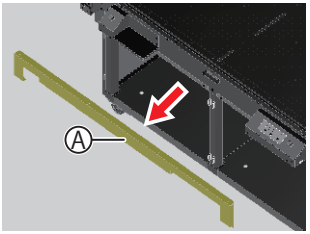
4	Remove base frame cover F. A : Base frame cover F	
5	Reverse the above procedure to reinstall the parts.	

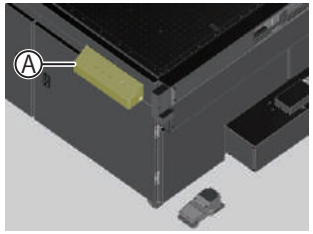
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.27. Base frame cover FR

A : Base frame cover FR



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L
- Base frame cover F

2 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x4)

3 Remove cable(s).

4 Remove base frame cover FR.

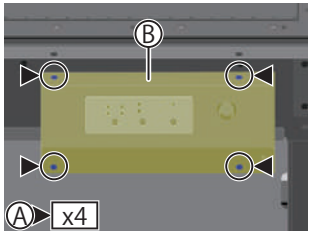
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L
- Base frame cover F

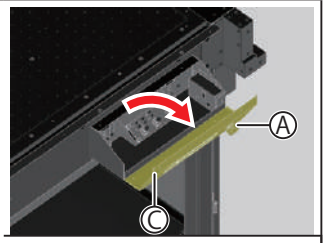
=> 3.2. Covers-remove/assemble

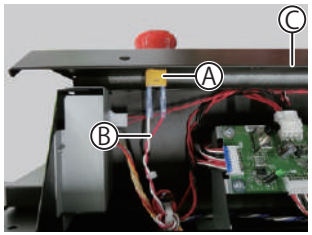
2 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x4)
B : Base frame cover FR



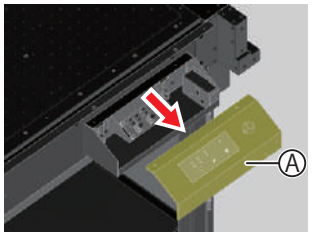
3 Remove cable(s).
- Lift base frame cover FR.
- Remove cable(s).

A : Emergency stop button
B : Cable(x2)
C : Base frame cover FR





4 Remove base frame cover FR.
A : Base frame cover FR



5 Reverse the above procedure to reinstall the parts.

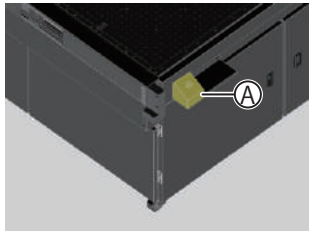
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.28. Base Frame cover FL

A : Base Frame cover FL



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Base Frame Front cover R
- Base Frame Front cover L
- Base Frame cover F

2 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x4)

3 Remove cable(s).

4 Remove base Frame cover FL.

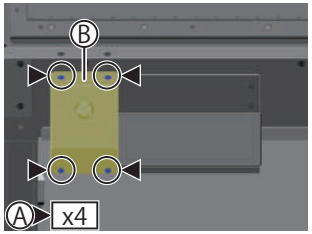
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Base Frame Front cover R
- Base Frame Front cover L
- Base Frame cover F

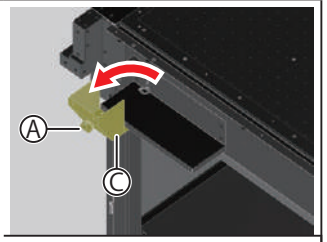
=> 3.2. Covers-remove/assemble

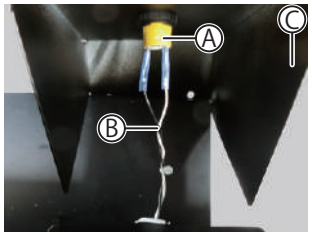
2 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x4)
B : Base Frame cover FL



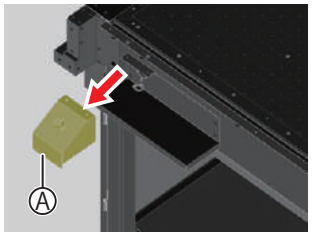
3 Remove cable(s).
- Lift base Frame cover FL.
- Remove cable(s).

A : Emergency stop button
B : Cable(x2)
C : Base Frame cover FL





4 Remove base Frame cover FL.
A : Base Frame cover FL



5 Reverse the above procedure to reinstall the parts.

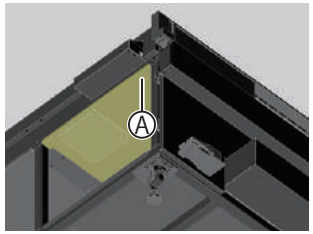
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.29. Vacuum fan cover R

A : Vacuum fan cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Base Frame Front cover R

2 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x6)

3 Remove vacuum fan cover R.

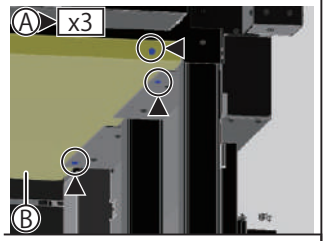
4 Reverse the above procedure to reinstall the parts.

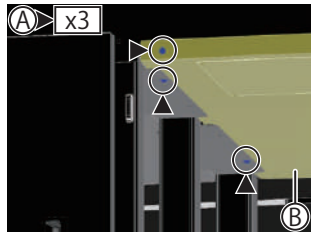
● Procedure(details)

1 Remove cover(s).
- Base Frame Front cover R
=> 3.2. Covers-remove/assemble

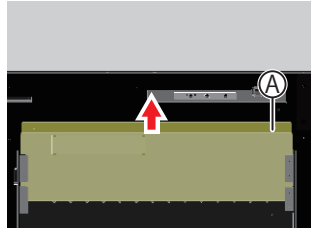
2 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x6)
B : Vacuum fan cover R

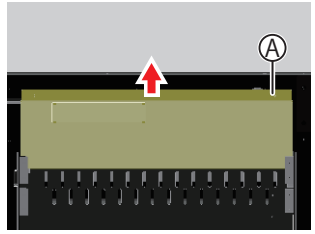
CAUTION
- Do not ride on base frame bottom cover.

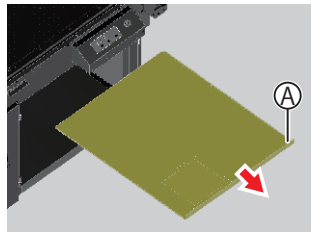




3 Remove vacuum fan cover R.
- Move vacuum fan cover R to front side.
A : Vacuum fan cover R







4 Reverse the above procedure to reinstall the parts.

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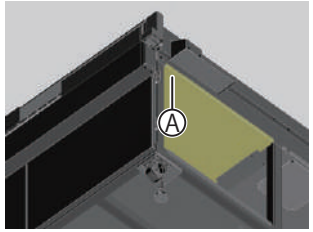
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.30. Vacuum fan cover L

A : Vacuum fan cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Base Frame Front cover L

2 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x6)

3 Remove vacuum fan cover L.

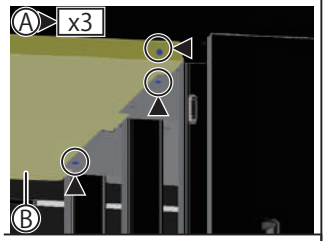
4 Reverse the above procedure to reinstall the parts.

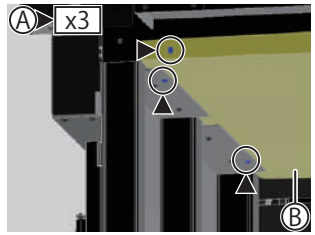
● Procedure(details)

1 Remove cover(s).
- Base Frame Front cover L
=> 3.2. Covers-remove/assemble

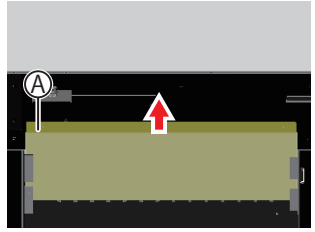
2 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x6)
B : Vacuum fan cover L

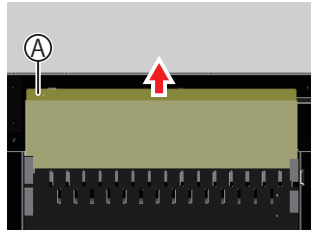
CAUTION
- Do not ride on base frame bottom cover.

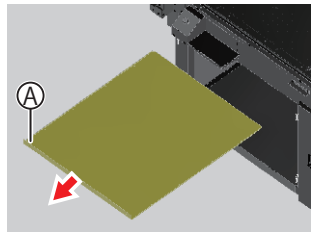




3 Remove vacuum fan cover L.
- Move vacuum fan cover L to front side.
A : Vacuum fan cover L







4 Reverse the above procedure to reinstall the parts.

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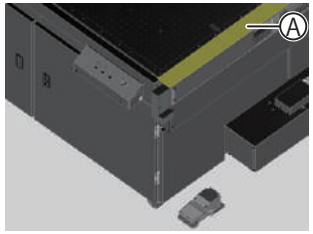
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.31. PF rail cover R

A : PF rail cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-
Generic item	Phillips screwdriver No.1	-

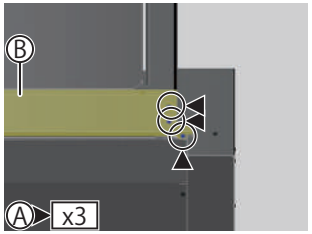
● Procedure

1 Move gantry.(front side)
2 Remove screw(s).(2)
- Tap tight S bind_M3x6(black)(x3)
3 Remove screw(s).(1)
- Baind small screw_M4x8(black)(x2)
4 Move gantry.(rear side)
5 Remove screw(s).(3)
- Small Thread (Extra-low head)_M3x8_t=0.8(x2)
6 Remove screw(s).(4)
- Small Thread (Extra-low head)_M3x8_t=0.8(x3)
7 Remove PF rail cover R.
8 Reverse the above procedure to reinstall the parts.

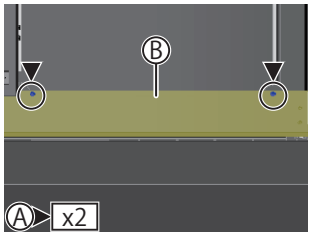
● Procedure(details)

1 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2.39. Manual method of gantry movement

2 Remove screw(s).(1)
A : Tap tight S bind_M3x6(black)(x3)
B : Vacuum fan cover L



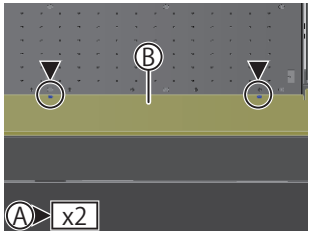
3 Remove screw(s).(2)
A : Baind small screw_M4x8(black)(x2)
B : PF rail cover R



4 Move gantry.(rear side)
- Mover gantry to rear side.
=> 3.2.39. Manual method of gantry movement

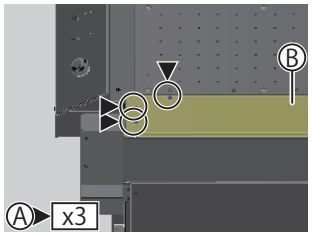
5 Remove screw(s).(3)
A : Small Thread (Extra-low head)_M3x8_t=0.8(x2)
B : PF rail cover R

NOTE
- Use screwdriver No. 1 for removal or installation of small screws (extra-low head).
There is a risk that screw is damaged.



6 Remove screw(s).(4)
A : Small Thread (Extra-low head)_M3x8_t=0.8(x3)
B : PF rail cover R

NOTE
- Use screwdriver No. 1 for removal or installation of small screws (extra-low head).
There is a risk that screw is damaged.



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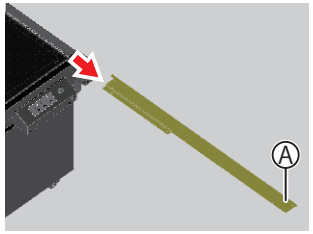
7	Remove PF rail cover R. A : PF rail cover R	
8	Reverse the above procedure to reinstall the parts.	

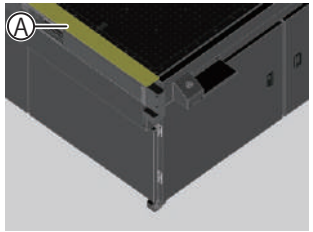
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.32. PF rail cover L

A : PF rail cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-
Generic item	Phillips screwdriver No.1	-

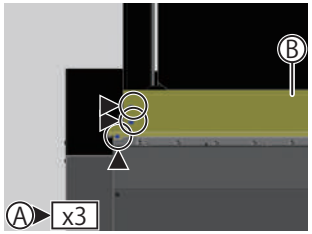
● Procedure

1 Move gantry.(front side)
2 Remove screw(s).(2)
- Tap tight S bind_M3x6(black)(x3)
3 Remove screw(s).(1)
- Baind small screw_M4x8(black)(x2)
4 Move gantry.(rear side)
5 Remove screw(s).(3)
- Small Thread (Extra-low head)_M3x8_t=0.8(x2)
6 Remove screw(s).(4)
- Small Thread (Extra-low head)_M3x8_t=0.8(x4)
7 Remove PF rail cover L.
8 Reverse the above procedure to reinstall the parts.

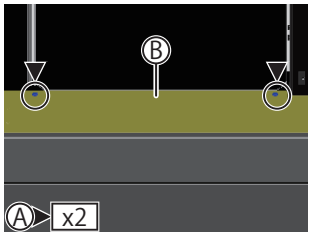
● Procedure(details)

1 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2.39. Manual method of gantry movement

2 Remove screw(s).(1)
A : Tap tight S bind_M3x6(black)(x3)
B : Vacuum fan cover L



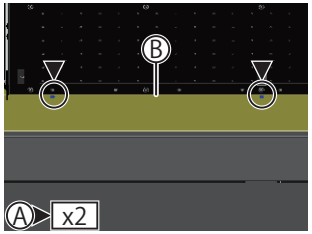
3 Remove screw(s).(2)
A : Baind small screw_M4x8(black)(x2)
B : PF rail cover L



4 Move gantry.(rear side)
- Mover gantry to rear side.
=> 3.2.39. Manual method of gantry movement

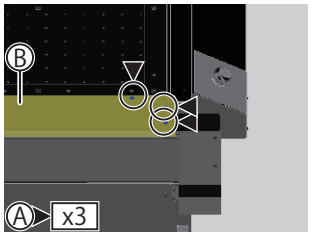
5 Remove screw(s).(3)
A : Small Thread (Extra-low head)_M3x8_t=0.8(x2)
B : PF rail cover L

NOTE
- Use screwdriver No. 1 for removal or installation of small screws (extra-low head).
There is a risk that screw is damaged.



6 Remove screw(s).(4)
A : Small Thread (Extra-low head)_M3x8_t=0.8(x3)
B : PF rail cover L

NOTE
- Use screwdriver No. 1 for removal or installation of small screws (extra-low head).
There is a risk that screw is damaged.



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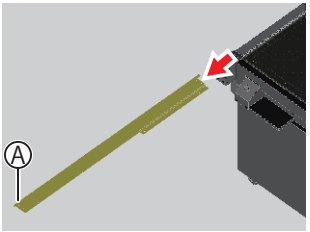
7	Remove PF rail cover L. A : PF rail cover L	
8	Reverse the above procedure to reinstall the parts.	

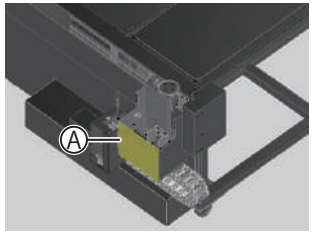
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.33. PG motor cover R

A : PG motor cover R



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove waste fluid valve.
2 Remove screw(s).
  - Tap tight S bind_M3x6(black)(x6)
3 Remove PG motor cover R.
4 Reverse the above procedure to reinstall the parts.

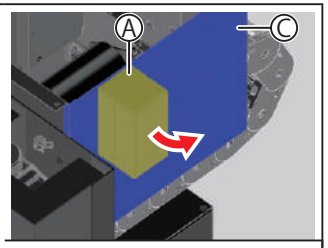
● Procedure(details)

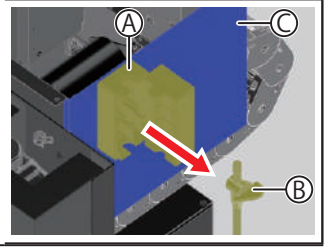
1 Remove waste fluid valve.
- Open waste fluid valve cover.
- Remove waste fluid valve.
- Close waste fluid cover.

A : Waste fluid valve cover
B : Waste fluid valve
C : PG motor cover R

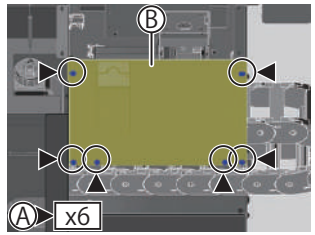
NOTE

- Be careful not to allow waste fluid to drip from waste fluid valve.

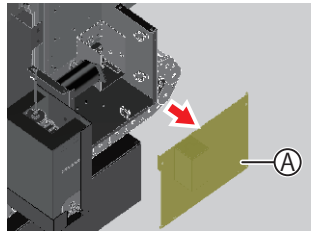




2 Remove screw(s).
A : Tap tight S bind_M3x6(black)(x6)
B : PG motor cover R



3 Remove PG motor cover R.
A : PG motor cover R



4 Reverse the above procedure to reinstall the parts.

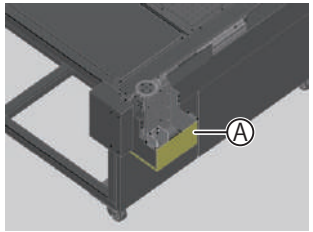
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.34. PG motor cover L

A : PG motor cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

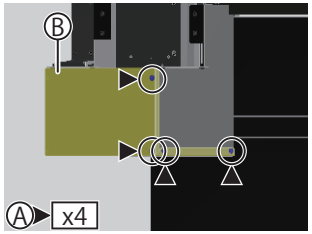
1 Remove screw(s).
- Tap tight S bind_M3x6(black)(x8)

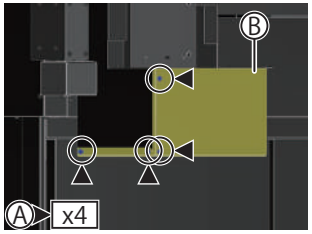
2 Remove PG motor cover L.

3 Reverse the above procedure to reinstall the parts.

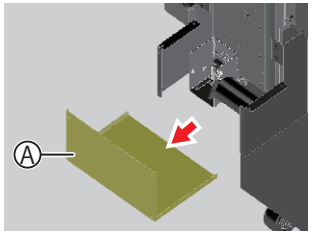
● Procedure(details)

1 Remove screw(s).
A : Tap tight S bind_M3x6(black)(x8)
B : PG motor cover L





2 Remove PG motor cover L.
A : PG motor cover L



3 Reverse the above procedure to reinstall the parts.

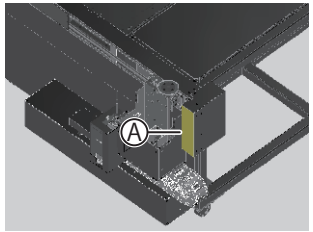
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.35. Dust prevention unit RR cover

A : Dust prevention unit RR cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

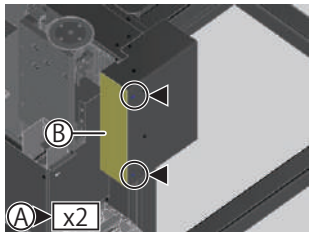
1 Remove screw(s).
- Tap tight S bind_M3x6(black)(x2)

2 Remove dust prevention unit RR cover.

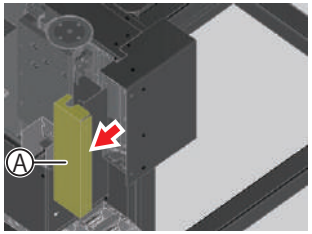
3 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove screw(s).
A : Tap tight S bind_M3x6(black)(x2)
B : Dust prevention unit RR cover



2 Remove dust prevention unit RR cover.
A : Dust prevention unit RR cover



3 Reverse the above procedure to reinstall the parts.

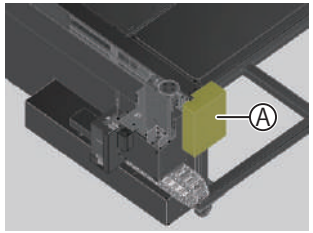
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.36. PF motor cover

A : PF motor cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Dust prebention unit RR cover

2 Move gantry.(front side)

3 Remove screw(s).(2)
- Tap tight S bind_M3x6(black)(x10)

4 Remove PF motor cover.

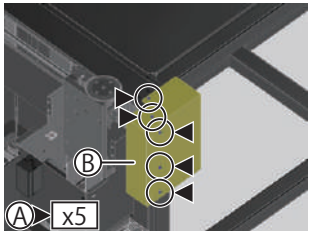
5 Reverse the above procedure to reinstall the parts.

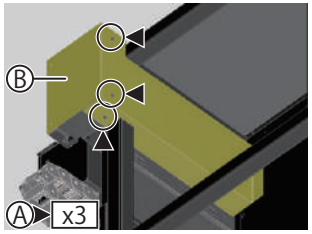
● Procedure(details)

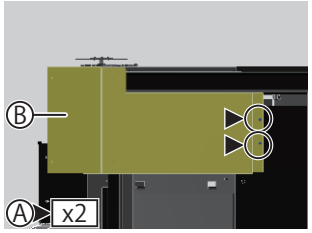
1 Remove cover(s).
- Dust prevention unit RR cover
=> 3.2. Covers-remove/assemble

2 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2.39. Manual method of gantry movement

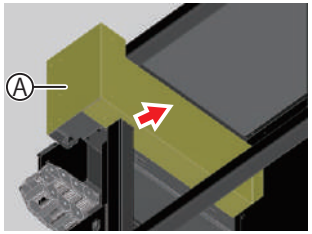
3 Remove screw(s).(2)
A : Tap tight S bind_M3x6(black)(x10)
B : PF motor cover

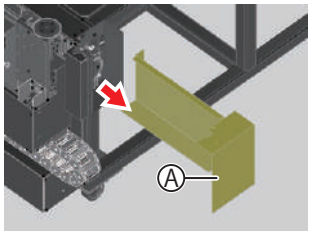






4 Remove PF motor cover.
- Move PF motor cover to right side.
- Remove PF motor cover.
A : PF motor cover





5 Reverse the above procedure to reinstall the parts.

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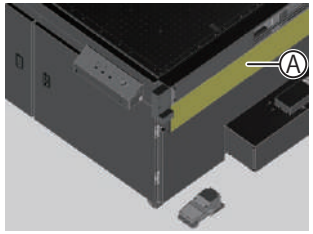
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.37. Ball screw cover R

A : Ball screw cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-
Generic item	Phillips screwdriver No.1	-

● Procedure

1 Remove cover(s).
- Base frame side cover R1
- Base frame side cover R2

2 Move gantry.(front side)

3 Remove screw(s).(1)
- Tap tight S bind_M3x6(black)(x4)
- Remove screw(s).(2)

4 Baind small screw_M4x8(black)(x2)

5 Move gantry.(rear side)
- Remove screw(s).(3)

6 Small Thread (Extra-low head)_M3x8_t=0.8(x2)

7 Remove screw(s).(4)
- Tap tight S bind_M3x6(black)(x2)

8 Remove screw(s).(2)
- Baind small screw_M4x8(black)(x2)

9 Remove ball screw cover R.

10 Reverse the above procedure to reinstall the parts.

● Procedure(details)

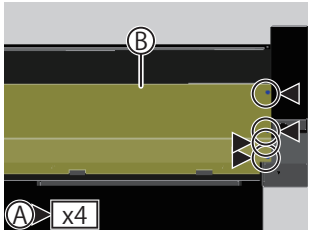
1 Remove cover(s).
- Base frame side cover R1
- Base frame side cover R2

=> 3.2. Covers-remove/assemble

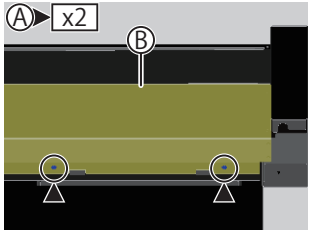
2 Move gantry.(front side)
- Mover gantry to front side.

=> 3.2.39. Manual method of gantry movement

3 Remove screw(s).(1)
A : Tap tight S bind_M3x6(black)(x4)
B : Ball screw cover R



4 Remove screw(s).(2)
A : Baind small screw_M4x8(black)(x2)
B : Ball screw cover R

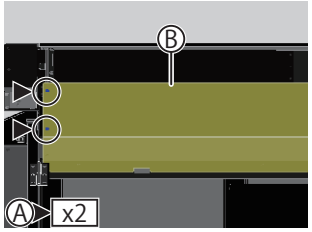


5 Move gantry.(rear side)
- Mover gantry to rear side.

=> 3.2.39. Manual method of gantry movement

6 Remove screw(s).(3)
A : Small Thread (Extra-low head)_M3x8_t=0.8(x2)
B : Ball screw cover R

NOTE
- Use screwdriver No. 1 for removal or installation of small screws (extra-low head).
There is a risk that screw is damaged.



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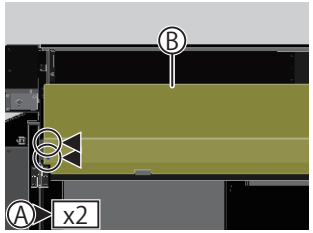
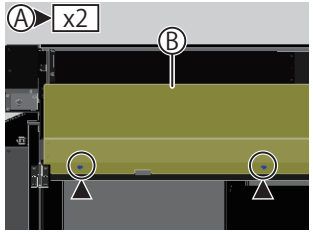
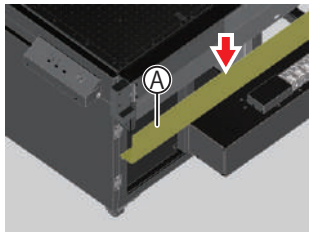
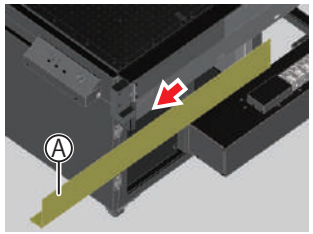
7	Remove screw(s).(4) A : Tap tight S bind_M3x6(black)(x2) B : Ball screw cover R	
8	Remove screw(s).(5) A : Baind small screw_M4x8(black)(x2) B : Ball screw cover R	
9	Remove ball screw cover R. - Move ball screw cover R to lower side. - Remove ball screw cover R. A : Ball screw cover R	 
10	Reverse the above procedure to reinstall the parts.	

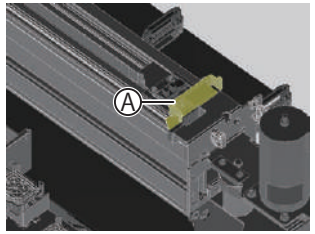
TIP

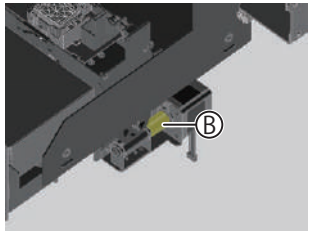
index=> 3. Parts replacement

CONFIDENTIAL

3.2.38. Manual method of cap-out

A : Carriage lock
B : Motor gear of maintenance slide unit





● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

CAUTION

- When capped out manually, the system should be rebooted and capped in automatically. There is a risk that it was not capped in the correct position.

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

2 Move maintenance unit. (lower side)
3 Release carriage lock.
4 Move carriage.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

=> 3.2. Covers-remove/assemble

NOTE

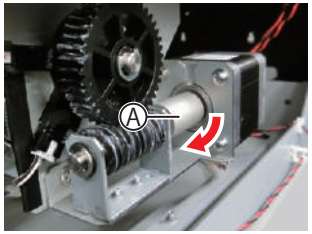
- Side cover R cannot be removed without removing the pump cover.
  => 3.7. Maintenance/drop sensor unit

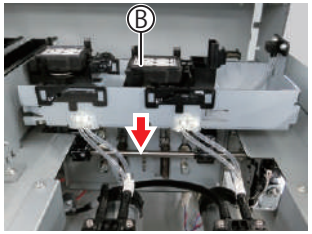
2 Move maintenance unit. (lower side)
- Turn motor gear of maintenance slide unit to right side.
- Move maintenance unit to lower side.

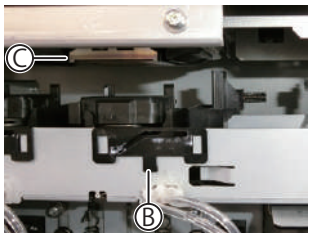
A : Motor gear of maintenance slide unit
B : Maintenance unit
C : Print head

CAUTION

- Lower maintenance unit to the point where it does not hit print head.

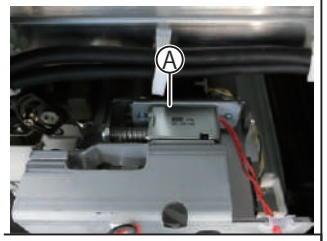


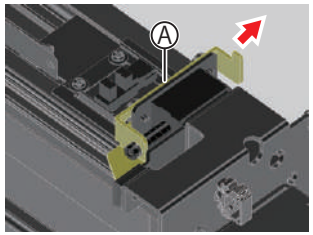




CONFIDENTIAL

3	Release carriage lock. - Move carriage lock to rear side. A : Carriage lock

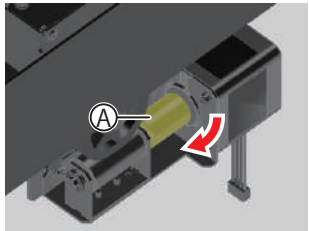


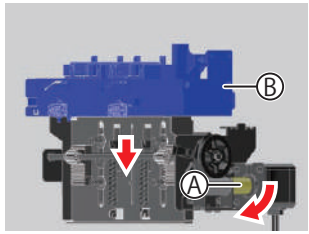


4	Move carriage.
5	Reverse the above procedure to reinstall the parts.

NOTE

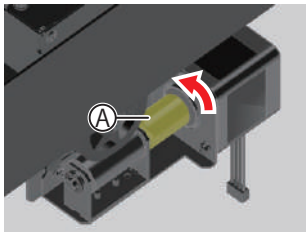
- When lower maintenance unit:
  Turn motor gear to right side.
  A : Motor gear of maintenance slide unit
  B : Maintenance unit

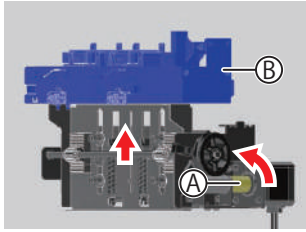




NOTE

- When raise maintenance unit
  Turn motor gear to left side.
  A : Motor gear of maintenance slide unit
  B : Maintenance unit





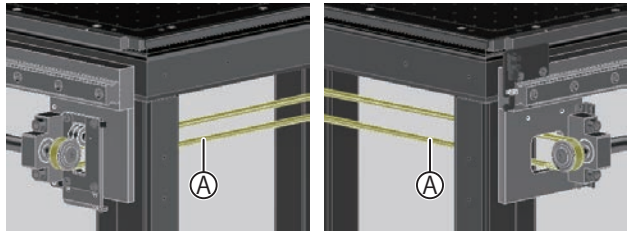
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.2.39. Manual method of gantry movement

A : PF belt



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

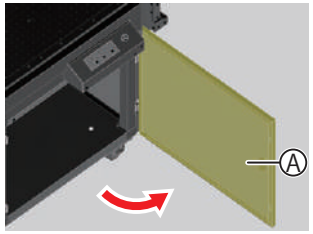
1 Open base frame fonrt cover R.
2 Remove PF belt cover.
- Round head screw with split washer_M3x6(x4)
3 Move guntry.
4 Install PF belt cover.
5 Close base frame fonrt cover R.

● Procedure(details)

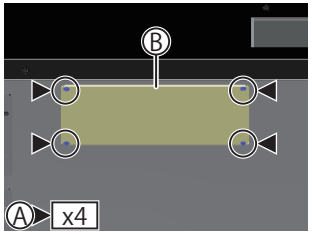
1 Open base frame fonrt cover R.
A : Base frame fonrt cover R

NOTE

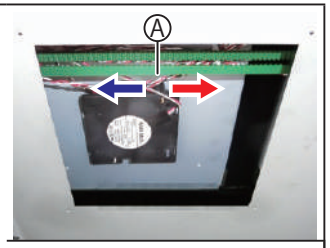
=> Installation manual (Startup guide)

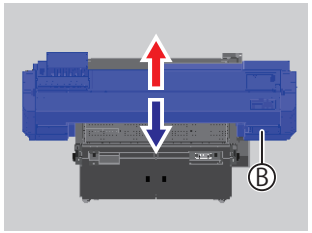


2 Remove PF belt cover.
A : Round head screw with split washer_M3x6(x4)
B : PF belt cover



3 Move guntry.
- Move the lower PF belt to left or right.
A : PF belt
B : Gantry





4 Install PF belt cover.

NOTE

=> Installation manual (Startup guide)

5 Close base frame fonrt cover R.

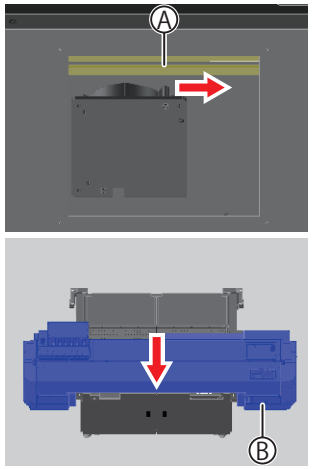
NOTE

=> Installation manual (Startup guide)

CONFIDENTIAL

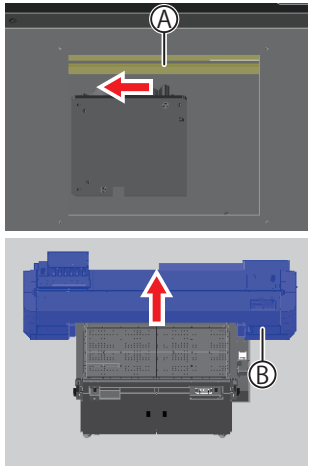
NOTE

- When move gantry to front side:
  Move the lower PF belt to left side.
  A : PF belt
  B : Gantry



NOTE

- When move gantry to rear side:
  Move the lower PF belt to right side.
  A : PF belt
  B : Gantry



TIP

index=> 3. Parts replacement

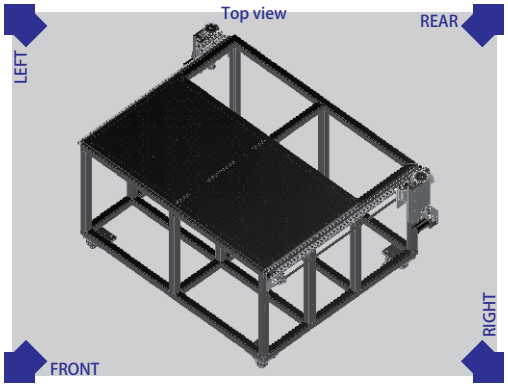
CONFIDENTIAL

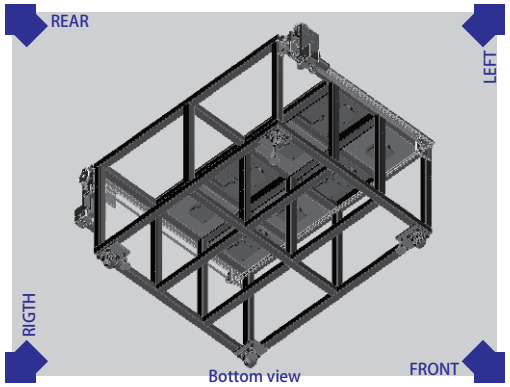
3.3. Base frame

NOTE

- As of April 1, 2023 (No.1485101)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No	Contents	Reference
1	PF encoder	=> 3.3.1. PF encoder(T.B.D.)
2	PF encoder scale	=> 3.3.2. PF encoder scale(T.B.D.)
6	PF speed reduction belt	=> 3.3.3. PF speed reduction belt(T.B.D.)
5	PF motor	=> 3.3.4. PF motor(T.B.D.)
3	PF origin sensor	=> 3.3.5. PF origin sensor(T.B.D.)
4	PF limit sensor	=> 3.3.6. PF limit sensor(T.B.D.)
7	PG encoder scale (right side)	=> 3.3.7. PG encoder scale (right side) (T.B.D.)
8	PG encoder scale (left side)	=> 3.3.8. PG encoder scale (left side) (T.B.D.)
9	PG belt (right side)	=> 3.3.9. PG speed reduction belt (right side)(T.B.D.)
10	PG belt (left side)	=> 3.3.10. PG speed reduction belt (left side)(T.B.D.)
11	PG motor (right side)	=> 3.3.11. PG motor (right side)(T.B.D.)
12	PG motor (left side)	=> 3.3.12. PG motor (left side)(T.B.D.)
13	Vacuum fan (right side)	=> 3.3.13. Vacuum fan (right side)
13	Vacuum fan (left side)	=> 3.3.14. Vacuum fan (left side)

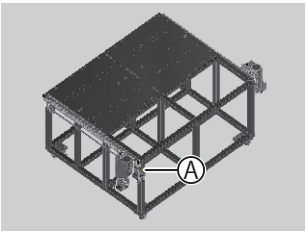
TIP

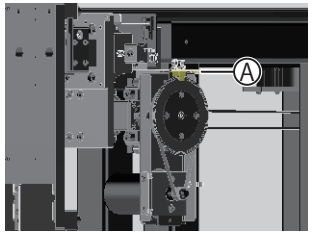
index=> 3. Parts replacement

CONFIDENTIAL

3.3.1. PF encoder(T.B.D.)

A : PF encoder



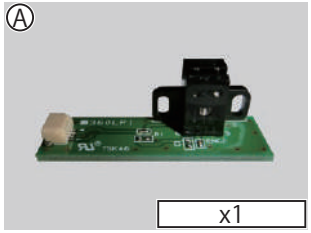


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-40770	PF Encoder Board	-

NOTE

DH-40770
PF Encoder Board
Ⓐ Encoder



● Procedure

- T.B.D.

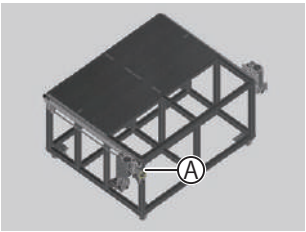
TIP

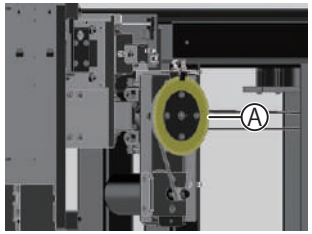
index=> 3. Parts replacement

CONFIDENTIAL

3.3.2. PF encoder scale(T.B.D.)

A : PF encoder scale



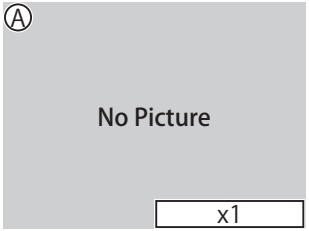


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41673	PF-Encoder Scale	-

NOTE

DH-41673
PF-Encoder Scale
Ⓐ Encoder scale



● Procedure

- T.B.D.

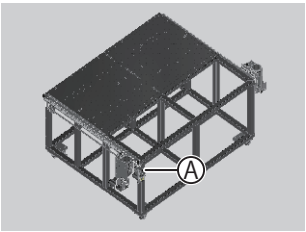
TIP

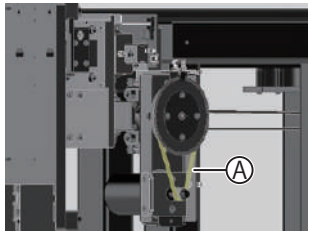
index=> 3. Parts replacement

CONFIDENTIAL

3.3.3. PF speed reduction belt(T.B.D.)

A : PF speed reduction belt



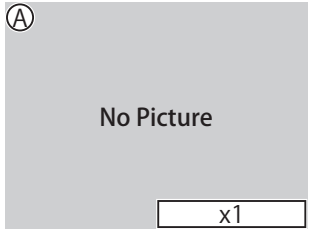


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-44700	PF Timing Belt Assy	-

NOTE

DG-44700
PF Timing Belt Assy
Ⓐ Belt



● Procedure

- T.B.D.

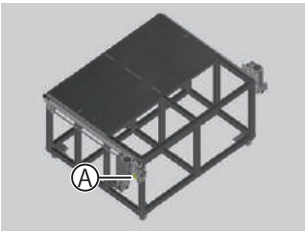
TIP

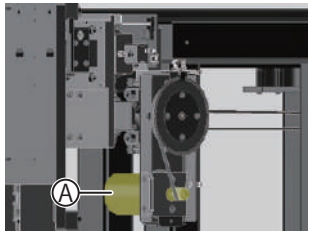
index=> 3. Parts replacement

CONFIDENTIAL

3.3.4. PF motor(T.B.D.)

A : PF motor





● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49020	PF Motor Assy	-

NOTE

DF-49020
PF Motor Assy
Ⓐ Motor

● Procedure

- T.B.D.

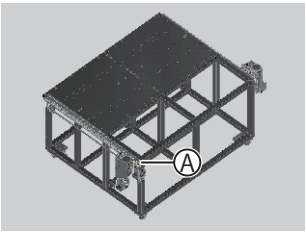
TIP

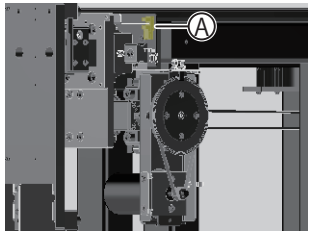
index=> 3. Parts replacement

CONFIDENTIAL

3.3.5. PF origin sensor(T.B.D.)

A : PF origin sensor



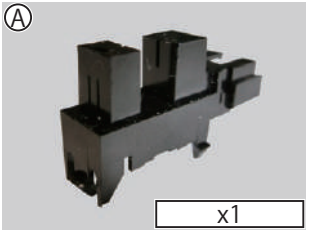


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49471	CR HP Sensor. Lever Sensor	-

NOTE

DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



● Procedure

- T.B.D.

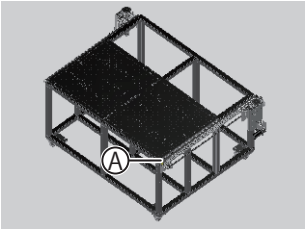
TIP

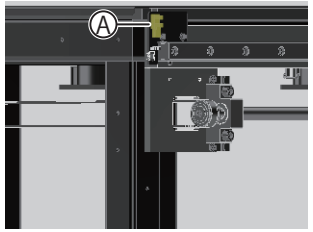
index=> 3. Parts replacement

CONFIDENTIAL

3.3.6. PF limit sensor(T.B.D.)

A : PF limit sensor



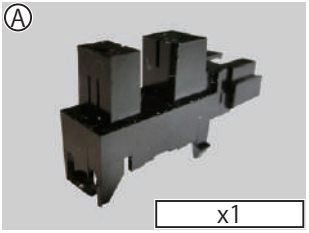


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49471	CR HP Sensor. Lever Sensor	-

NOTE

DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



● Procedure

- T.B.D.

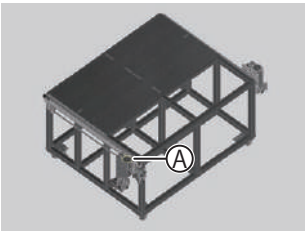
TIP

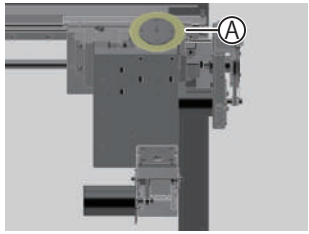
index=> 3. Parts replacement

CONFIDENTIAL

3.3.7. PG encoder scale (right side)(T.B.D.)

A : PG encoder scale (right side)



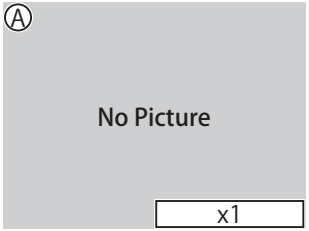


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41673	PF-Encoder Scale	-

NOTE

DH-41673
PF-Encoder Scale
Ⓐ Encoder scale



● Procedure

- T.B.D.

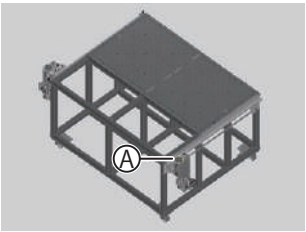
TIP

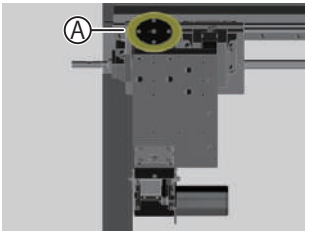
index=> 3. Parts replacement

CONFIDENTIAL

3.3.8. PG encoder scale (left side)(T.B.D.)

A : PG encoder scale (left side)



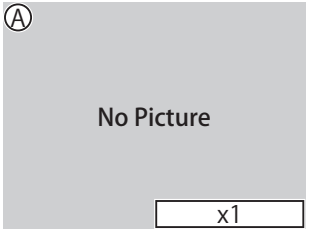


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41673	PF-Encoder Scale	-

NOTE

DH-41673
PF-Encoder Scale
Ⓐ Encoder scale



● Procedure

- T.B.D.

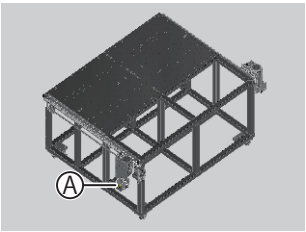
TIP

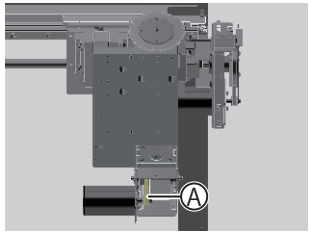
index=> 3. Parts replacement

CONFIDENTIAL

3.3.9. PG speed reduction belt (right side)(T.B.D.)

A : PG speed reduction belt (right side)





● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
T.B.D.	-	-

● Procedure

- T.B.D.

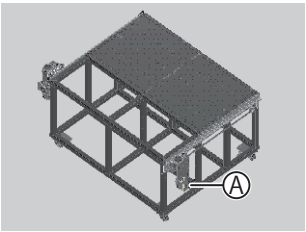
TIP

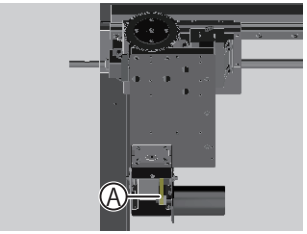
index=> 3. Parts replacement

CONFIDENTIAL

3.3.10. PG speed reduction belt (left side)(T.B.D.)

A : PG speed reduction belt (left side)





● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
T.B.D.	-	-

● Procedure

- T.B.D.

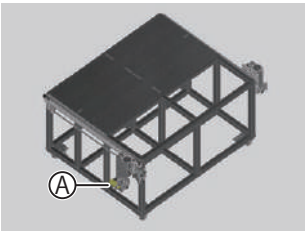
TIP

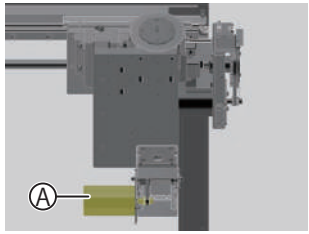
index=> 3. Parts replacement

CONFIDENTIAL

3.3.11. PG motor (right side)(T.B.D.)

A : PG motor (right side)





● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49020	PF Motor Assy	-

NOTE

DF-49020
PF Motor Assy
Ⓐ Motor

● Procedure

- T.B.D.

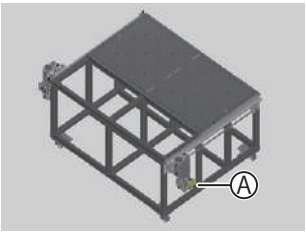
TIP

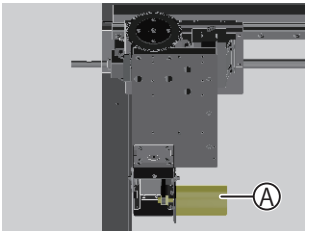
index=> 3. Parts replacement

CONFIDENTIAL

3.3.12. PG motor (left side)(T.B.D.)

A : PG motor (left side)





● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49020	PF Motor Assy	-

NOTE

DF-49020
PF Motor Assy
Ⓐ Motor

● Procedure

- T.B.D.

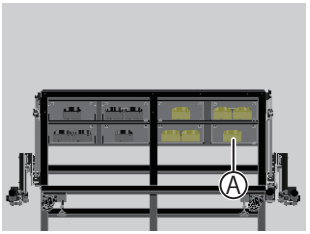
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.3.13. Vacuum fan (right side)

A : Vacuum fan (right side)



● Tools, Jigs, and Maintenance Part(s)

保守番号	名称	参照
DG-42988	吸着ファン Assy	-
一般市販品	プラスドライバー No.2	-

NOTE

DG-42988
Adsorption Fan Assy
Ⓐ Fan

● Procedure

1 Remove cover(s).
- Base FLame FLont cover R
- Vacuum fan cover R

2 Remove cable(s).

3 Remove fan.
- Round head screw with split washer(polished)_M3x40 Ni-3(x2)

4 Replace fan.

5 Reverse the above procedure to reinstall the Parts.

● Procedure(details)

1 Remove cover(s).
- Base FLame FLont cover R
- Vacuum fan cover R

=> 3.2. Covers-remove/assemble

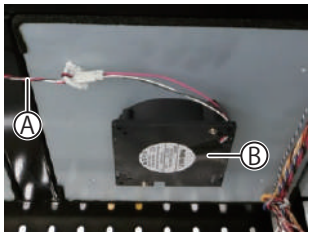
2 Remove cable(s).

=> 8. Electric cable diagram

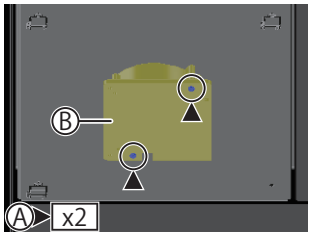
A : Cable
B : Vacuum fan

NOTE

- Connection
  - Vacuum fan cable:Relay cable (FAN CONT board [J5])



3 Remove fan.
A : Round head screw with split washer(polished)_ M3x40 Ni-3(x2)
B : Vacuum fan



4 Replace fan.

5 Reverse the above procedure to reinstall the parts.

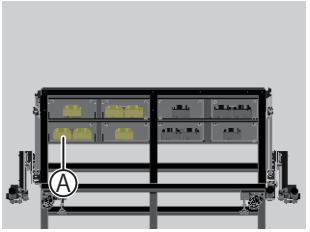
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.3.14. Vacuum fan (left side)

A : Vacuum fan (left side)



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-42988	Adsorption Fan Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-42988
Adsorption Fan Assy
Ⓐ Fan

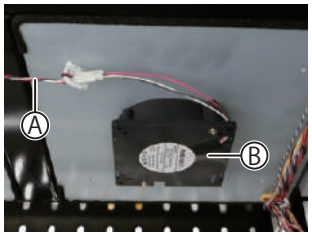
● Procedure

1 Remove cover(s).
- Base FLame FLont cover L
- Vacuum fan cover L
2 Remove cable(s).
3 Remove fan.
- Round head screw with split washer(polished)_M3x40 Ni-3(x2)
4 Replace fan.
5 Reverse the above procedure to reinstall the Parts.

● Procedure(details)

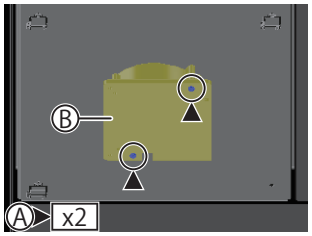
1 Remove cover(s).
- Base FLame FLont cover L
- Vacuum fan cover L
=> 3.2. Covers-remove/assemble

2 Remove cable(s).
=> 8. Electric cable diagram
A : Cable
B : Vacuum fan



NOTE
- Connection
  - Vacuum fan cable:Relay cable (FAN CONT board [J3])

3 Remove fan.
A : Round head screw with split washer(polished)_ M3x40 Ni-3(x2)
B : Vacuum fan



4 Replace fan.

5 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

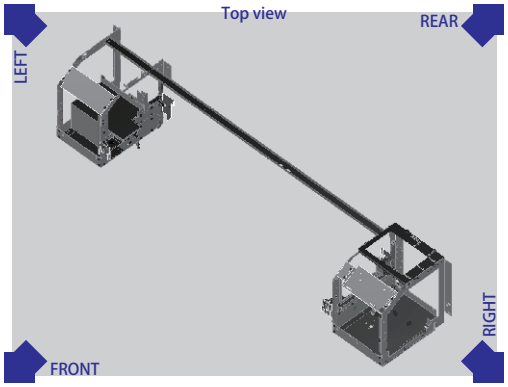
CONFIDENTIAL

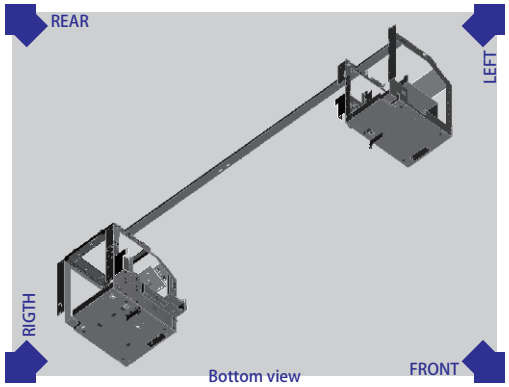
3.4. Frame

NOTE

- As of April 1, 2023 (No.1485201)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	Leaser sensor(right side)	=> 3.4.3. Leaser sensor(right side)
2	Leaser sensor(left side)	=> 3.4.4. Laser sensor(left side)
3	PG encoder (right side)	=> 3.4.5. PG encoder(right side)(T.B.D.)
4	PG encoder (left side)	=> 3.4.6. PG encoder(left side)(T.B.D.)
5	PG origin sensor(right side)	=> 3.4.7. PG origin sensor(right side) (T.B.D.)
6	PG origin sensor(left side)	=> 3.4.8. PG origin sensor(left side) (T.B.D.)
7	PG limit sensor (right side)	=> 3.4.9. PG limit sensor(right side) (T.B.D.)
8	PG limit sensor (left side)	=> 3.4.10. PG limit sensor(left side) (T.B.D.)

List of other related procedure:

No.	Contents	Reference
1	PG sensor cover R	=> 3.4.1. PG sensor cover R
2	PG sensor cover L	=> 3.4.2. PG sensor cover L

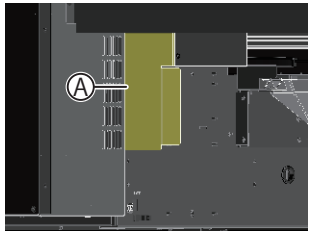
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.4.1. PG sensor cover R

A : PG sensor cover R



CAUTION

- This procedure may be performed by two people.
  =>Refer to step.3 and 5.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

2 Remove screw(s).
- Tapping screw_M3x6 S tight cup(black)(x1)

3 Remove screw(s).
- Tapping screw_M3x6 S tight cup(x2)

4 Remove PG sensor cover R.

5 Install PG sensor cover R.

6 Install screw(s).
- Tapping screw_M3x6 S tight cup(x2)

7 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

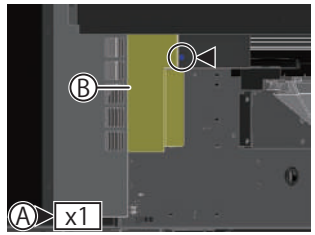
=> 3.2. Covers-remove/assemble

NOTE

- Side cover R cannot be removed without removing the pump cover.

=> 3.7. Maintenance/drop sensor unit

2 Remove screw(s).(1)
A : Tapping screw_M3x6 S tight cup(black)(x1)
B : PG sensor cover R



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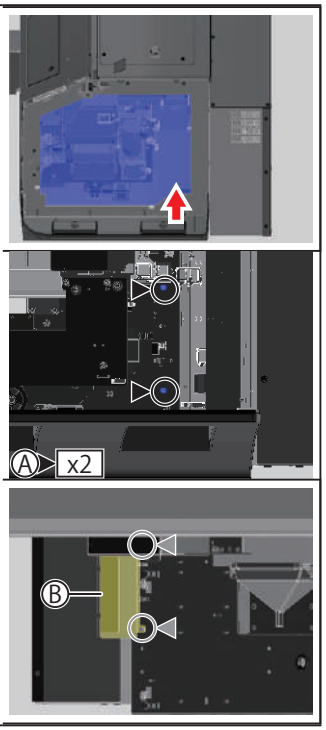
3 Remove screw(s).
- Remove screws inside side cover R.

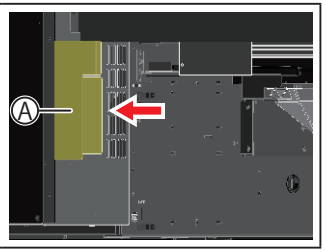
A : Tapping screw_M3x6 S tight cup(x2)
B : PG sensor cover R

CAUTION
- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to remove the screws while holding down the cover, work with two people.



4 Remove PG sensor cover R.

A : PG sensor cover R



5 Install PG sensor cover R.

NOTE
- Refer to step.4.

6 Install screw(s).

NOTE
- Refer to step.3.

CAUTION
- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to install the screws while holding down the cover, work with two people.

7 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.4.2. PG sensor cover L

A : PG sensor cover L

CAUTION

- This procedure may be performed by two people
  =>Refer to step.3 and 5.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover L
- Side cover L

2 Remove screw(s).(1)
- Tapping screw_M3x6 S tight cup(black)(x1)

3 Remove screw(s).(2)
- Tapping screw_M3x6 S tight cup(x2)

4 Remove PG sensor cover L.

5 Install PG sensor cover L.

6 Install screw(s).
- Tapping screw_M3x6 S tight cup(x2)

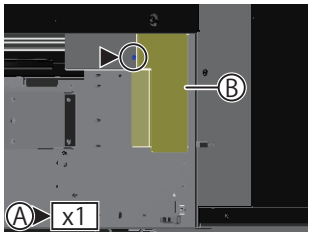
7 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover L
- Side cover L

=> 3.2. Covers-remove/assemble

2 Remove screw(s).(1)
A : TTapping screw_M3x6 S tight cup(black)(x1)
B : PG sensor cover L

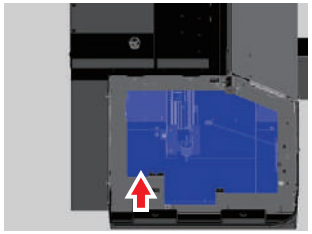


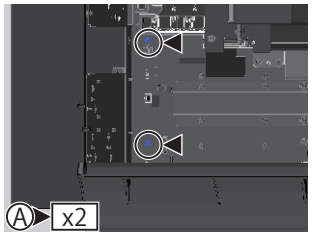
3 Remove screw(s).(2)
- Remove screws inside side cover L.

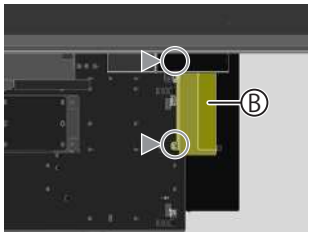
A : Tapping screw_M3x6 S tight cup(x2)
B : PG sensor cover L

CAUTION

- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to remove the screws while holding down the cover, work with two people.

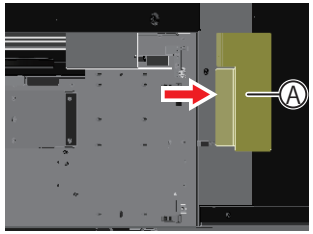






CONFIDENTIAL

4 Remove PG sensor cover L.
A : PG sensor cover L



5 Install PG sensor cover L.

NOTE

- Refer to step.4.

6 Install screw(s).

NOTE

- Refer to step.3.

CAUTION

- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to install the screws while holding down the cover, work with two people.

7 Reverse the above procedure to reinstall the parts.

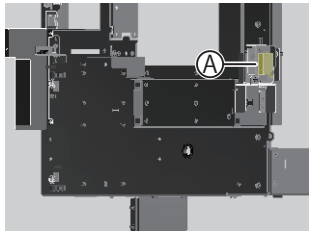
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.4.3. Leaser sensor(right side)

A : Laser sensor (right side)
*transmitter



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41728	Laser Sensor Assy	-
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (2.5mm)	-

NOTE

DH-41728
Leaser Sensor Assy
Ⓐ Leaser sensor (T)
Ⓑ Leaser sensor (R)

WARNING

- This system (including the housing and safety device) is a Class 1 laser product.
  Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure.

WARNING

- Precautions when using the laser sensor
  - Do not look into the laser beam.
  - Do not look into the laser beam with optical instruments.
    Doing so may cause eye damage.

● Procedure

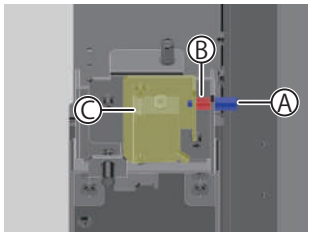
1 Remove cover(s).
  - Laser sensor cover R
2 Remove adjustment screw.
3 Remove cable(s).(from UV-LED board)
4 Remove laser sensor.
  - Hex socket screw with split washer_M3x6 Ni-3(x2)
5 Remove laser sensor.
  - Baind small screw_M3x14 Ni-3(x2)
6 Replace laser sensor.
7 Reverse the above procedure to reinstall the Parts.
8 Check and adjust after replacing parts.

● Procedure(details)

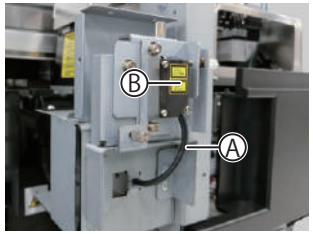
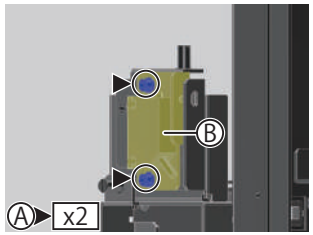
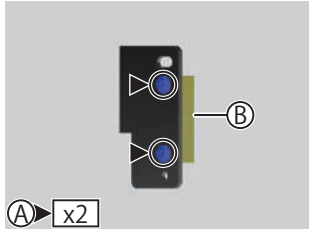
1 Remove cover(s).
  - Laser sensor cover R
  => 3.2. Covers-remove/assemble

2 Remove adjustment screw.
  A : Adjustment screw
  B : Adjustment spring
  C : Laser sensor Assy

  NOTE
  - Do not lose adjustment spring.



CONFIDENTIAL

3	Remove cable(s).(from UV-LED board) => 8. Electric cable diagram A : Cable B : Laser sensor Assy NOTE - Connection - Laser sensor(right side):UV-LED board [J27]	
4	Remove laser sensor Assy. A : Hex socket screw with split washer_M3x6 Ni-3(x2) B : Laser sensor Assy	
5	Remove laser sensor. A : Baind small screw_M3x14 Ni-3(x2) B : Laser sensor	
6	Replace laser sensor.	
7	Reverse the above procedure to reinstall the parts.	
8	Check and adjust after replacing parts. => 4. Adjustment	

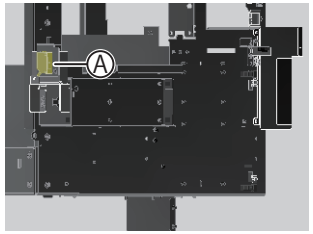
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.4.4. Laser sensor(left side)

A : Laser sensor(left side)
*receiver



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41728	Laser Sensor Assy	-
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (2.5mm)	-

NOTE

DH-41728
Leaser Sensor Assy
Ⓐ Leaser sensor (T)
Ⓑ Leaser sensor (R)

WARNING

- This system (including the housing and safety device) is a Class 1 laser product.
  Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure.

WARNING

- Precautions when using the laser sensor
  - Do not look into the laser beam.
  - Do not look into the laser beam with optical instruments.
    Doing so may cause eye damage.

● Procedure

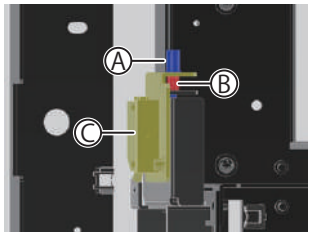
1 Remove cover(s).
  - Laser sensor cover L
2 Remove adjustment screw.
3 Remove cable(s).(from UV-LED board)
4 Remove laser sensor.
  - Hex socket screw with split washer_M3x6 Ni-3(x2)
5 Remove laser sensor.
  - Baind small screw_M3x14 Ni-3(x2)
6 Replace laser sensor.
7 Reverse the above procedure to reinstall the Parts.
8 Check and adjust after replacing parts.

● Procedure(details)

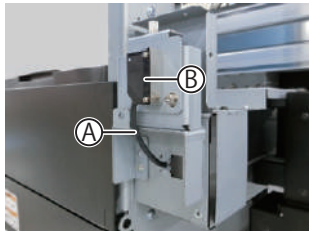
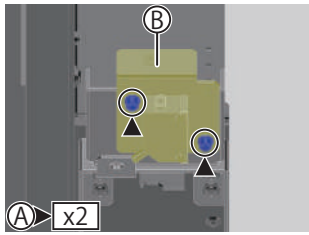
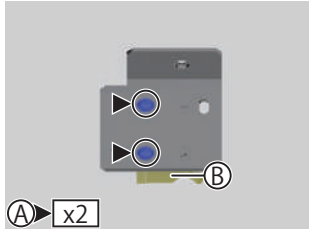
1 Remove cover(s).
  - Laser sensor cover L
  => 3.2. Covers-remove/assemble

2 Remove adjustment screw.
  A : Adjustment screw
  B : Adjustment spring
  C : Laser sensor Assy

  NOTE
  - Do not lose adjustment spring.



CONFIDENTIAL

3	Remove cable(s).(from UV-LED board) => 8. Electric cable diagram A : Cable B : Laser sensor Assy NOTE - Connection - Laser sensor(left side):UV-LED board [J26]	
4	Remove laser sensor Assy. A : Hex socket screw with split washer_M3x6 Ni-3(x2) B : Laser sensor Assy	
5	Remove laser sensor. A : Baind small screw_M3x14 Ni-3(x2) B : Laser sensor	
6	Replace laser sensor.	
7	Reverse the above procedure to reinstall the parts.	
8	Check and adjust after replacing parts. => 4. Adjustment	

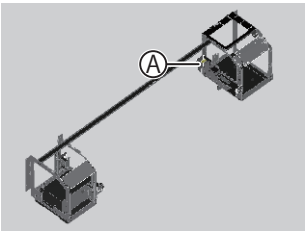
TIP

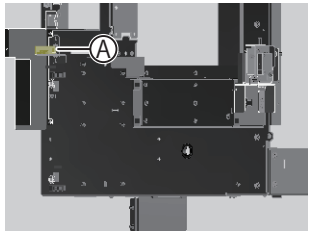
index=> 3. Parts replacement

CONFIDENTIAL

3.4.5. PG encoder(right side)(T.B.D.)

A : PG encoder(right side)



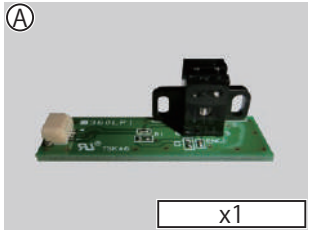


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-40770	PF Encoder Board	-

NOTE

DH-40770
PF Encoder Board
Ⓐ Encoder



● Procedure

- T.B.D.

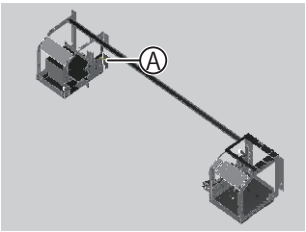
TIP

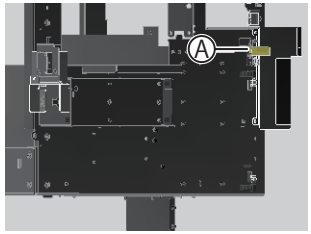
index=> 3. Parts replacement

CONFIDENTIAL

3.4.6. PG encoder(left side)(T.B.D.)

A : PG encoder(left side)



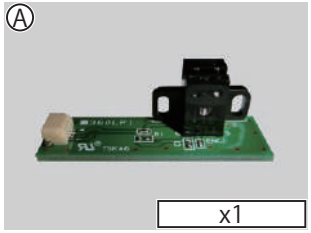


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-40770	PF Encoder Board	-

NOTE

DH-40770
PF Encoder Board
Ⓐ Encoder



● Procedure

- T.B.D.

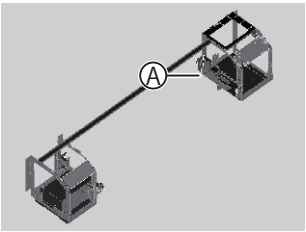
TIP

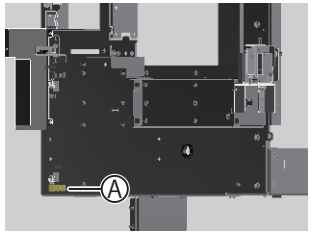
index=> 3. Parts replacement

CONFIDENTIAL

3.4.7. PG origin sensor(right side)(T.B.D.)

A : PG origin sensor(right side)



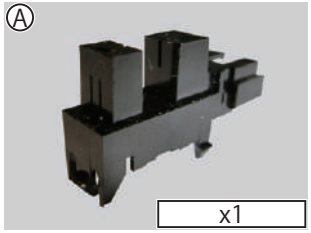


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49471	CR HP Sensor. Lever Sensor	-

NOTE

DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



● Procedure

- T.B.D.

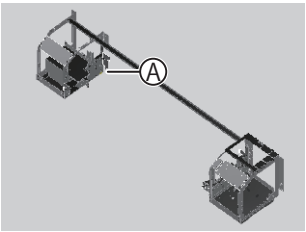
TIP

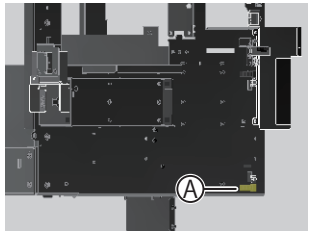
index=> 3. Parts replacement

CONFIDENTIAL

3.4.8. PG origin sensor(left side)(T.B.D.)

A : PG origin sensor(left side)



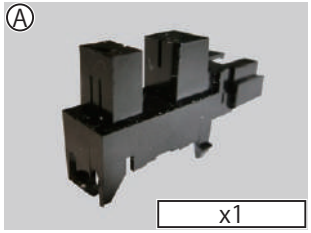


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49471	CR HP Sensor. Lever Sensor	-

NOTE

DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



● Procedure

- T.B.D.

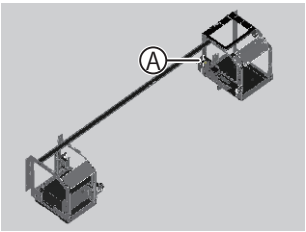
TIP

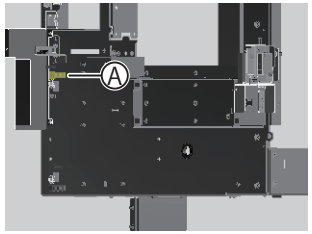
index=> 3. Parts replacement

CONFIDENTIAL

3.4.9. PG limit sensor(right side)(T.B.D.)

A : PG limit sensor(right side)



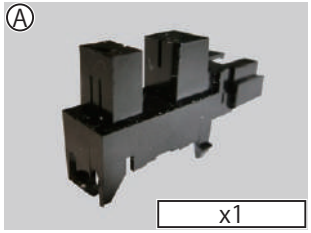


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49471	CR HP Sensor. Lever Sensor	-

NOTE

DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



● Procedure

- T.B.D.

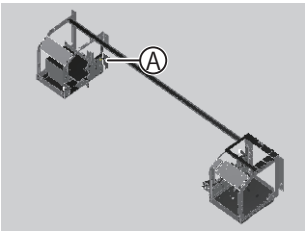
TIP

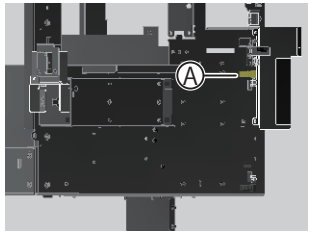
index=> 3. Parts replacement

CONFIDENTIAL

3.4.10. PG limit sensor(left side)(T.B.D.)

A : PG limit sensor(left side)



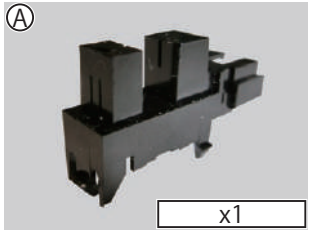


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49471	CR HP Sensor. Lever Sensor	-

NOTE

DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



● Procedure

- T.B.D.

TIP

index=> 3. Parts replacement

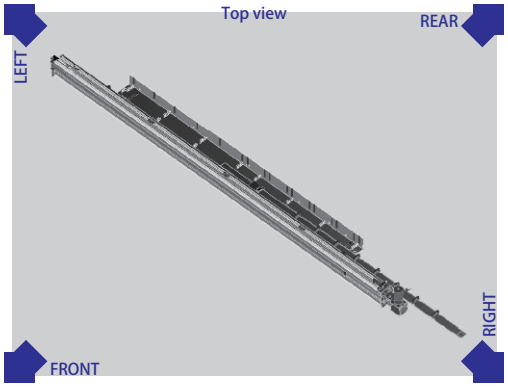
CONFIDENTIAL

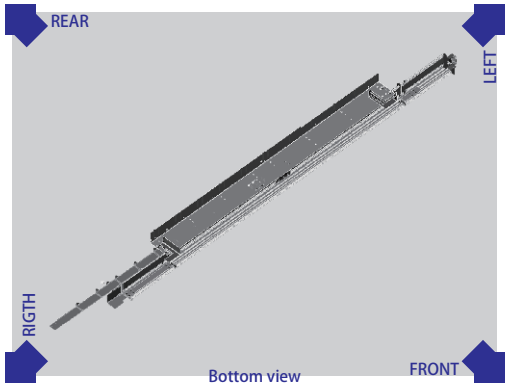
3.5. Y rail

NOTE

- As of April 1, 2023 (No.1485301)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	CR belt	=> 3.5.3. CR belt(T.B.D.)
2	CR lock solenoid	=> 3.5.4. CR lock solenoid
3	CR motor	=> 3.5.5. CR motor
4	CR origin sensor	=> 3.5.6. CR origin sensor
5	CR speed reduction belt	=> 3.5.7. CR speed reduction belt(T.B.D.)
6	Steel bare	=> 3.5.8. Steel bare(T.B.D.)
7	T fence	=> 3.5.9. T fence

List of other related procedure:

番号	内容	参照
1	PG encoder cover R	=> 3.5.1. PG encoder cover R
2	PG encoder cover L	=> 3.5.2. PG encoder cover L

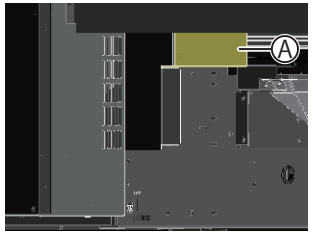
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.5.1. PG encoder cover R

A : PG encoder cover R



CAUTION

- This procedure may be performed by two people.
  =>Refer to step.3 and 5.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

2 Remove screw(s).(1)
- Tapping screw_M3x6 S tight cup(black)(x1)

3 Remove screw(s).(2)
- Tapping screw_M3x6 S tight cup(x2)

4 Remove PG encoder cover R.

5 Install PG encoder cover R.

6 Install screw(s).
- Tapping screw_M3x6 S tight cup(x2)

7 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

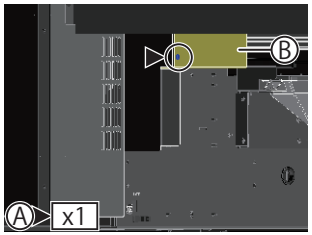
=> 3.2. Covers-remove/assemble

NOTE

- Side cover R cannot be removed without removing the pump cover.

=> 3.7. Maintenance/drop sensor unit

2 Remove screw(s).(1)
A : Tapping screw_M3x6 S tight cup(black)(x1)
B : PG encoder cover R

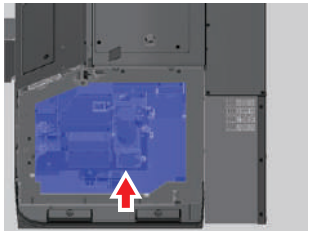


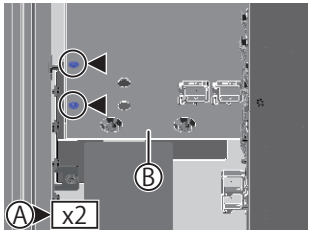
3 Remove screw(s).(2)
- Remove screws inside side cover R.
- Remove screws from cable guide.

A : Tapping screw_M3x6 S tight cup(x2)
B : Cable guide

CAUTION

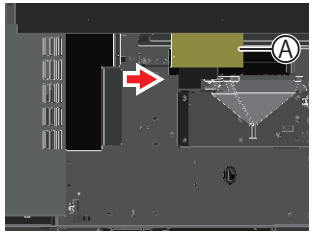
- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to remove the screws while holding down the cover, work with two people.





CONFIDENTIAL

4 Remove PG encoder cover R.
A : PG encoder cover R



5 Install PG encoder cover R.

NOTE
- Refer to step.4.

6 Install screw(s).

NOTE
- Refer to step.3.

CAUTION
- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to install the screws while holding down the cover, work with two people.

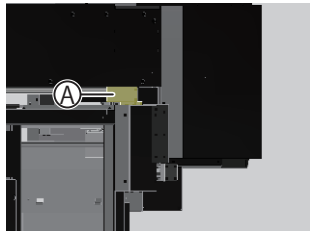
7 Reverse the above procedure to reinstall the parts.

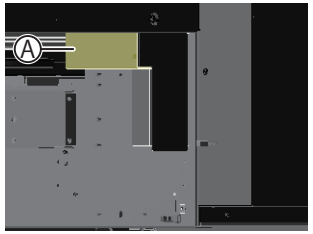
TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.5.2. PG encoder cover L

A : PG encoder cover L





CAUTION

- This procedure may be performed by two people.
  =>Refer to step.3 and 5.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover L
- Side cover L

2 Remove screw(s).(1)
- Tapping screw_M3x6 S tight cup(black)(x1)

3 Remove screw(s).(2)
- Tapping screw_M3x6 S tight cup(x2)

4 Remove PG encoder cover L.

5 Install PG encoder cover L.

6 Install screw(s).
- Tapping screw_M3x6 S tight cup(x2)

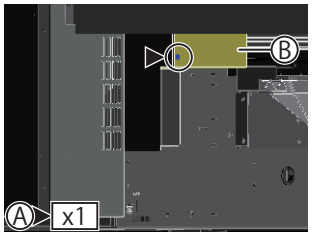
7 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover L
- Side cover L

=> 3.2. Covers-remove/assemble

2 Remove screw(s).(1)
A : Tapping screw_M3x6 S tight cup(black)(x1)
B : PG encoder cover L

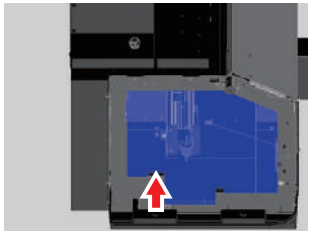


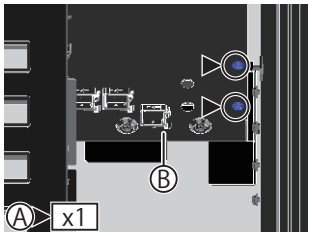
3 Remove screw(s).(2)
- Remove screws inside side cover L.
- Remove screws from cable guide.

A : Tapping screw_M3x6 S tight cup(x2)
B : Cable guide

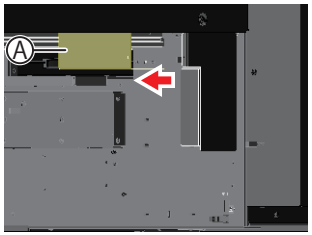
CAUTION

- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to remove the screws while holding down the cover, work with two people.





4 Remove PG encoder cover L.
A : PG encoder cover L



CONFIDENTIAL

5 Install PG encoder cover L.

NOTE

- Refer to step.4.

6 Install screw(s).

NOTE

- Refer to step.3.

CAUTION

- Remove screws and the cover will drop.
  While holding the cover, remove the screws.
  If it is not possible to install the screws while holding down the cover, work with two people.

7 Reverse the above procedure to reinstall the parts.

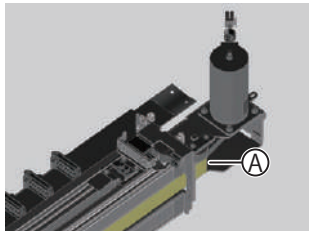
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.5.3. CR belt(T.B.D.)

A : CR belt

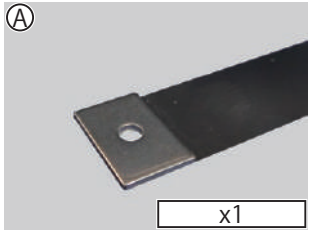


● Tools, Jigs, and Maintenance Part(s)

保守番号	名称	参照
DG-49266	Steel Belt Assy	-

NOTE

DG-49266
Steel Belt Assy
Ⓐ Steel belt



● Procedure

- T.B.D.

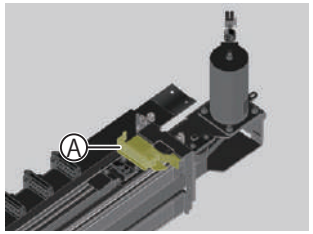
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.5.4. CR lock solenoid

A : CR lock solenoid

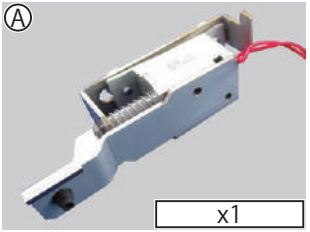


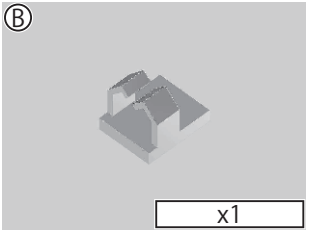
● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-44085	Carriage Lock Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-44085
Carriage Lock Assy
Ⓐ Carriage lock unit
Ⓑ Clamp





● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

2 Move carriage.
3 Remove cable(s).
4 Remove CR lock solenoid.
- Cup screw_M3x4 Zn-CM2(x2)
5 Replace CR lock solenoid.
6 Reverse the above procedure to reinstall the parts.
7 Check and adjust after replacing parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R

=> 3.2. Covers-remove/assemble

- Pump cover

=> 3.7. Maintenance/drop sensor unit

2 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

3 Remove cable(s).

=> 8. Electric cable diagram

NOTE

- Connection
  - CR lock solenoid cable:Relay cable (MAIN board [J31])

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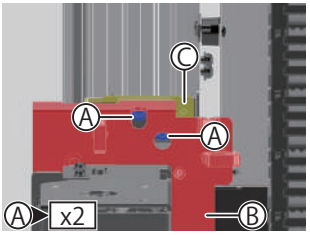
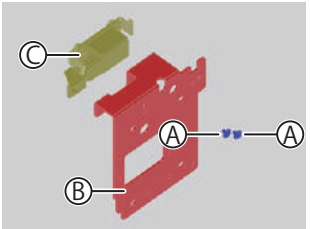
4	Remove CR lock solenoid. A : Cup screw_M3x4 Zn-CM2(x2) B : Y drive base C : CR lock solenoid **NOT** - Insert phillips screwdriver into hole in Y drive base and remove screws. - If phillips screwdriver does not fit in hole in Y drive base, remove CR motor.	 
5	Replace CR lock solenoid.	
6	Reverse the above procedure to reinstall the parts.	
7	Check and adjust after replacing parts. => 4. Adjustment	

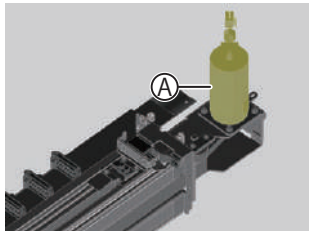
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.5.5. CR motor

A : CR motor



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-42456	CR Motor(Nidec)Assy	-
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (3mm)	-
Generic item	Tension gauge	Max 40N (4,080gf)

NOTE

DG-42456
CR Motor(Nidec)Assy
Ⓐ Motor

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

2 Move carriage.

3 Remove cable(s).

4 Loosen CR speed reduction belt tension.
- Hex socket screw with split washer(polished)_M4x10(x4)

5 Remove CR motor Assy.
- Hex socket screw with split washer(polished)_M4x10(x4)

6 Remove CR motor.
- Flat head small screw_M4x8(x4)

7 Replace CR motor.

8 Reverse the above procedure to reinstall the parts.

9 Check and adjust after replacing parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R

=> 3.2. Covers-remove/assemble

- Pump cover

=> 3.7. Maintenance/drop sensor unit

2 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

3 Remove cable(s).

=> 8. Electric cable diagram

NOTE
- Connection
  - CR motor cable:Relay cable (MAIN board [J20])

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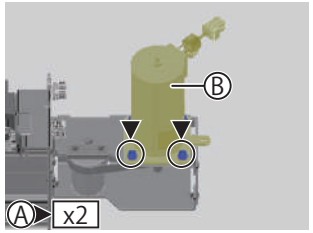
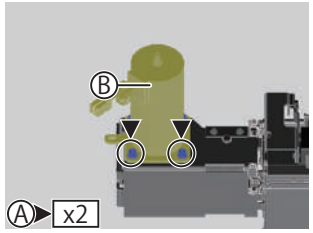
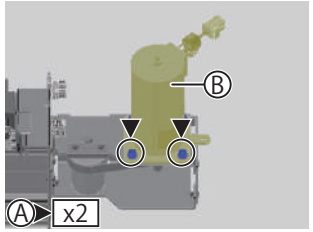
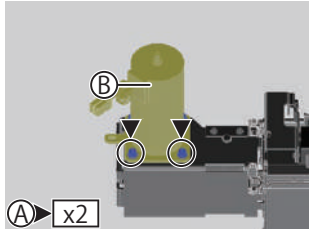
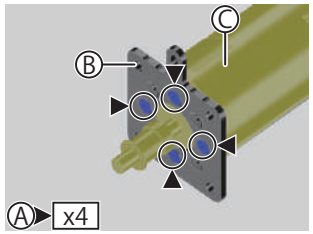
4	Loosen CR speed reduction belt tension. - Loosen screw(s). - Move CR motor Assy to left side. A : Hex socket screw with split washer(polished)_ M4x10(x4) B : CR motor Assy	 
5	Remove CR motor Assy. A : Hex socket screw with split washer(polished)_ M4x10(x4) B : CR motor Assy	 
6	Remove CR motor. A : Flat head small screw_M4x8(x4) B : CR motor spaser C : CR motor	
7	Replace CR motor.	

8	Reverse the above procedure to reinstall the parts.
9	Check and adjust after replacing parts. => 4. Adjustment

TIP

index=> 3. Parts replacement

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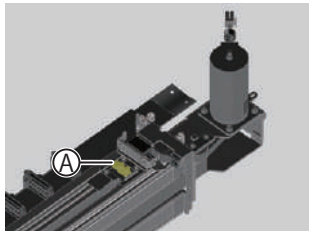
3.5.6. CR origin sensor

A : CR origin sensor

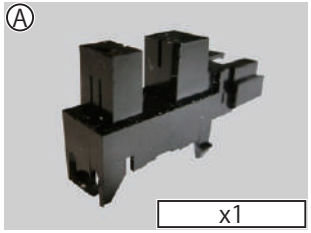


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DF-49471	CR HP Sensor. Lever Sensor	-

NOTE

DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



● Procedure

1 Move carriage.
2 Remove cable(s).
3 Remove sensor.
4 Replace sensor.
5 Reverse the above procedure to reinstall the parts.
6 Check and adjust after replacing parts.

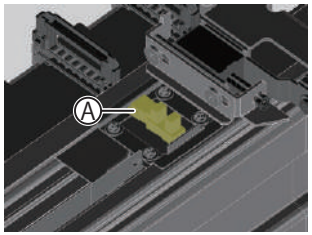
● Procedure(details)

1 Move carriage.
- Release carriage lock.
=> 3.2. Covers-remove/assemble

2 Remove cable(s).
=> 8. Electric cable diagram

NOTE
- Connection
  - CR origin sensor cable:Relay cable (MAIN board [J46])

3 Replace sensor.
A : CR origin sensor



4 Replace sensor.

5 Reverse the above procedure to reinstall the parts.

6 Check and adjust after replacing parts.
=> 4. Adjustment

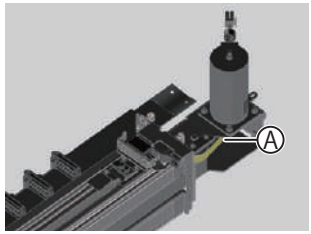
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.5.7. CR speed reduction belt(T.B.D.)

A : CR speed reduction belt

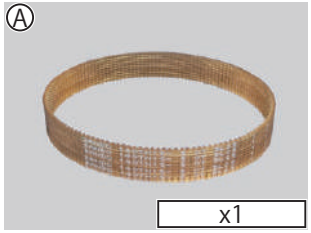


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-42458	CR Deceleration Belt(210)Assy	-

NOTE

DG-42458
CR Deceleration Belt(210)Assy
Ⓐ Belt



● Procedure

- T.B.D.

TIP

index=> 3. Parts replacement

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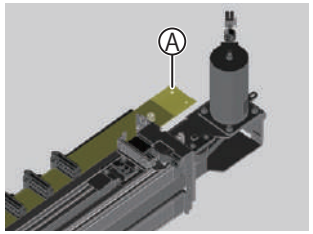
3.5.8. Steel bare(T.B.D.)

A : Steel bare

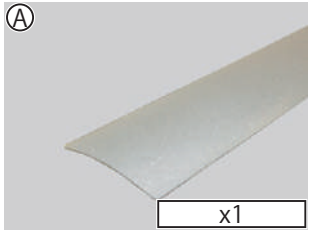


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49267	Bare Steel Sheet Assy	-

NOTE

DG-49267
Bare Steel Sheet Assy
Ⓐ Steel bare



● Procedure

- T.B.D.

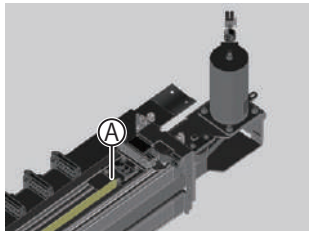
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.5.9. T fence

A : T fence

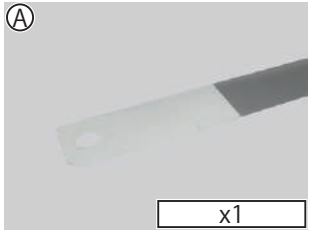


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49264	T Fence Assy	-

NOTE

DG-49264
T Fence Assy
Ⓐ T fence



CAUTION

- Precautions when handling T fence
  - Wear gloves.
    T fence may get dirty or damaged.
  - Do not deform T fence
    It may affect the image quality.

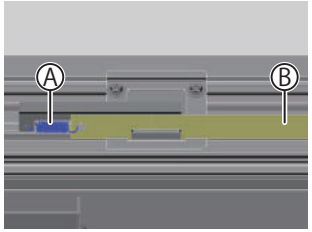
● Procedure

1 Move carriage.
2 Remove T fence.(from T fence spring)
3 Remove T fence.(from T fence holder)
4 Replace T fence.
5 Install T fence.
6 Reverse the above procedure to reinstall the 7arts.
7 Check and adjust after replacing parts.

● Procedure(details)

1 Move carriage.
- Release carriage lock.
=> 3.2. Covers-remove/assemble

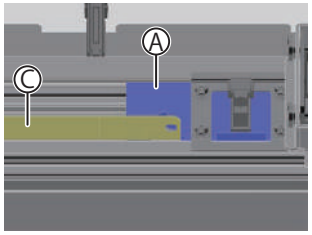
2 Remove T fence.(from T fence spring)
A : T fence spring
B : T fence

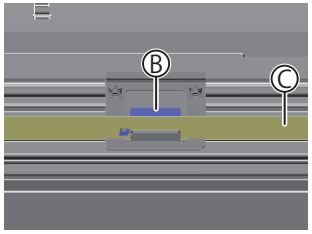


3 Remove T fence.(from T fence spring)
A : T fence holder (origin side)
B : T fence holder
C : T fence

NOTE

- T fence is removed in order from origin side.





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4	Replace T fence.

5 Install T fence.

- Install new T fence to hook of origin side.
- Allow a margin between T fence and hook of T fence holder.
- Insert T fence into T-fence holder and CR encoder.

NOTE

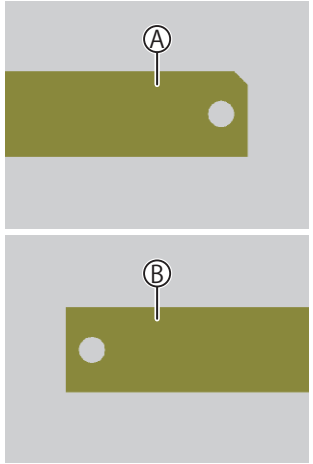
- Fold origin side of new T fence by 9mm from tip (by 90 degrees).
- Do not fold counter origin side.
- Remove all T fence seals before use.

NOTE

- T fence has different shape in both side.

A : T fence (origin side)

B : T fence (counter origin side)



6	Reverse the above procedure to reinstall the parts.
7	Check and adjust after replacing parts. => 4. Adjustment

TIP

index=> 3. Parts replacement

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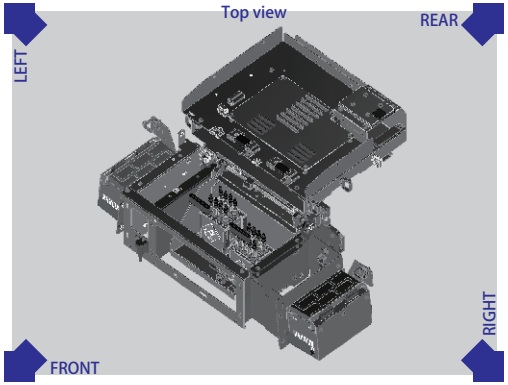
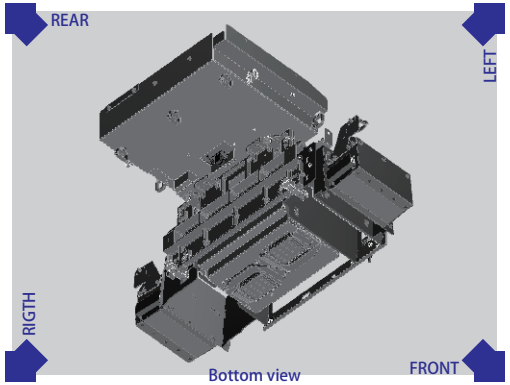
3.6. CR/UV-LED

NOTE

- CR:As of April 1, 2023 (No.1485401)
- UV-LED:As of April 1, 2023 (No.1489700)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	CR board	=> 3.6.6. CR board
2	LED pointer	=> 3.6.7. LED pointer
3	Print head	=> 3.6.8. Print head
4	UV-LED(right side)	=> 3.6.9. UVLED (right side)
5	UV-LED(left side)	=> 3.6.10. UVLED (left side)
6	Valve head	=> 3.6.11. Valve head
7	Cursor	=> 3.6.12. Cursor(T.B.D.)
8	Cursor roller arm	=> 3.6.13. Cursor roller arm(T.B.D.)
9	CR encoder	=> 3.6.14. CR encoder(T.B.D.)

List of other related procedure:

No.	Contents	Reference
1	CR board cover	=> 3.6.1. CR board cover
2	CR cover	=> 3.6.2. CR cover
3	Connector cover R	=> 3.6.3. Connector cover R
4	Connector cover L	=> 3.6.4. Connector cover L
5	Cleaning of valve head	=> 3.6.5. Cleaning of valve head

TIP

index=> 3. Parts replacement

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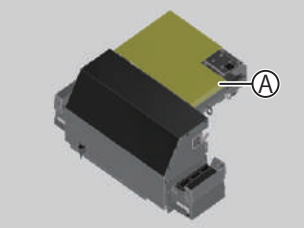
3.6.1. CR board cover

A : CR board cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R
- Top cover lid

2 Remove screw(s).(right side)
- Tapping screw_M3x6 S tight cup(x1)

3 Open front cover.

4 Remove screw(s).(left side)
- Tapping screw_M3x6 S tight cup(x2)

5 Remove CR board cover.

6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

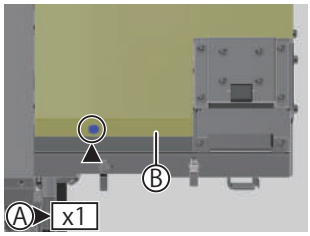
1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R
- Top cover lid

=> 3.2. Covers-remove/assemble

NOTE
- Side cover R cannot be removed without removing the pump cover.

=> 3.7. Maintenance/drop sensor unit

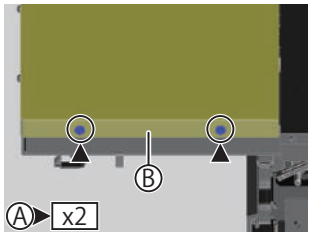
2 Remove screw(s).(right side)
A : Tapping screw_M3x6 S tight cup(x1)
B : CR board cover



3 Open front cover.

NOTE
=> Operation manual

4 Remove screw(s).(left side)
A : Tapping screw_M3x6 S tight cup(x2)
B : CR board cover



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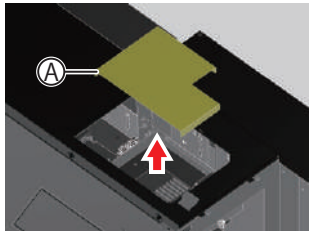
5	Remove CR board cover. - Remove CR board cover from top cover lid side. A : CR board cover	
6	Reverse the above procedure to reinstall the parts.	

TIP

index=> 3. Parts replacement

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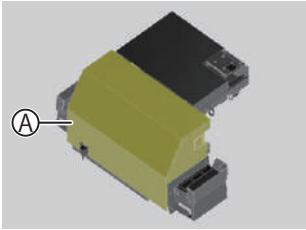
3.6.2. CR cover

A : CR cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Move gantry.(front side)
2 Move carriage.
3 Open front cover.
4 Open clamp. (Right side)
5 Open clamp. (left side)
6 Remove screw(s).
- Round head screw with split washer(polished)_M3x6(black)(x4)
7 Remove CR cover.
8 Reverse the above procedure to reinstall the parts.

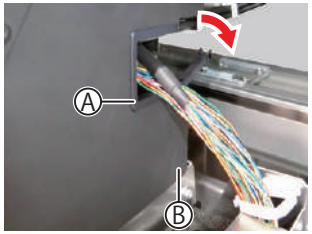
● Procedure(details)

1 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2. Covers-remove/assemble

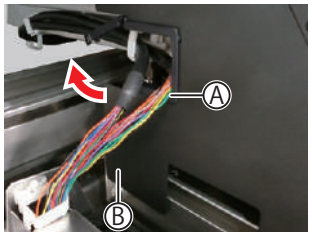
2 Move carriage.
- Release carriage lock.
=> 3.2. Covers-remove/assemble

3 Open front cover.
NOTE
=> Operation manual

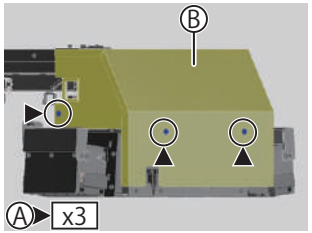
4 Open clamp. (Right side)
- Remove the hook on the upper side of clamp.
A : Clamp(right side)
B : CR cover

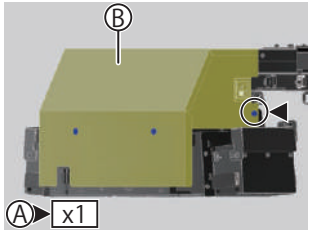


5 Open clamp. (left side)
- Remove the hook on the bottom side of clamp.
A : Clamp(left side)
B : CR cover



6 Remove screw(s).
A : Round head screw with split washer(polished)_ M3x6(black)(x4)
B : CR board cover





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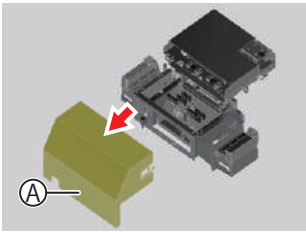
7	Remove CR cover. A : CR cover	
8	Reverse the above procedure to reinstall the parts.	

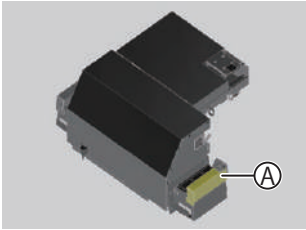
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.3. Connector cover R

A : Connector cover R



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Move gantry.(front side)
2 Move carriage.
3 Open front cover.
4 Remove screw(s).
- Round head screw with split washer_M3x6(x2)
5 Remove Connector cover R.
6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2. Covers-remove/assemble

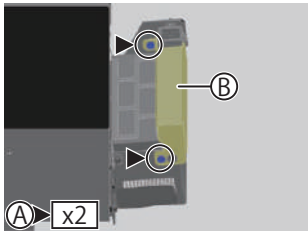
2 Move carriage.
- Release carriage lock.
=> 3.2. Covers-remove/assemble

3 Open front cover.

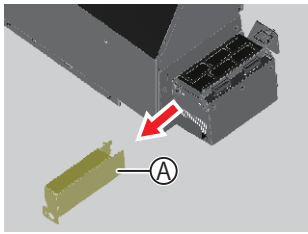
NOTE

=> Operation manual

4 Remove screw(s).
A : Round head screw with split washer_M3x6(x2)
B : Connector cover R



5 Remove Connector cover R.
A : Connector cover R



6 Reverse the above procedure to reinstall the parts.

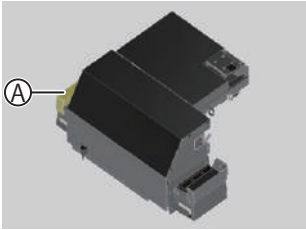
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.4. Connector cover L

A : Connector cover L



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Move gantry.(front side)
2 Move carriage.
3 Open front cover.
4 Remove screw(s).
- Round head screw with split washer_M3x6(x2)
5 Remove Connector cover L.
6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Move gantry.(front side)
- Mover gantry to front side.
=> 3.2. Covers-remove/assemble

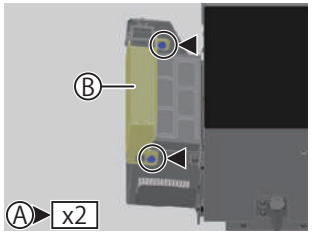
2 Move carriage.
- Release carriage lock.
=> 3.2. Covers-remove/assemble

3 Open front cover.

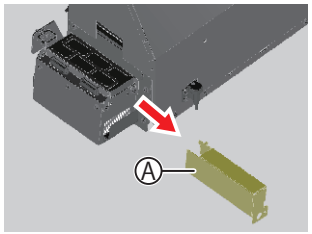
NOTE

=> Operation manual

4 Remove screw(s).
A : Round head screw with split washer_M3x6(x2)
B : Connector cover L



5 Remove Connector cover L.
A : Connector cover L



6 Reverse the above procedure to reinstall the parts.

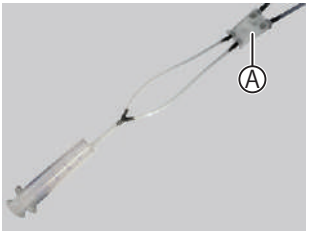
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.5. Cleaning of valve head

A : Valve head

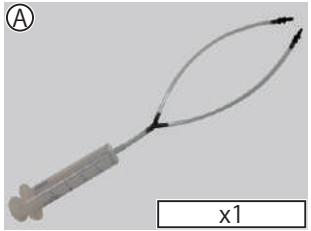


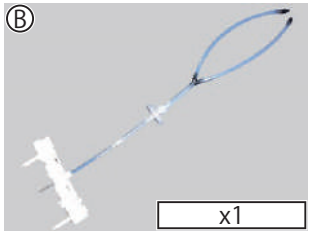
● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-41787	Valve Head Cleaning Kit (VJ Ink)	-
-	Dedicated cleaning fluid	-

NOTE

DG-41787
Valve Head Cleaning Kit (VJ Ink)
Ⓐ Cleaning jig 1
Ⓑ Cleaning jig 2





CAUTION

- Precautions when using cleaning liquid
  - Wear gloves.
  - Do not let the cleaning solution get into your eyes.
  - If the cleaning solution gets into your eyes, immediately wash your eyes with running water for at least 15 minutes and seek medical attention.

CAUTION

- Precautions when replacing the valve head
  - New valve head must be cleaned.
    The valve head is shipped with an aqueous cleaning liquid in it for inspection and quality maintenance.
    For this reason, it is necessary to clean with a special cleaning liquid before replacement.
  - Do not press the transparent film on the side of the valve head with your hand.
    The cleaning liquid filled inside the valve head is pushed out to the tube.
  - Do not scratch the transparent film on the side of the valve head.

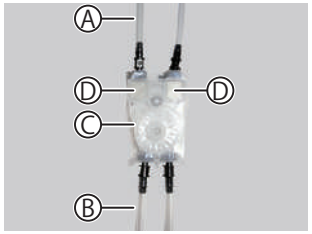
● Procedure

1 Install valve head.
2 Install dedicated cleaning fluid cartridge.
3 Clean valve head.
4 Cure valve head with cleaning fluid.
5 Suck out dedicated cleaning fluid.
6 Remove valve head.

● Procedure(details)

1 Install valve head.
- Install valve head cleaning jig in new valve head.

A : Cleaning jig 1
B : Cleaning jig 2
C : Valve head
D : Silver portion



NOTE

- Filter (silver part) side of valve head is connected to cleaning jig 1 side.

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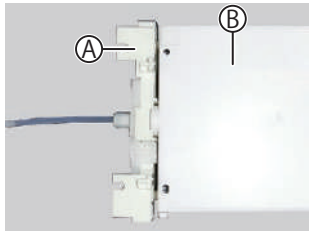
2 Install dedicated cleaning fluid cartridge.
- Install dedicated cleaning fluid cartridge to cleaning jig 1.

A : Cleaning jig 1
B : Dedicated cleaning fluid cartridge



3 Clean valve head.
- Pull syringe pump and let dedicated cleaning fluid flow into syringe cylinder by about 3cc.

NOTE
- The above 3cc does not contain air.
- Pull syringe pump so that amount of cleaning solution alone is 3cc.

4 Cure valve head with cleaning fluid.
- Turn front and back of valve head over so that valve head is sufficiently soaked with dedicated cleaning fluid.

5 Suck out dedicated cleaning fluid.
- Remove dedicated cleaning fluid cartridge from cleanng jig.
- Pull pump of syringe to suck up dedicated cleaning fluid remaining inside valve head.

NOTE
- This is to preventdedicated cleaning fluid from spilling during valve head installation.
- It is not necessary to completely suck out dedicated cleaning fluid.

6 Remove valve head.

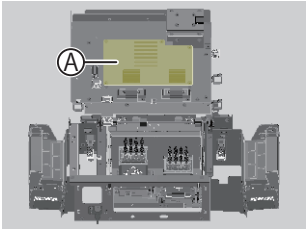
CAUTION
- To prevent dedicated cleaning fluid from splashing out of removed tube, remove it while covering area around tube tip with a polyknit wiper.
- If dirt on polyknit wiper adheres to tube, it may cause problems with print head. Use a clean polyknit wiper.

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.6.6. CR board

A : CR board

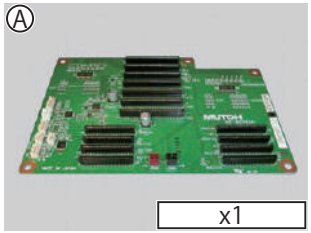


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49275	MAIN Board	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-49275
CR Board Assy
Ⓐ CR board



CAUTION

- Precautions when replacing board
  - When handling the board, do not touch the elements on the board with bare hands.
    There is a risk that the element will be destroyed by static electricity.

CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Remove cover(s).
  - Upper tray lid
  - CR board cover
2 Remove cable(s).
3 Remove CR board.
  - Cup screw_M3x6 Zn-CM2(x5)
4 Replace CR board.
5 Reverse the above procedure to reinstall the parts.
6 Check and adjust after replacing parts.

● Procedure(details)

1 Remove cover(s).
  - Upper tray lid
  => 3.2. Covers-remove/assemble
  - CR board cover
  => 3.6. CR/UV-LED

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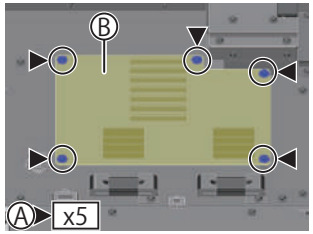
2 Remove cable(s).
=> 8. Electric cable diagram

NOTE
- Remove all cables.

3 Remove CR board.
A : Cup screw_M3x6 Zn-CM2(x5)
B : CR board



4 Replace CR board.

5 Reverse the above procedure to reinstall the parts.

6 Check and adjust after replacing parts.
=> 4. Adjustment

NOTE
- Connector list:
DG-49275:CR Board(OTS******_Rev.B)

Connector	Pin	Color	Connection	Reference
J1	40	Black	MAIN board[J10]	FFC
J2	40	Black	MAIN board[J11]	FFC
J3	40	Black	MAIN board[J12]	FFC
J4	40	Black	MAIN board[J13]	FFC
J5	40	Black	MAIN board[J14]	FFC
J6	40	Black	MAIN board[J15]	FFC
J7	40	Black	MAIN board[J16]	FFC
J8	29	Black	Print head 1[F-CN4]	FFC
J9	29	Black	Print head 1[F-CN3]	FFC
J10	29	Black	Print head 1[F-CN2]	FFC
J11	29	Black	Print head 1[F-CN1]	FFC
J12	29	Black	Print head 2[F-CN4]	FFC
J13	29	Black	Print head 2[F-CN3]	FFC
J14	29	Black	Print head 2[F-CN2]	FFC
J15	29	Black	Print head 2[F-CN1]	FFC
J16	3	Ivory	(no connection)	-
J17	3	-	-	not installed
J18	2	Black	(no connection)	-
J19	2	Red	(no connection)	-
J20	3	Ivory	(no connection)	-
J21	5	Ivory	(no connection)	-
J22	2	White	(no connection)	-
J23	4	Ivory	CR encoder	-
J24	6	Ivory	LED pointer	-

TIP
index=> 3. Parts replacement

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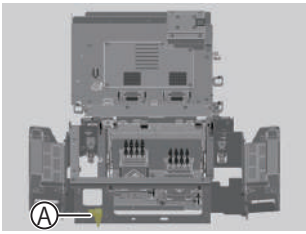
3.6.7. LED pointer

A : LED pointer

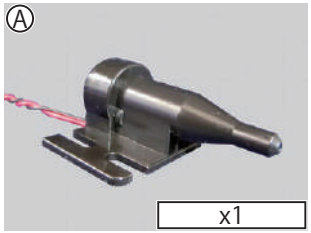


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41807	LED Pointer Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DH-41807
LED Pointer Assy
Ⓐ LED pointer



● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R
- Top cover lid
- CR board cover
- CR cover

2 Move gantry.(front side)

3 Move carriage.

4 Remove cable(s).

5 Remove LED pointer.
- Round head screw with split washer_M3x6(x1)

6 Replace LED pointer.

7 Reverse the above procedure to reinstall the parts.

8 Check and adjust after replacing parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R
- Top cover lid

=> **3.2. Covers-remove/assemble**

- CR board cover
- CR cover

=> **3.6. CR/UV-LED**

2 Move gantry.(front side)
- Mover gantry to front side.

=> **3.2. Covers-remove/assemble**

3 Move carriage.
- Release carriage lock.

=> **3.2. Covers-remove/assemble**

4 Remove cable(s).
- Remove cable from clamps.
- Remove cable from CR board.

=> **8. Electric cable diagram**

NOTE

- Connection
  - LED pointer cable:CR board [J24]

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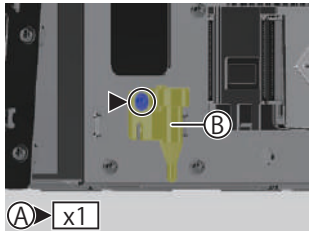
5	Remove LED pointer. A : Round head screw with split washer_M3x6(x1) B : LED pointer	
6	Replace LED pointer.	
7	Reverse the above procedure to reinstall the parts.	
8	Check and adjust after replacing parts. => 4. Adjustment	

TIP

index=> 3. Parts replacement

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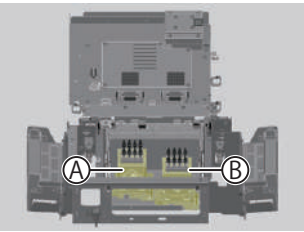
3.6.8. Print head

A : Print head 1
B : Print head 2

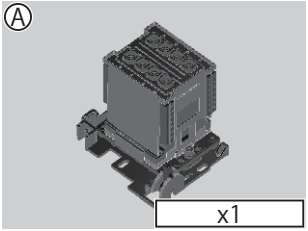


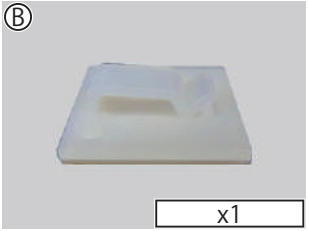
● Tools, Jigs, and Maintenance Part(s)

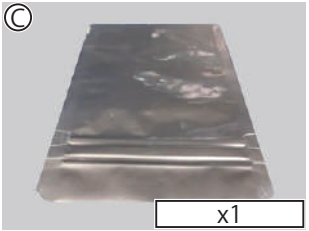
Part(s) No.	Name	Reference
DH-41677	Print Head_I9472 (62UF)	-
Generic item	Jig Cartridge Assy	-
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (2.5mm)	-
Generic item	Long-nose pliers	-

NOTE

DH-41677
Print Head_I9472 (62UF)
Ⓐ Print head
Ⓑ Clamp
Ⓒ Aluminum bag



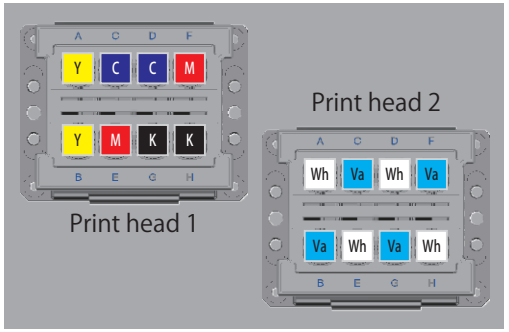




NOTE

- Ink arrangement is as shown in figure below.

6-color setting



CAUTION

- Precautions when replacing the print head (UV ink)
  - Exposed in sunlight and/or strong fluorescent light may harden print head.
    Do not leave print head for a long time (1 or more days) with the cover removed.
    If the operation is expected to take a long time, cover with carriage cover.
    (This prevents hardening effectively.)
  - Do not touch print nozzle surface.
    Keep print head from dust.
  - Do not disassemble print head.
  - Do not touch head board and FFC.
    Do not touch FFC when remove/reassemble the head cover.

CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

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CAUTION

- Precautions when replacing the ink path
  - Wear gloves.
    Ink remains in tube(s).
    Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Discharge ink.
2 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Pump cover
  - Side cover R
  - Top cover lid
  - CR board cover
  - CR cover
3 Move gantry.(front side)
4 Move carriage.
5 Remove frame F.
  - Round head screw with split washer_M3x6(x6)
6 Remove tube(s).
7 Remove print head.
  - Hex socket screw with split washer_M3x6 Ni-3(x3)
8 Remove head FFC.
9 Replace print head.
10 Remove head cover.
11 Replace head rank label.
12 Remove valve head.
13 Fill new valve head with cleaning fluid to cure.
14 Install valve head.
15 Install head cover.
16 Install head FFC.
17 Install print head.
18 Reverse the above procedure to reinstall the parts.
19 Check and adjust after replacing parts.

● Procedure(details)

1 Discharge ink.
  - [Check4:Adjustment]->[Adj.11:InkDischarge]
  => 5. Self-diagnosis

  NOTE
  - Discharge ink to prevent ink from dripping during parts replacement and contaminating system and installation site.
  - When jig cartridge is used, printhead can be removed without discharge ink.
    =>Usage Procedure:T.B.D.

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2 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R
- Top cover lid

=> 3.2. Covers-remove/assemble
- CR board cover
- CR cover

=> 3.6. CR/UV-LED

3 Move gantry.(front side)
- Mover gantry to front side.

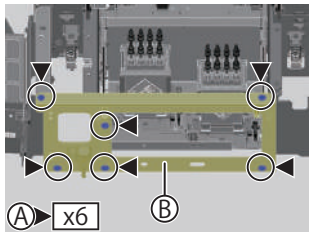
=> 3.2. Covers-remove/assemble

4 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

5 Remove frame F.
A : Round head screw with split washer_M3x6(x6)
B : Frame F

CAUTION
- LED pointer is installed on frame F.
  When frame F is removed, adjust LED pointer position after frame F is installed.

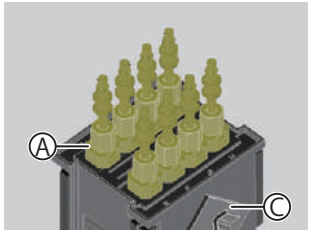


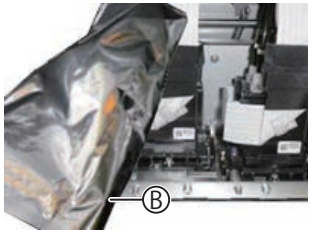
6 Remove tube(s).
- Turn connector by 45 degree clockwise.

A : Connector
B : Aluminum zipper bag
C : Print head

CAUTION
- Place connector removed from printhead in aluminum zipper bag.

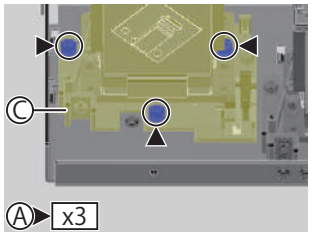
NOTE
- Mark all joint screw.

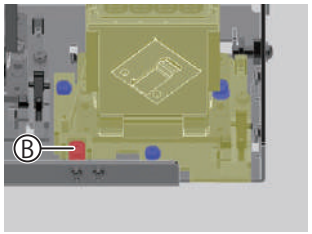




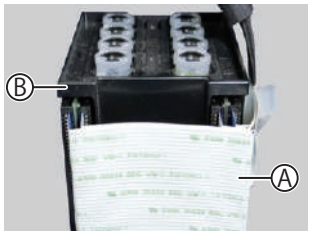
7 Remove print head.
A : Hex socket screw with split washer_M3x6 Ni-3(x3)
B : Head front/back spring
C : Print head

NOTE
- When replacing print head 2 (right side head), be careful not to lose head front/back spring.





8 Remove head FFC.
A : Head FFC (x4)
B : Print head



9 Replace print head.

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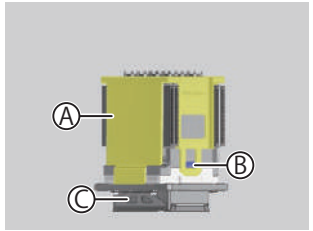
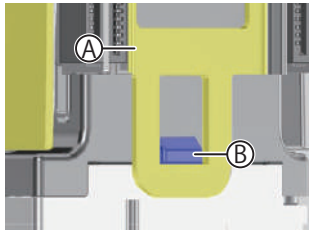
10 Remove head cover.
- Remove hooks.
- Pull out the head cover vertically to remove.

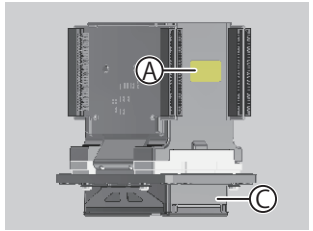
A : Head cover
B : Hooks
C : Print head

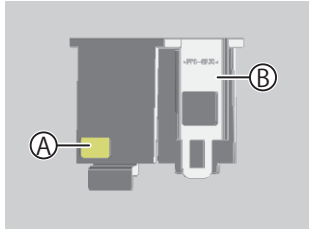




11 Replace head rank label.
- Peel off head rank label from new print head and affix it to head cover.

A : Head rank label
B : Head cover
C : Print head

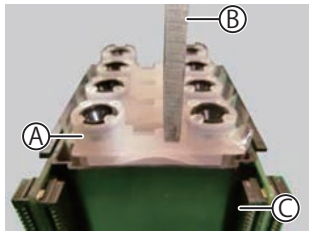




12 Remove valve head.

A : Valve head (x4)
B : Long-nose pliers
C : Print head

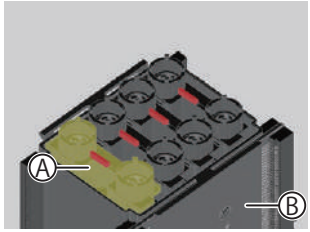
CAUTION
- Pull out valve head with long-nose pliers.
- Do not scratch transparent film of valve head.



13 Fill new valve head with cleaning fluid to cure.
=> 3.6. CR/UV-LED

14 Install valve head.

A : Valve head (x4)
B : Print head

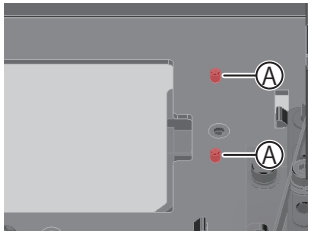


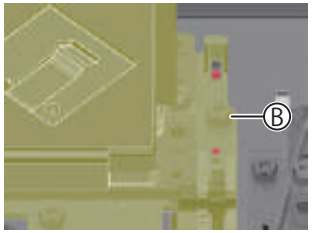
15 Install head cover.

16 Install head FFC.

17 Install print head.
- Align print head with marker.
- Install print head.

A : Marker (x2)
B : Print head





18 Reverse the above procedure to reinstall the parts.

19 Check and adjust after replacing parts.
=> 4. Adjustment

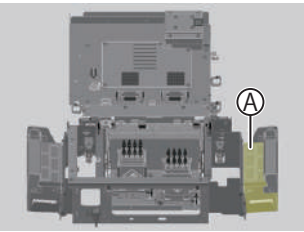
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.9. UVLED (right side)

A : UV-LED (right side)

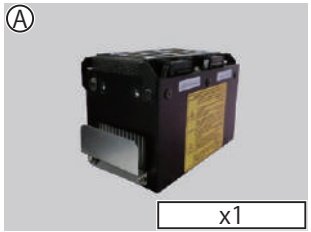


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41676	UV-LED Lamp Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DH-41676
UV-LED Lamp Assy
Ⓐ UV-LED



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

● Procedure

1 Remove cover(s).
  - Connector cover R
2 Move gantry.(front side)
3 Move carriage.
4 Remove cable(s).
5 Remove UV-LED Assy.
  - Round head screw with split washer_M3x6(x3)
6 Remove clamp plate.
  - Round head screw with split washer_M3x6(x2)
7 Remove UV-LED.
  - Round head screw with split washer_M3x8(x4)
8 Remove lamp holding plate.
9 Reverse the above procedure to reinstall the parts.
10 Check and adjust after replacing parts.

● Procedure(details)

1	Remove cover(s). - Connector cover R => 3.6. CR/UV-LED
2	Move gantry.(front side) - Mover gantry to front side. => 3.2. Covers-remove/assemble
3	Move carriage. - Release carriage lock. => 3.2. Covers-remove/assemble

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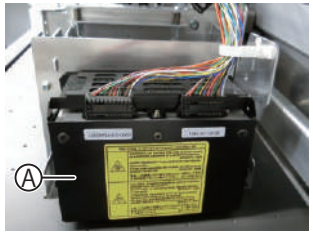
4 Remove cable(s).
- Remove cable from UV-LED.
- Remove cable from clamp.

=> 8. Electric cable diagram

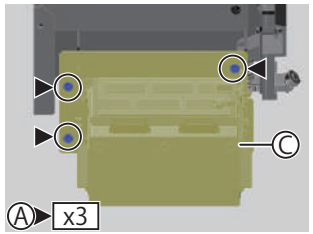
A : UV-LED (right side)

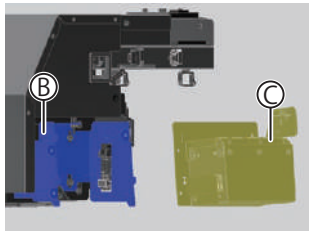
NOTE
- Remove all cables.



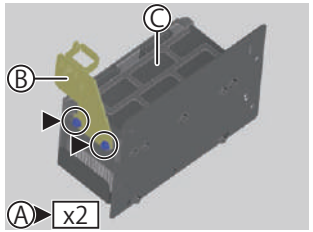
5 Remove UV-LED Assy.
A : Round head screw with split washer_M3x6(x3)
B : Lamp base
C : UV-LED Assy(right side)

NOTE
- Height position of UV-LED is adjusted by lamp base. No height position adjustment is required when replacing only UV-LED.

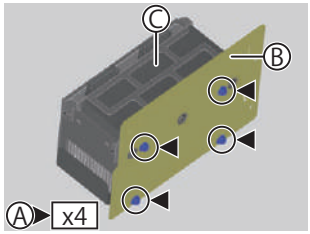




6 Remove clamp plate.
A : Round head screw with split washer_M3x6(x2)
B : Clamp plate(right side)
C : UV-LED(right side)



7 Remove lamp holding plate.
A : Round head screw with split washer_M3x8(x4)
B : Lamp holding plate(right side)
C : UV-LED (right side)



8 Replace UV-LED.

9 Reverse the above procedure to reinstall the parts.

10 Check and adjust after replacing parts.

=> 4. Adjustment

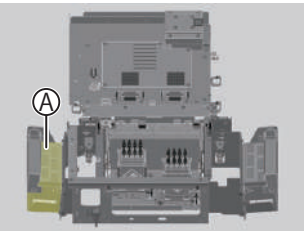
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.10. UVLED (left side)

A : UVLED (left side)

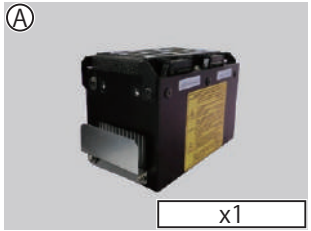


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41676	UV-LED Lamp Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DH-41676
UV-LED Lamp Assy
Ⓐ UV-LED



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

● Procedure

1 Remove cover(s).
  - Connector cover L
2 Move gantry.(front side)
3 Move carriage.
4 Remove cable(s).
5 Remove UV-LED Assy.
  - Round head screw with split washer_M3x6(x3)
6 Remove clamp plate.
  - Round head screw with split washer_M3x6(x2)
7 Remove UV-LED.
  - Round head screw with split washer_M3x8(x4)
8 Remove lamp holding plate.
9 Reverse the above procedure to reinstall the parts.
10 Check and adjust after replacing parts.

● Procedure(details)

1	Remove cover(s). - Connector cover L => 3.6. CR/UV-LED
2	Move gantry.(front side) - Mover gantry to front side. => 3.2. Covers-remove/assemble
3	Move carriage. - Release carriage lock. => 3.2. Covers-remove/assemble

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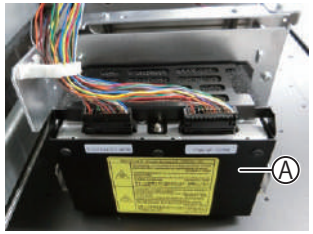
4 Remove cable(s).
- Remove cable from UV-LED.
- Remove cable from clamp.

=> 8. Electric cable diagram

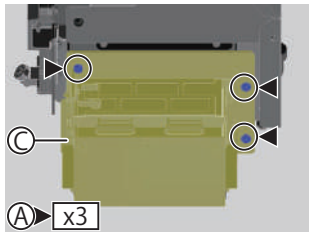
A : UV-LED (left side)

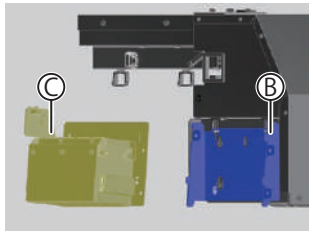
NOTE
- Remove all cables.



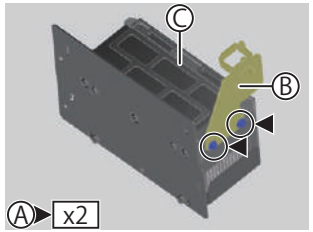
5 Remove UV-LED Assy.
A : Round head screw with split washer_M3x6(x3)
B : Lamp base
C : UV-LED Assy(left side)

NOTE
- Height position of UV-LED is adjusted by lamp base. No height position adjustment is required when replacing only UV-LED.

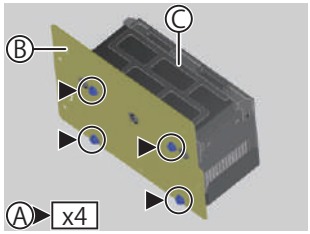




6 Remove clamp plate.
A : Round head screw with split washer_M3x6(x2)
B : Clamp plate(left side)
C : UV-LED(left side)



7 Remove lamp holding plate.
A : Round head screw with split washer_M3x8(x4)
B : Lamp holding plate(left side)
C : UV-LED (left side)



8 Replace UV-LED.

9 Reverse the above procedure to reinstall the parts.

10 Check and adjust after replacing parts.
=> 4. Adjustment$4.Adjustment$

TIP

index=> 3. Parts replacement

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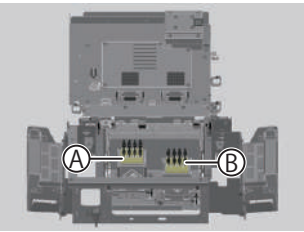
3.6.11. Valve head

A : Valve head (for Print head 1)
B : Valve head (for Print head 2)

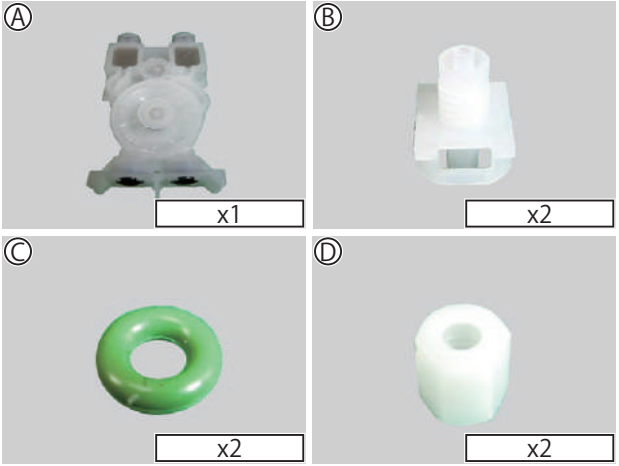


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-40834	Valve Head-2	-
Generic item	Jig Cartridge Assy	-
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (2.5mm)	-
Generic item	Long-nose pliers	-

NOTE

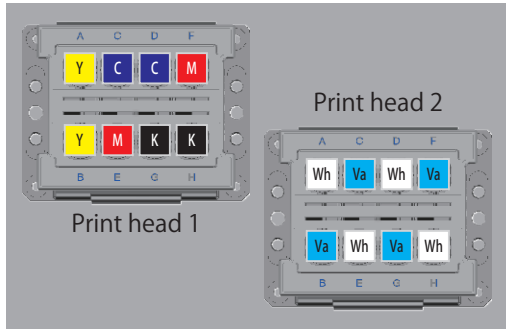
DH-40834
Valve Head-2
Ⓐ Valve head
Ⓑ Connector
Ⓒ O ring
Ⓓ Joint screw



NOTE

- Ink arrangement is as shown in figure below.

6-color setting



CAUTION

- Precautions when replacing the valve head
  - New valve head must be cleaned.
    The valve head is shipped with an aqueous cleaning liquid in it for inspection and quality maintenance.
    For this reason, it is necessary to clean with a special cleaning liquid before replacement.
  - Do not press the transparent film on the side of the valve head with your hand.
    The cleaning liquid filled inside the valve head is pushed out to the tube.
  - Do not scratch the transparent film on the side of the valve head.

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CAUTION

- Precautions when replacing the print head (UV ink)
  - Exposed in sunlight and/or strong fluorescent light may harden print head.
    Do not leave print head for a long time (1 or more days) with the cover removed.
    If the operation is expected to take a long time, cover with carriage cover.
    (This prevents hardening effectively.)
  - Do not touch print nozzle surface.
    Keep print head from dust.
  - Do not disassemble print head.
  - Do not touch head board and FFC.
    Do not touch FFC when remove/reassemble the head cover.

CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

CAUTION

- Precautions when replacing the ink path
  - Wear gloves.
    Ink remains in tube(s).
    Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Discharge ink.
2 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Pump cover
  - Side cover R
  - Top cover lid
  - CR board cover
  - CR cover
3 Move gantry.(front side)
4 Move carriage.
5 Remove frame F.
  - Round head screw with split washer_M3x6(x6)
6 Remove tube(s).
7 Replace connector.
8 Remove print head.
  - Hex socket screw with split washer_M3x6 Ni-3(x3)

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9 Remove head FFC.
10 Remove head cover.
11 Remove valve head.
12 Fill new valve head with cleaning fluid to cure.
13 Install valve head.
14 Reverse the above procedure to reinstall the parts.
15 Check and adjust after replacing parts.

● Procedure(details)

1 Discharge ink.
- [Check4:Adjustment]->[Adj.11:InkDischarge]

=> 5. Self-diagnosis

NOTE
- Discharge ink to prevent ink from dripping during parts replacement and contaminating system and installation site.
- When jig cartridge is used, printhead can be removed without discharge ink.
=>Usage Procedure:T.B.D.

2 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R
- Top cover lid

=> 3.2. Covers-remove/assemble
- CR board cover
- CR cover

=> 3.6. CR/UV-LED

3 Move gantry.(front side)
- Mover gantry to front side.

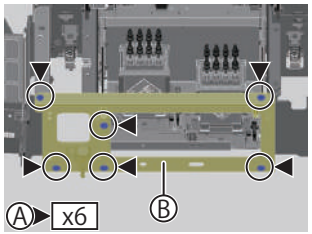
=> 3.2. Covers-remove/assemble

4 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

5 Remove frame F.
A : Round head screw with split washer_M3x6(x6)
B : Frame F

CAUTION
- LED pointer is installed on frame F.
When frame F is removed, adjust LED pointer position after frame F is installed.

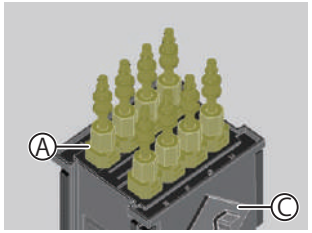


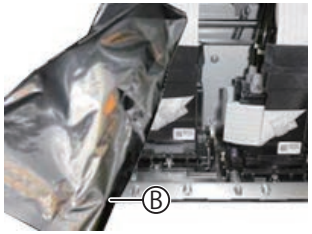
6 Remove tube(s).
- Turn head connector by 45 degree clockwise.

A : Valve head connector
B : Aluminum zipper bag
C : Print head

CAUTION
- Place valve head connector removed from printhead in aluminum zipper bag.

NOTE
- Mark all joint screw.





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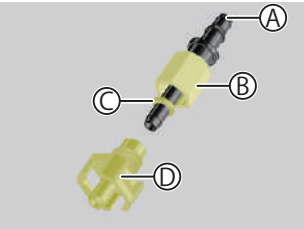
7 Replace connector.
- Remove joint screw, O-ring, and connector from fitting.
- Install new joint screw into fitting.
- Install new O-ring near end of fitting.
- Install new connector into fitting while pushing O-ring.
- Connect joint screw and connector.

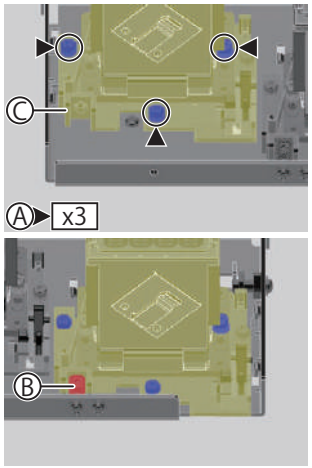
A : Fitting
B : Joint screw
C : O-ring
D : Connector



CAUTION
- O-rings is replaced with new ones.
  O-rings is not reused.
- Soak O-ring in cleaning solution before installation.

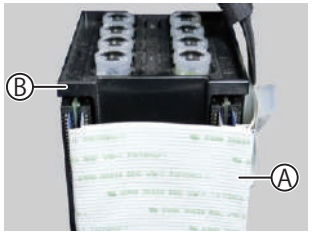
NOTE
- Remove only connector for valve head to be replaced.
- Mark new joint screw.

8 Remove print head.
A : Hex socket screw with split washer_M3x6 Ni-3(x3)
B : Head front/back spring
C : Print head



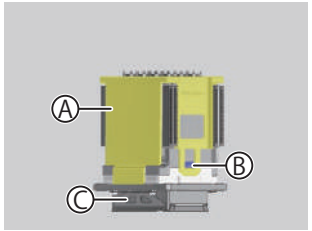
NOTE
- When replacing print head 2 (right side head), be careful not to lose head front/back spring.

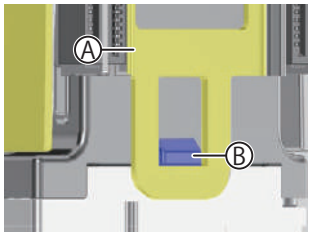
9 Remove head FFC.
A : Head FFC (x4)
B : Print head



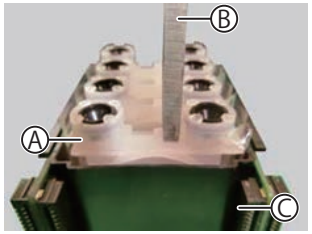
10 Remove head cover.
- Remove hooks.
- Pull out the head cover vertically to remove.

A : Head cover
B : Hooks
C : Print head





11 Remove valve head.
A : Valve head (x4)
B : Long-nose pliers
C : Print head

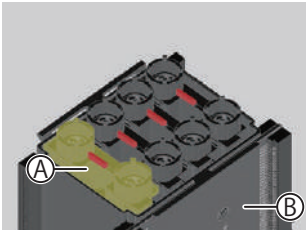


CAUTION
- Pull out valve head with long-nose pliers.
- Do not scratch transparent film of valve head.

NOTE
- Remove only valve head to be replaced.

12 Fill new valve head with cleaning fluid to cure.
=> 3.6. CR/UV-LED

CONFIDENTIAL

13	Install valve head. A : Valve head (x4) B : Print head	
14	Reverse the above procedure to reinstall the parts.	
15	Check and adjust after replacing parts. => 4. Adjustment	

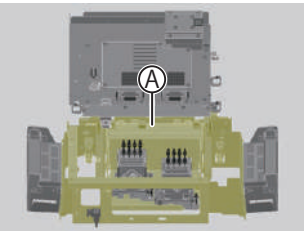
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.12. Cursor(T.B.D.)

A : Cursor

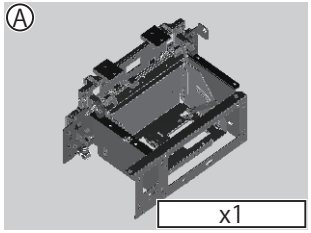


● Tools, Jigs, and Maintenance Part(s)

保守番号	名称	参照
DH-41675	CR_Assy	-

NOTE

DH-41675
CR_Assy
Ⓐ Cursor



● Procedure

- T.B.D.

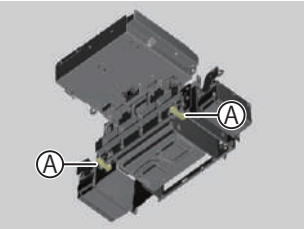
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.13. Cursor roller arm(T.B.D.)

A : Cursor roller arm



● Tools, Jigs, and Maintenance Part(s)

保守番号	名称	参照
DG-40326	VJ Cursor Roller Arm Assy	-

NOTE

DG-40326
VJ Cursor Roller Arm Assy
Ⓐ Cursor roller arm

● Procedure

- T.B.D.

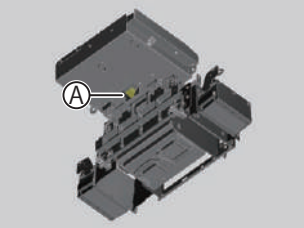
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.6.14. CR encoder(T.B.D.)

A : CR encoder

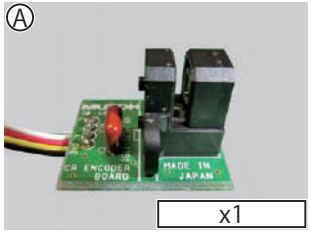


● Tools, Jigs, and Maintenance Part(s)

保守番号	名称	参照
DG-42947	CR Encoder Assy	-

NOTE

DG-42947
CR Encoder Assy
Ⓐ Encoder



● Procedure

- T.B.D.

TIP

index=> 3. Parts replacement

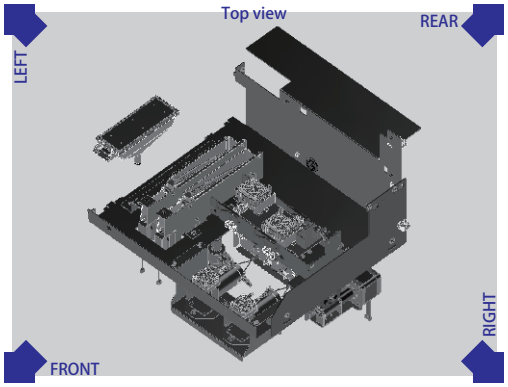
CONFIDENTIAL

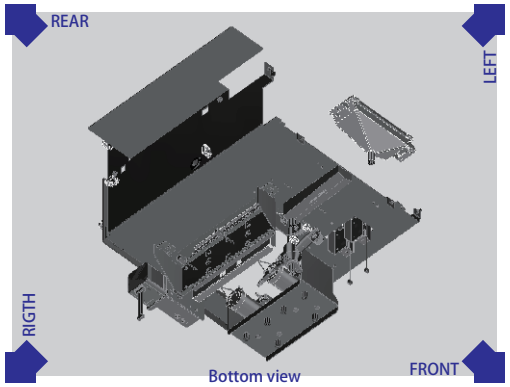
3.7. Maintenance/drop sensor unit

NOTE

- As of April 1, 2023 (No.1485500)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	Head cap	=> 3.7.2. Head cap
2	Maintenance slider unit	=> 3.7.3. Maintenance unit
3	Maintenance unit	=> 3.7.4. Maintenance U/D unit
4	Suction pump	=> 3.7.5. Suction pump
5	Wiper	=> 3.7.6. Wiper
6	Wiper unit	=> 3.7.7. Wiper unit
7	Wiper solenoid	=> 3.7.8. Wiper solenoid

List of other related procedure:

No.	Contents	Reference
1	Pump cover	=> 3.7.1. Pump cover

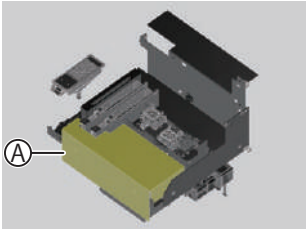
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.7.1. Pump cover

A : Pump cover



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2

2 Open front cover.
3 Remove screw(s).(right side)
- Tapping screw_M3x6 S tight cup(x2)

4 Remove pump cover.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2

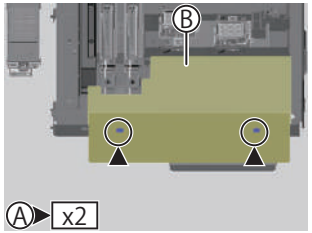
=> 3.2. Covers-remove/assemble

2 Open front cover.

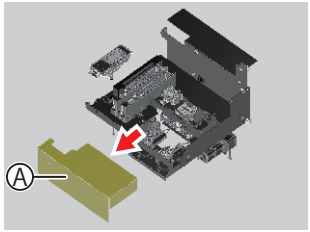
NOTE

=> Operation manual

3 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(x2)
B : Pump cover



4 Remove pump cover.
A : Pump cover



5 Reverse the above procedure to reinstall the parts.

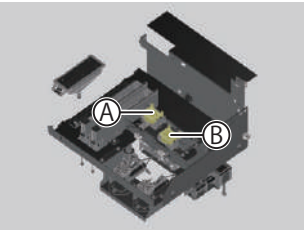
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.7.2. Head cap

A : Head cap (for print head 1)
B : Head cap (for print head 2)

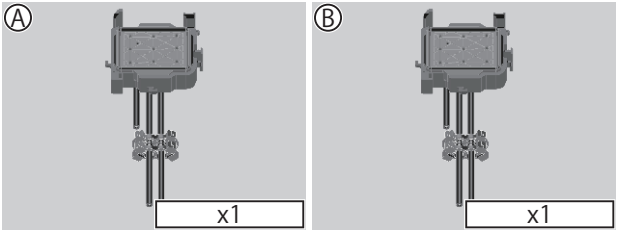


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49594	Head Cap Assy (38UR)	-
Generic item	Tube cutter	-
Generic item	Tweezers	-

NOTE

DG-49594
Head Cap Assy (38UR)
Ⓐ Head cap 1
Ⓑ Head cap 2



CAUTION

Precautions when using the UV ink
- UV ink may cause strong irritation to your skin.
  Wear butyl rubber gloves and protective goggles to prevent skin contact.
- There is a possibility that the ink would be cured by fluorescent lamps.
  Work in an environment where there is as little UV light as possible.

CAUTION

Precautions when replacing the ink path
- Wear gloves.
  Ink remains in tube(s).
- Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

● Procedure

1 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Pump cover
2 Move carriage.
3 Remove tube(s). (pump side)
4 Remove tube(s). (air valve side)
5 Remove head cap.
6 Replace head cap.
7 Install tube(s). (maintenance base)
8 Reverse the above procedure to reinstall the parts.
9 Check and adjust after replacing parts.

● Procedure(details)

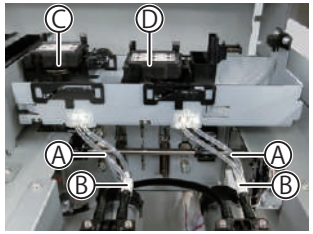
1	Remove cover(s). - Maintenance cover R - Maintenance cover R2 => 3.2. Covers-remove/assemble - Pump cover => 3.7. Maintenance/drop sensor unit
2	Move carriage. - Release carriage lock. => 3.2. Covers-remove/assemble

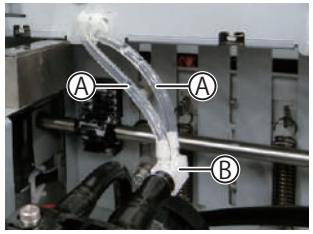
CONFIDENTIAL

3 Remove tube(s). (pump side)
- Remove tube from F-fitting.

A : Tube(x2)
B : F-fitting
C : Head cap (for print head 1)
D : Head cap (for print head 2)

NOTE
- Remove only tube for head cap to be replaced.

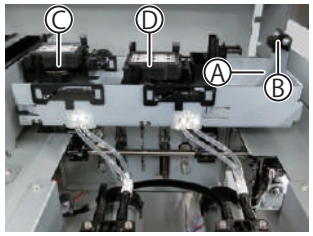


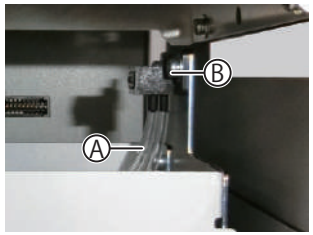


4 Remove tube(s). (air valve side)
- Remove tube from air valve.

A : Tube
B : Air valve
C : Head cap (for print head 1)
D : Head cap (for print head 2)

NOTE
- Remove only tube for head cap to be replaced.

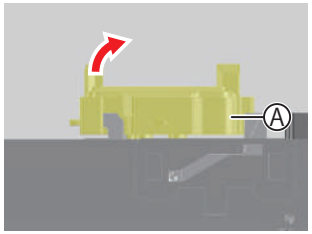




5 Remove head cap.
- While pressing down on head cap, remove it by rotating it in direction of arrow.

A : Head cap

NOTE
- When head cap is removed, cap spring is also removed.
  Do not lose it.



6 Replace head cap.

CAUTION
- Cut tubes to appropriate length.

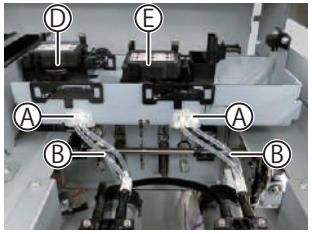
=> 9. Tube diagram

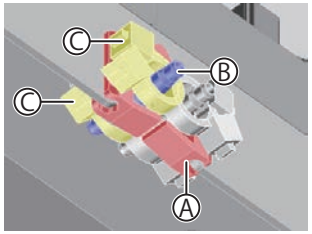
NOTE
- This maintenance part (DG-49594) contains two head caps.
- The difference is tube length on air valve side.
  - Head cap 1 : 240mm
  - Head cap 2 : 180mm

7 Install tube(s). (maintenance base)
- Install tube into clamp on maintenance base.

A : Clamp
B : Tube(x2)
C : Cable ties(x4)
D : Head cap (for print head 1)
E : Head cap (for print head 2)

NOTE
- Position clamp between cable ties.
- Ensure cut portion of cable ties face outward.





8 Reverse the above procedure to reinstall the parts.

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9	Check and adjust after replacing parts. => 4. Adjustment

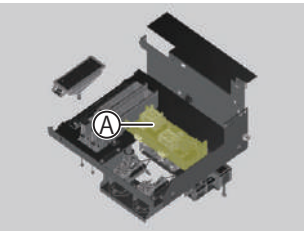
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.7.3. Maintenance unit

A : Maintenance unit

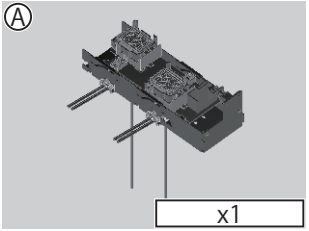


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41680	Cap Slider Assy (62UF)	-
Generic item	Phillips screwdriver No.2	-
Generic item	Tube cutter	-
Generic item	Tweezers	-

NOTE

DH-41680
Cap Slider Assy (62UF)
Ⓐ Maintenance unit



CAUTION

Precautions when using the UV ink
- UV ink may cause strong irritation to your skin.
  Wear butyl rubber gloves and protective goggles to prevent skin contact.
- There is a possibility that the ink would be cured by fluorescent lamps.
  Work in an environment where there is as little UV light as possible.

CAUTION

Precautions when replacing the ink path
- Wear gloves.
  Ink remains in tube(s).
  Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

● Procedure

1 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Pump cover
2 Move carriage.
3 Remove tube(s). (pump side)
4 Remove maintenance unit.
  - Round head screw with split washer_M3x8(x4)
5 Replace maintenance unit.
6 Reverse the above procedure to reinstall the parts.
7 Check and adjust after replacing parts.

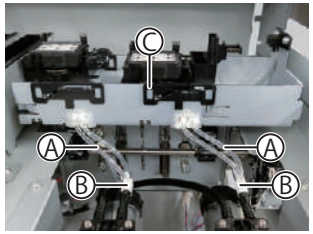
● Procedure(details)

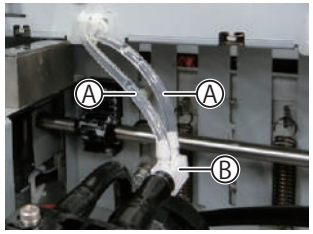
1	Remove cover(s). - Maintenance cover R - Maintenance cover R2 => 3.2. Covers-remove/assemble - Pump cover => 3.7. Maintenance/drop sensor unit
2	Move carriage. - Release carriage lock. => 3.2. Covers-remove/assemble

CONFIDENTIAL

3 Remove tube(s). (pump side)
- Remove tube from F-fitting.

A : Tube(x4)
B : F-fitting(x2)
C : Maintenance unit

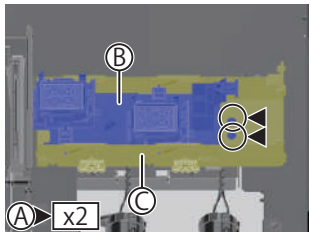


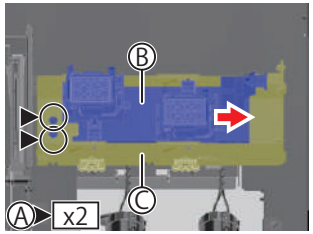


4 Remove maintenance unit.

A : Round head screw with split washer_M3x8(x4)
B : Cap slider base
C : Maintenance unit

NOTE
- Move cap slide base to right, and then remove screws of left side.





5 Replace maintenance unit.

CAUTION
- Cut tubes to appropriate length.

=> 9. Tube diagram

6 Reverse the above procedure to reinstall the parts.

7 Check and adjust after replacing parts.

=> 4. Adjustment

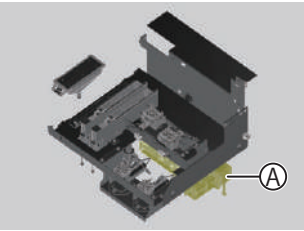
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.7.4. Maintenance U/D unit

A : Maintenance U/D unit

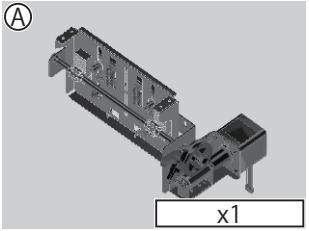


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41679	Maintenance Slider Unit Assy	-
Generic item	Phillips screwdriver No.2	-
Generic item	Tube cutter	-
Generic item	Tweezers	-

NOTE

DH-41679
Maintenance Slider Unit Assy
Ⓐ Maintenance U/D unit



CAUTION

Precautions when using the UV ink
- UV ink may cause strong irritation to your skin.
  Wear butyl rubber gloves and protective goggles to prevent skin contact.
- There is a possibility that the ink would be cured by fluorescent lamps.
  Work in an environment where there is as little UV light as possible.

CAUTION

Precautions when replacing the ink path
- Wear gloves.
  Ink remains in tube(s).
  Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

CAUTION

- Precautions when reusing tube
  - Cut off the deformed tips before reuse.
  - Replace tube in the following cases:
    If tube is too short to connect.
    If tube come out easily.

● Procedure

1 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Side cover R
  - Pump cover
2 Move carriage.
3 Remove maintenance unit.
4 Remove cable(s).
5 Move pump base.
  - Tapping screw_M3x6 S tight cup(x4)
6 Remove screw(s).
  - Round head screw with split washer_M4x8(x4)
7 Remove maintenance U/D unit.
8 Replace maintenance U/D unit.
9 Reverse the above procedure to reinstall the parts.
10 Check and adjust after replacing parts.

CONFIDENTIAL

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R

=> 3.2. Covers-remove/assemble
- Pump cover

=> 3.7. Maintenance/drop sensor unit

2 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

3 Remove maintenance unit.

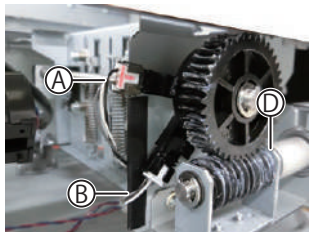
=> 3.7. Maintenance/drop sensor unit

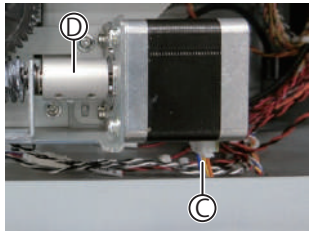
4 Remove cable(s).

=> 8. Electric cable diagram

A : Cap origin sensor cable (with marking)
B : Cap origin sensor 2 cable (no marking)
C : Cap motor cable
D : Maintenance U/D unit

NOTE
- Connection
  - Cap origin sensor cable:MAIN board [J27]
  - Cap origin sensor 2 cable:MAIN board [J57]
  - Cap motor cable:MAIN board [J58]

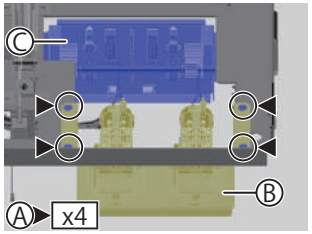


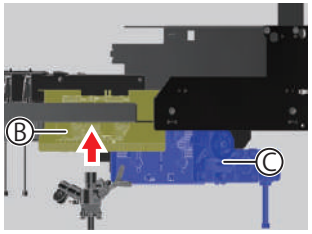


5 Move pump base.
- Remove screws.
- Move pump base to upper side.

A : Tapping screw_M3x6 S tight cup(x4)
B : Pump base
C : Maintenance U/D unit

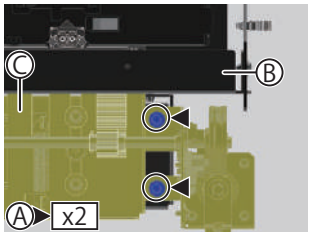
NOTE
- Move pump base to facilitate removal of maintenance U/D unit.
- Do not damage waste fluid tube.

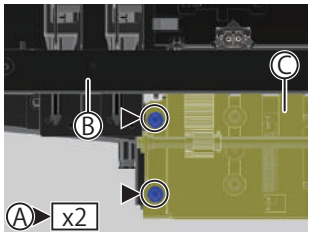




6 Remove screw(s).

A : Round head screw with split washer_M4x8(x4)
B : Pump base
C : Maintenance U/D unit





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7	Remove maintenance U/D unit. - Pull motor out to right side. - Tilt maintenance U/D unit horizontally. - Pull out maintenance U/D unit to right side. A : Maintenance U/D unit **CAUTION** - Do not damage cables.	
8	Replace maintenance U/D unit.	
9	Reverse the above procedure to reinstall the parts.	
10	Check and adjust after replacing parts. => 4. Adjustment	

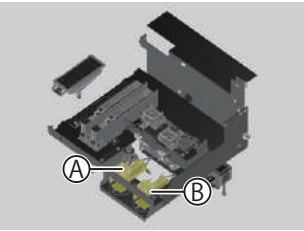
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.7.5. Suction pump

A : Suction pump (for print head 1)
B : Suction pump (for print head 2)

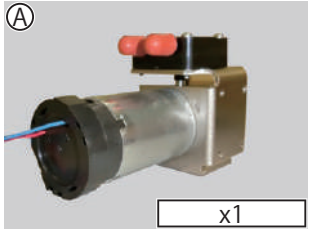


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-43402	Head Cap Assy (38UR)	-
Generic item	Phillips screwdriver No.2	-
Generic item	Tube cutter	-
Generic item	Tweezers	-

NOTE

DG-43402
DC Pump Assy
Ⓐ Pump



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

CAUTION

- Precautions when replacing the ink path
  - Wear gloves.
    Ink remains in tube(s).
    Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

CAUTION

- Precautions when reusing tube
  - Cut off the deformed tips before reuse.
  - Replace tube in the following cases:
    If tube is too short to connect.
    If tube come out easily.

● Procedure

1 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Side cover R
  - Pump cover
2 Move carriage.
3 Remove cable(s).
4 Remove tube(s).
5 Remove pump Assy.
  - Round head screw with split washer_M4x16(x3)
6 Remove pump.
  - Round head screw with split washer_M3x6(x2)
7 Replace pump.
8 Reverse the above procedure to reinstall the parts.
9 Check and adjust after replacing parts.

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● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R

=> 3.2. Covers-remove/assemble

- Pump cover

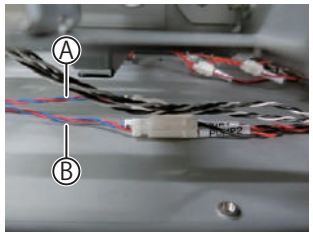
=> 3.7. Maintenance/drop sensor unit

2 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

3 Remove cable(s).
A : Suction pump cable (for print head 1)
B : Suction pump cable (for print head 2)

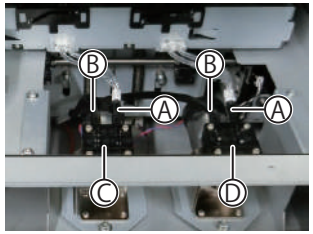
NOTE
- Remove only cable for pump to be replaced.
- Connection
  - Suction pump cable:Relay cable (MAIN board [J37])



4 Remove tube(s).
- Remove tube from pump. (x2)

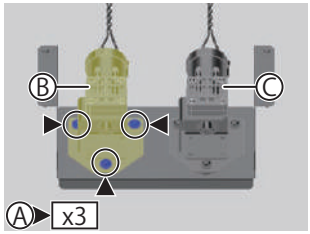
A : Tube (cap side)
B : Tube (waste fluid fitting side)
C : Suction pump (for print head 1)
D : Suction pump (for print head 2)

NOTE
- Remove only tube for pump to be replaced.
- Remove tube using tweezers.

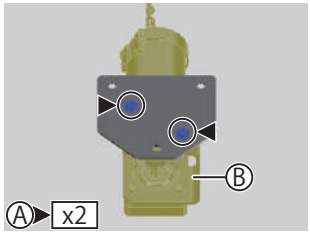


5 Remove pump Assy.
A : Round head screw with split washer_M4x16(x3)
B : Suction pump (for print head 1)
C : Suction pump (for print head 2)

NOTE
- Remove only pump to be replaced.



6 Remove pump.
A : Round head screw with split washer_M3x6(x2)
B : Suction pump



7 Replace pump.

8 Reverse the above procedure to reinstall the parts.

9 Check and adjust after replacing parts.

=> 4. Adjustment

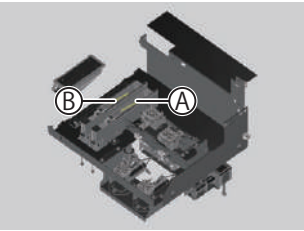
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.7.6. Wiper

A : Wiper (for print head 1)
B : Wiper (for print head 2)

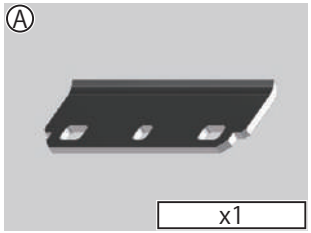


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-43497	Wiper (S) Assy	-
Generic item	Tweezers	-

NOTE

DG-43497
Wiper (S) Assy
Ⓐ Wiper



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

● Procedure

1 Move carriage.
2 Remove wiper Assy.
3 Remove wiper.
4 Replace wiper.
5 Reverse the above procedure to reinstall the parts.
6 Check and adjust after replacing parts.

● Procedure(details)

1 Move carriage.
- Release carriage lock.
=> 3.2. Covers-remove/assemble

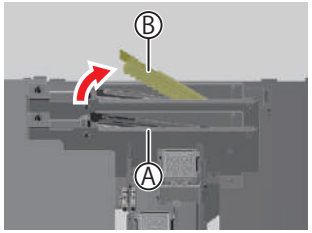
2 Remove wiper Assy.
A : Wiper Assy (for print head 1)
B : Wiper Assy (for print head 2)

NOTE

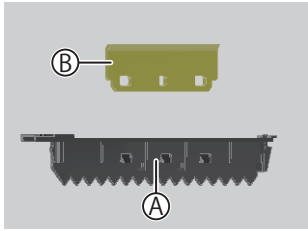
=> Operation manual

NOTE

- Remove only wiper to be replaced.



3 Remove wiper.
A : Wiper holder
B : Wiper



4 Replace wiper.

5 Reverse the above procedure to reinstall the parts.

6 Check and adjust after replacing parts.
=> 4. Adjustment

CONFIDENTIAL

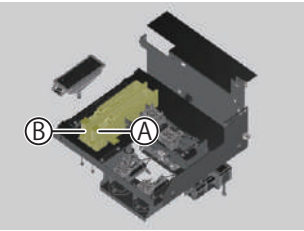
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.7.7. Wiper unit

A : Wiper unit (for print head 1)
B : Wiper unit (for print head 2)

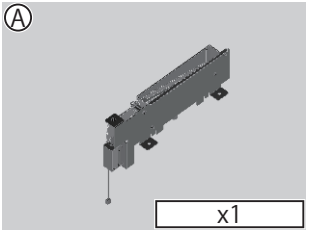


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41681	Wiper Unit Assy (62UF)	-
Generic item	Phillips screwdriver No.2	-

NOTE

DH-41681
Wiper Unit Assy (62UF)
Ⓐ Wiper unit



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

● Procedure

1 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Side cover R
  - Pump cover
2 Move carriage.
3 Remove cable(s).
4 Remove wiper unit.
  - Tapping screw_M3x6 S tight cup(x2)
5 Replace wiper unit.
6 Reverse the above procedure to reinstall the parts.
7 Check and adjust after replacing parts.

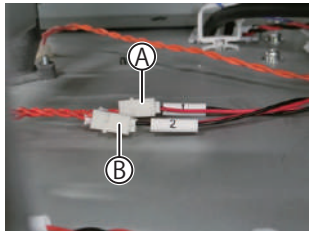
● Procedure(details)

1	Remove cover(s). - Maintenance cover R - Maintenance cover R2 - Side cover R => 3.2. Covers-remove/assemble - Pump cover => 3.7. Maintenance/drop sensor unit
2	Move carriage. - Release carriage lock. => 3.2. Covers-remove/assemble

CONFIDENTIAL

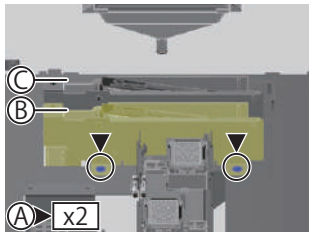
3 Remove cable(s).
A : Wiper solenoid cable (for print head 1)
B : Wiper solenoid cable (for print head 2)

NOTE
- Remove only cable for unit to be replaced.
- Connection
  - Wiper solenoid cable:Relay cable (MAIN board [J33])



4 Remove wiper unit.
A : Tapping screw_M3x6 S tight cup(x2)
B : Wiper unit (for print head 1)
C : Wiper unit (for print head 2)

NOTE
- Remove only unit to be replaced.



5 Replace wiper unit.

6 Reverse the above procedure to reinstall the parts.

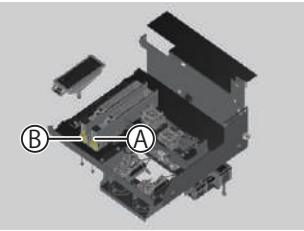
7 Check and adjust after replacing parts.
=> 4. Adjustment

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.7.8. Wiper solenoid

A : Wiper solenoid (for print head 1)
B : Wiper solenoid (for print head 2)

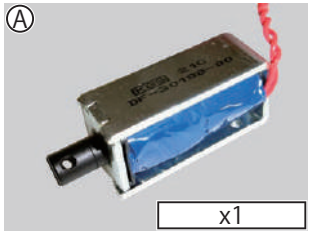


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-40176	Wiper Solenoid Assy	-
Generic item	Phillips screwdriver No.2	-
Generic item	Long-nose pliers	-

NOTE

DH-40176
Wiper Solenoid Assy
Ⓐ Solenoid



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R
- Pump cover

2 Move carriage.
3 Remove wiper unit.
4 Remove spring pin.
5 Remove solenoid.
- Pan head small screw_M2.6x4(x2)

6 Replace solenoid.
7 Reverse the above procedure to reinstall the parts.
8 Check and adjust after replacing parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R

=> 3.2. Covers-remove/assemble

- Pump cover

=> 3.7. Maintenance/drop sensor unit

2 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

3 Remove wiper unit.

=> 3.7. Maintenance/drop sensor unit

NOTE

- Remove only unit to be replaced.

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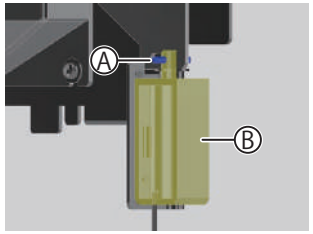
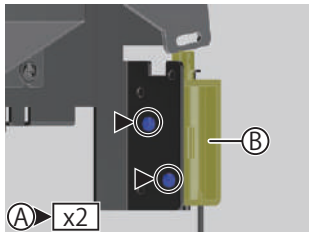
4	Remove spring pin. A : Spring pin B : Wiper solenoid	
5	Remove solenoid. A : Pan head small screw_M2.6x4(x2) B : Wiper solenoid	
6	Replace solenoid.	
7	Reverse the above procedure to reinstall the parts.	
8	Check and adjust after replacing parts. => 4. Adjustment	

TIP

index=> 3. Parts replacement

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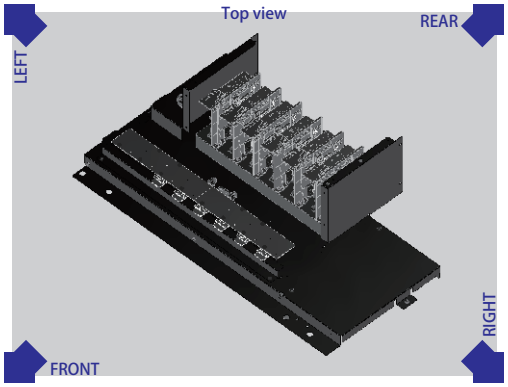
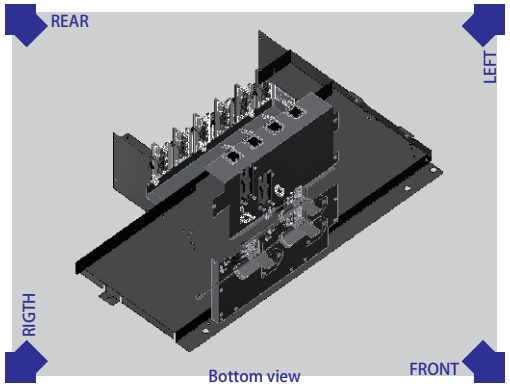
3.8. IH

NOTE

- As of April 1, 2023 (No.1485601)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	CARD board	=> 3.8.1. CARD board
2	Cartridge holder	=> 3.8.2. Cartridge holder
3	Circulation pump	=> 3.8.3. Circulation pump
4	Emargency stop button	=> 3.8.4. Emergency stop button (IH)
5	JUNCTION board	=> 3.8.5. JUNCTION board

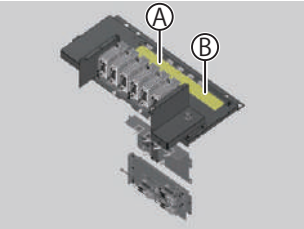
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.8.1. CARD board

A : CARD board (right side)
B : CARD board (left side)

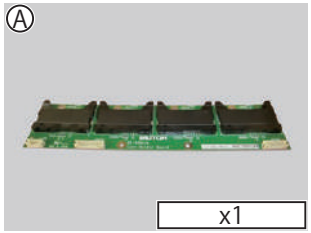


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49577	Card Holder board Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-49577
Card Holder board Assy
Ⓐ Card holder board



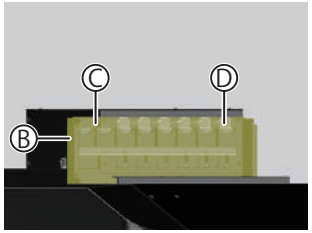
● Procedure

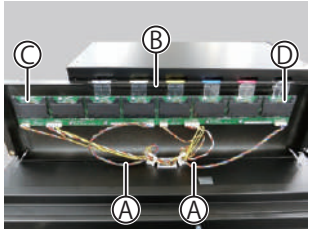
1 Remove cover(s).
- CARD board cover
2 Remove cable(s).
3 Remove CARD board.
- Baind small screw_M3x6 (x6)
4 Replace CARD board.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- CARD board cover
=> 3.2. Covers-remove/assemble

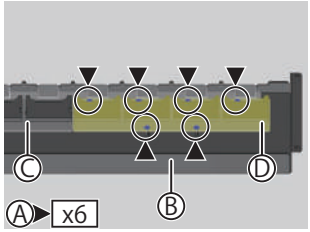
2 Remove cable(s).
- Lift CARD board cover.
- Remove cable(s).
A : Cable(x6)
B : CARD board covoer
C : CARD board (left side)
D : CARD board (right side)





3 Remove FAN_CONT board.
A : Baind small screw_M3x6 (x6)
B : CARD board covoer
C : CARD board (left side)
D : CARD board (right side)

NOTE
- Remove procedure is same for both sides.



4 Replace CARD board.

5 Reverse the above procedure to reinstall the parts.

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NOTE

- Connector list:
  DG-49577:CARD board(right side:GTX******_Rev.-)

Connector	Pin	Color	Connection	Reference
J1	8	Black	-	S/C card slot
J2	8	Black	-	S/C card slot
J3	8	Black	-	S/C card slot
J4	8	Black	-	S/C card slot
J5	11	Ivory	MAIN board [J21]	-
J6	8	Ivory	MAIN board [J51]	-
J7	5	Ivory	MAIN board [J60]	-

NOTE

- Connector list:
  DG-49577:CARD board(left side:GTX******_Rev.-)

Connector	Pin	Color	Connection	Reference
J1	8	Black	-	S/C card slot
J2	8	Black	-	S/C card slot
J3	8	Black	-	S/C card slot
J4	8	Black	-	S/C card slot
J5	11	Ivory	MAIN board [J22]	-
J6	8	Ivory	MAIN board [J52]	-
J7	5	Ivory	MAIN board [J61]	-

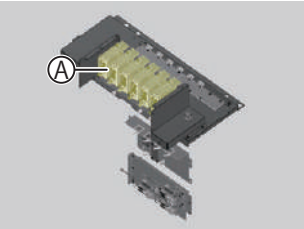
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.8.2. Cartridge holder

A : Cartridge holder(X6)

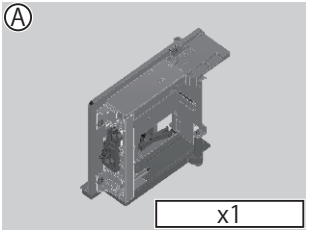


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41684	Cartridge Holder Assy 1 (62UF)	for slot.1
DH-41685	Cartridge Holder Assy 2 (62UF)	for slot.2
DH-41686	Cartridge Holder Assy 3 (62UF)	for slot.3/5
DH-41687	Cartridge Holder Assy 4 (62UF)	for slot.4/6
Generic item	Phillips screwdriver No.2	-
Generic item	Tube cutter	-
Generic item	Tweezers	-

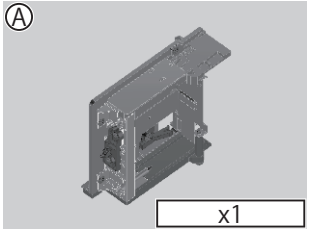
NOTE

DH-41684
Cartridge Holder Assy 1 (62UF)
Ⓐ Cartridge holder



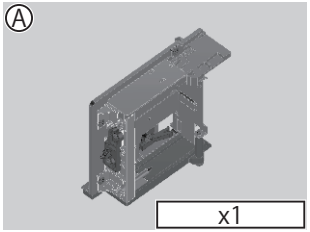
NOTE

DH-41685
Cartridge Holder Assy 2 (62UF)
Ⓐ Cartridge holder



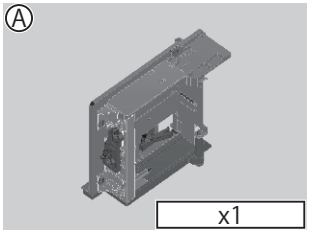
NOTE

DH-41686
Cartridge Holder Assy 3 (62UF)
Ⓐ Cartridge holder



NOTE

DH-41687
Cartridge Holder Assy 4 (62UF)
Ⓐ Cartridge holder



WARNING

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

CONFIDENTIAL

WARNING

- Precautions when replacing the ink path
  - Wear gloves.
    Ink remains in tube(s).
    Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

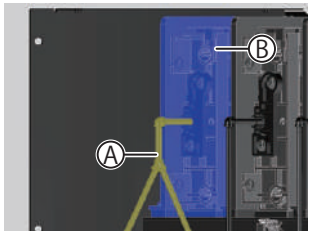
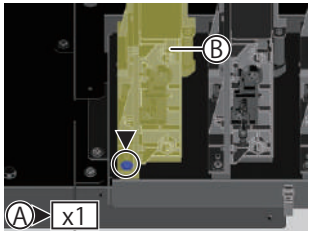
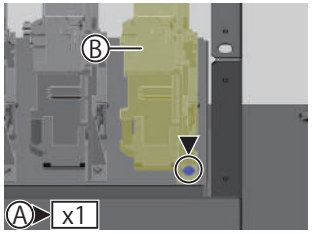
WARNING

- Precautions when reusing tube
  - Cut off the deformed tips before reuse.
  - Replace tube in the following cases:
    If tube is too short to connect.
    If tube come out easily.

● Procedure

1 Discharge ink.
2 Remove cover(s).
  - IH cover
3 Remove cable(s).(from JUNCTION board)
4 Remove tube(s).
5 Remove cartridge holder.
  - Tap tight S cup_M3x12(x2)
6 Replace cartridge holder.
7 Reverse the above procedure to reinstall the Parts.

● Procedure(details)

1	Discharge ink. - [Check4:Adjustment]->[Adj.11:InkDischarge] => 5. Self-diagnosis
2	Remove cover(s). - IH cover => 3.2. Covers-remove/assemble
3	Remove cable(s).(from JUNCTION board) => 8. Electric cable diagram **NOTE** - Connection - slot.1:JUNCTION board(orign side)[J8] - slot.2:JUNCTION board(orign side)[J9] - slot.3:JUNCTION board(orign side)[J10] - slot.4:JUNCTION board(orign side)[J11] - slot.5:JUNCTION board(counter orign side)[J8] - slot.6:JUNCTION board(counter orign side)[J9]
4	Remove tube(s). A : Tube B : Cartridge holder 
5	Remove cartridge holder. A : Tap tight S cup_M3x12(x2) B : Cartridge holder  
6	Replace cartridge holder.
7	Reverse the above procedure to reinstall the parts.

CONFIDENTIAL

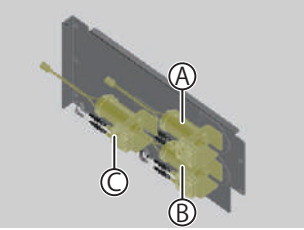
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.8.3. Circulation pump

A : Circulation pump (for slot.1)
B : Circulation pump (for slot.4)
C : Circulation pump (for slot.6)

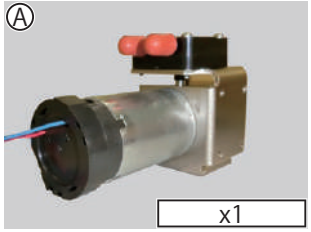


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-43402	Head Cap Assy (38UR)	-
Generic item	Phillips screwdriver No.2	-
Generic item	Tube cutter	-
Generic item	Tweezers	-

NOTE

DG-43402
DC Pump Assy
Ⓐ Pump



WARNING

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

WARNING

- Precautions when replacing the ink path
  - Wear gloves.
    Ink remains in tube(s).
    Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

WARNING

- Precautions when reusing tube
  - Cut off the deformed tips before reuse.
  - Replace tube in the following cases:
    If tube is too short to connect.
    If tube come out easily.

● Procedure

1 Discharge ink.
2 Remove cover(s).
  - IH cover
  - IH cover L
  - Circulation pump cover
3 Remove cable(s).
4 Remove tube(s).
5 Remove circulation pump Assy.
  - Round head screw with split washer_M4x8(x3)
6 Remove circulation pump.
  - Round head screw with split washer_M3x6(x2)
7 Replace circulation pump.
8 Reverse the above procedure to reinstall the Parts.
9 Check and adjust after replacing parts.

CONFIDENTIAL

● Procedure(details)

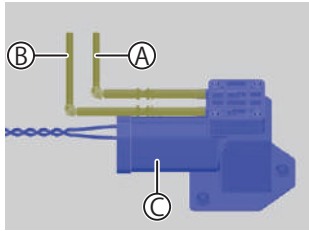
1 Discharge ink.
- [Check4:Adjustment]->[Adj.11:InkDischarge]
=> 5. Self-diagnosis

2 Remove cover(s).
- IH cover
- IH cover L
- Circulation pump cover
=> 3.2. Covers-remove/assemble

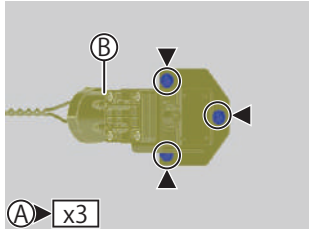
3 Remove cable(s).(from JUNCTION board)
=> 8. Electric cable diagram

NOTE
- Connection
  - Circulation pump cable:Relay cable (JUNCTION board(counter origin side)[J3])

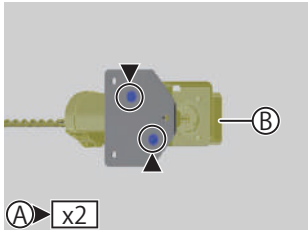
4 Remove tube(s).
A : Tube (for cartridge holder)
B : Tube (for print head)
C : Circulation pump Assy



5 Remove circulation pump Assy.
A : Round head screw with split washer_M4x8(x3)
B : Circulation pump Assy



6 Remove circulation pump.
A : Round head screw with split washer_M3x6(x2)
B : Circulation pump



7 Replace circulation pump.

8 Reverse the above procedure to reinstall the parts.

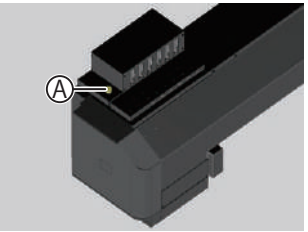
9 Check and adjust after replacing parts.
=> 4. Adjustment

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.8.4. Emergency stop button (IH)

A : Emergency stop button

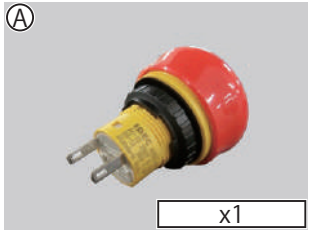


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41735	Emergency Stop Button	-

NOTE

DH-41735
Emergency Stop Button
Ⓐ Emergency Stop Button



● Procedure

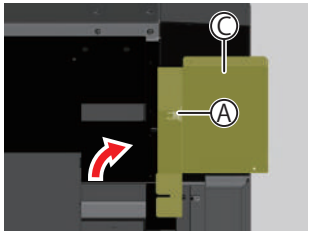
1 Remove cover(s).
- IH cover L
2 Remove cable(s).
3 Remove emergency stop button.
4 Replace emergency stop button.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

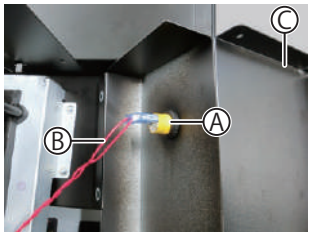
1 Remove cover(s).
- IH cover L
=> 3.2. Covers-remove/assemble

2 Remove cable(s).
- Lift IH cover L.
- Remove cable(s).

A : Emergency stop button
B : Cable(x2)
C : IH cover L

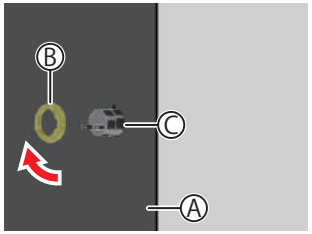


NOTE
- Connection
  - Emergency stop button cable:UV-LED board [J8]

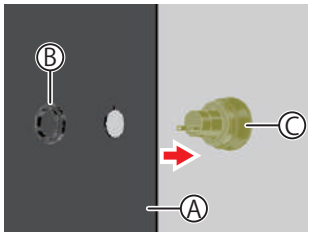


3 Remove emergency stop button.
- Remove fixing material behind emergency stop button.
- Remove emergency stop button.

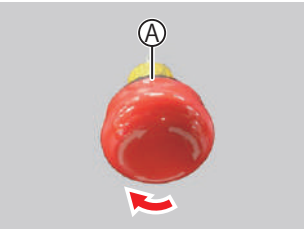
A : IH cover L
B : Fixing material
C : Emergency stop button



NOTE
- Turn fixing material to left side to remove it.



CONFIDENTIAL

4	Replace emergency stop button. - Check that emergency stop button is deactivated. A : Eemergency stop button	
5	Reverse the above procedure to reinstall the parts.	

TIP

index=> 3. Parts replacement

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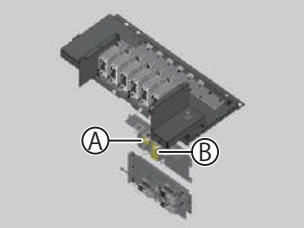
3.8.5. JUNCTION board

A : JUNCTION board (right side)
B : JUNCTION board (left side)

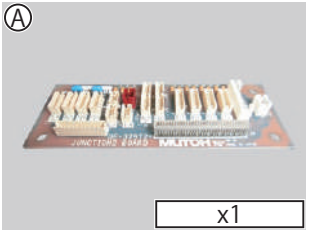


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-43396	Card Holder board Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-43396
Junction 2 Board
Ⓐ JUNCTION board



CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Remove cover(s).
  - IH cover
  - IH cover L
  - Circulation pump cover
2 Remove cable(s).
3 Remove JUNCTION board.
  - Cup screw_M3x6 Zn-CM2(x4)
4 Replace JUNCTION board.
5 Reverse the above procedure to reinstall the parts.

CONFIDENTIAL

● Procedure(details)

1 Remove cover(s).
- IH cover
- IH cover L
- Circulation pump cover

=> 3.2. Covers-remove/assemble

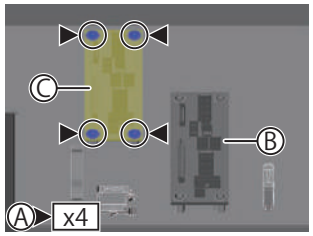
2 Remove cable(s).

=> 8. Electric cable diagram

NOTE
- Remove all cables.

3 Remove JUNCTION board.
A : Cup screw_M3x6 Zn-CM2(x4)
B : JUNCTION board (left side)
C : JUNCTION board (right side)

NOTE
- Remove procedure is same for both sides.



4 Replace JUNCTION board.

5 Reverse the above procedure to reinstall the parts.

NOTE
- Connector list:
  DG-43396:JUNCTION board(right side:GSC******_Rev.A)

Connector	Pin	Color	Connection	Reference
J1	31	Gray	MAIN 基板 [J23]	FFC
J2	2	White	Exhaust fan	-
J3	8	White	(no connection)	-
J4	6	Ivory	(no connection)	[BK/1]
J5	6	Ivory	(no connection)	[BLU/2]
J6	6	Ivory	(no connection)	[RED/3]
J7	6	Ivory	(no connection)	[YEL/4]
J8	4	Ivory	I/C cable (slot.1)	[BK/1]
J9	4	Ivory	I/C cable (slot.2)	[BLU/2]
J10	4	Ivory	I/C cable (slot.3)	[RED/3]
J11	4	Ivory	I/C cable (slot.4)	[YEL/4]
J12	2	Red	(no connection)	-
J13	3	Ivory	(no connection)	[BK]
J14	3	Ivory	(no connection)	[YEL]
J15	3	Ivory	PF limit sensor	[BLU]
J16	5	Ivory	(no connection)	[BK/1]
J17	5	Ivory	(no connection)	[BLU/2]
J18	5	Ivory	(no connection)	[RED/3]
J19	5	Ivory	(no connection)	[YEL/4]
J20	11	Ivory	(no connection)	-

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NOTE

- Connector list:
  DG-43396:JUNCTION board(left side:GSC******_Rev.A)

Connector	Pin	Color	Connection	Reference
J1	31	Gray	MAIN board [J24]	FFC
J2	2	White	(no connection)	-
J3	8	White	Circulation pump 1-3	-
J4	6	Ivory	(no connection)	[BK/1]
J5	6	Ivory	(no connection)	[BLU/2]
J6	6	Ivory	(no connection)	[RED/3]
J7	6	Ivory	(no connection)	[YEL/4]
J8	4	Ivory	I/C cable (slot.5)	[BK/1]
J9	4	Ivory	I/C cable (slot.6)	[BLU/2]
J10	4	Ivory	(no connection)	[RED/3]
J11	4	Ivory	(no connection)	[YEL/4]
J12	2	Red	(no connection)	-
J13	3	Ivory	(no connection)	[BK]
J14	3	Ivory	(no connection)	[YEL]
J15	3	Ivory	(no connection)	[BLU]
J16	5	Ivory	(no connection)	[BK/1]
J17	5	Ivory	(no connection)	[BLU/2]
J18	5	Ivory	(no connection)	[RED/3]
J19	5	Ivory	(no connection)	[YEL/4]
J20	11	Ivory	(no connection)	-

TIP

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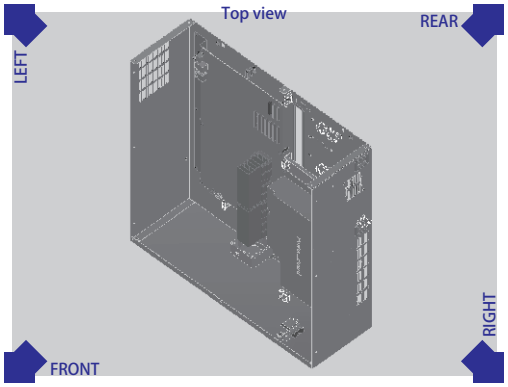
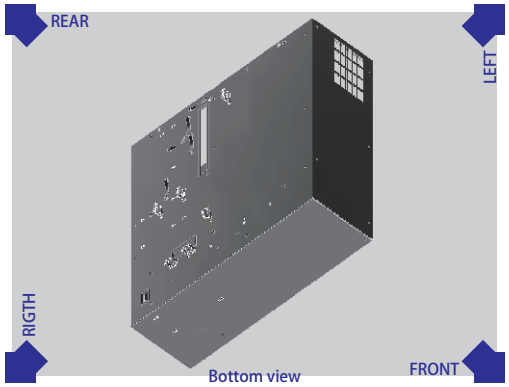
3.9. Board box

NOTE

- As of April 1, 2023 (No.1485700)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	MAIN board	=> 3.9.1. MAIN board
2	Power supply board	=> 3.9.2. Power supply board

TIP

index=> 3. Parts replacement

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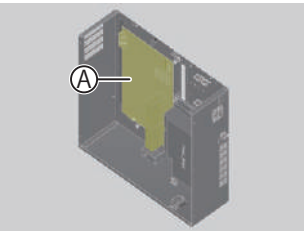
3.9.1. MAIN board

A : MAIN board

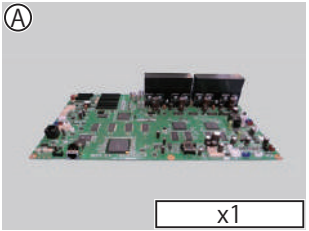


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41737	MAIN Board	-
Generic item	Phillips screwdriver No.2	-

NOTE

DH-41737
MAIN Board
Ⓐ MAIN board



NOTE

- MSA (MUTOH Service Assistance) ver.5.1.3 or later

CAUTION

- The mark on the left means "Refer to the manual".
- Refer to the following
  - Devices using lithium batteries may explode if replaced with an incorrect battery type.
  - Dispose of used batteries according to applicable laws and Regulations.

CAUTION

- Precautions when replacing board
  - When handling the board, do not touch the elements on the board with bare hands. There is a risk that the element will be destroyed by static electricity.

CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

CONFIDENTIAL

● Procedure

1 Remove cover(s).
- Board box cover
2 Follow the board replacement wizard. (MSA)
3 Remove cable(s).
4 Remove MAIN board.
- Cup screw_M3x6 Zn-CM2(x6)
5 Replace MAIN board.
6 Install MAIN board.
7 Reverse the above procedure to reinstall the parts.
8 Follow the board replacement wizard. (MSA)
9 Check and adjust after replacing parts.

● Procedure(details)

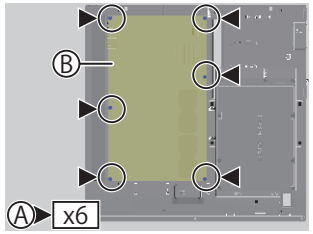
1 Remove cover(s).
- Board box cover
=> 3.2. Covers-remove/assemble

2 Follow the board replacement wizard. (MSA)
=> Refer to MSA maintenance manual

3 Remove cable(s).
=> 8. Electric cable diagram

NOTE
- Remove all cables.

4 Remove MAIN board.
A : Cup screw_M3x6 Zn-CM2(x6)
B : MAIN board



5 Replace MAIN board.

6 Install MAIN board.
- Refer to step.4.

7 Reverse the above procedure to reinstall the parts.

8 Follow the board replacement wizard. (MSA)
=> Refer to MSA maintenance manual

9 Check and adjust after replacing parts.
=> 4. Adjustment

NOTE
- Connector list:
DH-41737:MAIN board(OTR******_Rev.F)

Connector	Pin	Color	Connection	Reference
J2	6	Black	(no connection)	Pin header
J4	10	Black	(no connection)	Pin header
J7	6	Black	(no connection)	-
J8	8	Black	MOT_LED CONT board[J3]	RJ-45
J10	40	Black	CR board[J1]	FFC
J11	40	Black	CR board[J2]	FFC
J12	40	Black	CR board[J3]	FFC
J13	40	Black	CR board[J4]	FFC
J14	40	Black	CR board[J5]	FFC
J15	40	Black	CR board[J6]	FFC
J16	40	Black	CR board[J7]	FFC
J17	2	Ivory	MOT_LED CONT board[J17]	-
J18	4	Red	Cover switch R	-
J19	4	Blue	Cover switch L	-
J20	3	Ivory	CR motor	-
J21	11	Ivory	Card board(origin side) [J5]	-

CONFIDENTIAL

Connector	Pin	Color	Connection	Reference
J22	11	Ivory	Card board(counter origin side)[J5]	-
J23	31	Black	JUNCTION board(origin side)[J1]	FFC
J24	31	Black	JUNCTION board(counter origin side)[J1]	FFC
J26	4	Ivory	PF encoder	-
J27	3	Ivory	Cap origin sensor	-
J28	5	Ivory	(no connection)	-
J30	12	White	(no connection)	-
J31	2	Red	CR lock solenoid	-
J32	2	Blue	(no connection)	-
J33	4	White	Wiper solenoid 1/2	-
J34	12	White	Ionizer(option)	-
J35	2	White	Colling fan	-
J36	2	Black	Colling fan	-
J37	4	Red	Suction pump 1/2	-
J38	4	Black	(no connection)	-
J39	28	Black	Panel unit[J1]	FFC
J40	4	Ivory	MOT_LED CONT board[J15]	-
J41	20	White	Power supply board[CN301]	-
J42	8	-	-	not installed
J43	8	Ivory	(no connection)	-
J44	3	Ivory	(no connection)	-
J45	8	Black	LAN connector	RJ-45
J46	3	Ivory	CR origin sensor	-
J47	3	Ivory	PF origin sensor	-
J48	2	White	Waste fluid sensor	-
J50	4	White	(no connection)	-

Connector	Pin	Color	Connection	Reference
J51	8	Ivory	Card board(origin side)[J6]	-
J52	8	Ivory	Card board(counter origin side)[J6]	-
J53	10	White	MOT_LED CONT board[J2]	-
J54	2	White	(no connection)	-
J55	2	Ivory	(no connection)	-
J56	2	Ivory	(no connection)	-
J57	3	Ivory	Cap origin sensor 2	-
J58	4	Blue	Cap motor	-
J59	10	White	MOT_LED CONT board[J32]	-
J60	5	Ivory	Card board(origin side)[J7]	-
J61	5	Ivory	Card board(counter origin side)[J7]	-

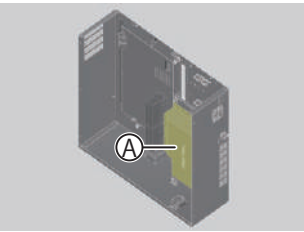
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.9.2. Power supply board

A : Power supply board

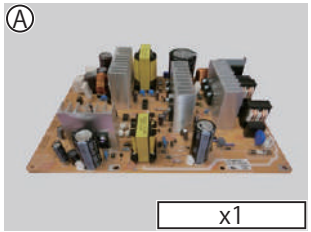


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-46873	Power Supply Board Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-46873
Power Supply Board Assy
Ⓐ Power supply board



CAUTION

- Precautions when replacing board
  - When handling the board, do not touch the elements on the board with bare hands. There is a risk that the element will be destroyed by static electricity.

● Procedure

1 Remove cover(s).
  - Board box cover
2 Remove cable(s).
3 Remove power supply board.
  - Cup screw_M3x6 Zn-CM2 (x9)
4 Replace power supply board.
5 Reverse the above procedure to reinstall the parts.

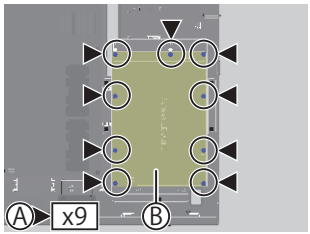
● Procedure(details)

1 Remove cover(s).
  - Board box cover
  => 3.2. Covers-remove/assemble

2 Remove cable(s).
  => 8. Electric cable diagram

  NOTE
  - Remove all cables.

3 Remove power supply board.
  A : Cup screw_M3x6 Zn-CM2(x9)
  B : Power supply board



4 Replace power supply board.

5 Reverse the above procedure to reinstall the parts.

NOTE

- Connector list:
  DG-46873:Power Supply Board

Connector	Pin	Color	Connection	Reference
CN001	2	White	Fuse holder (x2)	-
CN301	20	White	MAIN board[J41]	-

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TIP

index=> 3. Parts replacement

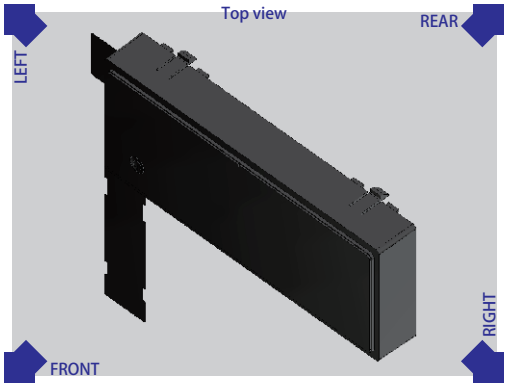
CONFIDENTIAL

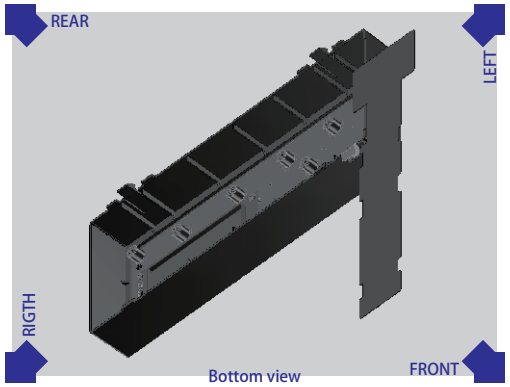
3.10. Panel

NOTE

- As of April 1, 2023 (No.1442902)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	Panel unit	=> 3.10.1. Panel unit

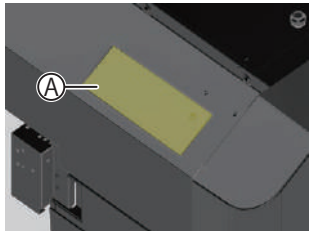
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.10.1. Panel unit

A : Panel unit

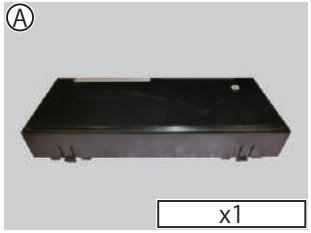


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49289	Panel Unit Assy	-

NOTE

DG-49289
Panel Unit Assy
Ⓐ Panel unit



CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Open front cover.
2 Remove panel unit.
3 Remove cable(s).
4 Replace panel unit.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Open front cover.

NOTE

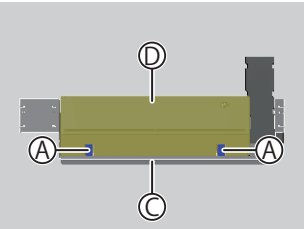
=> Operation manual

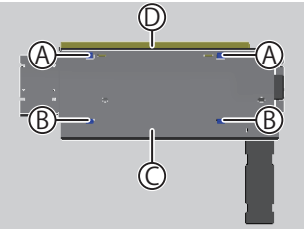
CONFIDENTIAL

2 Remove panel unit.
- Release hooks (x2) in front side.
- Lift up front side.
- Pull it out toward front.

A : Hook in front side (x2)
B : Hook in back side (x2)
C : Front stay R
D : Panel unit

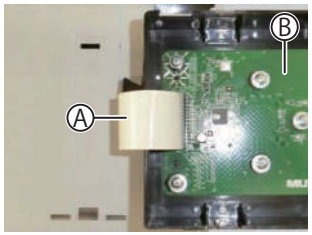
NOTE
- Panel unit is attached to front stay R with four hooks on back.





3 Remove cable(s).
=> 8. Electric cable diagram
A : FFC
B : Panel unit

NOTE
- Remove all cables.



4 Replace panel unit.

5 Reverse the above procedure to reinstall the parts.

NOTE
- Connector list:
  DG-49289:Panel unit(OTV******_Rev.I)

Connector	Pin	Color	Connection	Reference
J1	28	Black	MAIN board [J39]	FFC
J2	14	Black	(no connection)	Pin header

TIP
index=> 3. Parts replacement

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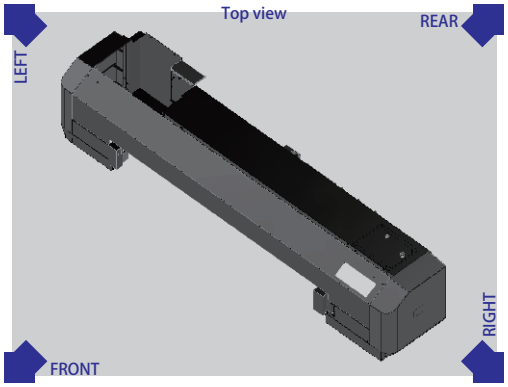
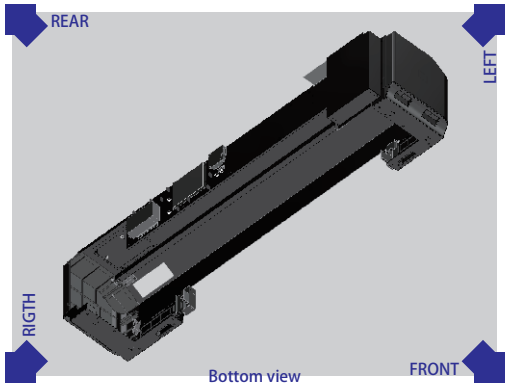
3.11. Cover/LED indicator light

NOTE

- As of April 1, 2023 (No.1485801)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	Emergency stop button	=> 3.11.1. Emergency stop button (cover)
2	Exhaust fan	=> 3.11.2. Exhaust fan
3	UV-LED board	=> 3.11.3. UV-LED board
4	Power supply board(UV-LED)	=> 3.11.4. Power supply board(UV-LED)

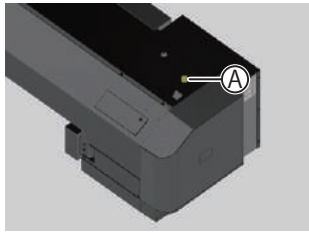
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.11.1. Emergency stop button (cover)

A : Emergency stop button

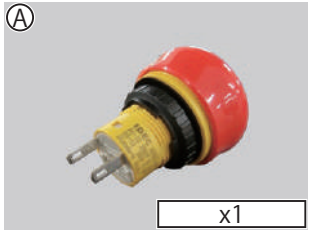


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41735	Emergency Stop Button	-

NOTE

DH-41735
Emergency Stop Button
Ⓐ Emergency Stop Button



● Procedure

1 Remove cover(s).
- Top cover lid
2 Remove cable(s).
3 Remove emergency stop button.
4 Replace emergency stop button.
5 Reverse the above procedure to reinstall the parts.

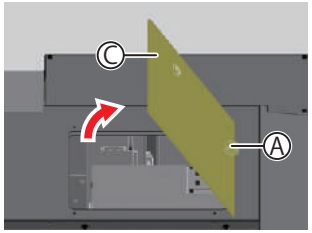
● Procedure(details)

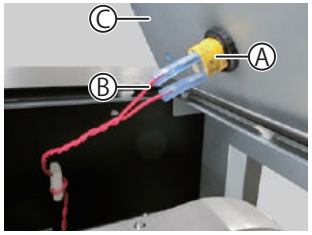
1 Remove cover(s).
- Top cover lid
=> 3.2. Covers-remove/assemble

2 Remove cable(s).
- Lift top cover lid.
- Remove cable(s).

A : Emergency stop button
B : Cable(x2)
C : Top cover lid

NOTE
- Connection
  - Emergency stop button cable:UV-LED board [J7]

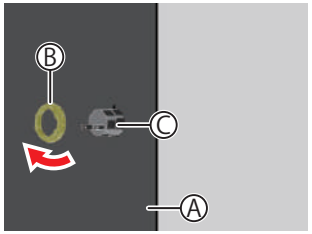


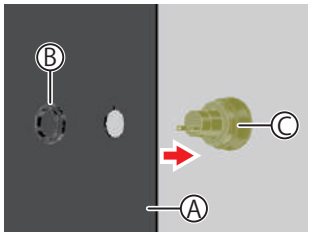


3 Remove emergency stop button.
- Remove fixing material behind emergency stop button.
- Remove emergency stop button.

A : Top cover lid
B : Fixing material
C : Emergency stop button

NOTE
- Turn fixing material to left side to remove it.





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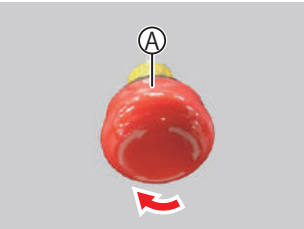
4	Replace emergency stop button. - Check that emergency stop button is deactivated. A : Eemergency stop button	
5	Reverse the above procedure to reinstall the parts.	

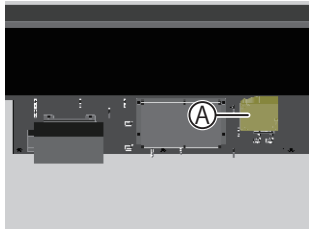
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.11.2. Exhaust fan

A : Exhaust fan



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-40311	Vacuum Fan Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-40311
Vacuum Fan Assy
Ⓐ Fan

● Procedure

1 Remove cover(s).
- UV-LED board cover
2 Remove cable(s).
3 Remove fan.
- Round head screw with split washer(polished)_M4x40(x2)
4 Replace fan.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

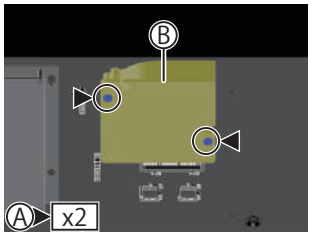
1 Remove cover(s).
- UV-LED board cover
=> 3.2. Covers-remove/assemble

2 Remove cable(s).
=> 8. Electric cable diagram

NOTE

- Connection
  - Exhaust fan cable:Relay cable (JUNCTION board(origin side)[J2])

3 Remove fan.
A : Round head screw with split washer(polished)_ M4x40(x2)
B : Fan



4 Replace fan.

5 Reverse the above procedure to reinstall the parts.

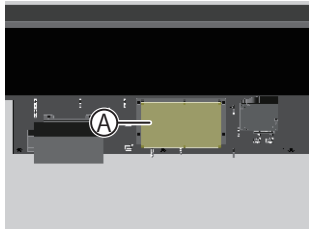
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.11.3. UV-LED board

A : UV-LED board

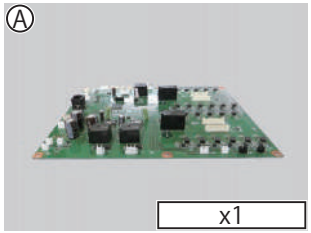


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41705	MOT_LED_CONT Board	-
Generic item	Phillips screwdriver No.2	-

NOTE

DH-41705
MOT_LED_CONT Board
Ⓐ UV-LED board



CAUTION

- Precautions when replacing board
  - When handling the board, do not touch the elements on the board with bare hands. There is a risk that the element will be destroyed by static electricity.

● Procedure

1 Remove cover(s).
- UV-LED board cover

2 Remove cable(s).

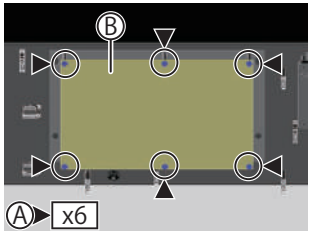
3 Remove UV-LED board.
- Cup screw_M3x6 Zn-CM2 (x6)

4 Replace UV-LED board.

5 Reverse the above procedure to reinstall the parts.

6 Check and adjust after replacing parts.

● Procedure(details)

1	Remove cover(s). - UV-LED board cover => **3.2. Covers-remove/assemble**
2	Remove cable(s). => **8. Electric cable diagram** **NOTE** - Remove all cables.
3	Remove UV-LED board. A : Cup screw_M3x6 Zn-CM2 (x6) B : UV-LED board 
4	Replace UV-LED board.
5	Reverse the above procedure to reinstall the parts.
6	Check and adjust after replacing parts. => **4. Adjustment**

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NOTE

- Connector list:
  DH-41705:UV-LED board(OVD******_Rev.-)

Connector	Pin	Color	Connection	Reference
J1	14	-		not installed
J2	10	White	MAIN board [J53]	-
J3	8	Black	MAIN board [J8]	RJ-45
J4	8	White	(no connection)	-
J5	5	White	FAN_CONT board [J2]	-
J6	2	White	Emergency stop button	-
J7	2	White	Emergency stop button	-
J8	2	White	Emergency stop button	-
J9	2	-	(no connection)	not installed
J10	2	White	MAIN board [J17]	-
J11	3	White	PF motor	-
J13	4	White	Power supply board (48V)[+V/-V]	-
J14	4	-	(no connection)	not installed
J15	4	Ivory	MAIN board [J40]	-
J16	2	White	PG motor (origin side)	-
J17	3	White	PG motor (counter origin side)	-
J18	3	Ivory	PG origin sensor (origin side)	-
J19	4	Ivory	PG encoder (origin side)	-
J20	3	Ivory	PG limit sensor(origin side)	-
J21	4	Ivory	PG encoder (counter origin side)	-
J22	3	Ivory	PG origin sensor (counter origin side)	-
J23	3	Ivory	PG limit sensor(counter origin side)	-
J24	3	Black	(no connection)	-
J25	2	Black	(no connection)	-
J26	3	White	Laser sensor (receiving side)	-
J27	2	White	Laser sensor (transmitting side)	-
J28	22	Ivory	UV-LED 1	-
J29	22	Ivory	UV-LED 2	-
J30	22	Ivory	UV-LED 1	-
J31	22	Ivory	UV-LED 2	-
J32	10	White	MAIN board [J59]	-
J33	9	Ivory	Drop sensor	-
J34	6	Black	(no connection)	-
J35	6	White	Signal light	-

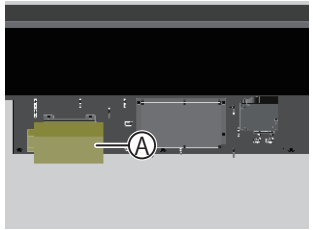
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.11.4. Power supply board(UV-LED)

A : Power supply board(UV-LED)

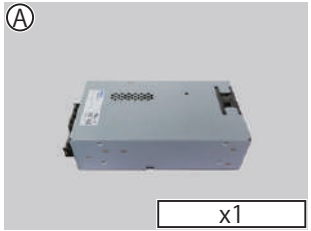


NOTE

- Power supply board (UV-LED) used depends on serial number.
  Maintenance parts are used in common.

NOTE

DH-41716
Switching Power Supply (48V)
Ⓐ Power supply board



CAUTION

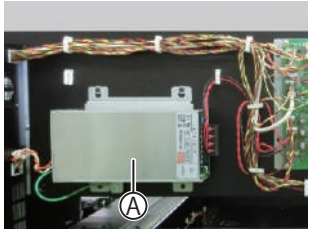
- Precautions when replacing board
  - When handling the board, do not touch the elements on the board with bare hands.
    There is a risk that the element will be destroyed by static electricity.

TIP

index=> 3. Parts replacement

3.11.4.1. Procedure(1)

This is procedure for removing power supply board (UV-LED) shown in figure.
A : Power supply board(UV-LED)



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41716	Switching Power Supply (48V)	-
Generic item	Phillips screwdriver No.2	-

NOTE

- Serial number:KQ5U000001~KQ5U000190(T.B.D.)

● Procedure

1 Remove cover(s).
  - UV-LED board cover
2 Remove cable(s).(from UV-LED board)
3 Remove screw(s).
  - Tapping screw_M3x6 S tight cup(black)(x2)
4 Remove power supply board.
  - Tapping screw_M3x6 S tight cup(black)(x2)
5 Remove cable(s).(1)
6 Remove cable(s).(2)
7 Remove power supply board.
  - Round head screw with split washer_M4x8(x4)
8 Replace power supply board.
9 Install power supply board.
  - Round head screw with split washer_M4x8(x4)

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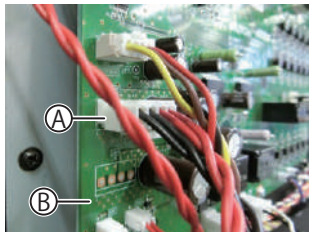
10 Install cable(s).(1)
11 Install cable(s).(2)
12 Install power supply board.
- Tapping screw_M3x6 S tight cup(black)(x2)
13 Install screw(s).
- Tapping screw_M3x6 S tight cup(black)(x4)
14 Install cable(s).(to UV-LED board)
15 Reverse the above procedure to reinstall the parts.

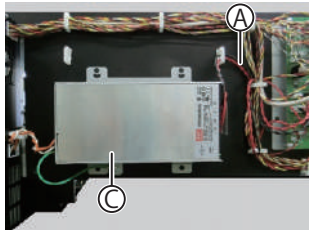
● Procedure(details)

1 Remove cover(s).
- UV-LED board cover
=> 3.2. Covers-remove/assemble

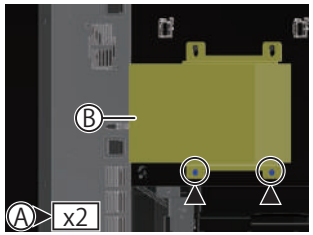
2 Remove cable(s).(from UV-LED board)
=> 8. Electric cable diagram
A : Cable
B : UV-LED board
C : Power supply board(UV-LED)

NOTE
- Connection
  - DC cable:UV-LED board[J13]



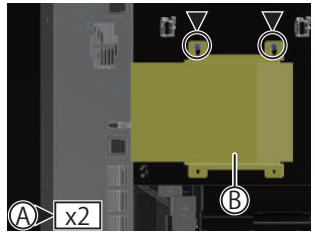


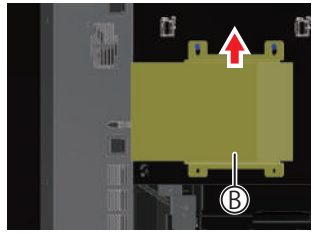
3 Remove screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x2)
B : Power supply board(UV-LED)

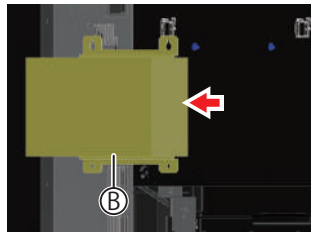


4 Remove power supply board.
- Loosen screws.(x2)
- Move power supply board assy to upper side.
- Remove power supply board.
A : Tapping screw_M3x6 S tight cup(black)(x2)
B : Power supply board(UV-LED)

CAUTION
- AC cable is connected to terminal block on system.



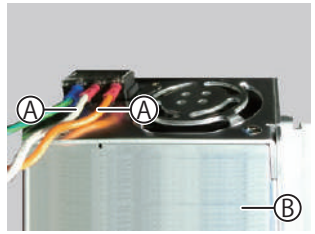




5 Remove cable(s).(1)
=> 8. Electric cable diagram
- Remove AC cable.
A : AC cable(x2)
B : Power supply board(UV-LED)

NOTE
- Connection
  - AC cable(x2):terminal block

CAUTION
- AC cable is connected to terminal block on system.
  Remove cables while holding power supply board.



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6 Remove cable(s).(2)

=> 8. Electric cable diagram

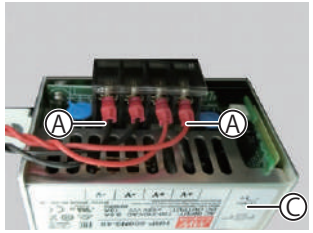
A : DC cable(x4)

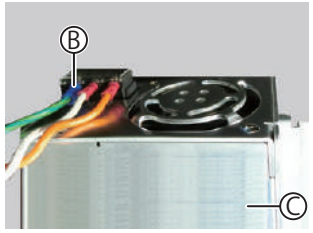
B : FG cable

C : Power supply board(UV-LED)

NOTE

- Connection
  - DC cable(x4):UV-LED board[J13]
  - FG cable:mounting plate





7 Remove power supply board.

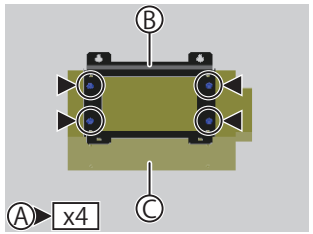
A : Round head screw with split washer_M4x8(x4)

B : mounting plate

C : Power supply board(UV-LED)

NOTE

- FG cable is not removed from mounting plate.



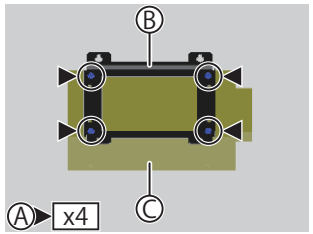
8 Replace power supply board.

9 Install power supply board.

A : Round head screw with split washer_M4x8(x4)

B : mounting plate

C : Power supply board(UV-LED)



10 Install cable(s).(1)

=> 8. Electric cable diagram

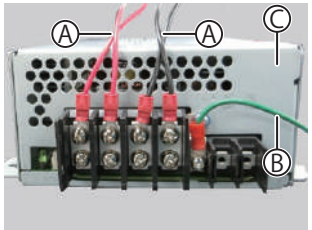
A : DC cable(x4)

B : FG cable

C : Power supply board(UV-LED)

NOTE

- Connection
  - DC cable(red x2):"+V"
  - DC cable(black x2):"-V"
  - FG cable:"FG"



11 Install cable(s).(2)

=> 8. Electric cable diagram

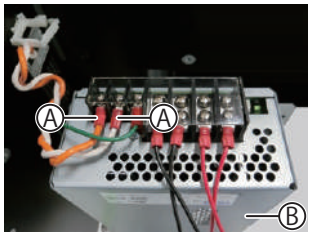
- Install AC cable.

A : AC Cable(x2)

B : Power supply board(UV-LED)

CAUTION

- AC cable is connected to terminal block on system. Install cables while holding power supply board.



12 Install power supply board.

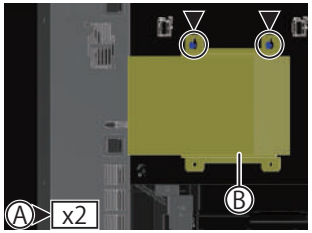
- Install power supply board assy to screws.
- Move power supply board assy to lower side.

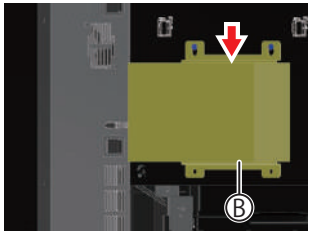
A : Tapping screw_M3x6 S tight cup(black)(x2)

B : Power supply board(UV-LED)

CAUTION

- AC cable is connected to terminal block on system.





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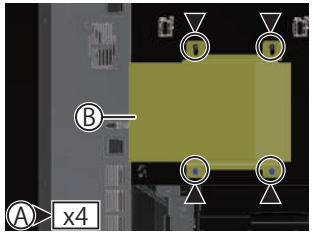
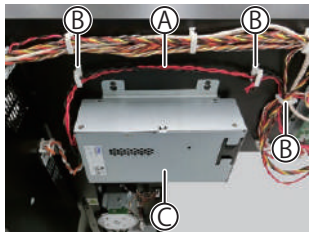
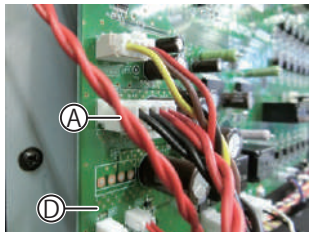
13 Install screw(s).
A : Tapping screw_M3x6 S tight cup(black)(x4)
B : Power supply board(UV-LED)



14 Install cable(s).(to UV-LED board)
=> 8. Electric cable diagram
- Install cable to clamp.
- Install cable to UV-LED board.
A : Cable
B : Clamp
C : Power supply board(UV-LED)
D : UV-LED board

NOTE
- Connection
  - DC cable (UV-LED board[J13])





15 Reverse the above procedure to reinstall the parts.

NOTE
- Connector list:
  Power supply board before replace(serial number:KQ5U000001~KQ5U000190(T.B.D.))

Connector	Pin	Color	Connection	Reference
L	-	-	terminal block (orange)	-
N	-	-	terminal block (white)	-
FG	-	-	Mounting plate	-
+V	-	-	UV-LED board[J13] (red)	-
+V	-	-	UV-LED board[J13] (red)	-
-V	-	-	UV-LED board[J13] (black)	-
-V	-	-	UV-LED board[J13] (black)	-

NOTE
- Connector list:
  DH-41716:Power supply board

Connector	Pin	Color	Connection	Reference
AC_L	-	-	terminal block (orange)	-
AC_N	-	-	terminal block (white)	-
FG	-	-	Mounting plate	-
+V	-	-	UV-LED board[J13] (red)	-
+V	-	-	UV-LED board[J13] (red)	-
-V	-	-	UV-LED board[J13] (black)	-
-V	-	-	UV-LED board[J13] (black)	-

TIP
index=> 3. Parts replacement

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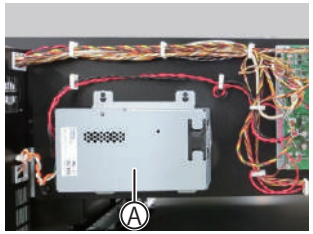
3.11.4.2. Procedure(2)

This is procedure for removing power supply board (UV-LED) shown in figure.
A : Power supply board(UV-LED)



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41716	Switching Power Supply (48V)	-
Generic item	Phillips screwdriver No.2	-

NOTE

- Serial number:KQ5U000191~(T.B.D.)

● Procedure

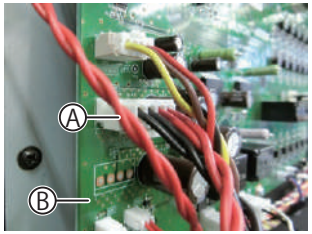
1 Remove cover(s).
 - UV-LED board cover
2 Remove cable(s).(from UV-LED board)
3 Remove screw(s).
 - Tapping screw_M3x6 S tight cup(black)(x2)
4 Remove power supply board.
 - Tapping screw_M3x6 S tight cup(black)(x2)
5 Remove cable(s).(1)
6 Remove cable(s).(2)
7 Remove power supply board.
 - Round head screw with split washer_M4x8(x4)
8 Replace power supply board.
9 Install power supply board.
 - Round head screw with split washer_M4x8(x4)
10 Install cable(s).(1)
11 Install cable(s).(2)
12 Install power supply board.
 - Tapping screw_M3x6 S tight cup(black)(x2)
13 Install screw(s).
 - Tapping screw_M3x6 S tight cup(black)(x4)
14 Install cable(s).(to UV-LED board)
15 Reverse the above procedure to reinstall the parts.

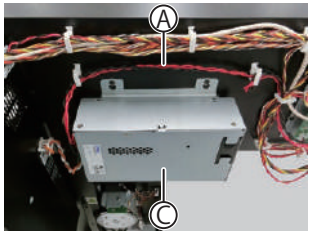
● Procedure(details)

1 Remove cover(s).
 - UV-LED board cover
 => 3.2. Covers-remove/assemble

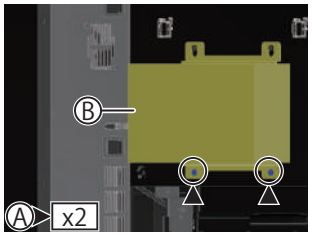
2 Remove cable(s).(from UV-LED board)
 => 8. Electric cable diagram
 A : Cable
 B : UV-LED board
 C : Power supply board(UV-LED)

 NOTE
 - Connection
  - DC cable:UV-LED board[J13]





3 Remove screw(s).
 A : Tapping screw_M3x6 S tight cup(black)(x2)
 B : Power supply board(UV-LED)



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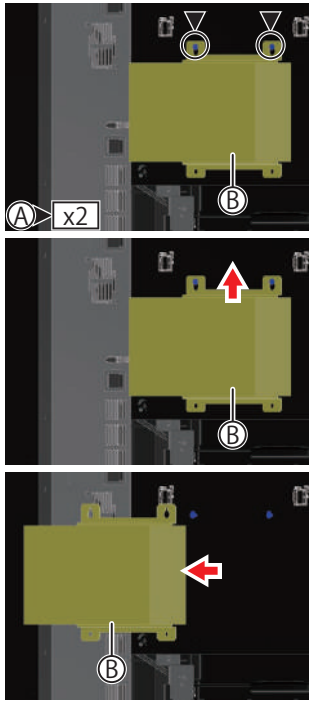
4 Remove power supply board.
- Loosen screws.(x2)
- Move power supply board assy to upper side.
- Remove power supply board.

A : Tapping screw_M3x6 S tight cup(black)(x2)
B : Power supply board(UV-LED)

CAUTION
- AC cable is connected to terminal block on system.

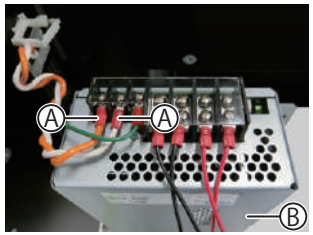


5 Remove cable(s).(1)
=> 8. Electric cable diagram
- Remove AC cable.

A : AC Cable(x2)
B : Power supply board(UV-LED)

NOTE
- Connection
  - AC cable(x2):terminal block

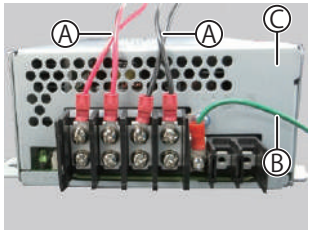
CAUTION
- AC cable is connected to terminal block on system. Remove cables while holding power supply board.



6 Remove cable(s).(2)
=> 8. Electric cable diagram

A : DC cable(x4)
B : FG cable
C : Power supply board(UV-LED)

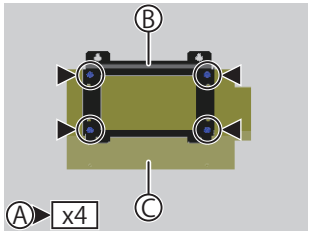
NOTE
- Connection
  - DC cable(x4):UV-LED board[J13]
  - FG cable:mounting plate



7 Remove power supply board.

A : Round head screw with split washer_M4x8(x4)
B : mounting plate
C : Power supply board(UV-LED)

NOTE
- FG cable is not removed from mounting plate.



8 Replace power supply board.

9 Reverse the above procedure to reinstall the parts.

NOTE
- Connector list:
  DH-41716:Power supply board

Connector	Pin	Color	Connection	Reference
AC_L	-	-	terminal block (orange)	-
AC_N	-	-	terminal block (white)	-
FG	-	-	Mounting plate	-
+V	-	-	UV-LED board[J13] (red)	-
+V	-	-	UV-LED board[J13] (red)	-
-V	-	-	UV-LED board[J13] (black)	-
-V	-	-	UV-LED board[J13] (black)	-

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TIP

index=> 3. Parts replacement

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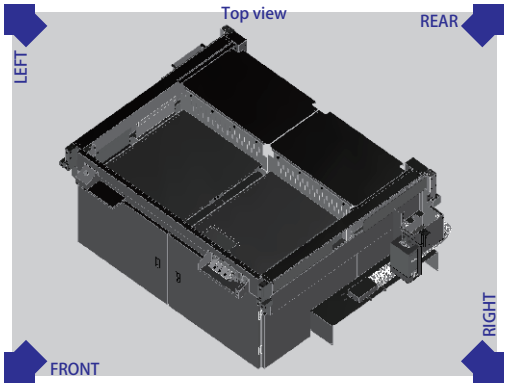
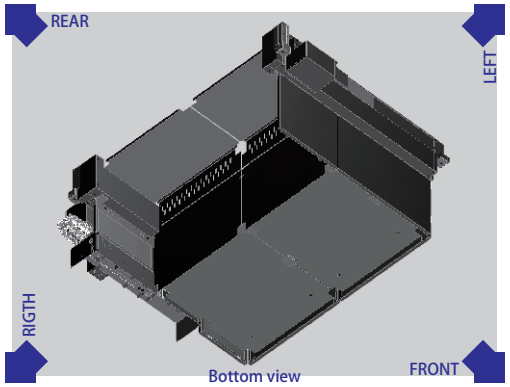
3.12. Base frame cover/foot switch

NOTE

- As of April 1, 2023 (No.1485901)

NOTE





This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	Emergency stop button (left side)	=> 3.12.1. Emergency stop button (left side)
2	Emergency stop button (right side)	=> 3.12.2. Emergency stop button (right side)
3	FAN CONT board	=> 3.12.3. FAN_CONT board
4	Power supply board(vacuum fan)	=> 3.12.4. Power supply board(vacuum fan)

TIP

index=> 3. Parts replacement

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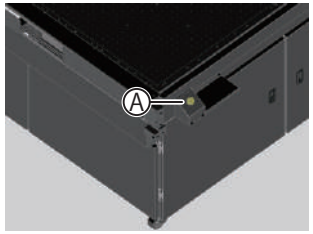
3.12.1. Emergency stop button (left side)

A : Emergency stop button

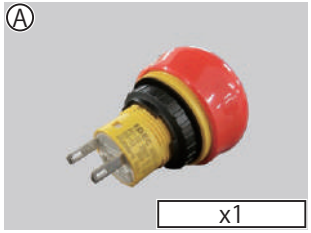


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41735	Emergency Stop Button	-

NOTE

DH-41735
Emergency Stop Button
Ⓐ Emergency Stop Button



● Procedure

1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L
- Base frame cover F
- Base frame cover FL

2 Remove cable(s).
3 Remove emergency stop button.
4 Replace emergency stop button.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

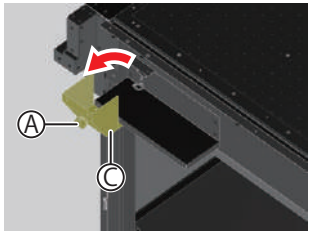
1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L
- Base frame cover F
- Base frame cover FL

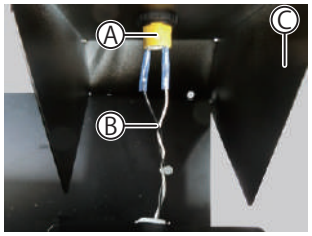
=> 3.2. Covers-remove/assemble

2 Remove cable(s).
- Lift base frame cover FL.
- Remove cable(s).

A : Emergency stop button
B : Cable(x2)
C : Base frame cover FL

NOTE
- Connection
  - Emergency stop button cable:UV-LED board [J6]

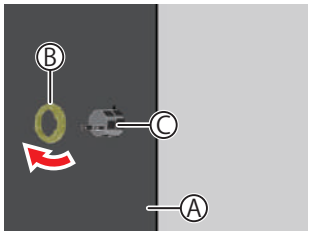


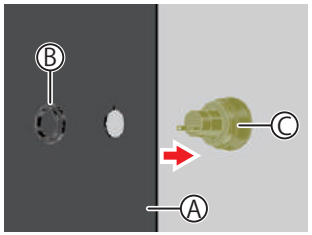


3 Remove emergency stop button.
- Remove fixing material behind emergency stop button.
- Remove emergency stop button.

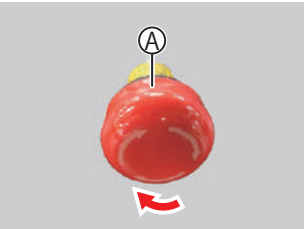
A : Base frame cover FL
B : Fixing material
C : Emergency stop button

NOTE
- Turn fixing material to left side to remove it.





CONFIDENTIAL

4	Replace emergency stop button. - Check that emergency stop button is deactivated. A : Eemergency stop button	
5	Reverse the above procedure to reinstall the parts.	

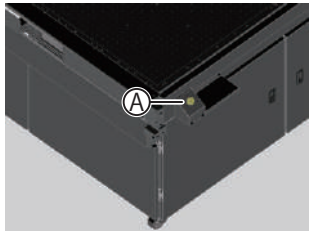
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.12.2. Emergency stop button (right side)

A : Emergency stop button

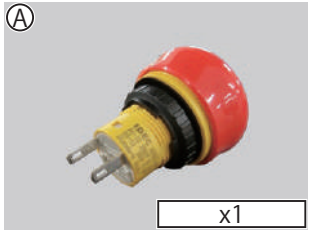


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41735	Emergency Stop Button	-

NOTE

DH-41735
Emergency Stop Button
Ⓐ Emergency Stop Button



● Procedure

1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L
- Base frame cover F
- Base frame cover FR

2 Remove cable(s).
3 Remove emergency stop button.
4 Replace emergency stop button.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

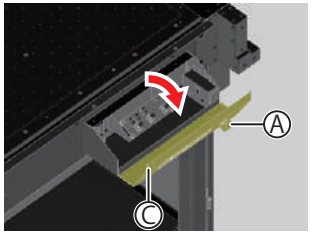
1 Remove cover(s).
- Base frame front cover R
- Base frame front cover L
- Base frame cover F
- Base frame cover FR

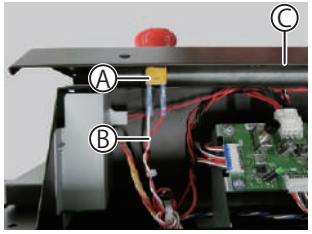
=> 3.2. Covers-remove/assemble

2 Remove cable(s).
- Lift base frame cover FR.
- Remove cable(s).

A : Emergency stop button
B : Cable(x2)
C : Base frame cover FR

NOT
- Connection
  - Emergency stop button cable:UV-LED board [J6]

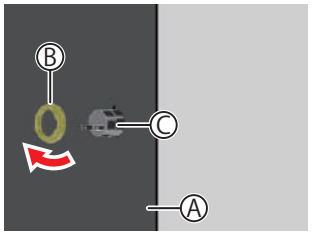


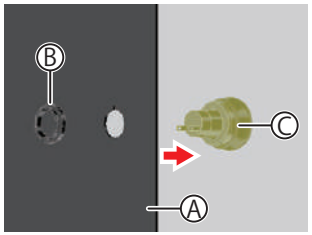


3 Remove emergency stop button.
- Remove fixing material behind emergency stop button.
- Remove emergency stop button.

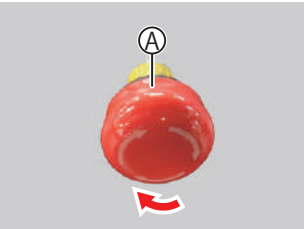
A : Base frame cover FR
B : Fixing material
C : Emergency stop button

NOTE
- Turn fixing material to left side to remove it.





CONFIDENTIAL

4	Replace emergency stop button. - Check that emergency stop button is deactivated. A : Eemergency stop button	
5	Reverse the above procedure to reinstall the parts.	

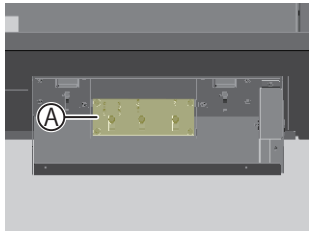
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.12.3. FAN_CONT board

A : FAN_CONT board

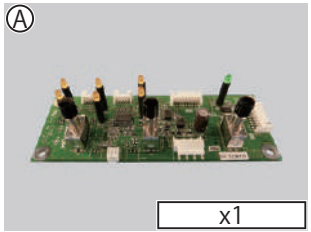


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41699	FAN_CONT Board	-
Generic item	Phillips screwdriver No.2	-

NOTE

DH-41699
FAN_CONT Board
Ⓐ FAN_CONT board



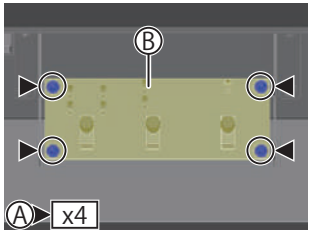
CAUTION

- Precautions when replacing board
  - When handling the board, do not touch the elements on the board with bare hands. There is a risk that the element will be destroyed by static electricity.

● Procedure

1 Remove cover(s).
  - UV-LED board cover
2 Remove cable(s).
3 Remove FAN_CONT board.
  - Cup screw_M3x6 Zn-CM2 (x4)
4 Replace FAN_CONT board.
5 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1	Remove cover(s). - Base frame front cover R - Base frame front cover L - Base frame cover F - Base frame cover FR => **3.2. Covers-remove/assemble**
2	Remove cable(s). => **8. Electric cable diagram** **NOTE** - Remove all cables.
3	Remove FAN_CONT board. A : Cup screw_M3x6 Zn-CM2 (x4) B : FAN_CONT board 
4	Replace FAN_CONT board.
5	Reverse the above procedure to reinstall the parts.

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NOTE

- Connector list:
  DH-41699:FAN_CONT board(GVC******_Rev.-)

Connector	Pin	Color	Connection	Reference
J1	4	White	(no connection)	-
J2	5	White	UV-LED board [J5]	-
J3	18	White	Vaccum fan 1~6	-
J4	2	-		not installed
J5	18	White	Vaccum fan 7~12	-
J6	2	White	Fot switch	-
J7	2			not installed
J8	4	White	Power supply board (24V)[CN2]	-

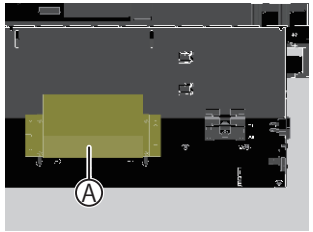
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.12.4. Power supply board(vacuum fan)

A : Power supply board(vacuum fan)

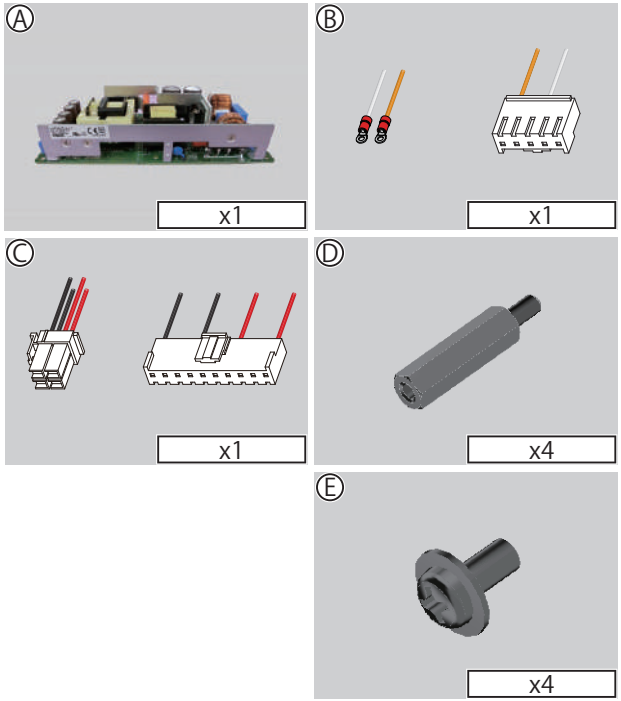


NOTE

- Power supply board (UV-LED) used depends on serial number.
  Maintenance parts are used in common.

NOTE

DH-41704
Switching Power Supply (24V)
Ⓐ Power sypply board
Ⓑ Cable 1
Ⓒ Cable 2
Ⓓ Spacer
Ⓔ Screw



CAUTION

- Precautions when replacing board
  - When handling the board, do not touch the elements on the board with bare hands.
    There is a risk that the element will be destroyed by static electricity.

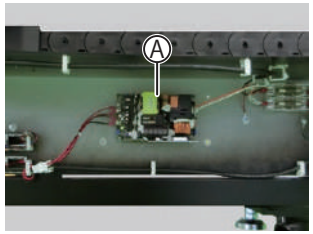
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.12.4.1. Procedure(1)

This is procedure for removing power supply board (UV-LED) shown in figure.
A : Power supply board(vacuum fan)



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41704	Switching Power Supply (24V)	-
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (2.5mm)	-

NOTE
- Serial number:KQ5U000001~KQ5U000050(T.B.D.)

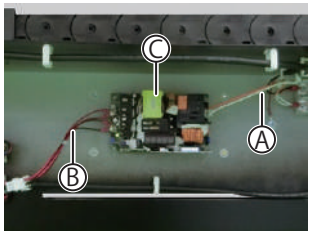
● Procedure

1 Remove cover(s).
 - Base frame side cover R1
 - Base frame board cover
2 Remove cable(s).
3 Remove power supply board.
 - Cup screw_M3x4 Zn-CM2(x4)
4 Install spacers.
5 Replace AC cable.
6 Replace DC cable.
7 Replace power supply board.
8 Install power supply board.
 - Cup screw_M3x6 Zn-CM2(x4)
9 Install cable.
10 Reverse the above procedure to reinstall the parts.

● Procedure(details)

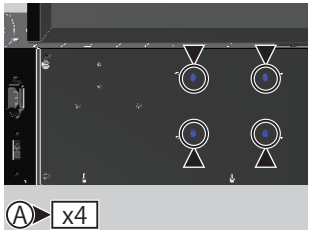
1 Remove cover(s).
 - Base frame side cover R1
 - Base frame board cover
 => 3.2. Covers-remove/assemble

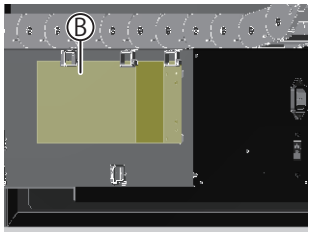
2 Remove cable(s).
 => 8. Electric cable diagram
 A : AC cable
 B : DC cable
 C : Power supply board(vacuum fan)



NOTE
- Connection
 - AC cable:fuse(x2)
 - DC cable:relay cable(FAN_CONT board[J8])

3 Remove power supply board.
 - Remove screws on rear side of power supply board.
 A : Cup screw_M3x4 Zn-CM2(x4)
 B : Power supply board(vacuum fan)

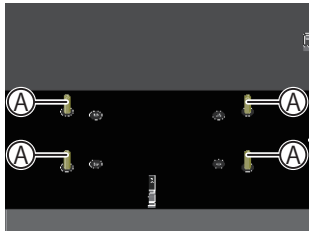




CAUTION
- If all screws are removed, power supply board will drop.
 Remove screws while holding power supply board.

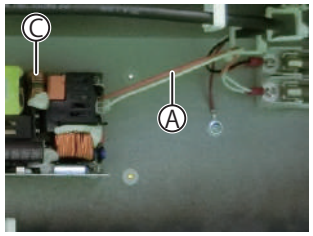
CONFIDENTIAL

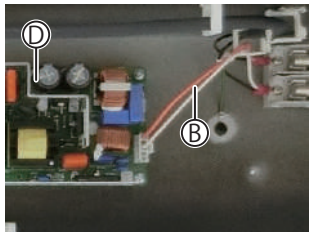
4 Install spacers.
A : Hexagonal spacer(x4)



5 Replace AC cable.
- Remove AC cable.
- Replace with new AC cable.

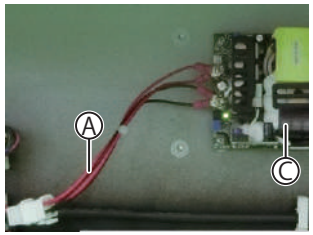
A : AC cable
B : New AC cable
C : Power supply board(vacuum fan)
D : New power supply board(vacuum fan)

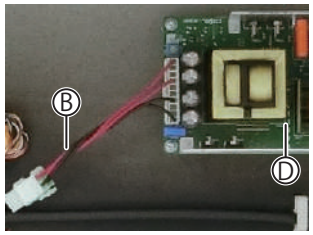




6 Replace DC cable.
- Remove DC cable.
- Replace with new DC cable.

A : DC cable
B : New DC cable
C : Power supply board(vacuum fan)
D : New power supply board(vacuum fan)

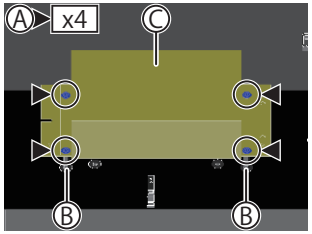




7 Replace power supply board.

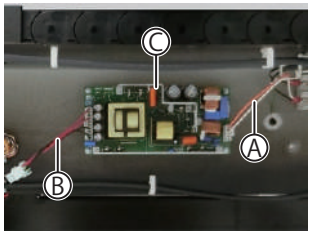
8 Install power supply board.
- Replace with new screws.
- Install power board to hexagonal spacer.

A : Cup screw_M3x6 Zn-CM2(x4)
B : Hexagonal spacer(x4)
C : Power supply board(vacuum fan)



9 Install power supply board.
=> 8. Electric cable diagram

A : AC cable
B : DC cable
C : Power supply board(vacuum fan)



10 Reverse the above procedure to reinstall the parts.

NOTE

- Connector list:
  Power supply board before replace(serial number:KQ5U000001~KQ5U000050(T.B.D.))

Connector	Pin	Color	Connection	Reference
CN1	3	White	Fuse(x2)	-
+V	-	-	FNA-CONT board[J8] (red x2)	-
-V	-	-	FNA-CONT board[J8] (black x2)	-

NOTE

- Connector list:
  DH-41704:Power supply board

Connector	Pin	Color	Connection	Reference
CN1	5	White	Fuse(x2)	-
CN3	10	White	FAN-CONT board[J8]	-

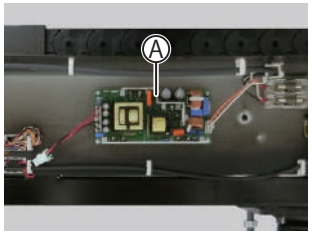
CONFIDENTIAL

TIP

index=> 3. Parts replacement

3.12.4.2. Procedure(2)

This is procedure for removing power supply board (UV-LED) shown in figure.
A : Power supply board(vacuum fan)



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41704	Switching Power Supply (24V)	-
Generic item	Phillips screwdriver No.2	-

NOTE

- Serial number:KQ5U000051~(T.B.D.)

● Procedure

1 Remove cover(s).
  - Base frame side cover R1
  - Base frame board cover
2 Remove cable(s).
3 Remove power supply board.
  - Cup screw_M3x6 Zn-CM2(x4)
4 Replace power supply board.
5 Reverse the above procedure to reinstall the parts.

CONFIDENTIAL

● Procedure(details)

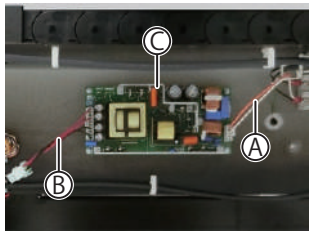
1 Remove cover(s).
- Base frame side cover R1
- Base frame board cover

=> 3.2. Covers-remove/assemble

2 Remove cable(s).

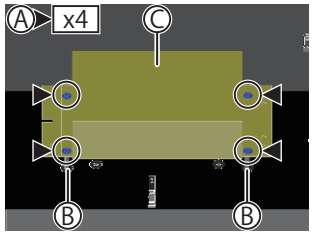
=> 8. Electric cable diagram

A : AC cable
B : DC cable
C : Power supply board(vacuum fan)



NOTE
- Connection
  - AC cable:fuse(x2)
  - DC cable:relay cable(FAN_CONT board[J8])

3 Remove power supply board.
A : Cup screw_M3x6 Zn-CM2(x4)
B : Hexagonal spacer(x4)
C : Power supply board(vacuum fan)



CAUTION
- If all screws are removed, power supply board will drop.
  Remove screws while holding power supply board.

4 Replace power supply board.

5 Reverse the above procedure to reinstall the parts.

NOTE
- Connector list:
  DH-41704:Power supply board

Connector	Pin	Color	Connection	Reference
CN1	5	White	Fuse(x2)	-
CN3	10	White	FAN-CONT board[J8]	-

TIP
index=> 3. Parts replacement

CONFIDENTIAL

3.13. Accessories

NOTE

- As of April 1, 2023 (No.1486101)

This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	-	-

TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.14. FFC

NOTE

- As of April 1, 2023

This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	CR-FFC	=> 3.14.1. CR-FFC
2	Head-FFC	=> 3.14.2. Head-FFC
3	JUNCTION-FFC	=> 3.14.3. JUNCTION-FFC
4	Panel-FFC	=> 3.14.4. Panel-FFC

TIP

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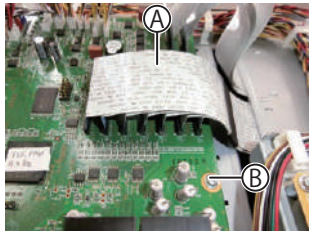
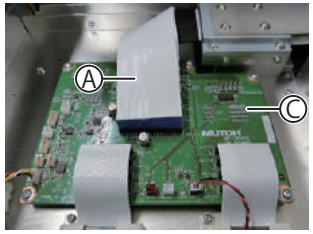
3.14.1. CR-FFC

A : CR-FFC(x7)
B : MAIN board
C : CR board



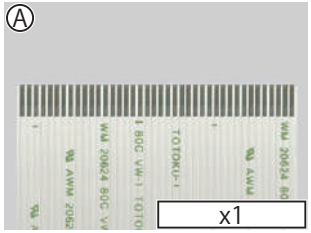


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49268	CR-FFC_Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-49268
CR-FFC_Assy
Ⓐ FFC



CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

CONFIDENTIAL

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L
- Top cover lid
- UV-LED board cover
- Front cover
- Top cover
- Board box cover

2 Move gantry.(rear side)
3 Move carriage.
4 Remove clamp(s).
5 Remove steel bare.(carriage side)
- Round head screw with split washer_M3x6(x4)

6 Remove steel bare holder.
- Round head screw with split washer(polished)_M3x16(x2)

7 Remove FFC.(from CR board)
8 Remove FFC.(from MAIN board)
9 Replace FFC.
10 Reverse the above procedure to reinstall the parts.
11 Check and adjust after replacing parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L
- Top cover lid
- UV-LED board cover
- Front cover
- Top cover
- IH cover
- IH cover L
- Circulation pump cover

=> 3.2. Covers-remove/assemble

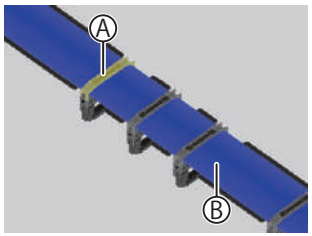
2 Move gantry.(rear side)
- Mover gantry to rear side.

=> 3.2. Covers-remove/assemble

3 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

4 Remove clamp(s).
A : Clamp_bare(x21)
B : Steel bare



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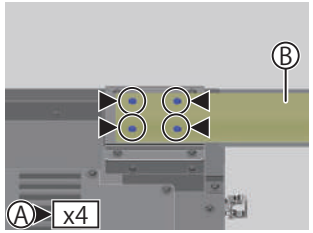
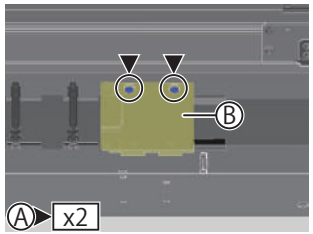
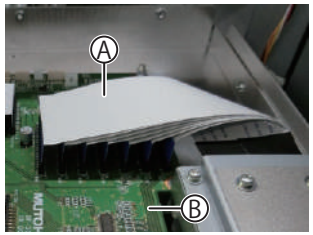
5 Remove steel bare.(carriage side)
A : Round head screw with split washer_M3x6(x4)
B : Steel bare



6 Remove steel bare holder.
A : Round head screw with split washer(polished)_ M3x16(x2)
B : Steel bare holder



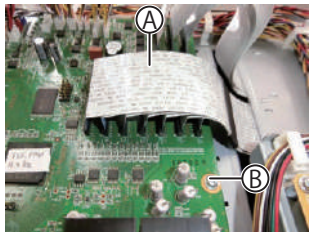
7 Remove FFC.(from CR board)
A : CR-FFC(x7)
B : CR board



8 Remove FFC.(from MAIN board)
A : CR-FFC(x7)
B : MAIN board

NOTE

- Connection
  - CR-FFC1:CR board[J1]/MAIN board[J10]
  - CR-FFC2:CR board[J2]/MAIN board[J11]
  - CR-FFC3:CR board[J3]/MAIN board[J12]
  - CR-FFC4:CR board[J4]/MAIN board[J13]
  - CR-FFC5:CR board[J5]/MAIN board[J14]
  - CR-FFC6:CR board[J6]/MAIN board[J15]
  - CR-FFC7:CR board[J7]/MAIN board[J16]



9 Replace FFC.

10 Reverse the above procedure to reinstall the parts.

11 Check and adjust after replacing parts.
=> 4. Adjustment

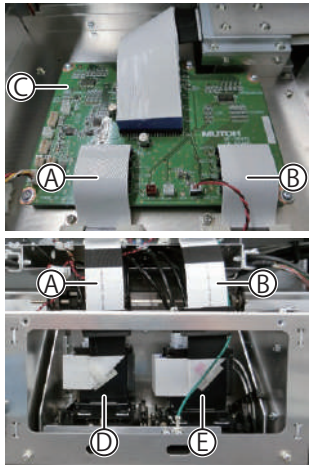
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.14.2. Head-FFC

A : Head-FFC(x4:for print head 1)
B : Head-FFC(x4:for print head 2)
C : CR board
D : Print head 1
E : Print head 2

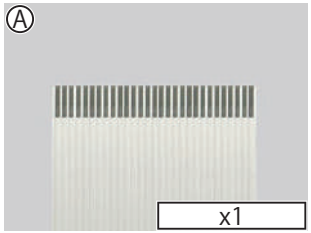


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-41072	Head FFC(D)	-
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (2.5mm)	-

NOTE

DG-41072
Head FFC(D)
Ⓐ FFC



CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Discharge ink.
2 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover R2
  - Pump cover
  - Side cover R
  - Top cover lid
  - CR board cover
  - CR cover
3 Move gantry.(front side)
4 Move carriage.
5 Remove frame F.
  - Round head screw with split washer_M3x6(x6)
6 Remove tube(s).
7 Remove print head.
  - Hex socket screw with split washer_M3x6 Ni-3(x3)
8 Remove FFC.(from print head)

CONFIDENTIAL

9 Remove FFC.(from CR board)
10 Replace FFC.
11 Reverse the above procedure to reinstall the parts.
12 Check and adjust after replacing parts.

● Procedure(details)

1 Discharge ink.
- [Check4:Adjustment]->[Adj.11:InkDischarge]

=> 5. Self-diagnosis

NOTE
- Discharge ink to prevent ink from dripping during parts replacement and contaminating system and installation site.
- When jig cartridge is used, printhead can be removed without discharge ink. =>Usage Procedure:T.B.D.

2 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R
- Top cover lid

=> 3.2. Covers-remove/assemble
- CR board cover
- CR cover

=> 3.6. CR/UV-LED

3 Move gantry.(front side)
- Mover gantry to front side.

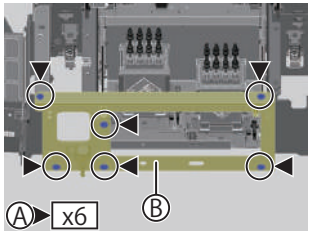
=> 3.2. Covers-remove/assemble

4 Move carriage.
- Release carriage lock.

=> 3.2. Covers-remove/assemble

5 Remove frame F.
A : Round head screw with split washer_M3x6(x6)
B : Frame F

CAUTION
- LED pointer is installed on frame F. When frame F is removed, adjust LED pointer position after frame F is installed.

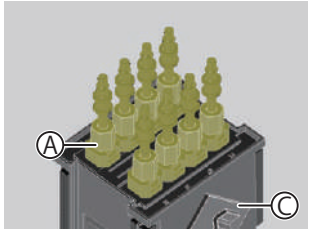


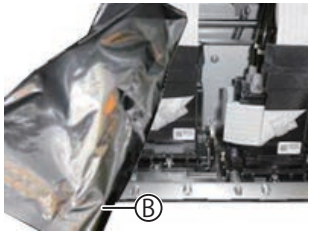
6 Remove tube(s).
- Turn head connector by 45 degree clockwise.

A : Valve head connector
B : Aluminum zipper bag
C : Print head

CAUTION
- Place valve head connector removed from printhead in aluminum zipper bag.

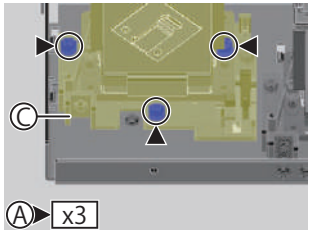
NOTE
- Mark all joint screw.

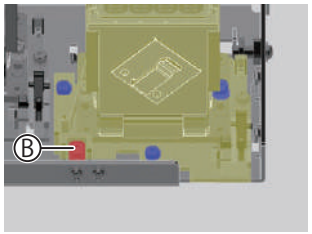




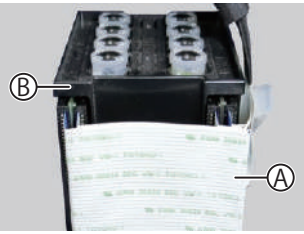
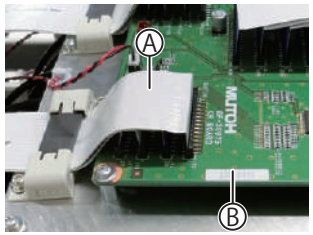
7 Remove print head.
A : Hex socket screw with split washer_M3x6 Ni-3(x3)
B : Head front/back spring
C : Print head

NOTE
- When replacing print head 2 (right side head), be careful not to lose head front/back spring.





CONFIDENTIAL

8	Remove FFC.(from print head) A : Head-FFC (x4) B : Print head	
9	Remove FFC.(from CR board) A : Head-FFC (x4) B : CR board	
10	Replace FFC.	
11	Reverse the above procedure to reinstall the parts.	
12	Check and adjust after replacing parts. => 4. Adjustment	

TIP

index=> 3. Parts replacement

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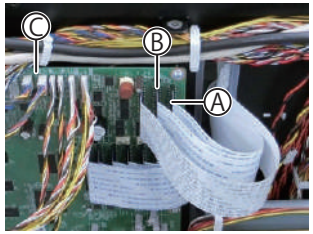
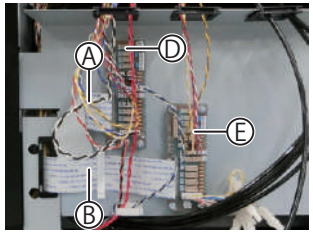
3.14.3. JUNCTION-FFC

A : JUNCTION-FFC(JUNCTION board(for origin side))
B : JUNCTION-FFC(JUNCTION board(for counter origin side))
C : MAIN board
D : JUNCTION board(orign side)
E : JUNCTION board(counter origin side)



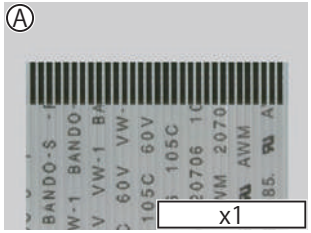


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49288	JUNC_FFC Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-49288
JUNC_FFC Assy
Ⓐ FFC



CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover L
  - Maintenance cover R2
  - Pump cover
  - Side cover R
  - Side cover L
  - Top cover lid
  - UV-LED board cover
  - Front cover
  - Top cover
  - IH cover
  - IH cover L
  - Circulation pump cover
  - Board box cover
2 Move gantry.(rear side)
3 Remove FFC.(from JUNCTION board)

CONFIDENTIAL

4 Remove FFC.(from MAIN board)
5 Replace FFC.
6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

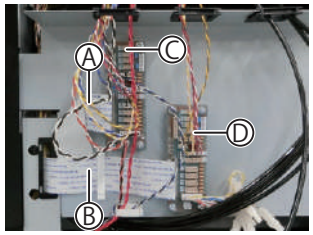
1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L
- Top cover lid
- UV-LED board cover
- Front cover
- Top cover
- IH cover
- IH cover L
- Circulation pump cover
- Board box cover

=> 3.2. Covers-remove/assemble

2 Move gantry.(rear side)
- Mover gantry to rear side.

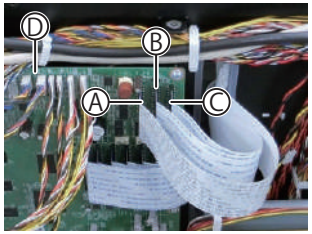
=> 3.2. Covers-remove/assemble

3 Remove FFC.(from JUNCTION board)
A : JUNCTION-FFC(JUNCTION board(for origin side))
B : JUNCTION-FFC(JUNCTION board(for counter origin side))
C : JUNCTION board(orign side)
D : JUNCTION board(counter origin side)



4 Remove FFC.(from MAIN board)
- Remove panel-FFC.
- Remove JUNCTION-FFC.

A : Panel-FFC
B : JUNCTION-FFC(JUNCTION board(for counter origin side))
C : JUNCTION-FFC(JUNCTION board(for origin side))
D : MAIN board



NOTE
- Connection
  - JUNCTION-FFC(JUNCTION board(for origin side)):MAIN board[J23]
  - JUNCTION-FFC(JUNCTION board(for counter origin side)):MAIN board[J24]

5 Replace FFC.

6 Reverse the above procedure to reinstall the parts.

TIP
index=> 3. Parts replacement

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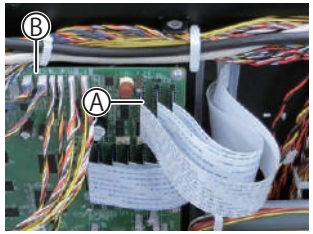
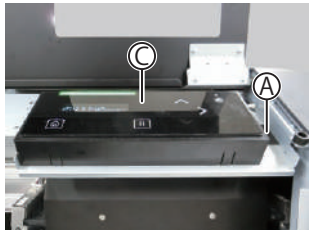
3.14.4. Panel-FFC

A : Panel-FFC
B : MAIN baord
C : Panel unit



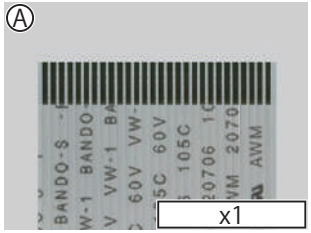


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-49290	Panel FFC Assy	-
Generic item	Phillips screwdriver No.2	-

NOTE

DG-49290
Panel FFC Assy
Ⓐ FFC



CAUTION

- Precautions for FFC installation / removal
  - When replacing the board or connecting/disconnecting the FFC, disconnect the power cable and leave it for a while before starting work.
    Working while power cable plugged in, there is a risk of damage to the board due to residual charge and electric shock to the operator.
  - Before inserting the FFC, check the condition of the FFC terminal.
    (the terminal angle is not bent, the reinforcing plate is not removed)
  - Insert and remove the FFC vertically with respect to the connector.
    Do not insert or remove the FCC diagonally to or from the connector.
    If you insert or remove the FCC at an angle, the terminals in the connector may be damaged, short-circuited or broken, and the elements on the board may be damaged.
  - Insert the FFC all the way into the connector.
  - After inserting, check that the FFC and connector terminals are not laterally displaced and that they are not inserted obliquely.

● Procedure

1 Remove cover(s).
  - Maintenance cover R
  - Maintenance cover L
  - Maintenance cover R2
  - Pump cover
  - Side cover R
  - Side cover L
  - Top cover lid
  - UV-LED board cover
  - Front cover
  - Top cover
  - Board box cover
2 Remove panel unit.
3 Remove FFC.(from panel unit)
4 Remove FFC.(from MAIN board)
5 Replace FFC.
6 Reverse the above procedure to reinstall the parts.

CONFIDENTIAL

● Procedure(details)

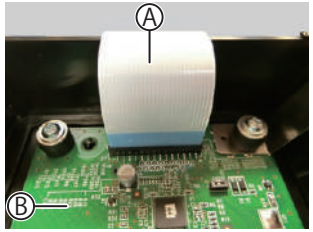
1 Remove cover(s).
- Maintenance cover R
- Maintenance cover L
- Maintenance cover R2
- Pump cover
- Side cover R
- Side cover L
- Top cover lid
- UV-LED board cover
- Front cover
- Top cover
- Board box cover

=> 3.2. Covers-remove/assemble

2 Remove panel unit.

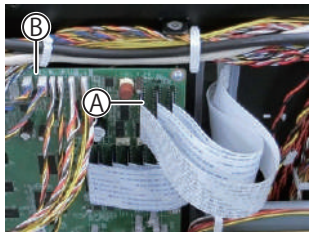
=> 3.10. Panel

3 Remove FFC.(from panel unit)
A : Panel-FFC
B : Panel unit



4 Remove FFC.(from MAIN board)
A : Panel-FFC
B : MAIN board

NOTE
- Connection
  - Panel-FFC:MAIN board[J39]



5 Replace FFC.

6 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

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3.15. Periodic replacement parts

NOTE

- As of April 1, 2023

This section describes how to replace the maintenance parts
The following table lists the maintenance parts.

No.	Contents	Reference
1	Periodic replacement parts	=> 3.15.1. Periodic replacement parts

TIP

index=> 3. Parts replacement

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3.15.1. Periodic replacement parts

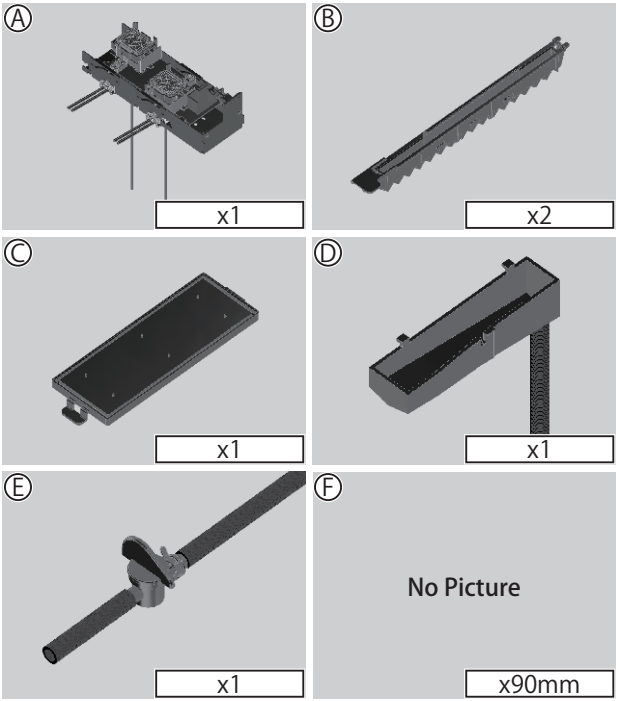
● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41691	VJ-1462UF Periodic Maintenance Kit	-
Generic item	Phillips screwdriver No.2	-
Generic item	Tube cutter	-
Generic item	Tweezers	-
Generic item	Long-nose pliers	-

NOTE

DH-41691
XPJ-1462UF Periodic Maintenace Kit

Ⓐ Maintenance unit
Ⓑ Wiper assy
Ⓒ Flushing absorbent Assy
Ⓓ Waste fluid tray
Ⓔ 2-way cock Assy
Ⓕ Waste fluid tube



CAUTION

- Precautions when using the UV ink
  - UV ink may cause strong irritation to your skin.
    Wear butyl rubber gloves and protective goggles to prevent skin contact.
  - There is a possibility that the ink would be cured by fluorescent lamps.
    Work in an environment where there is as little UV light as possible.

CAUTION

- Precautions when replacing the ink path
  - Wear gloves.
  - Ink remains in tube(s).
    Place a waste cloth or waste media that can be dirty so that it does not drip from the tube outlet to the outside of the product.

TIP

index=> 3. Parts replacement

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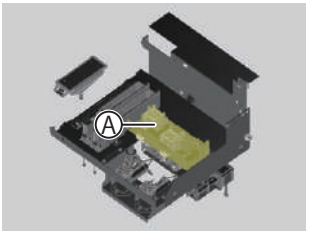
3.15.1.1. Maintenance unit

A : Maintenance unit



● Procedure

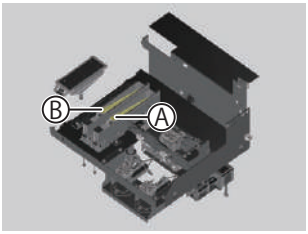
- Refer to 3.Parts replacement (Maintenance unit)
  => 3.7. Maintenance/drop sensor unit

TIP

index=> 3. Parts replacement

3.15.1.2. Wiper Assy

A : Wiper Assy(for print head 1)
B : Wiper Assy(for print head 2)



● Procedure

- Refer to Operation manual

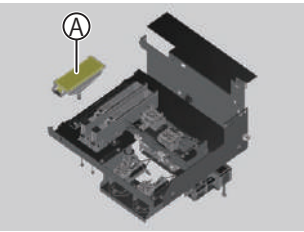
TIP

index=> 3. Parts replacement

CONFIDENTIAL

3.15.1.3. Flushing absorbent Assy

A : Flushing absorbent Assy



● Procedure

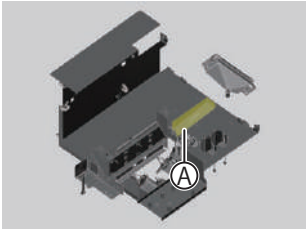
- Refer to Operation manual

TIP

index=> 3. Parts replacement

3.15.1.4. Waste fluid tray

A : Waste fluid tray



● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R
- Pump cover

2 Move carriage.
3 Remove wiper unit.(x2)
4 Remove screw(s).
- Tapping screw_M3x6 S tight cup(x1)

5 Remove waste fluid tray.
6 Replace waste fluid tray.
7 Install waste fluid tray.
8 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Side cover R

=> 3.2. Covers-remove/assemble

- Pump cover

=> 3.7. Maintenance/drop sensor unit

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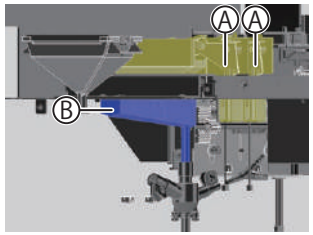
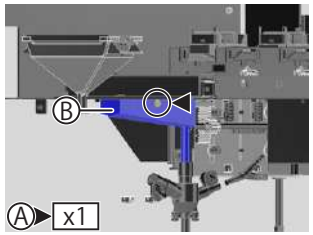
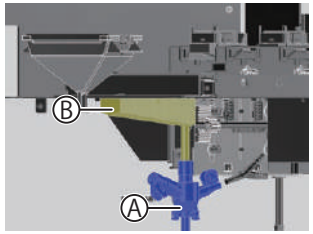
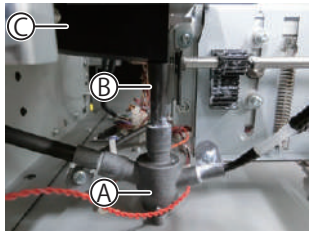
2	Move carriage. - Release carriage lock. => 3.2. Covers-remove/assemble
3	Remove wiper unit.(x2) => 3.7. Maintenance/drop sensor unit A : Wiper unit(x2) B : Waste fluid tray 
4	Remove screw(s). A : Tapping screw_M3x6 S tight cup(x1) B : Waste fluid tray 
5	Remove waste fluid tray. - Remove tube from waste fluid fitting. - Remove waste fluid tray. A : Waste fluid fitting B : Waste fluid tray 
6	Replace waste fluid tray.
7	Install waste fluid tray. - Install tube from waste fluid fitting. - Install waste fluid tray. A : Waste fluid fitting B : Tube C : Waste fluid tray 
8	Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

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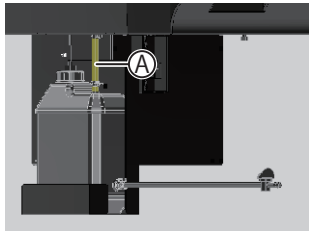
3.15.1.5. Waste fluid tube

A : Waste fluid tube



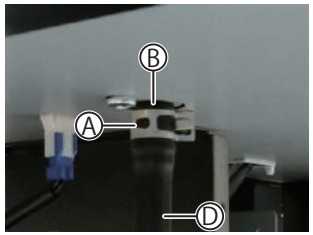
● Procedure

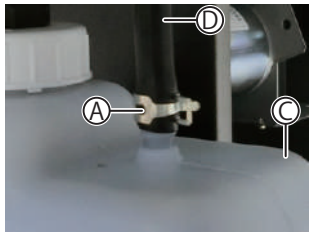
1 Remove tube(s).
2 Replace tube(s).
3 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove tube(s).
- Release hose band.(x2)
- Remove tube.

A : Hose band(x2)
B : Waste fluid fitting
C : Waste fluid tank
D : Waste fluid tube





2 Replace tube(s).

3 Reverse the above procedure to reinstall the parts.

TIP

index=> 3. Parts replacement

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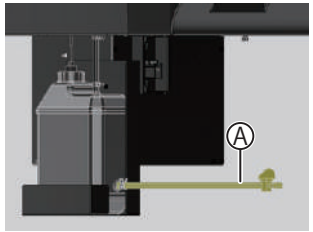
3.15.1.6. 2-way cock Assy

A : 2-way cock Assy

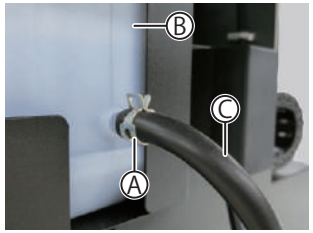


● Procedure

1 Empty waste fluid tank.
2 Remove 2-way cock Assy.
3 Replace 2-way cock Assy.
4 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1	Empty waste fluid tank.
2	Remove 2-way cock Assy. - Release hose band. - Remove 2-way cock Assy. A : Hose band B : Waste fluid tank C : 2-way cock Assy
3	Replace 2-way cock Assy.
4	Reverse the above procedure to reinstall the parts.



TIP

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4. Adjustment

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4.1. Introduction

This chapter provides information on necessary adjustment items and procedure.

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4.2. Adjustment item

This section describes the adjustment items required in part replacement procedures.

NOTE

- Index by section

=> 4.2.1. Covers-remove/assemble
=> 4.2.2. Base frame
=> 4.2.3. Frame
=> 4.2.4. Y rail
=> 4.2.5. CR/UV-LED
=> 4.2.6. Maintenance
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=> 4.2.8. Board box
=> 4.2.9. Panel
=> 4.2.10. Cover
=> 4.2.11. Base frame cover
=> 4.2.12. Accessories
=> 4.2.13. FFC
=> 4.2.14. Periodic replacement parts

TIP

index=> 4. Adjustment

4.2.1. Covers-remove/assemble

No.	Name	Step	Adjustment items	Reference
1	Maintenance cover R	-	-	
2	Maintenance cover L	-	-	
3	Side cover R	-	-	
4	Side cover L	-	-	
5	Bottom cover R	-	-	
6	Bottom cover L	-	-	
7	Leaser sensor cover R	-	-	
8	Leaser sensor cover L	-	-	
9	Maintenance cover R2	-	-	
10	Top cover lid	-	-	
11	UV-LED board cover	-	-	
12	Front cover	-	-	
13	Top cover	-	-	
14	CARD board cover	-	-	
15	IH cover	-	-	
16	IH cover L	-	-	
17	Circulation pump cover	-	-	
18	Board box cover	-	-	
19	Base frame front cover R	-	-	
20	Base frame front cover L	-	-	
21	Base frame side cover R1	-	-	
22	Base frame side cover R2	-	-	
23	Base frame side cover L1	-	-	

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No.	Name	Step	Adjustment items	Reference
24	Base frame side cover L2	-	-	
25	Base frame board cover	-	-	
26	Base frame cover F	-	-	
27	Base frame cover FR	-	-	
28	Base frame cover FL	-	-	
29	Vacuum fan cover R	-	-	
30	Vacuum fan cover L	-	-	
31	PF rail cover R	-	-	
32	PF rail cover L	-	-	
33	PG motor cover R	-	-	
34	PG motor cover L	-	-	
35	PF motor cover	-	-	
36	Dust prevention unit RF	-	-	
37	Dust prevention Unit RR	-	-	

TIP

index=> 4. Adjustment

4.2.2. Base frame

No.	Name	Step	Adjustment items	Reference
1	PF encoder	1	PF encoder check	=> 5. Self-diagnosis - Check2:Test
		2	PF motor endurance	=> 5. Self-diagnosis - Check9:Endurance
2	PF encoder scale	1	PF encoder check	=> 5. Self-diagnosis - Check2:Test
		2	PF motor endurance	=> 5. Self-diagnosis - Check9:Endurance
3	PF origin sensor	1	PF origin sensor check	=> 5. Self-diagnosis - Check2:Test
		2	PF motor endurance	=> 5. Self-diagnosis - Check9:Endurance
4	PF limit sensor	1	PF limit sensor check	=> 5. Self-diagnosis - Check2:Test
		2	PF motor endurance	=> 5. Self-diagnosis - Check9:Endurance
5	PF motor	-	T.B.D.	
6	PF speed reduction belt	-	T.B.D.	
7	PG encoder scale (right side)	1	PG encoder check	=> 5. Self-diagnosis - Check2:Test
		2	PG motor endurance	=> 5. Self-diagnosis - Check9:Endurance
8	PG encoder scale (left side)	1	PG encoder check	=> 5. Self-diagnosis - Check2:Test
		2	PG motor endurance	=> 5. Self-diagnosis - Check9:Endurance
9	PG belt (right side)	-	T.B.D.	
10	PG belt (left side)	-	T.B.D.	
11	PG motor (right side)	-	T.B.D.	
12	PG motor (left side)	-	T.B.D.	

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No.	Name	Step	Adjustment items	Reference
13	Vacuum fan	-	-	

TIP

index=> 4. Adjustment

4.2.3. Frame

No.	Name	Step	Adjustment items	Reference
1	PG sensor cover R	-	-	
2	PG sensor cover L	-	-	
3	Leaser sensor(right side)	1	Laser sensor adjustment	=> 4.3. Laser sensor adjutment
4	Leaser sensor(left side)	1	Laser sensor adjustment	=> 4.3. Laser sensor adjutment
5	PG encoder (right side)	1	PG encoder check	=> 5. Self-diagnosis - Check2:Test
		2	PG motor endurance	=> 5. Self-diagnosis - Check9:Endurance
6	PG encoder (left side)	1	PG encoder check	=> 5. Self-diagnosis - Check2:Test
		2	PG motor endurance	=> 5. Self-diagnosis - Check9:Endurance
7	PG origin sensor(right side)	1	PG origin sensor check	=> 5. Self-diagnosis - Check2:Test
		2	PG motor endurance	=> 5. Self-diagnosis - Check9:Endurance
8	PG origin sensor(left side)	1	PG origin sensor check	=> 5. Self-diagnosis - Check2:Test
		2	PG motor endurance	=> 5. Self-diagnosis - Check9:Endurance
9	PG limit sensor (right side)	-	T.B.D.	
10	PG limit sensor (left side)	-	T.B.D.	

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4.2.4. Y rail

No.	Name	Step	Adjustment items	Reference
1	PG encoder cover R	-	-	
2	PG encoder cover L	-	-	
3	CR belt	1	CR speed reduction belt tension adjustment	=> 4.4. CR speed reduction belt tension adjustment
		2	Steel belt tension adjustment	=> 4.5. Steel belt tension adjustment
		3	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance
4	CR lock solenoid	1	head lock endurance	=> 5. Self-diagnosis - Check9:Endurance
5	CR motor	1	CR speed reduction belt tension adjustment	=> 4.4. CR speed reduction belt tension adjustment
		2	life counter clear	=> 5. Self-diagnosis - Check7:Parameter
		3	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance
6	CR origin sensor	1	CR origin sensor check	=> 5. Self-diagnosis - Check2:Test
		2	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance
7	CR speed reduction belt	1	CR speed reduction belt tension adjustment	=> 4.4. CR speed reduction belt tension adjustment
		2	Steel belt tension adjustment	=> 4.5. Steel belt tension adjustment
		3	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance
8	Steel bare	1	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance
9	T fence	1	CR encoder check	=> 5. Self-diagnosis - Check2:Test
		2	Side margin adjustment	=> 5. Self-diagnosis - Check4:Adjustment
		3	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance

TIP

index=> 4. Adjustment

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4.2.5. CR/UV-LED

No.	Name	Step	Adjustment items	Reference
1	CR board cover	-	-	
2	CR cover	-	-	
3	Connector cover L	-	-	
4	Connector cover R	-	-	
5	CR board	1	Nozzle cehck	=> 5. Self-diagnosis - Check6:Print
6	CR encoder	1	CR encoder check	=> 5. Self-diagnosis - Check2:Test
		2	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance
7	Cursor	-	T.B.D.	
8	Cursor roller arm	-	T.B.D.	
9	LED pointer	1	LED pointer position adjustment	=> 4.6. LED pointer position adjustment
10	Print head	1	head rank entry (including initial charge)	=> 5. Self-diagnosis - Check15:HeadReplace
		2	Nozzle cehck	=> 5. Self-diagnosis - Check6:Print
		3	head slant adjustment	=> 4.7. Head adjustment
		4	Uni-D adjustment	=> 4.7. Head adjustment
		5	Bi-D adjustment	=> 4.7. Head adjustment
11	UV-LED(right side)	1	UV-LED check	=> 5. Self-diagnosis - Check12:UV
12	UV-LED(left side)	1	UV-LED check	=> 5. Self-diagnosis - Check12:UV
13	Valve head	1	Nozzle cehck	=> 5. Self-diagnosis - Check6:Print
		2	head slant adjustment	=> 4.7. Head adjustment
		3	Uni-D adjustment	=> 4.7. Head adjustment
		4	Bi-D adjustment	=> 4.7. Head adjustment

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index=> 4. Adjustment

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4.2.6. Maintenance

No.	Name	Step	Adjustment items	Reference
1	Pump cover	-	-	
2	Head cap	1	Cleaning	=> 5. Self-diagnosis - Check5:Cleaning
3	Maintenance unit	1	Cleaning	=> 5. Self-diagnosis - Check5:Cleaning
4	Maintenance U/D unit	1	Maintenance unit mounting position adjustment	=> 4.8. Maintenance U/D unit mounting position adjustment
		2	Maintenance unit U/D endurance	=> 5. Self-diagnosis - Check9:Endurance
		3	Cleaning	=> 5. Self-diagnosis - Check5:Cleaning
5	Suction pump	1	Life counter clear	=> 5. Self-diagnosis - Check7:Parameter
		2	Pump endurance	=> 5. Self-diagnosis - Check9:Endurance
6	Wiper	1	Cleaning	=> 5. Self-diagnosis - Check5:Cleaning
7	Wiper solenoid	1	Wiping endurance	=> 5. Self-diagnosis - Check9:Endurance
		2	Cleaning	=> 5. Self-diagnosis - Check5:Cleaning
8	Wiper unit	1	Wiping endurance	=> 5. Self-diagnosis - Check9:Endurance
		2	Cleaning	=> 5. Self-diagnosis - Check5:Cleaning

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index=> 4. Adjustment

4.2.7. IH

No.	Name	Step	Adjustment items	Reference
1	CARD board	-	-	
2	Cartridge holder	-	-	
3	Circulation pump	1	Life counter clear	=> 5. Self-diagnosis - Check7:Parameter
		2	C pump endurance	=> 5. Self-diagnosis - Check9:Endurance
4	Emargency stop button	-	-	
5	JUNCTION board	-	-	

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index=> 4. Adjustment

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4.2.8. Board box

No.	Name	Step	Adjustment items	Reference
1	MAIN board	1	item differs depending on MAIN board condition	=>Maintenance manaul for MSA
		2	Nozzle cehck	=> 5. Self-diagnosis - Check6:Print
2	Power supply board	-	-	

TIP

index=> 4. Adjustment

4.2.9. Panel

No.	Name	Step	Adjustment items	Reference
1	Panel unit	-	-	

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index=> 4. Adjustment

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4.2.10. Cover

No.	Name	Step	Adjustment items	Reference
1	Emergency stop button	-	-	
2	Exhaust fan	-	-	
3	Power supply board	-	-	
4	UV-LED board	1	UV-LED check	=> 5. Self-diagnosis - Check12:UV

TIP

index=> 4. Adjustment

4.2.11. Base frame cover

No.	Name	Step	Adjustment items	Reference
1	Emergency stop button (left side)	-	-	
2	Emergency stop button (right side)	-	-	
3	FAN CONT board	-	-	
4	Power supply board	-	-	

TIP

index=> 4. Adjustment

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4.2.12. Accessories

No.	Name	Step	Adjustment items	Reference
1	-	-	-	

TIP

index=> 4. Adjustment

4.2.13. FFC

No.	Name	Step	Adjustment items	Reference
1	CR-FFC	1	CR motor endurance	=> 5. Self-diagnosis - Check9:Endurance
		2	Nozzle cehck	=> 5. Self-diagnosis - Check6:Print
2	Head-FFC	1	Nozzle cehck	=> 5. Self-diagnosis - Check6:Print
		2	head slant adjustment	=> 4.7. Head adjustment
		3	Uni-D adjustment	=> 4.7. Head adjustment
		4	Bi-D adjustment	=> 4.7. Head adjustment
3	JUNCTION-FFC	-	-	
4	Panel-FFC	-	-	

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index=> 4. Adjustment

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4.2.14. Periodic replacement parts

No.	Name	Step	Adjustment items	Reference
1	Periodic replacement parts	1	Cleaning	=> **5. Self-diagnosis** - Check5:Cleaning

TIP

index=> **4. Adjustment**

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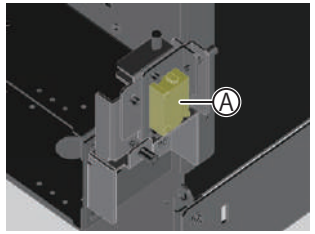
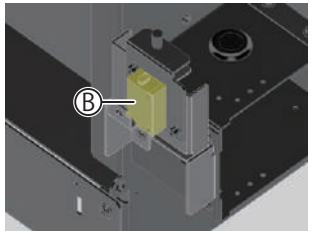
4.3. Laser sensor adjutment

A : Laser sensor (right side)
B : Laser sensor (left side)





● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41690	Laser Sensor Adjustment Jig	
Generic item	Phillips screwdriver No.2	-
Generic item	Hex wrench (2.5mm)	-

WARNING

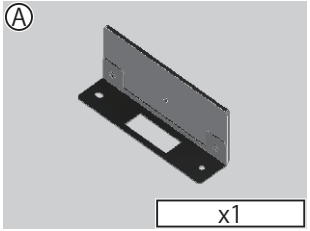
- This system (including the housing and safety device) is a Class 1 laser product.
  Use of controls or adjustments or performance of procedures other than those specified herein may result in radiation exposure.

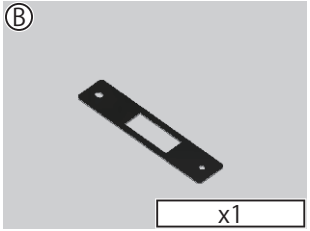
CAUTION

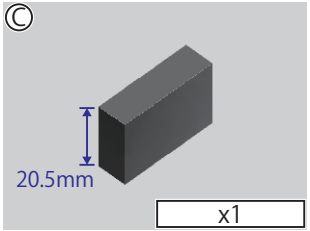
- Precautions when using the laser sensor
  - Do not look into the laser beam.
  - Do not look into the laser beam with optical instruments.
    Doing so may cause eye damage.

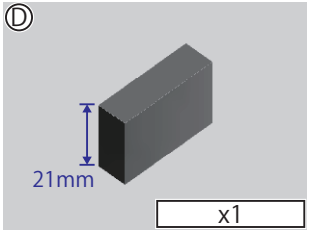
NOTE

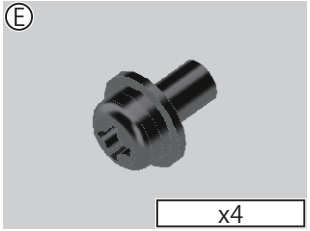
DH-41690
Laser Sensor Adjustment Jig
Ⓐ Jig 1
Ⓑ Jig 2
Ⓒ Block gauge (20.5mm)
Ⓓ Block gauge (21mm)
Ⓔ Screw











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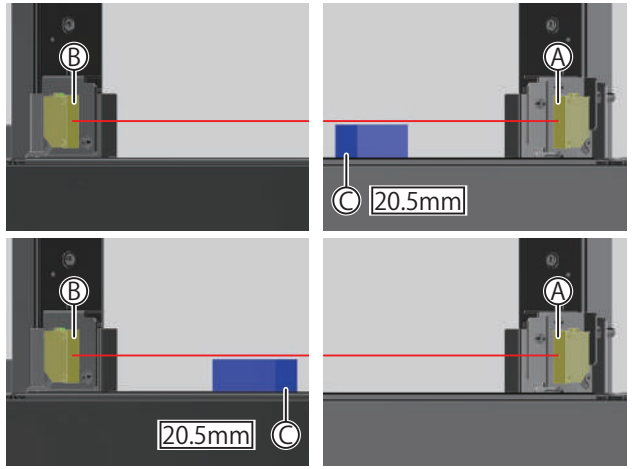
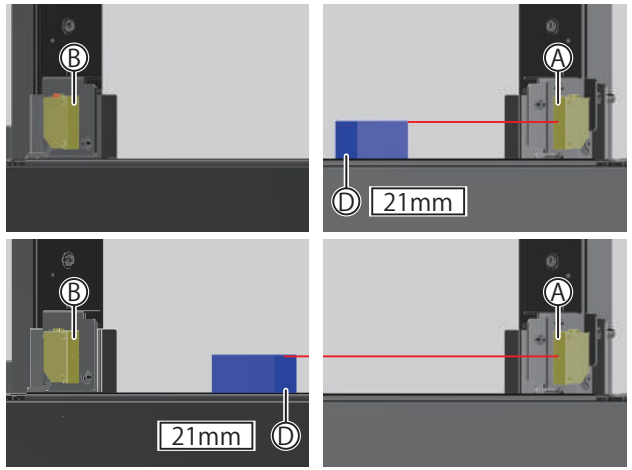
NOTE

- The outline of this adjustment is described below.
  1 Select adjustment menu.
  Gantry automatically moves to adjustment position.
  2 Place block gauge on table.
  3 Adjust mounting position on laser sensor.

When using block gauge (20.5mm):
-> Laser passes through.
* Laser sensor (left side):
LED (Green) : light on
LED (Red) : Light off
A : Laser sensor (right side)
B : Laser sensor (left side)
C : Block gauge (20.5mm)



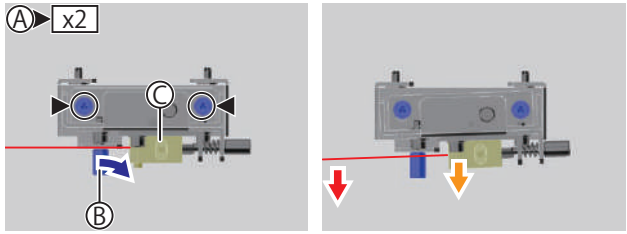
When using block gauge (21mm) :
-> Laser shuts off.
* Laser sensor (left side) :
LED (Green) : light on
LED (Red) : Light on
A : Laser sensor (right side)
B : Laser sensor (left side)
D : Block gauge (21mm)



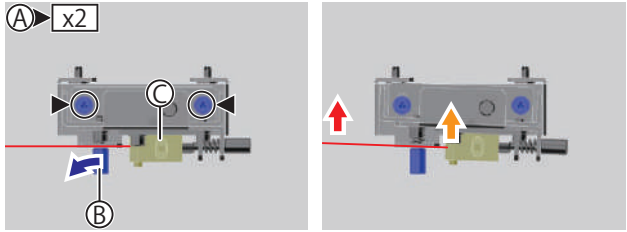
NOTE

- Adjustment of right side laser sensor mounting position (front-rear)
  Adjustment procedure is explained below.
  A : Hex socket screw with split washer_M3x6 (x2)
  B : Adjustment knob
  C : Laser sensor (right side)

To move laser sensor to the front side:
1 Loosen screws about half way. (x2)
2 Turn adjustment knob to the right side.
3 Tighten screws. (x2)



To move laser sensor to the rear side:
1 Loosen screws about half way. (x2)
2 Turn adjustment knob to the left side.
3 Tighten screws. (x2)



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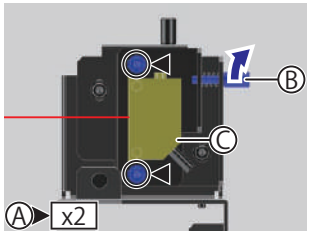
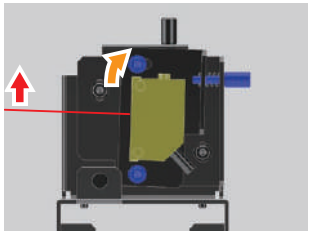
NOTE

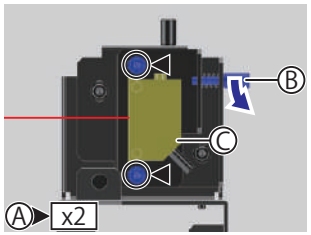
- Adjustment of right side laser sensor mounting position (slant)
  Adjustment procedure is explained below.
  A : Hex socket screw with split washer_M3x6 (x2))
  B : Adjustment knob
  C : Laser sensor (right side)

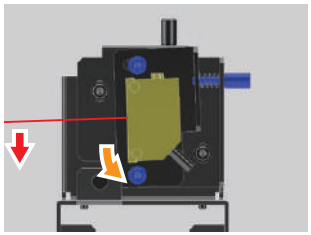
To tilt laser sensor upward:
1 Loosen screws about half way. (x2)
2 Turn adjustment knob to the right side.
3 Tighten screws. (x2)





To tilt laser sensor downward:
1 Loosen screws about half way. (x2)
2 Turn adjustment knob to the left side.
3 Tighten screws. (x2)

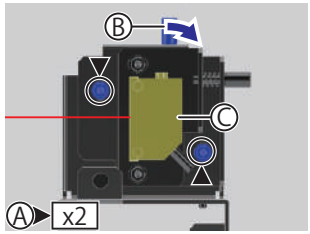


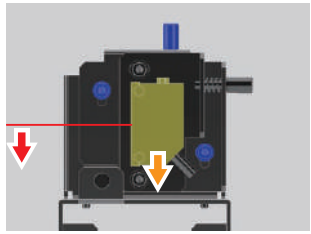


NOTE

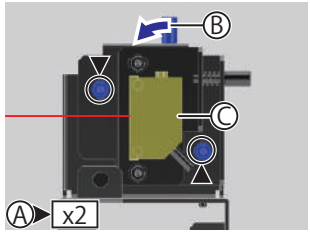
- Adjustment of right side laser sensor mounting position (up-down)
  Adjustment procedure is explained below.
  A : Hex socket screw with split washer_M3x6 (x2)
  B : Adjustment knob
  C : Laser sensor (right side)

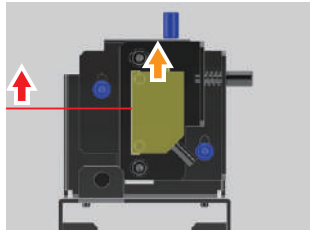
To move laser sensor to the lower side:
1 Loosen screws about 1 way. (x2)
2 Turn adjustment knob to the right side.
3 Tighten screws. (x2)





To move laser sensor to the upper side:
1 Loosen screws about 1 way. (x2)
2 Turn adjustment knob to the left side.
3 Tighten screws. (x2)





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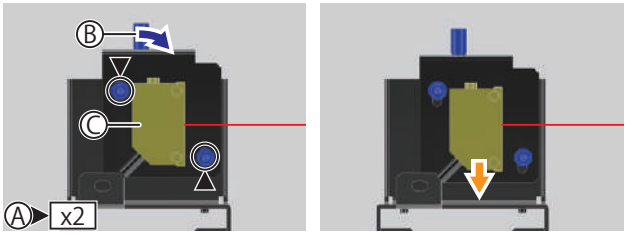
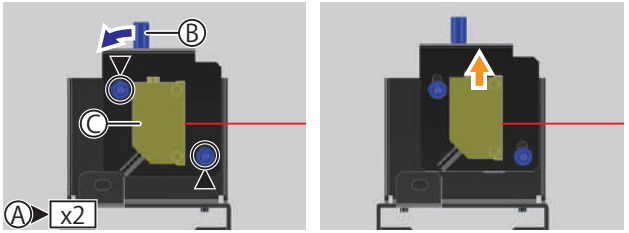
NOTE

- Adjustment of left side laser sensor mounting position (up/down)
  Adjustment procedure is explained below.
  A : Hex socket screw with split washer_M3x6 (x2)
  B : Adjustment knob
  C : Laser sensor (left side)

To move laser sensor to the lower side:
1 Loosen screws about 1 way. (x2)
2 Turn adjustment knob to the right side.
3 Tighten screws. (x2)



To move laser sensor to the upper side:
1 Loosen screws about 1 way. (x2)
2 Turn adjustment knob to the left side.
3 Tighten screws. (x2)



● Procedure

1 Remove cover(s).
  - Laser sensor cover R
  - Laser sensor cover L
2 Select adjustment menu.
  - [Check1:Adj.Mecha]->[Mecha2:Adj.Laser]->[Start Adj.->Enter]
3 Open front cover.
4 Set sensitivity volume.(MAX)
5 Install jig 1.(left side)
6 Adjust mounting position of laser sensor. (right side/front-rear)
7 Adjust mounting position of laser sensor. (right side/up-down)
8 Remove jig 1.(right side)
9 Adjust mounting position of laser sensor. (left side/up-down)
10 Adjust mounting position of laser sensor. (right side/front-rear)
11 Set sensitivity volume.
12 Install jig 2.(left side)
13 Adjust mounting position of laser sensor. (left side/passes through)
  - Block gauge (20.5mm)
14 Adjust mounting position of laser sensor. (left side/shuts off)
  - Block gauge (21mm)
15 Remove jig 2.(right side)
16 Install jig 2.(lieft side)
17 Adjust mounting position of laser sensor. (right side/passes through)
  - Block gauge (20.5mm)
18 Adjust mounting position of laser sensor. (right side/shuts off)
  - Block gauge (21mm)
19 Check mounting position of laser sensor.(left side)
20 Select adjustment menu.
  - [Start Adj.->Enter]->[Remove JIG->Enter]
21 Remove jig 2.(left side)
22 Select adjustment menu.
  - [Remove JIG->Enter]->[Remove/Attach Cover][End->Enter]
23 Install cover(s).
  - Laser sensor cover R
  - Laser sensor cover L
24 Select adjustment menu.
  - [Remove/Attach Cover][End->Enter]->[Adjust End->Enter][Readjust->Cancel]
25 Check mounting position of laser sensor.(step.12~step.18)
26 Select adjustment menu.
  - [Adjust End->Enter][Readjust->Cancel]->[Remove JIG->Enter]
27 Remove jig.
28 Select adjustment menu.
  - [Remove JIG->Enter]->[Sensor Pos:*.*mm]

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● Procedure(details)

1 Remove cover(s).
- Laser sensor cover R
- Laser sensor cover L

=> 3. Parts replacement

2 Select adjustment menu.
- Starts self-diagnosis function mode.
- [Check1:Adj.Mecha]->[Mecha2:Adj.Laser]->[Start Adj.->Enter]
- Gantry automatically moves to adjustment position.
- Panel will display [Adjust End->Enter].

=> 5. Self-diagnosis

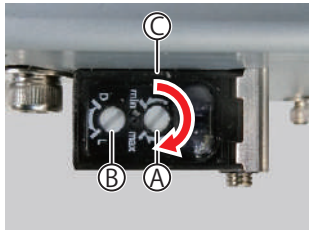
3 Open front cover.

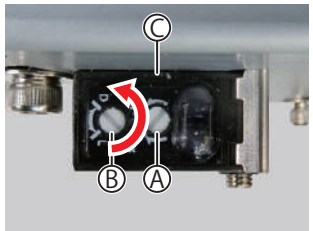
NOTE

=> Operation manual

4 et sensitivity volume.(MAX)
- Turn sensitivity volume of laser sensor (left side) to "MAX".
- Turn operation switching volume of laser sensor (left side) to "D".

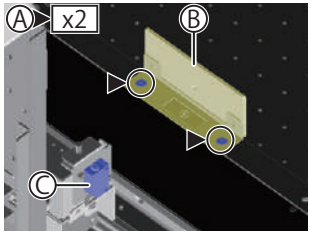
A : Sensitivity volume
B : Operation switching volume
C : Laser sensor (left side)





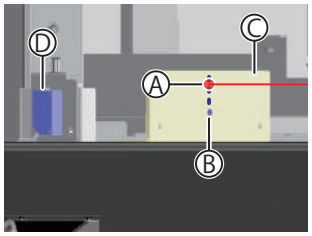
5 Install jig 1.(left side)
- Install jig 1 to table.

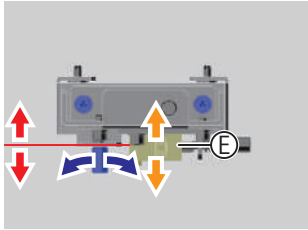
A : Round head screw with split washer_M4x8(x2)
B : Jig 1
C : Laser sensor(left side)



6 Adjust mounting position of laser sensor. (right side/ front-rear)
- Adjust front-back position of laser sensor(right side).
- Adjust laser so that it hits vertical position of hole in jig 1.

A : Laser
B : Hole in jig 1
C : Jig 1
D : Laser sensor(left side)
E : Laser sensor(right side)





NOTE
- Adjustment procedure
  - Adjustment of right side laser sensor mounting position (front-rear)

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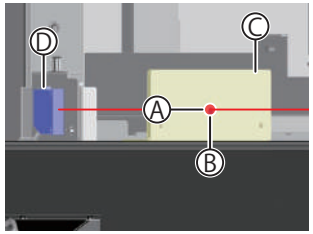
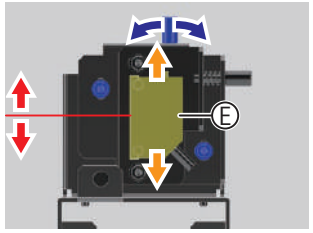
7 Adjust mounting position of laser sensor. (right side/up-down)
- Adjust up-down position of laser sensor(right side).
- Adjust laser so that it hits hole in jig 1.

A : Laser
B : Hole in jig 1
C : Jig 1
D : Laser sensor(left side)
E : Laser sensor(right side)





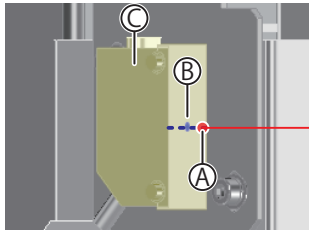
NOTE
- Adjustment procedure
  - Adjustment of right side laser sensor mounting position (up-down)

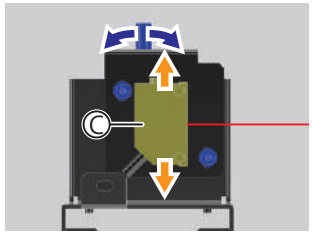
NOTE
- If laser does not strike position of hole in jig 1, adjust laser sensor mounting position (slant) on right side.

8 Remove jig 1.(right side)
=>Refer to step.5.

9 Adjust mounting position of laser sensor. (left side/up-down)
- Adjust front-back position of laser sensor(left side).
- Adjust laser so that it hits horizontal position of hole in laser sensor(left side).

A : Laser
B : Hole in laser sensor(left side)
C : Laser sensor(left side)

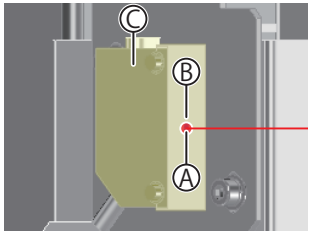


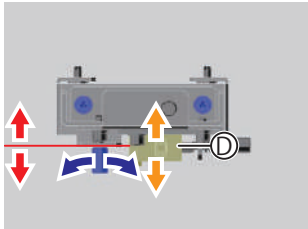


NOTE
- Adjustment procedure
  - Adjustment of leff side laser sensor mounting position (up-down)

10 Adjust mounting position of laser sensor. (right side/front-rear)
- Adjust up-down position of laser sensor(right side).
- Adjust laser so that it hits hole in laser sensor(left side).

A : Laser
B : Hole in laser sensor(left side)
C : Laser sensor(left side)
D : Laser sensor(lright side)





NOTE
- Adjustment procedure
  - Adjustment of right side laser sensor mounting position (front-rear)

NOTE
- If laser does not strike position of hole in jig 1, adjust laser sensor mounting position (slant) on right side.

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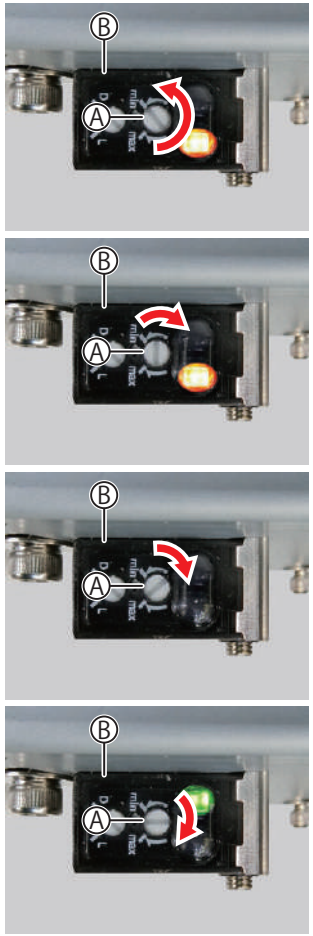
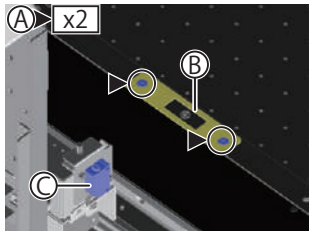
11 Set sensitivity volume.
- Turn sensitivity volume of laser sensor(left side) to "MIN".
- Slowly turn sensitivity volume of laser sensor(left side) to right side until LED(green) is light on and LED(red) is light off.

A : Sensitivity volume
B : Laser sensor (left side)

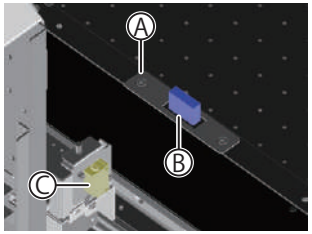


12 Install jig 2.(left side)
A : Round head screw with split washer_M4x8(x2)
B : Jig 1
C : Laser sensor (left side)

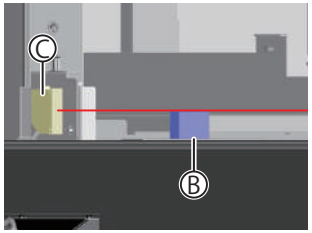


13 Adjust mounting position of laser sensor. (left side/ passes through)
- Place block gauge (20.5 mm) on left side of table.
- Adjust up-down position of left side laser sensor.
- Adjust laser so that it passes through block gauge (20.5 mm).

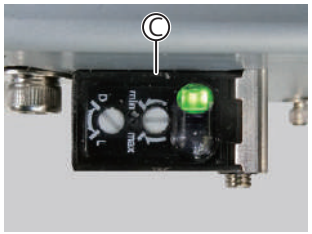
A : Jig 2
B : Block gauge(20.5mm)
C : Laser sensor(left side)

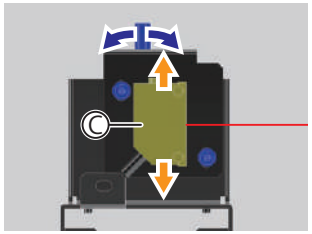


NOTE
- Adjustment procedure
  - Adjustment of leff side laser sensor mounting position (up-down)



NOTE
- When using block gauge (20.5mm):
  ->Laser passes through.
  *Laser sensor (left side):
  LED (Green) : light on
  LED (Red) : light off





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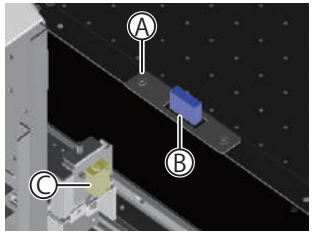
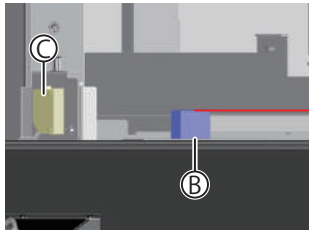
14 Adjust mounting position of laser sensor. (left side/ shuts off)
- Place block gauge(21mm) on left side of table.
- Adjust up-down position of left side laser sensor.
- Adjust laser so that it shuts off block gauge (21mm).

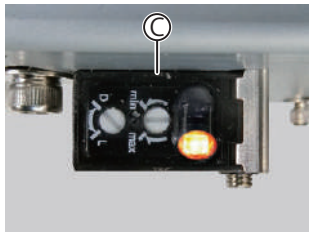
A : Jig 2
B : Block gauge(21mm)
C : Laser sensor(left side)

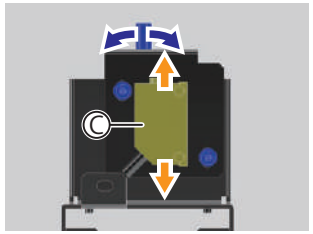




NOTE
- Adjustment procedure
  - Adjustment of leff side laser sensor mounting position (up-down)

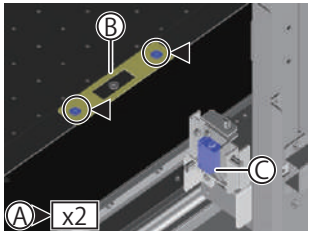
NOTE
- When using block gauge (21mm):
  ->Laser shuts off.
  *Laser sensor (left side):
    LED (Green) : light on
    LED (Red) : light on





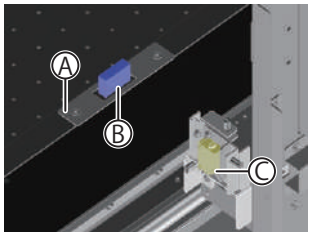
15 Remove jig 2.(right side)
=>Refer to step.12.

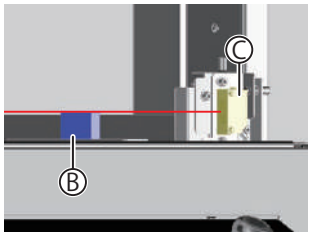
16 Install jig 2.(right side)
A : Round head screw with split washer_M4x8(x2)
B : Jig 1
C : Laser sensor(right side)



17 Adjust mounting position of laser sensor. (right side/ passes through)
- Place block gauge(20.5mm) on right side of table.
- Adjust slant and up-down position of right side laser sensor.
- Adjust laser so that it passes through block gauge(20.5mm).

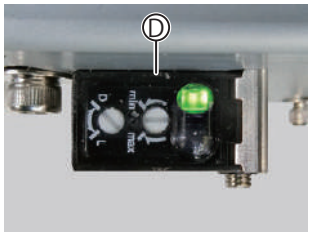
A : Jig 2
B : block gauge(20.5mm)
C : Laser sensor(right side)
D : Laser sensor(left side)

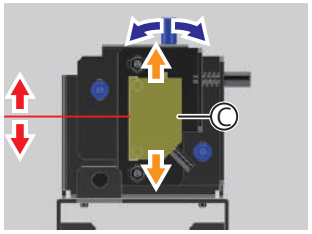




NOTE
- Adjustment procedure
  - Adjustment of right side laser sensor mounting position (slant)
  - Adjustment of right side laser sensor mounting position (up-down)

NOTE
- When using block gauge (20.5mm):
  ->Laser passes through.
  *Laser sensor (left side):
    LED (Green) : light on
    LED (Red) : light off





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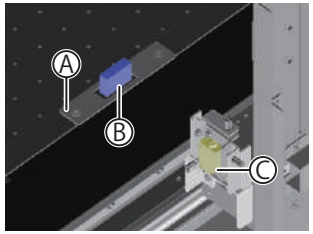
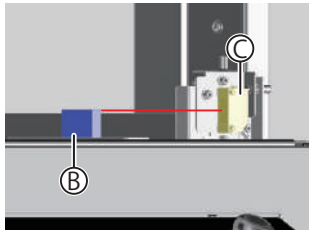
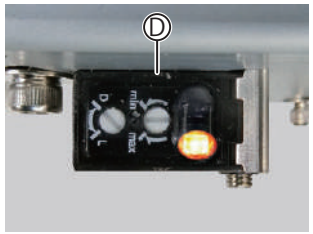
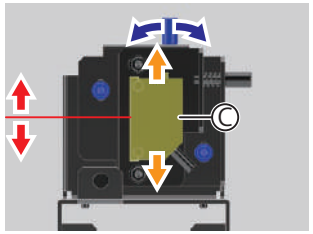
18 Adjust mounting position of laser sensor. (right side/ shuts off)
- Place block gauge(21mm) on right side of table.
- Adjust slant and up-down position of right side laser sensor.
- Adjust laser so that it shuts off block gauge (21 mm).

A : Jig 2
B : Block gauge(21mm)
C : Laser sensor(right side)
D : Laser sensor(left side)









NOTE
- Adjustment procedure
  - Adjustment of right side laser sensor mounting position (slant)
  - Adjustment of right side laser sensor mounting position (up-down)

NOTE
- When using block gauge (21mm):
  ->Laser shuts off.
  *Laser sensor (left side):
  LED (Green) : light on
  LED (Red) : light on

19 Check mounting position of laser sensor.(left side)
=>Refer to step.13~14.

20 Select adjustment menu.
- [Start Adj.->Enter]->[Remove JIG->Enter]
=> 5. Self-diagnosis

21 Remove jig 2.(left side)
=>Refer to step.16.

22 Select adjustment menu.
- [Remove JIG->Enter]->[Remove/Attach Cover][End->Enter]
- Gantry automatically moves to cover install position.
=> 5. Self-diagnosis

23 Remove cover(s).
- Laser sensor cover R
- Laser sensor cover L
=> 3. Parts replacement

24 Select adjustment menu.
- [Remove/Attach Cover][End->Enter]->[Adjust End->Enter][Readjust->Cancel]
- Gantry automatically moves to adjustment position.
=> 5. Self-diagnosis

25 Check mounting position of laser sensor.(step.12~step.18)
=>Refer to step.12~18.

NOTE
- To adjust again, press [Cansel] key.
=>Return to step.4.

26 Select adjustment menu.
- [Adjust End->Enter][Readjust->Cancel]->[Remove JIG->Enter]
=> 5. Self-diagnosis

27 Remove jig.

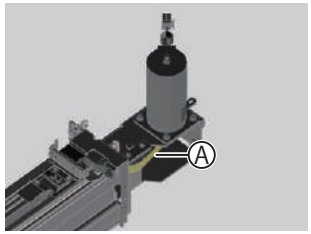
28 Select adjustment menu.
- [Remove JIG->Enter]->[Sensor Pos:*.*mm]
=> 5. Self-diagnosis

TIP
index=> 4. Adjustment

CONFIDENTIAL

4.4. CR speed reduction belt tension adjustment

A : CR speed reduction belt



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic item	Phillips screwdriver No.2	-
Generic item	Tension gauge	Max 40N (4,080gf)
Generic item	Sonic tension meter	U-507 (Gates Unitta Asia)

● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

2 Move carriage.

3 Loosen screw(s).
- Hex socket screw with split washer(polished)_M4x10(x4)

4 Adjust the tenstion.
- 34.4N ± 3.4N (3500gf ± 350gf)

5 Tighten screw(s).
- Hex socket screw with split washer(polished)_M4x10(x4)

6 Measure the tension.
- 15.5N ± 2N

7 Reverse the above procedure to reinstall the parts.

● Procedure(details)

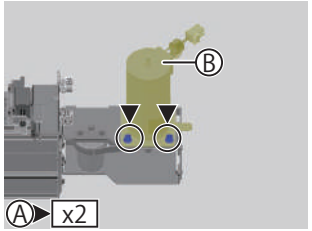
1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

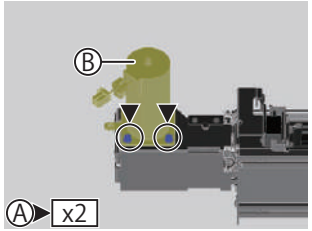
=> 3. Parts replacement

2 Move carriage.
- Release carriage lock.

=> 3. Parts replacement

3 Loosen screw(s).
A : Hex socket screw with split washer(polished)_ M4x10(x4)
B : CR motor assy





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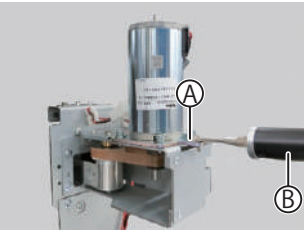
4 Adjust the tenstion.
- Hook Tension gauge in CR motor spacer.
- Pull Tension gauge horizontally.
- Tighten screw(s) at specification value.

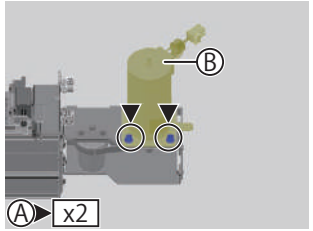
A : CR motor spacer
B : Tension gauge

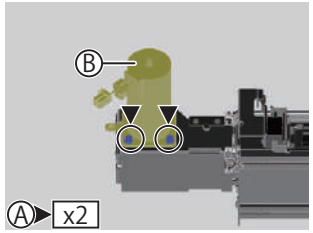


NOTE
- Specification value:
  - 34.4N ± 3.4N(3500g ± 350g)

CAUTION
- Do not hook Tension gauge directly in CR motor. CR motor might be damaged

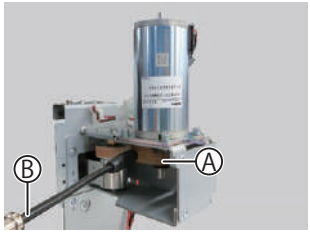
5 Tighten screw(s).
A : Hex socket screw with split washer(polished)_ M4x10(x4)
B : CR motor assy





6 Measure the tension.
- Bring the microphone of sonic tension meter close to the CR speed reduction belt.
- Snap the CR speed reduction belt.
- Measure the tension.

A : CR speed reduction belt
B : Microphone of sonic tension meter



NOTE
- Specification value:
  - 15.5N ~ 22N
- Setting value:
  - Unit mass(M): 1.2 [g/m]
  - Width(W): 10.0 [mm/R]
  - Span(S): 63 [mm]

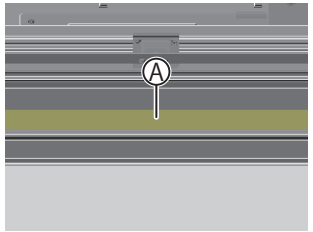
7 Reverse the above procedure to reinstall the parts.

TIP
index=> 4. Adjustment

CONFIDENTIAL

4.5. Steel belt tension adjustment

A : CR speed reduction belt

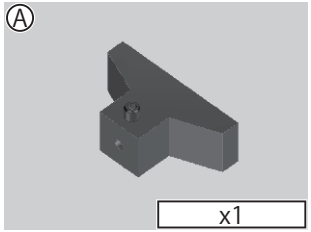


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DG-43197	Steel Belt Tension Attachment	-
Generic Item	Phillips driver No.2	-
Generic Item	Tension gauge	Max.2N (204gf)
Generic Item	Thread locker	-

NOTE

DG-43197
Steel Belt Tension Attachment
Ⓐ Adjustment jig



● Procedure

1 Remove cover(s).
- Maintenance cover L
- Side cover L

2 Move carriage.

3 Check tension.
- 0.98N ± 0.09N (100gf ± 10gf)

4 Adjust the tenstion.
- Round head screw with split washer(polished)_M3x40 Ni-3(x2)

5 Move carriage back and forth manually.

6 Apply thread locker.

7 Reverse the above procedure to reinstall the parts.

● Procedure(details)

1 Remove cover(s).
- Maintenance cover L
- Side cover L

=> 3. Parts replacement

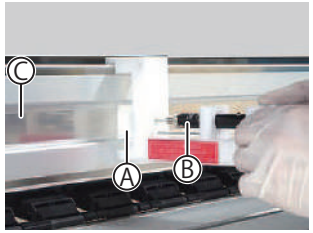
2 Move carriage.
- Release carriage lock.

=> 3. Parts replacement

CONFIDENTIAL

3 Check tension.
- Press tension gauge in center position of steel belt.
- Push jig to point where steel belt touches Y-rail.
- Check value of tension gauge when steel belt leaves Y-rail.
- Confirm value of tension gauge is specification value.

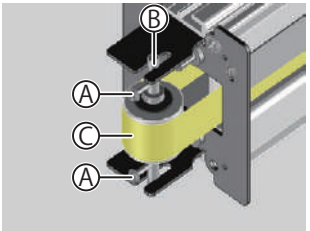
A : Jig
B : Tension gauge
C : Steel belt



NOTE
- Specification value:
  0.98N ± 0.09N (100gf ± 10gf)

4 Adjust the tenstion.
- If steel belt tension is not within specification value, adjust with steel belt adjustment screw.

A : Round head screw with split washer(polished)_ M3x40 Ni-3(x2)
B : CR return pulley
C : Steel belt



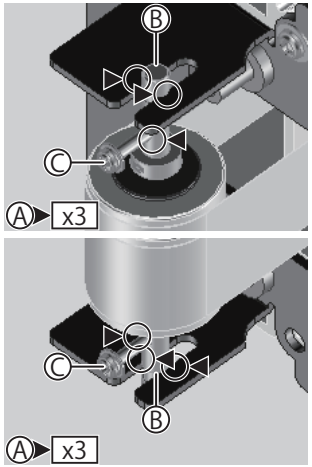
NOTE
- Turn same amount in both (upper and lower) Steel belt adjustment screw.

CAUTION
- CR return pulley must be placed vertical otherwise Steel belt might be damaged.

5 Move carriage back and forth manually.
- Check steel belt alignment on CR return pulley.
- Repeat step 3~5 to adjust steel belt tension.

NOTE
- Allowance for steel belt on CR return pulley ≦ 1mm.

6 Apply thread locker.
A : location where thread locker to be applied
B : CR return pulley
C : Adjustment screw(s)



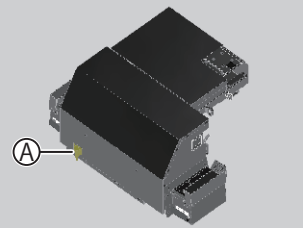
7 Reverse the above procedure to reinstall the parts.

TIP
index=> 4. Adjustment

CONFIDENTIAL

4.6. LED pointer position adjustment

A : LED pointer



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic Item	Phillips driver No.2	-
Generic Item	Block gauge (5mm)	-

● Procedure

1 Select adjustment menu.
- [Check1:Adj.Mecha]->[Mecha4:Level Gantry]->[Start Adj.->Enter]

2 Move carriage.

3 Loosen screw(s).
- Round head screw with split washer_M3x6(X2)

4 Adjust mounting position of LED pointer.
- Block gauge (5mm)

5 Tighten screw(s).
- Round head screw with split washer_M3x6(X2)

6 Reverse the above procedure to reinstall the parts.

● Procedure(details)

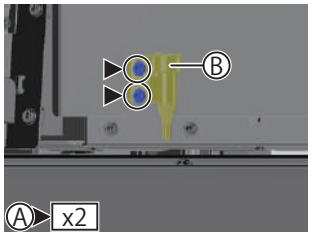
1 Select adjustment menu.
- Starts self-diagnosis function mode.
- Select adjustment menu.
  [Check1:Adj.Mecha]->[Mecha4:Level Gantry]->[Start Adj.->Enter]
- Gantry automatically moves to adjustment position.

=> 5. Self-diagnosis

2 Move carriage.
- Release carriage lock.

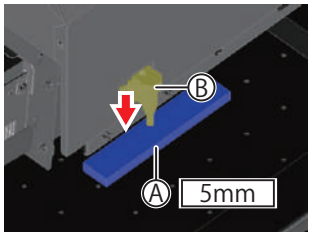
=> 3. Parts replacement

3 Loosen screw(s).
A : Round head screw with split washer_M3x6(X2)
B : LED pointer

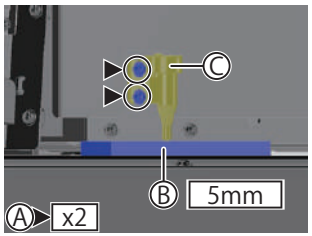


4 Adjust mounting position of LED pointer.
- Place block gauge (5mm) under LED pointer.
- Place tip of LED pointer on block gauge (5mm).

A : Block gauge (5mm)
B : LED pointer



5 Tighten screw(s).
A : Round head screw with split washer_M3x6(X2)
B : Block gauge (5mm)
C : LED pointer



6 Reverse the above procedure to reinstall the parts.

CONFIDENTIAL

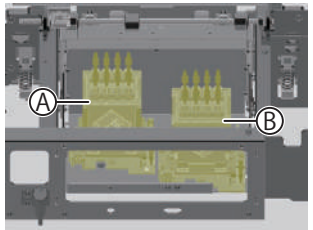
TIP

index=> 4. Adjustment

CONFIDENTIAL

4.7. Head adjustment

A : Print head 1
B : Print head 2

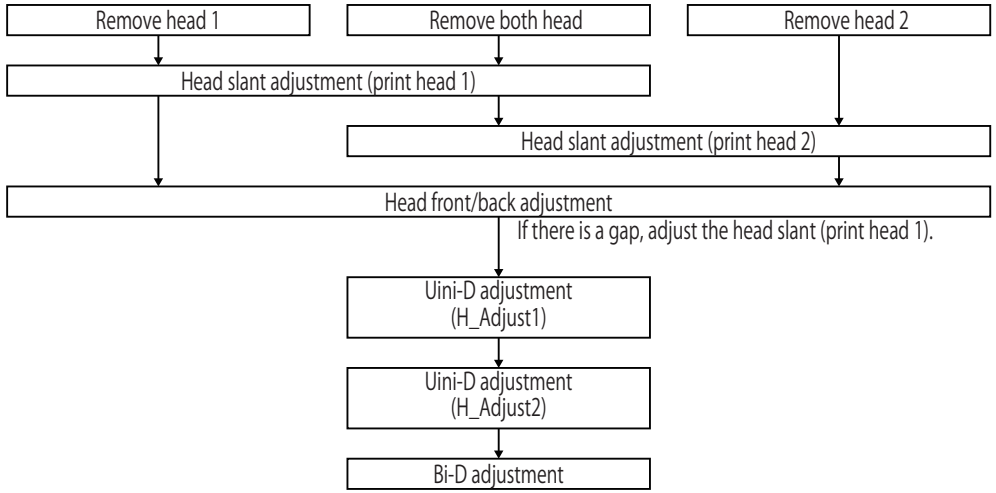


Head adjustment is required after print head is assembled.

No.	Adjustment	Contents	Reference
1	Head slant adjustment (print head 1)	Print adjustment pattern and check - Mechanical adjustment of head position	=> 4.7.1. Head slant adjustment (print head 1)
2	Head slant adjustment (print head 2)	Print adjustment pattern and check - Mechanical adjustment of head position	=> 4.7.2. Head slant adjustment (print head 2)
3	Head front-back adjustment	Print adjustment pattern and check - Mechanical adjustment of head position	=> 4.7.3. Head front/back adjustment
4	Uini-D adjustment (H_Adjust1)	Adjustment pattern check - Adjustment parameter entry on panel	=> 4.7.4. Uni-D adjustment (H_Adjust1)
5	Uini-D adjustment (H_Adjust2)	Adjustment pattern check - Adjustment parameter entry on panel	=> 4.7.5. Uni-D adjustment (H_Adjust2)
6	Bi-D adjustment	Adjustment pattern check - Adjustment parameter entry on panel	=> 4.7.6. Bi-D adjustment

NOTE

Adjustment depends on the print head removed.
Refer to the following diagram below for adjustment.



TIP

index=> 4. Adjustment

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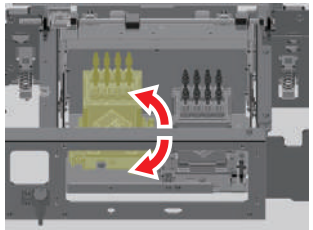
4.7.1. Head slant adjustment (print head 1)

- In this procedure, the slant in the arrow direction of print head 1 is to be adjusted.



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic Item	Phillips driver No.2	-
Generic Item	Ball point hex wrench 2.5mm	-
Generic Item	Loupe	25x magnification recommended.
Generic Item	Penlight	-
-	Media for adjustment	-

NOTE

- Check
  => 4.7.1.1. Head slant adjustment (print head 1)-check
- Adjustment
  => 4.7.1.2. Head slant adjustment (print head 1)-adjust

TIP

index=> 4. Adjustment

4.7.1.1. Head slant adjustment (print head 1)-check

● Procedure

1 Start in self diagnosis mode.
2 Set media.
3 Print adjustment pattern.
  - [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]
4 Check rough adjustment pattern.
5 Check fine adjustment pattern.

● Procedure(details)

1 Start in self diagnosis mode.
  => 5. Self-diagnosis

2 Set media.
  - Set media.
  - Press the [Menu] key.

3 Print adjustment pattern.
  - [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head slant:Slant1]

  NOTE
  - After drawing the adjustment pattern, [cap out->Enter] is displayed.
    - To continue with print head adjustment, press [Enter] key and cap out.
    - When [Cancel] key is pressed, [Head slanti:Slant1] is displayed.

  NOTE
  - In self-diagnosis mode, next printing will continue from point where previous printing was finished.
  - When table moving distance reaches media length specified in Media Initialization, printing will be canceled.

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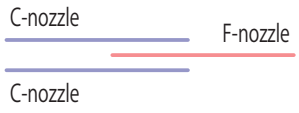
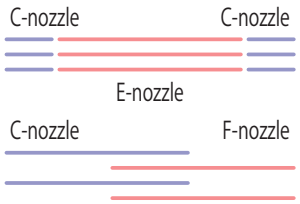
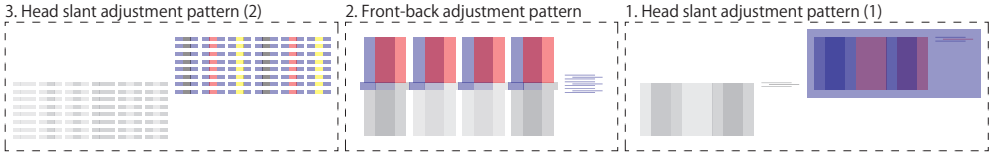
4	Check rough adjustment pattern. - If drawing line of F nozzle is located between drawing line of C nozzle, it is OK. - If not OK, adjust head slant. => 4.7.1.2. Head slant adjustment (print head 1)-adjust	
5	Check fine adjustment pattern. - Point.1(Adjustment pattern in the center): If drawing line of center E nozzle is at same position as drawing lines of C nozzles at both ends, it is OK. - Point.2(Adjustment pattern at both ends): If drawing lines are drawn alternately, it is OK. - If not OK, adjust head slant. => 4.7.1.2. Head slant adjustment (print head 1)-adjust	

NOTE

● Adjustment pattern (slant1)

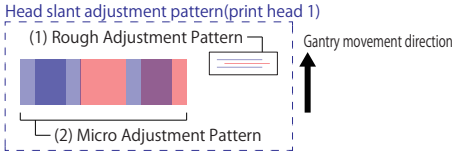
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]
- Print mode : 2pass, Uni-D, CR 360dpi / PF 360dpi, 400cps, VSD3, Small dot



*Head slant adjustment pattern (print head 1)

NOTE

● Head slant adjustment pattern (print head 1)



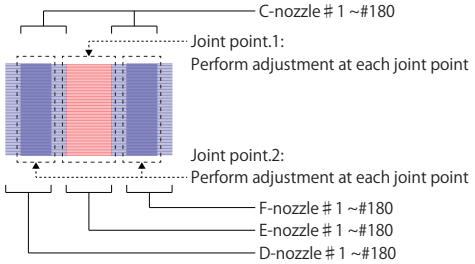
Adjust slant direction of print head 1.
First, use the rough adjustment pattern to roughly correct the head slant.
Then use the micro adjustment pattern to check and perform precise adjustment.

(1) Rough Adjustment Pattern

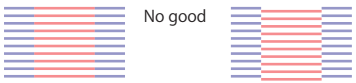
①F-nozzle # 179

Adjust slant so that drawing line of F nozzle (①) is located between drawing line of C nozzle (②).

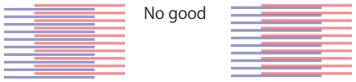
(2) Micro Adjustment Pattern



Joint point.1:
Adjust slant so that drawing line of center E nozzle is at same position as drawing lines of C nozzles at both ends.



Joint point.2:
Adjust slant so that drawing lines are drawn alternately.



TIP

index=> 4. Adjustment

CONFIDENTIAL

4.7.1.2. Head slant adjustment (print head 1)-adjust

● Procedure

1 Remove cover(s).
- CR cover
- CR frame F

2 Start in self diagnosis mode.
3 Set media.
4 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]

5 Move carriage.
- [Cap out->Enter]

6 Loosen screw(s).
- M3x12_Hexagon socket head screws(x2)

7 Move lever to adjust.
8 Tighten screw(s).
- M3x12_Hexagon socket head screws(x2)

9 Check adjustment pattern.

● Procedure(details)

1 Remove cover(s).
- CR cover
- CR frame F

=> 3. Parts replacement

NOTE
- After CR frame F is installed, LED pointer mounting position is adjusted.

2 Start in self diagnosis mode.
=> 5. Self-diagnosis

3 Set media.
- Set media.
- Press the [Menu] key.

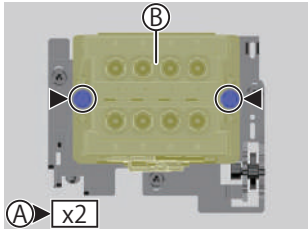
4 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head slant:Slant1]

NOTE
- After drawing the adjustment pattern, [cap out->Enter] is displayed.
  - To continue with print head adjustment, press [Enter] key and cap out.
  - When [Cancel] key is pressed, [Head slanti:Slant1] is displayed.

NOTE
- In self-diagnosis mode, next printing will continue from point where previous printing was finished.
- When table moving distance reaches media length specified in Media Initialization, printing will be canceled.

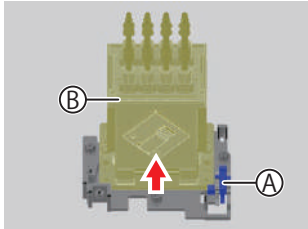
5 Move carriage.
- After drawing the adjustment pattern, [Cap out->Enter] is displayed.
- Press [Enter] and cap out.

6 Loosen screw(s).
A : M3x12_Hexagon socket head screws(x2)
B : Print head 1



7 Move lever to adjust.
A : Lever (for head slant adjustment)
B : Print head 1

NOTE
- After moving lever, push print head horizontally. When print hand is released, print head move by spring.



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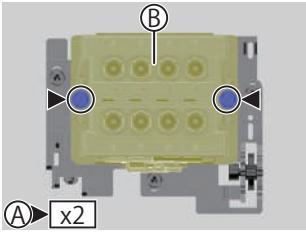
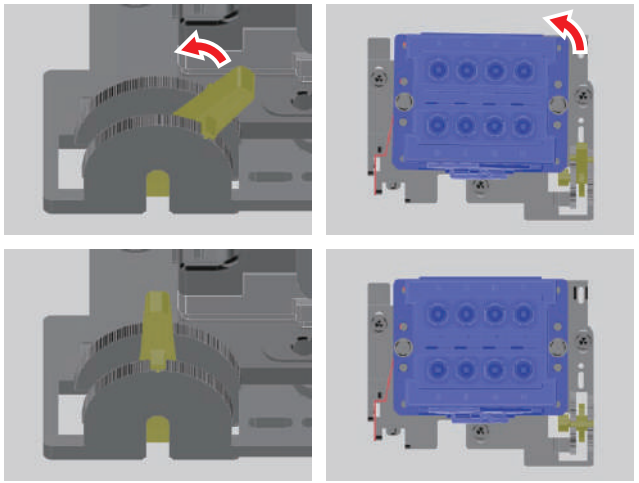
8	Tighten screw(s). A : M3x12_Hexagon socket head screws(x2) B : Print head 1	

9	Check adjustment pattern. => 4.7.1.1. Head slant adjustment (print head 1)-check **NOTE** - Repeat [Draw]->[Confirm]->[adjustment] until result is OK.

NOTE

- Adjustment method (when moving lever to front side)

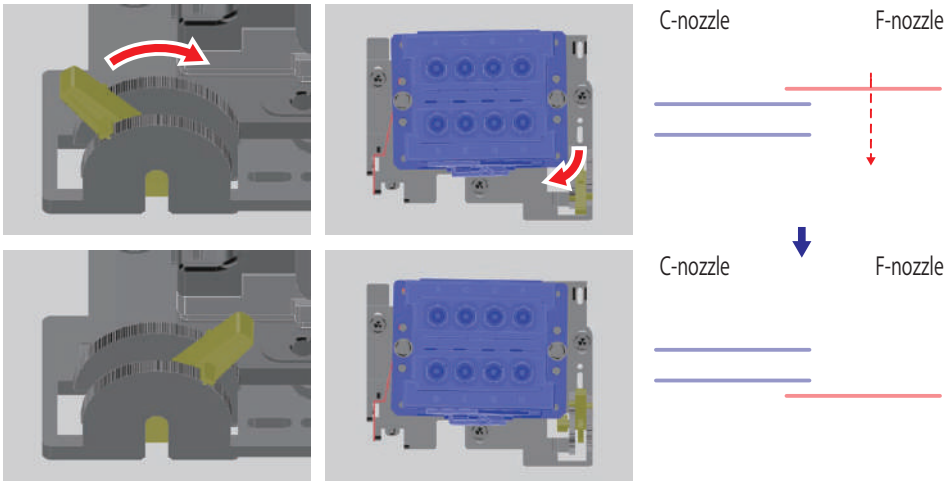
1.Move lever to front side.



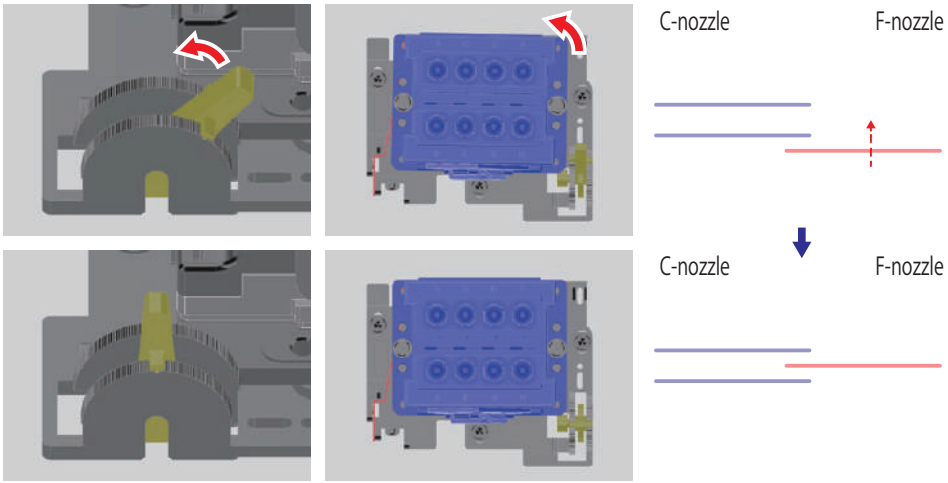
NOTE

- Adjustment method (when moving lever to rear side)

1.Move the lever rearward widely.



2. Return lever to front side.



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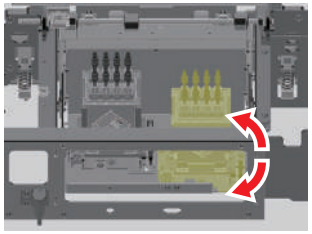
TIP

index=> 4. Adjustment

4.7.2. Head slant adjustment (print head 2)

- In this procedure, the slant in the arrow direction of print head 2 is to be adjusted.



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic Item	Phillips driver No.2	-
Generic Item	Ball point hex wrench 2.5mm	-
Generic Item	Loupe	25x magnification recommended.
Generic Item	Penlight	-
-	Media for adjustment	Ability to check adjustment pattern of white and varnish inks.

NOTE

- Check
  => 4.7.2.1. Head slant adjustment (print head 1)-check
- Adjustment
  => 4.7.2.2. Head slant adjustment (print head 2)-adjust

TIP

index=> 4. Adjustment

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4.7.2.1. Head slant adjustment (print head 1)-check

● Procedure

1 Start in self diagnosis mode.
2 Set media.
3 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]
4 Check rough adjustment pattern.
5 Check fine adjustment pattern.

● Procedure(details)

1 Start in self diagnosis mode.
=> **5. Self-diagnosis**

2 Set media.
- Set media.
- Press the [Menu] key.

Note
- The adjustment pattern is drawn using white ink and vernish ink. Set colored media or transparent media.

3 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head slant:Slant1]

NOTE
- After drawing the adjustment pattern, [cap out->Enter] is displayed.
  - To continue with print head adjustment, press [Enter] key and cap out.
  - When [Cancel] key is pressed, [Head slanti:Slant1] is displayed.

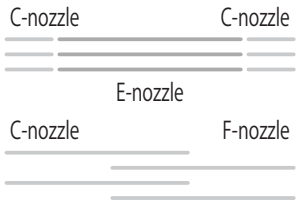
NOTE
- In self-diagnosis mode, next printing will continue from point where previous printing was finished.
- When table moving distance reaches media length specified in Media Initialization, printing will be canceled.

4 Check rough adjustment pattern.
- If drawing line of F nozzle is located between drawing line of C nozzle, it is OK.
- If not OK, adjust head slant.

=> **4.7.2.2. Head slant adjustment (print head 2)-adjust**

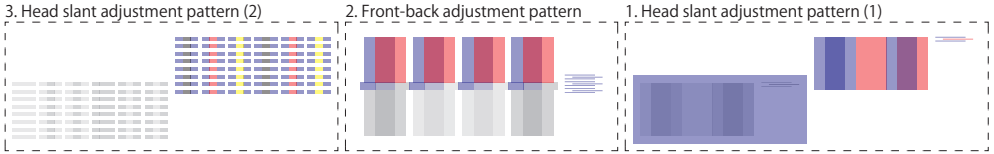
5 Check fine adjustment pattern.
- Point.1(Adjustment pattern in the center) :
  If drawing line of center E nozzle is at same position as drawing lines of C nozzles at both ends, it is OK.
- Point.2(Adjustment pattern at both ends) :
  If drawing lines are drawn alternately, it is OK.
- If not OK, adjust head slant.

=> **4.7.2.2. Head slant adjustment (print head 2)-adjust**



NOTE

● Adjustment pattern (slant1)
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]
- Print mode : 2pass, Uni-D, CR 360dpi / PF 360dpi, 400cps, VSD3, Small dot



*Head slant adjustment pattern (print head 2)

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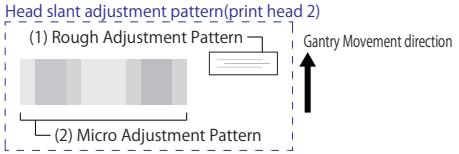
NOTE

● Head slant adjustment pattern (print head 2)

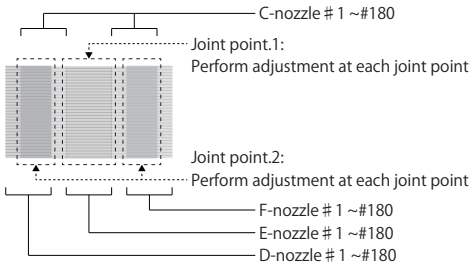


Adjust slant direction of print head 2.
First, use the rough adjustment pattern to roughly correct the head slant.
Then use the micro adjustment pattern to check and perform precise adjustment.

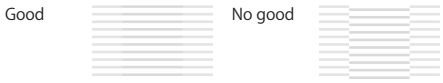
(1) Rough Adjustment Pattern

Adjust slant so that drawing line of F nozzle (①) is located between drawing line of C nozzle (②).

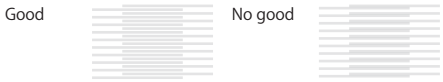
(2) Micro Adjustment Pattern



Joint point.1:
Adjust slant so that drawing line of center E nozzle is at same position as drawing lines of C nozzles at both ends.



Joint point.2:
Adjust slant so that drawing lines are drawn alternately.



TIP

index=> 4. Adjustment

4.7.2.2. Head slant adjustment (print head 2)-adjust

● Procedure

1 Remove cover(s).
- CR cover
- CR frame F

2 Start in self diagnosis mode.

3 Set media.

4 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]

5 Move carriage.
- [Cap out->Enter]

6 Loosen screw(s).
- M3x12_Hexagon socket head screws(x2)

7 Move lever to adjust.

8 Tighten screw(s).
- M3x12_Hexagon socket head screws(x2)

9 Check adjustment pattern.

● Procedure(details)

1	1 Remove cover(s). - CR cover - CR frame F => 3. Parts replacement NOTE - After CR frame F is installed, LED pointer mounting position is adjusted.
2	Start in self diagnosis mode. => 5. Self-diagnosis

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3 Set media.
- Set media.
- Press the [Menu] key.

Note
- The adjustment pattern is drawn using white ink and vernish ink.
  Set colored media or transparent media.

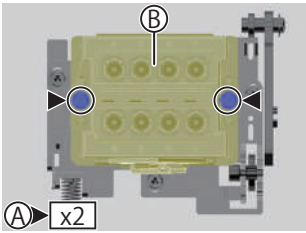
4 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head slant:Slant1]

NOTE
- After drawing the adjustment pattern, [cap out->Enter] is displayed.
  - To continue with print head adjustment, press [Enter] key and cap out.
  - When [Cancel] key is pressed, [Head slanti:Slant1] is displayed.

NOTE
- In self-diagnosis mode, next printing will continue from point where previous printing was finished.
- When table moving distance reaches media length specified in Media Initialization, printing will be canceled.

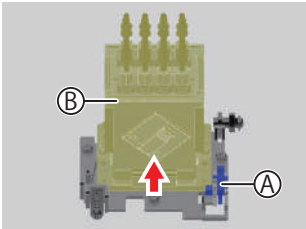
5 Move carriage.
- After drawing the adjustment pattern, [Cap out->Enter] is displayed.
- Press [Enter] and cap out.

6 Loosen screw(s).
A : M3x12_Hexagon socket head screws(x2)
B : Print head 2

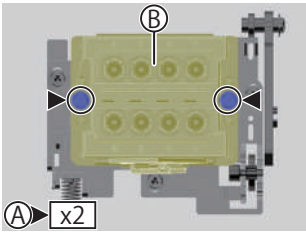


7 Move lever to adjust.
A : Lever (for head slant adjustment)
B : Print head 2

NOTE
- After moving lever, push print head horizontally.
  \When print hand is released, print head move by spring.



8 Tighten screw(s).
A : M3x12_Hexagon socket head screws(x2)
B : Print head 2



9 Check adjustment pattern.
=> 4.7.2.1. Head slant adjustment (print head 1)-check

NOTE
- Repeat [Draw]->[Confirm]->[adjustment] until result is OK.

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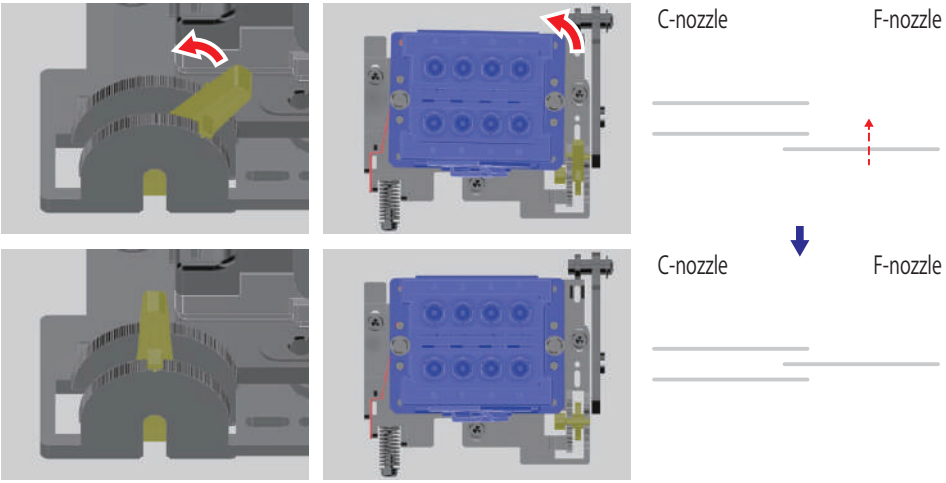
NOTE

- Adjustment method (when moving lever to front side)

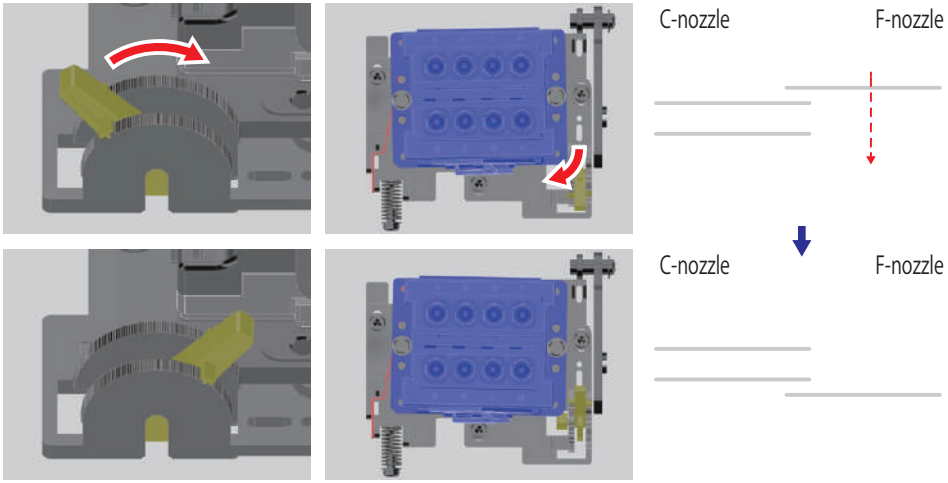
1.Move lever to front side.



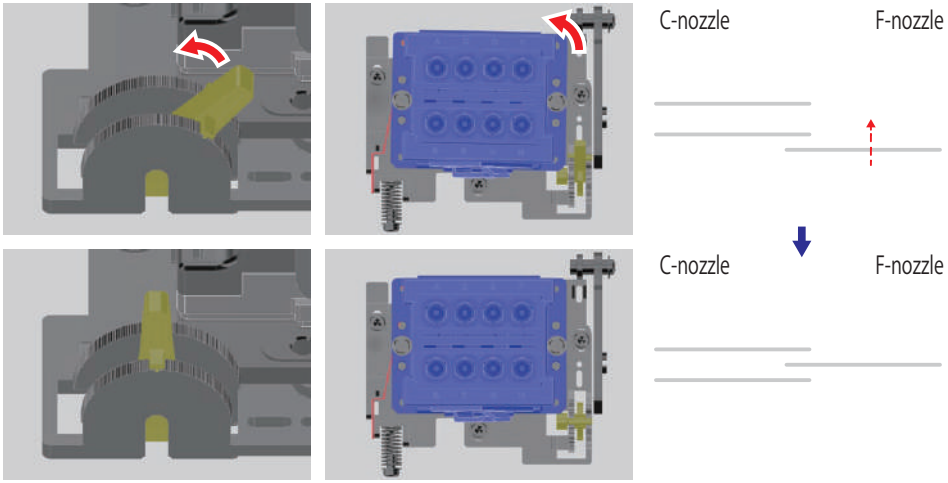
NOTE

- Adjustment method (when moving lever to rear side)

1.Move the lever rearward widely.



2. Return lever to front side.



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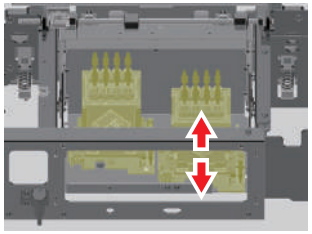
TIP

index=> 4. Adjustment

4.7.3. Head front/back adjustment

- In this procedure, the deviation of head 2 in the frontback direction with respect to head 1 is adjusted.



● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic Item	Phillips driver No.2	-
Generic Item	Ball point hex wrench 2.5mm	-
Generic Item	Loupe	25x magnification recommended.
Generic Item	Penlight	-
-	Media for adjustment	Ability to check adjustment pattern of cyan and white inks.

NOTE

- Check
  => 4.7.3.1. Head front/back adjustment-check
- Adjustment
  => 4.7.3.2. Head front/back adjustment-adjust

TIP

index=> 4. Adjustment

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4.7.3.1. Head front/back adjustment-check

● Procedure

1 Start in self diagnosis mode.
2 Set media.
3 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]
4 Check rough adjustment pattern.
5 Check fine adjustment pattern.

● Procedure(details)

1 Start in self diagnosis mode.
=> **5. Self-diagnosis**

2 Set media.
- Set media.
- Press the [Menu] key.

Note
- The adjustment pattern is drawn using cyan ink and white ink.
  Set colored media or transparent media.

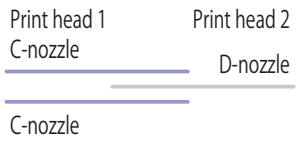
3 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head slant:Slant1]

NOTE
- After drawing the adjustment pattern, [cap out->Enter] is displayed.
  - To continue with print head adjustment, press [Enter] key and cap out.
  - When [Cancel] key is pressed, [Head slanti:Slant1] is displayed.

NOTE
- In self-diagnosis mode, next printing will continue from point where previous printing was finished.
- When table moving distance reaches media length specified in Media Initialization, printing will be canceled.

4 Check rough adjustment pattern.
- If the drawing line of D nozzle of print head 2 is located between drawing lines of C nozzle of print head 1, it is OK.
- If not OK, adjust head front/back.

=> **4.7.3.2. Head front/back adjustment-adjust**

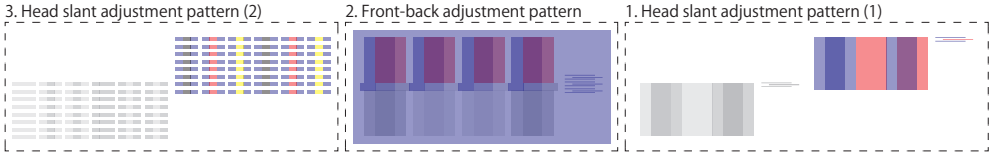


5 Check fine adjustment pattern.
- Point(Adjustment pattern in the center) :
  If drawing lines are drawn alternately, it is OK.
- If not OK, adjust head front/back.

=> **4.7.3.2. Head front/back adjustment-adjust**

NOTE

● Adjustment pattern (front/back)
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]
- Print mode : 2pass, Uni-D, CR 360dpi / PF 360dpi, 400cps, VSD3, Small dot



*Head front/back adjustment pattern

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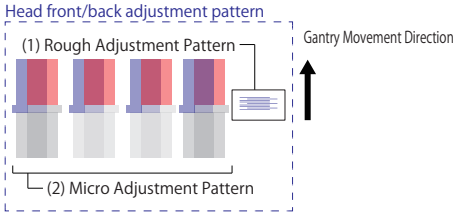
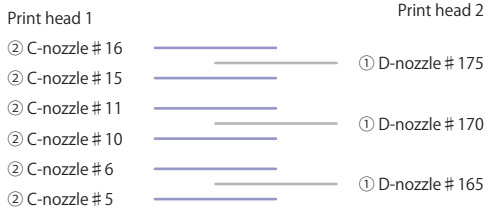
NOTE

● Head front/back adjustment pattern



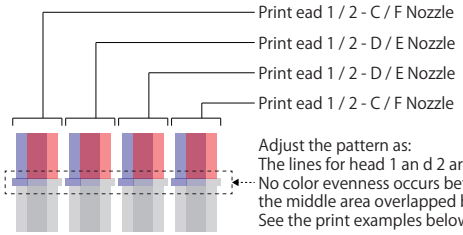
Adjust two print heads to correct the dot placement between two heads.
First, use the rough adjustment pattern to roughly correct the dot placement between
two heads.
Then use the micro adjustment pattern to check and perform precise adjustment.

(1) Rough Adjustment Pattern

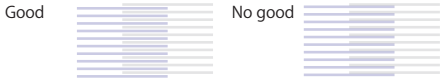


Adjust front/back of print head 2 so that drawing line of D nozzle of print head 2(①) is located between drawing lines of C nozzle of print head 1(②).

(2) Micro Adjustment Pattern

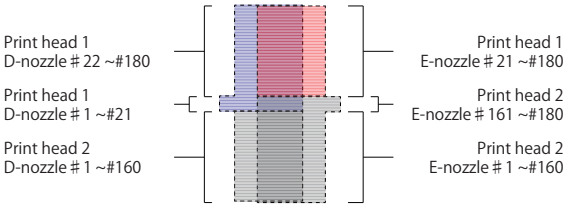


Joint point:
Adjust front/back of print head 2 so that drawing lines are drawn alternately.



Adjust the pattern as:
The lines for head 1 an d 2 are equally spaced where the both lines are printed (middle area).
No color evenness occurs between the upper or lower area overlapped by only Head 1 or Head 2 and the middle area overlapped by both heads.
See the print examples below.

Print ead 1 / 2 - D / E Nozzle



TIP

index=> 4. Adjustment

4.7.3.2. Head front/back adjustment-adjust

● Procedure

1 Remove cover(s).
- CR cover
- CR frame F

2 Start in self diagnosis mode.

3 Set media.

4 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head Slant:Slant1]

5 Move carriage.
- [Cap out->Enter]

6 Loosen screw(s).
- Hex socket screw with split washer_M3x6 Ni-3(x3)

7 Move lever to adjust.

8 Tighten screw(s).
- Hex socket screw with split washer_M3x6 Ni-3(x3)

9 Check adjustment pattern.

● Procedure(details)

1	Remove cover(s). - CR cover - CR frame F => 3. Parts replacement NOTE - After CR frame F is installed, LED pointer mounting position is adjusted.
2	Start in self diagnosis mode. => 5. Self-diagnosis

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3 Set media.
- Set media.
- Press the [Menu] key.

Note
- The adjustment pattern is drawn using white ink and vernish ink.
  Set colored media or transparent media.

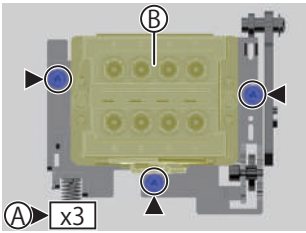
4 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.2:HeadSlant]->[Head slant:Slant1]

NOTE
- After drawing the adjustment pattern, [cap out->Enter] is displayed.
  - To continue with print head adjustment, press [Enter] key and cap out.
  - When [Cancel] key is pressed, [Head slanti:Slant1] is displayed.

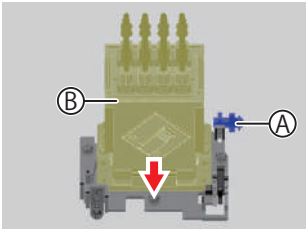
NOTE
- In self-diagnosis mode, next printing will continue from point where previous printing was finished.
- When table moving distance reaches media length specified in Media Initialization, printing will be canceled.

5 Move carriage.
- After drawing the adjustment pattern, [Cap out->Enter] is displayed.
- Press [Enter] and cap out.

6 Loosen screw(s).
A : Hex socket screw with split washer_M3x6 Ni-3(x3)
B : Print head 2

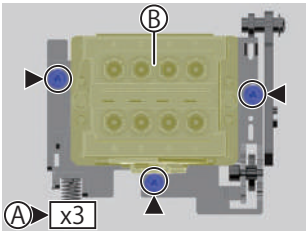


7 Move lever to adjust.
A : Lever (for head front/back adjustment)
B : Print head 2



NOTE
- After moving lever, pull print head horizontally.
  When print hand is released, print head move by spring.

8 Tighten screw(s).
A : Hex socket screw with split washer_M3x6 Ni-3(x3)
B : Print head 2



9 Check adjustment pattern.
=> 4.7.3.1. Head front/back adjustment-check

NOTE
- Repeat [Draw]->[Confirm]->[adjustment] until result is OK.

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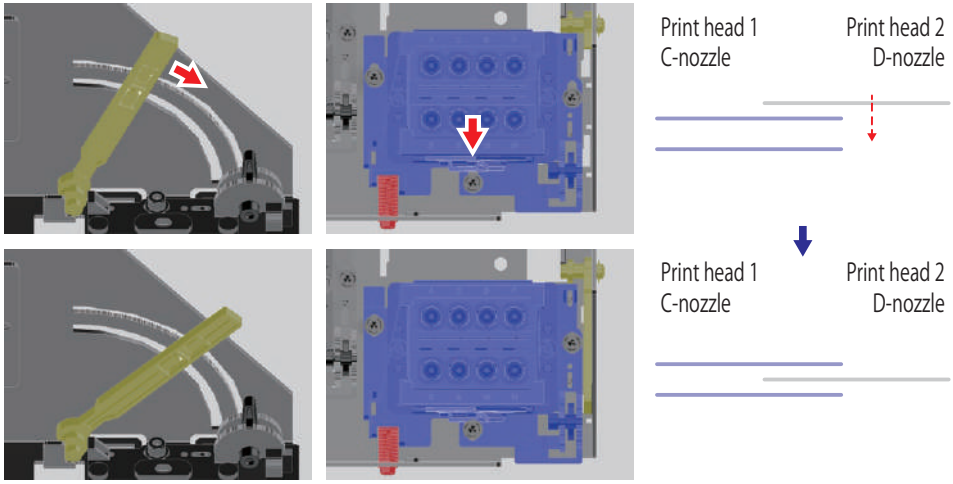
NOTE

- Adjustment method (when moving lever to front side)

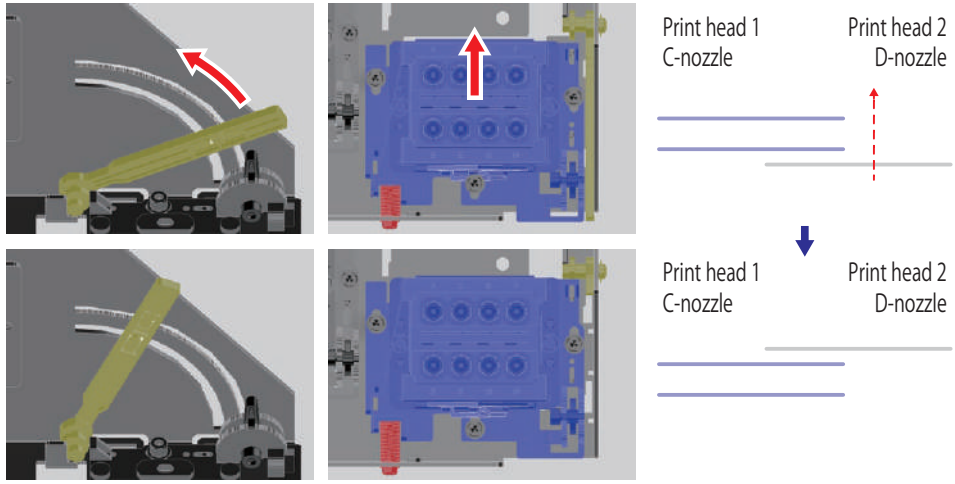
1.Move lever to front side.



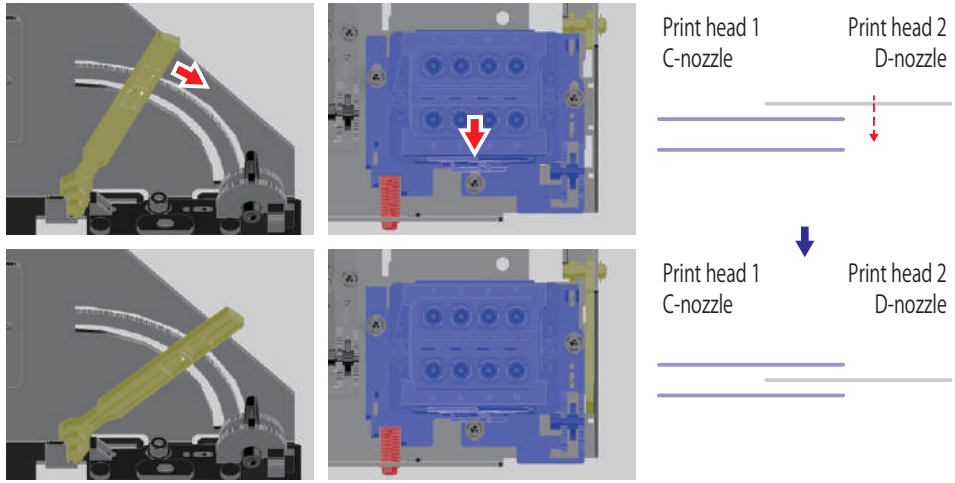
NOTE

- Adjustment method (when moving lever to rear side)

1.Move the lever rearward widely.



2. Return lever to front side.



CONFIDENTIAL

TIP

index=> 4. Adjustment

4.7.4. Uni-D adjustment (H_Adjust1)

- Adjust deviation between reference rows of print head 1 and print head 2.
- Enter adjustment value (parameter) from panel to adjust drawing position.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic Item	Loupe	25x magnification recommended.
Generic Item	Penlight	-
-	Media for adjustment	Ability to check adjustment pattern of Magenta and white inks.

NOTE

- Check
  => 4.7.4.1. Uni-D adjustment (H_Adjust1)_Print
- Adjust
  => 4.7.4.2. Uni-D adjustment (H_Adjust1)_Setup

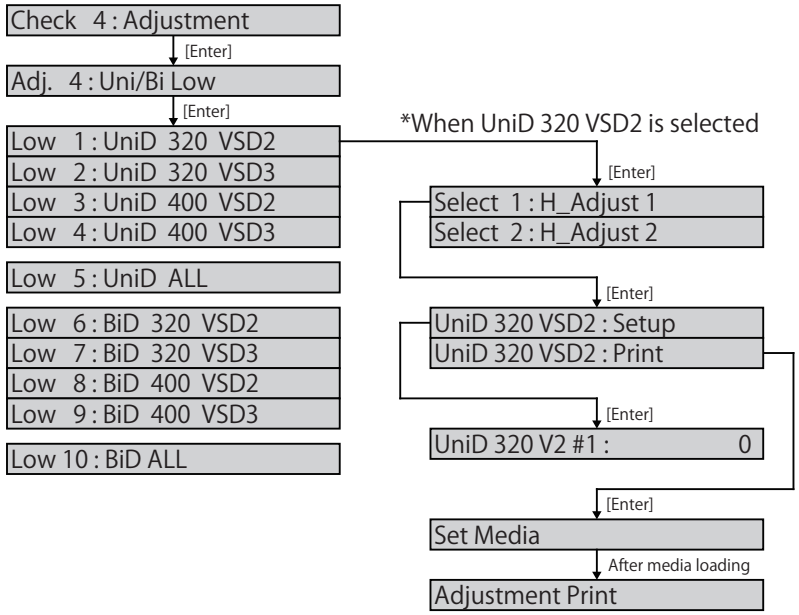
NOTE

- This adjustment is same for all modes.
  - [Low 1: UniD320 VSD2]
  - [Low 2: UniD320 VSD3]
  - [Low 3: UniD400 VSD2]
  - [Low 4: UniD400 VSD3]

CONFIDENTIAL

NOTE

● Operation panel



TIP

index=> 4. Adjustment

4.7.4.1. Uni-D adjustment (H_Adjust1)_Print

● Procedure

1 Start in self diagnosis mode.
2 Set media.
3 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust1]->[UniD 320 VSD2:Print]
4 Check adjustment pattern.

● Procedure(details)

1	Start in self diagnosis mode. => 5. Self-diagnosis
2	Set media. - Set media. - Press the [Menu] key. **Note** - The adjustment pattern is drawn using Magenta ink and white ink. Set colored media or transparent media.
3	Print adjustment pattern. - [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust1]->[UniD 320 VSD2:Print]
4	Check adjustment pattern. - If there is no lateral deviation of upper and lower drawing lines, it is OK. - If not OK, perform Uni-D adjustment. => 4.7.4.2. Uni-D adjustment (H_Adjust1)_Setup

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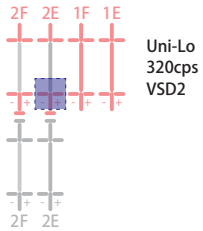
NOTE

- Adjustment pattern (Uni-D(H_Adjust1))
  - Printing method : Uni-D, Medium-dot

: Adjust the setting value so that the connection point matches.



TIP

index=> 4. Adjustment

4.7.4.2. Uni-D adjustment (H_Adjust1)_Setup

● Procedure

1 Start in self diagnosis mode.
2 Enter adjustment value.
  - [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust1]->[UniD 320 VSD2:Setup]
3 Check adjustment pattern.

● Procedure(details)

1	Start in self diagnosis mode. => 5. Self-diagnosis

2	Print adjustment pattern.
	- [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust1]->[UniD 320 VSD2:Setup]
	NOTE
	- Press [+] key or [-] key to change adjustment value.
	  - Adjustment Range : -400 to +400
	  - Adjustment Unit : 2880dpi (1/2880inch : Approx 8.8 μ m)

3	Check adjustment pattern. => 4.7.4.1. Uni-D adjustment (H_Adjust1)_Print NOTE - Repeat [Draw]->[Confirm]->[adjustment] until result is OK.

TIP

index=> 4. Adjustment

CONFIDENTIAL

4.7.5. Uni-D adjustment (H_Adjust2)

- Check gap in other lines of basis line head.
- Enter adjustment value (parameter) from panel to adjust drawing position.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic Item	Loupe	25x magnification recommended.
Generic Item	Penlight	-
-	Media for adjustment	Ability to check adjustment pattern of KCMY and white inks.

NOTE

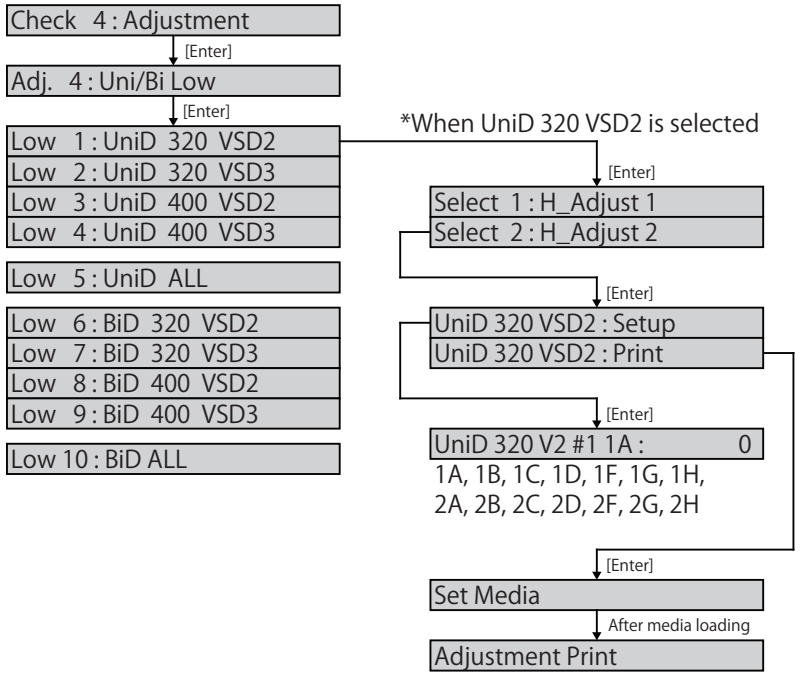
- Check
  => 4.7.5.1. Uni-D adjustment (H_Adjust2)_Print
- Adjust
  => 4.7.5.2. Uni-D adjustment (H_Adjust2)_Setup

NOTE

- This adjustment is same for all modes.
  - [Low 1: UniD320 VSD2]
  - [Low 2: UniD320 VSD3]
  - [Low 3: UniD400 VSD2]
  - [Low 4: UniD400 VSD3]

NOTE

● Operation panel



TIP

index=> 4. Adjustment

CONFIDENTIAL

4.7.5.1. Uni-D adjustment (H_Adjust2)_Print

● Procedure

1 Start in self diagnosis mode.
2 Set media.
3 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust2]->[UniD 320 VSD2:Print]
4 Check adjustment pattern.

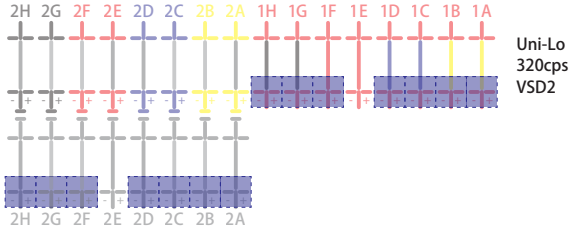
● Procedure(details)

1	Start in self diagnosis mode. => 5. Self-diagnosis
2	Set media. - Set media. - Press the [Menu] key. **Note** - The adjustment pattern is drawn using KCMY ink and white ink. Set colored media or transparent media.
3	Print adjustment pattern. - [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust2]->[UniD 320 VSD2:Print]
4	Check adjustment pattern. - If there is no lateral deviation of upper and lower drawing lines, it is OK. - If not OK, perform Uni-D adjustment. => 4.7.5.2. Uni-D adjustment (H_Adjust2)_Setup

NOTE

- Adjustment pattern (Uni-D(H_Adjust2))
  - Printing method : Uni-D, Medium-dot

: Adjust the setting value so that the connection point matches.



TIP

index=> 4. Adjustment

CONFIDENTIAL

4.7.5.2. Uni-D adjustment (H_Adjust2)_Setup

● Procedure

1 Start in self diagnosis mode.
2 Enter adjustment value.
- [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust2]->[UniD 320 VSD2:Setup]
3 Check adjustment pattern.

● Procedure(details)

1 Start in self diagnosis mode.
=> 5. Self-diagnosis

2 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low1:UniD 320 VSD2]->[Select1:H_Adjust2]->[UniD 320 VSD2:Setup]

NOTE
- Press [+] key or [-] key to change adjustment value.
  - Adjustment Range : -100 to +100
  - Adjustment Unit : 720dpi (1/720inch : Approx 35 μ m)

3 Check adjustment pattern.
=> 4.7.5.1. Uni-D adjustment (H_Adjust2)_Print

NOTE
- Repeat [Draw]->[Confirm]->[adjustment] until result is OK.

TIP
index=> 4. Adjustment

4.7.6. Bi-D adjustment

- Adjusts deviation of return drawing with respect to outward drawing during bidirectional drawing.
- Enter the adjustment value (parameter) from the panel to adjust the drawing position.

● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
Generic Item	Loupe	25x magnification recommended.
Generic Item	Penlight	-
-	Media for adjustment	Ability to check adjustment pattern of Magenta and white inks.

NOTE
- Check
  => 4.7.6.1. Bi-D adjustment_Print1
  => 4.7.6.2. Bi-D adjustment_Print2
- Adjust
  => 4.7.6.3. Bi-D adjustment_Setup

NOTE
- This adjustment is same for all modes.
  - [Low 6: BiD320 VSD2]
  - [Low 7: BiD320 VSD3]
  - [Low 8: BiD400 VSD2]
  - [Low 9: BiD400 VSD3]

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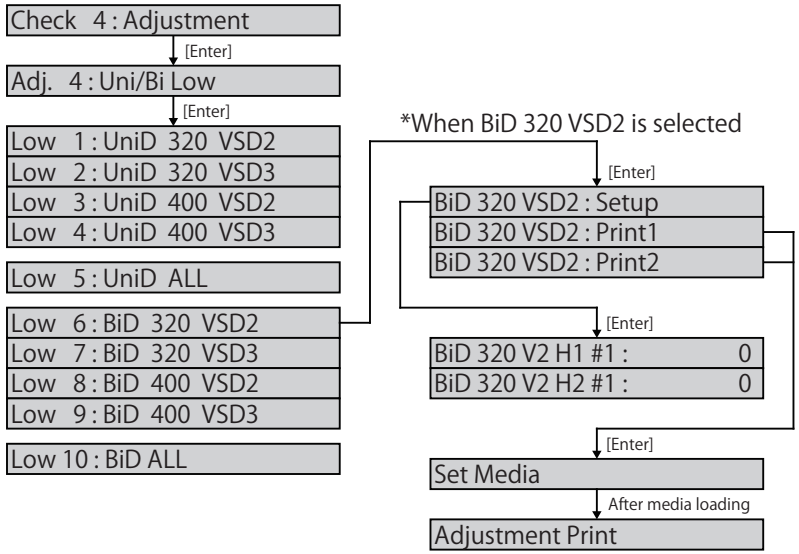
NOTE

● Operation panel



TIP

index=> 4. Adjustment

4.7.6.1. Bi-D adjustment_Print1

● Procedure

1 Start in self diagnosis mode.
2 Set media.
3 Print adjustment pattern.
- [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low8:BiD 320 VSD2]->[BiD 320 VSD2:Print1]
4 Check adjustment pattern.

● Procedure(details)

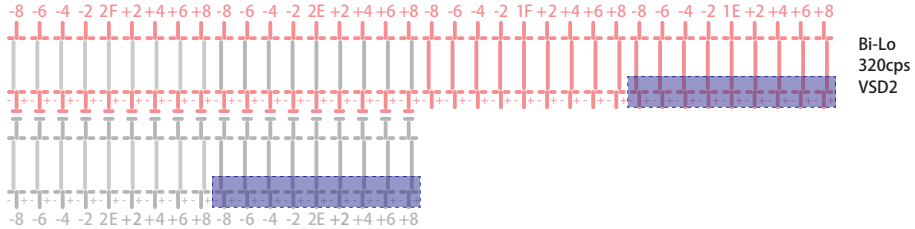
1	Start in self diagnosis mode. => 5. Self-diagnosis
2	Set media. - Set media. - Press the [Menu] key. **Note** - The adjustment pattern is drawn using Magenta ink and white ink. Set colored media or transparent media.
3	Print adjustment pattern. - [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low8:BiD 320 VSD2]->[BiD 320 VSD2:Print1]
4	Check adjustment pattern. - If there is no lateral deviation of upper and lower drawing lines, it is OK. - If not OK, perform Uni-D adjustment. => 4.7.6.3. Bi-D adjustment_Setup

CONFIDENTIAL

NOTE

- Adjustment pattern (Bi-D)
  - Printing method : Bi-D, Medium-dot

: Adjust the setting value so that the connection point matches.



TIP

index=> 4. Adjustment

4.7.6.2. Bi-D adjustment_Print2

● Procedure

1 Start in self diagnosis mode.
2 Set media.
3 Print adjustment pattern.
  - [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low8:BiD 320 VSD2]->[BiD 320 VSD2:Print2]
4 Check adjustment pattern.

● Procedure(details)

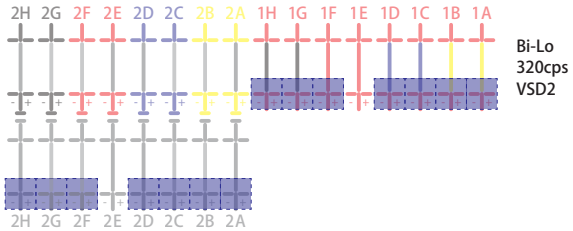
1	Start in self diagnosis mode. => 5. Self-diagnosis
2	Set media. - Set media. - Press the [Menu] key. **Note** - The adjustment pattern is drawn using Magenta ink and white ink. Set colored media or transparent media.
3	Print adjustment pattern. - [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low8:BiD 320 VSD2]->[BiD 320 VSD2:Prin2t]
4	Check adjustment pattern. - If there is no lateral deviation of upper and lower drawing lines, it is OK. - If not OK, perform Uni-D adjustment. => 4.7.6.3. Bi-D adjustment_Setup

CONFIDENTIAL

NOTE

- Adjustment pattern (Bi-D)
  - Printing method : Bi-D, Medium-dot

: Adjust the setting value so that the connection point matches.



TIP

index=> 4. Adjustment

4.7.6.3. Bi-D adjustment_Setup

● Procedure

1 Start in self diagnosis mode.
2 Enter adjustment value.
  - [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low8:BiD 320 VSD2]->[BiD 320 VSD2:Setup]
3 Check adjustment pattern.

● Procedure(details)

1	Start in self diagnosis mode. => 5. Self-diagnosis

2	Print adjustment pattern.
	- [Check4:Adjustment]->[Adj.3:Uni/Bi Low]->[Low8:BiD 320 VSD2]->[BiD 320 VSD2:Setup]
	NOTE
	- Press [+] key or [-] key to change adjustment value.
	  - Adjustment Range : -400 to +400
	  - Adjustment Unit : 2880dpi (1/2880inch : Approx 8.8 μm)

3	Check adjustment pattern. => 4.7.6.1. Bi-D adjustment_Print1 => 4.7.6.2. Bi-D adjustment_Print2 NOTE - Repeat [Draw]->[Confirm]->[adjustment] until result is OK.

TIP

index=> 4. Adjustment

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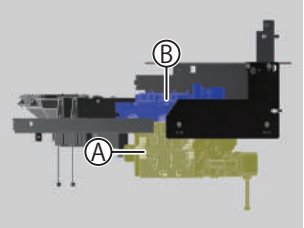
4.8. Maintenance U/D unit mounting position adjustment

A : Maintenance U/D unit
B : Maintenance unit

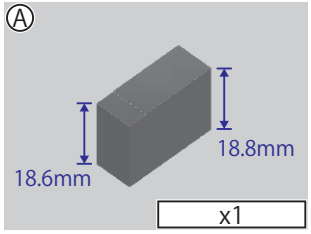


● Tools, Jigs, and Maintenance Part(s)

Part(s) No.	Name	Reference
DH-41688	Maintenance Statuion Height Adjustment Jig	
Generic item	Phillips screwdriver No.2	-
Generic item	Block gauge (18.6mm)	-
Generic item	Block gauge (18.8mm)	-

NOTE

DH-41688
Maintenance Station Height
Adjustment Jig
Ⓐ Jig



● Procedure

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

2 Remove maintenance unit.
3 Select adjustment menu.
- [Check1:Adj.Mecha]->[Mecha3:Adj.Maint.]

4 Loosen screw(s).
- Round head screw with split washer_M4x8(x4)

5 Install maintenance unit.
6 Set jig.(right side)
- Block gauge (18.6mm)

7 Tighten screw(s).(right side)
- Round head screw with split washer_M4x8(x2)

8 Remove jig.(right side)
9 Set jig.(left side)
- Block gauge (18.6mm)

10 Tighten screw(s).(left side)
- Round head screw with split washer_M4x8(x2)

11 Remove jig.(right side)
12 Check maintenance U/D unit mounting position.
- Block gauge (18.6mm)

13 Check maintenance U/D unit mounting position.
- Block gauge (18.8mm)

14 Reverse the above procedure to reinstall the parts.

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● Procedure(details)

1 Remove cover(s).
- Maintenance cover R
- Maintenance cover R2
- Pump cover
- Side cover R

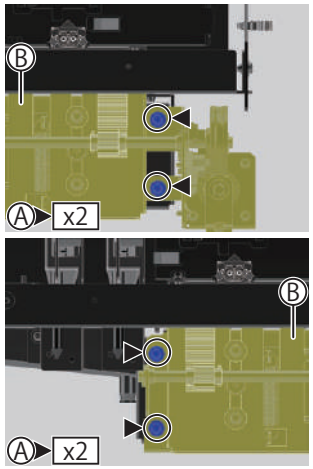
=> 3. Parts replacement

2 Remove maintenance unit.

=> 3. Parts replacement

3 Select adjustment menu.
- Starts self-diagnosis function mode.
- Select adjustment menu.
  [Check1:Adj.Mecha]->[Mecha3:Adj.Maint.]
- Maintenance U/D unit automatically moves to cap-in position.

4 Loosen screw(s).
A : Round head screw with split washer_M4x8(x4)
B : Maintenance U/D unit

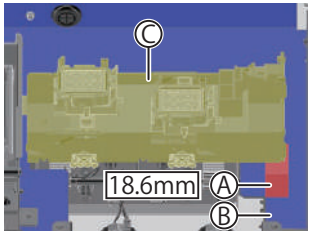


5 Install maintenance unit.

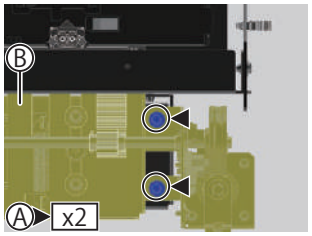
=> 3. Parts replacement

6 Set jig.(right side)
- Place block gauge (18.6 mm) between maintenance base and maintenance unit.(right side)

A : Block gauge (18.6mm)
B : Maintenance base
C : Maintenance unit

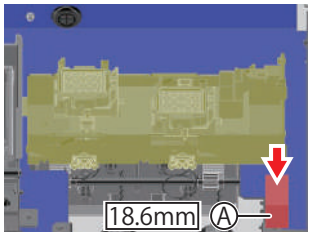


7 Tighten screw(s).(right side)
A : Round head screw with split washer_M4x8(x2)
B : Maintenance U/D unit



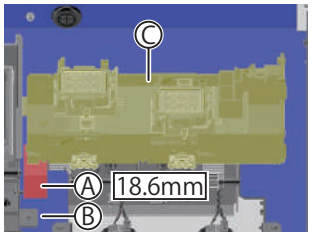
8 Remove jig.(right side)
- Remove block gauge (18.6 mm) from between maintenance base and maintenance unit. (Right side)

A : Block gauge (18.6mm)

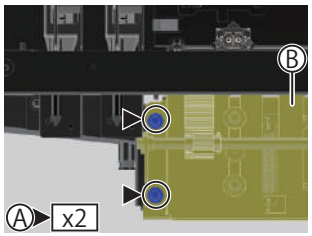


9 Set jig.(left side)
- Place block gauge (18.6 mm) between maintenance base and maintenance unit.(left side)

A : Block gauge (18.6mm)
B : Maintenance base
C : Maintenance unit



10 Tighten screw(s).(left side)
A : Round head screw with split washer_M4x8(x2)
B : Maintenance U/D unit



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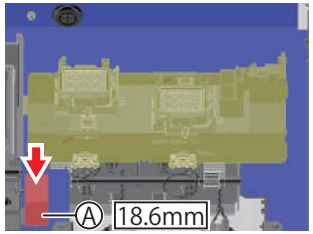
11 Remove jig.(left side)
- Remove block gauge (18.6 mm) from between maintenance base and maintenance unit. (left side)

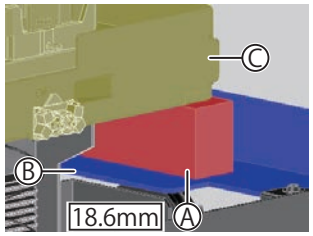
A : Block gauge (18.6mm)

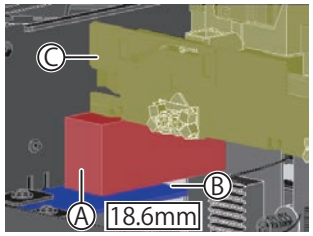


12 Check maintenance U/D unit mounting position.
- Check that block gauge (18.6 mm) passes between maintenance base and maintenance unit.

A : Block gauge (18.6mm)
B : Maintenance base
C : Maintenance unit

NOTE
- Check on both left side and right side.

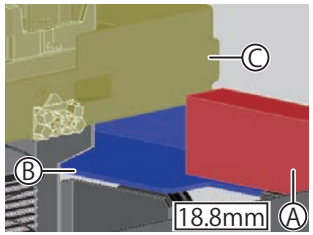


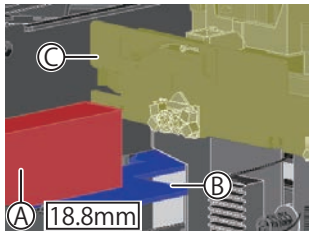


13 Check maintenance U/D unit mounting position.
- Check that block gauge (18.8 mm) does not pass between maintenance base and maintenance unit.
- Check on both left side and right side.

A : Block gauge (18.8mm)
B : Maintenance base
C : Maintenance unit

NOTE
- Check on both left side and right side.





14 Reverse the above procedure to reinstall the parts.

TIP

index=> 4. Adjustment

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5.1. Introduction

This chapter provides information on Self-diagnosis function.
Self-diagnosis function adjusts printing accuracy. It is used in manufacturing process, adjustment, and in maintenance.
Self-diagnosis function is implemented in System Firmware.
All the functions are available from Operation panel.

NOTE

- This manual is created based on firmware Ver.0.90(No.SS620A(2023.06.27))

TIP

index=> 5. Self-diagnosis

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5.2. Operation

This chapter explains how to operate Self-diagnosis function.

NOTE

- For details on operating procedures, refer to flow diagram for each diagnostic item.

TIP

index=> 5. Self-diagnosis

5.2.1. Turning on main power

Follow the steps below to turn on the printer's main power.

● Procedure

1 Connect AC power cord to printer's AC inlet.
2 Plug AC power cord into the outlet.
- > When the main power is on, the power LED is light up.

TIP

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5.2.2. Activate self-diagnostic function mode

Follow the steps below to activate self-diagnostic startup mode.

● Procedure

1 Hold down [▲], [>], and [▼] keys and press power key.
2 After panel LED lights up, release power key.
3 Hold down [▲], [>], and [▼] keys until self-diagnostic menu appears.
4 After self-diagnostic function menu is displayed, release each key.

TIP

index=> 5. Self-diagnosis

5.2.3. Power OFF

Follow the steps below to turn off.

● Procedure

1 Press power key for at least 2 seconds.
2 After "Power Off" is displayed on the panel, release power key.

TIP

index=> 5. Self-diagnosis

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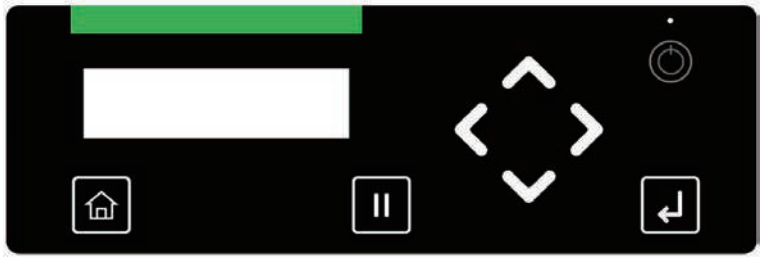
5.2.4. Panel key

In self-diagnostic mode, some of contents of panel keys are changed.
The differences in contents of panel keys in user mode and self-diagnostic mode are shown below.



Key	User mode	Self-diagnosis mode	
	Names	Names	Functions
	Cancel	Cancel	Tap to go back to the upper-level menu.
	▶	Next menu	Tap to scroll down the menu.
	◀	Previous menu	Tap to scroll up the menu.
	▲/SetMedia	Setting value +	Tap to increase the value.
	▼/RemoveMedia	Setting value -	Tap to decrease the value.
	Enter	Enter	Tap to confirm the setting value.
	Menu	Menu	Tap to switch the media loading status.
	Power	Power	Press the button to power on or off the printer.

TIP

index=> 5. Self-diagnosis

5.2.5. Set media

XPJ-1462UF does not automatically detect media loaded on the table.
Use the Home key to switch the media loading status (Ready/No media).

5.2.5.1. Restrictions on key operations

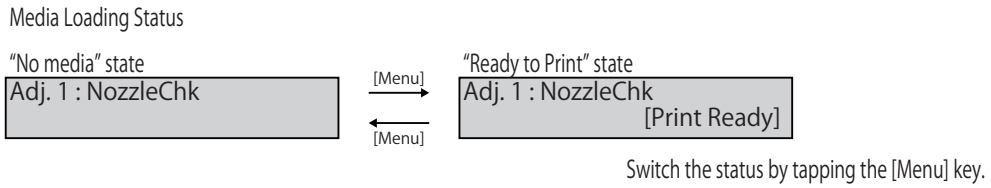
[Menu] keys are disabled until mechanical initial operation is completed.
After mechanical initial operation is completed, keys are enabled only for following menu items.

Menu with key enabled:
- Top menu in Self Diagnosis Mode
- Adjustment Menu
- Test Printing Menu

5.2.5.2. Key operation and action

In the initial state when the power is turned on, the media set state is no media.
Each time the [Menu] key is pressed, the media set status alternates between "with media" and "without media".
When media is present, "Ready to Print" is displayed on the second line of the panel.

● Operation panel



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5.2.5.3. Obstacle Detection

When [Menu] key is tapped in No media status, the printer will perform obstacle detection on table.
If any obstacle is detected, table will stop at detected point and then Status LED turns on red.
If it happens:

1 Tap [Menu] key.
2 The printer performs media ejecting process and Status LED turns off.
3 Remove obstacle or adjust table height.
4 Load media again and tap [Menu] key.
5 Printer performs obstacle detection again.
6 If no obstacle is detected, status will be switched to "Ready to Print".

5.2.5.4. Media automatic ejection

In user mode, the printer always prints from home position.
However, in self-diagnostic mode, printer continuously prints behind position where previous print job ended.
If table travel reaches set media length during printing, printing stops.
After printing is stopped, printer automatically ejects media and media set status changes to "no media".

TIP

index=> 5. Self-diagnosis

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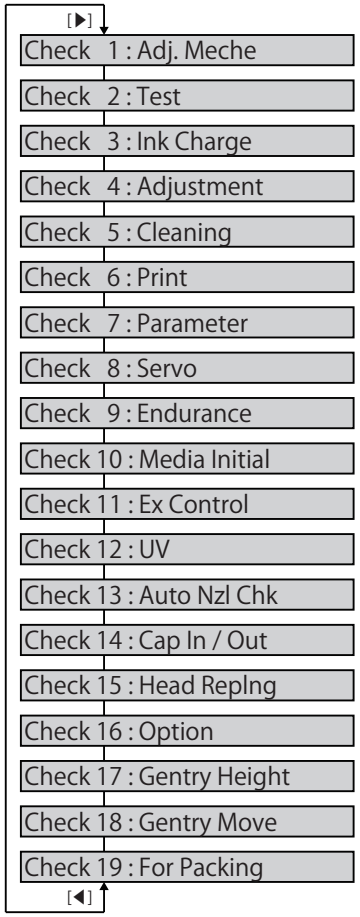
5.3. Main menu

● Operation panel



● Function description

Menu	Reference
Check 1 : Adj. Mecha	=> 5.4. Adjust mecha
Check 2 : Test	=> 5.5. Test
Check 3 : InkCharge	=> 5.6. Ink charge
Check 4 : Adjustment	=> 5.7. Adjustment
Check 5 : Cleaning	=> 5.8. Cleaning
Check 6 : Print	=> 5.9. Print
Check 7 : Parameter	=> 5.10. Paramter
Check 8 : Servo	=> 5.11. Servo
Check 9 : Endurance	=> 5.12. Endurance
Check10 : MediaInitial	=> 5.13. Media initialization
Check11 : ExControl	=> 5.14. ExControl
Check12 : UV	=> 5.15. UV-LED
Check13 : Auto Nzl Chk	=> 5.16. Auto nozzle detection
Check14 : Cap In/Out	=> 5.17. Cap in/out
Check15 : HeadReplace	=> 5.18. Head replacement
Check16 : Option	=> 5.19. Option
Check17 : GantreyHeight	=> 5.20. Gantry height
Check18 : GantreyMave	=> 5.20. Gantry height
Check19 : For packing	=> 5.22. For packing

TIP

index=> 5. Self-diagnosis

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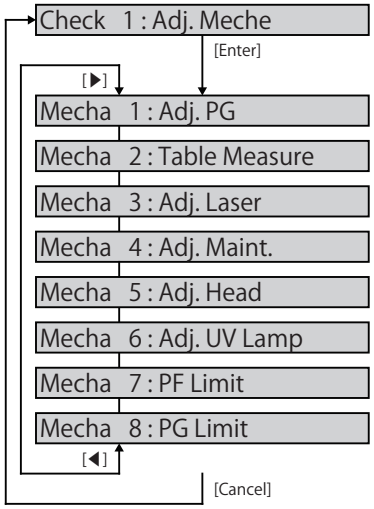
5.4. Adjust mecha

● Operation panel



● Explanation

In this menu, perform to adjust mechanical.
Each item is as follows.

Item	Content
Mecha1 : Adj. PG	=> 5.4.1. Adjust PG
Mecha2 : Table Measurement	=> 5.4.2. Table measurement
Mecha3 : Adj. Laser	=> 5.4.3. Obstacle detection sensor adjustment
Mecha4 : Adj. Maint.	=> 5.4.4. Maintenance unit height adjustment
Mecha5 : Adj. Head	=> 5.4.5. Head adjustment
Mecha6 : Adj. UV Lamp	=> 5.4.6. UV lamp adjustment
Mecha7 : PF Limit	=> 5.4.7. PF limit check
Mecha8 : PG Limit	=> 5.4.8. PG limit check

NOTE

- PF origin position and PG origin position in following explanation are as follows.
  - PF origin position: gantry is at rear side of system.
  - PG origin position: gantry is at lower side of system.

TIP

index=> 5. Self-diagnosis

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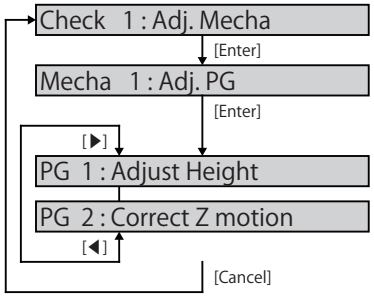
5.4.1. Adjust PG

● Operation panel



● Explanation

In this menu, perform to adjust PG.
Each item is as follows.

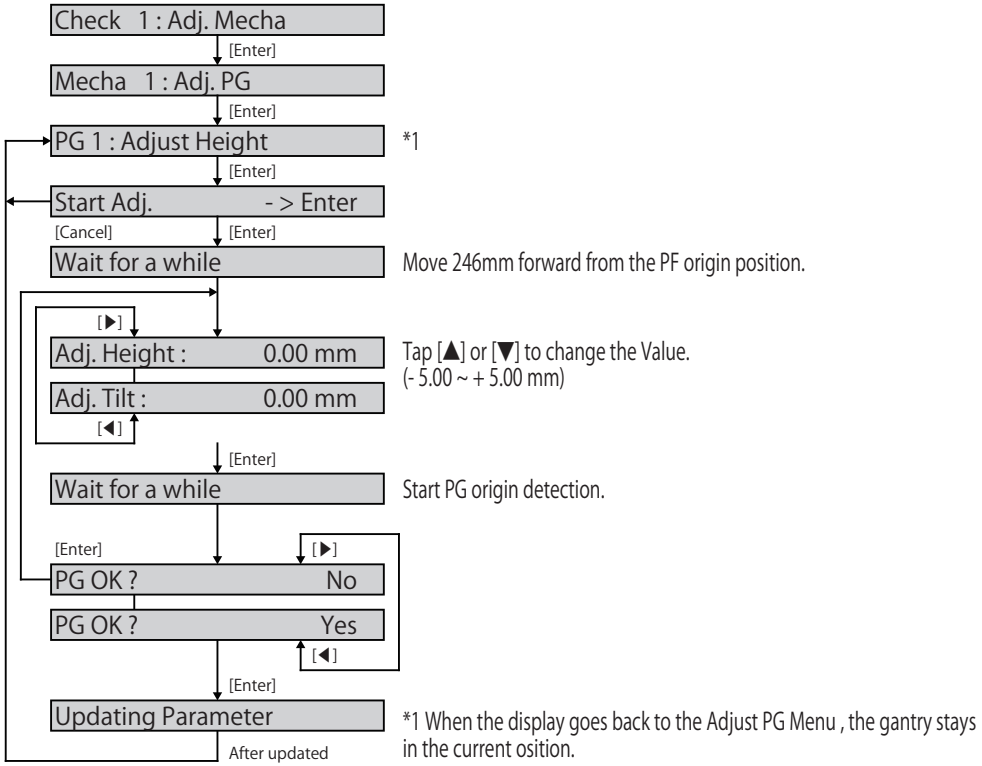
Item	Content
PG1 : Adjust Height	=> 5.4.1.1. Leveling Gantry
PG2 : Correct Z motion	=> 5.4.1.2. Gantry Z motion Correction

TIP

index=> 5. Self-diagnosis

5.4.1.1. Leveling Gantry

● Operation panel



● Explanation

In this menu, perform to adjust gantry height and gantry level.

TIP

index=> 5. Self-diagnosis

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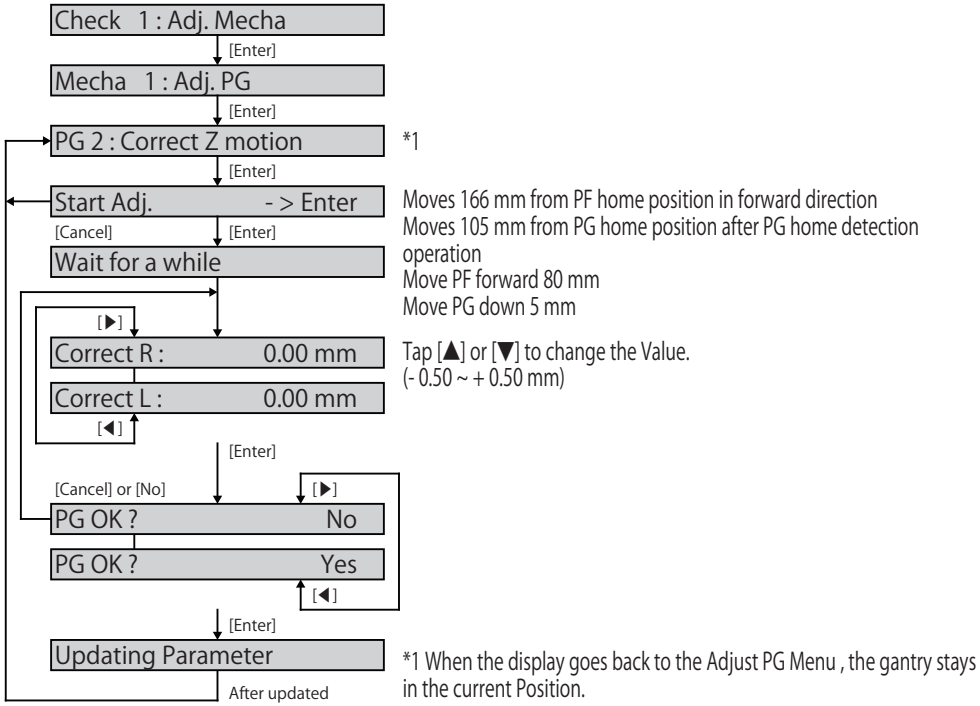
5.4.1.2. Gantry Z motion Correction

● Operation panel



● Explanation

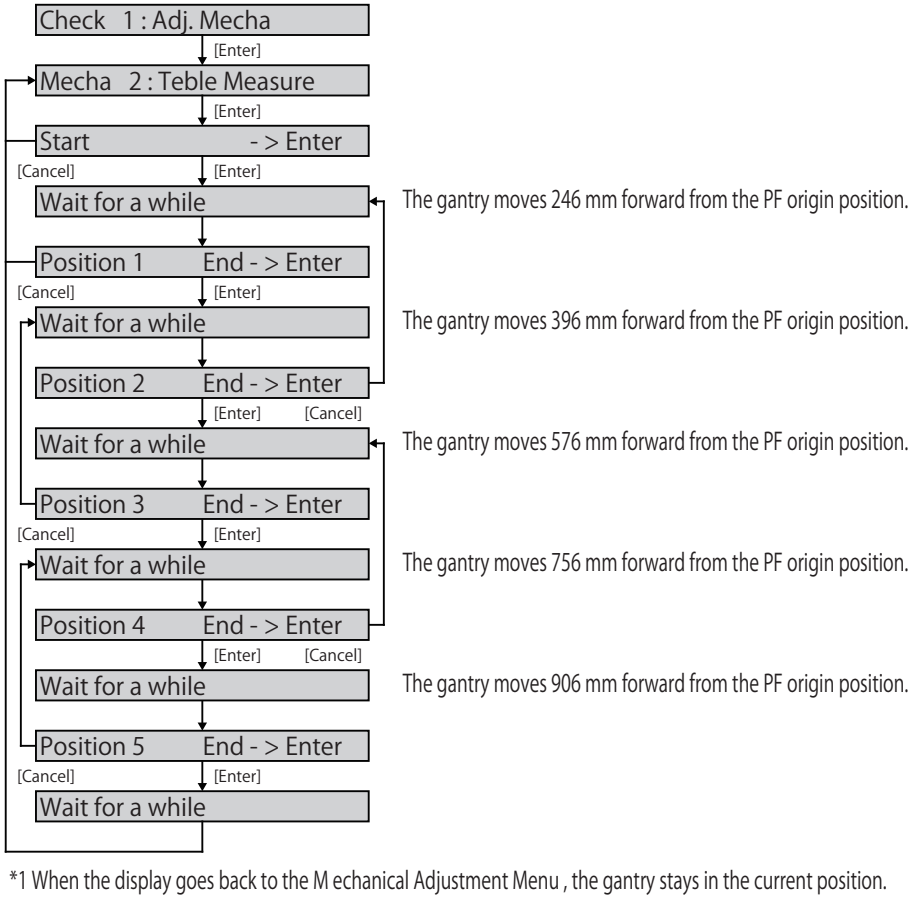
In this menu, perform to correct Z motion on both end s of gantry.

TIP

index=> 5. Self-diagnosis

5.4.2. Table measurement

● Operation panel



*1 When the display goes back to the M echanical Adjustment Menu , the gantry stays in the current position.

● Explanation

In this menu, perform to mesures flatness of vacuum table.
Gantry moves five places on table by key operation from control panel.

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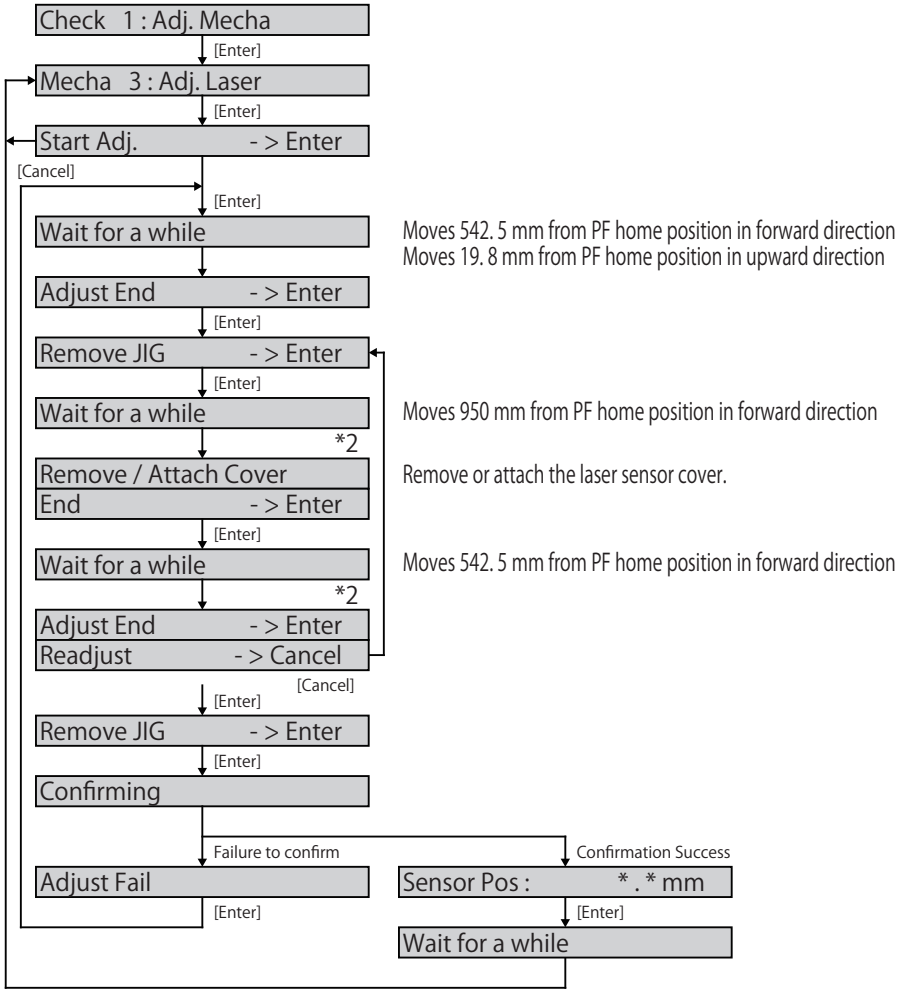
TIP

index=> 5. Self-diagnosis

5.4.3. Obstacle detection sensor adjustment

● Operation panel



*1 When the display goes back to the Adjust PG Menu , the gantry stays in the current position.
*2 The message is displayed in two lines.

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● Explanation

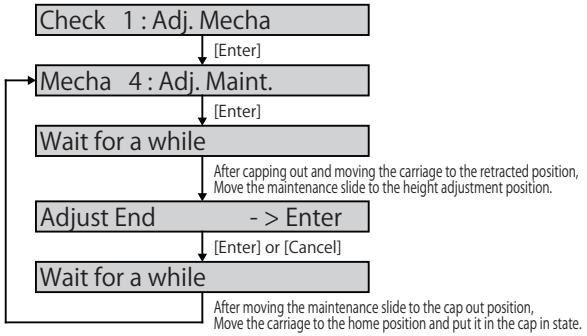
In this menu, perform to adjust laser beam of obstacle detection sensor.

TIP

index=> 5. Self-diagnosis

5.4.4. Maintenance unit height adjustment

● Operation panel



*1 When the display goes back to the Mechanical Adjustment Menu , the gantry stays in the current position.

● Explanation

In this menu, perform to adjust maintenance unit height.
Move maintenance slide to height adjustment position of maintenance unit, and adjust with jig.

TIP

index=> 5. Self-diagnosis

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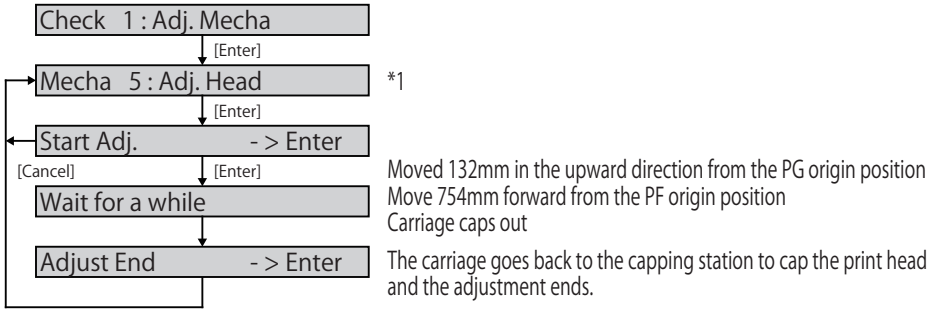
5.4.5. Head adjustment

● Operation panel



*1 When the display goes back to the Mechanical Adjustment Menu , the gantry stays in the current position.

● Explanation

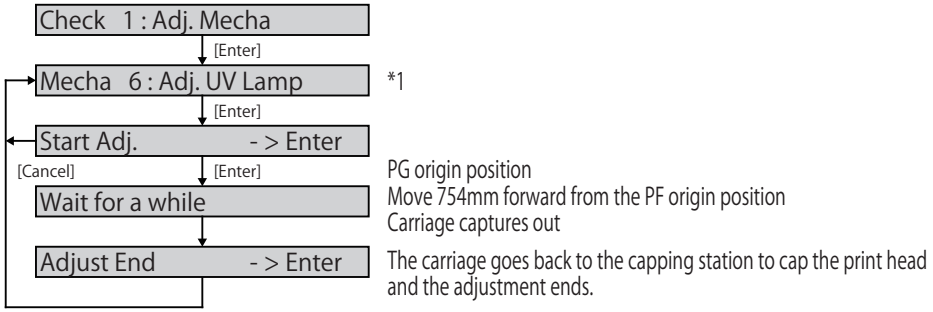
In this menu, perform to adjust head height.

TIP

index=> 5. Self-diagnosis

5.4.6. UV lamp adjustment

● Operation panel



*1 When the display goes back to the Mechanical Adjustment Menu , the gantry stays in the current position.

● Explanation

In this menu, perform to adjust UV lamp height

TIP

index=> 5. Self-diagnosis

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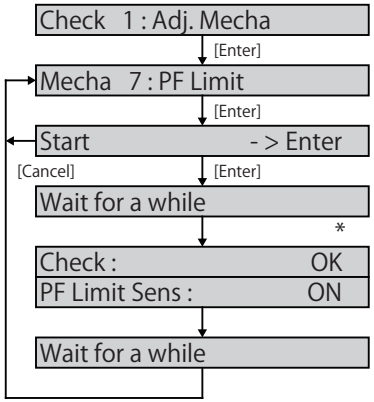
5.4.7. PF limit check

● Operation panel



The gantry moves 1001 mm forward from the PF origin position.

If the gantry moves properly, "OK" will be displayed in the first line. The second line shows the status of PF limit sensor when the movement ends.

The gantry returns to the PF origin position.

* The message is displayed in two lines.

● Explanation

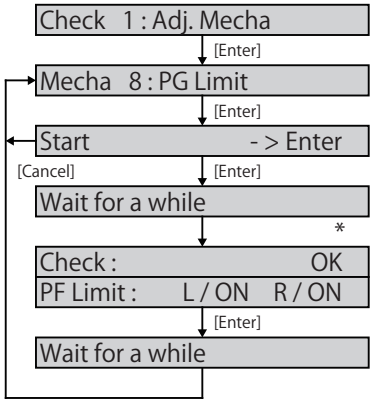
In this menu, perform to check operation to PF limit position.

TIP

index=> 5. Self-diagnosis

5.4.8. PG limit check

● Operation panel



The gantry moves 157 mm forward from the PF origin position.

If the gantry moves properly, "OK" will be displayed in the first line. The second line shows the status of both PG limit sensors when the movement ends.

The gantry returns to the PG origin position.

* The message is displayed in two lines.

● Explanation

In this menu, perform to check operation to PG limit position.

TIP

index=> 5. Self-diagnosis

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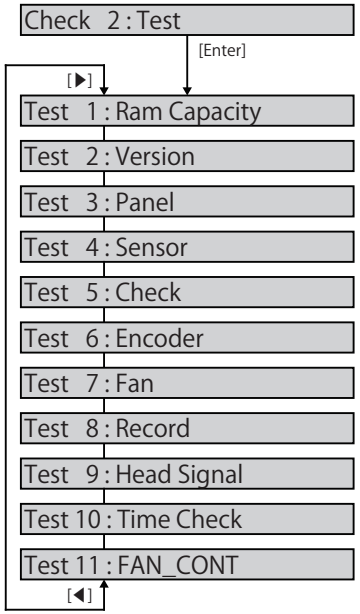
5.5. Test

● Operation panel



● Explanation

In this menu, perform to check operation of each parts.
Each item is as follows.

Item	Content
Test1 : Ram Capacity	=> 5.5.1. RAM capacity
Test2 : Version	=> 5.5.2. Version
Test3 : Panel	=> 5.5.3. Panel
Test4 : Sensor	=> 5.5.4. Sensor
Test5 : Check	=> 5.5.5. Check
Test6 : Encoder	=> 5.5.6. Encoder
Test7 : Fan	=> 5.5.7. Fan
Test8 : Record	=> 5.5.8. Record
Test9 : Head Signal	=> 5.5.9. Head signal
Test10 : Time Check	=> 5.5.10. Time check
Test11 : FAN_CONT	=> 5.5.11. FAN_CONT

TIP

index=> 5. Self-diagnosis

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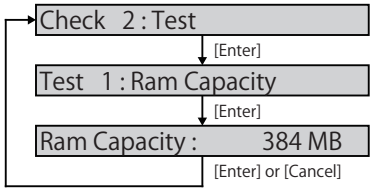
5.5.1. RAM capacity

● Operation panel



● Explanation

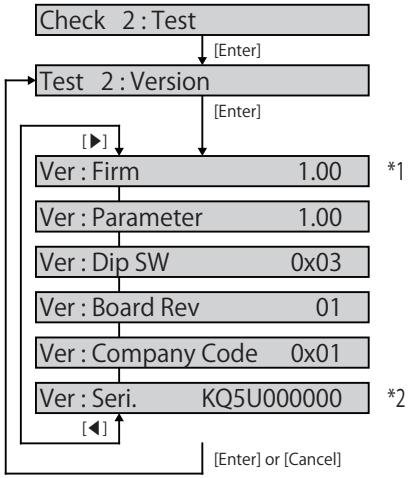
In this menu, display RAM capacity on main board.

TIP

index=> 5. Self-diagnosis

5.5.2. Version

● Operation panel



*1 : In the factory default, " * " appears to the right of the version.

Ver : Firm	1.00 *

*2 : If the serial number is not provided, the following message will appear.

Ver : Seri.	Not Set

● Explanation

In this menu, display following items.

- Version of firmware (program)
- Version of firmware (backup parameter)
- Setting of dip switches
- Revision of main board
- Company code
- Serial number

TIP

index=> 5. Self-diagnosis

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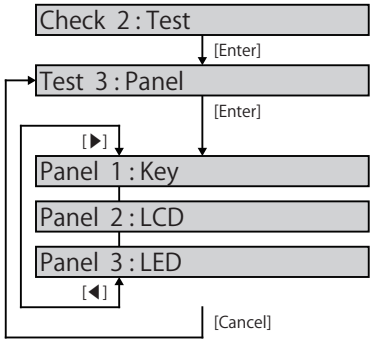
5.5.3. Panel

● Operation panel



● Explanation

In this menu, perform to check panel operation.
Each item is as follows.

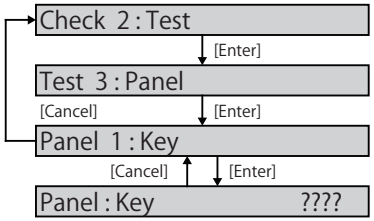
Item	Content
Panel1 : Key	=> 5.5.3.1. Panel key check
Panel2 : LCD	=> 5.5.3.2. Panel LCD check
Panel3 : LED	=> 5.5.3.3. Panel LED check

TIP

index=> 5. Self-diagnosis

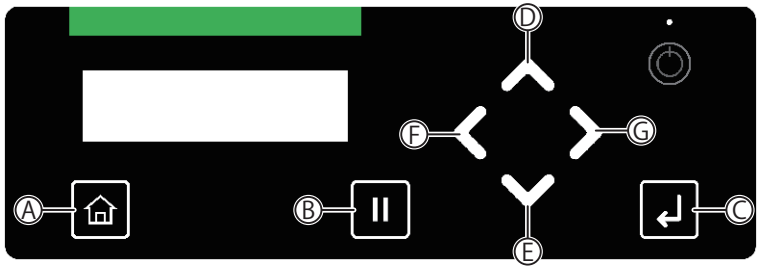
5.5.3.1. Panel key check

● Operation panel



● Explanation

In this menu, display name of key pressed on panel.
To exit panel key check, tap [Cancel] twice.



Key name

A : Menu
B : Cancel
C : Enter
D : Plus
E : Minus
F : Pre
G : Next

TIP

index=> 5. Self-diagnosis

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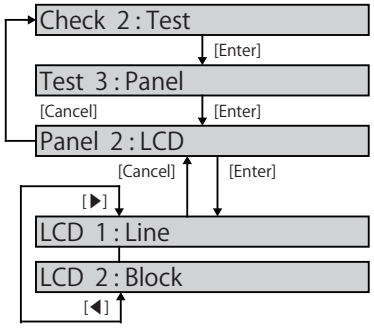
5.5.3.2. Panel LCD check

● Operation panel



Displays the display test patterns on the OLED screen.

● Explanation

In this menu, display each pattern on panel according to selection.

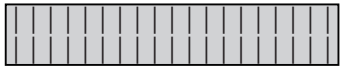
When "LCD1 : Line" is selected:
Display pattern on panel in following order 1 to 3.

1 Display vertical line patterns per column from right to left.
2 Display horizontal line patterns per row from top to bottom.
3 Display block pattern.

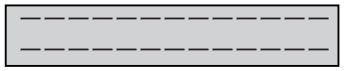
NOTE

- Tapping [Enter] key during pattern lighting will pause pattern.
- Tapping [Enter] key while paused will release pause.
- Tapping [Enter] key during pattern switching or pause will exit.

Examples of patterns
1. Vertical line patterns



2. Horizontal line pattern



3.Block pattern

When "LCD2 : Block" is selected:
Display block patterns every 0.5 second from right to left.

Examples of patterns

TIP

index=> 5. Self-diagnosis

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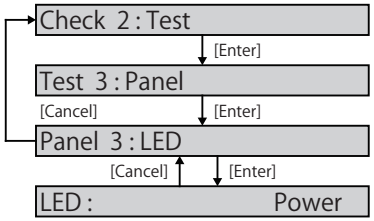
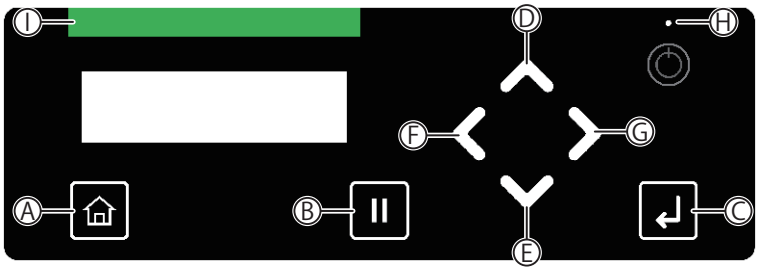
5.5.3.3. Panel LED check

● Operation panel



● Explanation

In this menu, turn on LEDs in sequence and display name of lit LED on panel.



Led lighting sequence

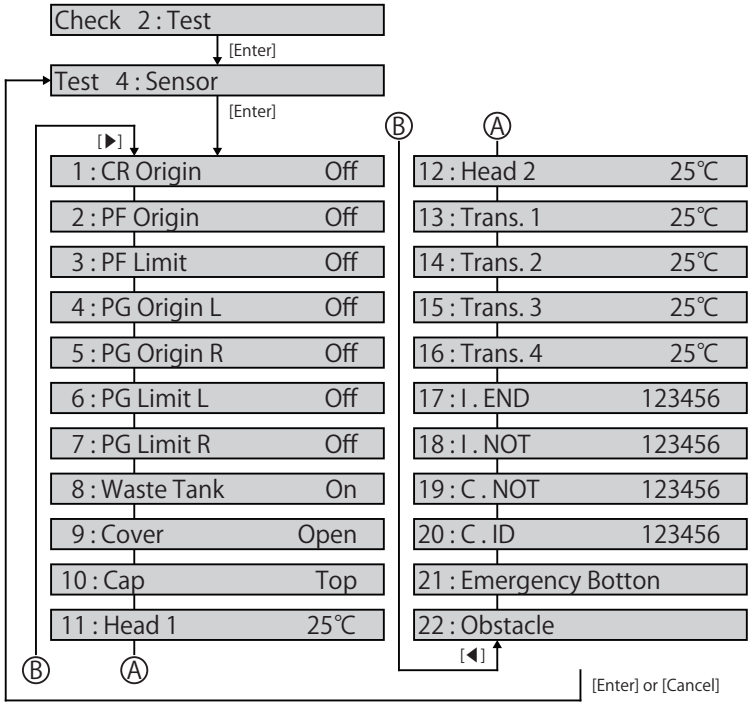
1	: [H]	Power LED	6	: [C]	Enter LED
2	: [I]	Status LED (Red)	7	: [D]	Plus LED
3	: [I]	Status LED (Green)	8	: [E]	Minus LED
4	: [A]	Menu LED	9	: [F]	Pre LED
5	: [B]	Cancel LED	10	: [G]	Next LED

TIP

index=> 5. Self-diagnosis

5.5.4. Sensor

● Operation panel



● Explanation

In this menu, perform to check each sensor.
Each item is as follows.

Item	Content
1 : CR Origin	CR origin sensor status
2 : PF Origin	PF origin sensor status
3 : PF Limit	PF limit sensor status
4 : PG Origin L	PG origin sensor status (origin side)
5 : PG Origin R	PG origin sensor status (counter origin side)

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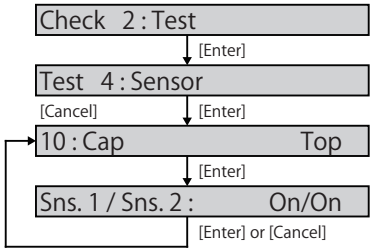
Item	Content
6 : PG Limit L	PG limit sensor status (origin side)
7 : PG Limit R	PG limit sensor status (counter origin side)
8 : Waste Tank	Waste fluid tank status
9 : Cover	Cover status
10 : Cap	=> 5.5.4.1. Cap status
11 : Head 1	Head thermistor temperature (print head 1)
12 : Head 2	Head thermistor temperature (print head 2)
13 : Trans.1	Head transirtor temperature (transistor 1)
14 : Trans.2	Head transirtor temperature (transistor 2)
15 : Trans.3	Head transirtor temperature (transistor 3)
16 : Trans.4	Head transirtor temperature (transistor 4)
17 : I.END	Cartridge status (ink end)
18 : I.NOT	Cartridge status (ino cartridge)
19 : C.NOT	Ink card status (no card)
20 : C.ID	Ink card status (card ID)
21 : Emergency Botton	=> 5.5.4.2. Emergency button status
22 : Obstacle	=> 5.5.4.3. Obstacle sensor status

TIP

index=> 5. Self-diagnosis

5.5.4.1. Cap status

● Operation panel



● Explanation

In this menu, display status of cap sensor.
Cap state and cap sensors 1 and 2 are as follows.

Cap status	Cap sensor 1	Cap sensor 2
Origin	Off	Off
Bottom	Off	On
Motion	On	Off
Top	On	On

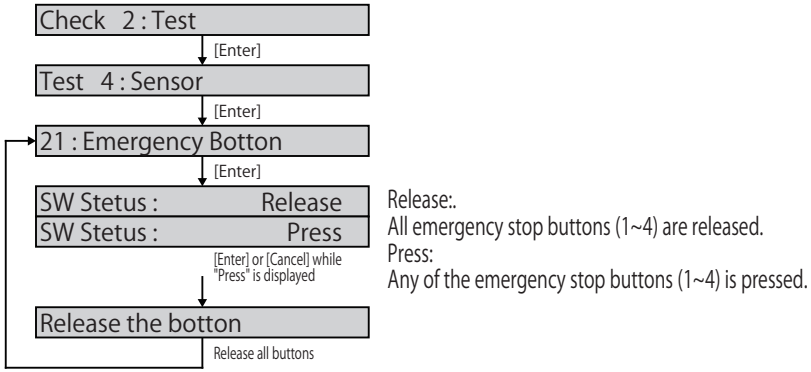
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.4.2. Emergency button status

● Operation panel



● Explanation

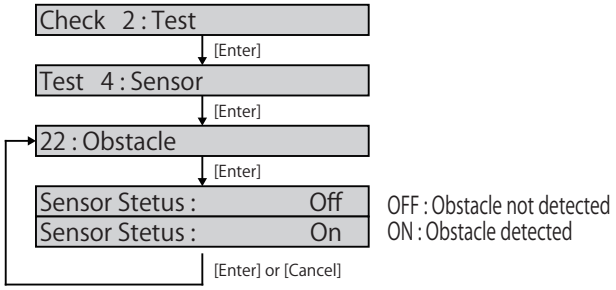
In this menu, display status of emergency stop button.

TIP

index=> 5. Self-diagnosis

5.5.4.3. Obstacle sensor status

● Operation panel



● Explanation

In this menu, display display status of obstacle detection sensor.

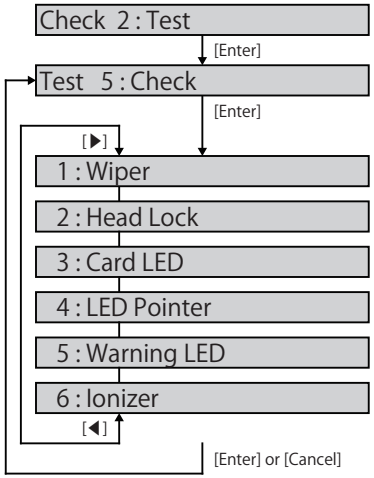
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.5. Check

● Operation panel



● Explanation

In this menu, perform to check each parts.
Each item is as follows.

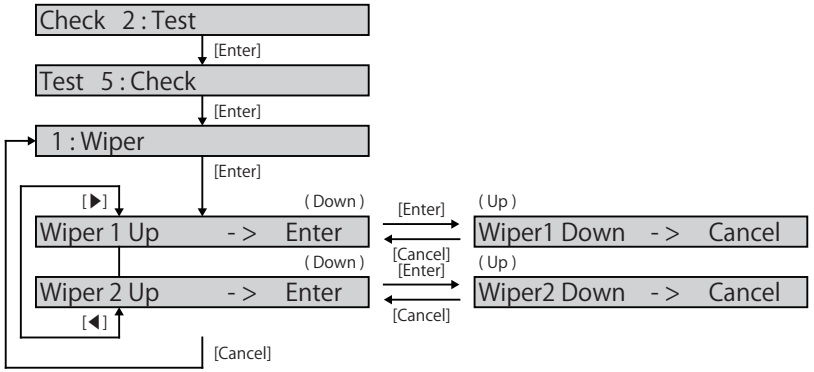
Item	Content
1 : Wiper	=> 5.5.5.1. Wiper solenoid
2 : Head Lock	=> 5.5.5.2. CR lock solenoid
3 : Card LED	=> 5.5.5.3. Card LED
4 : LED Pointer	=> 5.5.5.4. LED pointer
5 : Warning LED	=> 5.5.5.5. Warning LED
6 : Ionizer	=> 5.5.5.6. Ionizer

TIP

index=> 5. Self-diagnosis

5.5.5.1. Wiper solenoid

● Operation panel



● Explanation

In this menu, perform to check wiper solenoid operation.

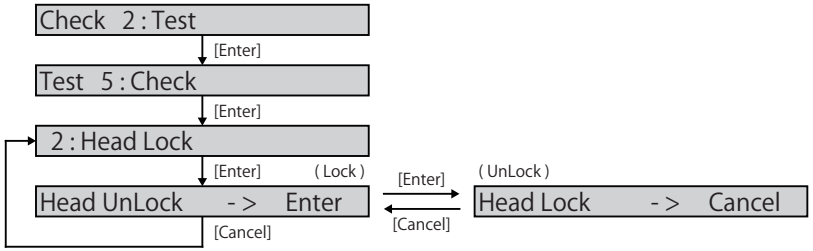
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.5.2. CR lock solenoid

● Operation panel



● Explanation

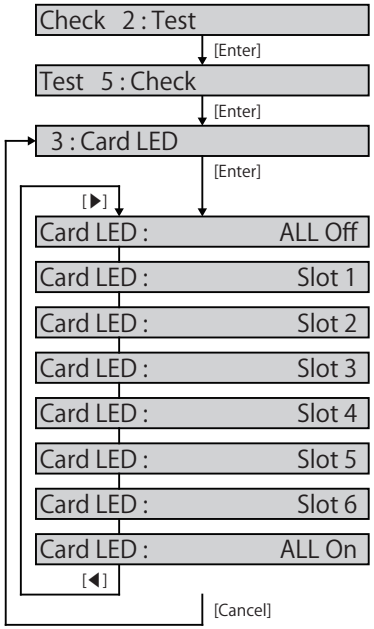
In this menu, perform to check carriage lock solenoid operation.

TIP

index=> 5. Self-diagnosis

5.5.5.3. Card LED

● Operation panel



● Explanation

In this menu, perform to check card LED operation.

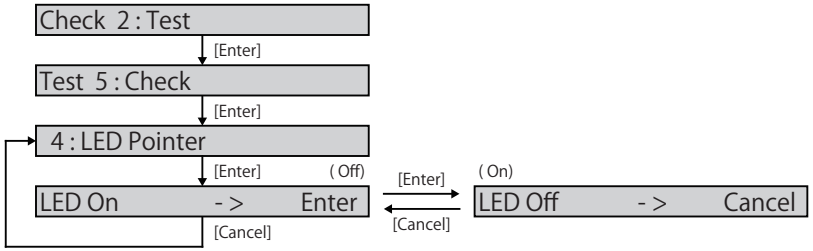
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.5.4. LED pointer

● Operation panel



● Explanation

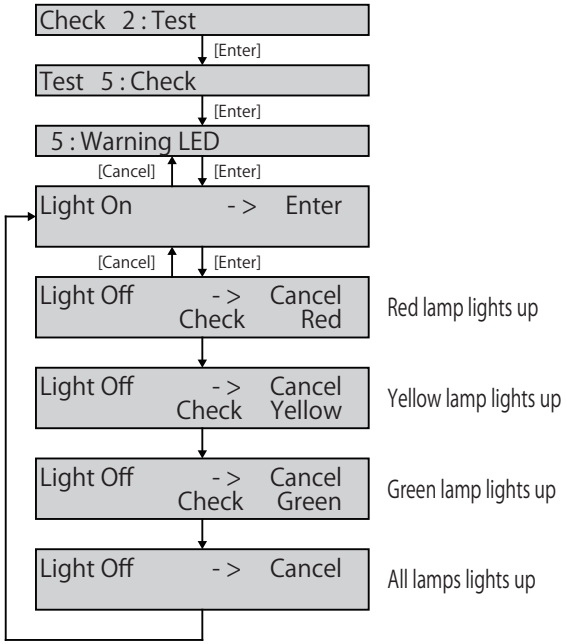
In this menu, perform to check LED pointer operation.

TIP

index=> 5. Self-diagnosis

5.5.5.5. Warning LED

● Operation panel



● Explanation

In this menu, perform to check warning LED operation.

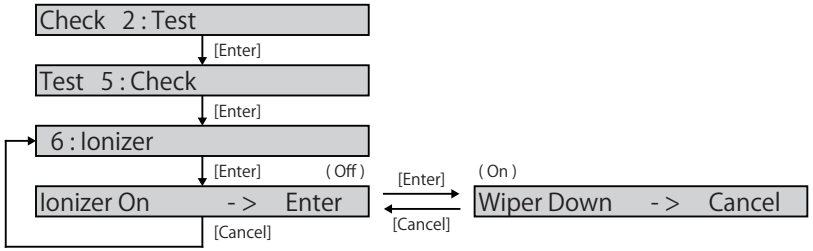
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.5.6. Ionizer

● Operation panel



● Explanation

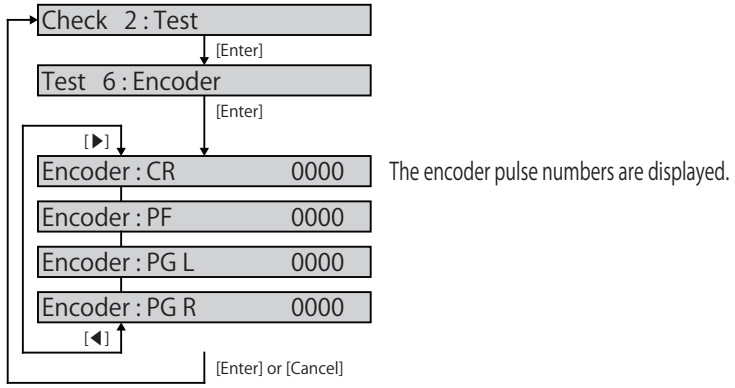
In this menu, perform to check ionizer operation.

TIP

index=> 5. Self-diagnosis

5.5.6. Encoder

● Operation panel



● Explanation

In this menu, display each encoder status.
Each item is as follows.

Item	Content
Encoder : CR	CR encoder values
Encoder : PF	PF encoder values
Encoder : PG L	PG encoder values (origin side)
Encoder : PG R	PG encoder values (counter origin side)

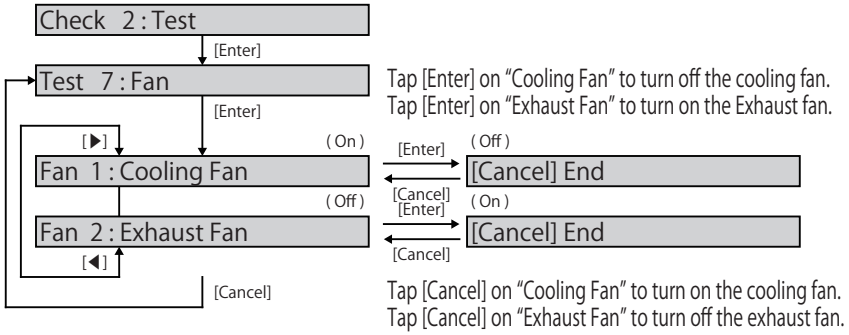
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.7. Fan

● Operation panel



● Explanation

In this menu, perform to check each fan.
Each item is as follows

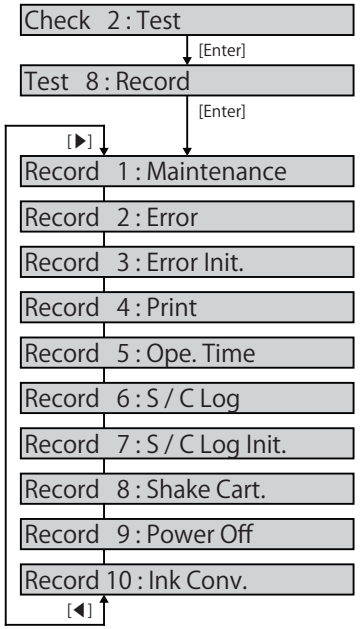
Item	Content
Fan1 : Cooling Fan	Cooling fan operation
Fan2 : Exhaust Fan	Exhaust fan operation

TIP

index=> 5. Self-diagnosis

5.5.8. Record

● Operation panel



● Explanation

In this menu, display each record.
Each item is as follows.

Item	Content
Record1 : Maintenance	=> 5.5.8.1. Maintenance record
Record2 : Error	=> 5.5.8.2. Error record
Record3 : Error Init.	=> 5.5.8.3. Error record initialization
Record4 : Print	=> 5.5.8.4. Print Information
Record5 : Ope. Time	=> 5.5.8.5. Operation time
Record6 : S/C Log	=> 5.5.8.6. S/C log
Record7 : S/C Log Init.	=> 5.5.8.7. S/C log initialization

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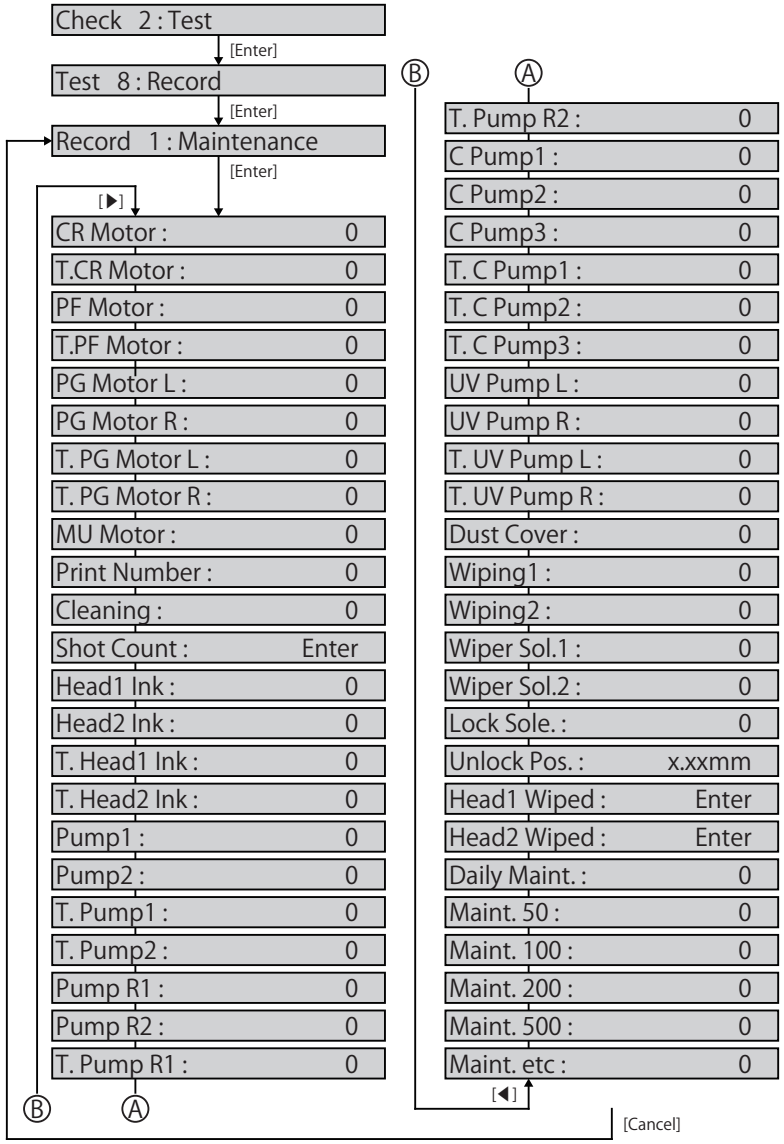
Item	Content
Record8 : Shake Cart.	=> 5.5.8.8. Ink cartridge shaking log
Record9 : Power Off	=> 5.5.8.9. Power off record
Record10 : Ink Conv.	=> 5.5.8.10. Ink conversion log

TIP

index=> 5. Self-diagnosis

5.5.8.1. Maintenance record

● Operation panel



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● Explanation

In this menu, display each parts record.
Each item is as follows.

Item	Content
CR Motor :	CR motor drive count (unit:number of cycle) *1
T.CR Motor :	CR motor total drive count (unit:number of cycle) *1
PF Motor :	PF motor drive count (unit:number of cycle) *1
T.PF Motor :	PF motor total drive count (unit:number of cycle) *1
PG Motor L :	PG motor L drive count (unit:mm)
PG Motor R :	PG motor R drive count (unit:mm)
T.PG Motor L :	PG motor L total drive count (unit:mm)
T.PG Motor R :	PG motor R total drive count (unit:mm)
MU Motor :	Maintenance motor drive count (unit:1k pulse)
Print Number :	Number of printed (including internal pattern)
Cleaning :	Number of cleaning count *2
Shot Count :	=> 5.5.8.1.1. Shot count
Head1Ink :	Head 1 ink consumption (unit: ml)
Head2Ink :	Head 2 ink consumption (unit: ml)
T.Head1Ink :	Head 1 ink total consumption (unit: ml)
T.Head2Ink :	Head 2 ink total consumption (unit: ml)
Pump1 :	Pump 1 suction time (unit: second)
Pump2 :	Pump 2 suction time (unit: second)
T.Pump1 :	Pump 1 total suction time (unit: second)
T.Pump2 :	Pump 2 total suction time (unit: second)
PumpR1 :	Pump motor R1 drive time (unit: second)
PumpR2 :	Pump motor R2 drive time (unit: second)
T.PumpR1 :	Pump motor R1 total drive time (unit: second)
T.PumpR2 :	Pump motor R2 total drive time (unit: second)
CPump1 :	Circulation pump motor 1 drive time (unit: second)
CPump2 :	Circulation pump motor 2 drive time (unit: second)
CPump3 :	Circulation pump motor 3 drive time (unit: second)

Item	Content
T.CPump1 :	Circulation pump motor 1 total drive time (unit: second)
T.CPump2 :	Circulation pump motor 2 total drive time (unit: second)
T.CPump3 :	Circulation pump motor 3 total drive time (unit: second)
UV Lamp L :	UV lamp L lighting time (unit: second)
UV Lamp R :	UV lamp R lighting time (unit: second)
T.UV Lamp L :	UV lamp L total lighting time (unit: second)
T.UV Lamp R :	UV lamp R total lighting time (unit: second)
Dust Cover :	Moving distance of dust cover (unit: mm)
Wiping1 :	Head 1 wiping count
Wiping2 :	Head 2 wiping count
Wiper Sol.1 :	Wiper solenoid 1 drive count
Wiper Sol.2 :	Wiper solenoid 2 drive count
Lock Sole. :	Lock solenoid Down count
UnlockPos. :	CR lock release position set value
Head1 Wiped :	=> 5.5.8.1.2. Head wiped count
Head2 Wiped :	=> 5.5.8.1.2. Head wiped count
DailyMaint. :	Daily maintenance count
Maint.50 :	Daily maintenance interval time (0~50 hours)
Maint.100 :	Daily maintenance interval time (50~100 hours)
Maint.200 :	Daily maintenance interval time (100~200 hours)
Maint.500 :	Daily maintenance interval time (200~500 hours)
Maint.etc :	Daily maintenance interval time (500 hours ~)

NOTE

*1:
One cycle of CR motor usage is counted when CR makes one way movement from origin side to non origin side or from non origin side to origin side.
*2:
The cleaning history includes all the cleaning mo des, initial charge and little charge.
*3:
Unadjusted value: X.XXXmm
Values except for unadjusted value: 99.999mm to -99.999mm

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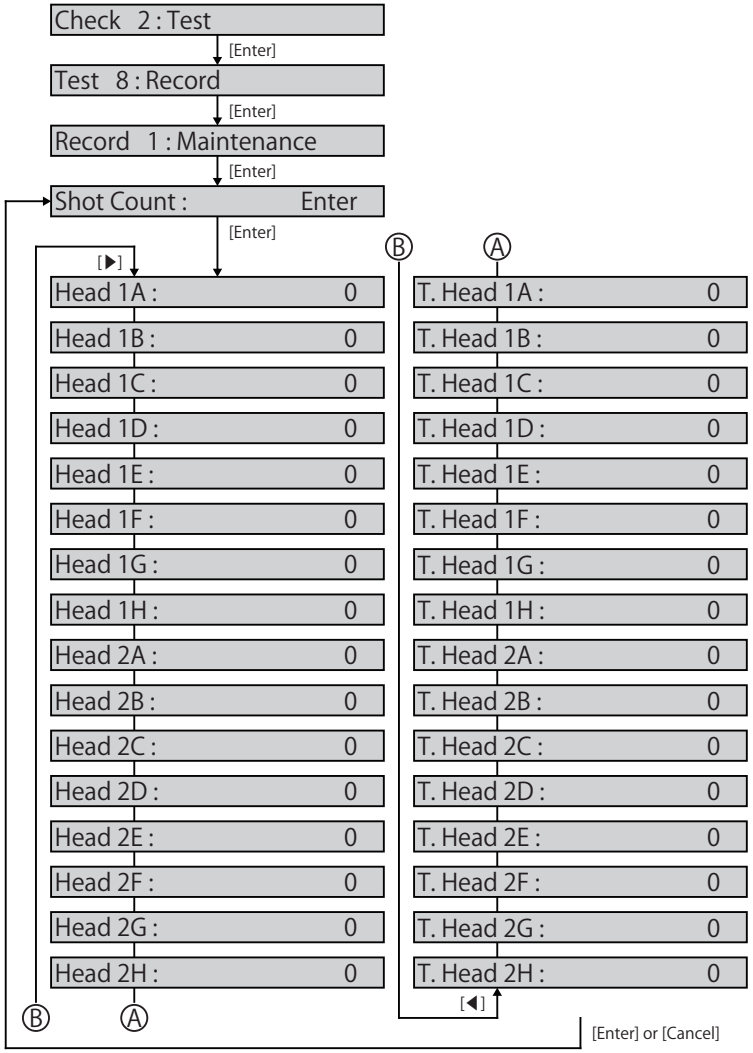
TIP

index=> 5. Self-diagnosis

5.5.8.1.1. Shot count

● Operation panel



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● Explanation

In this menu, display number of discharged heads.
Each item is as follows.

Item	Content
Head1x :	Average number of ink discharges in x rows of head 1 *1
Head2x :	Average number of ink discharges in x rows of head 2 *1
T.Head1x :	Average number of ink discharges in x rows of head 1 (total) *1
T.Head2x :	Average number of ink discharges in x rows of head 2 (total) *1

NOTE

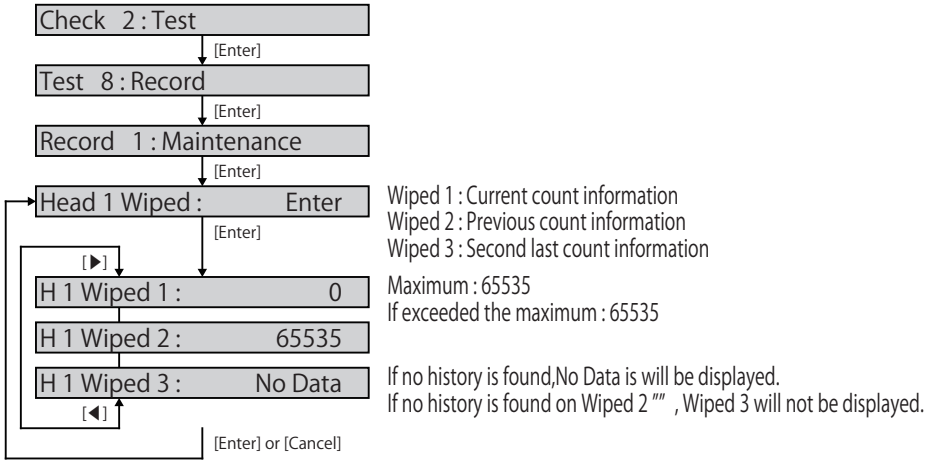
*1:
Average value per nozzle calculated by "Cumulative count"/180 (Unit: Mega dots)

TIP

index=> 5. Self-diagnosis

5.5.8.1.2. Head wiped count

● Operation panel



● Explanation

In this menu, display record of wiping count for head.
Displays up to last 2 records.

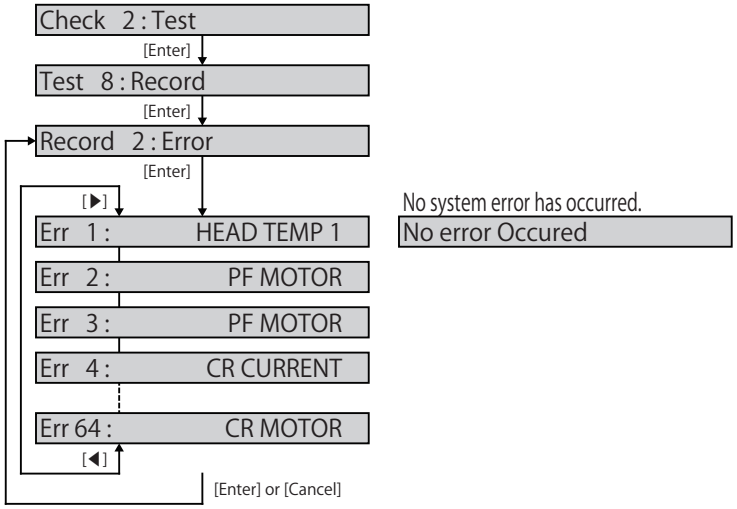
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.8.2. Error record

● Operation panel



● Explanation

In this menu, display error record.
Display up to 64 record.

NOTE

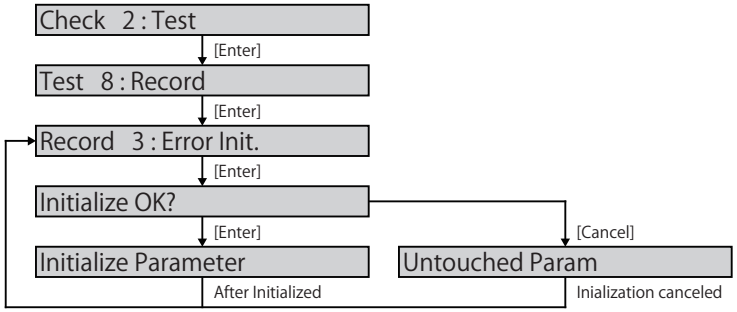
- CPU errors is not displayed.

TIP

index=> 5. Self-diagnosis

5.5.8.3. Error record initialization

● Operation panel



● Explanation

In this menu, perform to initialize error record.

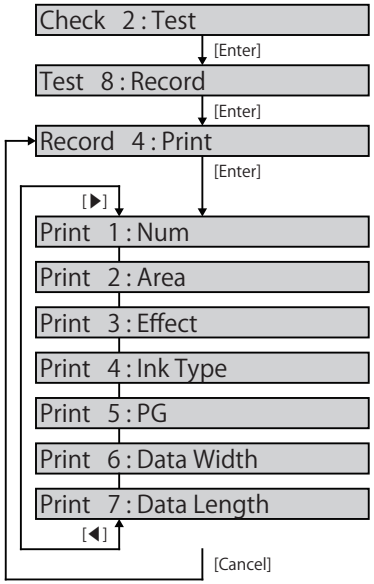
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.8.4. Print Information

● Operation panel



● Explanation

In this menu, display each printed information.
Each item is as follows.

Item	Content
Print1 : Num	=> 5.5.8.4.1. Number of Prints
Print2 : Area	=> 5.5.8.4.2. Printed area
Print3 : Effect	=> 5.5.8.4.3. Effect
Print4 : InkType	=> 5.5.8.4.4. Ink type
Print5 : PG	=> 5.5.8.4.5. PG height
Print6 : Data Width	=> 5.5.8.4.6. Data width
Print7 : Data Length	=> 5.5.8.4.7. Data length

TIP

index=> 5. Self-diagnosis

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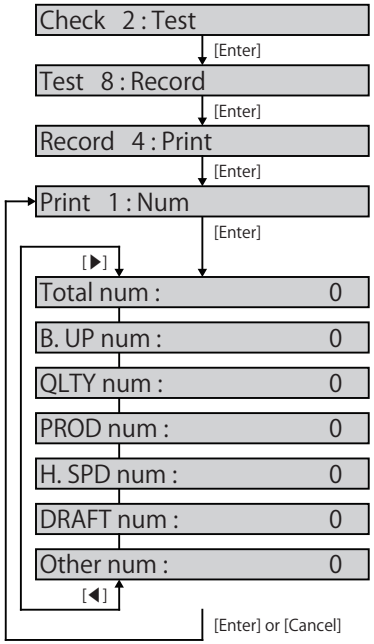
5.5.8.4.1. Number of Prints

● Operation panel



● Explanation

In this menu, display printed count for each print mode.
Each item is as follows.

Item	Content
Total num :	Number of prints in total.
B.UP num :	Number of prints in "Build Up".
QLTY num :	Number of prints in "Quality".
PROD num :	Number of prints in "Production".
H.SPD num :	Number of prints in "High Speed".
DRAFT num :	Number of prints in "Draft".
Other num :	Number of prints in other print mode.

NOTE

- All numbers are displayed in decimal notation.
- Excluding internal pattern.

TIP

index=> 5. Self-diagnosis

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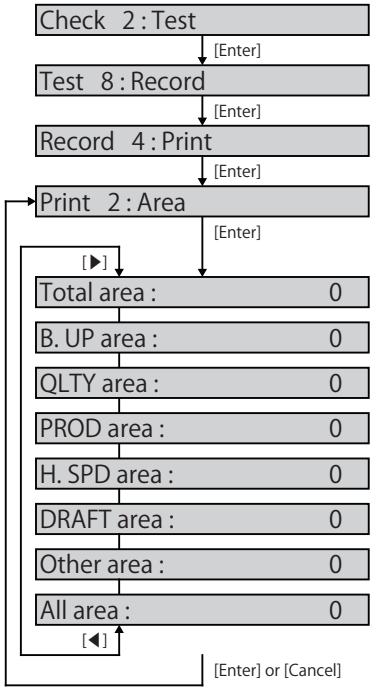
5.5.8.4.2. Printed area

● Operation panel



● Explanation

In this menu, display printed area and total printed area for each print mode.
Each item is as follows.

Item	Content
Total area :	Printed area in total.
B.UP area :	Printed area in "Build UP".
QLTY area :	Printed area in "Quality".
PROD area :	Printed area in "Production".
H.SPD area :	Printed area in "High Speed".
DRAFT area :	Printed area in "Draft".
Other area :	Printed area in other print mode.
Other area :	Total printed area in all print mode.

NOTE

- All numbers are displayed in decimal notation.(unit : m2)

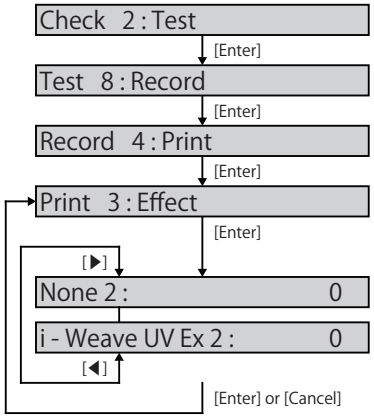
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.8.4.3. Effect

● Operation panel



● Explanation

In this menu, display printed count for each effect.
Each item is as follows.

Item	Content
None2 :	Number of prints in None2.
i-Weave UVEx2 :	Number of prints in i-Weave UVEx2.

NOTE

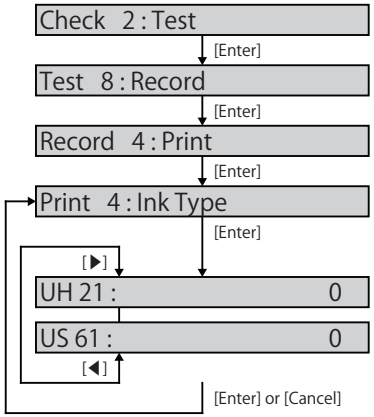
- All numbers are displayed in decimal notation.
- Excluding internal pattern.

TIP

index=> 5. Self-diagnosis

5.5.8.4.4. Ink type

● Operation panel



● Explanation

In this menu, display printed count for each ink type.
Each item is as follows.

Item	Content
UH21 :	Number of prints in UH21 ink.
US61 :	Number of prints in US61 ink.

NOTE

- All numbers are displayed in decimal notation.
- Excluding internal pattern.

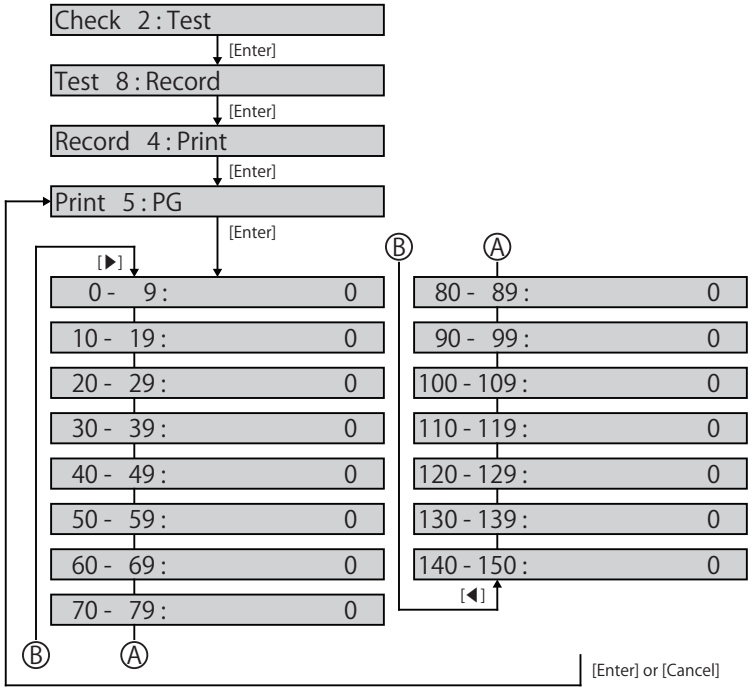
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.8.4.5. PG height

● Operation panel



● Explanation

In this menu, display printed count per each PG height.(interval : approx. 10mm)

NOTE

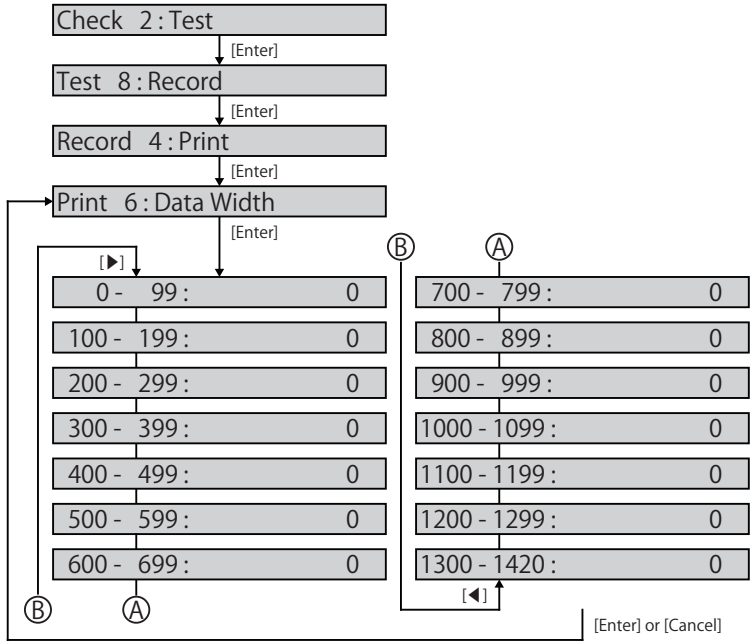
- All numbers are displayed in decimal notation.
- Excluding internal pattern.

TIP

index=> 5. Self-diagnosis

5.5.8.4.6. Data width

● Operation panel



● Explanation

In this menu, display printed count per each data width.(interval : approx. 100mm)

NOTE

- All numbers are displayed in decimal notation.
- Excluding internal pattern.

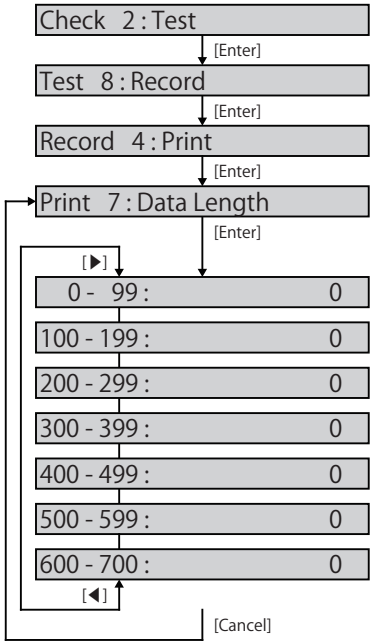
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.8.4.7. Data length

● Operation panel



● Explanation

In this menu, display printed count per each data length.(interval : approx. 100mm)

NOTE

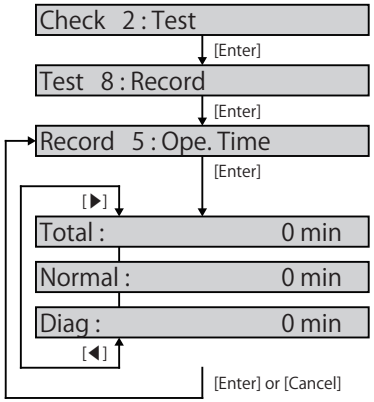
- All numbers are displayed in decimal notation.
- Excluding internal pattern.

TIP

index=> 5. Self-diagnosis

5.5.8.5. Operation time

● Operation panel



● Explanation

In this menu, display total operating times for each startup mode.
Each item is as follows.

Item	Content
Total :	Total operating times in ALL.
Normal :	Total operating times in User mode.
Diag :	Total operating times in Self-diagnosis mode.

NOTE

- All numbers are displayed in decimal notation.

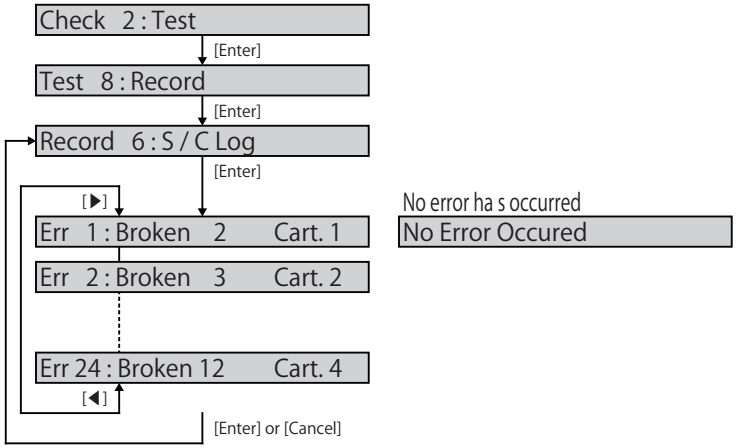
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.8.6. S/C log

● Operation panel



● Explanation

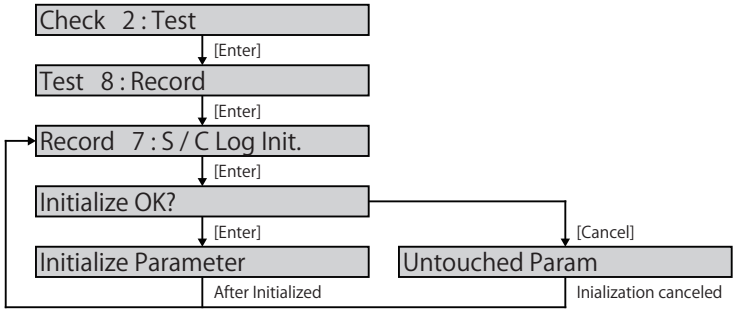
In this menu, display smart chip logs.
Display up to 24 logs.

TIP

index=> 5. Self-diagnosis

5.5.8.7. S/C log initialization

● Operation panel



● Explanation

In this menu, perform to Initialize smart chip logs.

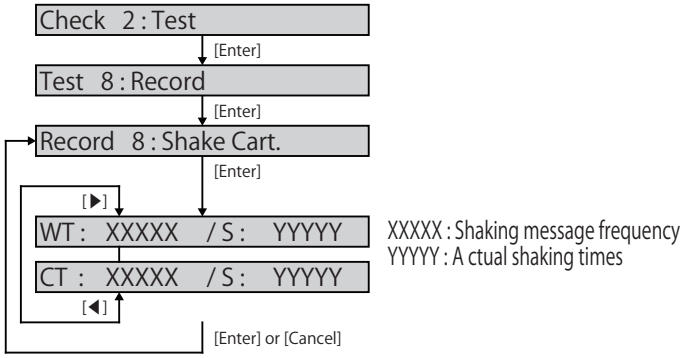
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.8.8. Ink cartridge shaking log

● Operation panel



● Explanation

In this menu, display ink cartridge shaking logs.
Each item is as follows.

Item	Content
W T:XXXX/S:YYYY	White ink cartridge shaking log
C T:XXXX/S:YYYY	Color ink cartridge shaking log

NOTE

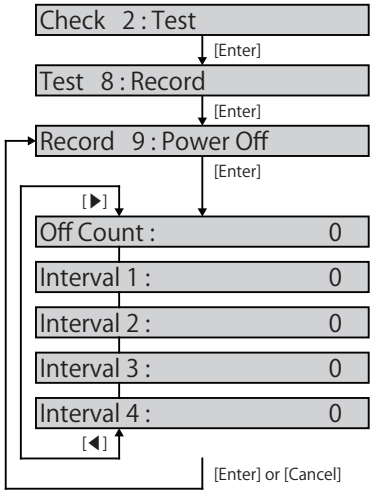
- All numbers are displayed in decimal notation.

TIP

index=> 5. Self-diagnosis

5.5.8.9. Power off record

● Operation panel



● Explanation

In this menu, display power off logs.
Each item is as follows.

Item	Content
Off Count :	Power OFF/ON count
Interval1 :	Power OFF/ON time interval (0 to less than 5 minutes).
Interval2 :	Power OFF/ON time interval (5 minutes to less than 1 hours).
Interval3 :	Power OFF/ON time interval (1 hours to less than 24 hours).
Interval4 :	Power OFF/ON time interval (more than 24 hours).

NOTE

- All numbers are displayed in decimal notation.

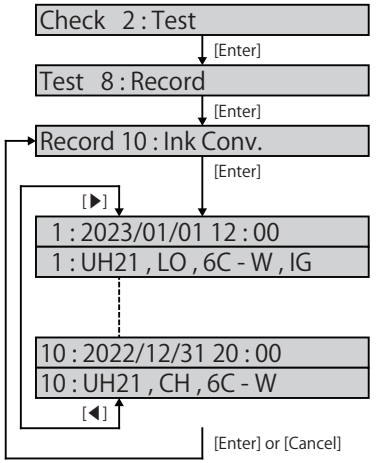
CONFIDENTIAL

TIP

index=> 5. Self-diagnosis

5.5.8.10. Ink conversion log

● Operation panel



The most recent log up to 10 log will be displayed .
If no record is stored, the message "No Data" will appear.

● Explanation

In this menu, display ink conversion logs.
Display up to 10 logs.
Each item is as follows.

Item	Content
Date and time	Date and time of head cleaning or ink filling
Ink type	"""UH21"" = UH21 ink ""US61"" = US61 ink ""---"" = Non-MUTOH ink"
Operation	"""CH"" = Ink charge ""LO"" = Longstore"
Ink color	"6C" = 6 colors
White ink	"""-W"" = White ink ""_"" = Color ink"

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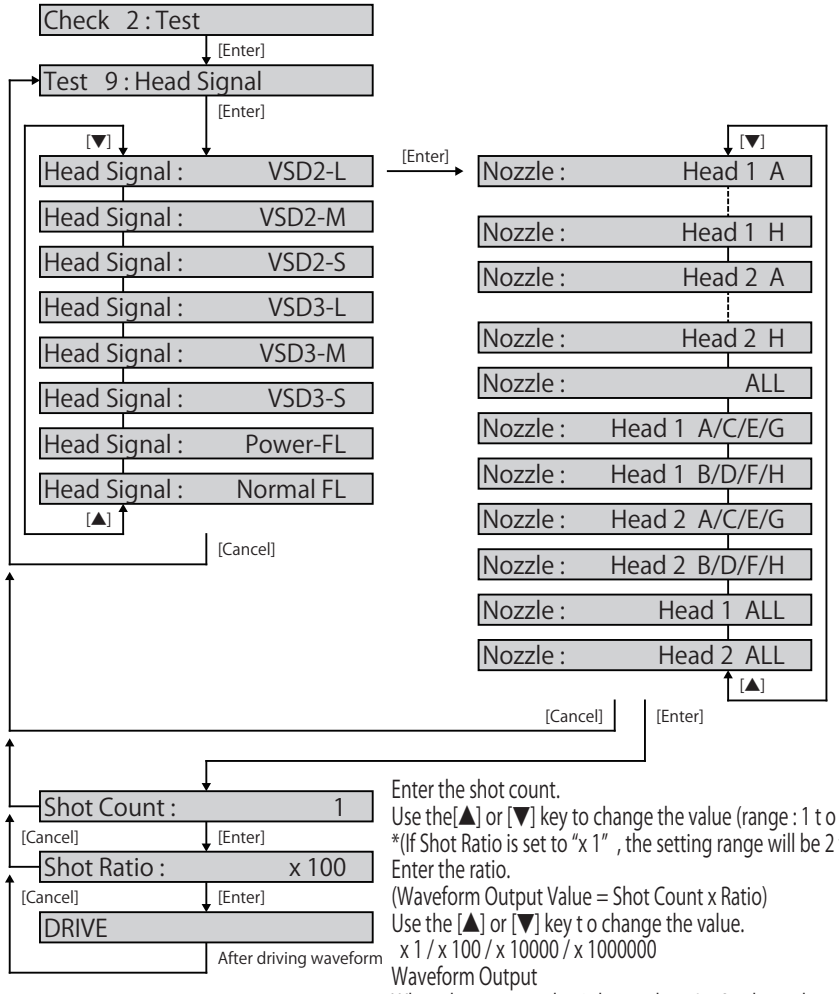
Item	Content
Ignore	"""_"" = S/C card ""IG"" = Ignore"

TIP

index=> 5. Self-diagnosis

5.5.9. Head signal

● Operation panel



Enter the shot count.
Use the[▲] or [▼] key to change the value (range : 1 t o 655).
*(If Shot Ratio is set to "x 1" , the setting range will be 2 to 655).
Enter the ratio.
(Waveform Output Value = Shot Count x Ratio)
Use the [▲] or [▼] key t o change the value.
x 1 / x 100 / x 10000 / x 1000000
Waveform Output
When the output value is larger than 65535 shots, the unit of waveform output will be 65535 shots.(Temperature correction is per formed based on the unit of waveform output)
* The Cancel key is disabled during the output of head waveform.

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● Explanation

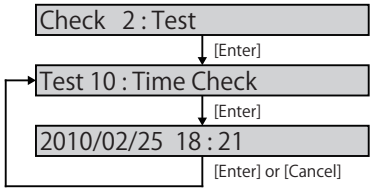
In this menu, perform to check head driving waveforms.

TIP

index=> 5. Self-diagnosis

5.5.10. Time check

● Operation panel



● Explanation

In this menu, display setting time.

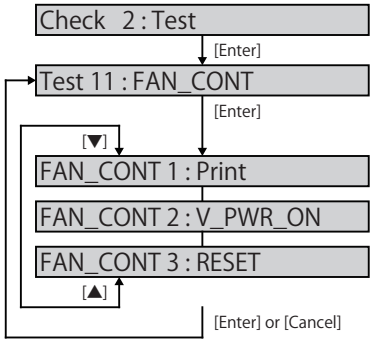
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.5.11. FAN_CONT

● Operation panel



● Explanation

In this menu, perform to check communication status with vacuum fan control board.
Each item is as follows.

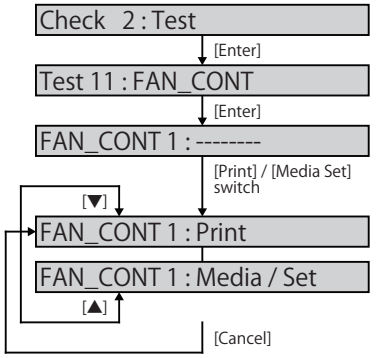
Item	Content
FAN_CONT 1 : Print	=> 5.5.11.1. Print
FAN_CONT 2 : V_PWR_ON	=> 5.5.11.2. V_PWR_ON
FAN_CONT 3 : RESET	=> 5.5.11.3. RESET

TIP

index=> 5. Self-diagnosis

5.5.11.1. Print

● Operation panel



*This menu appears only when the [Print]]/[Media Set] switch has never been used since the printer start - up.

The display switches between [Print] and [Media Set] according to the [Print]]/[Media Set] status on the vacuum control panel.

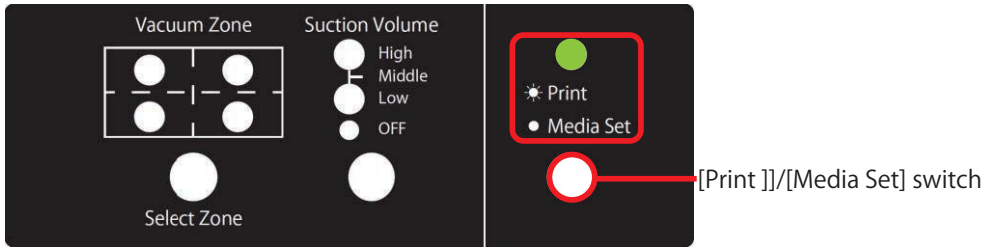
● Explanation

In this menu, perform to check [Print]/[Media Set] status of vacuum control panel.

NOTE

- Check that status of [Print]/[Media Set] LED indicator on vacuum control panel matches status displayed here.
  - [Print]/[Media Set] LED indicator ON: [Print]
  - [Print]/[Media Set] LED indicator OFF: [Media Set]

● Operation panel



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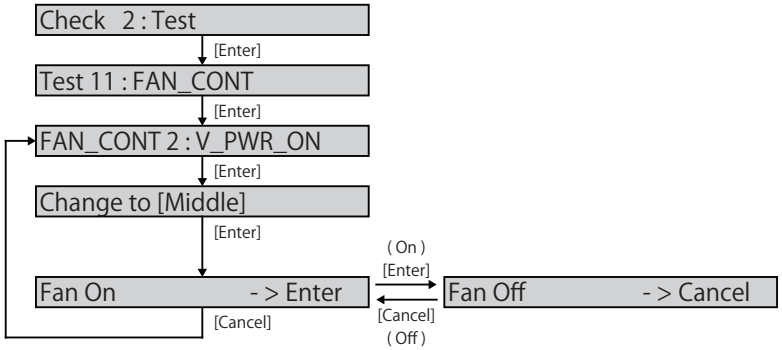
TIP

index=> 5. Self-diagnosis

5.5.11.2. V_PWR_ON

● Operation panel



● Explanation

In this menu, perform to check that vacuum fan turns on and off properly by tapping [Enter] or [Cancel] key on printer control panel.

NOTE

- On the vacuum control panel, set the Suction Volume to “Middle”.
- This test cannot be performed when set to “OFF”.

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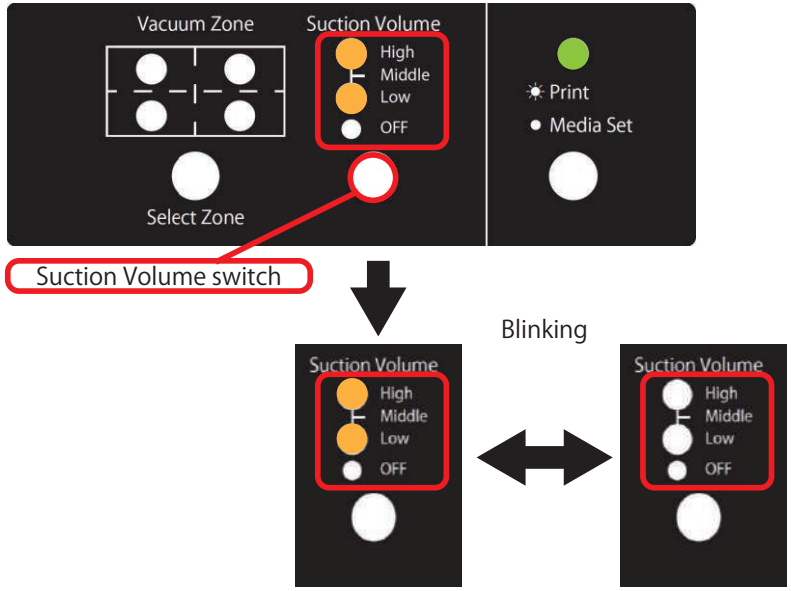
● Operation panel



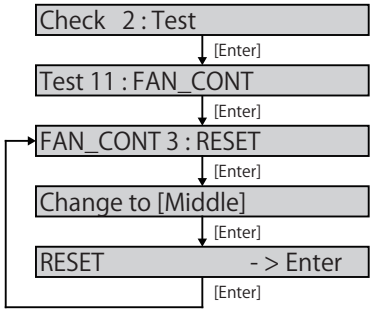
*When suction fan is turned off, "Suction Volume" LED on suction fan operation panel flashes.

TIP

index=> 5. Self-diagnosis

5.5.11.3. RESET

● Operation panel



● Explanation

In this menu, perform to check that vacuum fan turns off by tapping [Enter] key on printer control panel.

NOTE

- On the vacuum control panel, set the Suction Volume to “Middle”.
- This test cannot be performed when set to “OFF”.

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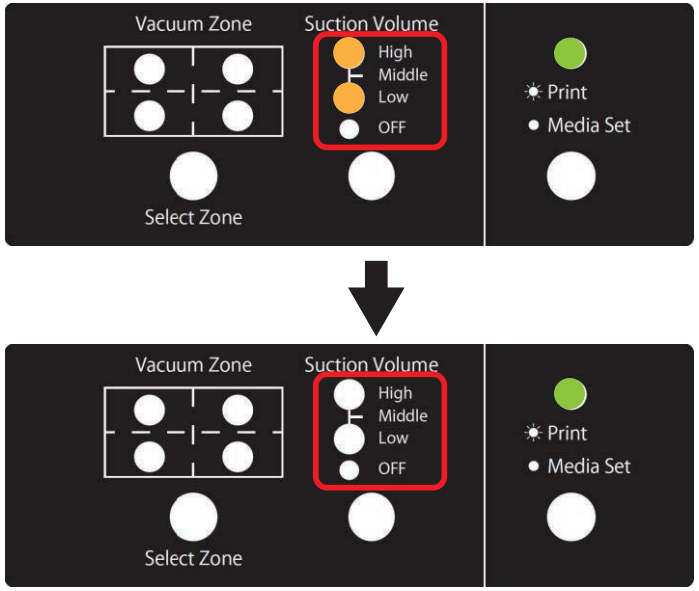
● Operation panel



*Tapping Enter key on message "RESET -> Enter" will turn off Suction Volume LED and stop vacuum fan.

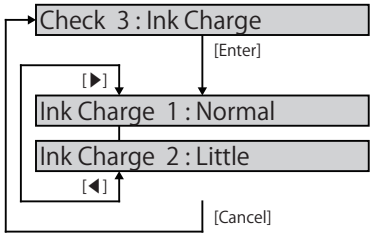
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.6. Ink charge

● Operation panel



● Explanation

In this menu, perform ink filling.
Each item is as follows.

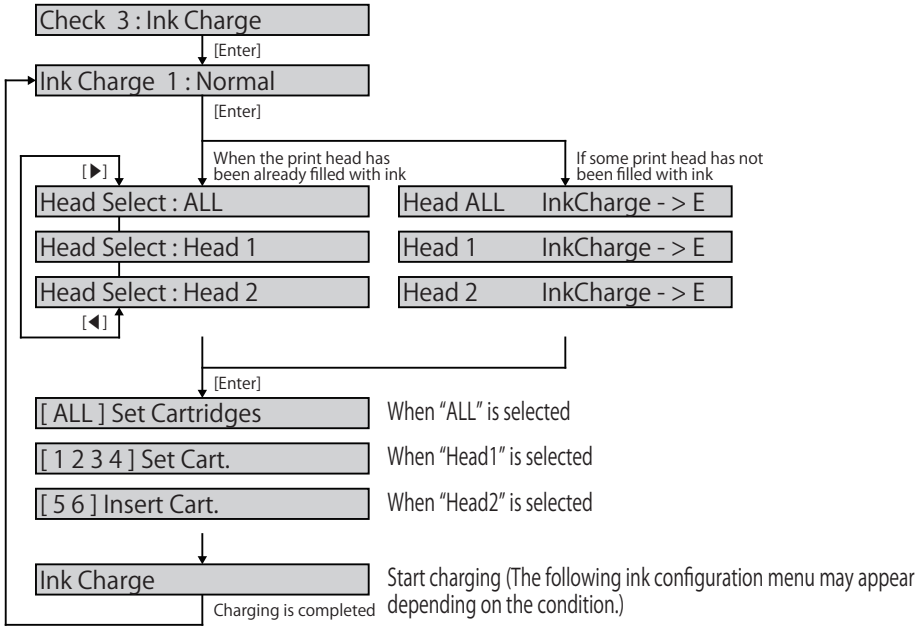
Item	Content
Initial Charge	Execute initial ink charging.
Little Charge	Execute a small amount of ink charging.

TIP

index=> 5. Self-diagnosis

5.6.1. Initial charge

● Operation panel



● Explanation

In this menu, perform initial filling.

TIP

index=> 5. Self-diagnosis

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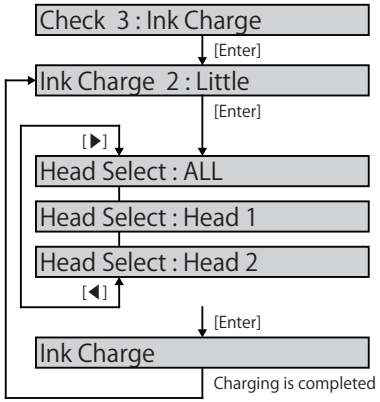
5.6.2. Little charge

● Operation panel



● Explanation

In this menu, perform little charge.

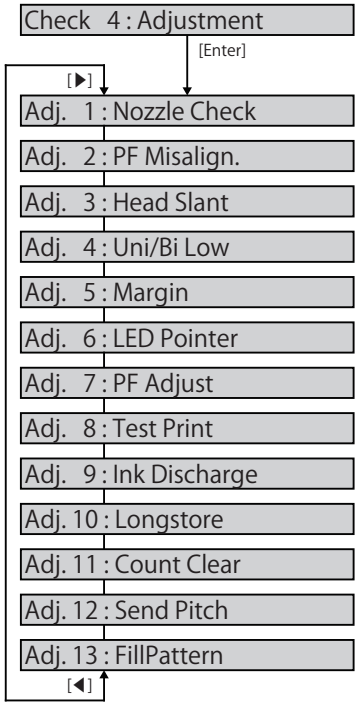
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7. Adjustment

● Operation panel



● Explanation

In this menu, perform to adjust head.
Each item is as follows.

Item	Content
Adj.1 : NozzleChk	=> 5.7.1. Head nozzle check
Adj.2 : PF Misalignment	=> 5.7.2. PF misalignment Check
Adj.3 : HeadSlant	=> 5.7.3. Head Slant Check
Adj.4 : Uni/Bi Low	=> 5.7.4. UniD/BiD adjustment Low
Adj.5 : Margin	=> 5.7.5. Margin adjustment
Adj.6 : LED Pointer	=> 5.7.6. LED pointer adjustment
Adj.7 : PF Adjust	=> 5.7.7. PF adjustment
Adj.8 : Test Print	=> 5.7.8. Test printing
Adj.9 : Ink Discharge	=> 5.7.9. Ink discharge
Adj.10 : Longstore	=> 5.7.10. Longstore
Adj.11 : CounterClear	=> 5.7.11. Counter clear
Adj.12 : SendPitch	=> 5.7.12. Send pitch check
Adj.13 : FillPattern	=> 5.7.13. Fill pattern check

TIP

index=> 5. Self-diagnosis

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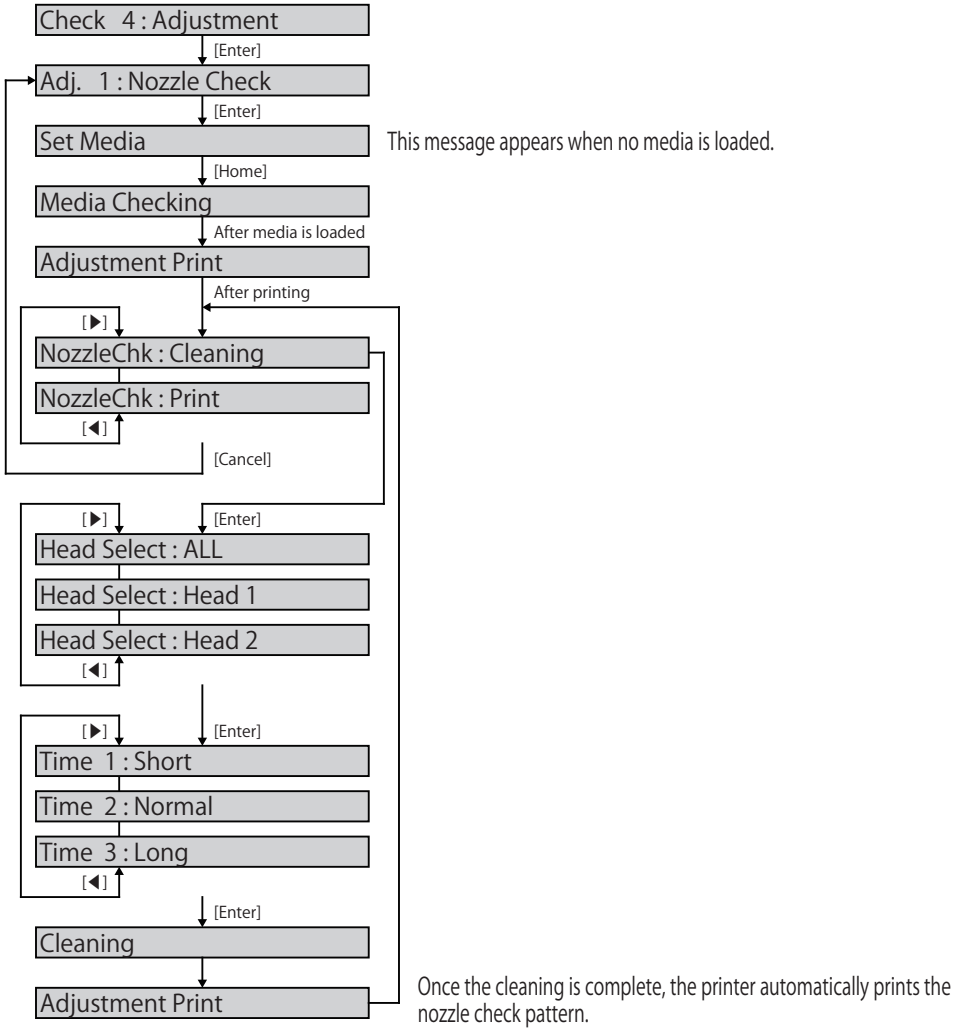
5.7.1. Head nozzle check

● Operation panel



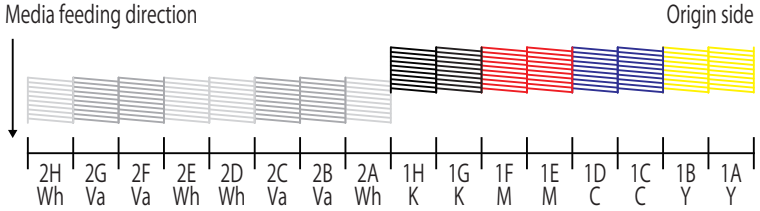
● Explanation

In this menu, perform to check nozzle condition with nozzle check pattern.

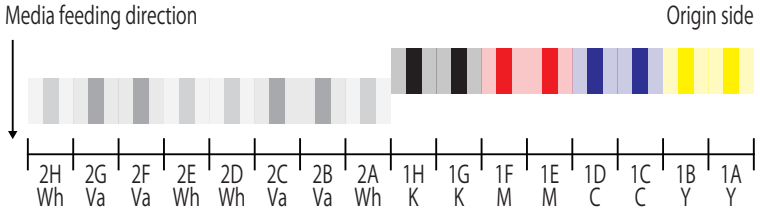
● Print pattern

- Check item:
  Check nozzle condition (missing, partially missing, misaligned, satellite)
- Print mode:
  1 pass, Uni-direction, CR : 360dpi, PF : 360dpi, 400cps, VSD3, Large dot

- Nozzle check pattern
  Prints from media origin side in order of Head 1-A nozzle to Head 2-H nozzle.



- Vertical check pattern
  Prints from media origin side in order of Head 1-A nozzle to Head 2-H nozzle.



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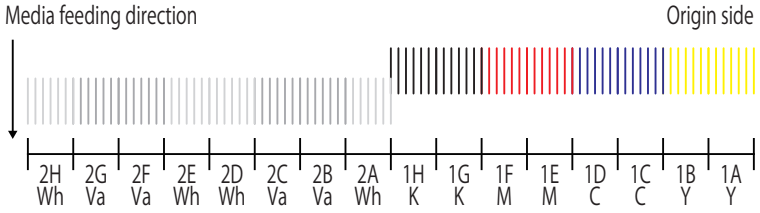
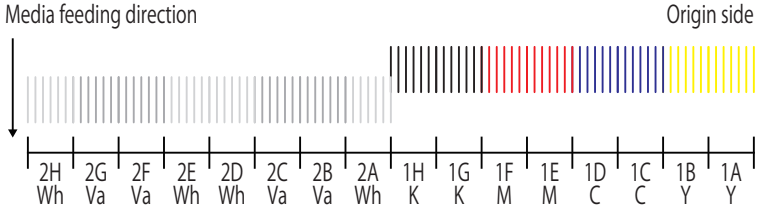
- Horizontal check pattern (CW)
  Prints from media origin side in order of Head 1-A nozzle to Head 2-H nozzle.



- Horizontal check pattern (CCW)
  Prints from media counter origin side in order of Head 2-H nozzle to Head 1-A nozzle.

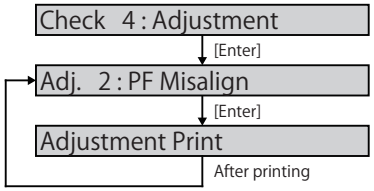


TIP

index=> 5. Self-diagnosis

5.7.2. PF misalignment Check

● Operation panel

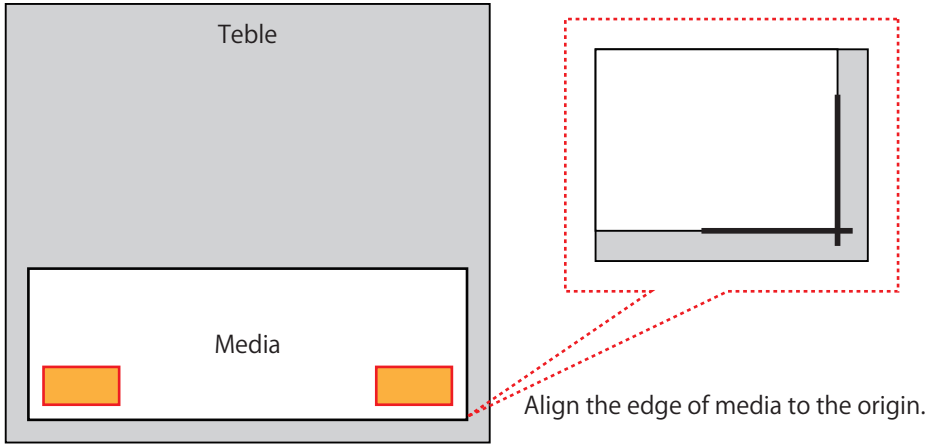


● Explanation

In this menu, perform to check printed pattern to see if PF drive unit is assembled correctly.

● Positions of media placement and adjustment pattern printing

This adjus tment requires at 1420 mm wide media because the adjustment patterns must be printed on the both ends of media as close to the ends of the table as possible.



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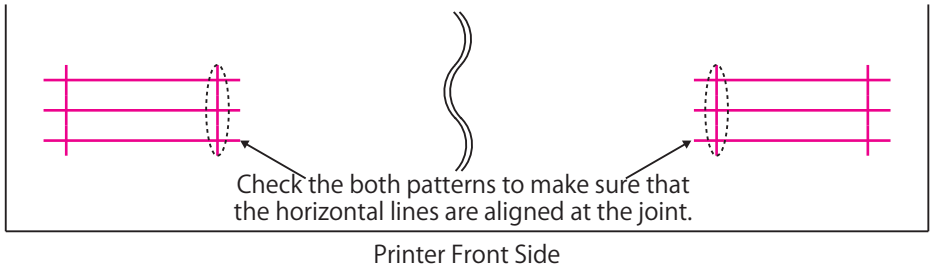
● Print pattern

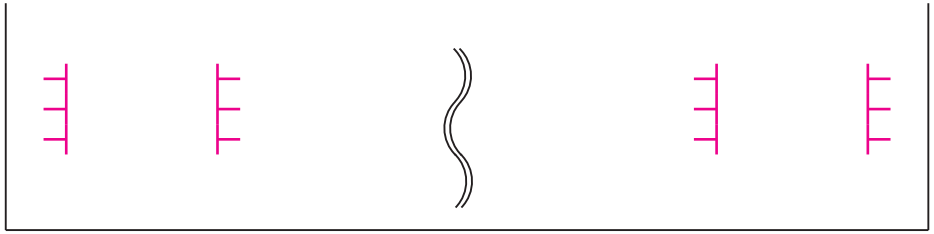
- Check item:
  Checking print pattern misalignment
- Print mode:
  2 pass, Uni-direction, CR : 360dpi, PF : 320dpi, VSD3, Large dot



● Print pattern details

(1) Gantry moves 5.00 mm to the back of the printer.

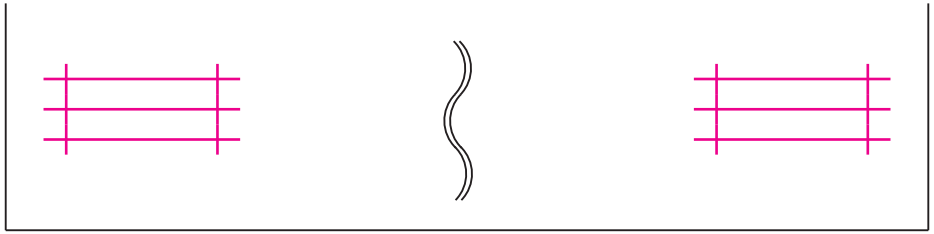
(2) Printer prints the 1 st pass.



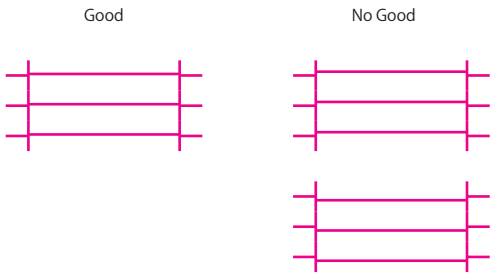
(3) Gantry moves 5.00 mm to the back of the printer.

(4) Gantry moves 5.00 mm to the front of the printer.

(5) Printer prints the 2 nd pass.



Check that the horizontal line of both patterns are aligned like the “Good” example below.



TIP

index=> 5. Self-diagnosis

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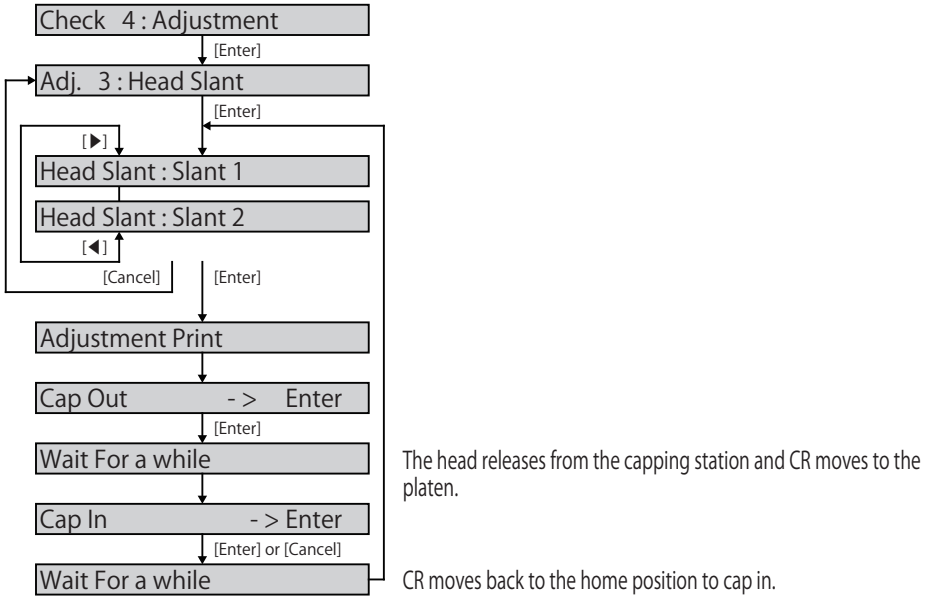
5.7.3. Head Slant Check

● Operation panel

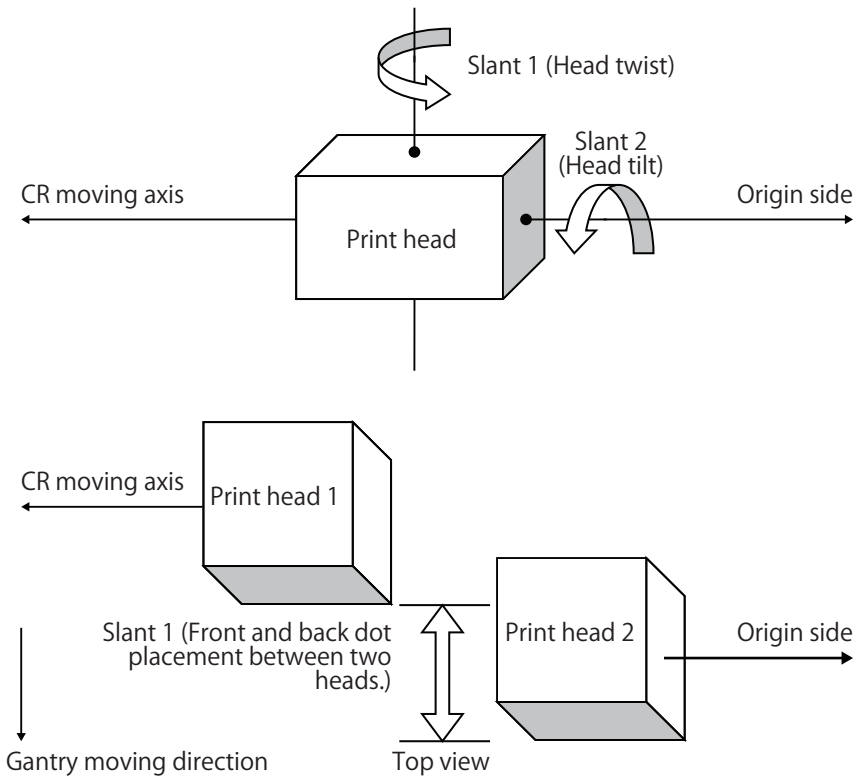


● Explanation

In this menu, perform to check nozzle condition with nozzle check pattern.
Each item is as follows.

Item	Content
Head Slant Check 1 : Head Slant 1	=> 5.7.3.1. Head Slant 1
Head Slant Check 2 : Head Slant 2	=> 5.7.3.2. Head Slant 2

● Head slant check directions



Item	Content
Slant1	Head slant check (check head twist, front and back dot placement between two heads)
Slant2	Head slant check (check hea d tilt)

TIP

index=> 5. Self-diagnosis

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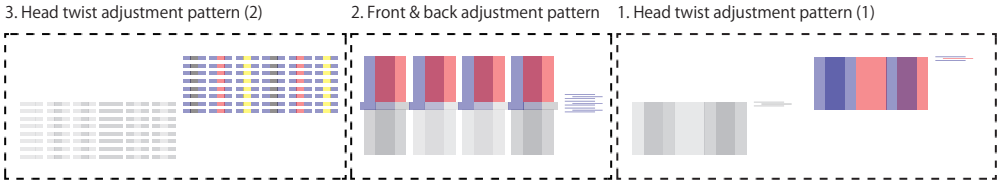
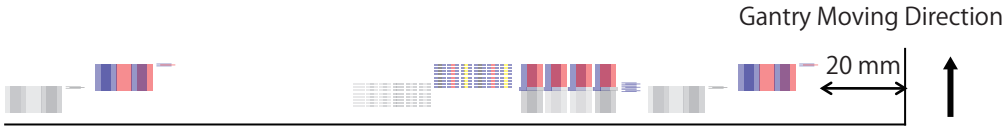
5.7.3.1. Head Slant 1

Items to check :
Head Slant 1(head twist, front and back dot placement position between two heads)
Print Mode :
2 pass, Uni-D CR 360dpi, PF 360dpi 400cps, VSD3, Small

● Head slant 1 adjustment pattern

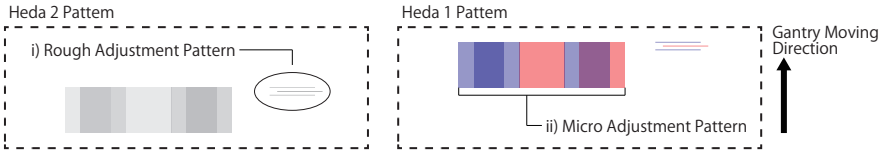


● How each pattern is printed on the media



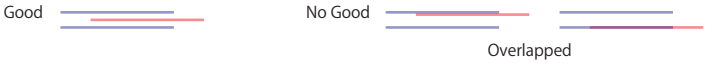
1. Head Twist Adjustment Pattern on Head Slant 1

Calibrates the print head twist.
First, use the rough adjustment pattern to roughly correct the head twist. Then use the micro adjustment pattern to check and perform precise adjustment.

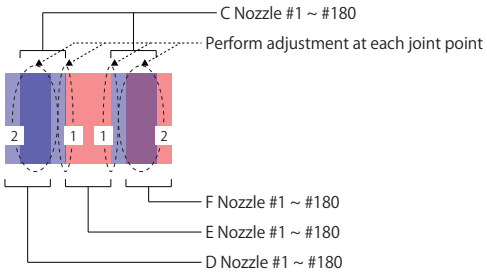


(1) Rough Adjustment Pattern

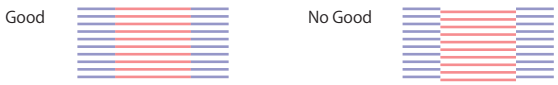
Calibrate the print head twist so that the line 1 is printed between two lines of 2 as shown in the good example.



(2) Micro Adjustment Pattern



Joint Point 1
Calibrate the head twist to align the lines of nozzle E row with the lines of both nozzle C rows.



Joint Point 2
Calibrate the head twist so that each cyan line is printed between the magenta lines at the Joint Point 2.

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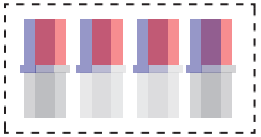
2. Front and Back Adjustment Pattern on Head Slant 1

Calibrate two print heads to correct the dot placement between two heads.
First, use the rough adjustment pattern to roughly correct the dot placement between two heads. Then use the micro adjustment pattern to check and perform precise adjustment.

ii) Micro Adjustment Pattern

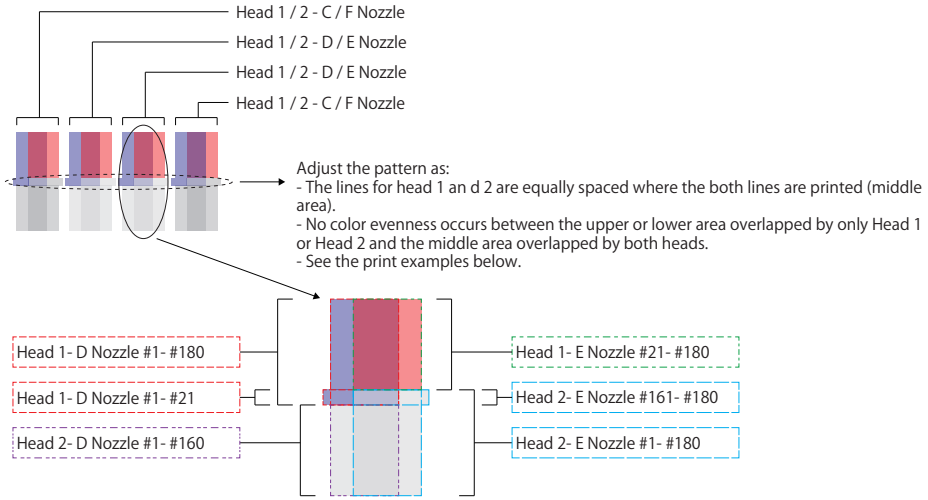


i) Rough Adjustment Pattern

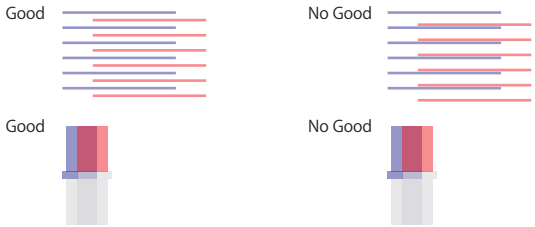
(1) Rough Adjustment Pattern

Calibrate the print head twist so that the line 1 is printed between two lines of 2 as shown in the good example.

(2) Micro Adjustment Pattern



Example) Adjustment Patterns for Head 1 - D/E Nozzles and Head 2 - D/E Nozzles
Second pattern from right)



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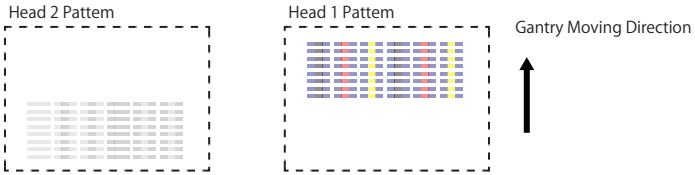
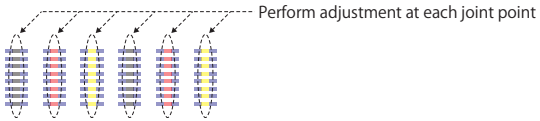
3. Adjustment Pattern in horizontal direction

Perform adjustments on each head in horizontal direction.
This is the auxiliary pattern for 1.Slant Adjust Pattern.



Adjustment Method



The pattern is printed in the CW direction from the media origin side in the combination of nozzle C and A, C and E, C and G, D and B, D and F, D and H.

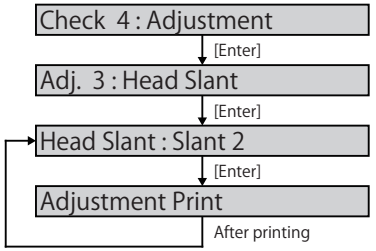
Joint Point
Perform this adjustment to align the print line of C (D) nozzle, at both edges, with the print line of A/E/G (B/F/H) nozzle, at center, respectively.

TIP

index=> 5. Self-diagnosis

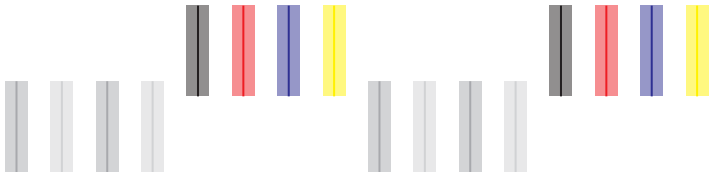
5.7.3.2. Head Slant 2

● Operation panel



Items to check :
Head Slant 2 (Head tilt)
Print Mode 1 pass, Bi-D CR 360dpi, PF 360dpi 400cps, VSD3, Large

Head Slant 2 Pattern



How each pattern is printed on the media

Once the pattern is printed, the display goes to “Head Slant: Slant 2”.

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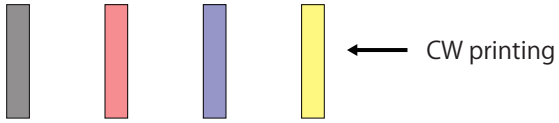
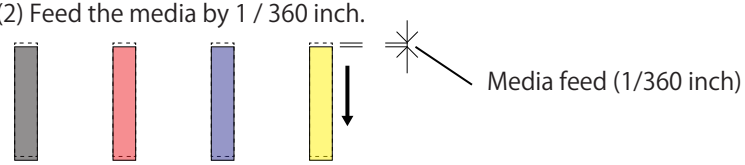
Details of head tilt adjustment pattern

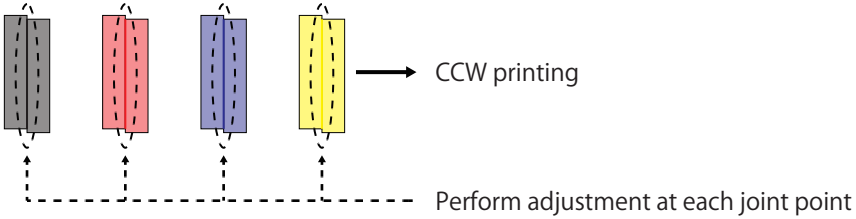
(1) Print the block pattern with the nozzles A / C / E / G rows of each head in the CW direction.



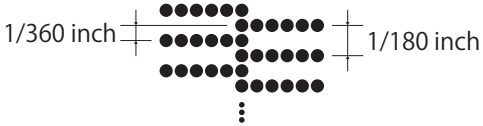
(2) Feed the media by 1 / 360 inch.



(3) Print the block pattern with the nozzles A / C / E / G row of each head in the CCW direction to overlap the one dot each on the block pattern printed in the step (1).

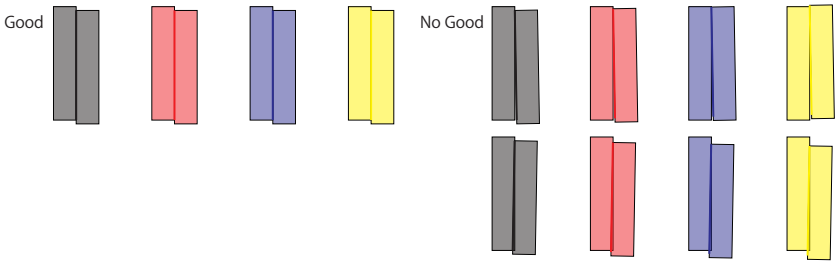


Enlarged view of Joint Point (A row block)



Adjustment Method

Calibrate the head tilt to align the joint point of two blocks



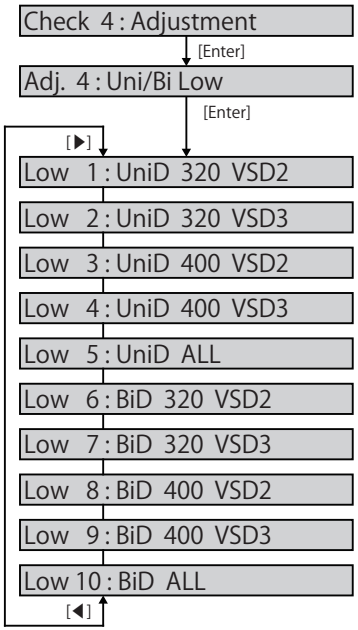
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4. UniD/BiD adjustment Low

● Operation panel



● Explanation

In the CW printing, adjust the misalignment for the base nozzle row in Head 2, compared to Head 1, and then adjust the misalignment in each nozzle row for each head height. After CW printing is performed, check the result and enter the value to adjust the misalignment in each nozzle row.
For the BiD adjustment, after CW/CCW printing is performed, check the result and enter the value to adjust the misalignment between the CW and CCW position.
In addition, adjust the misalignment in each nozzle row for CCW printing. After CCW printing is performed, check the result and enter the value to adjust the misalignment in each nozzle row.
Due to the characteristics of head, only one value to adjust misalignment for the base nozzle row in Head 2 compared to Head 1 can be entered.
Each item is as follows

Item	Content
UniD/BiD, Low Adjustment 1 : Adjust / UniD / UniD ALL	=> 5.7.4.1. UniD / UniD ALL
UniD/BiD, Low Adjustment 2 : Adjust / BiD / BiD ALL	=> 5.7.4.2. BiD / BiD ALL
UniD/BiD, Low Adjustment 3 : TypeB print pattern for Uni/ Bi adjustment pattern	=> 5.7.4.3. TypeB print pattern for Uni/ Bi adjustment pattern

Item	Content
UniD 320 VSD 2	Uni-D Adjustment for 320cps, VSD2
UniD 320 VSD 3	Uni-D Adjustment for 320cps, VSD3
UniD 400 VSD 2	Uni-D Adjustment for 400cps, VSD2
UniD 400 VSD 3	Uni-D Adjustment for 400cps, VSD3
UniD ALL	Batch Adjustment of all Uni-D items
BiD 320 VSD 2	Bi-D Adjustment for 320cps, VSD2
BiD 320 VSD 3	Bi-D Adjustment for 320cps, VSD3
BiD 400 VSD 2	Bi-D Adjustment for 400cps, VSD2
BiD 400 VSD 3	Bi-D Adjustment for 400cps, VSD3
BiD ALL	Batch Adjustment of all Bi-D items

Item	Second Item	Third Item	Details
UinD	H_Adjust 1	Setup	Enter the print gap between the base nozzle rows of head 1 and head 2. Adjustment Value Input Unit : 2880dpi
		Print	Print the adjustment pattern with current adjustment value, and check the gap between the base nozzle rows of head 1 and head 2.
	H_Adjust 2	Setup	Enter the adjustment value for the print gap between base nozzle row and other nozzle row in the same head. Adjustment Value Input Unit : 720dpi
		Print	Print the adjustment pattern with current adjustment value, and check the gap between the base nozzle row and other nozzle row in the same head.

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Item	Second Item	Third Item	Details
UinD ALL	H_Adjust 1	Setup	Enter the adjustment value for the print gap between the base nozzle rows of head 1 and head 2. (Enter the value for all adjustment items) Adjustment Value Input Unit : 2880dpi
		Print	Print all items of UniD H_Adjust 1 with current parameter, and check the amount of current gap.
	H_Adjust 2	Print	Print all items of UniD H_Adjust 2 with current parameter, and check the amount of current gap.
BiD	-	Setup	Enter the amount of print gap between the shuttles of base nozzle row for each head. Adjustment Value Input Unit : 2880dpi
		Print 1	Print the patterns with current parameter and ± 2, ± 4, ± 6 and ± 8 to the current parameter (print 1 vertical line with each parameter), and check the amount of gap.
		Print 2	Perform the print with current parameter, and check the amount of gap.
BiD ALL	-	Setup	Enter the amount of print gap between the shuttles of base nozzle row for each head. (Enter the value for all B iD items) Adjustment Value Input Unit : 2880dpi
		Print 3	Print all items of BiD with current parameter, and check the amount of current gap.

Print the all items above in order with the combination of 3 waveforms (VSD2 / VSD3 / VSD4) and 2 types of print speed (320cps / 400cps).

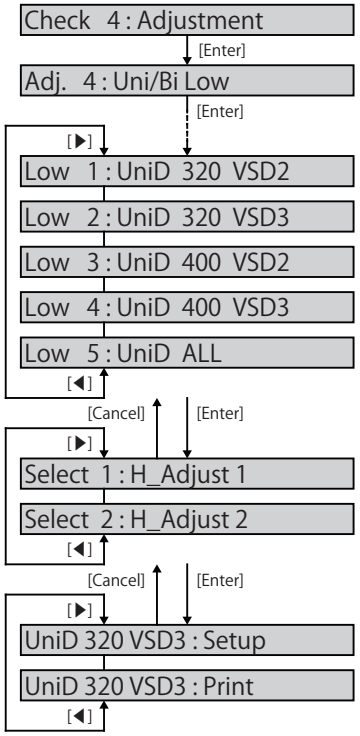
The base nozzle row for adjustment: E row for Head 1/2

TIP

index=> 5. Self-diagnosis

5.7.4.1. UniD / UniD ALL

● Operation panel



● Explanation

The panel operation to select the UniD item is shown below.
(For UniD 320 VSD3)
Each item is as follows

Item	Content
Adjust. Unid/UniD/ALL 1 : Adjust / UniD	=> 5.7.4.1.1. UniD
Adjust. Unid/UniD/ALL 2 : Adjust / UniD ALL	=> 5.7.4.1.2. UniD ALL

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TIP

index=> 5. Self-diagnosis

5.7.4.1.1. UniD

Each item is as follows

Item	Content
Adjust. Unid 1 : H_Adjust 1	=> 5.7.4.1.1.1. H_Adjust 1
Adjust. Unid 2 : H_Adjust 2	=> 5.7.4.1.1.2. H_Adjust 2

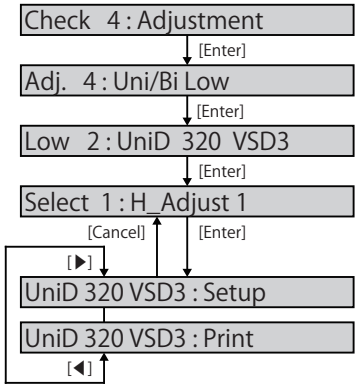
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.1.1.1. H_Adjust 1

● Operation panel



● Explanation

The panel operation to select the H_Adjust 1 item is shown below.
(For UniD 320 VSD3)
Each item is as follows

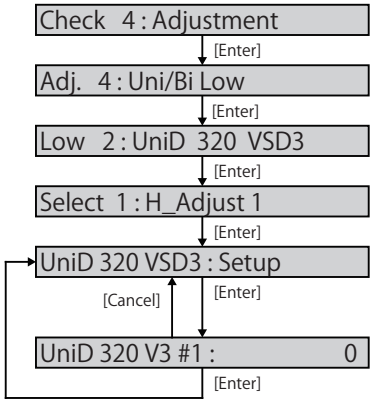
Item	Content
H_Adjust 1_1 : Setup	=> 5.7.4.1.1.1.1. Setup
H_Adjust 1_2 : Print	=> 5.7.4.1.1.1.2. Print

TIP

index=> 5. Self-diagnosis

5.7.4.1.1.1.1. Setup

● Operation panel



Use the [▲] or [▼] key to change the adjustment value.
Range : -400 to 400
Unit : 2880 dpi
(1/2880 inch = approx 8.8 μm)

● Explanation

The panel operation to select the Setup item is shown below.
(For UniD 320 VSD3)

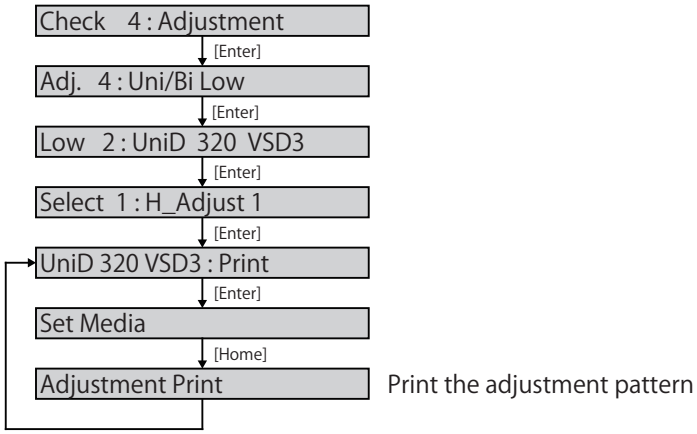
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.1.1.1.2. Print

● Operation panel

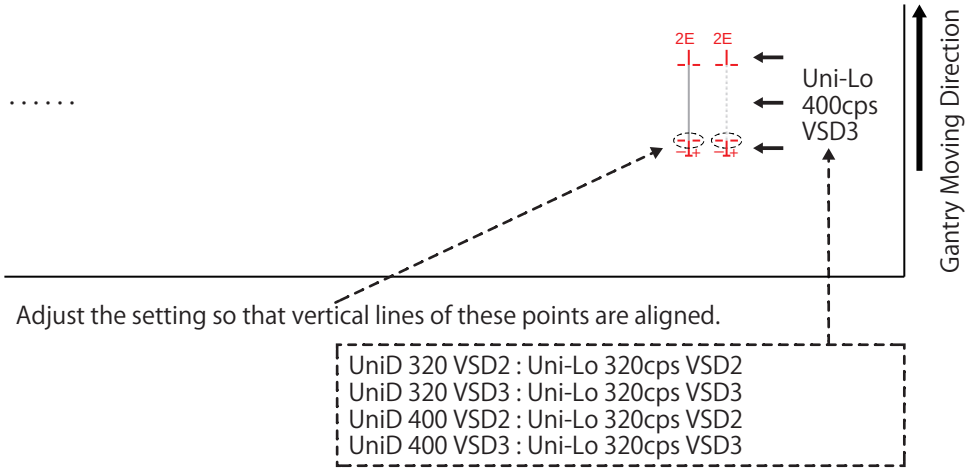


● Explanation

The panel operation to select the Print item is shown below.
The shifting of panel display to select the following menu is common to the UniD, BiD and CCW adjustment.

- UniD / H_Adjust 1 / Print
- UniD / H_Adjust 2 / Print
- UniD ALL / H_Adjust 1 / Print
- UniD ALL / H_Adjust 2 / Print
- BiD / Print 1
- BiD / Print 2
- BiD ALL / Print 3

● Adjustment Pattern
(For H_Adjust 1 UniD 400 VSD3)
- Item to adjust :
  Dot placement position of base nozzle row between two heads (CW Direction)
- Print Mode :
  Uni-D Print, Selected Print speed and waveform, Medium Dot



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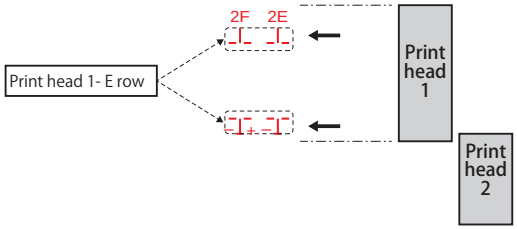
● Details of Printing Method

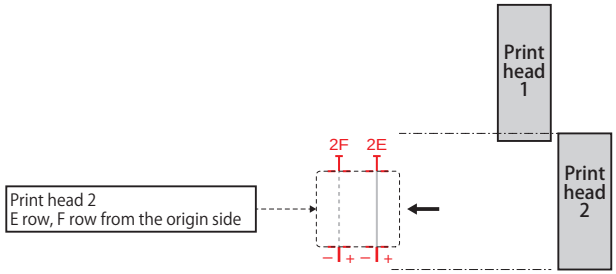
(1) Print : 1st pass



* The figure below shows how the two heads print the pattern.
Print direction ←

(2) Gantry moves 22.578 mm backward

(3) Print : 2st pass



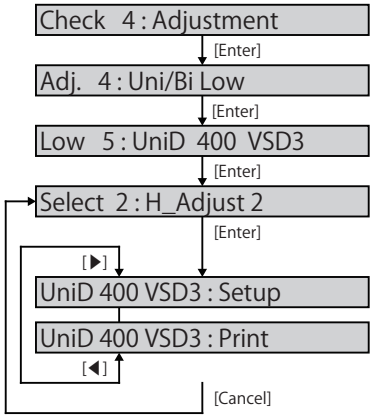
* The figure below shows how the two heads print the pattern.
Print direction ←

TIP

index=> 5. Self-diagnosis

5.7.4.1.1.2. H_Adjust 2

● Operation panel



● Explanation

The panel operation to select the H_Adjust 2 item is shown below.
(For UniD 400 VSD3)
Each item is as follows

Item	Content
H_Adjust 2_1 : Setup	=> 5.7.4.1.1.2.1. Setup
H_Adjust 2_2 : Print	=> 5.7.4.1.1.2.2. Print

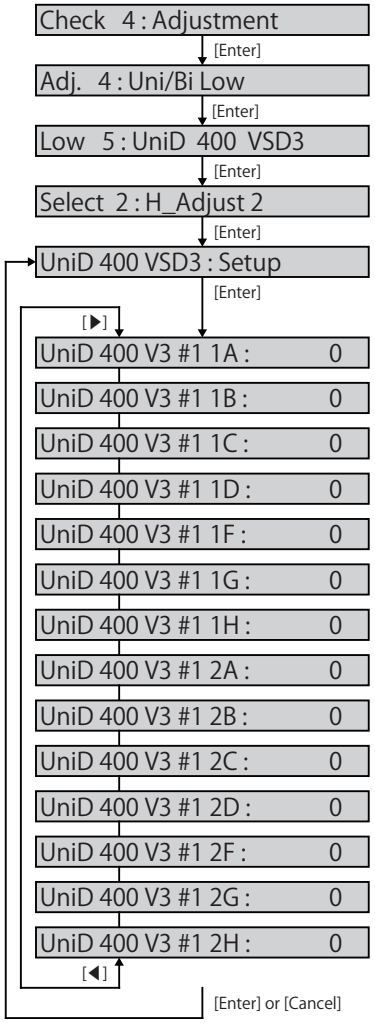
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.1.1.2.1. Setup

● Operation panel



Use the [▲] or [▼] key to change the adjustment value.
Range : -100 to 100
Unit : 720 dpi
(1/720 inch = approx 35µm)

The base nozzle rows (1E and 2 E) are not displayed.

● Explanation

The panel operation to select the Setup item is shown below.
(For UniD 400 VSD3)

TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

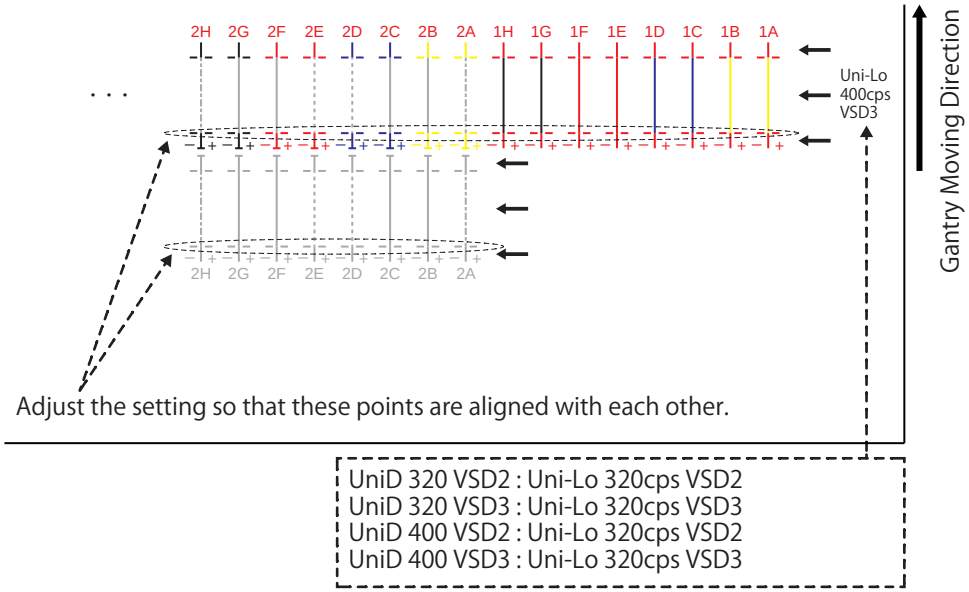
5.7.4.1.1.2.2. Print

● Explanation

The panel operation to select the Print item is shown below.
The panel key operation flow is the same as UniD Adjustment / H_Adjust 1 / Print Refer to Print for the details

● Adjustment Pattern
(For H_Adjust 2 UniD 320 VSD3)

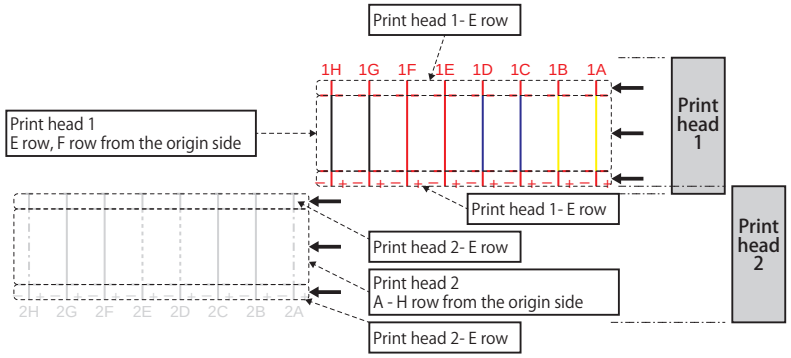
- Item to adjust :
  Dot placement position between nozzle rows (CW Direction)
- Print Mode :
  Uni-D Print, Selected Print speed and waveform, Medium Dot



Print the patterns in the order from the Head 1 A row to the Head 2 H row.

● Details of Printing Method

(1) Print : 1st pass



* The figure below shows how the two heads print the pattern.
Print direction ←

TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.1.2. UniD ALL

Each item is as follows

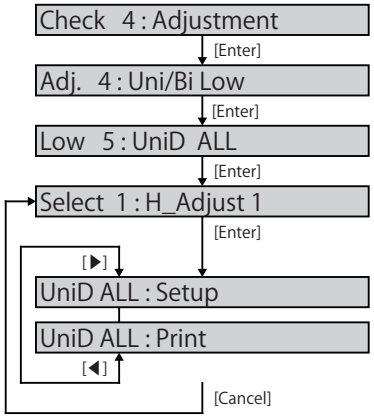
Item	Content
Unid ALL 1 : H_Adjust 1	=> 5.7.4.1.2.1. H_Adjust 1
Unid ALL 2 : H_Adjust 2	=> 5.7.4.1.2.2. H_Adjust 2

TIP

index=> 5. Self-diagnosis

5.7.4.1.2.1. H_Adjust 1

● Operation panel



● Explanation

The panel operation to select the H_Adjust 1 item is shown below.
Each item is as follows

Item	Content
H_Adjust 1_1 : Setup	=> 5.7.4.1.2.1.1. Setup
H_Adjust 1_2 : Print	=> 5.7.4.1.2.1.2. Print

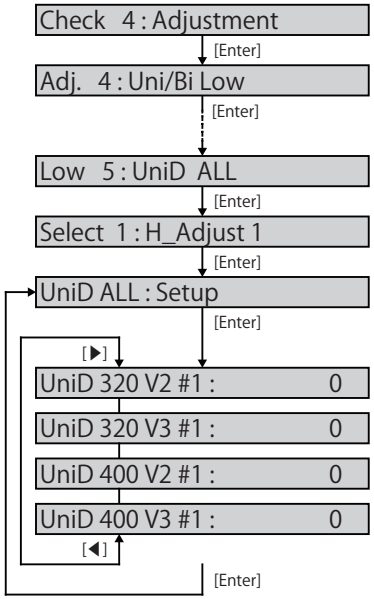
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.1.2.1.1. Setup

● Operation panel



Use the [▲] or [▼] key to change the adjustment value.
Range : - 400 to 400
Unit : 2880 dpi
(1/2880 inch = approx 8.8 μm)

● Explanation

The panel operation to select the Setup item is shown below.

TIP

index=> 5. Self-diagnosis

5.7.4.1.2.1.2. Print

● Explanation

The panel operation to select the Print item is shown below.
The panel operation is same as UniD Adjustment / H_Adjust 1 / Print.
Refer to " Print " for the details.

● Print Pattern

- Adjustment Item :
  Uni-directional Print
- Print Method :
  UniD, All print speed / waveform, Medium dot

Print the print patterns of UniD / H_Adjust1 / Print collectively for all items (waveform / speed)
Refer to " Print " for the details of adjustment

● Print Item

- UniD 320 VSD2 : UniD-Lo 320cps VSD2
- UniD 320 VSD3 : UniD-Lo 320cps VSD3
- UniD 400 VSD2 : UniD-Lo 400cps VSD2
- UniD 400 VSD3 : UniD-Lo 400cps VSD3

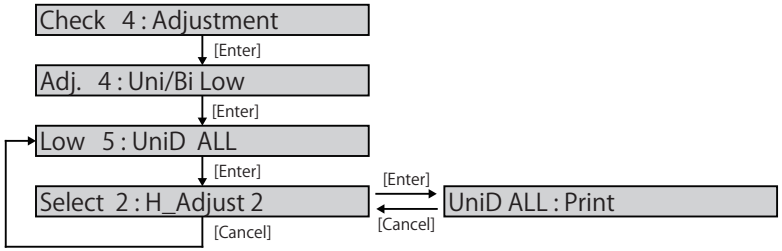
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.1.2.2. H_Adjust 2

● Operation panel



● Explanation

The panel operation to select the H_Adjust 2 item is shown below.
As the bundle print function in this item, enter the adjustment value in the UniD adjustment, or parameter / update / UniD
Each item is as follows

Item	Content
H_Adjust 2_2 : Print	=> 5.7.4.1.2.2.1. Print

TIP

index=> 5. Self-diagnosis

5.7.4.1.2.2.1. Print

● Explanation

The panel operation to select the Print item is shown below.
The panel operation is same as UniD Adjustment / H_Adjust 1 / Print.
Refer to " Print " for the details.

● Print Pattern

- Adjustment Item :
  Uni-directional Print
- Print Method :
  UniD, All print speed / waveform, Medium dot

● Print Item

- UniD 320 VSD2 : UniD-Lo 320cps VSD2
- UniD 320 VSD3 : UniD-Lo 320cps VSD3
- UniD 400 VSD2 : UniD-Lo 400cps VSD2
- UniD 400 VSD3 : UniD-Lo 400cps VSD3

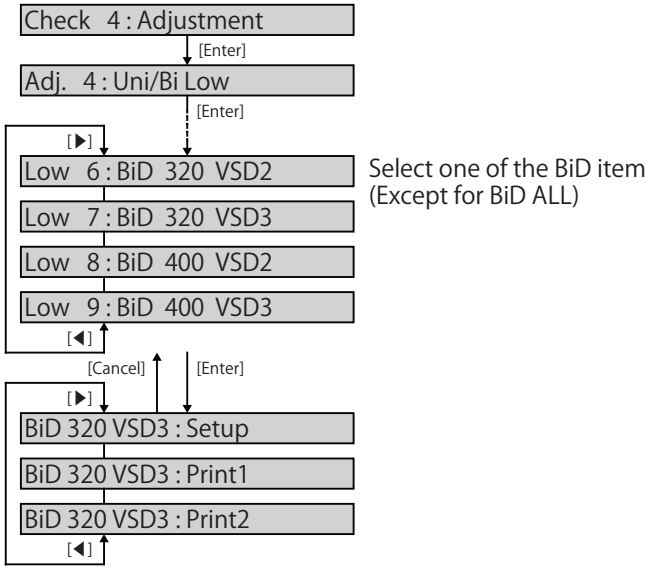
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.2. BiD / BiD ALL

● Operation panel

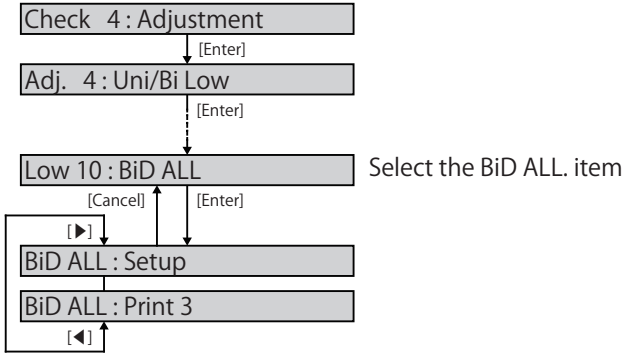


● Explanation

The panel operation to select the UniD item is shown below.
Each item is as follows

Item	Content
BiD ALL 1 : BiD	=> 5.7.4.2.1. BiD
BiD ALL 2 : BiD ALL	=> 5.7.4.2.2. BiD ALL

● Operation panel



● Explanation

The panel operation to select the BiD ALL item is shown below.

TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.2.1. BiD

Each item is as follows

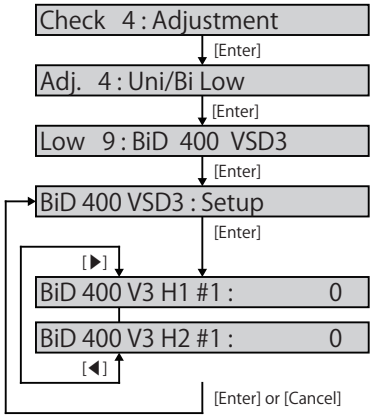
Item	Content
BiD 1 : Setup	=> 5.7.4.2.1.1. Setup
BiD 2 : Print 1	=> 5.7.4.2.1.2. Print 1
BiD 3 : Print 2	=> 5.7.4.2.1.3. Print 2

TIP

index=> 5. Self-diagnosis

5.7.4.2.1.1. Setup

● Operation panel



Use the [▲] or [▼] key to change the adjustment value.
Range : - 400 to 400
Unit : 2880 dpi
(1/2880 inch = approx 8.8 µm)

● Explanation

The panel operation to select the Setup item is shown below.
(For BiD 400 VSD3)

TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

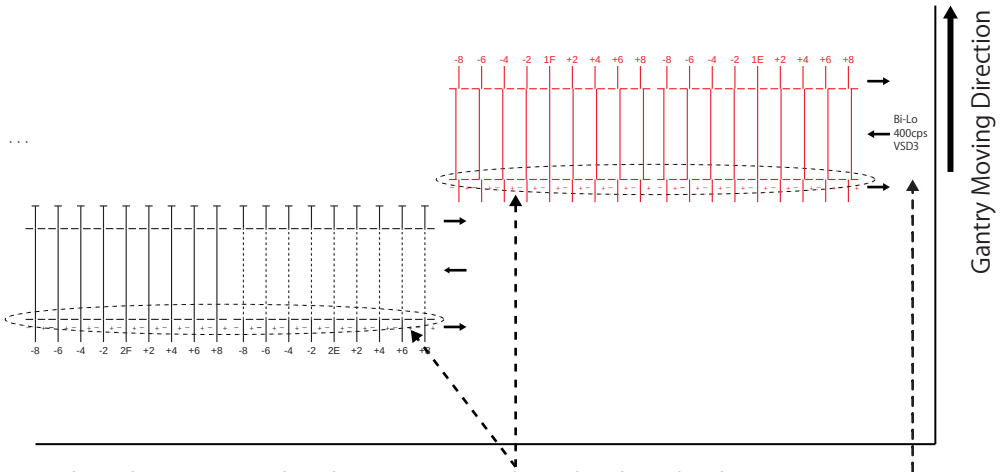
5.7.4.2.1.2. Print 1

● Explanation

on is same as UniD Adjustment / H_Adjust 1 / Print.
Refer to " Print " for the

● Print Pattern
(For BiD 400 VSD3)

- Adjustment Item :
- Base Nozzle Reciprocating Print Position
- Print Mode :
  Bi-D Print, Print Speed and Waveform for the selected item, Medium Dot



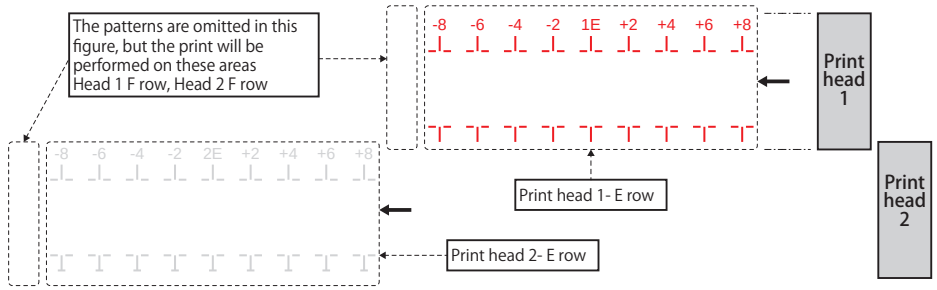
Adjust the setting so that these points are aligned with each other.

BiD 320 VSD2 : Bi-Lo 320cps VSD2
BiD 320 VSD3 : Bi-Lo 320cps VSD3
BiD 400 VSD2 : Bi-Lo 320cps VSD2
BiD 400 VSD3 : Bi-Lo 320cps VSD3

● BiD Print 1 Print Pattern-Details of Printing Method

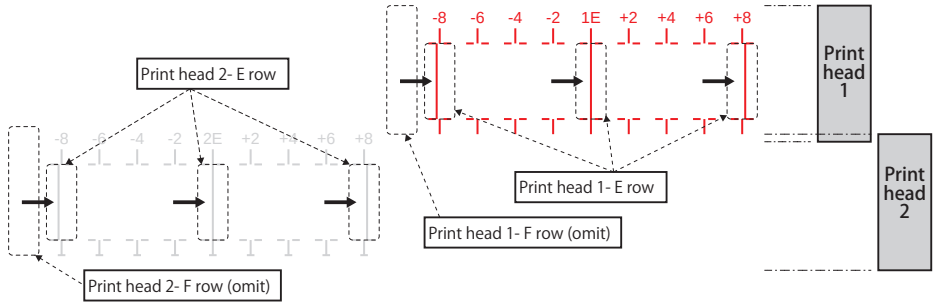
The patterns are shortly described.

(1) Print : 1st pass (CW Print)



* The figure below shows how the two heads print the pattern.
Print direction ←

(2) Print : 2 nd Pass 5 th Pass (CW Print)
2nd Pass (Print the line +8, 0, -8)



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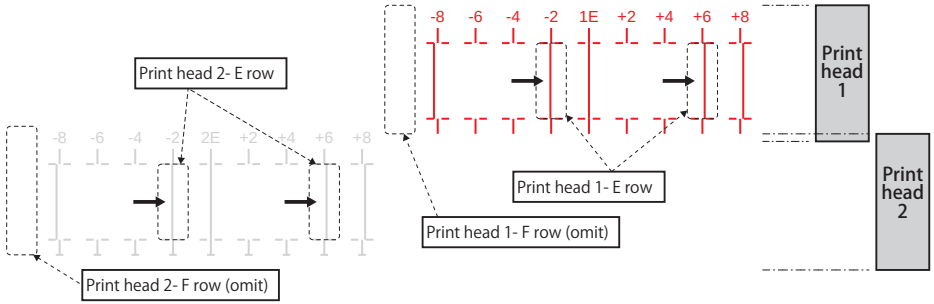
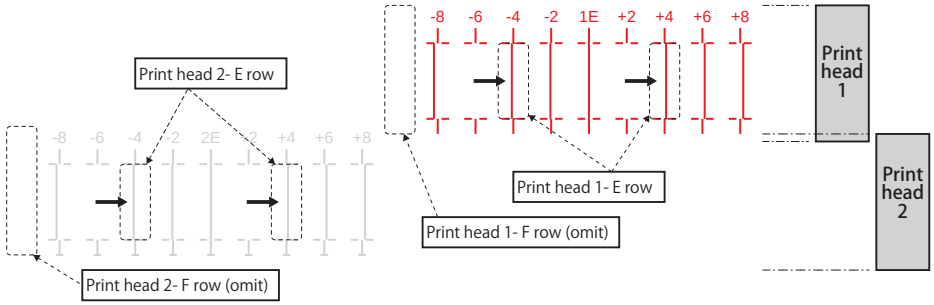
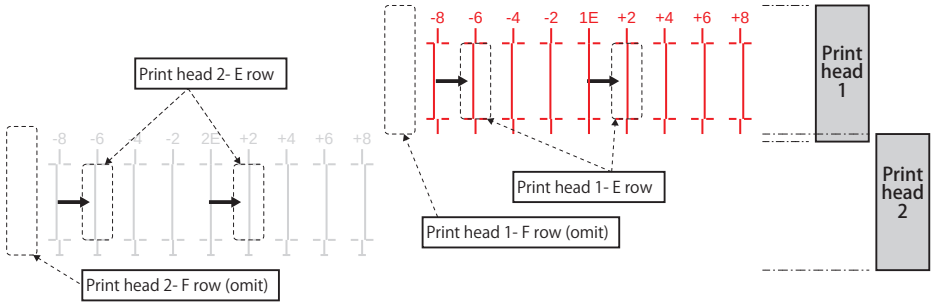
3rd Pass (Print the line +6, -2)



4th Pass (Print the line +4, -4)



5th Pass (Print the line +2, -6)



TIP

index=> 5. Self-diagnosis

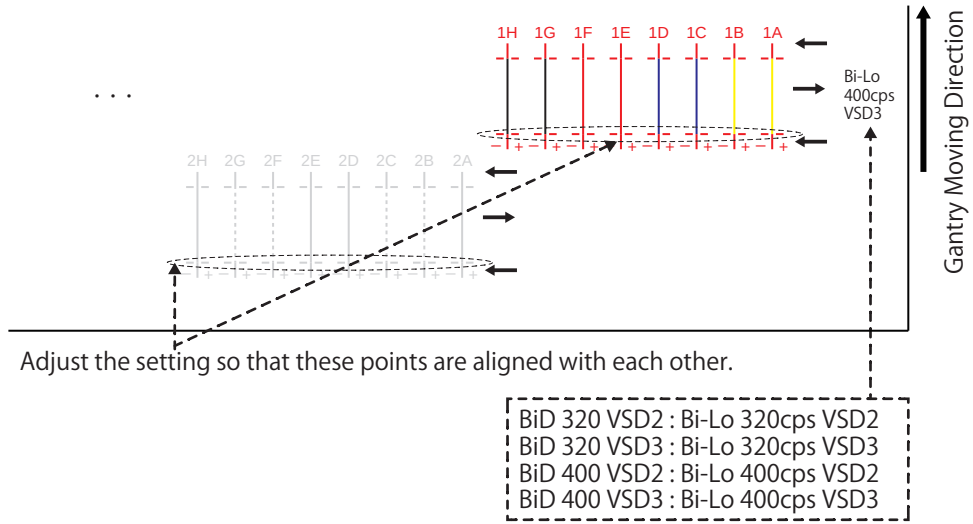
5.7.4.2.1.3. Print 2

● Explanation

on is same as UniD Adjustment / H_Adjust 1 / Print.
Refer to " Print " for the

● Print Pattern
(For BiD 400 VSD3)

- Adjustment Item :
  Reciprocating Print Position
- Print Mode :
  Bi-D Print, Print Speed and Waveform for the selected item, Medium Dot

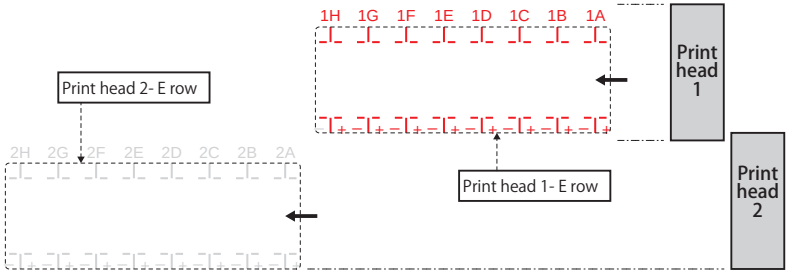


Print the patterns in the order from the Head 1 A row to the Head 2 H row.

CONFIDENTIAL

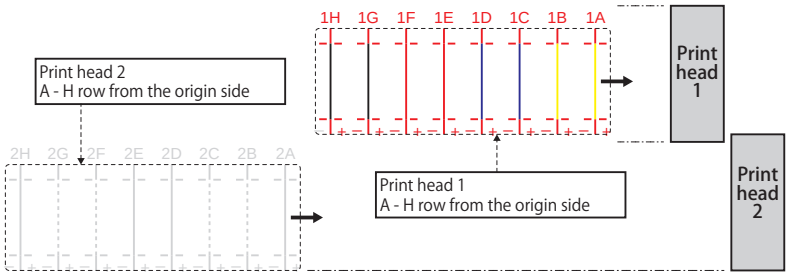
● BiD Print 2 Print Pattern-Details of Printing Method

(1) Print : 1st pass (CW Print)



* The figure below shows how the two heads print the pattern.
Print direction ←

(2) Print : 2st pass (CCW Print)



* The figure below shows how the two heads print the pattern.
Print direction ←

TIP

index=> 5. Self-diagnosis

5.7.4.2.2. BiD ALL

● Explanation

Each item is as follows

Item	Content
BiD ALL 1 : Setup	=> 5.7.4.2.2.1. Setup
BiD ALL 2 : Print 3	=> 5.7.4.2.2.2. Print 3

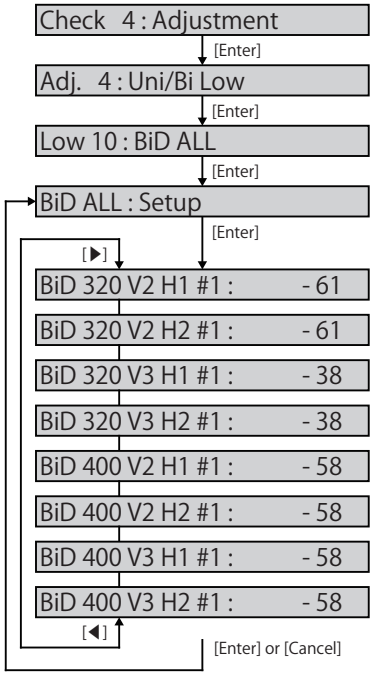
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.2.2.1. Setup

● Operation panel



Use the [▲] or [▼] key to change the adjustment value.
Range : - 400 to 400
Unit : 2880 dpi
(1/2880 inch = approx 8.8 µm)

● Explanation

The panel operation to select the Setup item is shown below.

TIP

index=> 5. Self-diagnosis

5.7.4.2.2.2. Print 3

● Explanation

The panel operation is same as UniD Adjustment / H_Adjust 1 / Print.
Refer to " Print " for the

● Print Pattern

- Adjustment Item :
  Bi-directional Print
- Print Mode :
  Bi-D, All Print Speed and Waveform for the selected item, Medium Dot

Print the print pattern (Print 2) collectively for all items.
For the details on adjustment pattern, refer to Print 2

● List of Print Item

- BiD 320 VSD2 : Bi-Lo 320cps VSD2
- BiD 320 VSD2 : Bi-Lo 320cps VSD3
- BiD 400 VSD2 : Bi-Lo 400cps VSD2
- BiD 400 VSD2 : Bi-Lo 400cps VSD3

TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.3. TypeB print pattern for Uni/ Bi adjustment pattern

● Explanation

Each item is as follows

Item	Content
TypeB print pattern for Uni/ Bi adjustment pattern 1 : H_Adjust 1/Print	=> 5.7.4.3.1. H_Adjust / Print
TypeB print pattern for Uni/ Bi adjustment pattern 2 : H_Adjust 2/Print	=> 5.7.4.3.2. H_Adjust 2 / Print
TypeB print pattern for Uni/ Bi adjustment pattern 3 : Print 1	=> 5.7.4.3.3. Print 1
TypeB print pattern for Uni/ Bi adjustment pattern 4 : Print 2	=> 5.7.4.3.4. Print 2

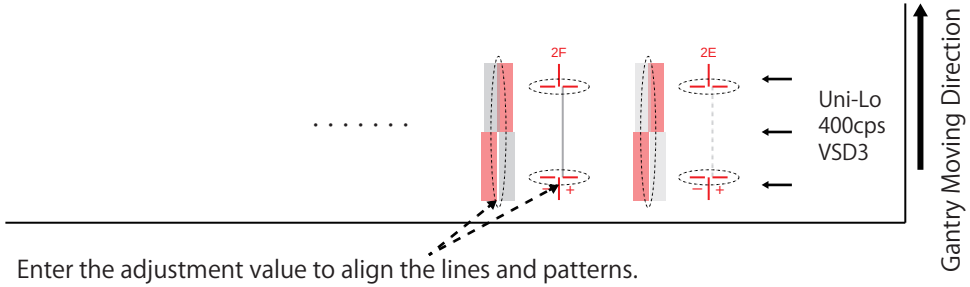
TIP

index=> 5. Self-diagnosis

5.7.4.3.1. H_Adjust / Print

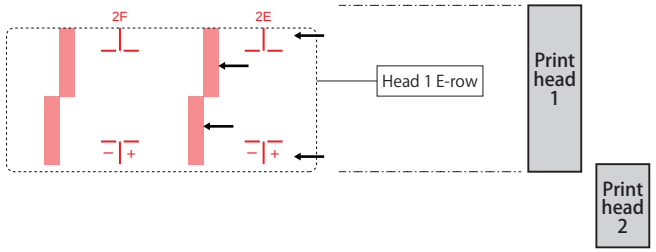
● Print Pattern

(For BiD 400 VSD3)



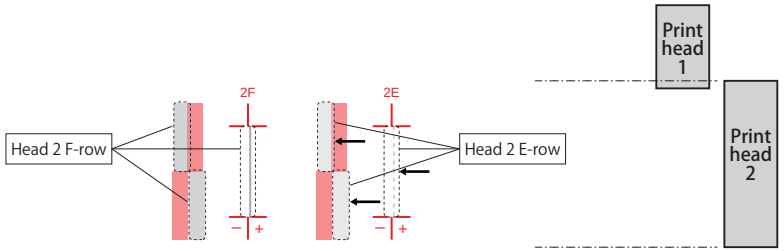
● H_Adjust 1 Print Pattern Details of Printing Method

(1) Print : 1 st Pass



(2) Gantry moves 22.578mm backward.

(3) Print : 2 nd Pass



CONFIDENTIAL

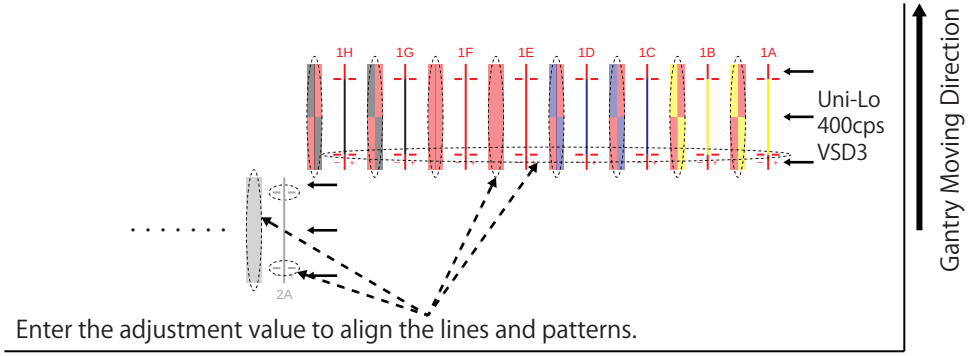
TIP

index=> 5. Self-diagnosis

5.7.4.3.2. H_Adjust 2 / Print

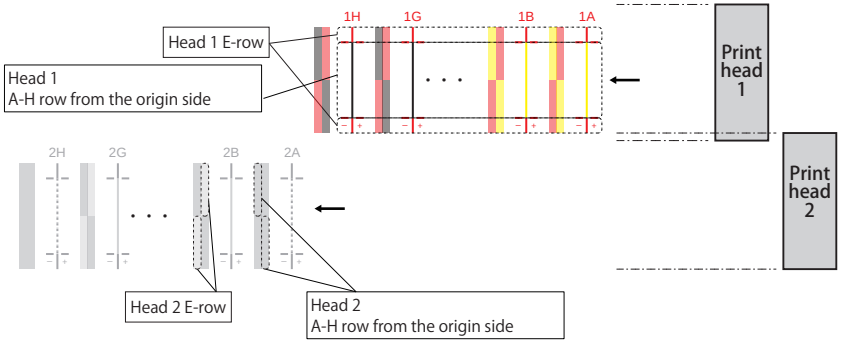
● Print Pattern

(For BiD 400 VSD3)



● H_Adjust 2 Print Pattern Details of Printing Method

(1) Print : 1 st Pass



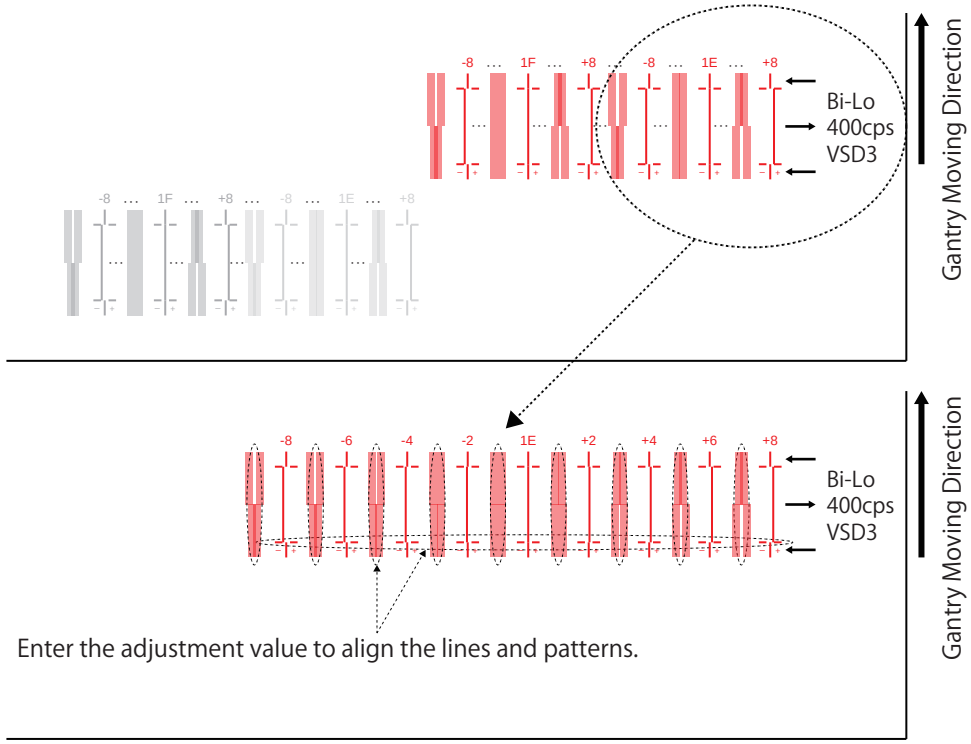
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.4.3.3. Print 1

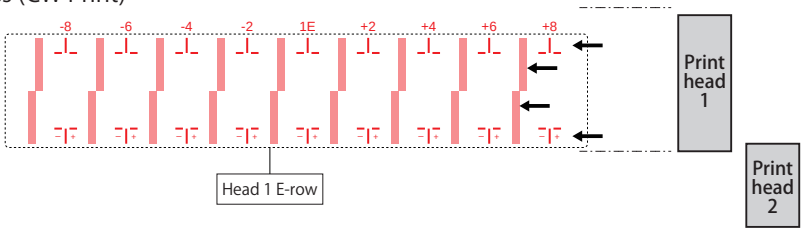
● Print Pattern
(For BiD 400 VSD3)



● BiD Print 1 Print Pattern Details of Printing Method

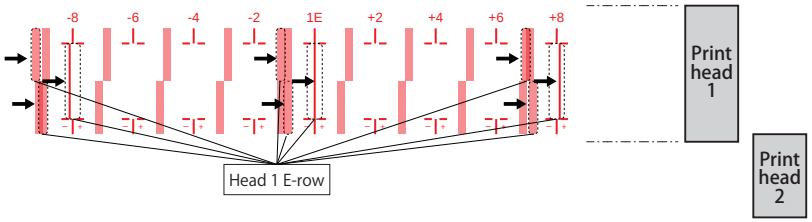
The printing method will be explained with Head 1 E-row as an example (Head 1 F-row, Head 2 E-row, Head 2 F-row will be also printed).

(1) Print: 1 st Pass (CW Print)

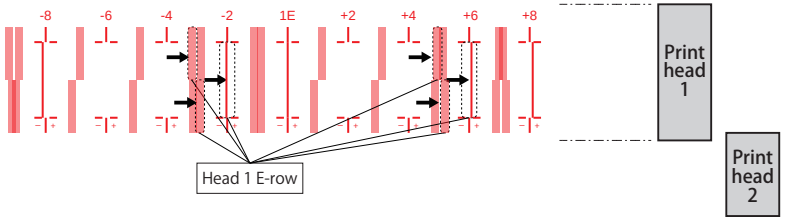


(2) Print : 2 nd Pass 5 th Pass (CCW Print)

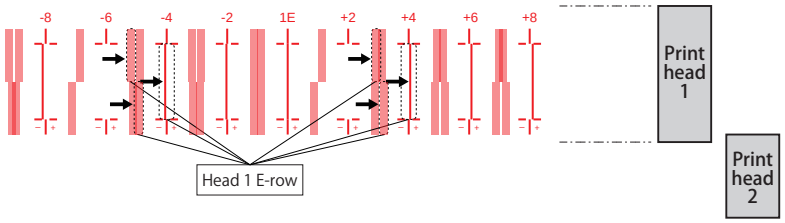
2nd Pass (Print +8, 0, -8)



3nd Pass (Print +6, -2)



4nd Pass (Print +4, -4)



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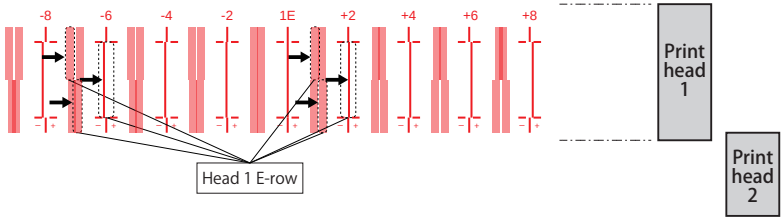
5nd Pass (Print +2, -6)



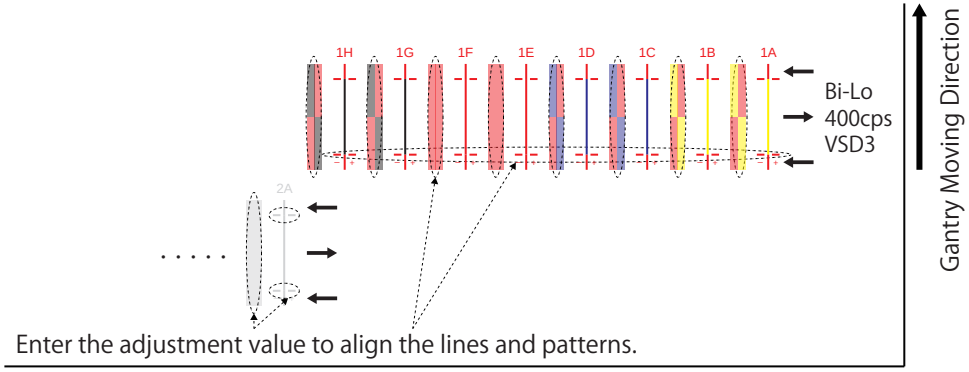
TIP

index=> 5. Self-diagnosis

5.7.4.3.4. Print 2

● Print Pattern

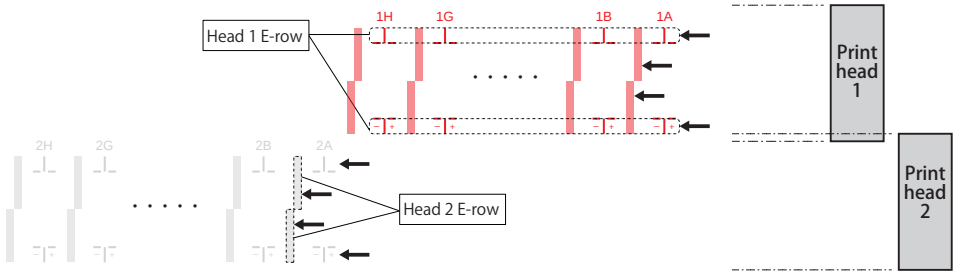
(For BiD 400 VSD3)



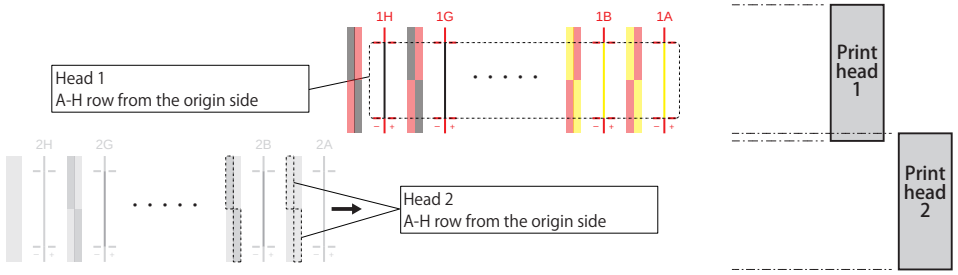
CONFIDENTIAL

● BiD Print 2 Print Pattern Details of Printing Method

(1) Print : 1 st Pass (360 dpi CW Print)



(2) Print : 2 st Pass (360 dpi CCW Print)

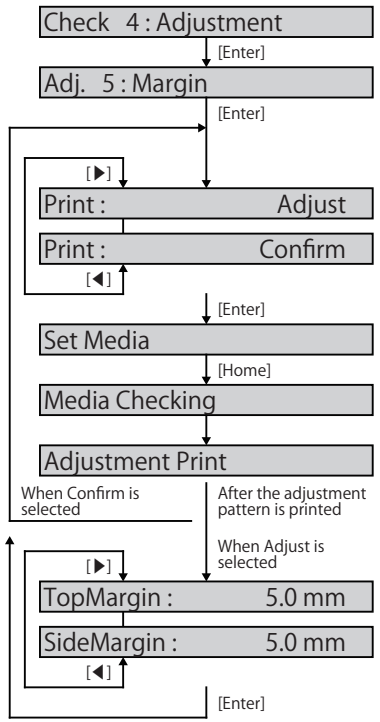


TIP

index=> 5. Self-diagnosis

5.7.5. Margin adjustment

● Operation panel



Adjust
Reset the current margin adjustment para meter and print the margin adjustment pattern. Then measure the top and side margins on the print and enter the actual measured top and side margins.

Confirm
Print the margin adjustment pattern using the current margin adjustment parameter (*unable to ent er value).

This message appears when no media is loaded.

Use the [▲] or [▼] key to enter the actual measured value in 0.1 mm increments.
Top margin : 0.0 to 10.0 mm
Side margin : 0.0 to 10.0 mm

*If media is loaded on the table when this function is performed, the printer will perform media ejection process.
*In factory default, top and side margins are set to 5.0 mm each.
*Tap [Cancel] to go back to "Adjustment Menu".

● Explanation

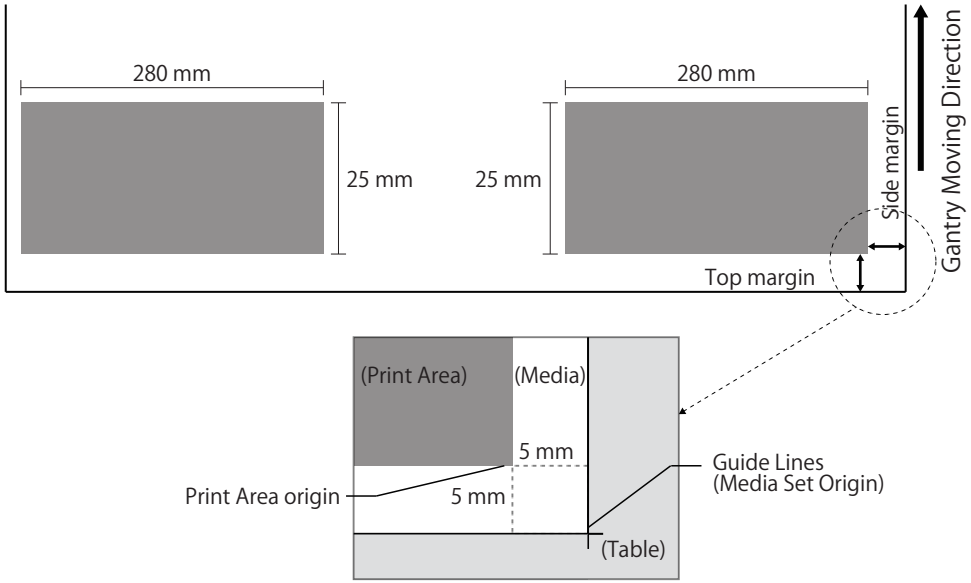
Use this function to calibrate the print start position from the guide lines.
Even if the front right corner of paper is aligned with the guide lines, the printer may not precisely leave the margin in top, side or bottom. Use this function to calibrate the print start position.

CONFIDENTIAL

● Margin Adjustment Pattern

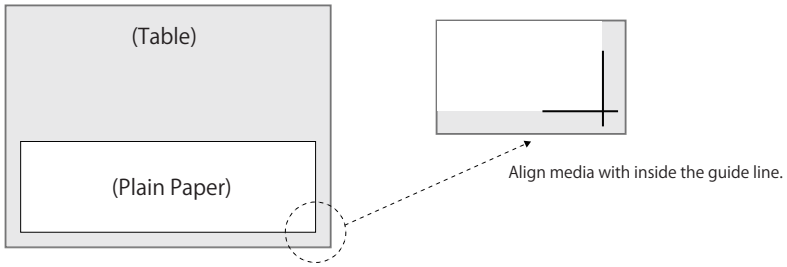
- Adjustment item :
  Top margin (print start position in PF direction)
  Side margin (print start position in CR direction)

- Printing condition :
  Black 1 pass, UniD 360dpi, 320cps, VSD3, Large
  *When Confirm is selected, the pattern will be printed with Magenta.



*Measure the top and side margins on the printed pattern as shown above, and then enter the measured value respectively.

● Media loading position



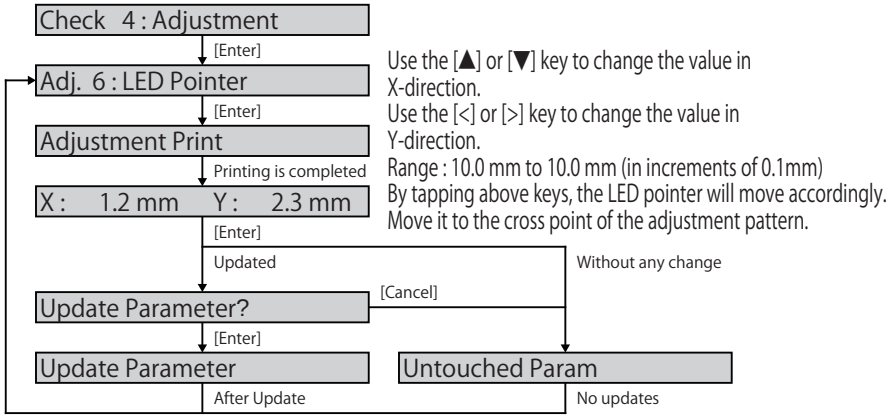
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.6. LED pointer adjustment

● Operation panel



● Explanation

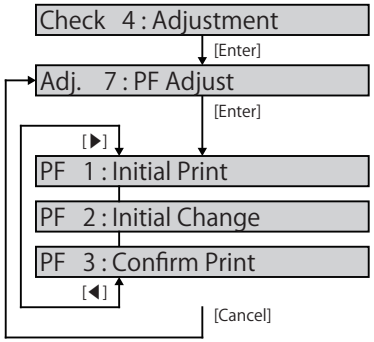
Calibrate the position of LED Pointer.

TIP

index=> 5. Self-diagnosis

5.7.7. PF adjustment

● Operation panel



● Explanation

Print an adjustment pattern and correct the amount that the gantry moves in the X direction. Each item is as follows

Item	Details
Initial Print	Print a base pattern (initial print pattern) with the adjustment value reset.
Initial Change	Enter the initial adjustment value (the actual measurement value of the distance between two marks on the base pattern print).
Confirm Print	Print a confirm pattern that the initial adjustment value was reflected.

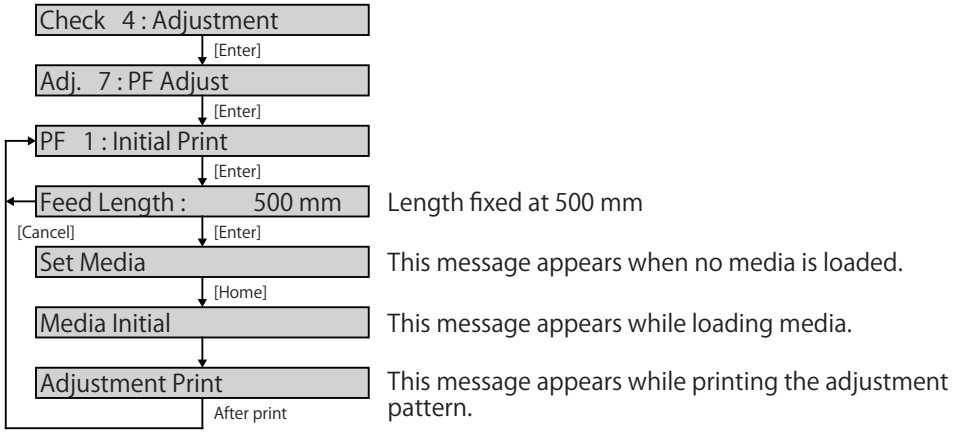
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.7.1. Initial Print Pattern

● Operation panel



● Explanation

The operation when “Initial Print” is selected is shown here.

TIP

index=> 5. Self-diagnosis

5.7.7.1.1. Initial Print Pattern

● Printing condition

UniD, 400cps, VSD3, Large Dot
Four marks are printed using Head 1, row G (Black).

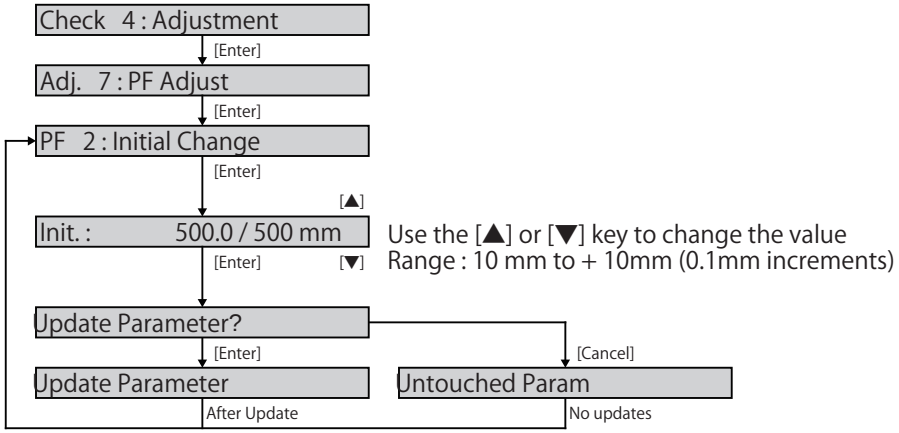
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.7.2. Initial Change

● Operation panel



● Explanation

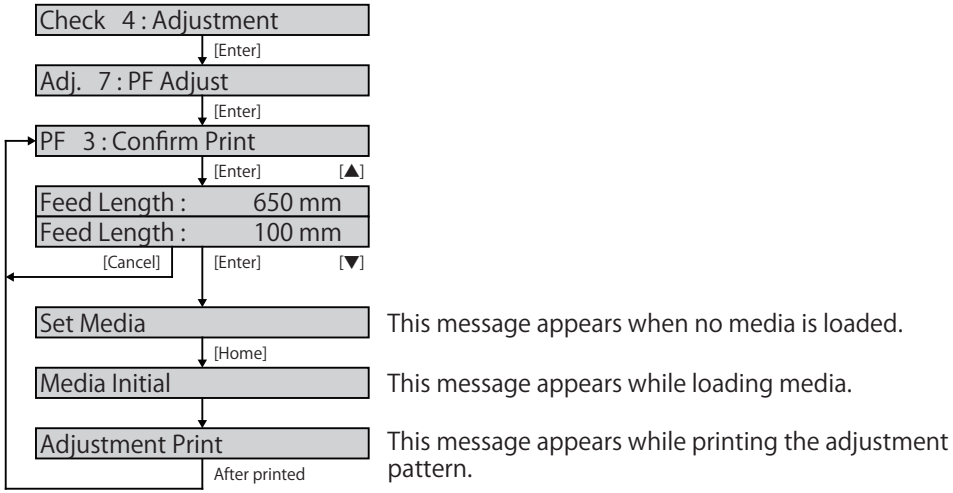
The operation when "Initial Change" is selected is shown here.

TIP

index=> 5. Self-diagnosis

5.7.7.3. Confirm Print

● Operation panel



● Explanation

The operation when "Confirm Print" is selected is shown here.

TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.7.3.1. Confirm print pattern

● Printing condition

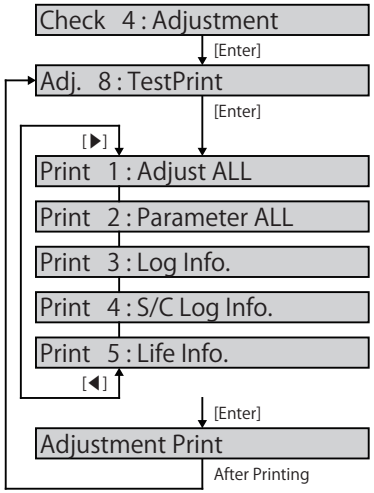
UniD, 400cps, VSD3, Large Dot
Four marks are printed using Head 1, row E (Magenta).

TIP

index=> 5. Self-diagnosis

5.7.8. Test printing

● Operation panel



● Explanation

Run the selected test printing for check.
* See "Test Printing" for more details.

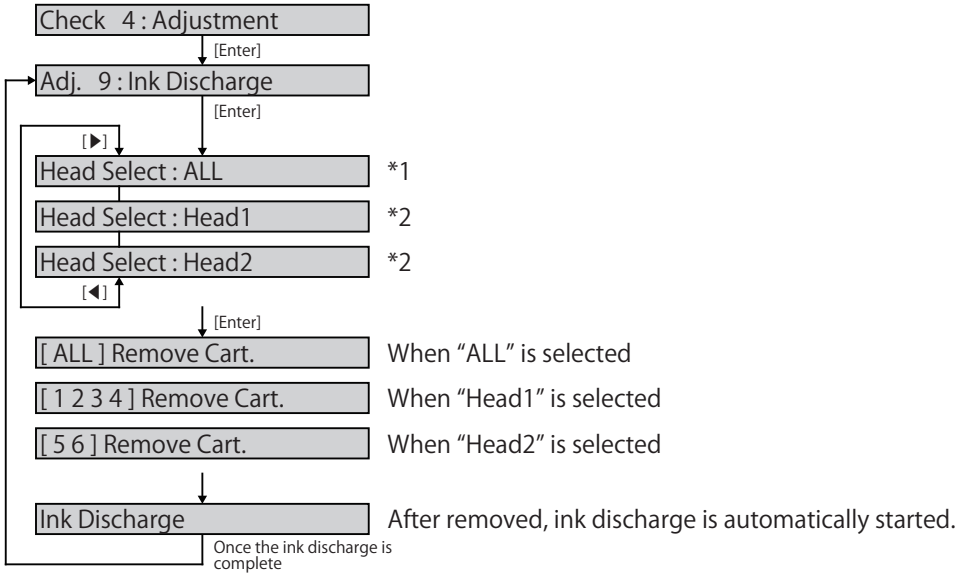
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.7.9. Ink discharge

● Operation panel



● Explanation

Discharges the ink from the ink tubes and the print head during maintenance.

*1 To perform "Longstore" after "Ink Discharge", select "ALL".

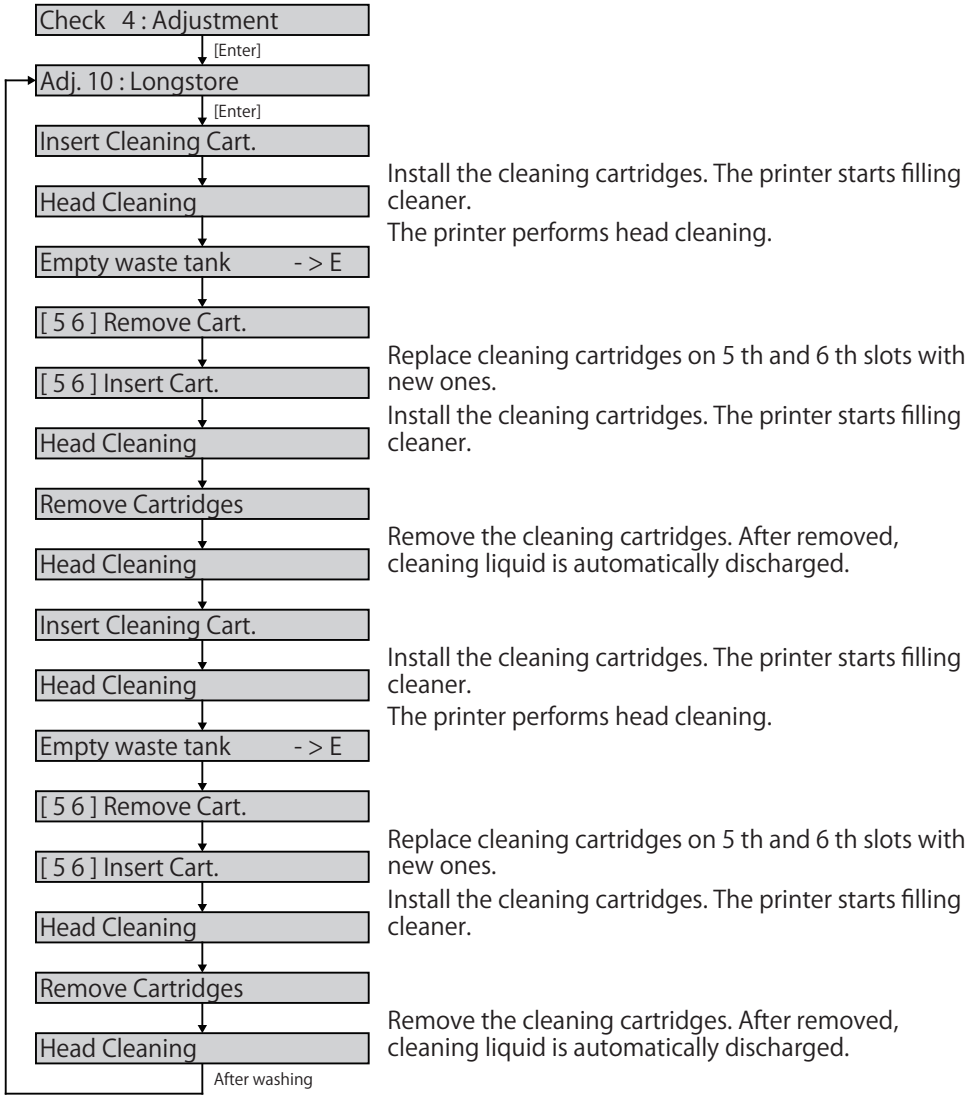
*2 To perform ink charging after "Ink Discharge", go to the "Check 3 Ink Charge" menu.

TIP

index=> 5. Self-diagnosis

5.7.10. Longstore

● Operation panel



CONFIDENTIAL

● Explanation

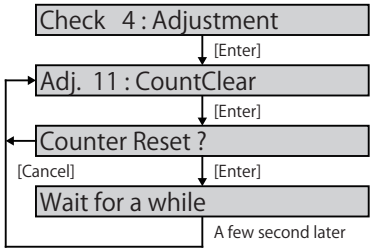
Use this menu to clean the print head and ink lines before the print head replacement or at the end of the production.
Once the Longstore is complete, the ink configuration setting is reset to default (Auto) (see Ink).
This menu must be performed after "Adj.9:InkDischarge" is performed.
If "Ink Discharge" has not been performed, the message "Execute InkDischarge" will appear and you will not be able to perform "Longstore".

TIP

index=> 5. Self-diagnosis

5.7.11. Counter clear

● Operation panel



● Explanation

Reset the following software counter.
Make sure to perform this menu before shipping this product.
Each item is as follows

Counter	Initial Value
Cumulative printing timer	0
Ink consumption (per cartridge)	0
The amount of ink in the cap	0
Ink type previously filled in the printer	1
Ink information per slot (type of ink filled, smartchip color information)	1
User charge flag	0
Not-filled flag	1
User initial start-up flag	1
Invalid power off log	0
User type initial selection flag	0xFFFFFFFF
Count to indicate replacement of 1L adapter plug	0
DebugBit	0
UniD/BiD adjustment dot size	4
Cleaning time	0
White maintenance log	0

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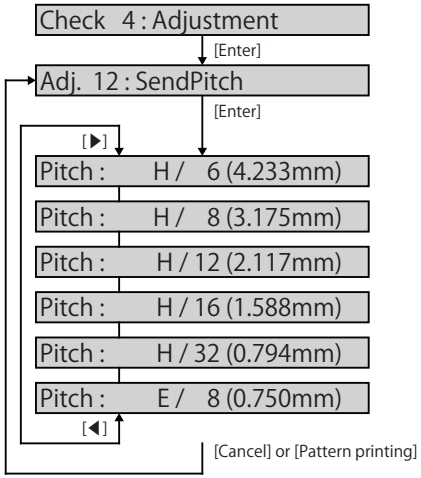
Counter	Initial Value
CR maintenance (cycles, interval)	0
Job status (data length, printed length)	0
Print log	0x120101 ···
Cleaning log (number of times, status)	0x120101 ···
UV Lamp lighting direction	AUTO
UV Lamp Illuminance	100
Time the printer was powered off	2000 / 1 / 1
The number of power-off	0
Time interval between power OFF and ON	0
Daily log (printer on-off state)	0x110101···
Daily log (daily maintenance)	0x110000···
Daily log (print head temperature)	0x110101···
Option log	0xFFFFFFFF
User mode: ALL	See "XPJ 1462UF Panel Operating Specification".

TIP

index=> 5. Self-diagnosis

5.7.12. Send pitch check

● Operation panel



● Explanation

Check if there is any error in the feeding amount per swath.

- Table feed amount of H/6 (4.233mm) = table moving distance for one sixth (1/6) of the print head length.
  Print head length 25.4 mm / 6 = 4.233 mm
- Table feed amount of E/8 (0.625 mm) = table moving distance for one eighth (1/8) of encoder diameter.
  Encoder diameter 5 mm / 8 = 0.625 mm

● Adjustment pattern

- Item to adjust:
  distance to feed the media per swath
- Print mode:
  320 cps, VSD3, Large

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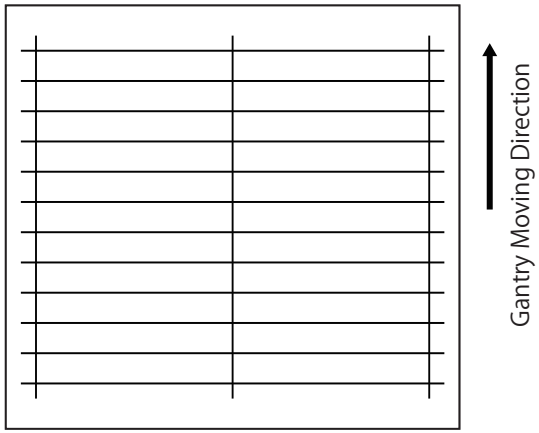


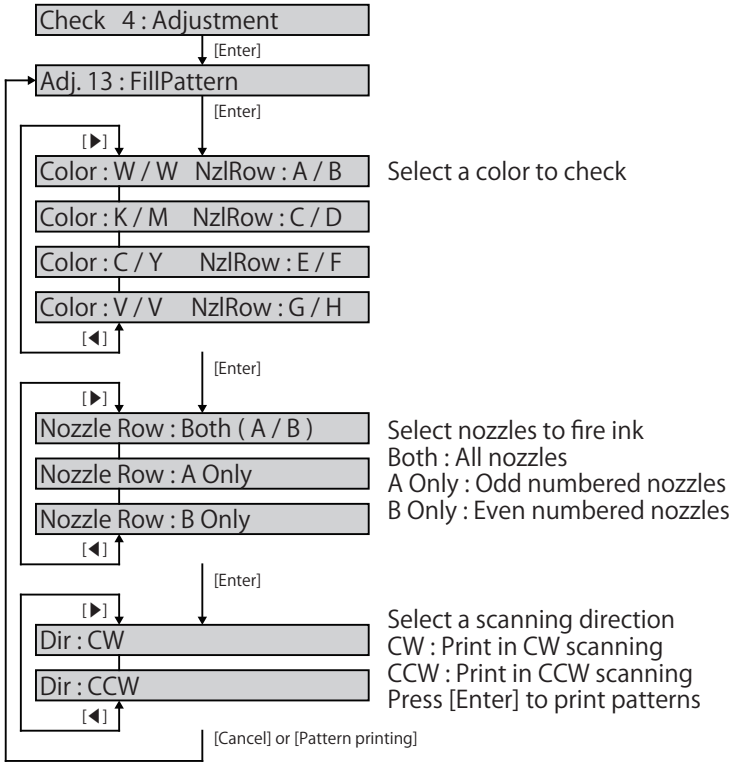
The printer prints this pattern for approximately 560 mm.
When you tap [Cance l] or printing is done, the display goes back to " Adjustment Menu " .

TIP

index=> 5. Self-diagnosis

5.7.13. Fill pattern check

● Operation panel



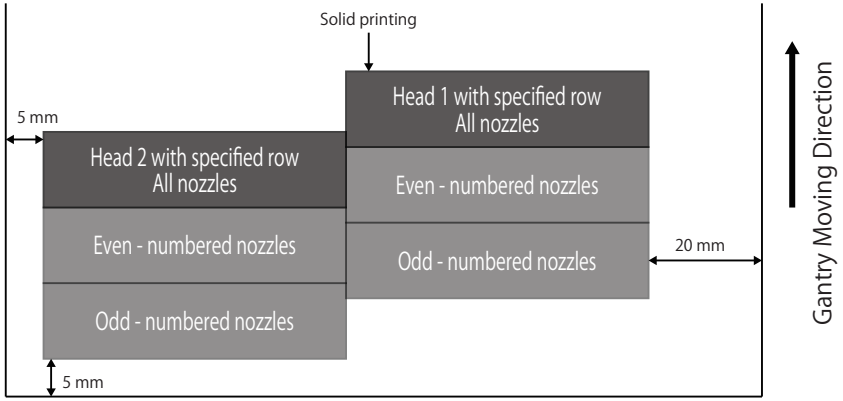
● Explanation

Check the accuracy of fill pattern printing

● Print pattern

- Item to adjust:
  Fill pattern printing
- Print mode:
  400 cps, VSD3, Large

CONFIDENTIAL



When you tap [Cance l] or printing is done, the display goes back to “Adjustment Menu” .

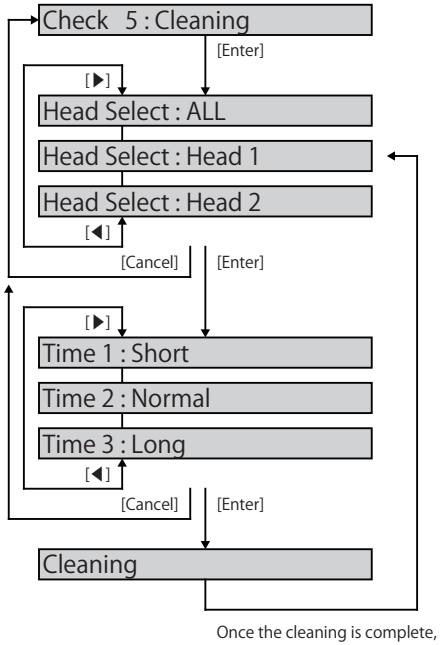
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.8. Cleaning

● Operation panel



● Explanation

In this menu, perform head cleaning.
Each item is as follows

Item	Content
Time1 : Short	Short cleaning
Time2 : Normal	Normal cleaning
Time3 : Long	Long cleaning

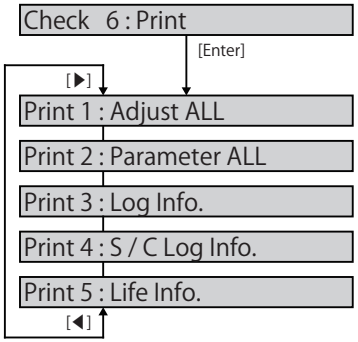
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.9. Print

● Operation panel



● Explanation

In this menu, perform test printing.
Each item is as follows.

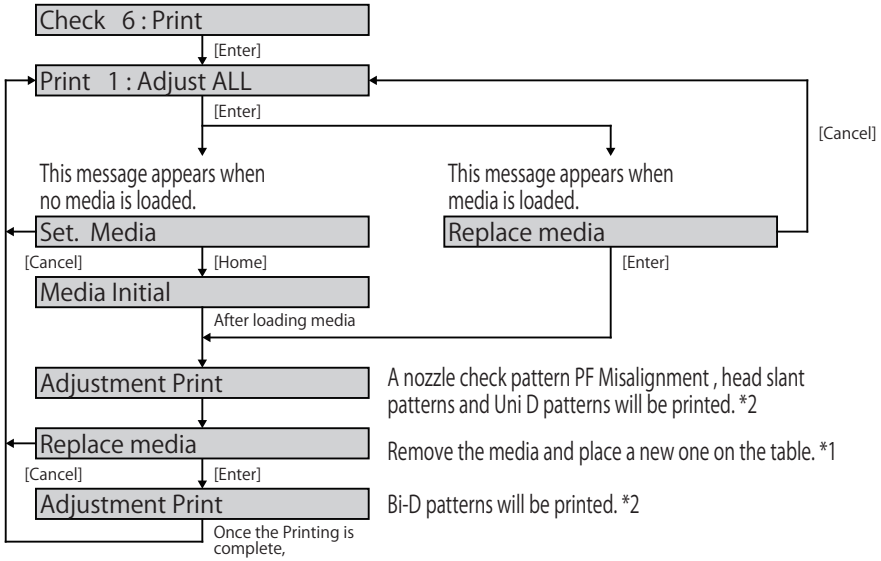
Item	Content
Print1 : Adjust ALL	=> 5.9.1. Adjust pattern printing
Print2 : Parameter ALL	=> 5.9.2. Parameter printing
Print3 : Log Info.	=> 5.9.3. Error record printing
Print4 : S/C Log Info.	=> 5.9.4. S/C log printing
Print5 : Life Info.	=> 5.9.5. Maintenance record printing

TIP

index=> 5. Self-diagnosis

5.9.1. Adjust pattern printing

● Operation panel



*1. Make sure to replace with the same type of media.
*2. After media is replaced with a new one, the pattern is printed from the top of the media.

● Explanation

In this menu, perform to print head check patterns and adjustment patterns.

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● The items to be printed:

1. Nozzle Check (nozzle alignment with normal pattern, horizontal direction pattern, vertical direction pattern in CW, vertical direction pattern in CCW)
2. PF Misalignment
3. Slant - twist
4. Slant – tilt

—— Replace with a new media, then tap Enter. —— Replace media

5. UniD 320 VSD2 Low
6. UniD 320 VSD3 Low
7. UniD 400 VSD2 Low
8. UniD 400 VSD3 Low

—— Replace with a new media, then tap Enter. —— Replace media

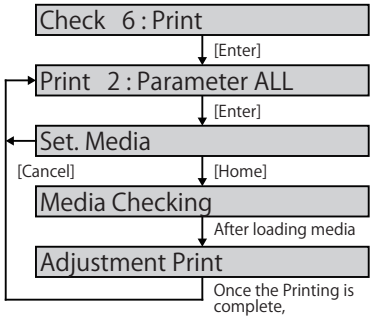
9. BiD 320 VSD2 Low
10. BiD 320 VSD3 Low
11. BiD 400 VSD2 Low
12. BiD 400 VSD3 Low

TIP

index=> 5. Self-diagnosis

5.9.2. Parameter printing

● Operation panel



● Explanation

In this menu, perform to print adjustment parameters list.

● The adjustment parameters to be printed

Item
Head Rank
PG adjustment value (Height/ Tilt/ Gantry Z motion correction L/R)
Uni-D / Bi-D adjustment value
Margin adjustment value (Top/Side)
Company Code
LED Pointer adjustment value (X/Y)
PF Adjust value
Periodic Cleaning
Servo Parameter

TIP

index=> 5. Self-diagnosis

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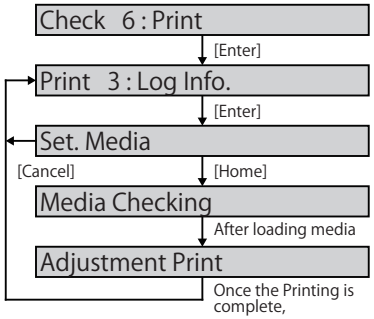
5.9.3. Error record printing

● Operation panel



● Explanation

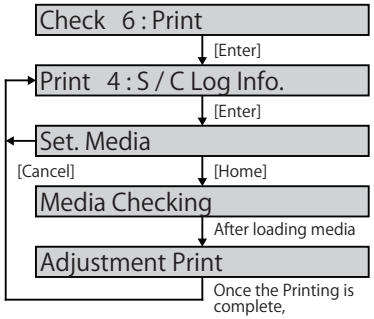
In this menu, perform to print system error record.

TIP

index=> 5. Self-diagnosis

5.9.4. S/C log printing

● Operation panel



● Explanation

In this menu, perform to print smart chip log.

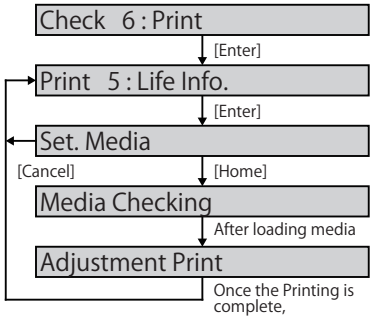
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.9.5. Maintenance record printing

● Operation panel



● Explanation

In this menu, perform to print maintenance record.

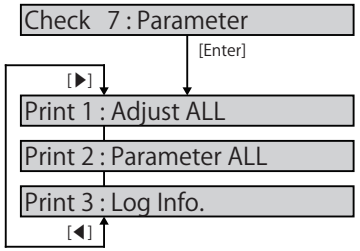
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10. Paramter

● Operation panel



● Explanation

In this menu, perform parameter setting.
Each item is as follows.

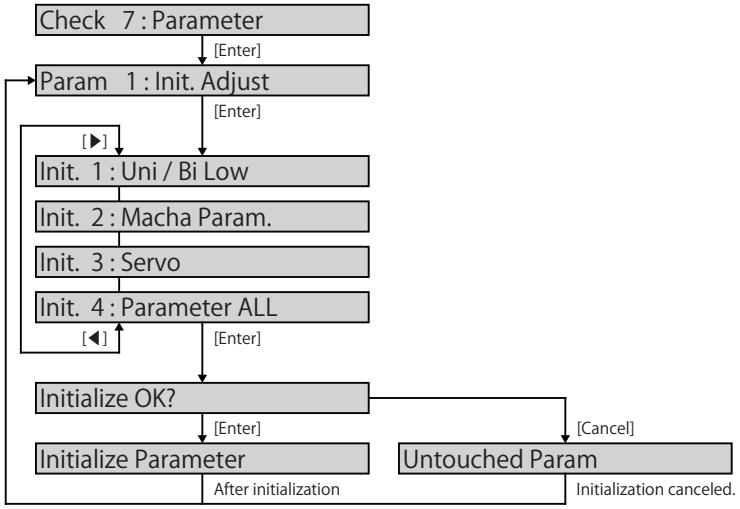
Item	Content
Param1 : Init.Adjust	=> 5.10.1. Initialization Adjustment
Param2 : Init.Counter	=> 5.10.2. Initialization Counter
Param3 : Update	=> 5.10.3. Update

TIP

index=> 5. Self-diagnosis

5.10.1. Initialization Adjustment

● Operation panel



Tap [Enter] on the Uni / Bi menu to goes to the Uni / Bi initialization menu.
Also, tap [Enter] on the Servo menu to goes to the Servo initialization menu.

When [Enter] is tapped on other menu, the message "Initialize OK?" will be displayed.
To reset to parameter, tap [Enter].
To cancel the parameter initialization, tap [Cancel].
If the initialization is canceled, the display goes to "Param 1: Init.Adjust"

● Explanation

In this menu, perform to Initialize adjustment parameters.
The parameters that can be initialized from this menu are Uni-D / Bi-D parameters, mechanical parameters, servo, or all items.
Each item is as follows

Item	Content
Init. 1 : UniD / BiD Low	=> 5.10.1.1. Uni / Bi Low
Init. 2 : Mecha Param.	-
Init. 3 : Servo	=> 5.10.1.2. Servo

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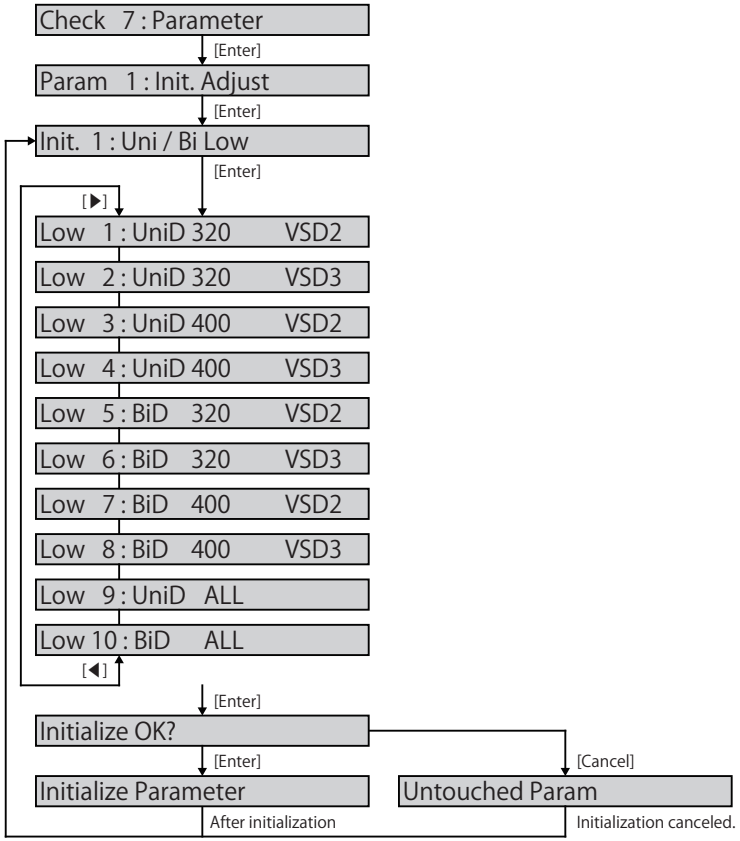
Item	Content
Init. 4 : Parameter ALL	-

TIP

index=> 5. Self-diagnosis

5.10.1.1. Uni / Bi Low

● Operation panel



If you tap [Enter], "Initialize OK?" will be displayed on the panel. Tap [Enter] to start initialization.
If you tap [Cancel], "Untouched Param" will be displayed and the initialization will be canceled.
Then the display goes back to "Parameter Menu" .

● Explanation

In this menu, perform to Initialize Uni-D/Bi-D parameters.

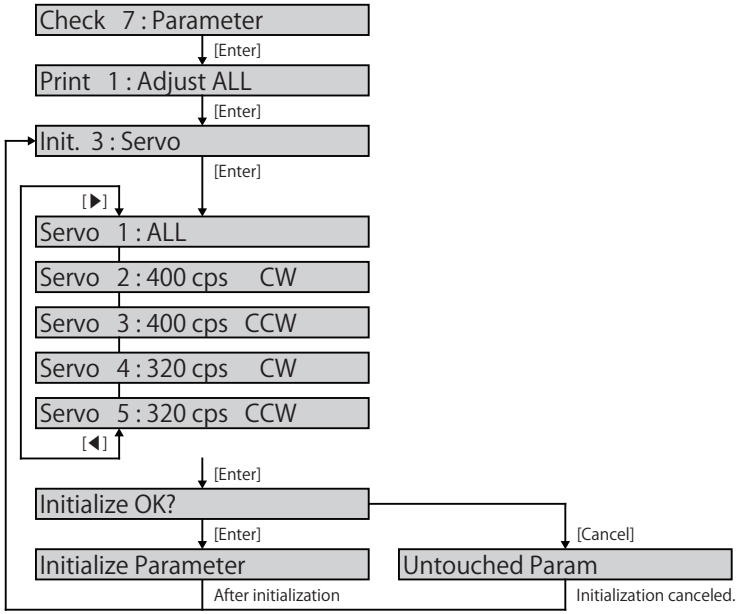
CONFIDENTIAL

TIP

index=> 5. Self-diagnosis

5.10.1.2. Servo

● Operation panel



If you tap [Enter], "Initialize OK?" will be displayed on the panel. Tap [Enter] to start initialization.
If you tap [Cancel], "Untouched Param" will be displayed and the initialization will be canceled.
Then the display goes to "Parameter Menu" .

● Explanation

In this menu, perform to Initialize servo parameters.

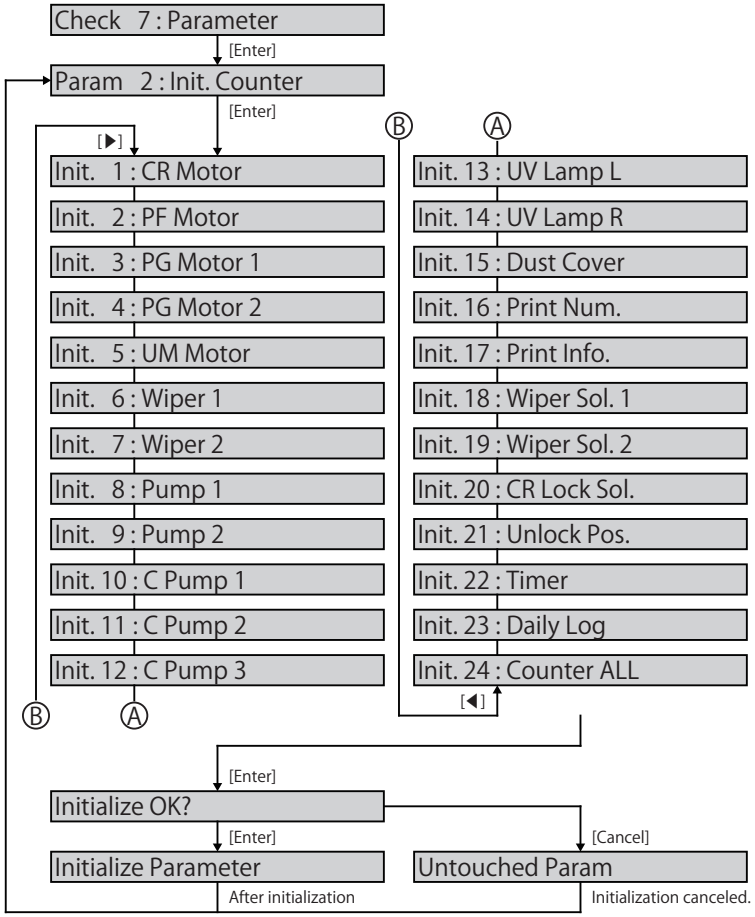
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.2. Initialization Counter

● Operation panel



When [Enter] is tapped on each item, the message "Initialize OK?" will be displayed.
To reset the counter, tap [Enter].
To cancel the initialization, tap [Cancel].
After the counter has been reset or initialization has been canceled, the display goes to "Param 2 : Init. Counter" .

● Explanation

In this menu, perform to Initialize each counters.

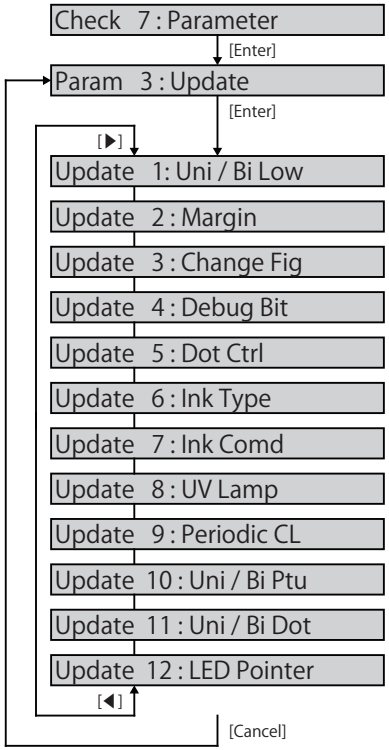
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3. Update

● Operation panel



● Explanation

In this menu, perform to update adjustment parameters.
Each item is as follows.

Item	Content
Update 1 : UniD / BiD Low	=> 5.10.3.1. UniD / BiD Low
Update 2 : Margin	=> 5.10.3.2. Margin parameter
Update 3 : Charge Flg	=> 5.10.3.3. Charge flag
Update 4 : DebugBit	=> 5.10.3.4. Debug bit
Update 5 : DotCtrl.	=> 5.10.3.5. Dot control
Update 6 : Ink Type	=> 5.10.3.6. Ink type
Update 7 : Ink Config	=> 5.10.3.7. Ink combination
Update 8 : UV Lamp	=> 5.10.3.8. UV lamp
Update 9 : Periodic CL	=> 5.10.3.9. Periodic cleaning
Update 10 : Uni / Bi Ptn	=> 5.10.3.10. Uni/Bi pattern
Update 11 : Uni / Bi Dot	=> 5.10.3.11. Uni/Bi dot
Update 12 : LED Pointer	=> 5.10.3.12. LED pointer

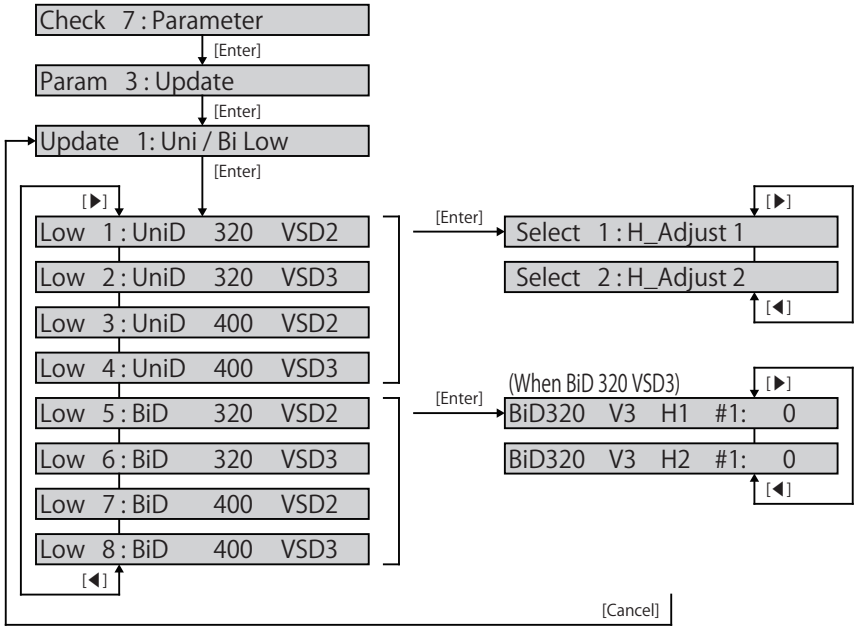
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3.1. UniD / BiD Low

● Operation panel



● Explanation

In this menu, perform to update UniD/BiD adjustment parameters (PG Low).
Each item is as follows

Item	Content
UniD 320 VSD2	UniD adjustment for 320cps, VSD 2
UniD 320 VSD3	UniD adjustment for 320cps, VSD 3
UniD 400 VSD2	UniD adjustment for 400cps, VSD 2
UniD 400 VSD3	UniD adjustment for 400cps, VSD 3
BiD 320 VSD2	BiD adjustment for 320cps, VSD 2
BiD 320 VSD3	BiD adjustment for 320cps, VSD 3
BiD 400 VSD2	BiD adjustment for 400cps, VSD 2
BiD 400 VSD3	BiD adjustment for 400cps, VSD 3

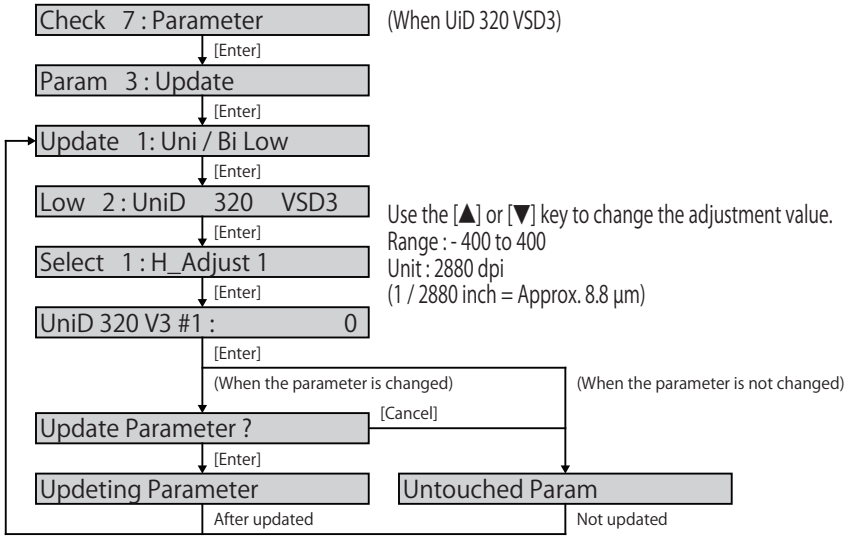
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3.1.1. UniD Low(H_Adjust1)

● Operation panel



● Explanation

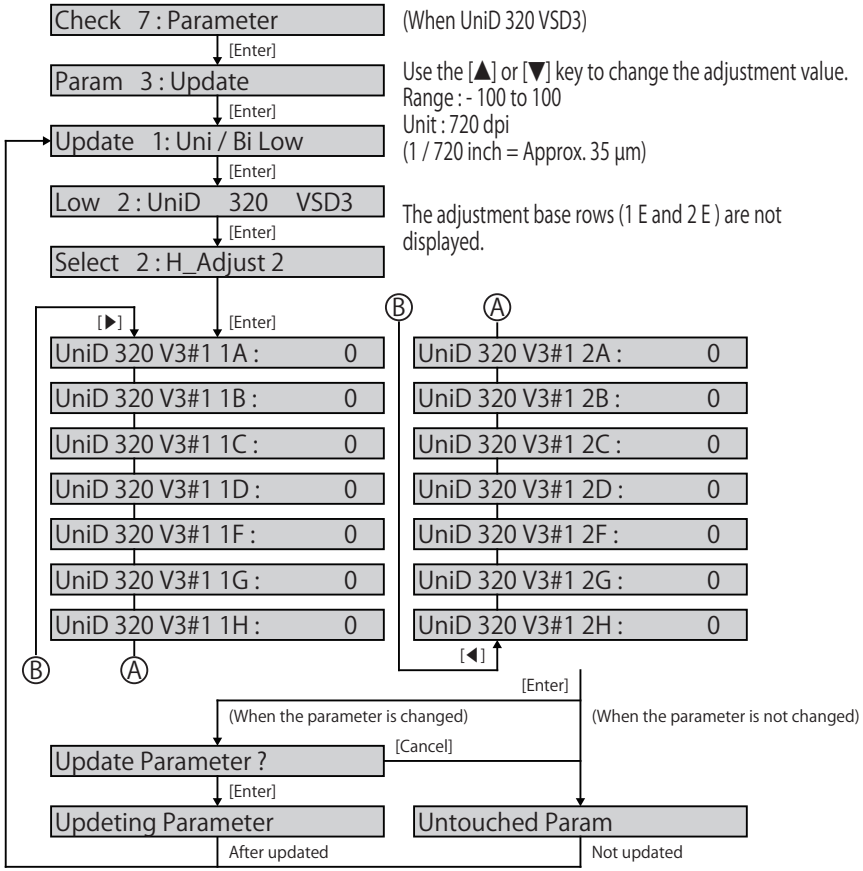
In this menu, perform to update UniD adjustment parameters (H_Adjust1).

TIP

index=> 5. Self-diagnosis

5.10.3.1.2. UniD Low(H_Adjust2)

● Operation panel



● Explanation

In this menu, perform to update UniD adjustment parameters (H_Adjust2).

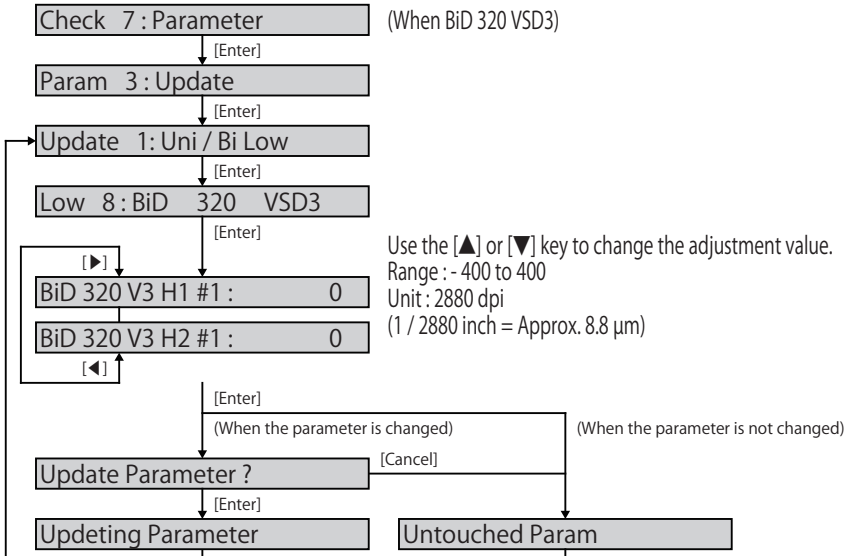
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3.1.3. BiD

● Operation panel



● Explanation

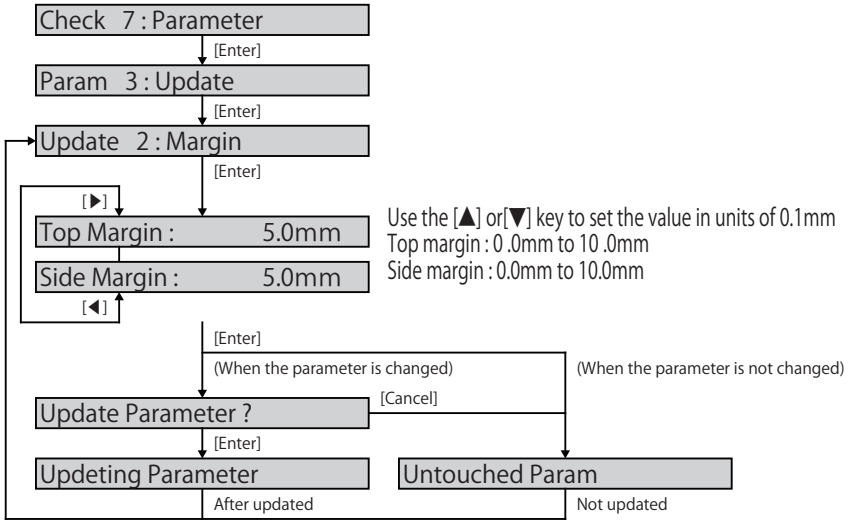
In this menu, perform to update BiD adjustment parameters.

TIP

index=> 5. Self-diagnosis

5.10.3.2. Margin parameter

● Operation panel



● Explanation

In this menu, perform to update mechanical position parameters (top and side margins).

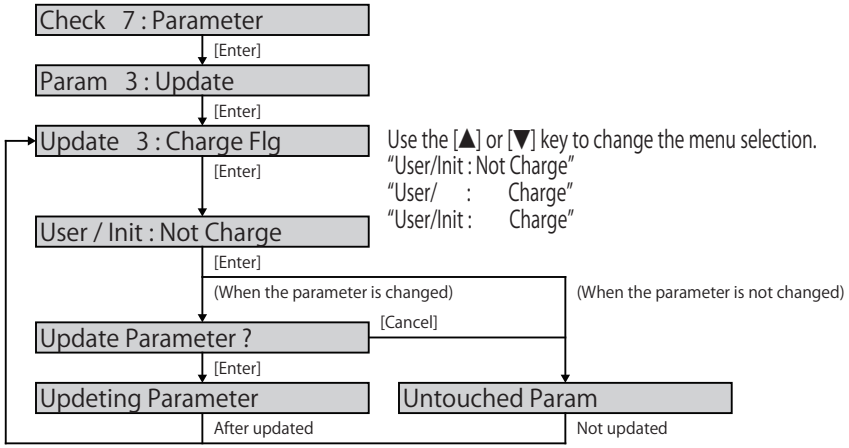
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3.3. Charge flag

● Operation panel



● Explanation

In this menu, perform to update the charge flag parameter
Each item is as follows.

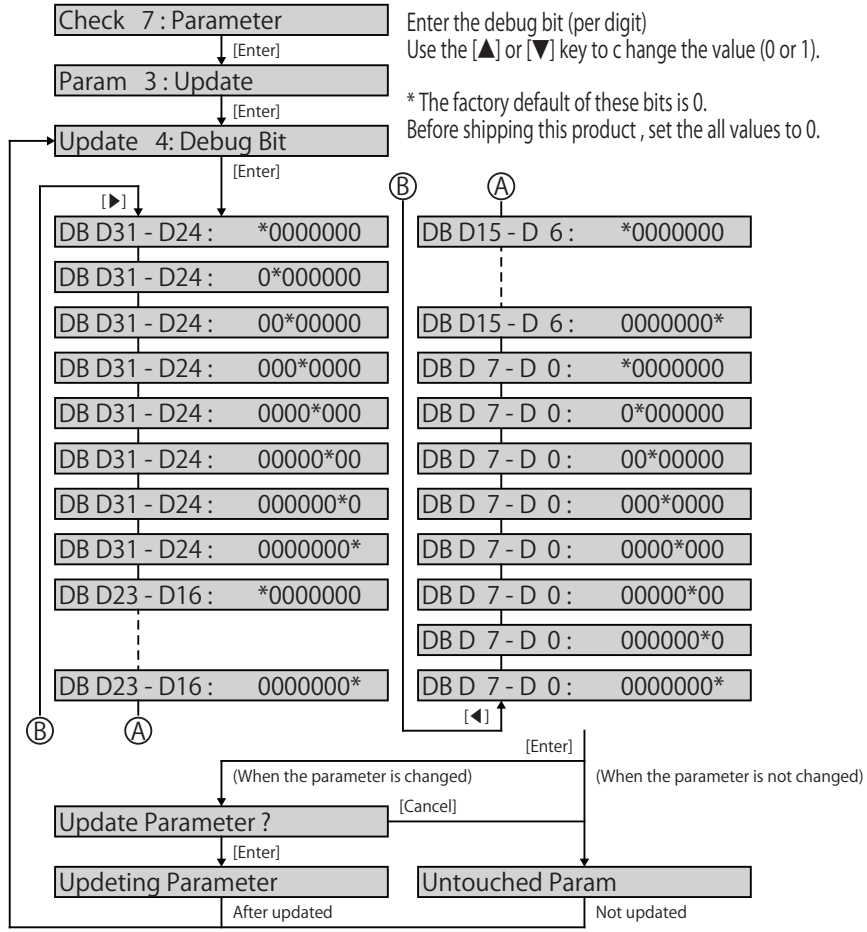
Item	Initial cleaning	Initial charge
User / Init : Not charge	Not completed	Not completed
User / : charge	Completed	Not completed
User / Init : charge	Completed	Completed

TIP

index=> 5. Self-diagnosis

5.10.3.4. Debug bit

● Operation panel



● Explanation

In this menu, perform to change debug bit.
(This is an experimental menu used in firmware.)

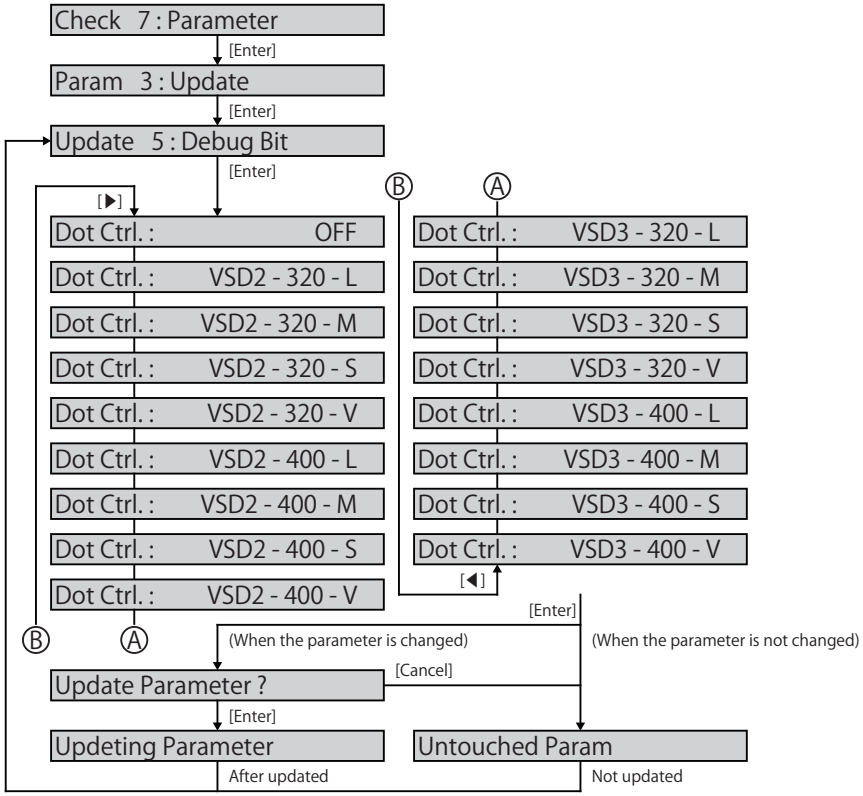
CONFIDENTIAL

TIP

index=> 5. Self-diagnosis

5.10.3.5. Dot control

● Operation panel



VSD3-320-L
Explanation of L, M, S, V
L: Large M: Medium S: Small V: Variable

* When you select the variable dot printing, the print data will be regarded as 2bit/dot pattern.
If you use the 1bit/dot pattern image, the print result will be halved in CR direction.

CONFIDENTIAL

● Explanation

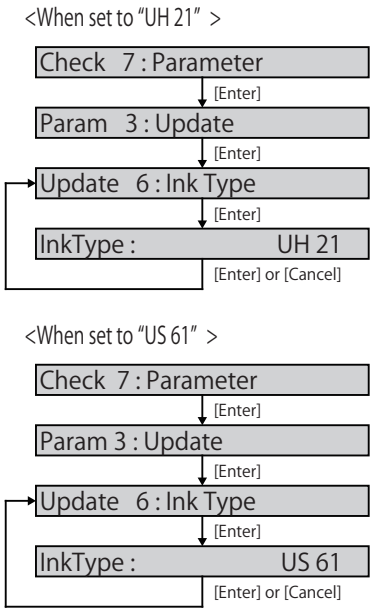
In this menu, perform to set dot control.(This is a debug menu.)
Specify the dot family and dot size for printing.
If it is set to OFF, dot control is automatically determined in accordance with the printing data.

TIP

index=> 5. Self-diagnosis

5.10.3.6. Ink type

● Operation panel



● Explanation

In this menu, display current ink type setting.

NOTE

- Ink type cannot be changed in this menu.

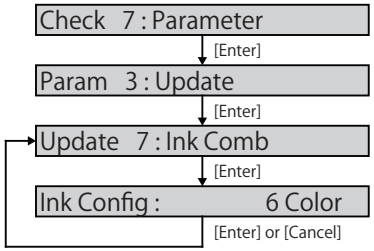
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3.7. Ink combination

● Operation panel



● Explanation

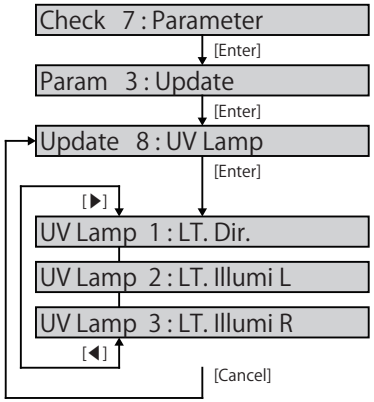
In this menu, display current ink combination.

TIP

index=> 5. Self-diagnosis

5.10.3.8. UV lamp

● Operation panel



● Explanation

In this menu, performe to set UV lamp control.
Set "lighting direction" and "lighting illuminance" of UV lamp.

Item	Content
UV Lamp 1:LT.Dir.	=> 5.10.3.8.1. Lighting direction
UV Lamp 2:LT.Illumi L	=> 5.10.3.8.2. Illuminance
UV Lamp 3:LT.Illumi R	=> 5.10.3.8.2. Illuminance

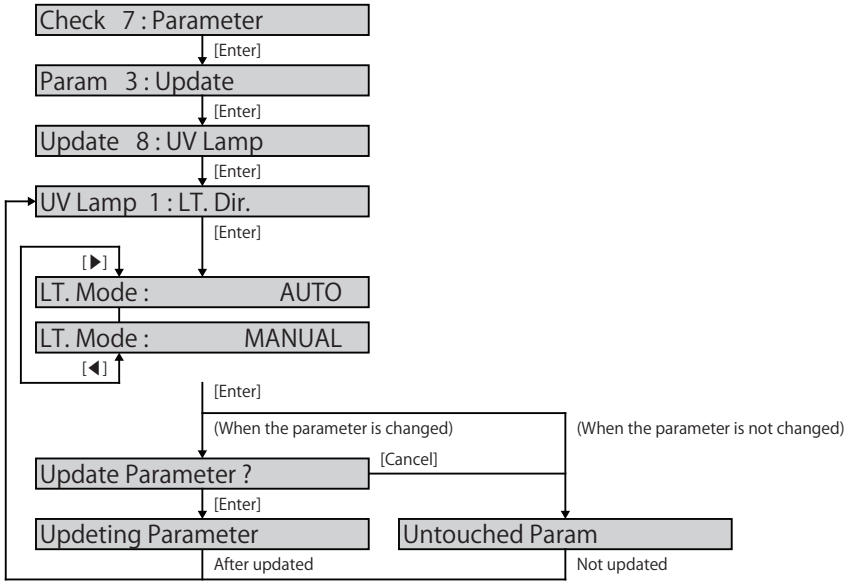
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3.8.1. Lighting direction

● Operation panel



● Explanation

In this menu, perform to set UV lamp lighting direction.

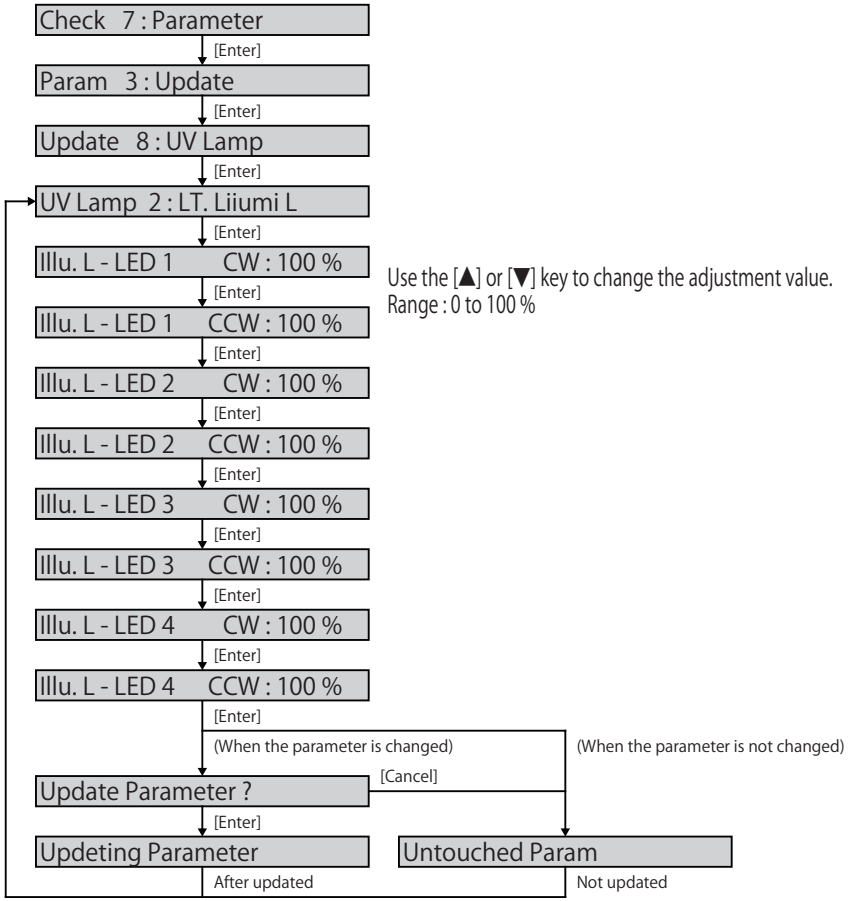
AUTO :Lights up in accordance with print data.
MANUAL :Lights up according to "Lighting intensity" menu setting.

TIP

index=> 5. Self-diagnosis

5.10.3.8.2. Illuminance

● Operation panel



CONFIDENTIAL

● Explanation

In this menu, perform to set UV lamp illuminance.
Setting flow is common with UV Lamp R/L.

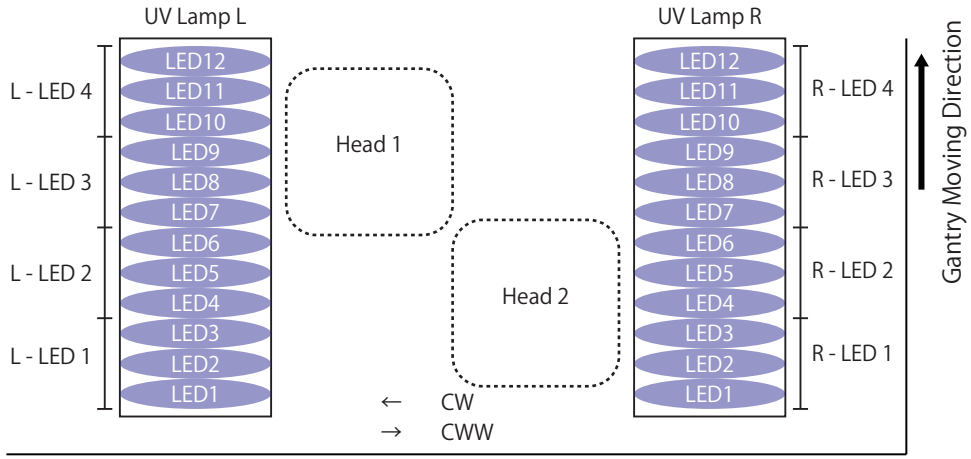
When "UV Lamp 1: LT. Dir." menu is set to "MANUAL", each LED illuminance can be set for each printing direction during printing.

Each item is as follows

UV Lamp-L		UV Lamp-R	
UV-LED block	Menu	UV-LED block	Menu
LED1 to LED3	L-LED1	LED1 to LED3	R-LED1
LED4 to LED6	L-LED2	LED4 to LED6	R-LED2
LED7 to LED9	L-LED3	LED7 to LED9	R-LED3
LED10 to LED12	L-LED4	LED10 to LED12	R-LED4

*1. CW direction is direction when carriage moves from right to left.
*2. CCW direction is direction when carriage moves from left to right.

● UV-LED Blocks



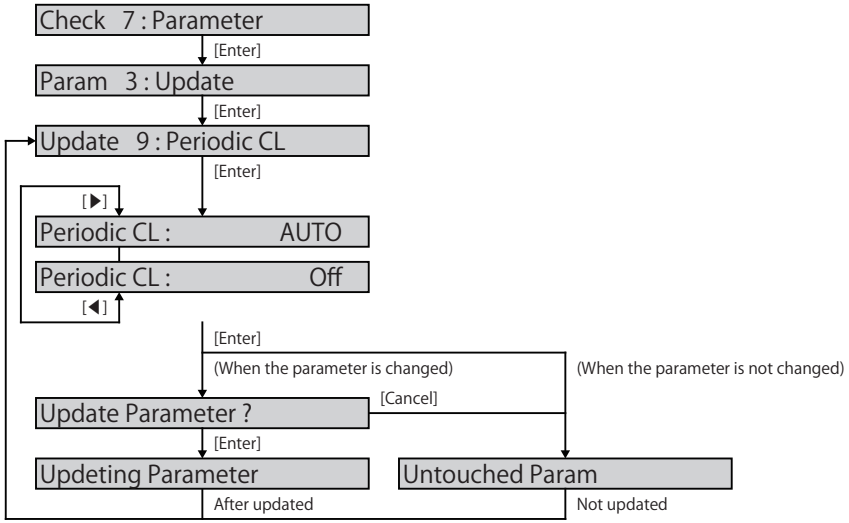
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.10.3.9. Periodic cleaning

● Operation panel



● Explanation

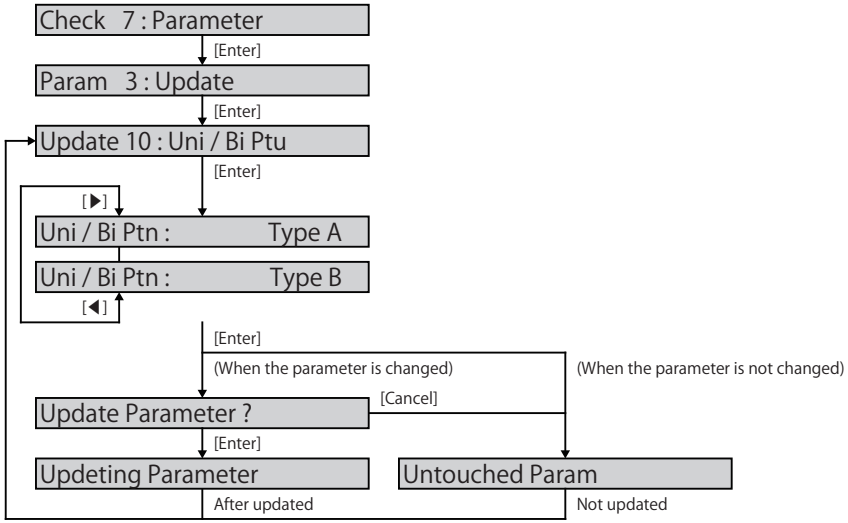
In this menu, perform to set periodic cleaning.
This periodic cleaning is a cleaning performed according to print head specifications, regardless of user mode setting.
Default value is "AUTO" to enable periodic cleaning function.
If set to "Off", following periodic cleaning will be disabled.
- Before printing: cleaning performed according to print head specifications
- At power-on: cleaning performed when in cap-out state

TIP

index=> 5. Self-diagnosis

5.10.3.10. Uni/Bi pattern

● Operation panel



● Explanation

In this menu, perform to set Uni-D and Bi-D adjustment pattern in self diagnosis mode.
The patterns for UniD/ BiD UniD ALL/ BiD ALL/ Adjust ALL will be printed with this setting.
The default setting is set to "Type A"
When “Uni/Bi Ptn: Type A” is selected , the line pattern will be printed.
When “Uni/Bi Ptn: Type B” is selected , the line and block pattern will be printed.

● Adjustment pattern

Type A Type B

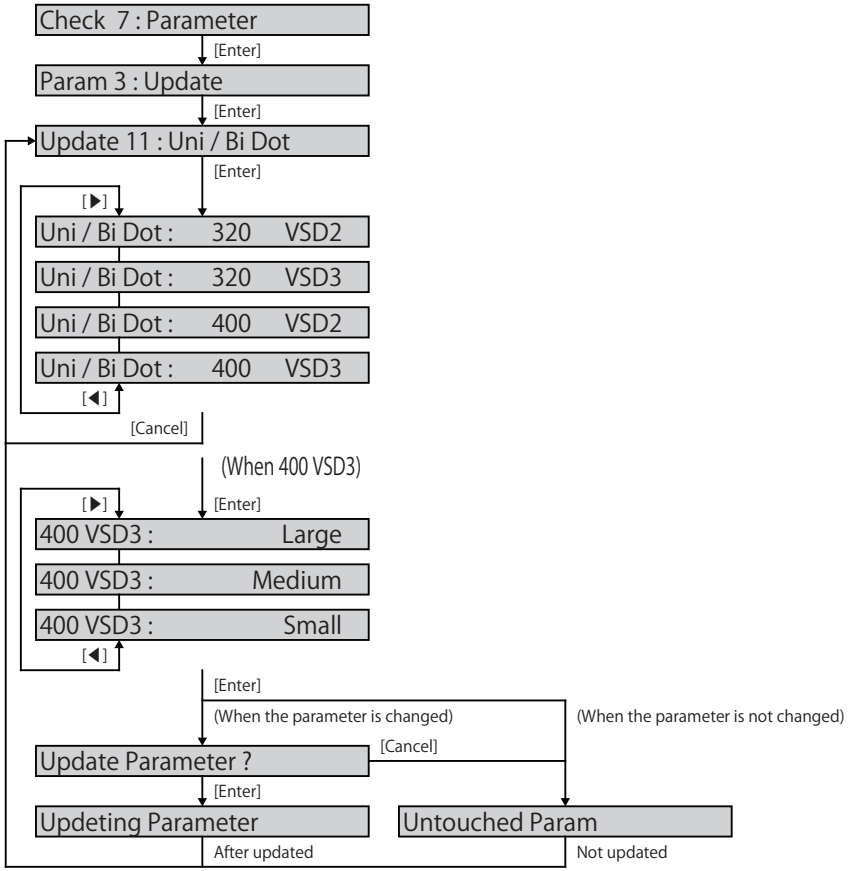
CONFIDENTIAL

TIP

index=> 5. Self-diagnosis

5.10.3.11. Uni/Bi dot

● Operation panel



● Explanation

In this menu, perform to set dot size to print Uni/Bi pattern in user mode and the self diagnosis mode
The default setting is set to “Medium”.
Dot size can be specified for each waveform as well as for each print speed. This setting will be applied to pattern printings in user mode and self diagnosis mode.

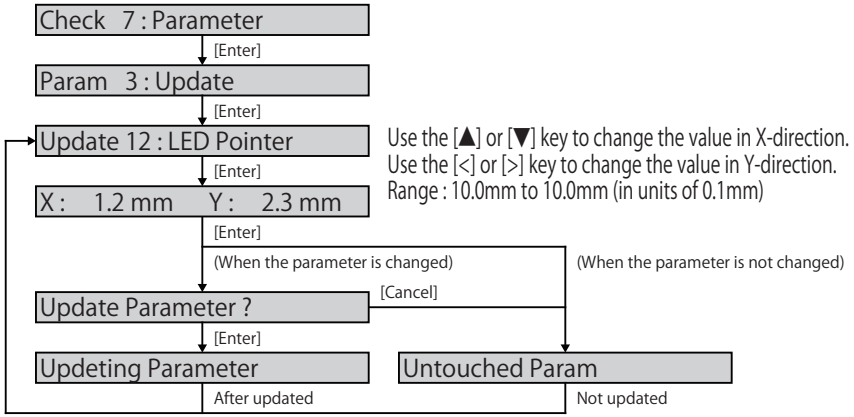
CONFIDENTIAL

TIP

index=> 5. Self-diagnosis

5.10.3.12. LED pointer

● Operation panel



● Explanation

In this menu, perform to update LED pointer parameter.

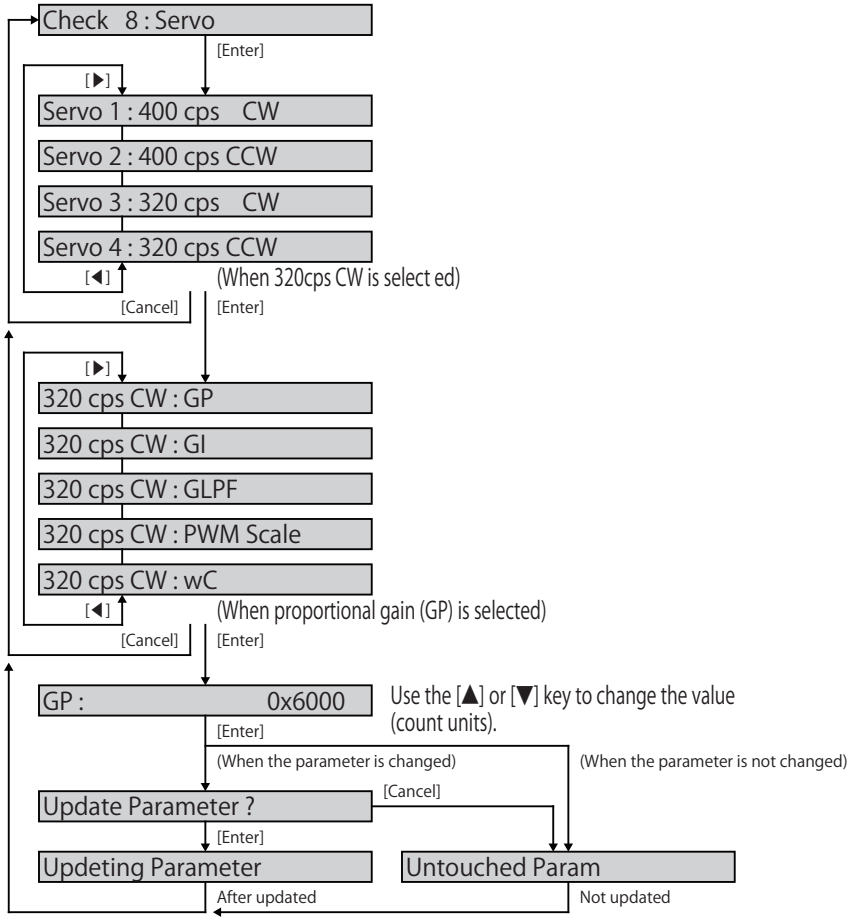
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.11. Servo

● Operation panel



● Explanation

In this menu, perform to set servo.
Each item is as follows.

Item	Content
Servo1 : 400cps CW	Servo setting for CW direction (400cps)
Servo2 : 400cps CCW	Servo setting for CCW direction (400cps)
Servo3 : 320cps CW	Servo setting for CW direction (320cps)
Servo4 : 320cps CCW	Servo setting for CCW direction (320cps)

Item	Content
320cps CW : GP	Proportional gain setting
320cps CW : GI	Integral gain setting
320cps CW : GLPF	Low-pass filter setting
320cps CW : PWM Scale	PWM scale setting
320cps CW : wC	ω C setting

Item	Minimum Value	Maximum Value	Count
GP (Proportional gain)	0x1000	0x7800	0x200
GI (Integral gain)	0x0002	0x0800	1
GLPF (Low-pass filter)	0	255	1
PWM (PWM scale)	10	15	1
ω C (w C)	30	60	5

Item	GP	GI	GLPF	PWM	ω C
400cps CW	0x1400	0x0040	190	13	45
400cps CCW	0x2a00	0x0040	200	13	45
320cps CW	0x2800	0x0050	200	13	45
320cps CCW	0x2800	0x0050	200	13	45

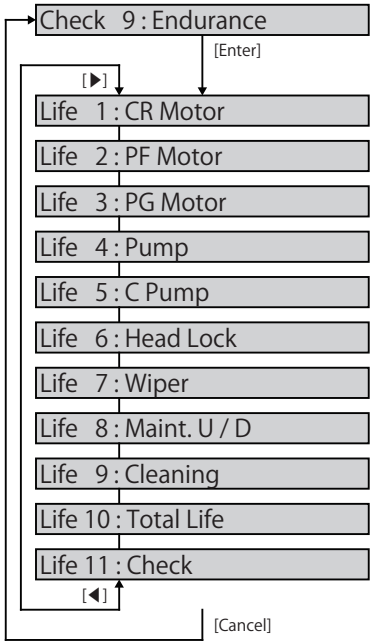
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12. Endurance

● Operation panel



● Explanation

In this menu, perform to check endurance operation.
Each item is as follows.

Item	Content
Life1 : CR Motor	=> 5.12.1. CR motor
Life2 : PF Motor	=> 5.12.2. PF motor
Life3 : PG Motor	=> 5.12.3. PG motor
Life4 : Pump	=> 5.12.4. Pump
Life5 : CPump	=> 5.12.5. Circulation pump
Life6 : Head Lock	=> 5.12.6. Head lock
Life7 : Wiper	=> 5.12.7. Wiper
Life8 : Maint. U/D	=> 5.12.8. Maintenance unit U/D
Life9 : Cleaning	=> 5.12.9. Cleaning
Life10 : Total Life	=> 5.12.10. General endurance
Life11 : Check	=> 5.12.11. Endurance check

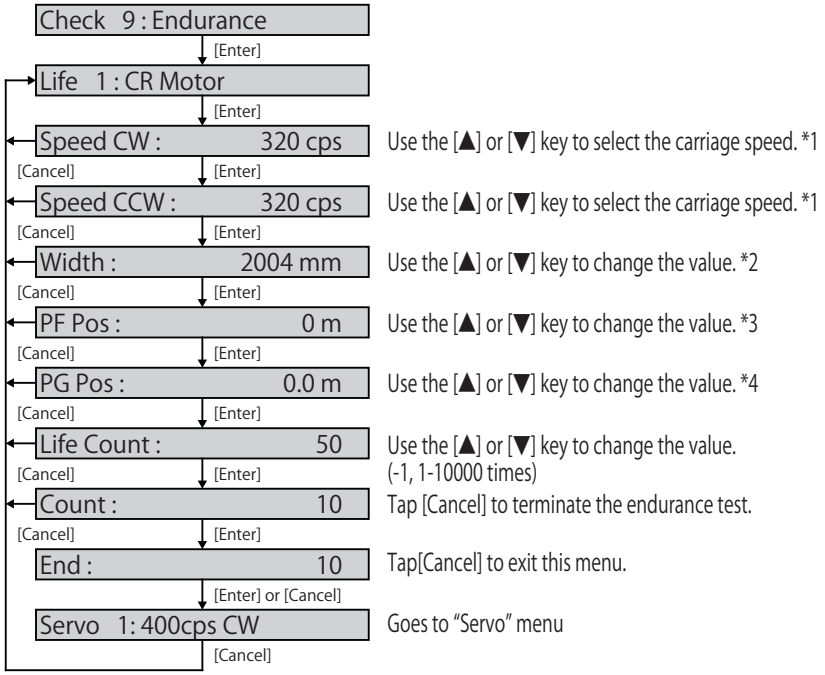
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.1. CR motor

● Operation panel



● Explanation

In this menu, perform CR motor endurance test.
The carriage is scanned a specified travel distance at a specified speed for a specified number of times at the specified gantry position. If "Life Count" is set to -1, this test is repeated until [Cancel] is tapped. The maximum count number is 99,999,999 (8 digits). If it exceeds the maximum, the count will be reset to 0.
*Note: This endurance test can be also performed with media loaded.

NOTE

The display goes back to " Endurance Test Menu
* 1 Selectable speed
  320cps, 400cps
* 2 Range of the carriage travel distance
  400mm to 2004 mm
*3. Range of the gantry position in the front and back direction (PF direction)
  0 mm to 990 mm
*4. Range of the gantry position in the z axis
  0.0 mm to 150.0 mm (0.1 mm increment)

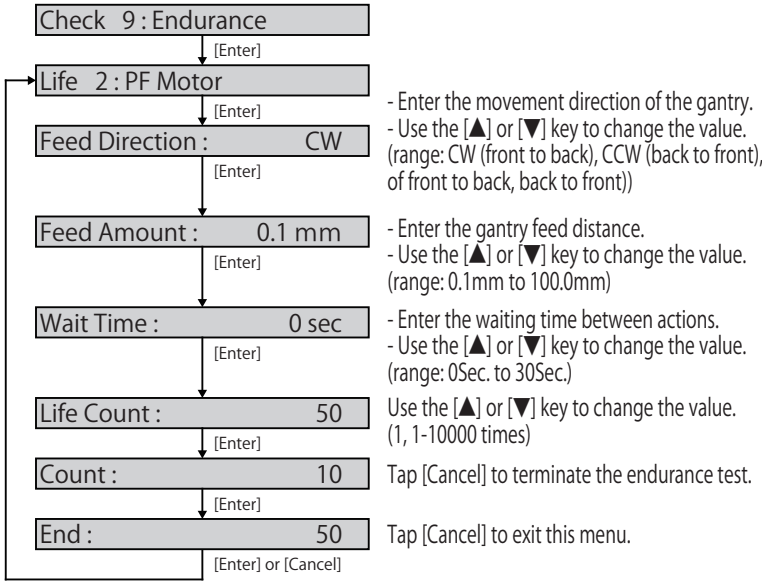
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.2. PF motor

● Operation panel



● Explanation

In this menu, perform PF motor endurance test.
PF motor runs a specified number of times.
If “Life Count” is set to -1, this test If number of times is set to -1, operation is repeated until [Cancel] is tapped.
Maximum count number is 99,999,999 (8 digits). If exceeded, count will be reset to 0.

NOTE

*When CW/CCW is selected in Feed Direction
Gantry has the maximum travel range. When the gantry moves to its limit, it will automatically move back to the start position and will continue the endurance test.
If the gantry reaches its limit of travel in the middle of the media feeding, it will count as one operation.
*When BOTH is selected in Feed Direction
The gantry repeats movement back and forth according to the input feed amount. One round trip is counted as one.

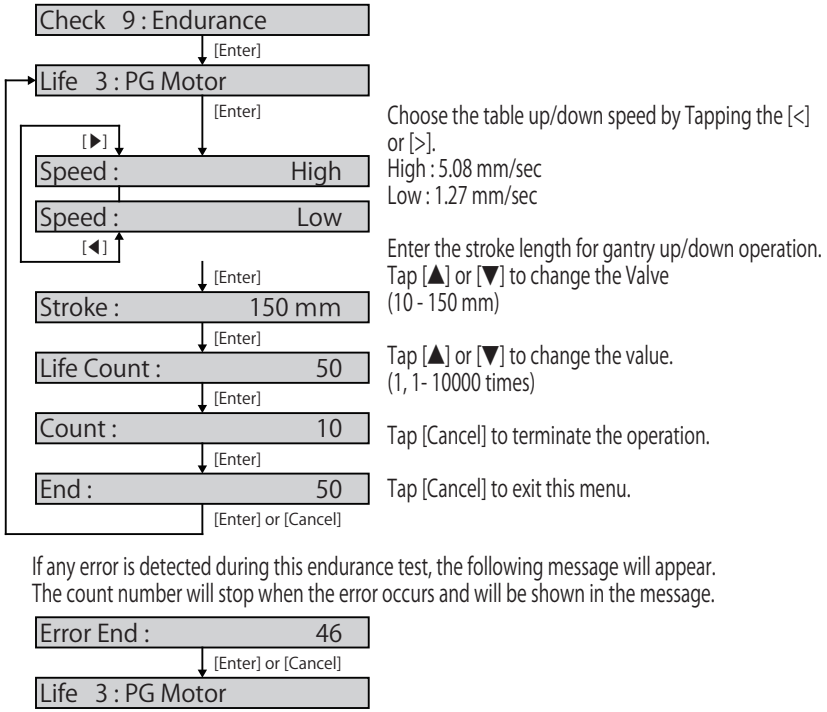
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.3. PG motor

● Operation panel



● Explanation

In this menu, perform PG motor endurance test.
PG motor runs a specified number of times.
If “Life Count” is set to -1, this test is repeated until [Cancel] is pressed.
Maximum count number is 99,999,999 (8 digits).
If it exceeds the maximum, the count will be reset to 0.

NOTE

* This endurance test will have 60 seconds interval per one up and down movement for motor driver heat prevention.

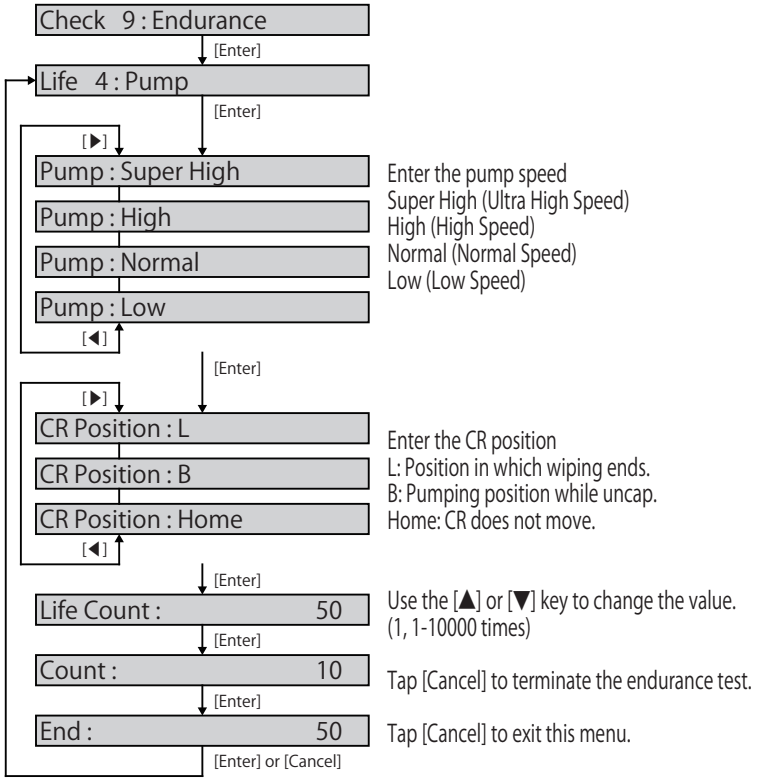
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.4. Pump

● Operation panel



● Explanation

In this menu, perform pump endurance test.
Pump runs a specified number of times.
If "Life Count" is set to -1, this test is repeated until [Cancel] is tapped.
Maximum count number is 99,999,999 (8 digits).

NOTE

- The operation sequence
  1 The pump endurance operation starts.
  2 The pump rotates at the specified speed.

Speed Mode options:	Suction time:
Super High (Ultra high speed):	10.0 seconds
High (High speed):	10.0 seconds
Normal (Normal speed):	10.0 seconds
Low (Low speed):	10.0 seconds

  3 After finishing step 2, the counter counts up the number.
  Return to step 2.
  Repeat the procedure until it reaches a set number.
  4 When it reaches a set number, the pump endurance test is completed.

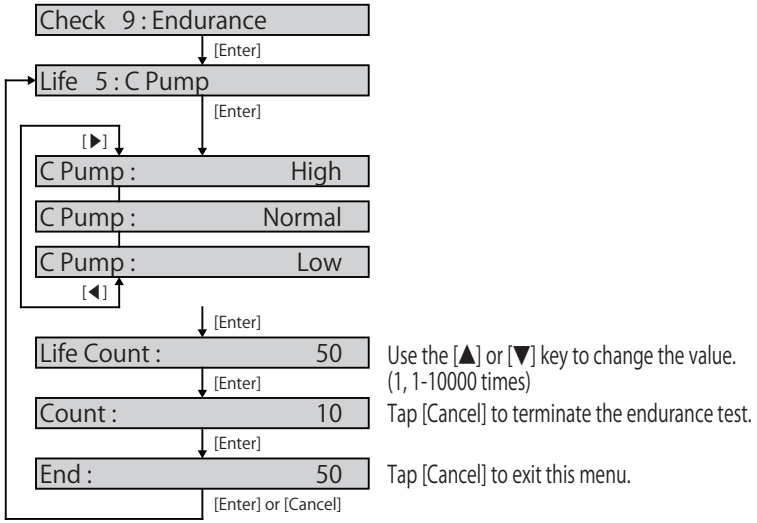
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.5. Circulation pump

● Operation panel



● Explanation

In this menu, perform circulation pump endurance test.
Circulation pump runs a specified number of times.
If "Life Count" is set to -1, this test is repeated until [Cancel] is tapped.
Maximum count number is 99,999,999 (8 digits).

NOTE

- The current operation sequence
  1 The circulation pump endurance operation starts.
  2 The circulation pump rotates at specified speed

Speed Mode options:	Suction Time:
High (High speed):	10.0 seconds
Normal (Normal speed):	10.0 seconds
Low (Low speed):	10.0 seconds

  3 The operation stops for 60.0 seconds.
  4 After finishing step 3, the counter counts up the number.
  Return to step 2.
  Repeat the procedure until it reaches a set number.
  5 When it reaches a set number, the circulation pump endurance test is completed.

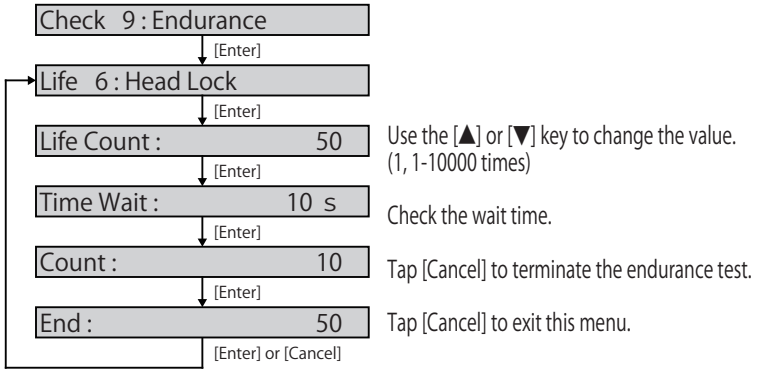
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.6. Head lock

● Operation panel



● Explanation

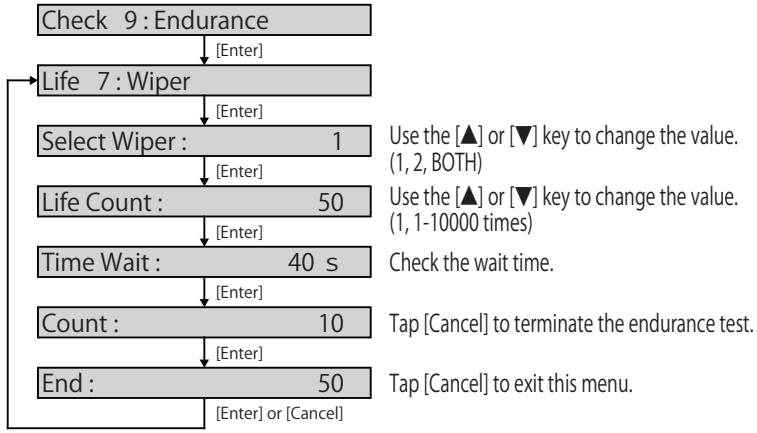
In this menu, perform head lock endurance test.
Lock/unlock operation of the head lock is performed a specified number of times.
If the specified number of times is set to -1, the operation is repeated until [Cancel] is tapped.
Maximum count number is 99,999,999 (8 digits).

TIP

index=> 5. Self-diagnosis

5.12.7. Wiper

● Operation panel



● Explanation

In this menu, perform wiper endurance test.
Perform ON / OFF operation of wiper solenoid for specified number of time.
If "Life Count" is set to -1, this test is repeated until [Cancel] is tapped.
Maximum count number is 99,999,999 (8 digits).

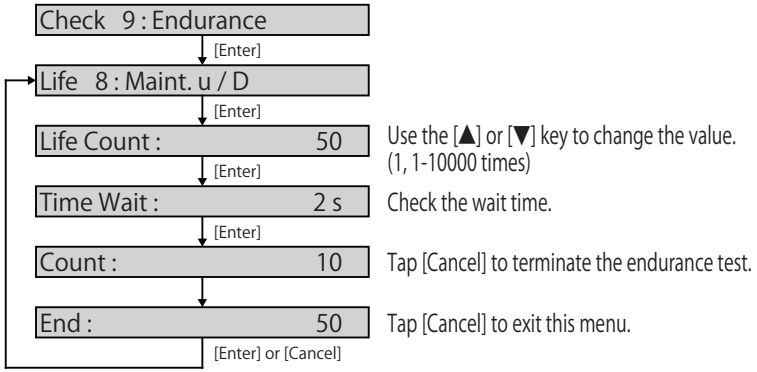
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.8. Maintenance unit U/D

● Operation panel



● Explanation

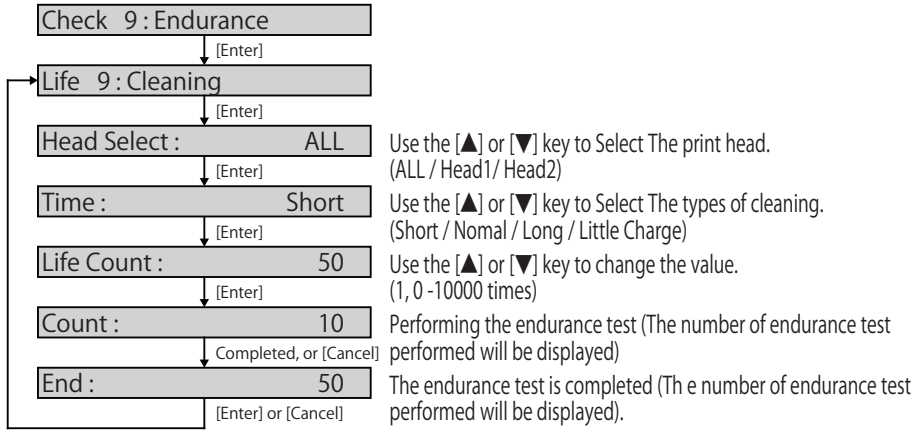
In this menu, perform maintenance unit endurance test.
Up / Down operation of the maintenance unit is performed for specified number of time.
When number of time is set to –1, endurance test will be repeated until [Cancel] key is pressed.
Maximum count number is 99999999 times (8 digits).

TIP

index=> 5. Self-diagnosis

5.12.9. Cleaning

● Operation panel



● Explanation

In this menu, perform repeated cleaning cycle.
Select print head and types of cleaning and specify number of time test is performed.

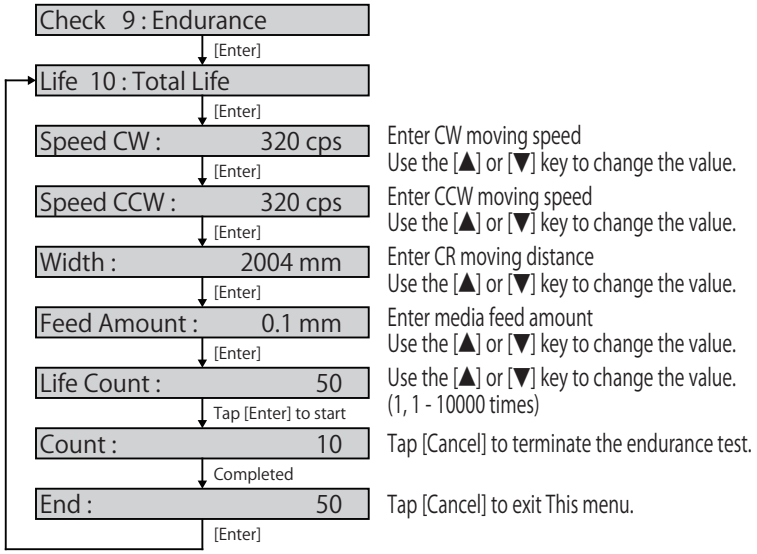
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.12.10. General endurance

● Operation panel



● Explanation

In this menu, perform endurance test of CR and PF at same time.
If specified number of times is set to -1, operation is repeated until [Cancel] is tapped.
Maximum count number is 99,999,999 (8 digits).

Number of reciprocations of the carriage: Once
Number of times that the gantry is feed: Once

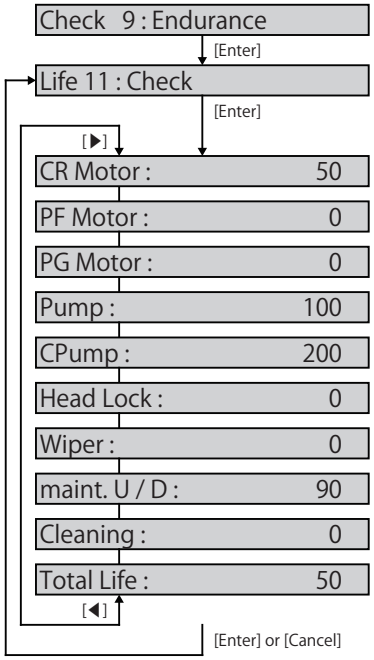
In this menu, above operations are counted as one set of operation.
As a count, above set of operation is displayed.

TIP

index=> 5. Self-diagnosis

5.12.11. Endurance check

● Operation panel



● Explanation

In this menu, display number of times that endurance test is performed.
Even if system error occurs, you can check number of endurance tests performed before occurrence of error because number is stored in NVRAM.

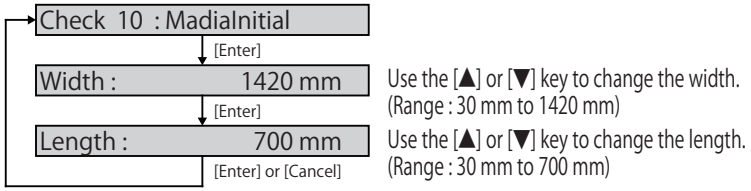
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.13. Media initialization

● Operation panel



● Explanation

In this menu, perform to set media detection.
Each item is as follows.

Item	Content
Width	Enter media width. (30mm to 1420mm)
Length	Enter media length. (30mm to 700mm)

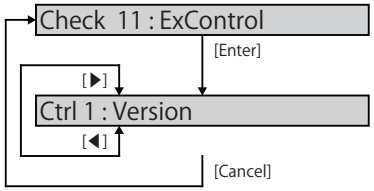
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.14. ExControl

● Operation panel



● Explanation

In this menu, display control board information.
Each item is as follows.

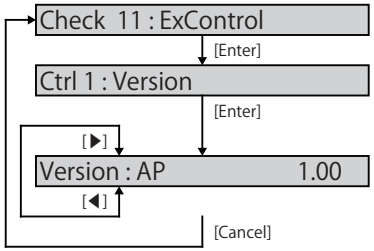
Item	Content
Ctrl1 : Version	=> 5.14.1. Version

TIP

index=> 5. Self-diagnosis

5.14.1. Version

● Operation panel



● Explanation

In this menu, display ROM version of controller board firmware.
Firmware version (AP version) is displayed in “XX.XX” form.

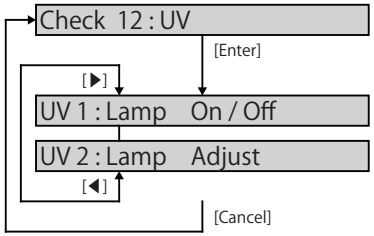
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.15. UV-LED

● Operation panel



● Explanation

In this menu, perform to check UV-LED operation.
Each item is as follows.

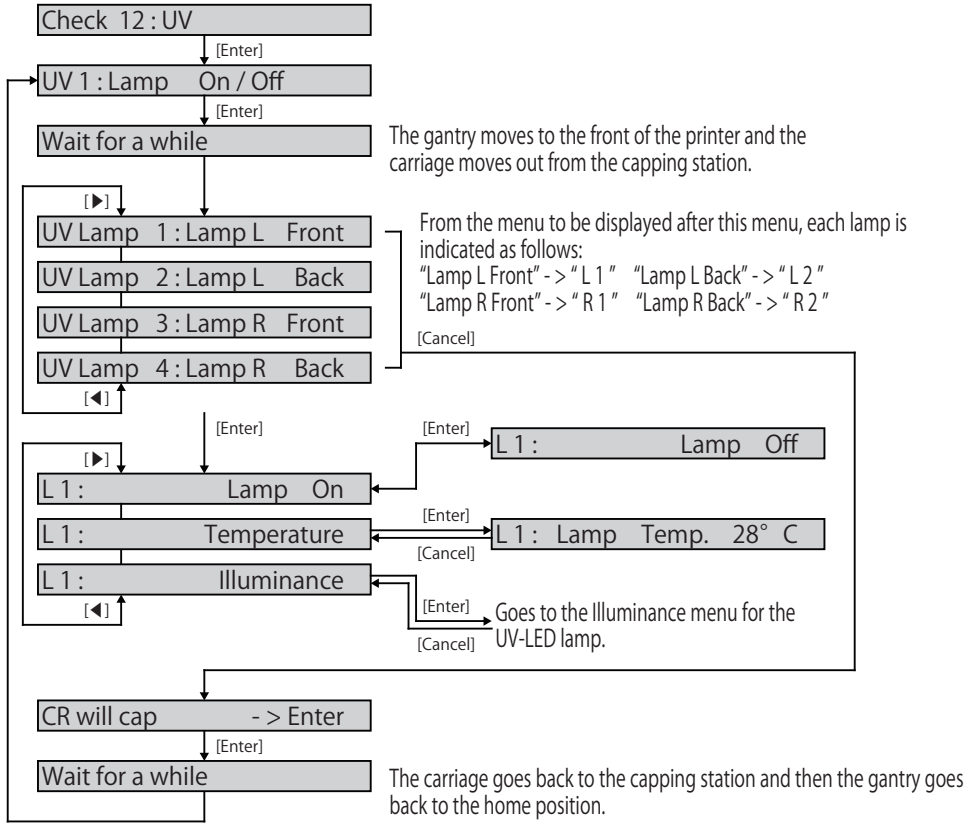
Item	Content
UV1 : Lamp On/Off	=> 5.15.1. UV lamp On/Off
UV2 : Lamp Adjust	=> 5.15.2. Lamp adjustment

TIP

index=> 5. Self-diagnosis

5.15.1. UV lamp On/Off

● Operation panel



● Explanation

In this menu, perform to check if UV Lamp is On/Off.

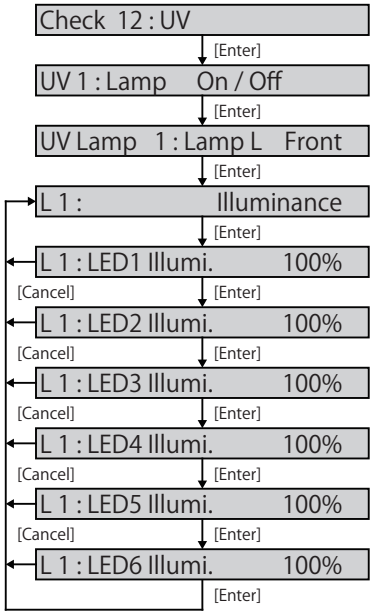
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.15.1.1. Illuminance

● Operation panel

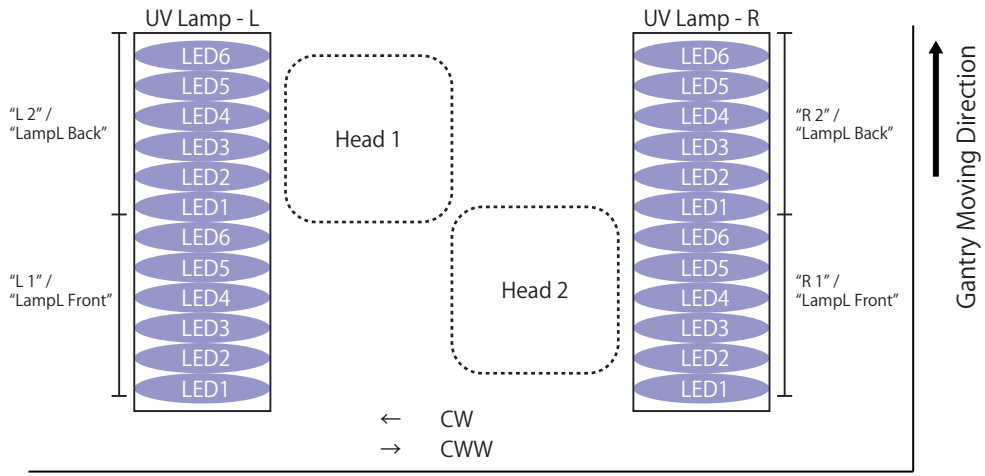


Enter the illuminance for UV LED block 1 to 6"
Use the [▲] or [▼] to set the value
(Range : 0 % to 100 %, 5 % increments)

● Explanation

In this menu, perform to check illuminance setting by UV LED block.
Setting is initialized after you exit from the "UV Lamp" menu.
Menu flow is common with UV Lamp R/L.

● UV LED Blocks



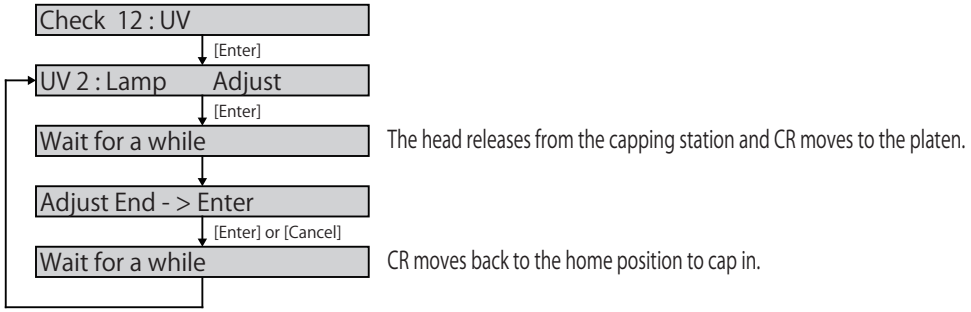
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.15.2. Lamp adjustment

● Operation panel



● Explanation

In this menu, perform to adjust UV Lamp when mounting to printer.

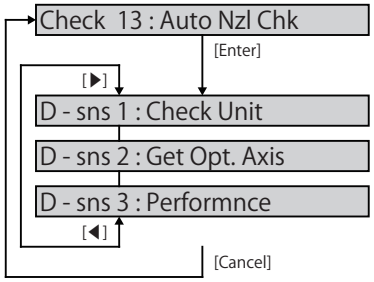
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.16. Auto nozzle detection

● Operation panel



● Explanation

In this menu, perform to check auto nozzle detection operation.
Each item is as follows.

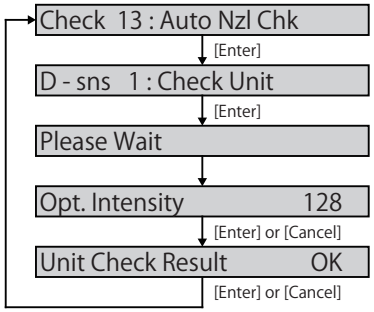
Item	Content
D-sns1 : Check Unit	=> 5.16.1. Check unit
D-sns2 : Get Opt.Axis	=> 5.16.2. Get Optical Axis
D-sns3 : Performance	=> 5.16.3. Performance

TIP

index=> 5. Self-diagnosis

5.16.1. Check unit

● Operation panel



● Explanation

In this menu, perform to check auto nozzle detection at initial operation.
Each item is as follows.

Item	Content
Opt.Intensity	LED light intensity settings in the digital potentiometer
Unit Check Result	Completion or incompletion of dummy nonfiring detection

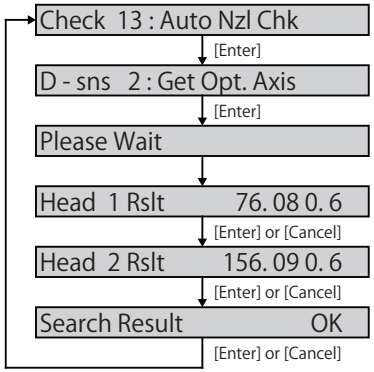
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.16.2. Get Optical Axis

● Operation panel



● Explanation

In this menu, perform to check auto nozzle detection at optical axis search operation.
Each item is as follows.

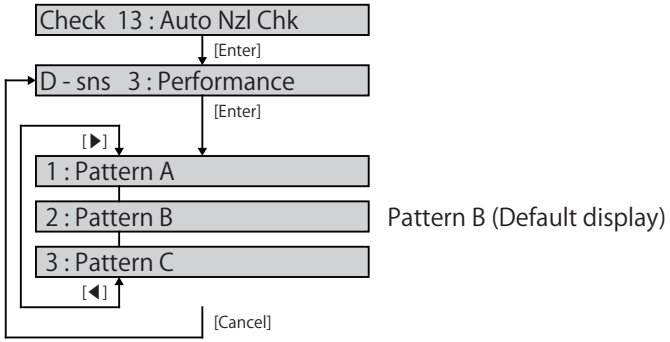
Item	Content
Head 1 Rslt	Position and width of optical axis (for head 1)
Head 2 Rslt	Position and width of optical axis (for head 2)
Search Result	Completion or incompletion of the optical axis search

TIP

index=> 5. Self-diagnosis

5.16.3. Performance

● Operation panel



● Explanation

In this menu, perform to check if the drop sensor can detect non-firing nozzles properly. The detection accuracy inspection can be performed on all nozzles or some designated nozzles which were intentionally induced non-firing state.
Each item is as follows

Item	Content
1 : Pattern A	=> 5.16.3.1. Pattern A
2 : Pattern B	=> 5.16.3.2. Pattern B
3 : Pattern C	=> 5.16.3.3. Pattern C

TIP

index=> 5. Self-diagnosis

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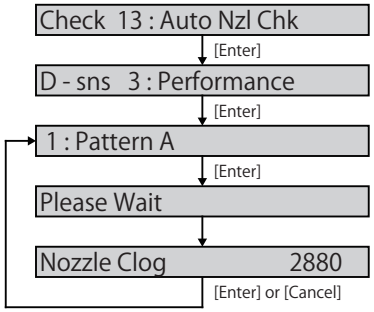
5.16.3.1. Pattern A

● Operation panel



● Explanation

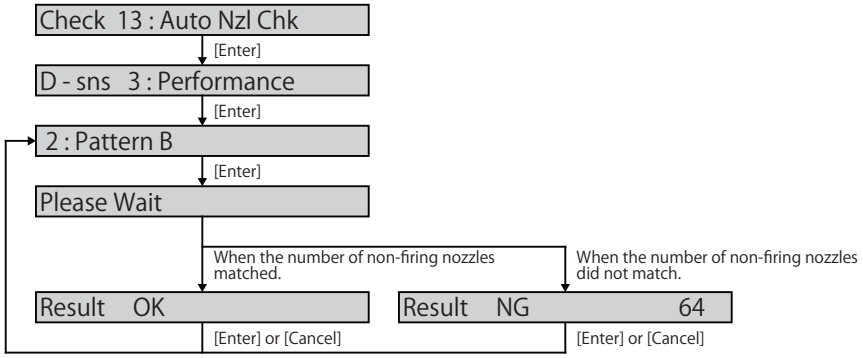
Pattern A runs a non-firing detection on all nozzles and displays the number of non-firing nozzles detected (Range : 0 to 2880)

TIP

index=> 5. Self-diagnosis

5.16.3.2. Pattern B

● Operation panel



● Explanation

Pattern B intentionally induces non-firing states on the designated nozzles and checks if the sensor detects them correctly.
The designated nozzles are every 50 nozzles from 1 st to 151 st nozzles in all nozzle rows as follows:
1, 51, 101, 151 (in all nozzle rows)
The printer runs a normal non-firing detection on the rest of nozzles.
The detection accuracy is determined on the designated nozzles only.
[When the sensor detected that the designated nozzles are all blocked]
=>The sensor works correctly. The message “Result OK” will be displayed.
[When the sensor detected that some of the designated nozzles are firing properly]
=>The sensor gave false detection. The message “Result Mismatch” will be displayed with the number of false detected nozzles.

TIP

index=> 5. Self-diagnosis

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5.16.3.3. Pattern C

● Explanation

Pattern C runs detection accuracy inspection in the same manner as Pattern B on the doubled number of nozzles as follows:

1, 26, 51, 76, 101, 126, 151, 176 (in all nozzle rows)

TIP

index=> 5. Self-diagnosis

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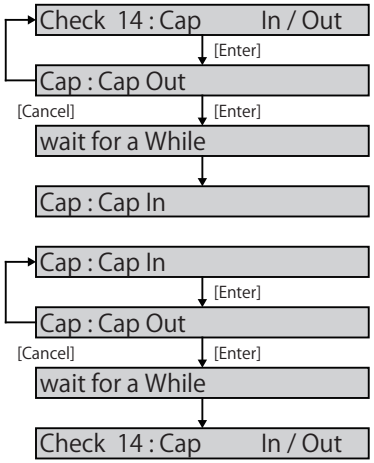
5.17. Cap in/out

● Operation panel



<When the head is in the capping station>

Cap out :
The head releases from the capping station and CR moves to the platen.

<When the head is released from the capping station>

Cap in :
CR moves back to the home position to cap-in.

● Explanation

In this menu, perform cap-out operation.
Each item is as follows.

Item	Content
Cap : Cap Out	After [Enter] key is pressed, caps out and carriage moves to evacuation position.
Cap : Cap In	After pressing [Enter] key, carriage is moved to home position and capped in.

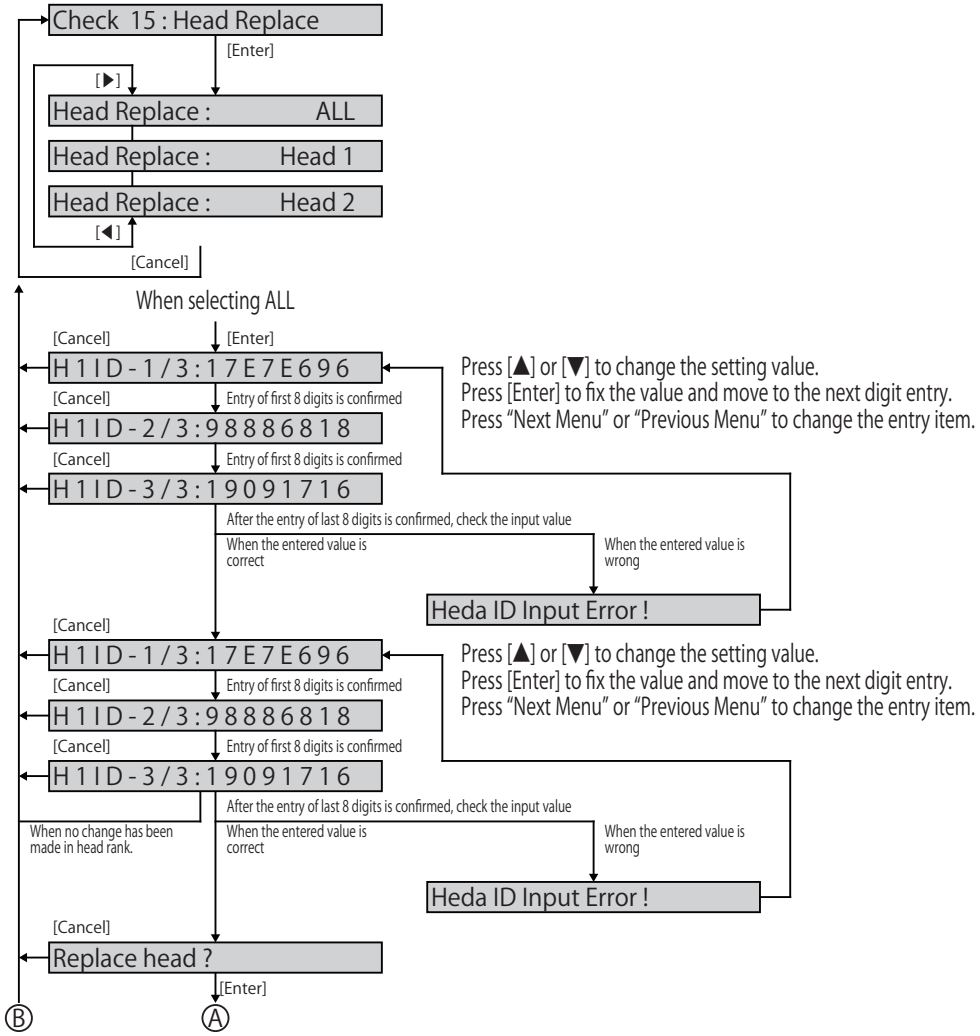
TIP

index=> 5. Self-diagnosis

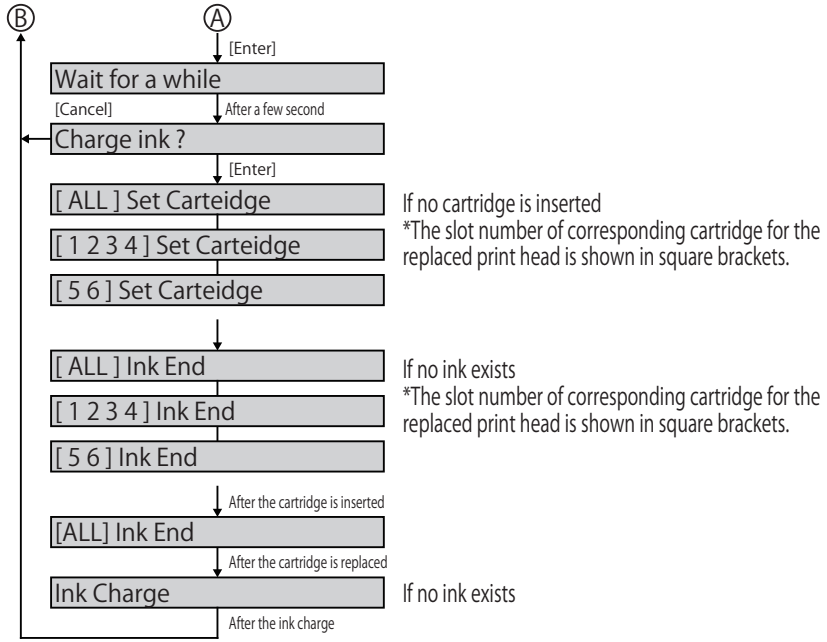
CONFIDENTIAL

5.18. Head replacement

● Operation panel (1)



● Operation panel (2)



● Explanation

In this menu, perform head replacement.
Each item is as follows

Item	Content
HeadReplace : ALL	Enter head ranks of Head 1/2 and reset those lifetime counters.
HeadReplace : Head1	Enter the head rank of Head 1 and reset the Head 1 lifetime counter.
HeadReplace : Head2	Enter the head rank of Head 2 and reset the Head 2 lifetime counter.

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TIP

index=> 5. Self-diagnosis

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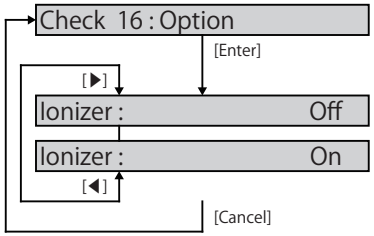
5.19. Option

● Operation panel



● Explanation

In this menu, perform to set option parts.
Each item is as follows.

Item	Content
Ionizer	=> 5.5.5.6. Ionizer

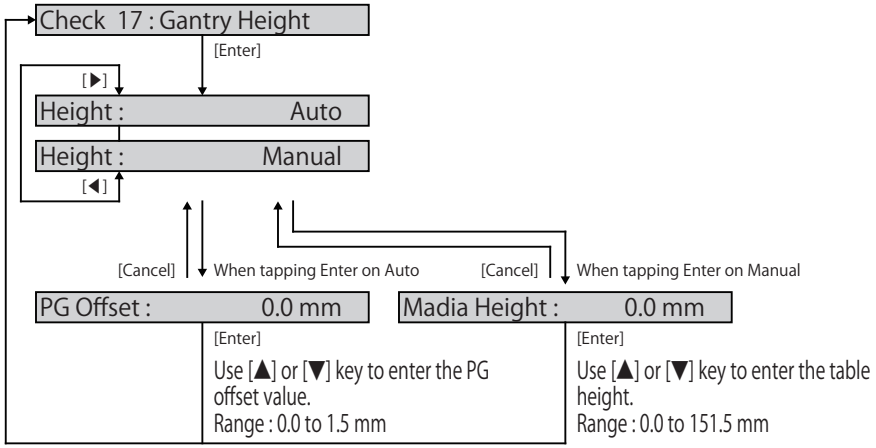
TIP

index=> 5. Self-diagnosis

CONFIDENTIAL

5.20. Gantry height

● Operation panel



● Explanation

In this menu, perform to set gantry height.

TIP

index=> 5. Self-diagnosis

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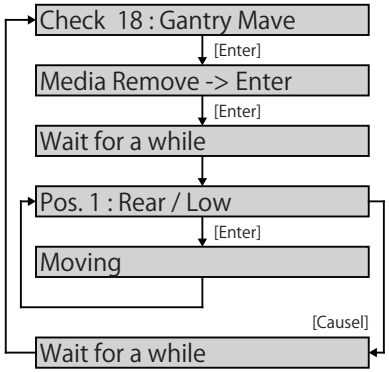
5.21. Gantry move

● Operation panel



● Explanation

IIn this menu, perform to move gantry to select position.
Each item is as follows

Item	Gantry position	
	In PF direction	In PG direction
Pos. 1 : Rear / Low	Rear side	Lowest position
Pos. 2 : Rear / High	Rear side	Top position
Pos. 3 : Front / High	Front side	Top position
Pos. 4 : Front / Low	Front side	Lowest position

TIP

index=> 5. Self-diagnosis

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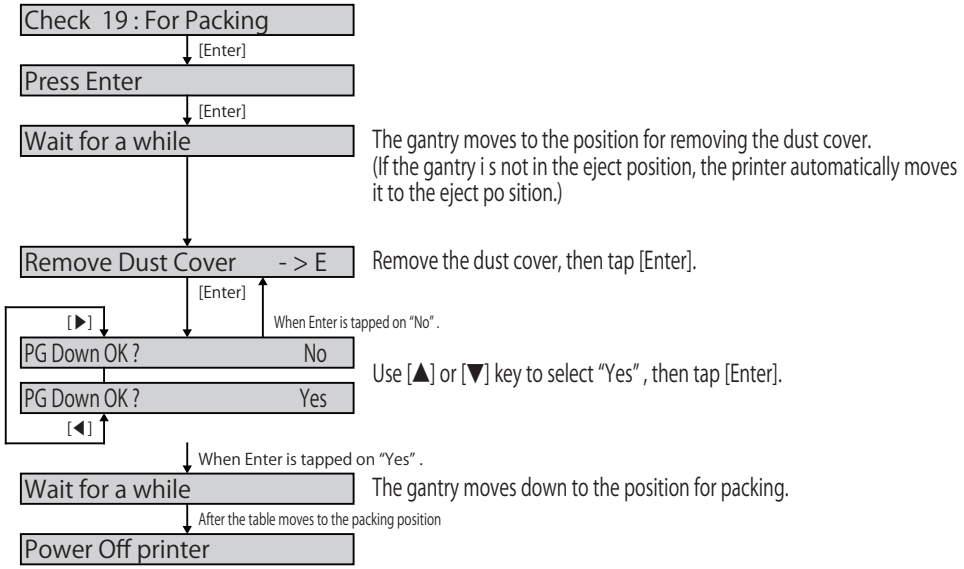
5.22. For packing

● Operation panel



● Explanation

In this menu, perform re-packing preparation.

NOTE

- Move table to position for packing.
- After move, it displays message to turn off.
  Thereafter, no operations other than turning off power are allowed.

TIP

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6. Maintenance

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6.1. Introduction

This chapter provides information about the periodical services, part life, lubrication/bonding, and transport.

WARNING

- When using this product, you must follow the safety precautions provided in following document to avoid the risks to person and damage to property.
  =>XPJ-1462UF Safety Precautions

CAUTION

- Read the installation manual and operation manual carefully before starting the operation. Otherwise, you may be injured.
  => Installation manual
  => Operation manual
- Before starting part(s) replacement, always perform following operations.
  - Turn OFF power.
  - Remove Power plug from outlet.
    Otherwise, you may suffer electric shock or system circuit may be damaged.
  - Remove any cable(s) connected to the printer.
    Otherwise, the printer may be damaged.

CAUTION

- Components in printer can be disassembled only if instructed so in this manual.
  Do not disassemble Frame components and/or other components that are not instructed.
- The printer has been assembled in MUTOH factory with extremely high precision up to 1/100mm.
  If disassembled inappropriately, normal functionality may not be restored.
- Allow sufficient space around the perimeter for maintenance work
- When removing covers to operate the product for maintenance work, be careful not to injure yourself on the drive unit, etc.

TIP

index=> 6. Maintenance

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6.2. Periodical Services

This section describes the Periodic maintenance work of this product.
Periodic maintenance work is item-like to make the printer stable and usable.

NOTE

- Refer to operation manual

TIP

index=> 6. Maintenance

6.2.1. Periodic Replacement Parts

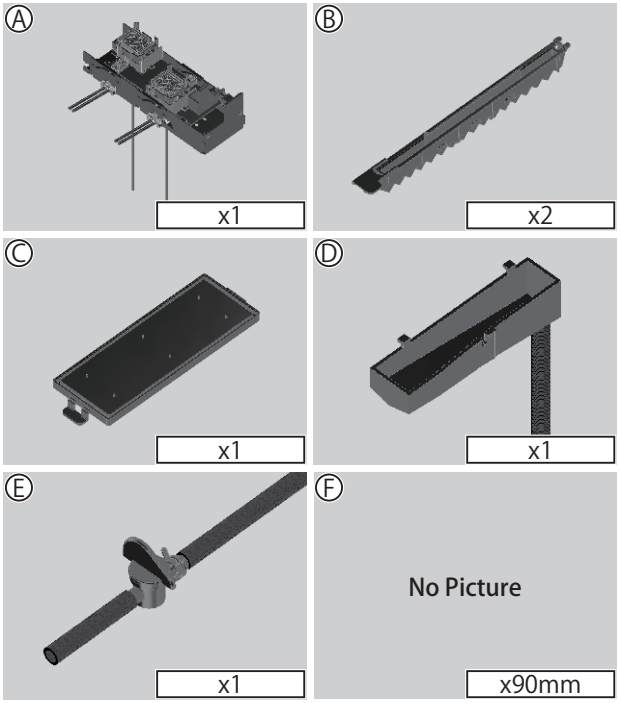
Following part(s) requires replacement every year.

Part(s) number	Maintenance part name	Remark
DH-41691	VJ-1462UF Periodic Maintenance Kit	

NOTE

DH-41691
XPJ-1462UF Periodic Maintenace Kit

Ⓐ Maintenance unit
Ⓑ Wiper assy
Ⓒ Flushing absorbent Assy
Ⓓ Waste fluid tray
Ⓔ 2-way cock Assy
Ⓕ Waste fluid tube



TIP

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6.2.2. Parts Which Require Inspection/Replacement

T.B.D.

TIP

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6.3. Part Life Information

NOTE

- As of March 1, 2023 (No.C0264d)

This section shows how to check the life of the service parts.
To know the life of the service parts, check the maintenance counter from the counter display menu in the maintenance mode.
Part life information of this printer is shown in the table below.

Part	Replacement cycle	Panel message	How to restore	Replacement parts	Reference
Wiper	6 months	-	-	Wiper (Periodic Replacement Parts)	- DH-41691 VJ-1462UF Periodic Maintenance Kit - DG-43497 Wiper (S) Assy
Head cap	12 months	-	-	Head cap (Periodic Replacement Parts)	- DH-41691 VJ-1462UF Periodic Maintenance Kit - DG-49594 Head Cap Assy (38UR)
Suction pump	93.1 hour	Life Times [Pumpx]	Counter clear	Pump	- DG-43402 DC Pump Assy
Circulation pump	93.1 hour	Life Times [CPumpx]	Counter clear	Pump	- DG-43402 DC Pump Assy
CR motor	4,370,000 scans	Life Times [CR Motor]	Counter clear	CR motor	- DG-42456 CR Motor(Nidec) Assy
PF motor	176,700 m (T.B.D)	Life Times [PF Motor]	Counter clear	PF motor	- DF-49020 PF Motor Assy
PG motor	T.B.D.	Life Times [PG Motor]	Counter clear	PG motor	- T.B.D.
UV-LED	14,250 hour	Life Times [UV-LED]	Counter clear	UV-LED	- DH-41676 UV-LED Lamp Assy
Print head	(6,000,000,000 dot)	-	(Head replace)	Print head	- DH-40274 I9472 Print Head

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6.4. Jigs and Tools

T.B.D.

TIP

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6.5. Lubrication/Bonding

T.B.D.

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6.6. Transportation of Product

T.B.D.

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7. Maintenance parts list

7. Maintenance parts list
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7.2. Maintenance part(s) 438

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7.1. Maintenance part(s) list

NOTE

- As of June 26, 2023 (No.00739SP02)

CAUTION

- The changes in the maintenance parts list are described below.
  When using maintenance parts, use the changed maintenance parts.

● Change

[No.026] DH-41678 : Head Capping Assy
->DG-49594 : Head Cap Assy (38UR)
[No.044] DG-49300 : Valve Head Cleaning Kit (1L)
->DG-41787 : Valve Head Cleaning Kit (VJ Ink)
[No.063] DG-43899 : LED Pointer Assy
->DH-41807 : LED Pointer Assy
[No.071] DH-41696 : CR Board
->DG-49275 : CR Board Assy
[No.121] DH-40619 : AC Cable
->DG-43039 : AC Inlet(Main side)-Fuse Box Cable Assy

● Addition

[No.005] DH-41675 : CR_Assy
[No.141] DH-41778 : Exhaust fan relay cable
[No.142] DH-41808 : Worm Gear Fixing Bracket
[No.143] DH-41688 : Maintenance Station Height Adjustment Jig
[No.144] DH-41689 : UV Lamp Height Calibration Jig
[No.145] DH-41690 : Laser Sensor Adjustment Jig
[No.146] DH-41895 : PG Drive Unit Eccentric Jig
[No.147] DH-41892 : Power Supply FG Cable Assy
[No.148] DH-41893 : FAN DC Relay Cable
[No.149] DH-41704 : Switching Power Supply (24V)
[No.150] DH-41716 : Switching Power Supply (48V)

● Delete

[No.***] DH-41674 : Timing Belt Z
[No.***] DH-41729 : Rotary RB Cable
[No.***] DH-41730 : Rotary Relay Cable 2
[No.***] DH-41731 : Rotary Relay Cable
[No.***] DG-46884 : Power Supply FG Cable Assy

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No.	Part No.	Maintenace part(s) name	Reference
001	DH-41673	PF-Encoder Scale	
002	DF-49051	Speed Reduction Pulley Assy	
003	DF-49020	PF Motor Assy	
004	DG-44700	PF Timing Belt Assy	
005	DH-41675	CR_Assy	00:Addition
006	DH-41676	UV-LED Lamp Assy	
007	DH-41677	Print Head_I9472 (62UF)	
008	DG-40326	VJ Cursor Roller Arm Assy	
009	DH-40834	Valve Head-2	
010	DG-41915	Connector_Valve_Head Assy	
011	DF-46671	O Ring M6	
012	DG-44085	Carriage Lock Assy	
013	DG-49264	T Fence Assy	
014	DG-42456	CR Motor(Nidec)Assy	
015	DG-49269	CR Deceleration Pulley	
016	DG-42458	CR Deceleration Belt(210)Assy	
017	DF-43868	CR Return Pulley Assy	
018	DG-49266	Steel Belt Assy	
019	DG-49267	Bare Steel Sheet Assy	
020	DG-48681	VJ five-layer black tube 3-4(1m)	
021	DG-48682	VJ five-layer black tube 3-4(2m)	
022	DG-48683	VJ five-layer black tube 3-4(3m)	
023	DG-45264	Tube Clamp Assy-C	
024	DG-49301	Roller Strip (Front)	
025	DG-49302	Roller Strip (Slope)	
026	DG-49594	Head Cap Assy (38UR)	00:Change
027	DH-41679	Maintenance Slider Unit Assy	
028	DH-41680	Cap Slider Assy (62UF)	
029	DH-41681	Wiper Unit Assy (62UF)	
030	DH-41682	Soft Tube φ 3x5(1m)	
031	DH-41683	Soft Tube φ 4x6(1m)	

No.	Part No.	Maintenace part(s) name	Reference
032	DG-43402	DC Pump Assy	
033	DG-46908	Thermoflon Basic φ 1.6x3.2(1000mm)	
034	DG-43497	Wiper (S) Assy	
035	DH-40176	Wiper Solenoid Assy	
036	DH-40843	Fluoto Rubber Tube(B) Φ 7*10(1m)	
037	DH-41684	Cartridge Holder Assy 1 (62UF)	
038	DH-41685	Cartridge Holder Assy 2 (62UF)	
039	DH-41686	Cartridge Holder Assy 3 (62UF)	
040	DH-41687	Cartridge Holder Assy 4 (62UF)	
041	DG-49081	Waste Ink Bottle B Kit	
042	DH-41691	VJ-1462UF Periodic Maintenance Kit	
043	DG-45465	Jig Cartridge Assy	
044	DG-41787	Valve Head Cleaning Kit (VJ Ink)	00:Change
045	DG-43197	Steel Belt Tension Attachment	
046	DG-46922	PG Adjustment Jig(1.3-1.4)	
047	DG-46948	High Capacity Ink Pack Adapter(UV1)	
048	DG-46949	Adapter Sealing Jig(UV)	
049	DG-49569	I Fitting	
050	DG-49570	L Fitting	
051	DG-42982	Y Type Fitting Assy	
052	DG-49572	F Fitting	
053	DH-40580	Y Fitting Assy (3-5)	
054	DH-41246	L Fitting (Soft-Hard)	
055	DH-40872	Straight Fittings	
056	DF-46698	Mini Fitting I Type	
057	DH-41692	EJ Fitting 3-4	
058	DH-41728	Laser Sensor Assy	
059	DH-41735	Emergency Stop Button	
060	DF-49471	CR HP Sensor. Lever Sensor	
061	DH-40770	PF Encoder Board	
062	DG-42947	CR Encoder Assy	

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No.	Part No.	Maintenace part(s) name	Reference
063	DH-41807	LED Pointer Assy	00:Change
064	DG-41091	Waste Fluid Level Switch (VJ16)	
065	DG-42956	Cover Switch Assy	
066	DG-45354	Cooling Fan Assy	
067	DG-40311	Vacuum Fan Assy	
068	DG-42988	Adsorption Fan Assy	
069	DG-49289	Panel Unit Assy	
070	DH-41737	MAIN Board	
071	DG-49275	CR Board Assy	00:Change
072	DH-41699	FAN_CONT Board	
073	DH-41705	MOT_LED_CONT Board	
074	DG-49577	Card Holder board Assy	
075	DG-43396	Junction 2 Board	
076	DG-46873	Power Supply Board Assy	
077	DG-49290	Panel FFC Assy	
078	DG-49268	CR-FFC_Assy	
079	DG-41072	Head FFC(D)	
080	DG-49288	JUNC_FFC Assy	
081	DH-41693	CONT Relay Cable 2	
082	DH-41694	CONT Relay Cable	
083	DH-41695	CR Lock Solenoid Cable	
084	DH-41697	EMG_SW Relay Cable 3	
085	DH-41698	EMG_SW Relay Cable	
086	DH-41700	FAN DC Cable	
087	DH-41701	LAN Cable	
088	DH-41702	LED_CONT Cable	
089	DH-41703	LED_HEAD Relay Cable	
090	DH-41706	MOT_LED_DC Cable	
091	DH-41707	PF Encoder Relay Cable 2	
092	DH-41708	PF Encoder Relay Cable	
093	DH-41709	PF Motor RB Cable	

No.	Part No.	Maintenace part(s) name	Reference
094	DH-41710	PF Motor Relay Cable 2	
095	DH-41711	PF Motor Relay Cable 3	
096	DH-41712	PF Limit Sensor Relay Cable 2	
097	DH-41713	PF Limit Sensor Relay Cable	
098	DH-41714	PF Origin Sensor Relay Cable 2	
099	DH-41715	PF Origin Sensor Relay Cable	
100	DH-41717	Z Encoder Relay Cable	
101	DH-41718	Z Sensor Cable	
102	DH-41719	Z Motor Cable 2	
103	DH-41720	Ionizer Relay Cable	
104	DH-41721	Cover L Cable	
105	DH-41722	Cap Motor Cable	
106	DH-41723	Cap Origin Sensor Cable	
107	DH-41724	LED Tower Light Relay Cable	
108	DH-41725	Fuse-Terminal Block RB Cable	
109	DH-41726	Fuse-Power Supply Cable	
110	DH-41727	Foot Switch Relay Cable	
111	DH-41732	Wiper Solenoid Cable	
112	DH-41733	Flatbed Table-Gantry RB Cable	
113	DH-41734	Vacuum Fan Relay Cable	
114	DH-41736	Drop Sensor Cable	
115	DH-41738	PF Motor Relay Cable	
116	DG-49281	Two-Way Valve Cable	
117	DG-46952	AC Inlet Assy	
118	DG-43039	AC Inlet(Main side)-Fuse Box Cable Assy	00:Change
119	DG-46330	AC Fuse Assy	
120	DG-49552	Card_LED Cable	
121	DG-49256	Control Board_PS Cable	
122	DF-49672	MAIN-CNT Cable Assy	
123	DG-49265	CR Origin Sensor Cable	
124	DG-49261	Main Board_DC Cable	

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No.	Part No.	Maintenace part(s) name	Reference
125	DG-43741	FG Cable Assy	
126	DG-49287	JUNC_ID Cable	
127	DG-48132	LAN Cable Coupler	
128	DH-40019	LED_HEAD Cable	
129	DG-43042	PF Motor Relay Assy	
130	DG-49551	SC-SW Cable	
131	DG-49291	Cover R Cable	
132	DG-41572	Terminal Block	
133	DG-43025	Fuse-Terminal Block Cable Assy	
134	DG-46201	Head FG_Assy	
135	DG-49298	Pump Motor Cable	
136	DG-43168	Terminal Block-Power Cable Assy	
137	DG-49263	Waste Ink Sensor Cable	
138	DG-43032	Exhaust Fan Cable Assy	
139	DG-49558	Cooling Fan Relay Cable	
140	DG-49270	CR Motor Cable	
141	DH-41778	Exhsust Fan Relay Cable	00:Addition
142	DH-41808	Worm Gear Fixing Bracket	00:Addition
143	DH-41688	Maintenance Station Height Adjustment Jig	01:Addition
144	DH-41689	UV Lamp Height Calibration Jig	01:Addition
145	DH-41690	Laser Sensor Adjustment Jig	01:Addition
146	DH-41895	PG Drive Unit Eccentric Jig	01:Addition
147	DH-41892	Power Supply FG Cable Assy	01:Addition
148	DH-41893	FAN DC Relay Cable	01:Addition
149	DH-41704	Switching Power Supply (24V)	01:Addition
150	DH-41716	Switching Power Supply (48V)	01:Addition

TIP

index=> 7. Maintenance parts list

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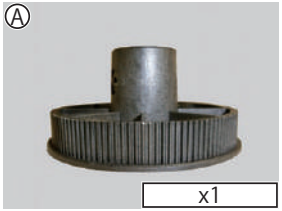
7.2. Maintenance part(s)

1 DH-41673
PF-Encoder Scale
Ⓐ Encoder scale

Ⓐ No Picture x1

2 DF-49051
Speed Reduction Pulley Assy
Ⓐ Pulley

Ⓐ  x1

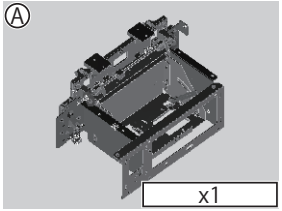
3 DF-49020
PF Motor Assy
Ⓐ Motor

Ⓐ x1

4 DG-44700
PF Timing Belt Assy
Ⓐ Belt

Ⓐ No Picture x1

5 DH-41675
CR_Assy
Ⓐ Cursor

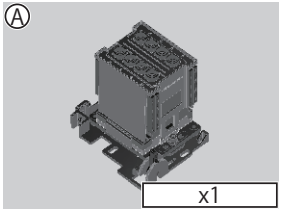
Ⓐ  x1

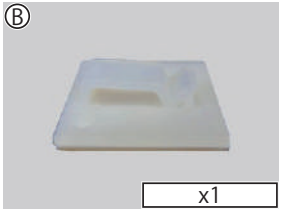
00:Addition

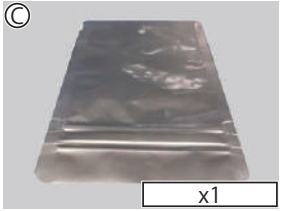
6 DH-41676
UV-LED Lamp Assy
Ⓐ UV-LED

Ⓐ x1

7 DH-41677
Print Head_I9472 (62UF)
Ⓐ Print head
Ⓑ Clamp
Ⓒ Aluminum bag

Ⓐ  x1

Ⓑ  x1

Ⓒ  x1

8 DG-40326
VJ Cursor Roller Arm Assy
Ⓐ Cursor roller arm

Ⓐ x1

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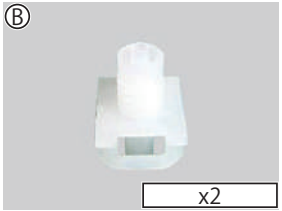
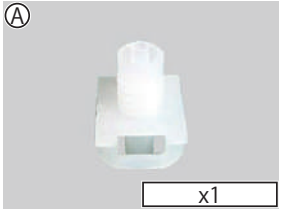
9 DH-40834
Valve Head-2
Ⓐ Valve head
Ⓑ Connector
Ⓒ O ring
Ⓓ Joint screw

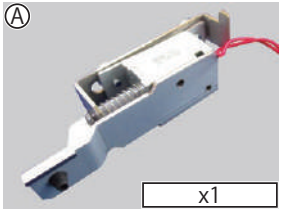


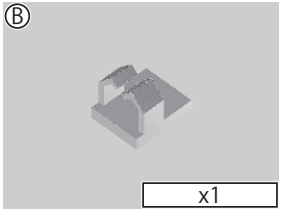
10 DG-41915
Connector Valve Head Assy
Ⓐ Connector
Ⓑ O ring



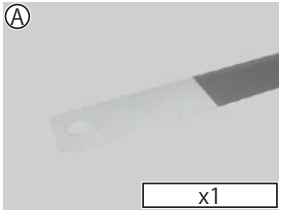
11 DF-46671
O Ring M6
Ⓐ O ring

12 DG-44085
Carriage Lock Assy
Ⓐ Carriage lock unit
Ⓑ Clamp



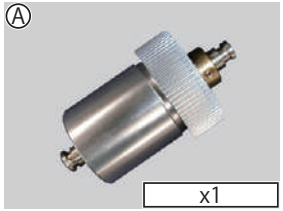


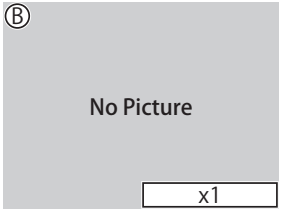
13 DG-49264
T Fence Assy
Ⓐ T fence



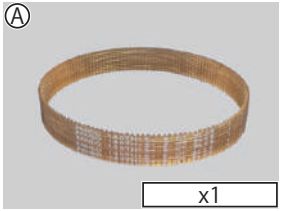
14 DG-42456
CR Motor(Nidec)Assy
Ⓐ Motor

15 DG-49269
CR Deceleration Pulley
Ⓐ Pulley
Ⓑ E-ring

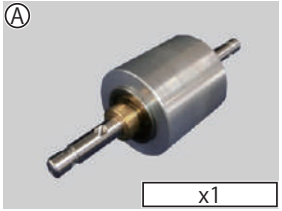




16 DG-42458
CR Deceleration Belt(210)Assy
Ⓐ Belt



17 DF-43868
CR Return Pulley Assy
Ⓐ Pulley



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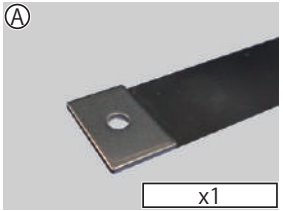
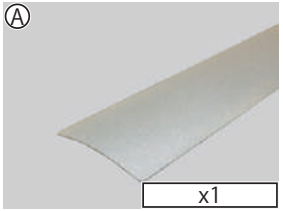
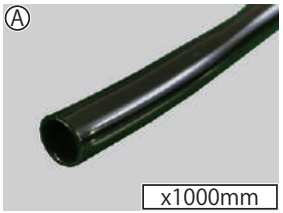
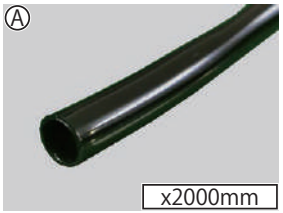
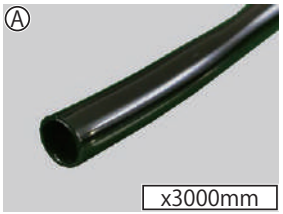
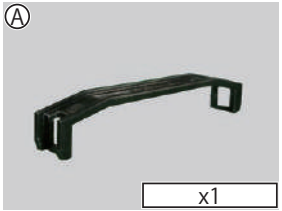
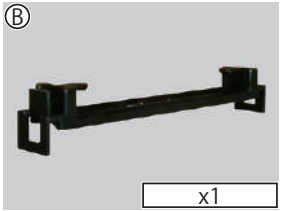
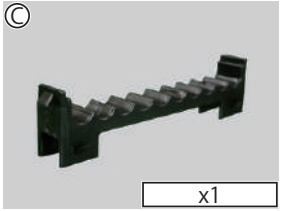
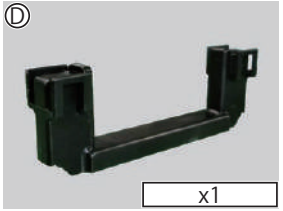
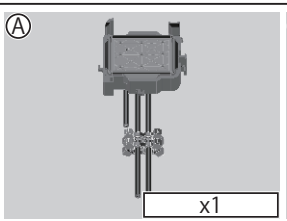
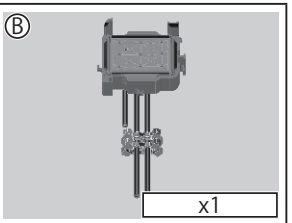
18	DG-49266 Steel Belt Assy Ⓐ Steel belt	Ⓐ  x1
19	DG-49267 Bare Steel Sheet Assy Ⓐ Steel bare	Ⓐ  x1
20	DG-48681 VJ five-layer black tube 3-4 (1m) Ⓐ Tube	Ⓐ  x1000mm
21	DG-48682 VJ five-layer black tube 3-4 (2m) Ⓐ Tube	Ⓐ  x2000mm
22	DG-48683 VJ five-layer black tube 3-4 (3m) Ⓐ Tube	Ⓐ  x3000mm

23	DG-45264 Tube Clamp Assy-C Ⓐ Clamp1 Ⓑ Clamp2 Ⓒ Clamp3 Ⓓ Clamp4	Ⓐ  x1 Ⓑ  x1 Ⓒ  x1 Ⓓ  x1
24	DG-49301 Roller Strip (Front) Ⓐ Roller strip Ⓑ Film	Ⓐ No Picture x1 Ⓑ No Picture x1
25	DG-49302 Roller Strip (Slope) Ⓐ Roller strip Ⓑ File	Ⓐ No Picture x1 Ⓑ No Picture x1
26	DG-49594 Head Cap Assy (38UR) Ⓐ Head cap 1 Ⓑ Head cap 2 00:Change	Ⓐ  x1 Ⓑ  x1

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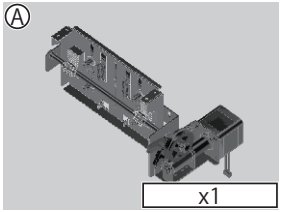
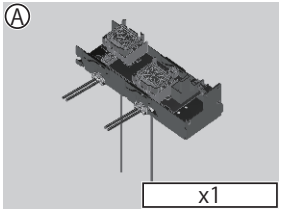
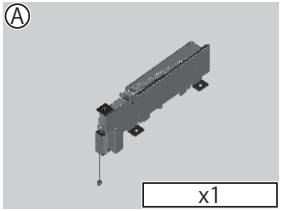
27 DH-41679
Maintenance Slider Unit Assy
Ⓐ Maintenance U/D unit



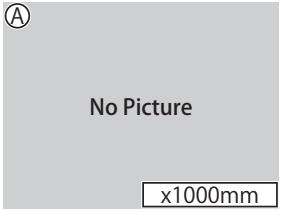
28 DH-41680
Cap Slider Assy (62UF)
Ⓐ Maintenance unit



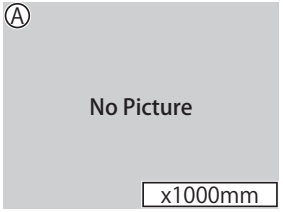
29 DH-41681
Wiper Unit Assy (62UF)
Ⓐ Wiper unit



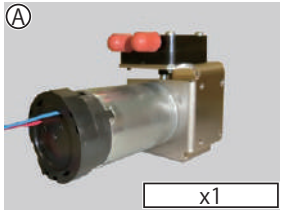
30 DH-41682
Soft Tube φ3x5(1m)
Ⓐ Tube



31 DH-41683
Soft Tube φ4x6(1m)
Ⓐ Tube

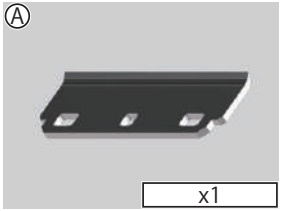


32 DG-43402
DC Pump Assy
Ⓐ Pump



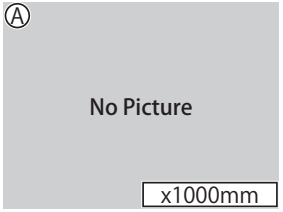
33 DG-46908
Thermoflon Basic φ1.6x3.2
(1000mm)
Ⓐ Tube

34 DG-43497
Wiper (S) Assy
Ⓐ Wiper



35 DH-40176
Wiper Solenoid Assy
Ⓐ Solenoid

36 DH-40843
Fluoto Rubber Tube (B) Φ7*10 (1m)
Ⓐ Tube



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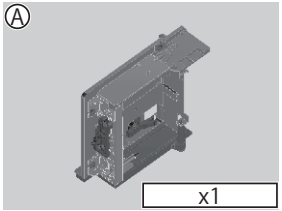
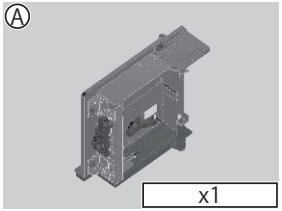
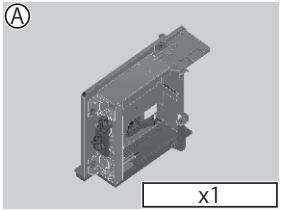
37 DH-41684
Cartridge Holder Assy 1 (62UF)
Ⓐ Cartridge holder



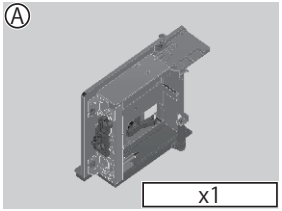
38 DH-41685
Cartridge Holder Assy 2 (62UF)
Ⓐ Cartridge holder



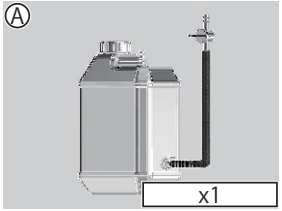
39 DH-41686
Cartridge Holder Assy 3 (62UF)
Ⓐ Cartridge holder



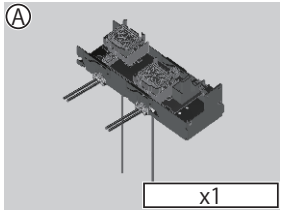
40 DH-41687
Cartridge Holder Assy 4 (62UF)
Ⓐ Cartridge holder

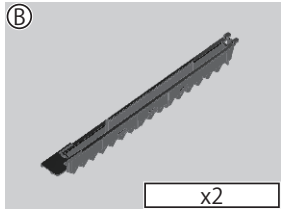


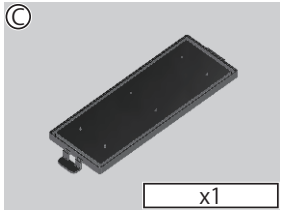
41 DG-49081
Waste Ink Bottle B Kit
Ⓐ Waste fluid bottle

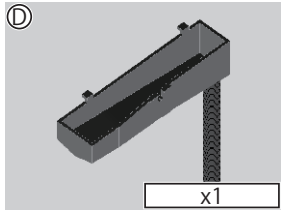


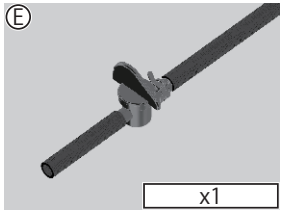
42 DH-41691
XPJ-1462UF Periodic Maintenace Kit
Ⓐ Maintenance unit
Ⓑ Wiper assy
Ⓒ Flushing absorbent Assy
Ⓓ Waste fluid tray
Ⓔ 2-way cock Assy
Ⓕ Waste fluid tube

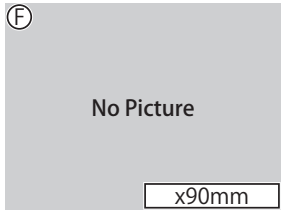




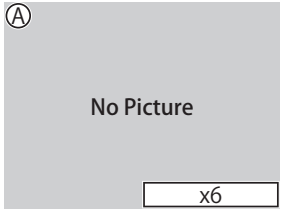


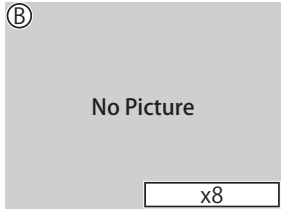






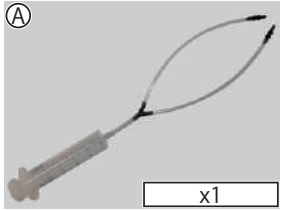
43 DG-45465
Jig Cartridge Assy
Ⓐ Jig cartridge
Ⓑ Jig tube

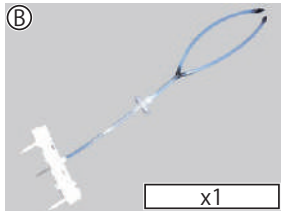




44 DG-41787
Valve Head Cleaning Kit (VJ Ink)
Ⓐ Cleaning jig 1
Ⓑ Cleaning jig 2

00:Change





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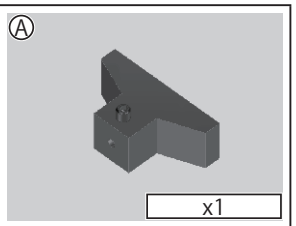
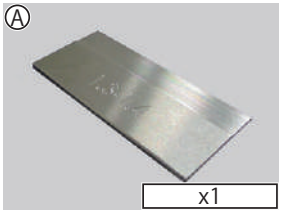
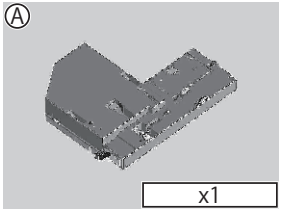
45 DG-43197
Steel Belt Tension Attachment
Ⓐ Adjustment jig

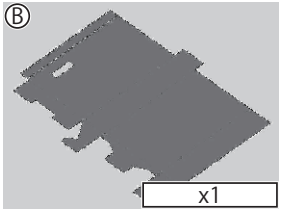


46 DG-46922
PG Adjustment Jig (1.3-1.4)
Ⓐ Adjustment jig

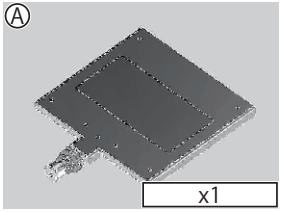


47 DG-46948
High Capacity Pack Adapter (UV1)
Ⓐ High capacity pack adapter
Ⓑ Shielding case



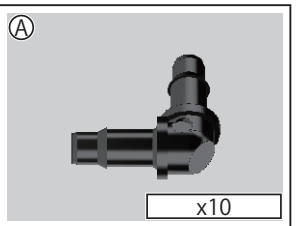


48 DG-46949
Adapter Sealing Jig (UV)
Ⓐ Sealing jig

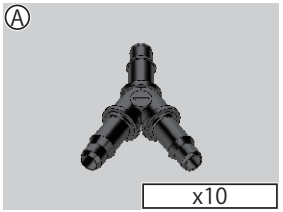


49 DG-49569
I Fitting
Ⓐ Fitting

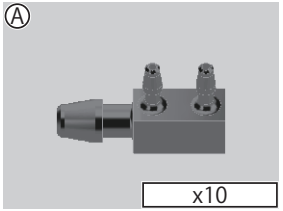
50 DG-49570
L Fitting
Ⓐ Fitting



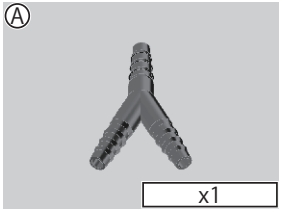
51 DG-42982
Y Type Fitting Assy
Ⓐ Fitting



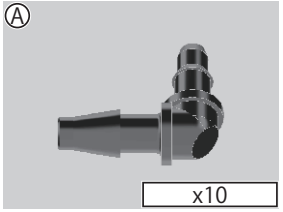
52 DG-49572
F Fitting
Ⓐ Fitting



53 DH-40580
Y Fitting Assy (3-5)
Ⓐ Fitting



54 DH-41246
L Fitting (Soft-Hard)
Ⓐ Fitting



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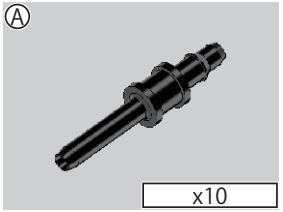
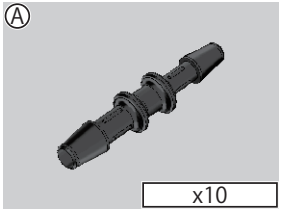
55 DH-40872
Straight Fittings
Ⓐ Fitting



56 DF-46698
Mini Fitting I Type
Ⓐ Fitting

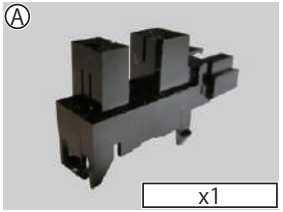
57 DH-41692
EJ Fitting 3-4
Ⓐ Fitting



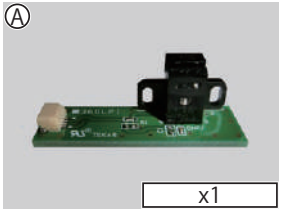
58 DH-41728
Leaser Sensor Assy
Ⓐ Leaser sensor (T)
Ⓑ Leaser sensor (R)

59 DH-41735
Emergency Stop Button
Ⓐ Emergency Stop Button

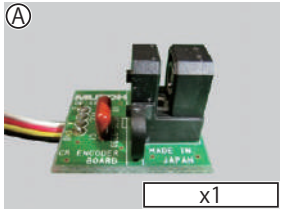
60 DF-49471
CR HP Sensor. Lever Sensor
Ⓐ Sensor



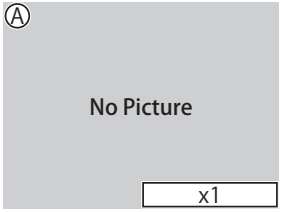
61 DH-40770
PF Encoder Board
Ⓐ Encoder



62 DG-42947
CR Encoder Assy
Ⓐ Encoder



63 DH-41807
LED Pointer Assy
Ⓐ LED pointer



00:Change

64 DG-41091
Waste Fluid Level Switch (VJ16)
Ⓐ Switch

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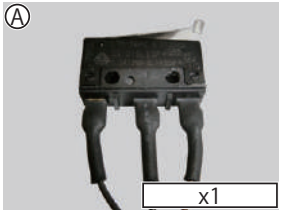
65 DG-42956
Cover Switch Assy
Ⓐ Switch



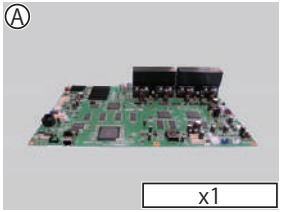
66 DG-45354
Cooling Fan Assy
Ⓐ Fan

67 DG-40311
Vacuum Fan Assy
Ⓐ Fan

68 DG-42988
Adsorption Fan Assy
Ⓐ Fan

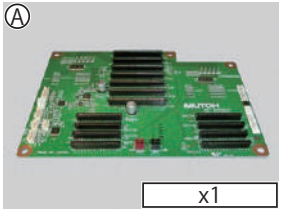
69 DG-49289
Panel Unit Assy
Ⓐ Panel unit

70 DH-41737
MAIN Board
Ⓐ MAIN board

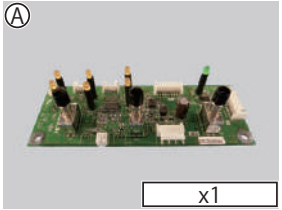


71 DG-49275
CR Board Assy
Ⓐ CR board

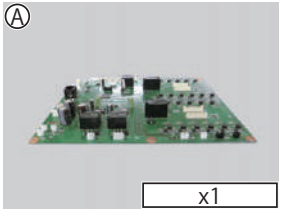
00:Change



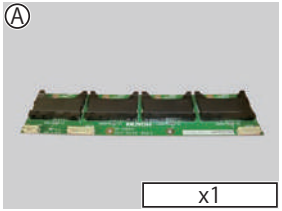
72 DH-41699
FAN_CONT Board
Ⓐ FAN_CONT board



73 DH-41705
MOT_LED_CONT Board
Ⓐ UV-LED board



74 DG-49577
Card Holder board Assy
Ⓐ Card holder board



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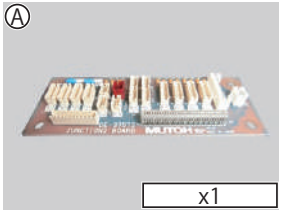
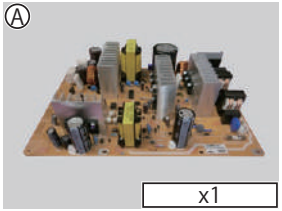
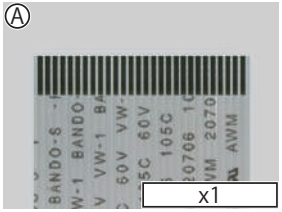
75 DG-43396
Junction 2 Board
Ⓐ JUNCTION board



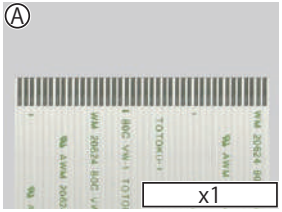
76 DG-46873
Power Supply Board Assy
Ⓐ Power supply board



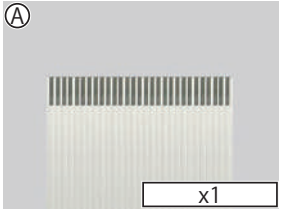
77 DG-49290
Panel FFC Assy
Ⓐ FFC



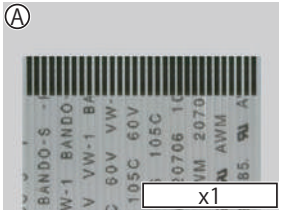
78 DG-49268
CR-FFC_Assy
Ⓐ FFC



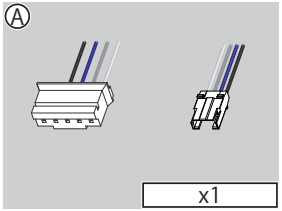
79 DG-41072
Head FFC(D)
Ⓐ FFC



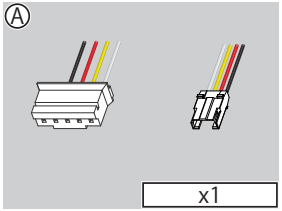
80 DG-49288
JUNC_FFC Assy
Ⓐ FFC



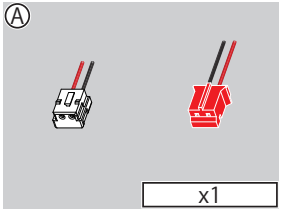
81 DH-41693
CONT Relay Cable 2
Ⓐ Cable



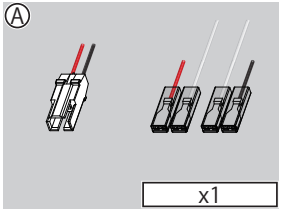
82 DH-41694
CONT Relay Cable
Ⓐ Cable



83 DH-41695
CR Lock Solenoid Cable
Ⓐ Cable



84 DH-41697
EMG_SW Relay Cable 3
Ⓐ Cable



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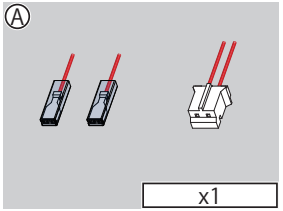
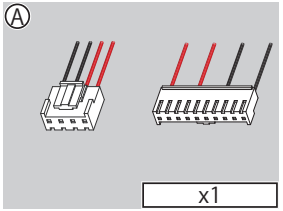
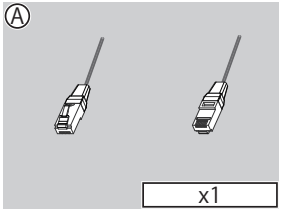
85 DH-41698
EMG_SW Relay Cable
Ⓐ Cable



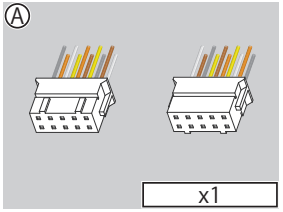
86 DH-41700
FAN DC Cable
Ⓐ Cable



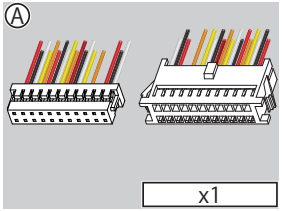
87 DH-41701
LAN Cable
Ⓐ Cable



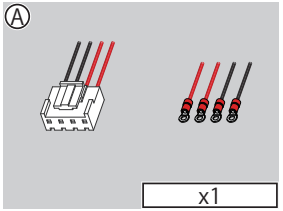
88 DH-41702
LED_CONT Cable
Ⓐ Cable



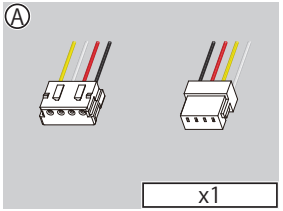
89 DH-41703
LED_HEAD Relay Cable
Ⓐ Cable



90 DH-41706
MOT_LED_DC Cable
Ⓐ Cable



91 DH-41707
PF Encoder Relay Cable 2
Ⓐ Cable



92 DH-41708
PF Encoder Relay Cable
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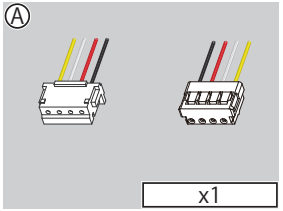
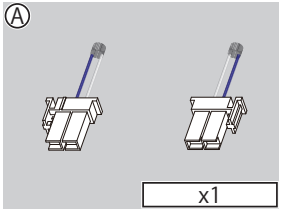


93 DH-41709
PF Motor RB Cable
Ⓐ Cable



94 DH-41710
PF Motor Relay Cable 2
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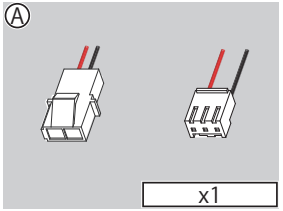

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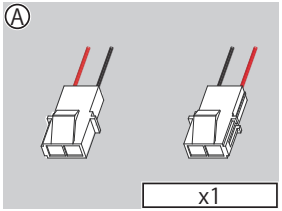
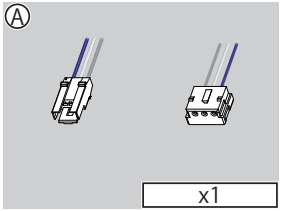
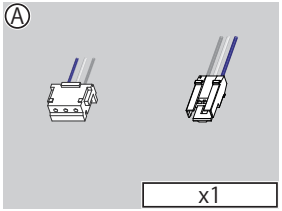
95 DH-41711
PF Motor Relay Cable 3
Ⓐ Cable



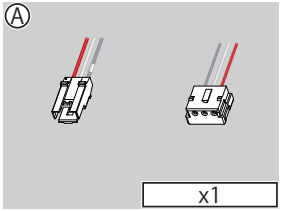
96 DH-41712
PF Limit Sensor Relay Cable 2
Ⓐ Cable



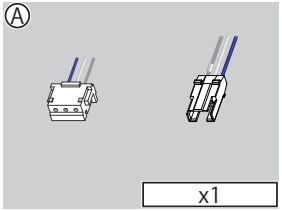
97 DH-41713
PF Limit Sensor Relay Cable
Ⓐ Cable



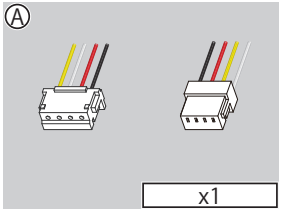
98 DH-41714
PF Origin Sensor Relay Cable 2
Ⓐ Cable



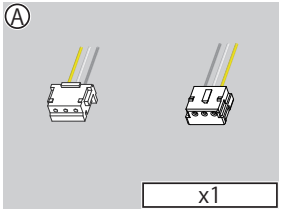
99 DH-41715
PF Origin Sensor Relay Cable
Ⓐ Cable



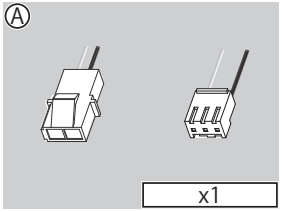
100 DH-41717
Z Encoder Relay Cable
Ⓐ Cable



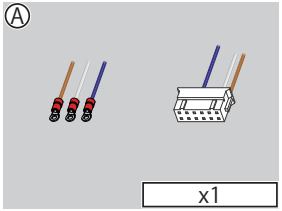
101 DH-41718
Z Sensor Cable
Ⓐ Cable



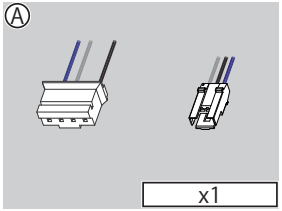
102 DH-41719
Z Motor Cable 2
Ⓐ Cable



103 DH-41720
Ionizer Relay Cable
Ⓐ Cable



104 DH-41721
Cover L Cable
Ⓐ Cable



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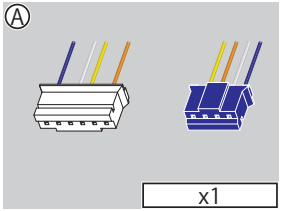
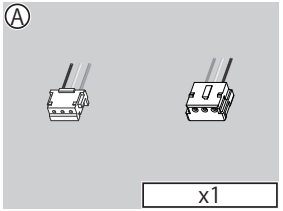
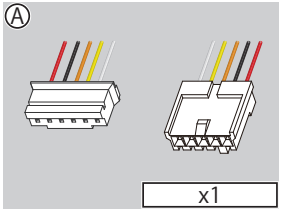
105 DH-41722
Cap Motor Cable
Ⓐ Cable



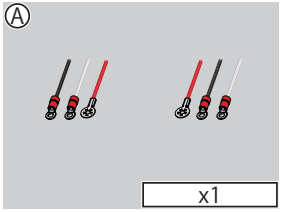
106 DH-41723
Cap Origin Sensor Cable
Ⓐ Cable



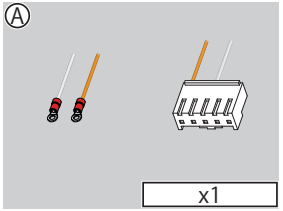
107 DH-41724
LED Tower Light Relay Cable
Ⓐ Cable



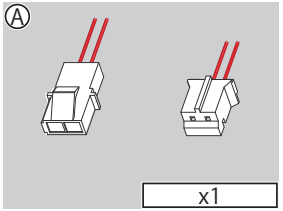
108 DH-41725
Fuse-Terminal Block RB Cable
Ⓐ Cable



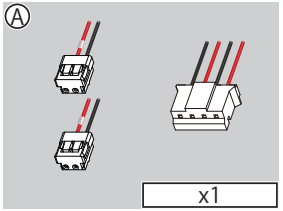
109 DH-41726
Fuse-Power Supply Cable
Ⓐ Cable



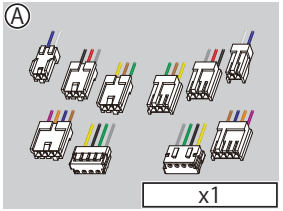
110 DH-41727
Foot Switch Relay Cable
Ⓐ Cable



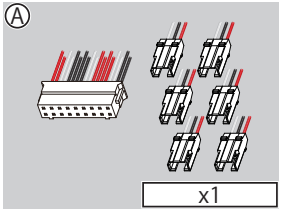
111 DH-41732
Wiper Solenoid Cable
Ⓐ Cable



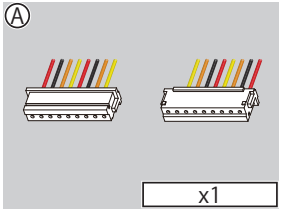
112 DH-41733
Flatbed Table-Gantry RB Cable
Ⓐ Cable



113 DH-41734
Vacuum Fan Relay Cable
Ⓐ Cable



114 DH-41736
Drop Sensor Cable
Ⓐ Cable



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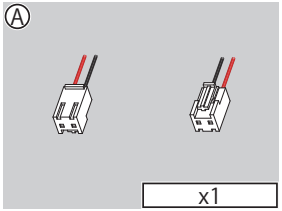
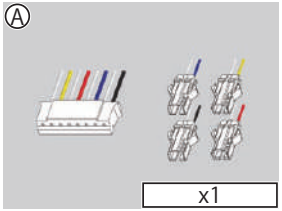
115 DH-41738
PF Motor Relay Cable
Ⓐ Cable



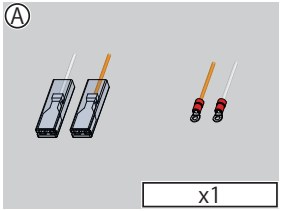
116 DG-49281
Two-Way Valve Cable
Ⓐ Cable



117 DG-46952
AC Inlet Assy
Ⓐ AC inlet

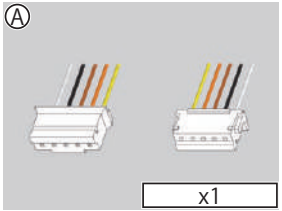
118 DG-43039
AC Inlet(Main side)-Fuse Box Cable Assy
Ⓐ Cable

00:Change

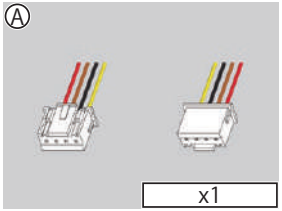


119 DG-46330
AC Fuse Assy
Ⓐ Fuse

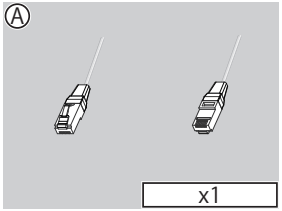
120 DG-49552
Card_LED Cable
Ⓐ Cable



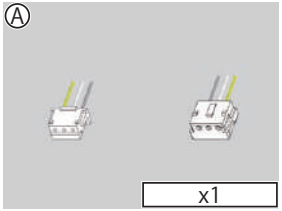
121 DG-49256
Control Board_PS Cable
Ⓐ Cable



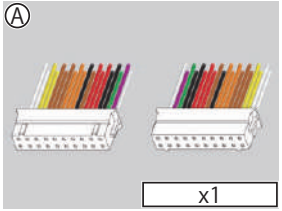
122 DF-49672
MAIN-CNT Cable Assy
Ⓐ LAN cable



123 DG-49265
CR Origin Sensor Cable
Ⓐ Cable



124 DG-49261
Main Board_DC Cable
Ⓐ Cable



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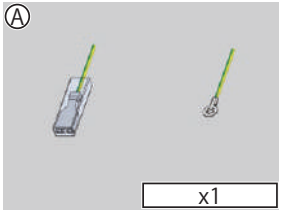
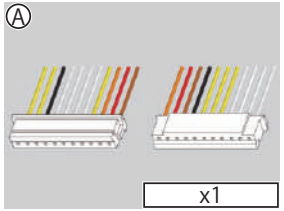
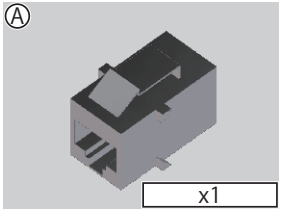
125 DG-43741
FG Cable Assy
Ⓐ Cable



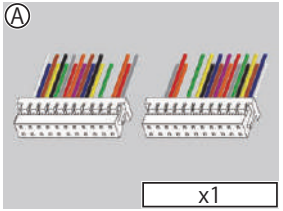
126 DG-49287
JUNC_ID Cable
Ⓐ Cable



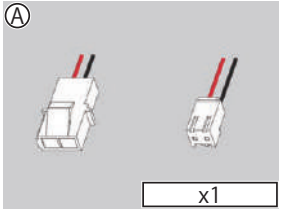
127 DG-48132
LAN Cable Coupler
Ⓐ LAN cable coupler



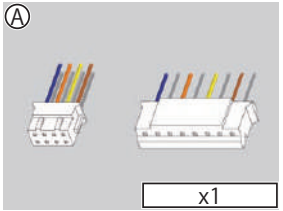
128 DH-40019
LED_HEAD Cable
Ⓐ Cable



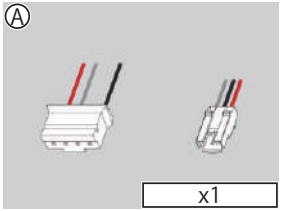
129 DG-43042
PF Motor Relay Assy
Ⓐ Cable



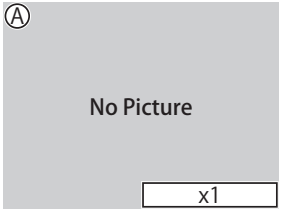
130 DG-49551
SC-SW Cable
Ⓐ Cable

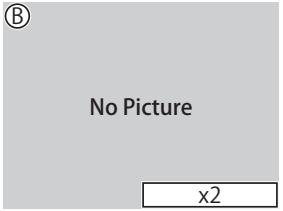


131 DG-49291
Cover R Cable
Ⓐ Cable

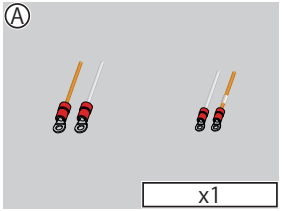


132 DG-41572
Terminal Block
Ⓐ Terminal black
Ⓑ Short bar

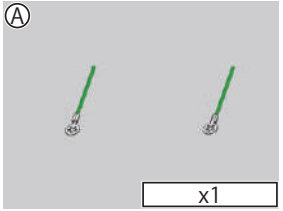




133 DG-43025
Fuse-Terminal Block Cable Assy
Ⓐ Cable



134 DG-46201
Head FG_Assy
Ⓐ Cable



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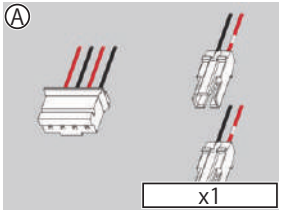
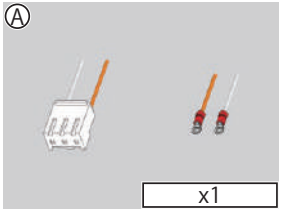
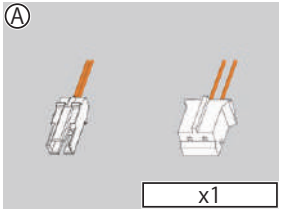
135 DG-49298
Pump Motor Cable
Ⓐ Cable



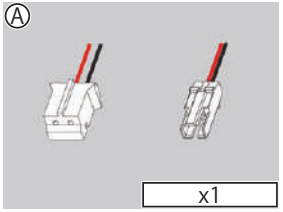
136 DG-43168
Terminal Block-Power Cable Assy
Ⓐ Cable



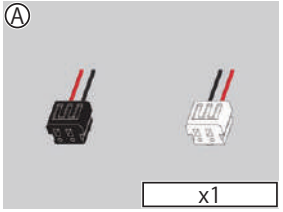
137 DG-49263
Waste Ink Sensor Cable
Ⓐ Cable



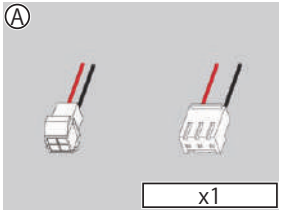
138 DG-43032
Exhaust Fan Cable Assy
Ⓐ Cable



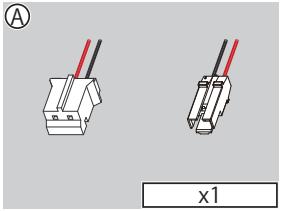
139 DG-49558
Cooling Fan Relay Cable
Ⓐ Cable



140 DG-49270
CR Motor Cable
Ⓐ Cable

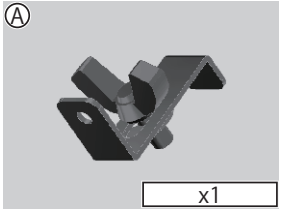


141 DH-41778
Exhaust Fan Relay Cable
Ⓐ Cable



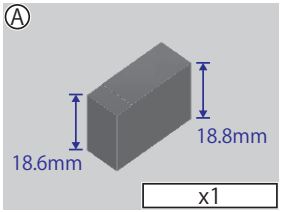
00:Addition

142 DH-41808
Worm Gear Fixing Bracket
Ⓐ Jig



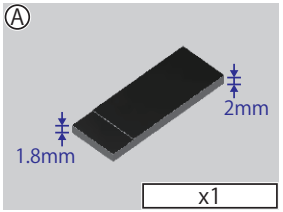
00:Addition

143 DH-41688
Maintenance Station Height
Adjustment Jig
Ⓐ Jig



01:Addition

144 DH-41689
UV Lamp Height Calibration Jig
Ⓐ Jig



01:Addition

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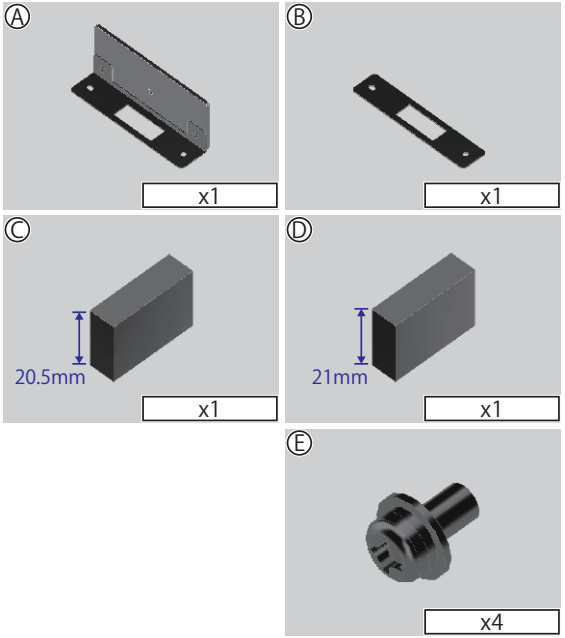
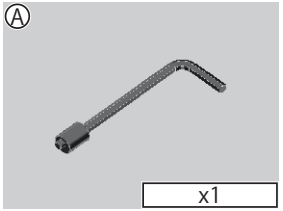
145 DH-41690
Laser Sensor Adjustment Jig
Ⓐ Jig 1
Ⓑ Jig 2
Ⓒ Block gauge (20.5mm)
Ⓓ Block gauge (21mm)
Ⓔ Screw



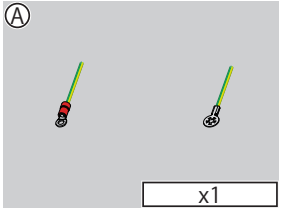
01:Addition

146 DH-41895
PG Drive Unit Eccentric Jig
Ⓐ Jig



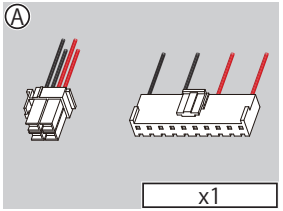
01:Addition

147 DH-41892
Power Supply FG Cable Assy
Ⓐ Cable



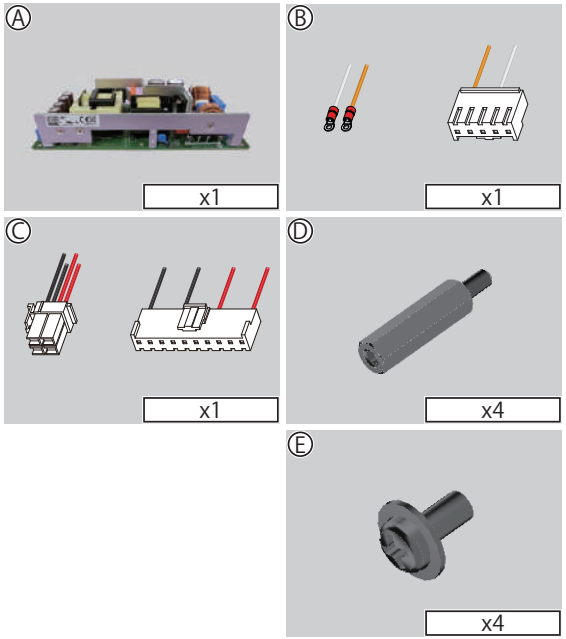
01:Addition

148 DH-41893
FAN DC Relay Cable
Ⓐ Cable



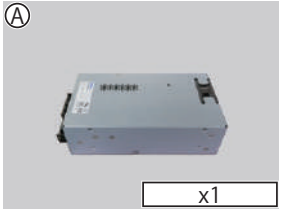
01:Addition

149 DH-41704
Switching Power Supply (24V)
Ⓐ Power sypply board
Ⓑ Cable 1
Ⓒ Cable 2
Ⓓ Spacer
Ⓔ Screw



01:Addition

150 DH-41716
Switching Power Supply (48V)
Ⓐ Power supply board



01:Addition

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TIP

index=> 7. Maintenance parts list

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8. Electric cable diagram

8. Electric cable diagram

8.1. Electric cable diagram (XPJ-1462UF) 456

8.1.1. Power supply section 457

8.1.2. Control section 459

8.1.3. Control section 2 460

8.1.4. IH section 461

CONFIDENTIAL

8.1. Electric cable diagram (XPJ-1462UF)

Section	Related parts
8.1.1. Power supply section	- MAIN board - Power supply borad - Power supply board[UV-LED(48V)] - Power suppy board[vacuum fan(24V)] - UV-LED CONT board - FAN CONT board
8.1.2. Control section	- MAIN board - Panel unit - CR board - Print head (x2)
8.1.3. Control section 2	- MAIN board - MOT_LED CONT board
8.1.4. IH section	- MAIN board - JUNCTION board (x2) - Card holder board (x2)

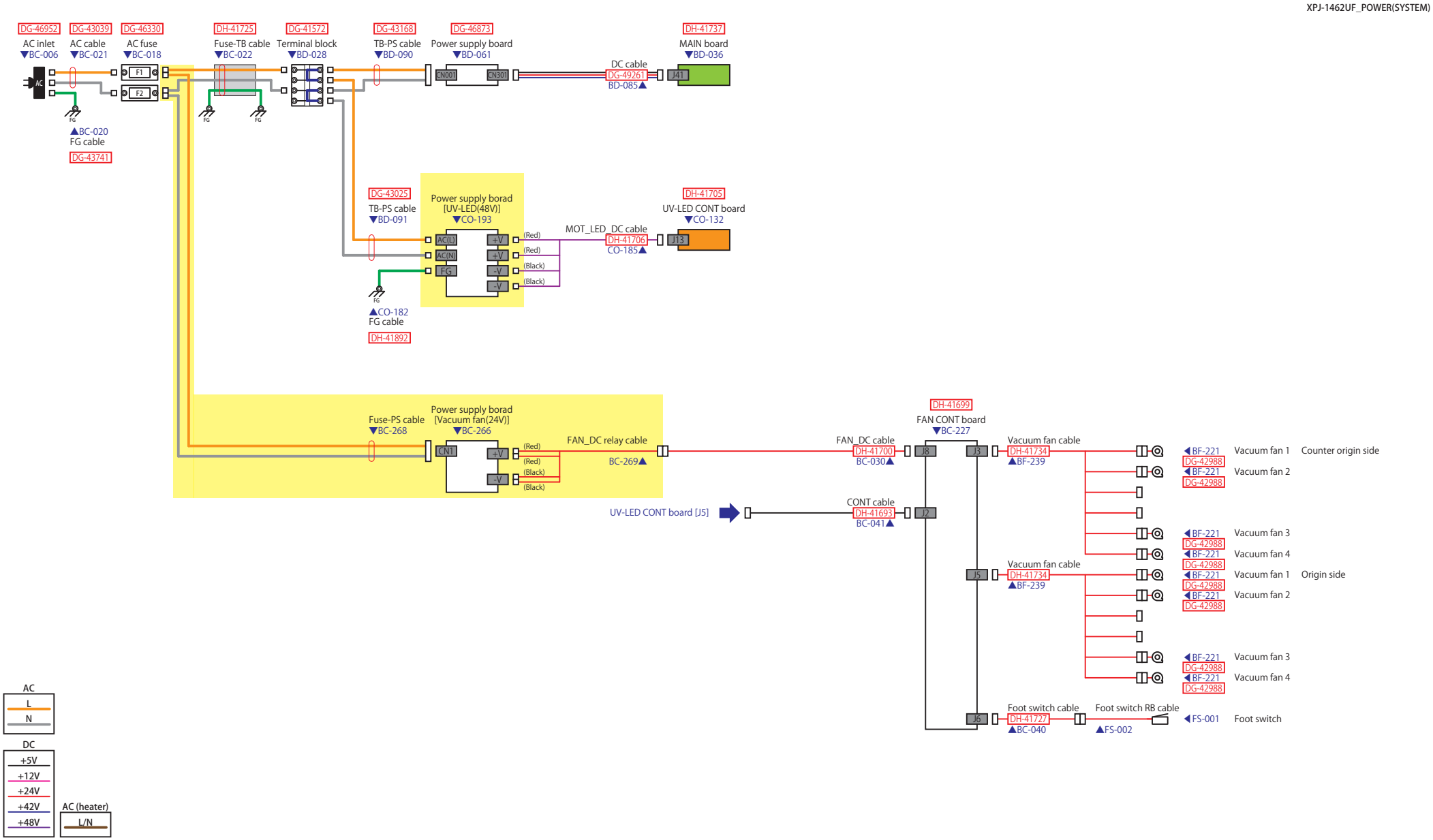
TIP

index=> 8. Electric cable diagram

CONFIDENTIAL

8.1.1. Power supply section

*Production system (KQ5U000001~)



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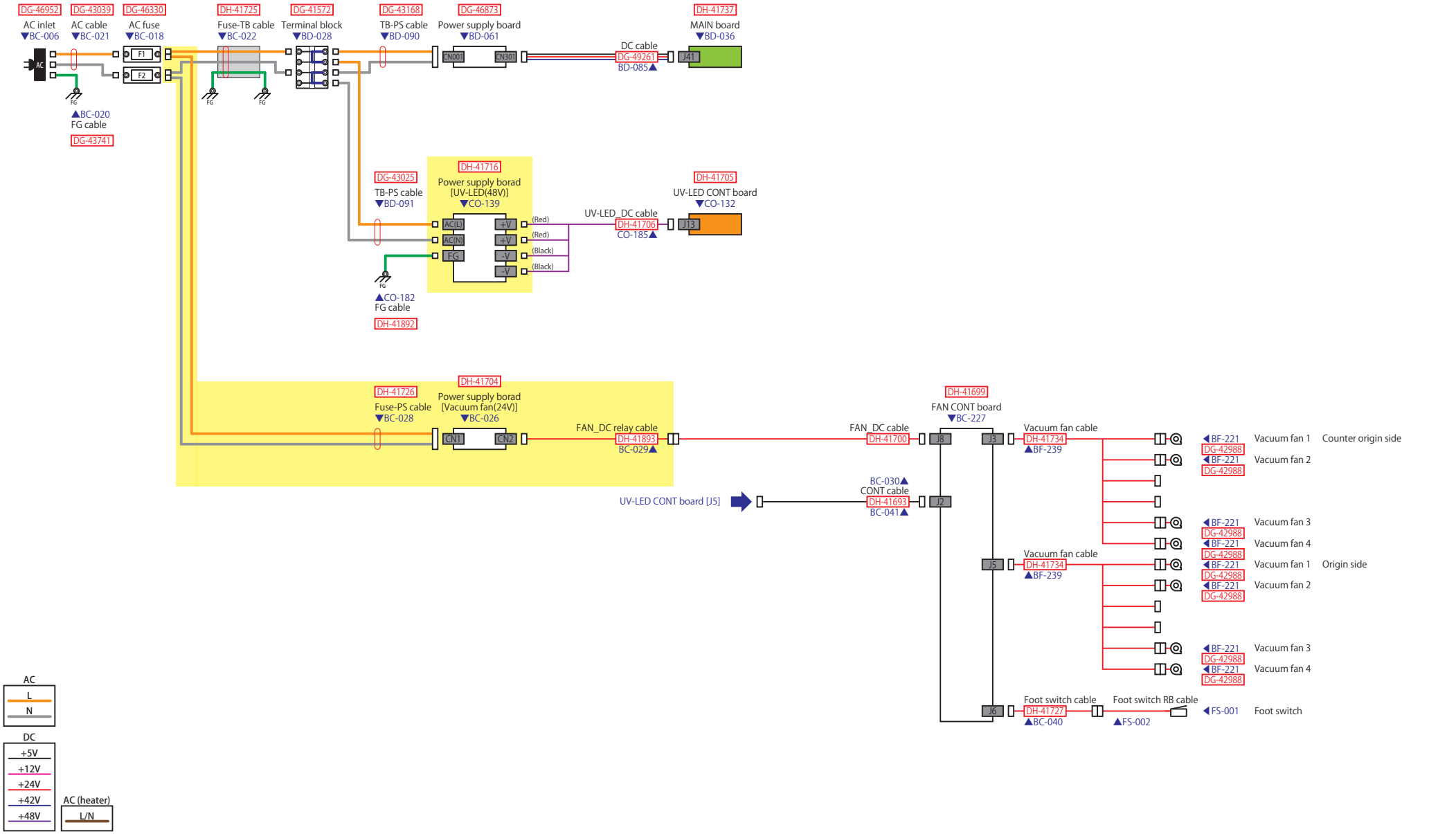
*After maintenance parts replacement

XPJ-1462UF_POWER(Maintenance Parts)



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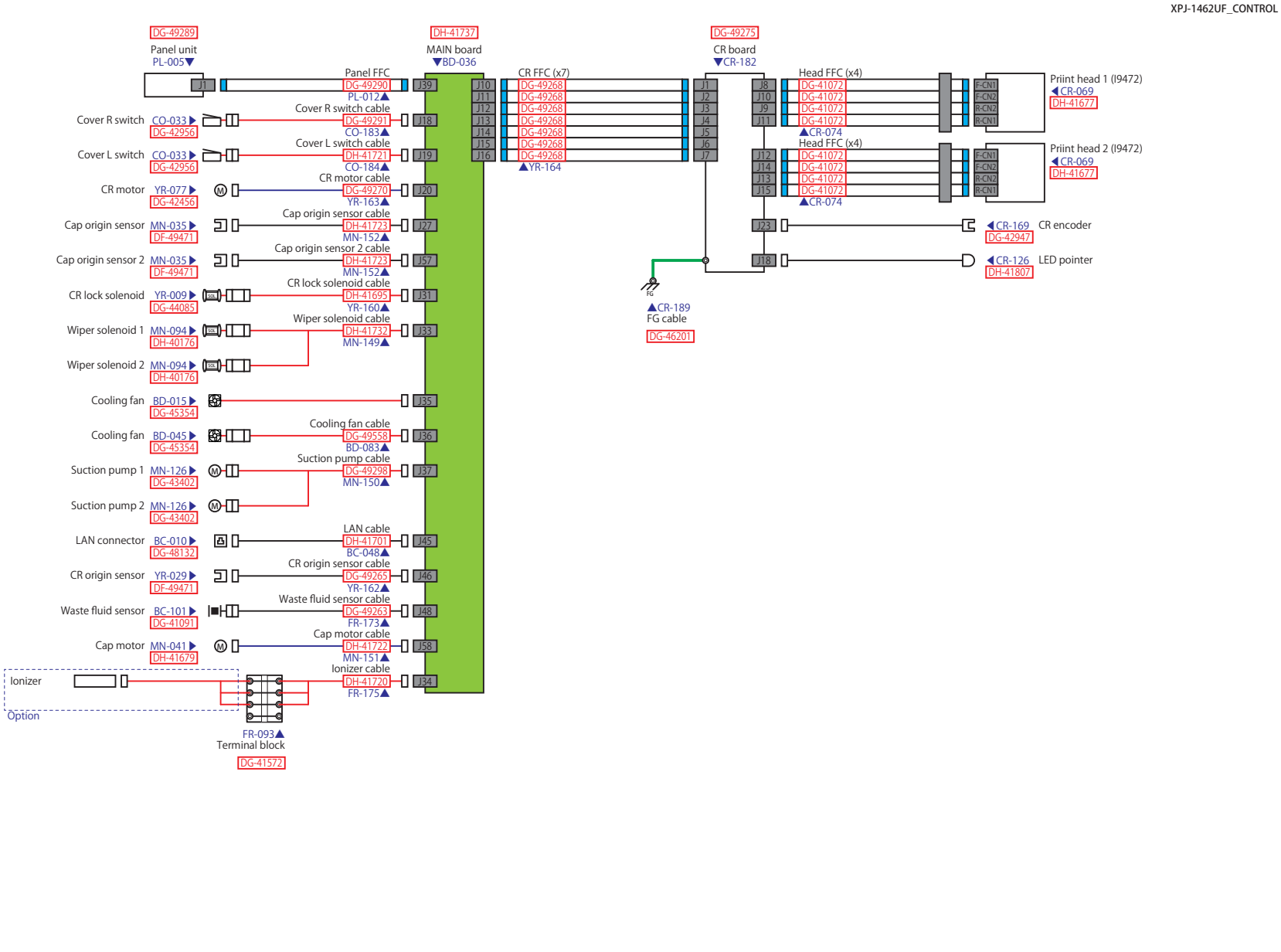
8.1.2. Control section



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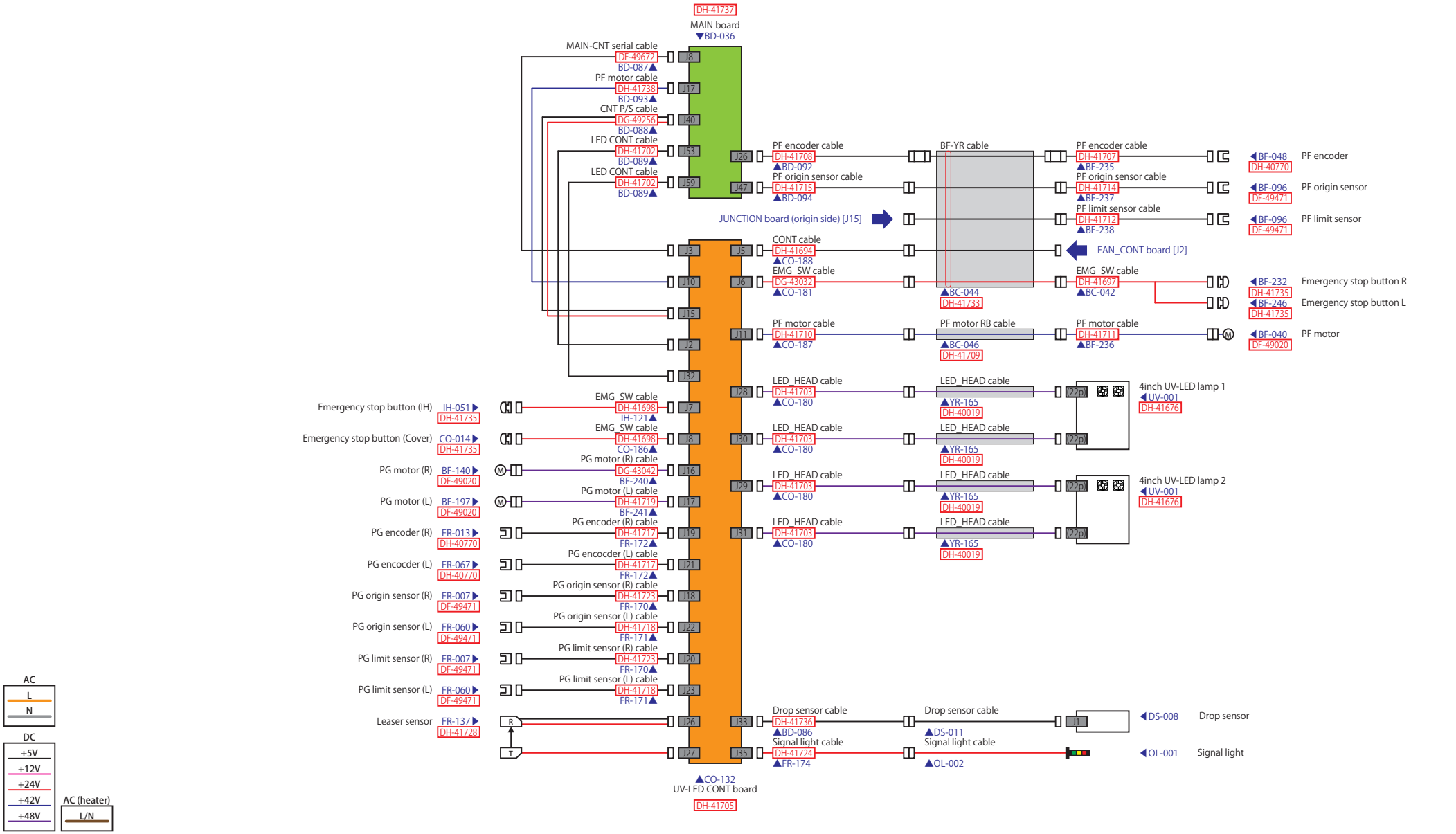
8.1.3. Control section 2

XPJ-1462UF_CONTROL2



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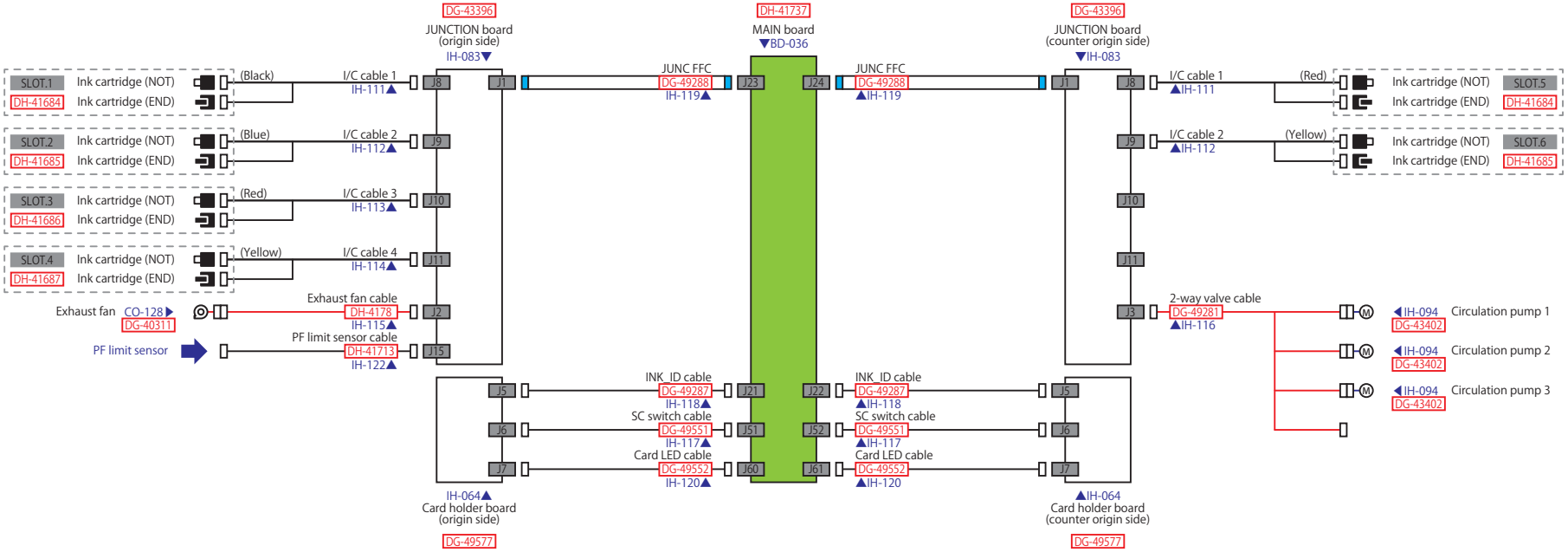
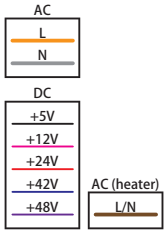
8.1.4. IH section

XPJ-1462UF_IH





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9. Tube diagram

9. Tube diagram

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9.1. Tube diagram (XPJ-1682SR)

Section	Related parts
9.1.1. Tube diagram (table:print head)	- Ink slot - print head
9.1.2. Tube diagram (table:waste fluid tank)	- Cap/Waste fluid tray - Waste fluid tank
9.1.3. Tube diagram (figure)	- Ink slot - print head - Cap/Waste fluid tray - Waste fluid tank

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9.1.1. Tube diagram (table:print head)

[Ink slot - Print head]

XPJ-1462UF

tube length : [mm]

6 color setting				Wh				Va				Y		C		M		K	
Type	Parts No.	Parts No.		slot.6				slot.5				slot.4		slot.3		slot.2		slot.1	
Ink holder	DH-41684	Frame assemble-C	IH-025	-				○				-		-		-		○	
	DH-41685	Frame assemble-C	IH-025	○				-				-		-		○		-	
	DH-41686	Frame assemble-C	IH-025	-				-				-		○		-		-	
	DH-41687	Frame assemble-C	IH-025	-				-				○		-		-		-	
Tube	*1	VJ_5-layer tube(BK) [Φ3]	IH-034	25				25				25		25		25		25	
Fitting	DG-49570	L-fitting(BK) [Φ3]	IH-035	○				○				○		○		○		○	
Tube	*1	VJ_5-layer tube(BK) [Φ3]	IH-036	20								20						20	
Fitting	DG-42982	Y-fitting(BK) [Φ3]	IH-037	○								○						○	
Tube	*1	VJ_5-layer tube(BK) [Φ3]	IH-039	590								590						670	
Fitting	DH-41246	L-fitting(BK) [soft-hard]	IH-100	○								○						○	
Tube	DH-41682	Soft tube(BK) [Φ3]	IH-101	25								25						25	
Fitting	DH-41692	I-fitting(BK) [Φ3/Φ4]	IH-102	○								○						○	
Tube	DH-41683	Soft tube(BK) [Φ4]	IH-103	25								25						25	
Pump	DG-43402	Circulation pump	IH-094	IN								IN						IN	
				OUT								OUT						OUT	
Tube	DH-41683	Soft tube(BK) [Φ4]	IH-104	25								25						25	
Fitting	DH-41692	I-fitting(BK) [Φ3/Φ4]	IH-105	○								○						○	
Tube	DH-41682	Soft tube(BK) [Φ3]	IH-106	35								35						35	
Fitting	DH-41246	L-fitting(BK) [soft-hard]	IH-107	○								○						○	
Tube	*1	VJ_5-layer tube(BK) [Φ3]	IH-038,108	550		840		940				600	940	1170		1170		600	1170
Fitting	DG-49569	I-fitting(BK) [Φ3]	YR-143	○		○		○				○	○	○		○		○	○
Tube	*1	VJ_5-layer tube(BK) [Φ3]	YR-142	2500		2500		2500				2500	2500	2500		2500		2500	2500
Fitting	DG-42982	Y-fitting(BK) [Φ3]	CR-101,105	○								○						○	
Tube	*1	VJ_5-layer tube(BK) [Φ3]	CR-100,104	20								20						20	
Fitting	DG-42982	Y-fitting(BK) [Φ3]	CR-103	○				○											
Tube	*1	VJ_5-layer tube(BK) [Φ3]	CR-102	30		30		30		30									
Fitting	DG-42982	Y-fitting(BK) [Φ3]	CR-099	○		○		○		○		○		○		○		○	
Tube	*1	VJ_5-layer tube(BK) [Φ3]	CR-098	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120	120
Fitting	DH-40872	I-fitting(BK) [Φ2/Φ3]	CR-097	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Screw	-	Joint screw	CR-096	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Connector	DG-41915	O-ring	CR-095	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		Connector	CR-094	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Print head 1	DH-41677	Print head(I9472)	CR-069	-	-	-	-	-	-	-	-	A	B	C	D	E	F	G	H
Print head 2	DH-41677	Print head(I9472)	CR-069	A	D	E	H	B	C	F	G	-	-	-	-	-	-	-	-
				Nozzle															

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*1 : Maintenance parts for “VJ_5-layer tube(BK) [Φ3]”
1000mm : DG-48681 [VJ five-layer black tube 3-4(1m)]
2000mm : DG-48682 [VJ five-layer black tube 3-4(2m)]
3000mm : DG-48683 [VJ five-layer black tube 3-4(3m)]

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9.1.2. Tube diagram (table:waste fluid tank)

[Cap/Waste fluid tray - Waste fluid tank]

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tube length : [mm]

Type	Parts No.	Parts No.		Flushing box	Drop sensor unit	Wiper-2 (for print head 2)	Wiper -1 (for print head 1)	Head cap-1 (for print head 1)			Head cap-2 (for print head 2)		
								To waste fluid tank		To air open valve	To waste fluid tank		To air open valve
Box	-	Flushing waste fluid box	MN-106	○	-	-	-	-		-	-		-
Tube	DH-40843	Fluoro rubber tube(BK) [Φ7]	MN-110	210	-	-	-	-		-	-		-
Sensor	-	Drop sensor unit	DS-001		○	-	-	-		-	-		-
Tube	-	Silicon tube [Φ8]	DS-018		33	-	-	-		-	-		-
Wiper	DG-43497	Wiper	MN-101			○	○	-		-	-		-
Box	-	Wipping waste fluid box	MN-087			○	○	-		-	-		-
Tray	-	Waste fluid tray	MN-114			○		-		-	-		-
Tube	DH-40843	Fluoro rubber tube(BK) [Φ7]	MN-116			60		-		-	-		-
Head cap	DG-49594	Head cap	MN-070					○			○		
		Spacer	MN-071					○	○	○	○	○	○
		Thermoflon tube [Φ1.6]*1	MN-072,073					75	75	240	75	75	170
		Bundling band (x2)	MN-075					○	○		○	○	
		I-fitting [Φ1.6]	MN-074					○	○		○	○	
		Bundling band (x2)	MN-075					○	○		○	○	
		Thermoflon tube [Φ1.6]*1	MN-073					70	70		70	70	
Valve holder	-	Air open valve holder	MN-060							○			○
Fitting	DG-49572	F-fitting	MN-129					○		-	○		-
Tube	DH-41683	Soft tube(BK) [Φ4]	MN-130					25		-	25		-
Pump	DG-43402	Circulation pump	MN-126					IN		-	IN		-
								OUT		-	OUT		-
Tube	DH-41683	Soft tube(BK) [Φ4]	MN-131					170		-	250		-
Fitting	-	Waste fluid fitting	MN-119	○									
Band	-	Hose band	BC-098	○									
Tube	DH-40843	Fluoro rubber tube(BK) [Φ7]	MN-122	95									
Band	-	Hose band	BC-098	○									
Bottle	DG-49081	Waste fluid tank	BC-095	○									
		Hose band	BC-098	○									
		Fluoro rubber tube(BK) [Φ7]*2	BC-096	350									
		Hose band	BC-098	○									
		2-way valve	BC-097	○									

*1 : Maintenance parts for "Thermoflon tube [Φ1.6]"
1000mm: DG-46908 [ThermoflonBasic φ1.6x3.2(1000mm)]

*2 : Maintenance parts for "Fluoro rubber tube(BK) [Φ7]"
1000mm : DH-40843 [Fluoto Rubber Tube(B) Φ7*10(1m)]

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9.1.3. Tube diagram (figure)

[6 color setting]

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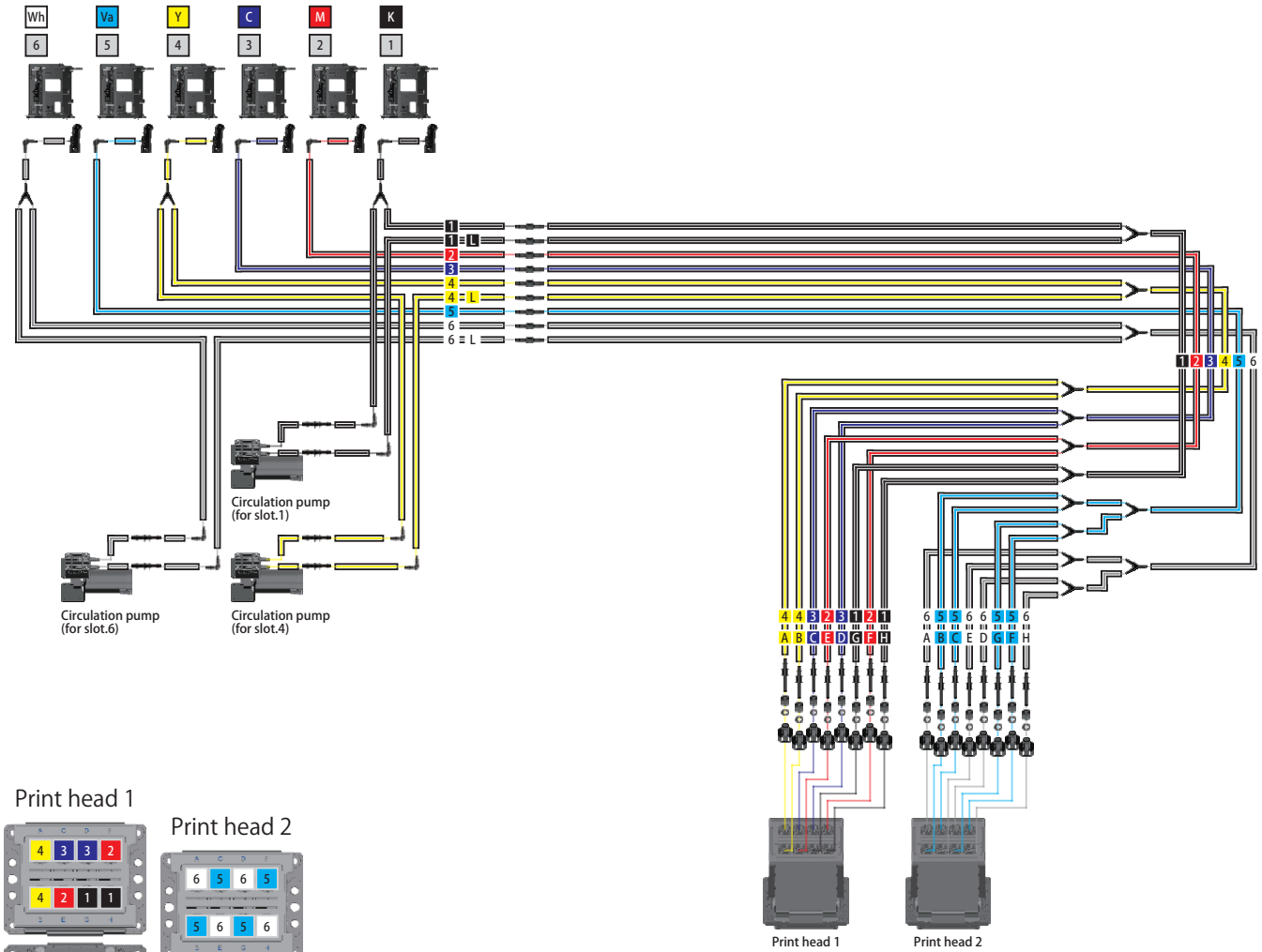

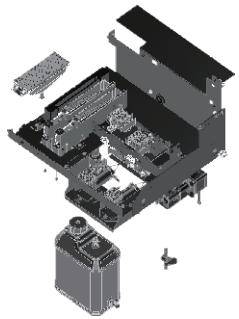

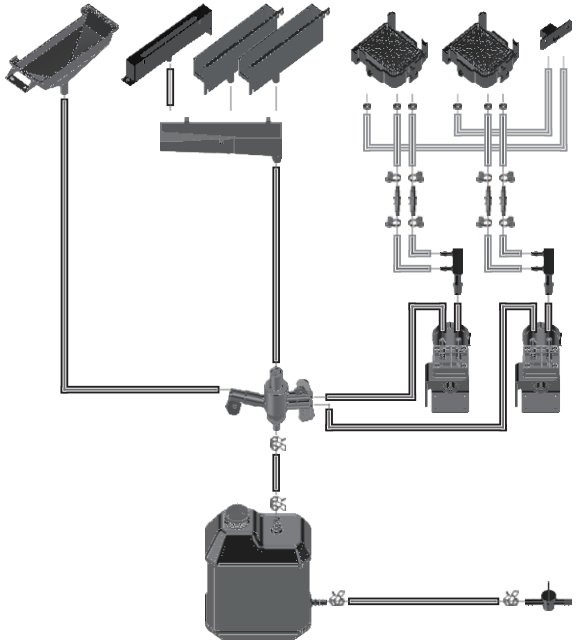

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10. Self-diagnosis function diagram

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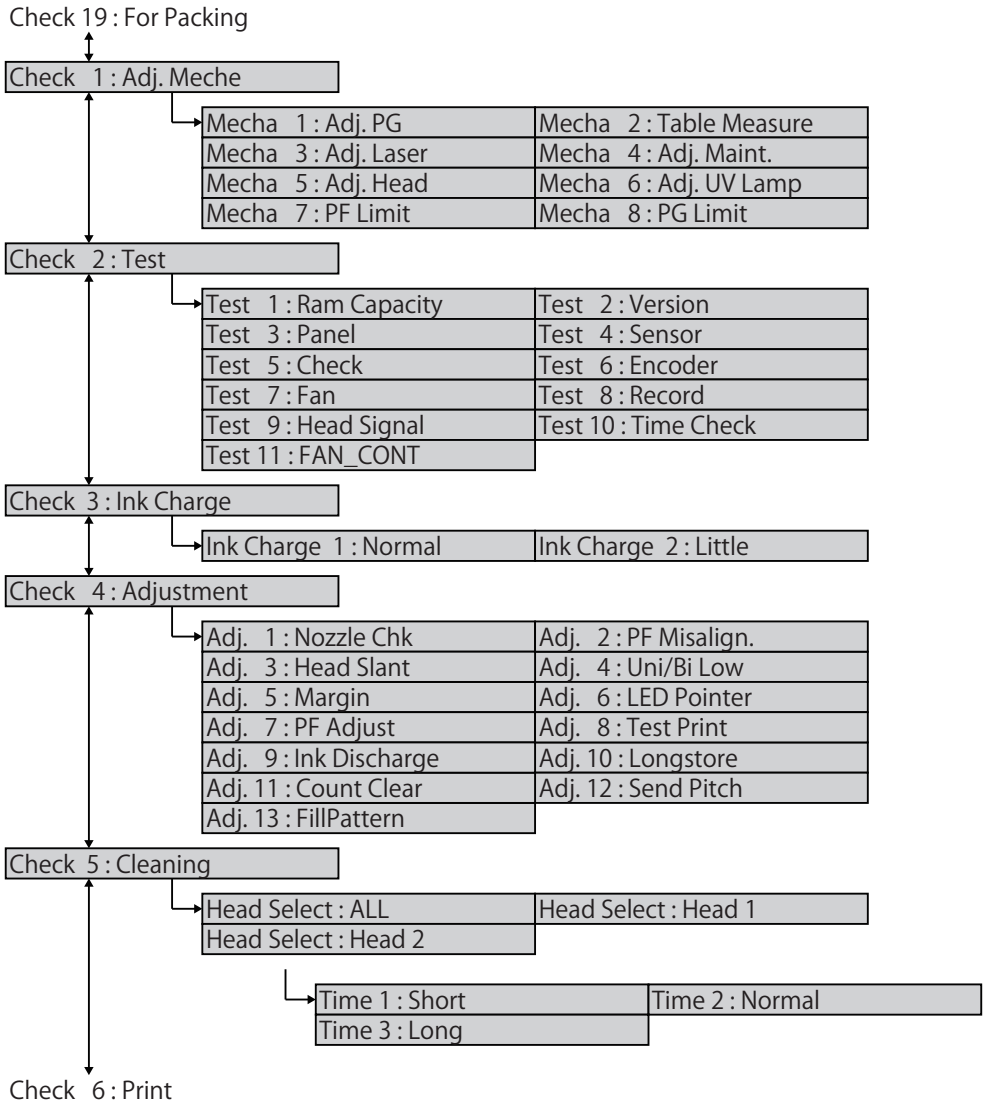
10.1. Self-diagnosis function diagram (XPJ-1462UF)

NOTE

- As of July 1, 2023 (No.SS620A(2023.06.27))



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Check 5 : Cleaning

Check 6 : Print

- Print 1 : Adjust ALL
- Print 2 : Parameter ALL
- Print 3 : Log Info.
- Print 4 : S / C Log Info.
- Print 5 : Life Info.

Check 7 : Parameter

- Param 1 : Init.Adjust
  - Init. 1 : Uni/Bi Low
  - Init. 2 : Mecha Param.
  - Init. 3 : Servo
  - Init. 4 : ParameterALL
- Param 2 : Init.Counter
  - Init. 1 : CR Motor
  - Init. 2 : PF Motor
  - Init. 3 : PG Motor L
  - Init. 4 : PG Motor R
  - Init. 5 : MU Motor
  - Init. 6 : Wiper1
  - Init. 7 : Wiper2
  - Init. 8 : Pump1
  - Init. 9 : Pump2
  - Init.10 : CPump1
  - Init.11 : CPump2
  - Init.12 : CPump3
  - Init.13 : UV Lamp L
  - Init.14 : UV Lamp R
  - Init. 15 : Dust Cover
  - Init. 16 : Print Num.
  - Init. 17 : Print Info.
  - Init. 18 : Wiper Sol. 1
  - Init. 19 : Wiper Sol. 2
  - Init. 20 : CR Lock Sol.
  - Init. 21 : Unlock Pos.
  - Init. 22 : Timer
  - Init. 23 : Daily Log
  - Init. 24 : Counter ALL
- Param 3 : Update
  - Update 1 : Uni/Bi Low
  - Update 2 : Margin
  - Update 3 : Change Flg
  - Update 4 : DebugBit
  - Update 5 : Dot Ctrl.
  - Update 6 : InkType
  - Update 7 : InkConfig.
  - Update 8 : UV Lamp
  - Update 9 : Periodic CL
  - Update10 : Uni/Bi Ptn
  - Update11 : Uni/Bi Dot
  - Update12 : LED Pointer

Check 8 : Servo

Check 7 : Parameter

Check 8 : Servo

- Servo 1 : 400cps CW
- Servo 2 : 400cps CCW
- Servo 3 : 320cps CW
- Servo 4 : 320cps CCW
  - 320 cps CW : GP
  - 320 cps CW : GI
  - 320 cps CW : GLPF
  - 320 cps CW : PWM Scale
  - 320 cps CW : wC

Check 9 : Endurance

- Life 1 : CR Motor
- Life 2 : PF Motor
- Life 3 : PG Motor
- Life 4 : Pump
- Life 5 : C Pump
- Life 6 : Head Lock
- Life 7 : Wiper
- Life 8 : Maint. U / D
- Life 9 : Cleaning
- Life 10 : Total Life
- Life 11 : Check

Check 10 : MadiaInitial

- Width : 1420 mm
- Length : 700 mm

Check 11 : ExControl

- Ctrl 1 : Version

Check 12 : UV

- UV 1 : Lamp On / Off
- UV 2 : Lamp Adjust

Check 13 : Auto Nzl Chk

- D-sns 1 : Check Unit
- D-sns 2 : Get Opt. Axis
- D-sns 3 : Performnce

Check 14 : Cap In / Out

- Cap : Cap Out
- Cap : Cap In

Check 15 : Head Replace

- Head Replace : ALL
- Head Replace :Head 1
- Head Replace : Head 2

Check 16 : Option

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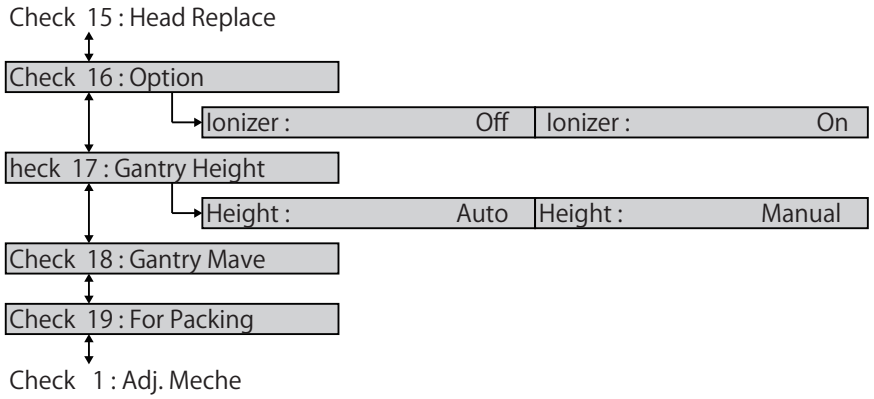

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11. Error message lists

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11.1. Error message list (XPJ-1462UF)

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E016Err Interrupt [00] E016Err TLB Modif [01] E016Err TLB-L/I [02] E016Err TLB-S [03] E016Err AddErr-L/I [04] E016Err AddErr-S [05] E016Err BusErr-I [06] E016Err BusErr-L/S [07] E016Err SystemCall [08] E016Err BreakPoint [09] E016Err Reserved [10] E016Err Copro [11] E016Err Overflow [12] E016Err Trap [13] E016Err Floating [15] E016Err Watch [23] E016Err WatchDog [32] E016Err Abort Err [33] E016Err ERROR [35] E016Err Exception Err [XX]	Cause - Defect in the MAIN board.
Symptom CPU system serious error	

E065Err PF Motor	Cause
Symptom Error in the media feed motor (X-axis) during printer operation.	- This error occurs when there is a large difference between the motor command value and the encoder feedback value. - Defect in the PF motor, MAIN board, etc.

E066Err CR Motor	Cause
Symptom Error in the head moving motor (Y-axis) during printer operation.	- This error occurs when there is a large difference between the motor command value and the encoder feedback value. - Defect in the T-fence, CR motor, CR board, MAIN board, etc.

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E067Err PF Encoder	Cause
Symptom Error in media feed amount (X-axis) during printer operation.	- This error occurs when there is no feedback from the encoder at all. - Defect in the PF motor, MAIN board, etc.

E068Err CR Encoder	Cause
Symptom Error in head moving amount (Y-axis) during printer operation.	- This error occurs when there is no feedback from the encoder at all. - Defect in the T-fence, CR motor, CR board, MAIN board, etc.

E069Err PF Timeout	Cause
Symptom Time-out in media feed amount (X-axis) during printer operation.	- This error occurs when the gantry does not reach a predetermined position. - Defect in the PF motor, MAIN board, etc.

E070Err CR Timeout	Cause
Symptom Time-out in head moving amount (Y-axis) during printer operation.	- This error occurs when the carriage does not reach a predetermined position. - Defect in the T-fence, CR motor, CR board, MAIN board, etc.

E071Err PF Current	Cause
Symptom Problem caused by media feed motor (X-axis) overload during printer operation.	- Defect in the PF motor, MAIN board, etc.

E072Err CR Current	Cause
Symptom Problem caused by head moving motor (Y-axis) overload during printer operation.	- Defect in the T-fence, CR motor, CR board ,MAIN board, etc.

E073Err PF2 Current	Cause
Symptom E071 Error detected by the firmware.	- Defect in the PF motor, MAIN board, etc.

E074Err CR2 Current	Cause
Symptom E072 Error detected by the firmware.	- Defect in the T-fence, CR motor, CR board, MAIN board, etc.

E075Err Head Cable	Cause
Symptom Head cable or head thermistor problem.	- Defect in the head cable, head thermistor, etc.

E079Err Board Commu.	Cause
Symptom Abnormality in serial communication between the main board and the controller board during printer operation.	- Defect in the communication cable, MAIN board, controller board, etc.

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E081Err CR Origin	Cause
Symptom CR origin cannot be detected.	- Defect in the origin sensor, MAIN board, etc.

E092Err CR Over Load	Cause
Symptom E072 Error detected by the firmware.	- Defect in the head lock assembly, T-fence, CR motor, CR board, MAIN board, or overload of the carriage motor during cap-in/cap-out, etc.

E093Err Control Ver.	Cause
Symptom Problem with the controller firmware.	- Mismatch of the firmware version on controller board, etc.

E094Err PF Drv Temp	Cause
Symptom Heat generated by overloading of PF motor.	- Defect in the MAIN board, PF motor, etc.

E097Err NVRAM	Cause
Symptom Problem with the NVRAM.	- Defect in the MAIN board, etc.

E154Err AC Volt. Low	Cause
Symptom Power-supply disconnection or brownout.	- Disconnected AC cable, temporary blackout, or problem with the power supply board, etc.

E155Err Abnormal End	Cause
Symptom Problem with CPU memory.	- ” E016” is shown on the screen.

E163Err PF Limit	Cause
Symptom PF limit sensor does not detect.	- Defect in the PF limit sensor, etc.

E164Err PF Sensor	Cause
Symptom Both the PF origin sensor and the PF limit sensor detect at the same time.	- Defect in the PF limit sensor, PF origin sensor, etc.

E165Err PF LimDetect	Cause
Symptom PF limit sensor detected.	- Defect in the PF encoder, PF encoder scale, PF limit sensor, etc.

E166Err Obst Snsr	Cause
Symptom Obstacle detect sensor does not detect.	- Defect in the obstacle detect sensor, etc.

E186Err Head Temp 1	Cause
Symptom Problem with the head cable 1 or head thermistor 1.	- Defect in the head cable 1, head thermistor 1, etc.

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E187Err Head Temp 2	Cause
Symptom Problem with the head cable 2 or head thermistor 2.	- Defect in the head cable 2, head thermistor 2, etc.

E188Err Head Heat 1	Cause
Symptom Problem with the head cable 1 or print head 1.	- Defect in the head cable 1, print head 1, etc.

E189Err Head Heat 2	Cause
Symptom Problem with the head cable 2 or print head 2.	- Defect in the head cable 2, print head 2, etc.

E190Err H Trans Th.1	Cause
Symptom (Head transistor thermistor 1) Problem with the head transistor 1.	- Defect in the temperature of the head transistor 1/2 on the MAIN board or sensor 1/2, etc.

E191Err H Trans Th.2	Cause
Symptom (Head transistor thermistor 2) Problem with the head transistor 2.	- Defect in the temperature of the head transistor 3/4 on the MAIN board or sensor 3/4, etc.

E224Err UVL Fan 1	Cause
Symptom Left UV Fan 1 is stopped.	- Defect in the Left UV Fan 1, etc.

E225Err UVL Fan 2	Cause
Symptom Left UV Fan 2 is stopped.	- Defect in the Left UV Fan 2, etc.

E226Err UVL TempErr.	Cause
Symptom Left UV Lamp is overheated.	- Defect in the Left UV Lamp, etc.

E227Err UVL HeadDet.	Cause
Symptom Left UV Lamp is not connected.	- Defect in the Left UV Lamp cable 1, etc.

E228Err UVR Fan 1	Cause
Symptom Right UV Fan 1 is stopped.	- Defect in the Right UV Fan 1, etc.

E229Err UVR Fan 2	Cause
Symptom Right UV Fan 2 is stopped.	- Defect in the Right UV Fan 2, etc.

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E230Err UVR TempErr.	Cause
Symptom Right UV Lamp is overheated.	- Defect in the Right UV Lamp, etc.

E231Err UVR HeadDet.	Cause
Symptom Right UV Lamp is not connected.	- Defect in the Right UV Lamp cable 1, etc.

E232Err Cap Sensor	Cause
Symptom Cap sensor is not working properly.	- Defect in the MAIN board, sensor, etc.

E233Err Maint. Motor	Cause
Symptom Problem with maintenance unit motor driver.	- Defect in the MAIN board, sensor, etc.

E234Err Emergency	Cause
Symptom Emergency stop button was pressed. If not, defect in the emergency stop sensor.	- When the emergency stop button is pressed, Emergency Stop", Reboot Printer" will be - displayed in User Mode and this error will not be displayed.

E241Err PG Limit	Cause
Symptom PG limit sensor does not detect.	- Defect in the PG limit sensor, Control board, MAIN board, etc.

E242Err PG Motor L	Cause
Symptom Error in the gantry moving motor (Z axis/counter origin side) during printer operation.	- This error occurs when there is a large difference between the motor command value and the encoder feedback value. - Defect in the PG motor (counter origin side), Control board, MAIN board, etc.

E243Err PG Motor R	Cause
Symptom Error in the gantry moving motor (Z axis/origin side) during printer operation.	- This error occurs when there is a large difference between the motor command value and the encoder feedback value. - Defect in the PG motor (origin side), Control board, MAIN board, etc.

E244Err PG Encoder L	Cause
Symptom Error in the gantry moving amount (Z axis/counter origin side) during printer operation.	- This error occurs when there is no feedback from the encoder at all. - Defect in the PG motor (counter origin side), Control board, MAIN board, etc.

E245Err PG Encoder R	Cause
Symptom Error in the gantry moving amount (Z axis/corigin side) during printer operation.	- This error occurs when there is no feedback from the encoder at all. - Defect in the PG motor (origin side), Control board, MAIN board, etc.

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E246Err PG Timeout L	Cause
Symptom Time out in the gantry moving amount (Z axis/counter origin side) during printer operation.	- This error occurs when the gantry does not reach a predetermined position. - Defect in the PG motor (counter origin side), Control board, MAIN board, etc.

E247Err PG Timeout R	Cause
Symptom Time out in the gantry moving amount (Z axis/origin side) during printer operation.	- This error occurs when the gantry does not reach a predetermined position. - Defect in the PG motor (origin side), Control board, MAIN board, etc.

E248Err PG Current L	Cause
Symptom Problem caused by the gantry moving motor (Z axis) non origin side) overload during printer operation.	- Defect in the PG motor (non origin side), Control board, MAIN board, etc.

E249Err PG Current R	Cause
Symptom Problem caused by the gantry moving motor (Z axis) origin side) overload during printer operation.	- Defect in the PG motor (origin side), Control board, MAIN board, etc.

E250Err PG Sensor	Cause
Symptom Problem in the PG origin senser or PG limit senser during printer operation.	- Defect in the PG motor, PG limit sensr, Control board, MAIN board, etc.

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12.1. FFC folding instruction (XPJ-1462UF)

Section	Related parts
12.1.1. CR-FFC	- MAIN board - CR board
12.1.2. Head-FFC	- CR board - Print head (1/2)
12.1.3. JUNCTION-FFC	- MAIN board - JUNCTION board (origin side) - MAIN board - JUNCTION board (counter origin side)
12.1.4. Panel-FFC	- MAIN board - Panel unit

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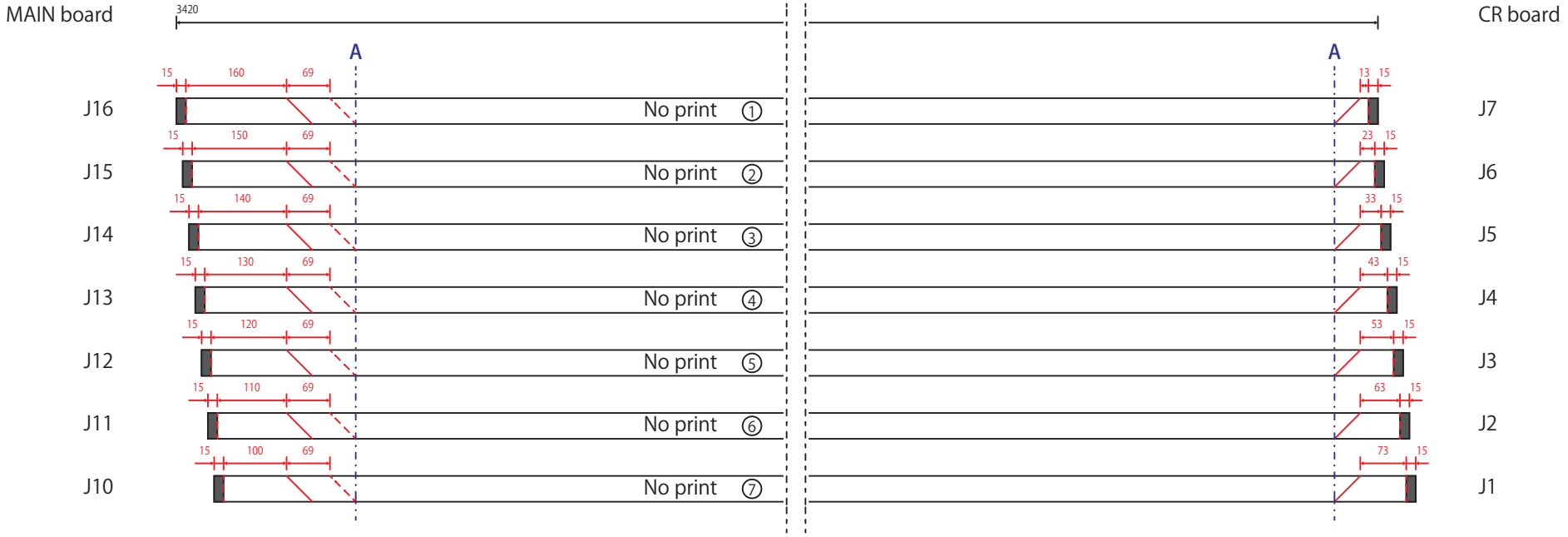
12.1.1. CR-FFC

Maintenance part : DG-49268 [CR-FFC_Assy]

XPJ-1462UF_CR-FFC
R123024



——— : Mountain fold
- - - - - - : Valley fold
Unit : mm

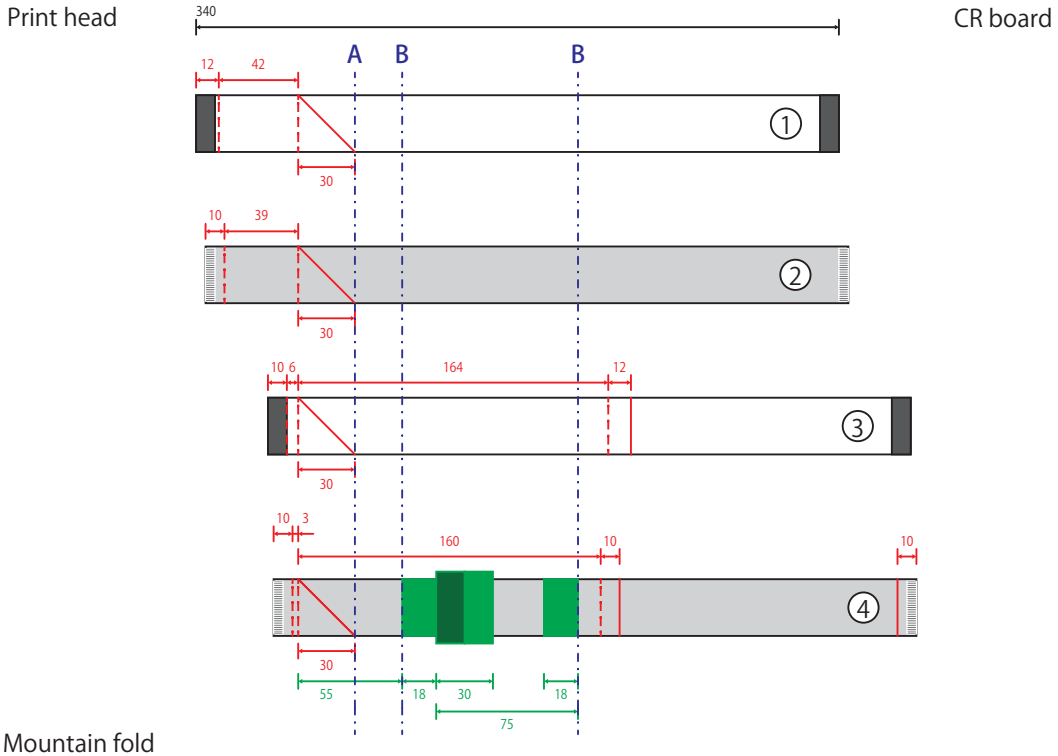
- Allign FFCs position at folding line (A).
- Lay FFC by ①-②-③-④-⑤-⑥-⑦ order.

CONFIDENTIAL

12.1.2. Head-FFC

Maintenance part : DG-41072 [Head FFC(D)]

XPJ-1462UF_Head-FFC
R123010(R119019)



: Mountain fold
: Valley fold
: Acetate tape
: Ferrite core
Unit : mm

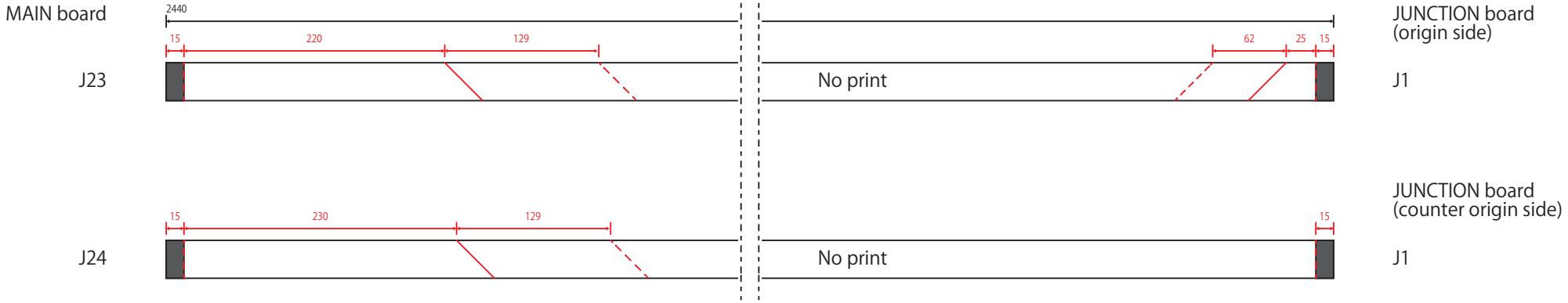
- FFC is piled up in order of ①,②,③ and ④ from te bottom so that the floding line A are aligned.
- Bundle all FFCs with acetate tape in B. (1.5 ~ 2 rounds)
- Attach ferrite core at all FFCs.
- Attach an acetate tape to cover a ferrite core. (3 rounds)
- Alignment of piled FFCs must be within 2mm.

CONFIDENTIAL

12.1.3. JUNCTION-FFC

Maintenance part : DG-49288 [JUNC_FFC Assy]

XPJ-1462UF_Junction-FFC
R120010(R119019, R119034)



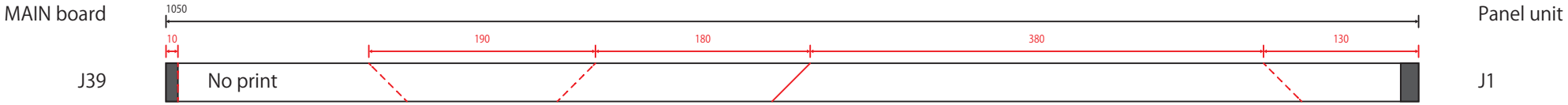
: Mountain fold
: Valley fold
Unit : mm

CONFIDENTIAL

12.1.4. Panel-FFC

Maintenance part : DG-49290 [Panel FFC Assy]

XPJ-1462UF_Panel-FFC
R123010(R119019)



——— : Mountain fold
- - - - - - : Valley fold
Unit : mm

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13. Explodid view

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13.1. System

NOTE

- As of July 1, 2023 (No.0073902)

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1	13.1.1. Overview	-
2	13.1.2. Breakdown	-

No.	Item	Reference
1	13.2. Base	-
2	13.3. Frame	-
3	13.4. Y rail	-
4	13.5. CR	-
5	13.6. Maintenance	-
6	13.7. IH	-
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15	13.16. Operation lamp	-
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TIP

index=> 13. Explodid view

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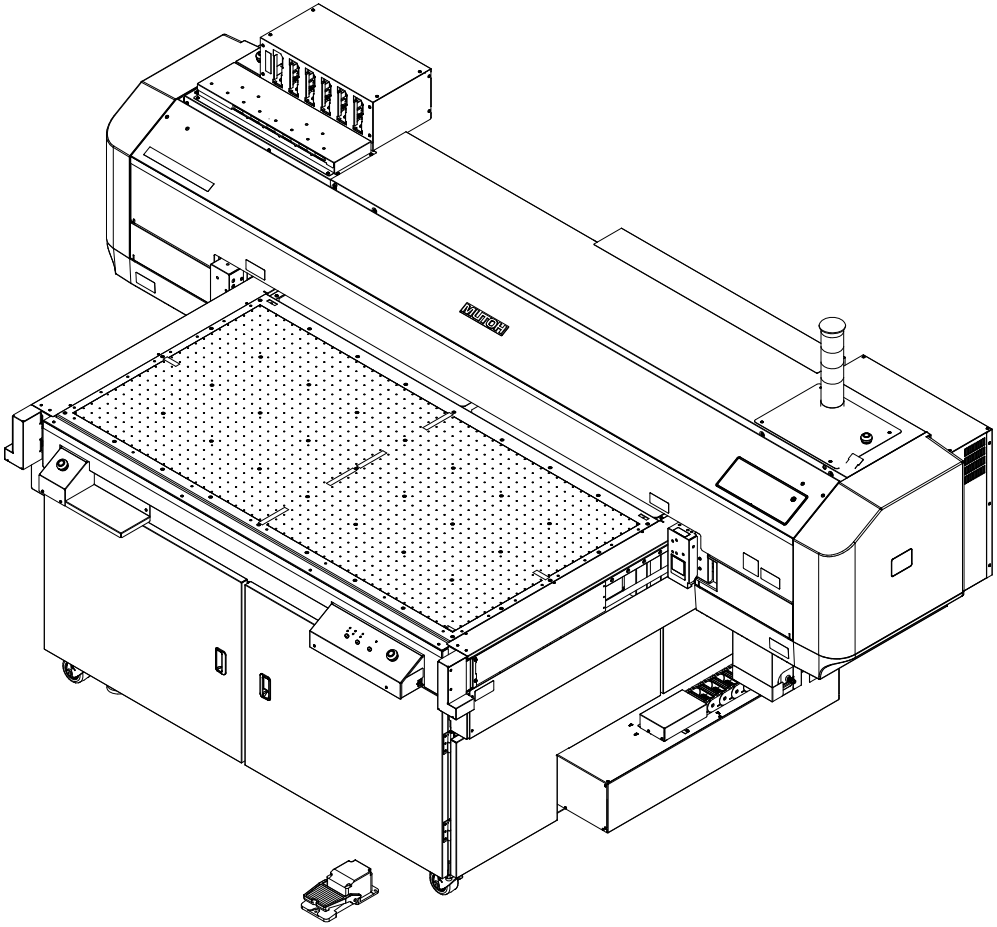
13.1.1. Overview

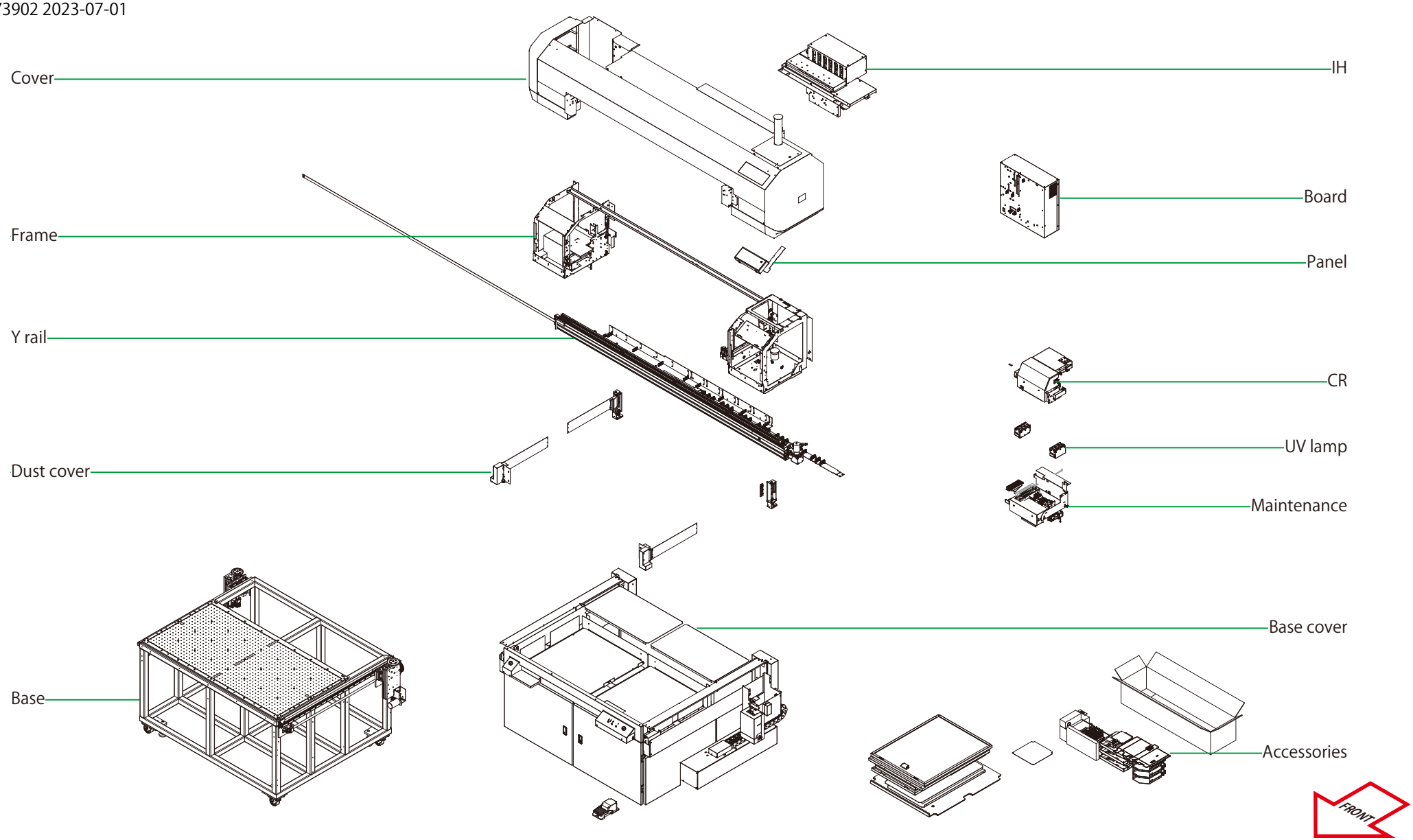
0073902 2023-07-01



CONFIDENTIAL

13.1.2. Breakdown

0073902 2023-07-01



CONFIDENTIAL

13.2. Base

NOTE

- As of July 1, 2023 (No.1485104)

No.	Item	Reference
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2	13.2.2. Breakdown	-
3	13.2.3. Z driver right	-
4	13.2.4. X driver right	-
5	13.2.5. X limit sensor right	-
6	13.2.6. Z dirver left	-
7	13.2.7. X return left	-
8	13.2.8. Stage	-
9	13.2.9. Beam	-
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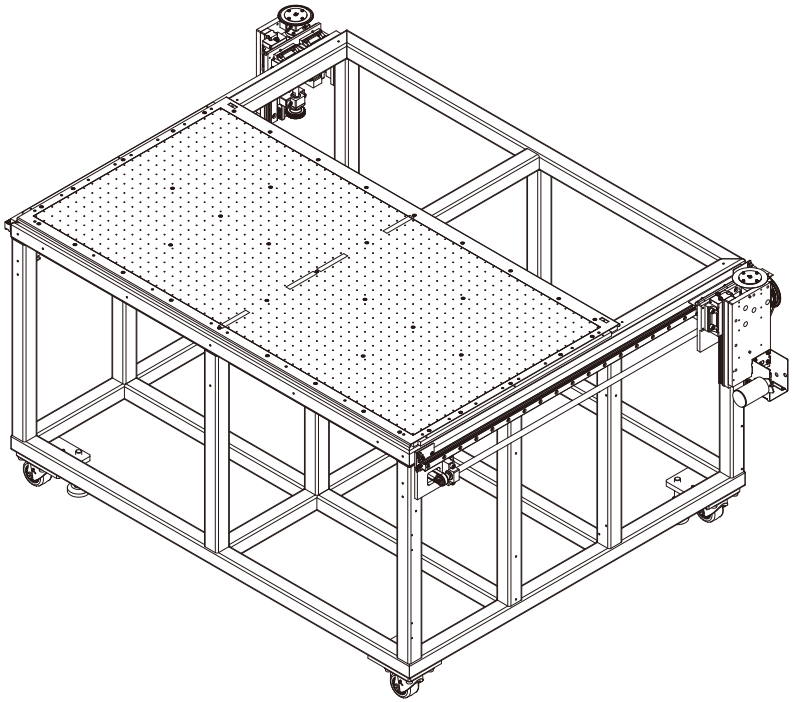
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.2.1. Overview

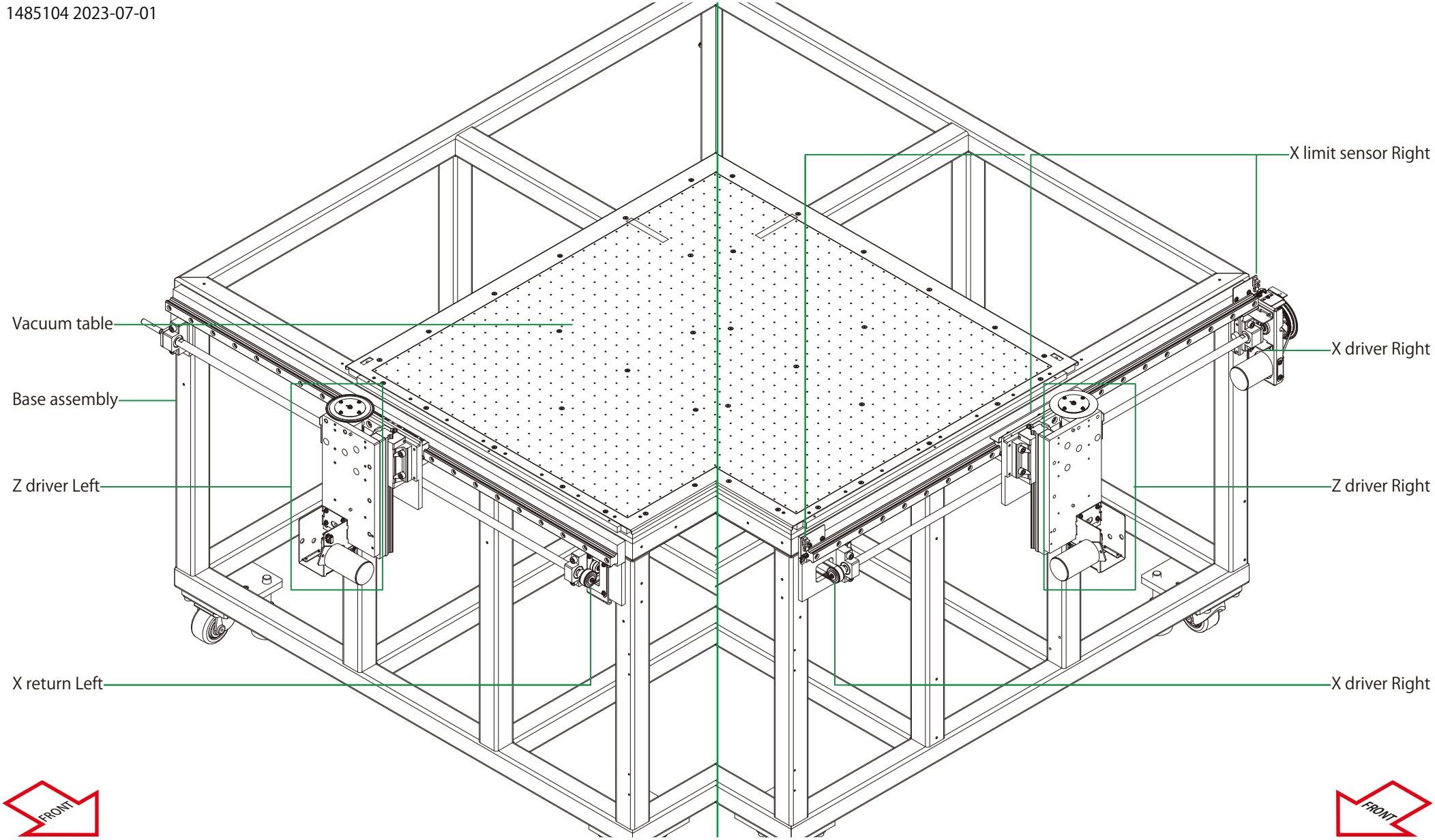
1485104 2023-07-07



CONFIDENTIAL

13.2.2. Breakdown

1485104 2023-07-01



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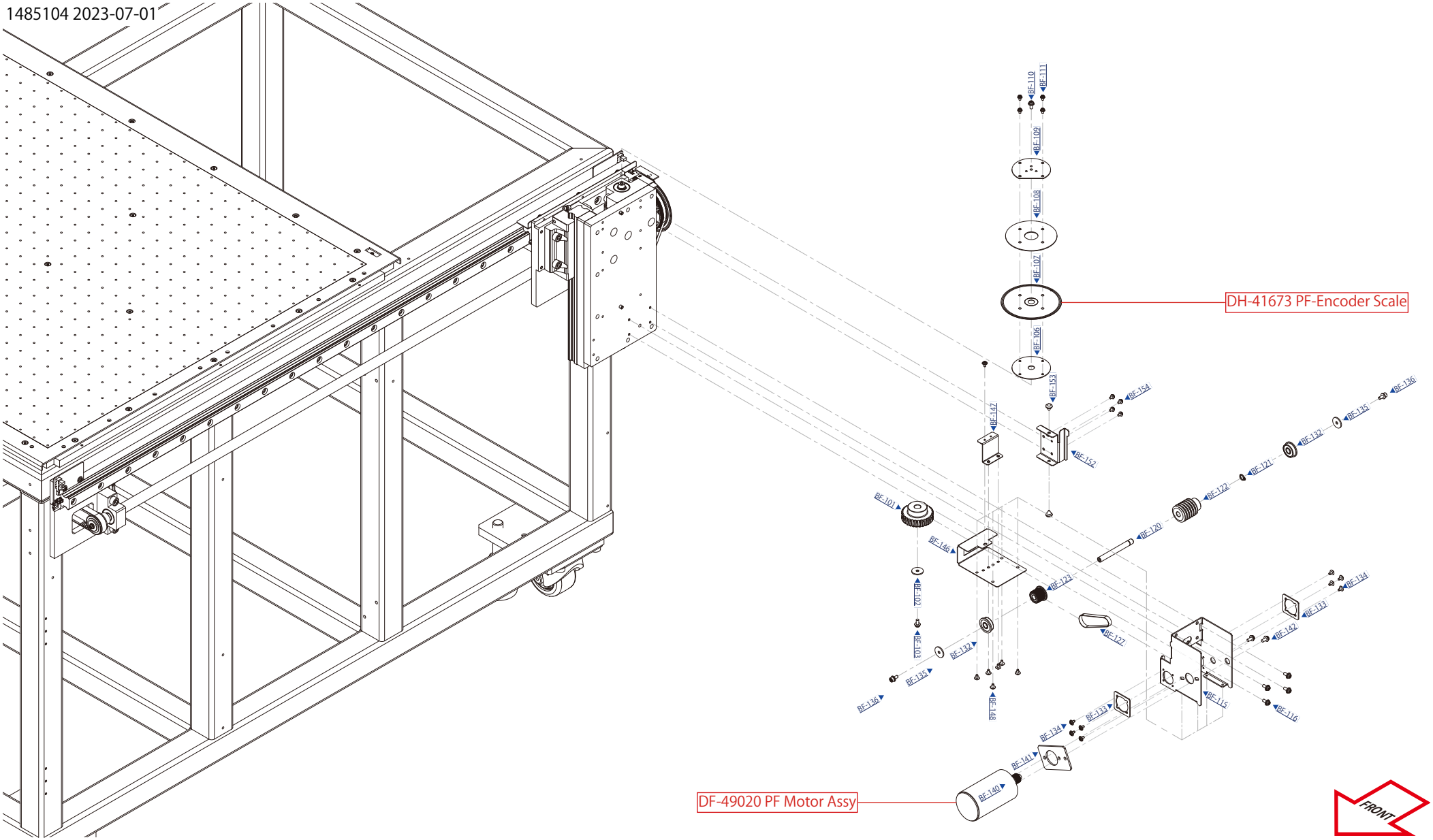
13.2.3. Z driver right

1485104 2023-07-01



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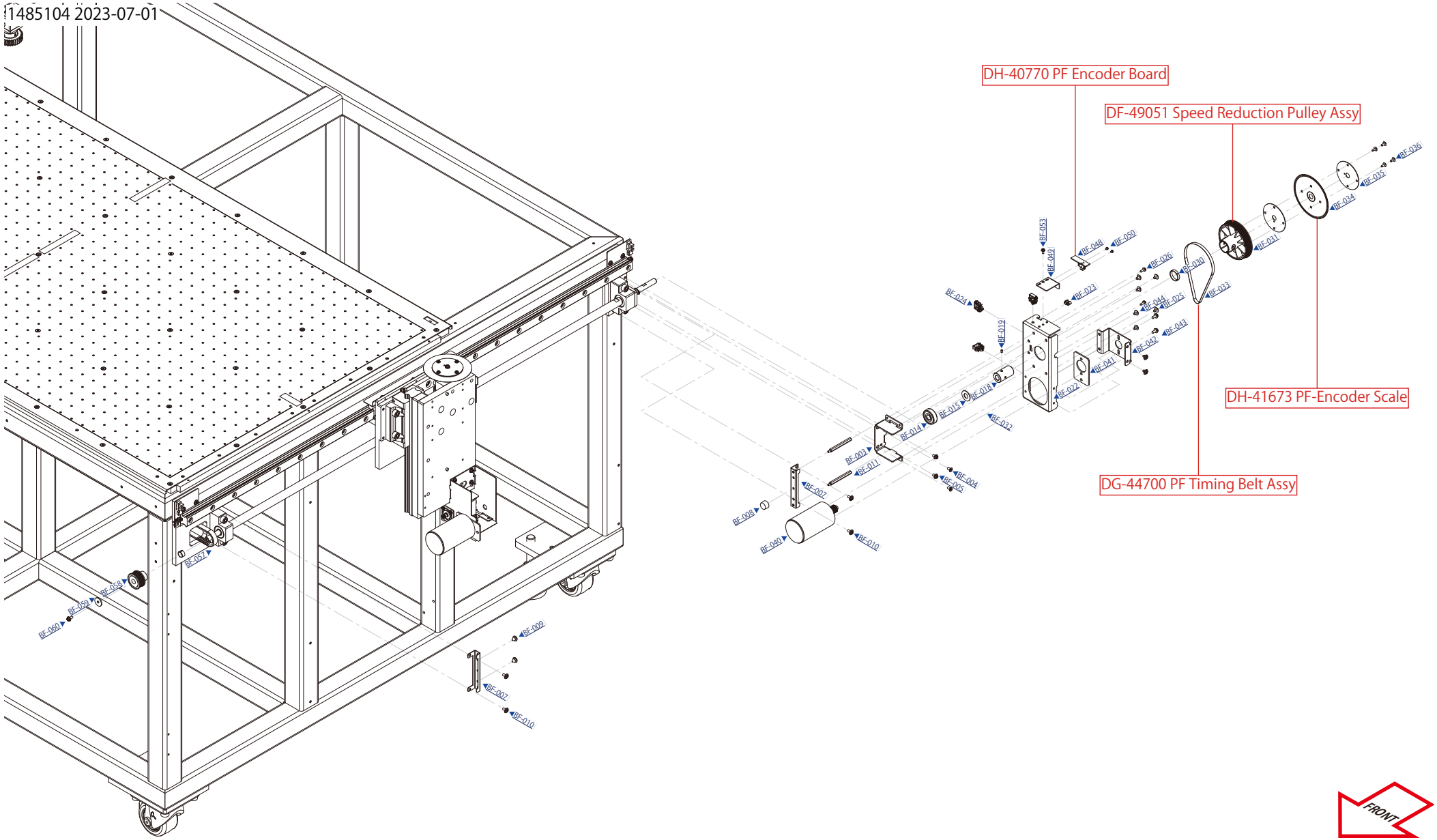
13.2.4. X driver right



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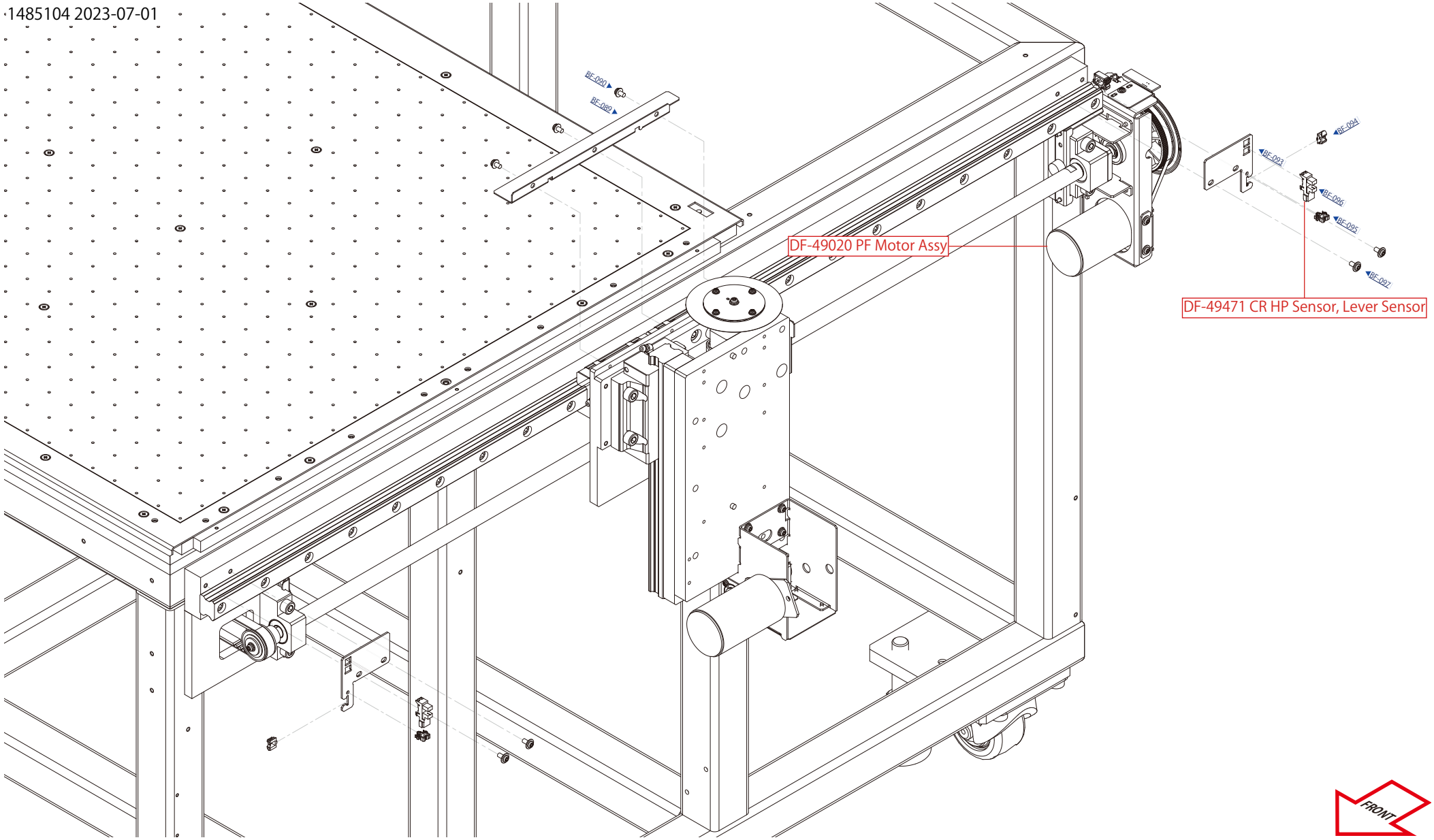
13.2.5. X limit sensor right

1485104 2023-07-01



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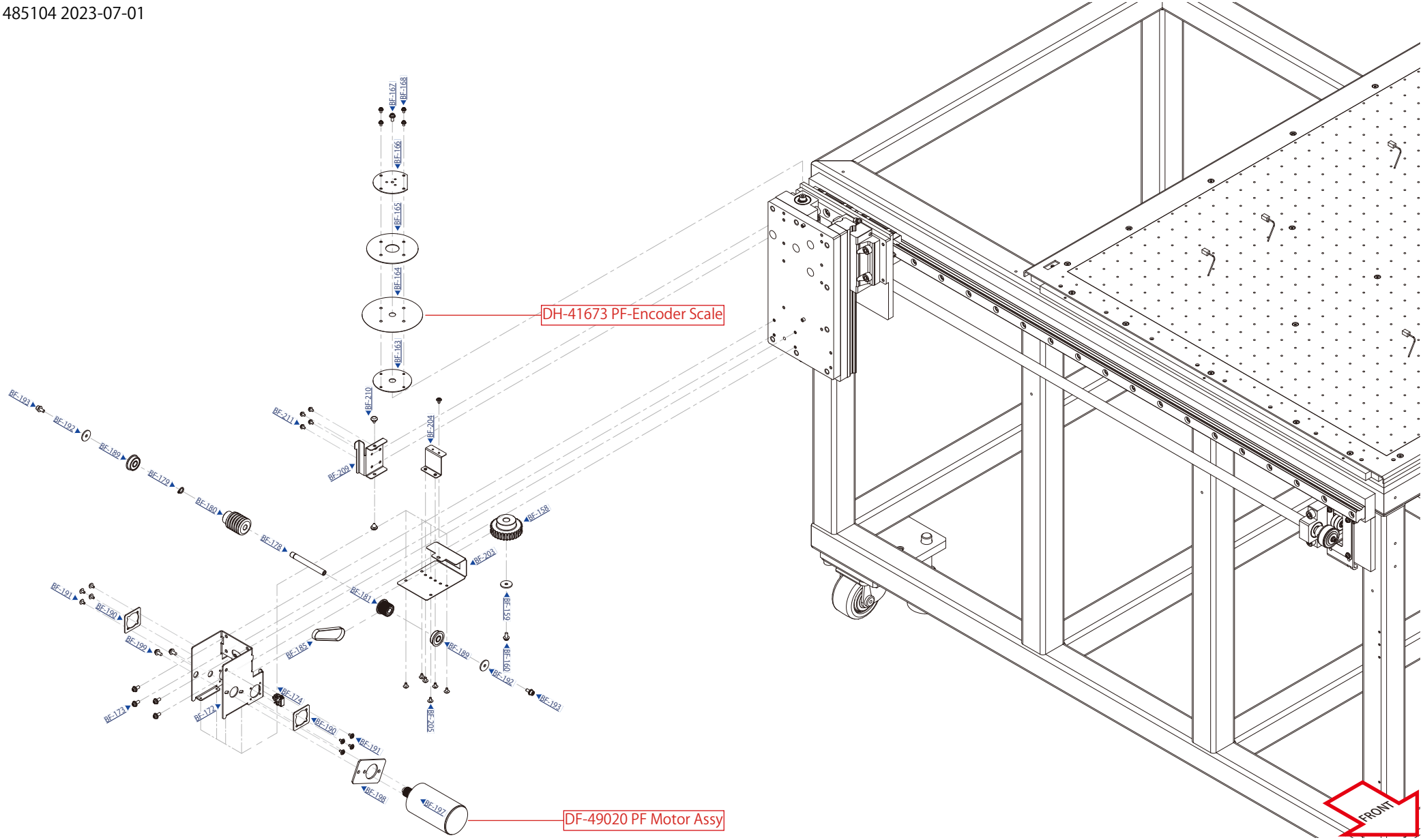
13.2.6. Z dirver left

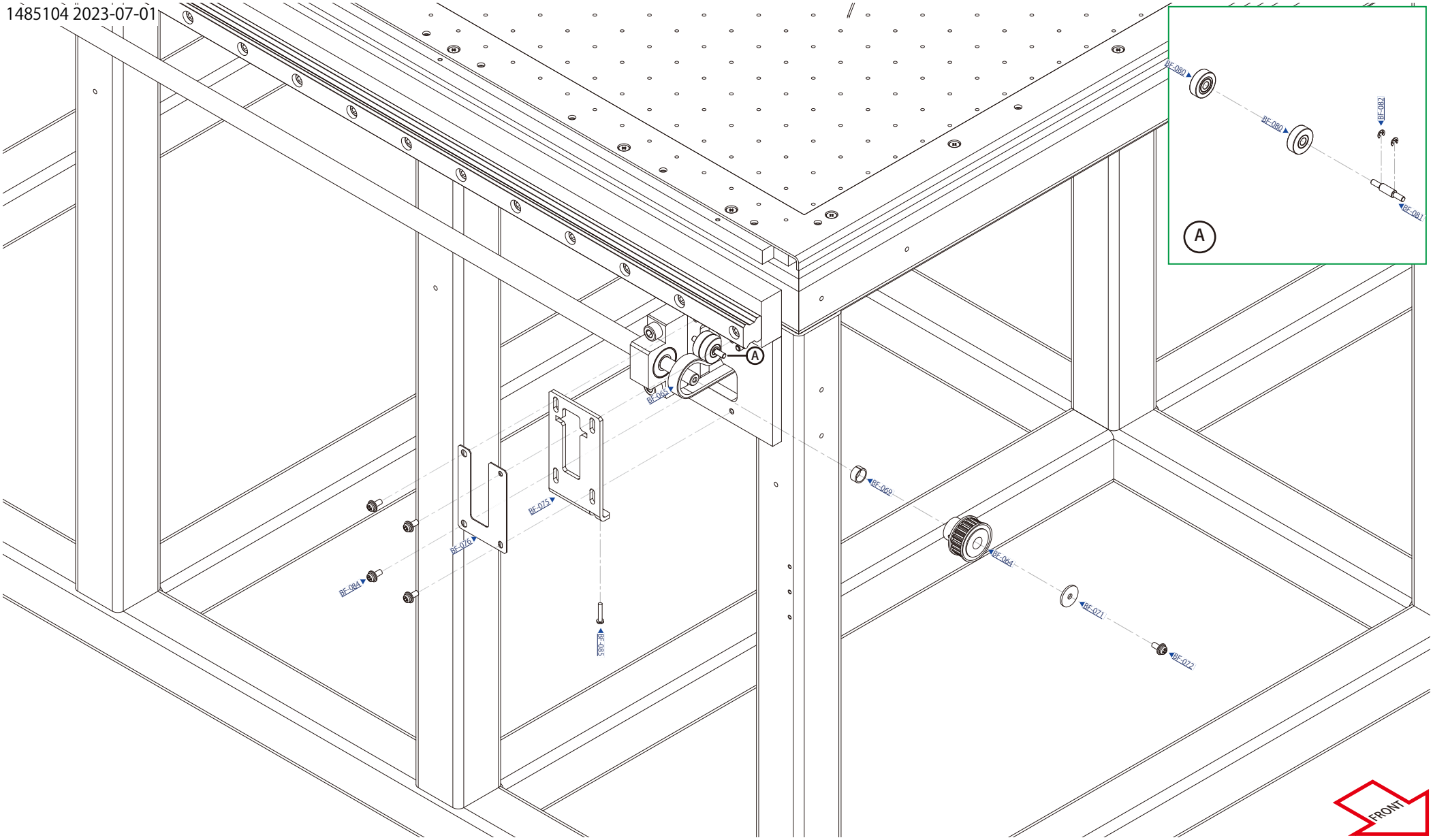
1485104 2023-07-01



CONFIDENTIAL

13.2.7. X return left

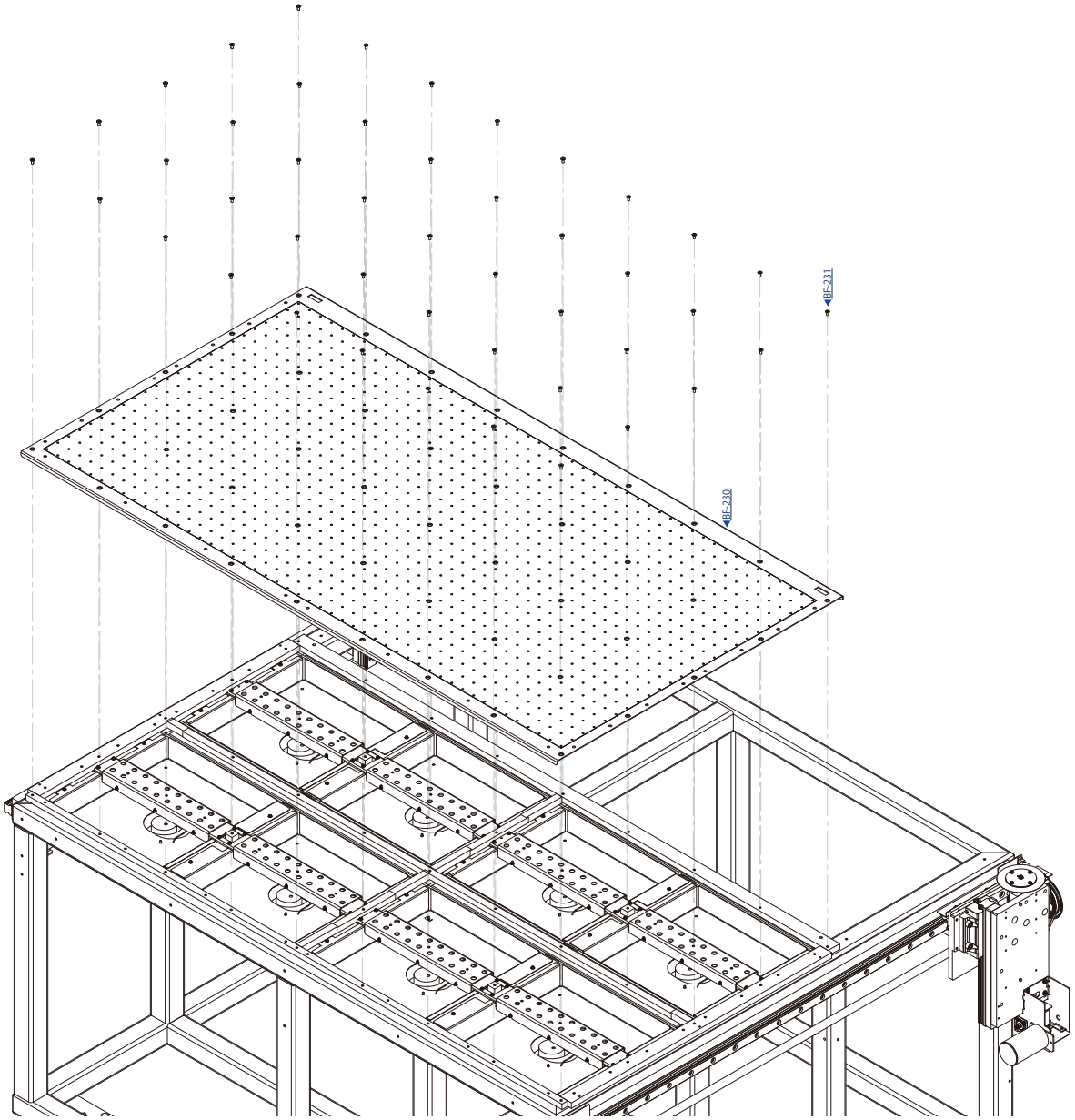
1485104 2023-07-01



CONFIDENTIAL

13.2.8. Stage

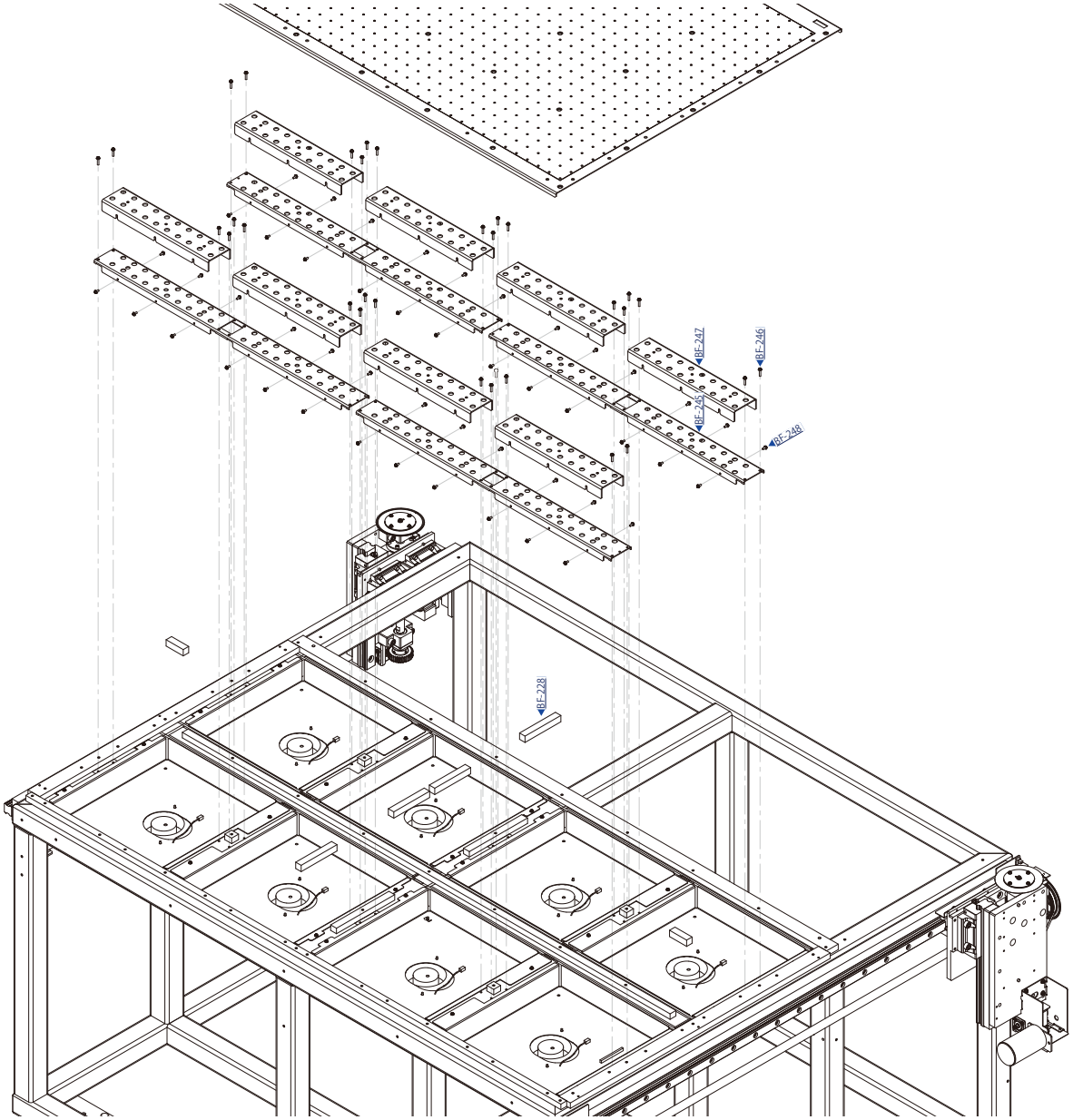
1485104 2023-07-01



CONFIDENTIAL

13.2.9. Beam

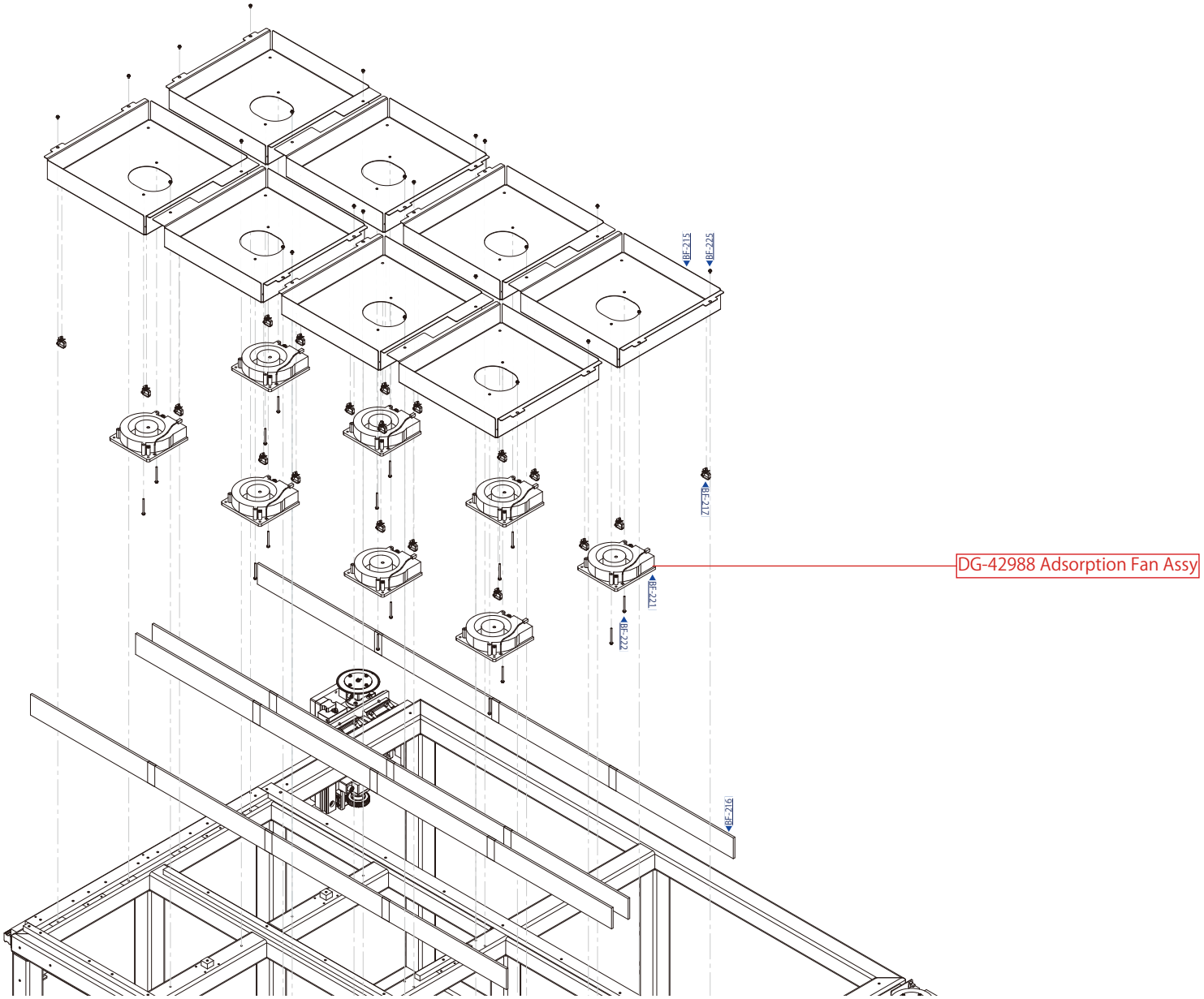
1485104 2023-07-01



CONFIDENTIAL

13.2.10. Vacuum fan

1485104 2023-07-01



CONFIDENTIAL

13.3. Frame

NOTE

- As of July 1, 2023 (No.1485203)

No.	Item	Reference
1	13.3.1. Overview	-
2	13.3.2. Breakdown	-
3	13.3.3. Top	-
4	13.3.4. Right	-
5	13.3.5. Left	-
6	13.3.6. Laser sensor R	-
7	13.3.7. Laser sensor L	

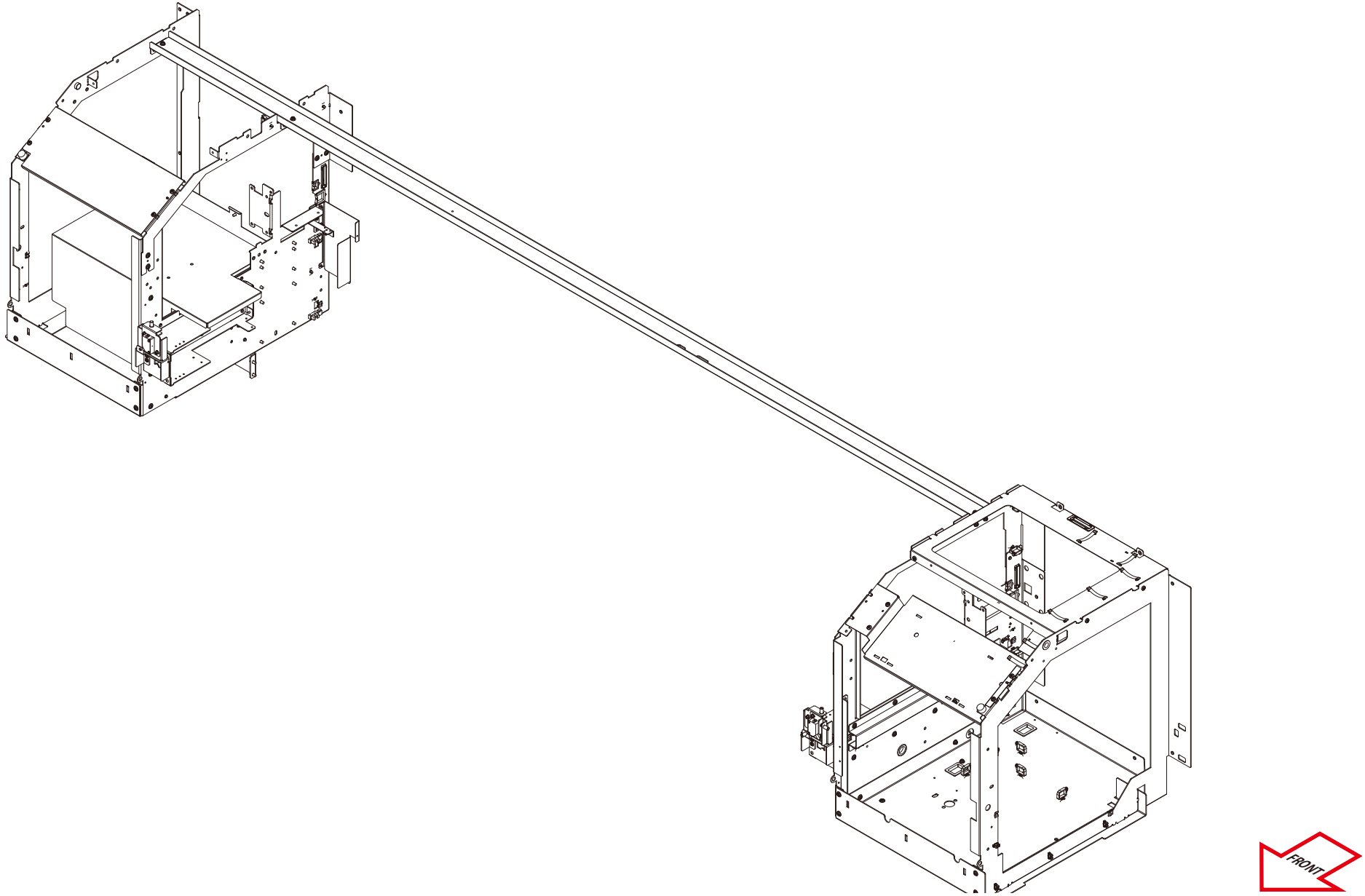
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.3.1. Overview

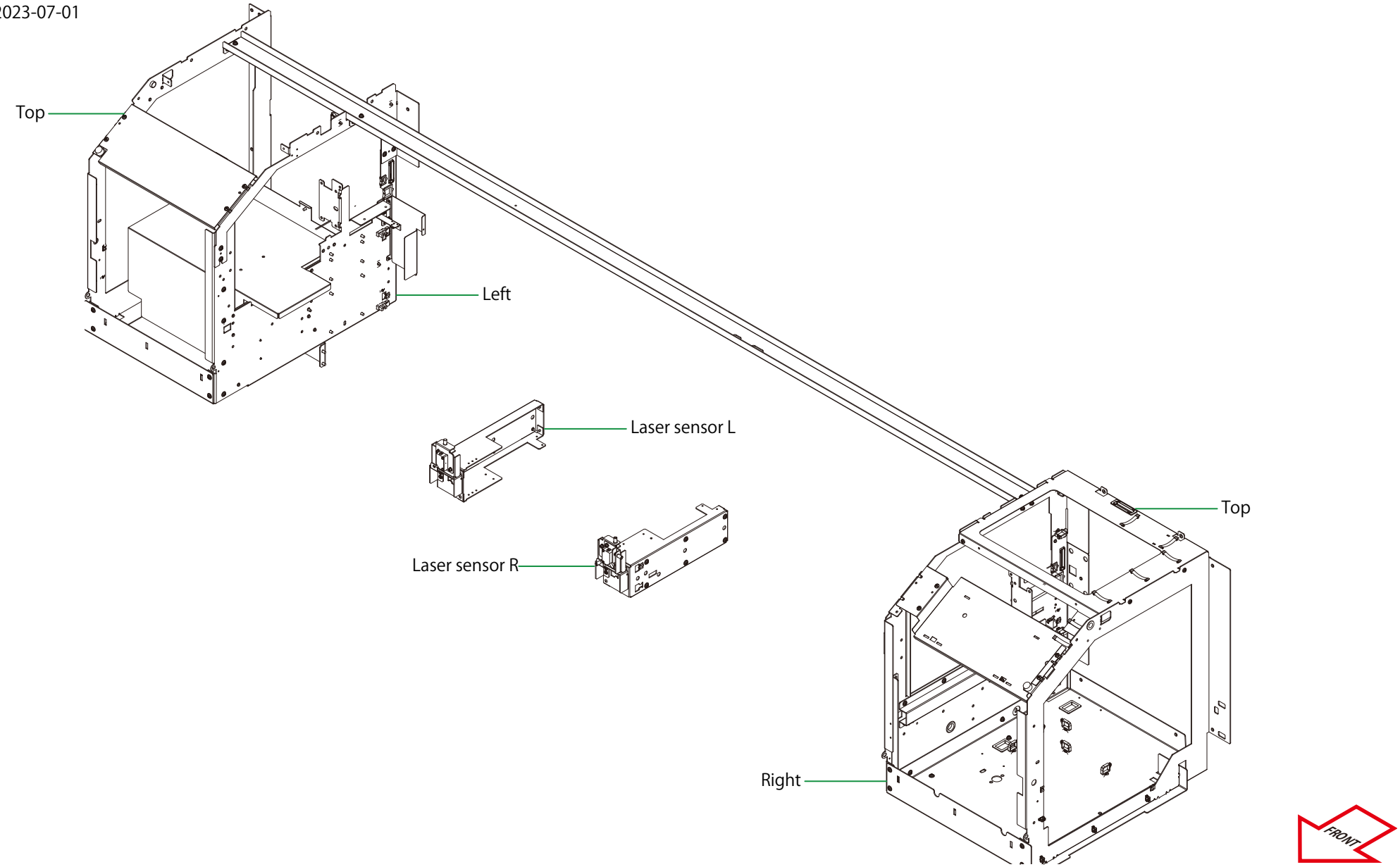
1485203 2023-07-01



CONFIDENTIAL

13.3.2. Breakdown

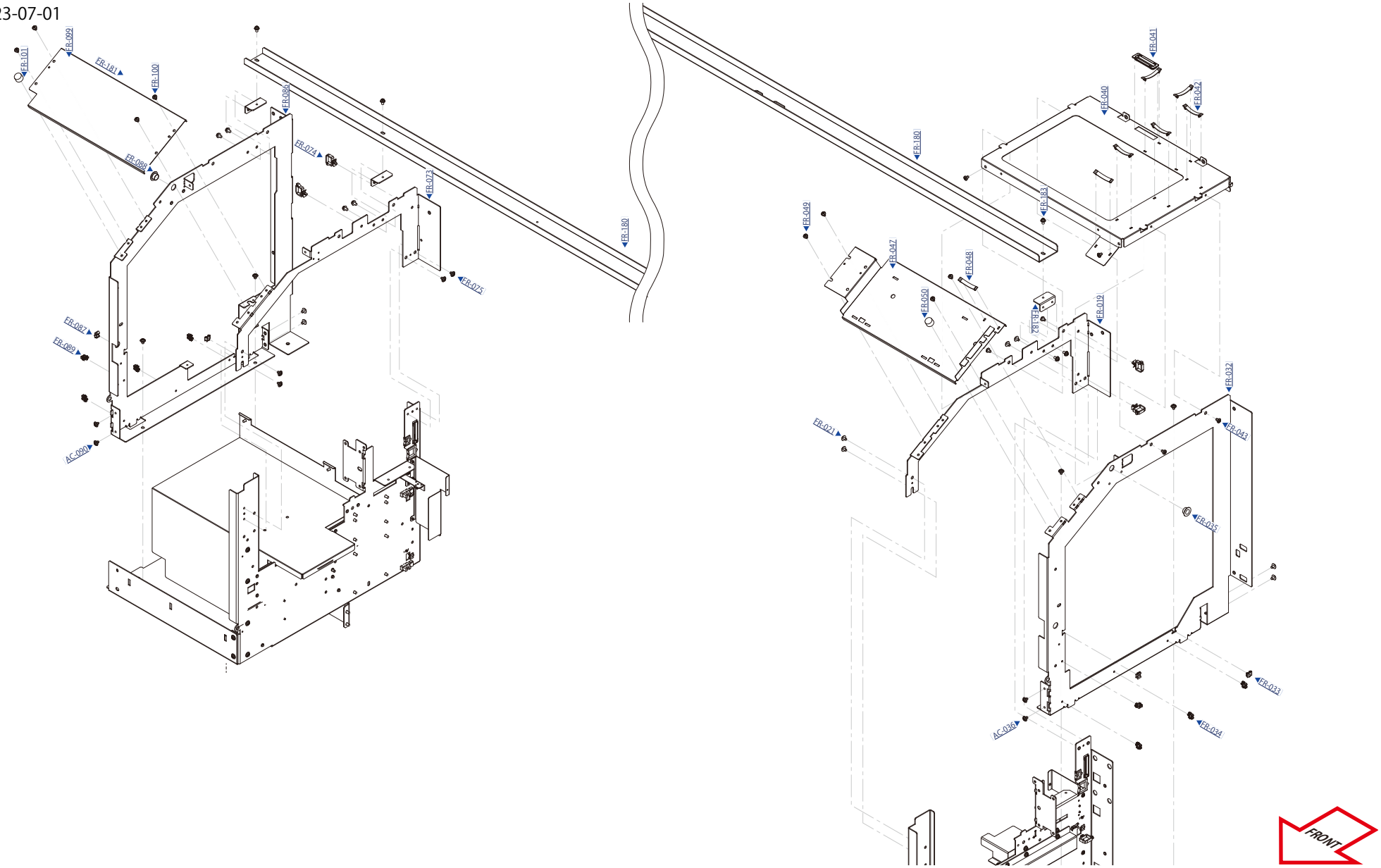
1485201 2023-07-01



CONFIDENTIAL

13.3.3. Top

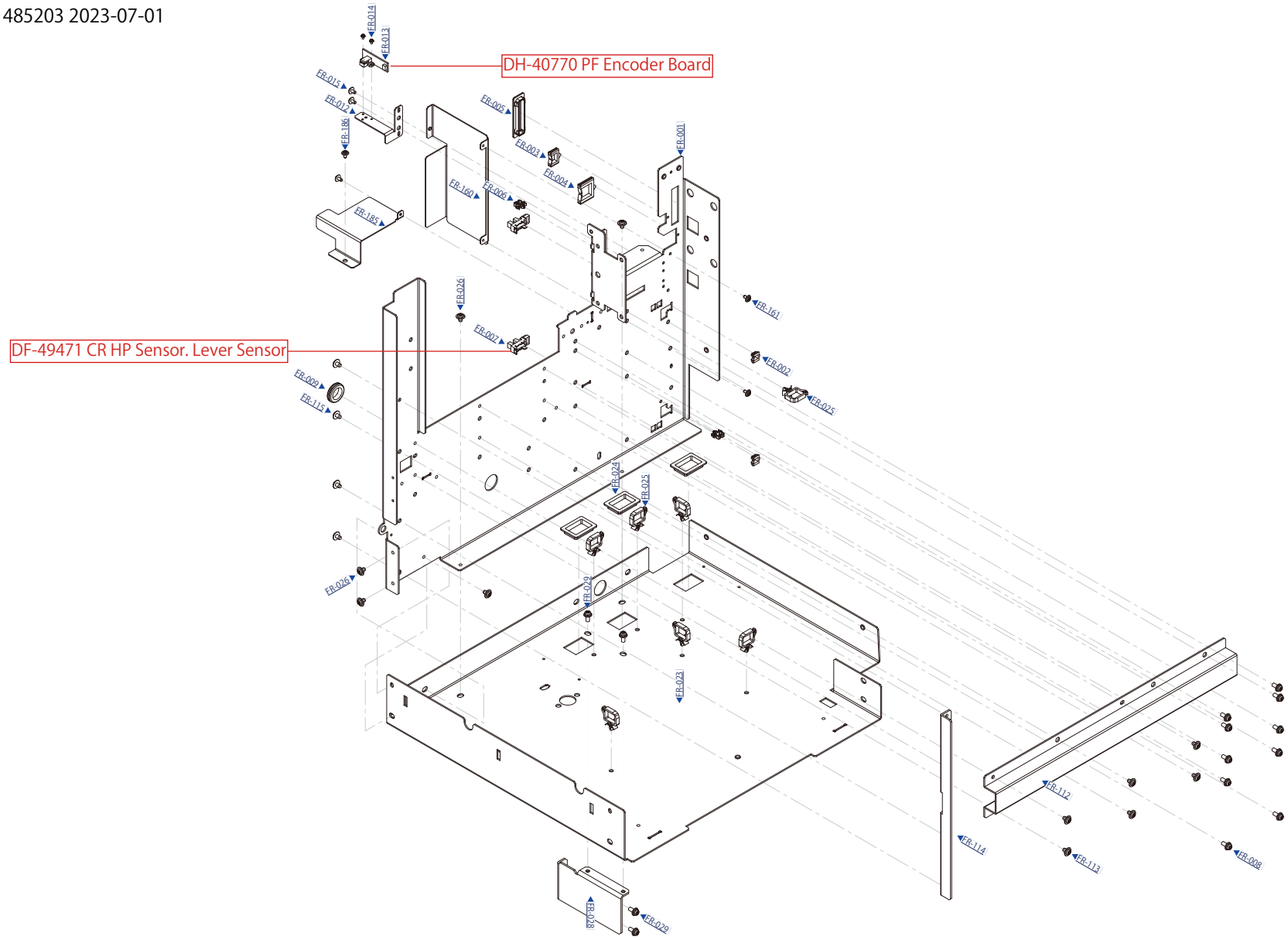
1485203 2023-07-01



CONFIDENTIAL

13.3.4. Right

1485203 2023-07-01



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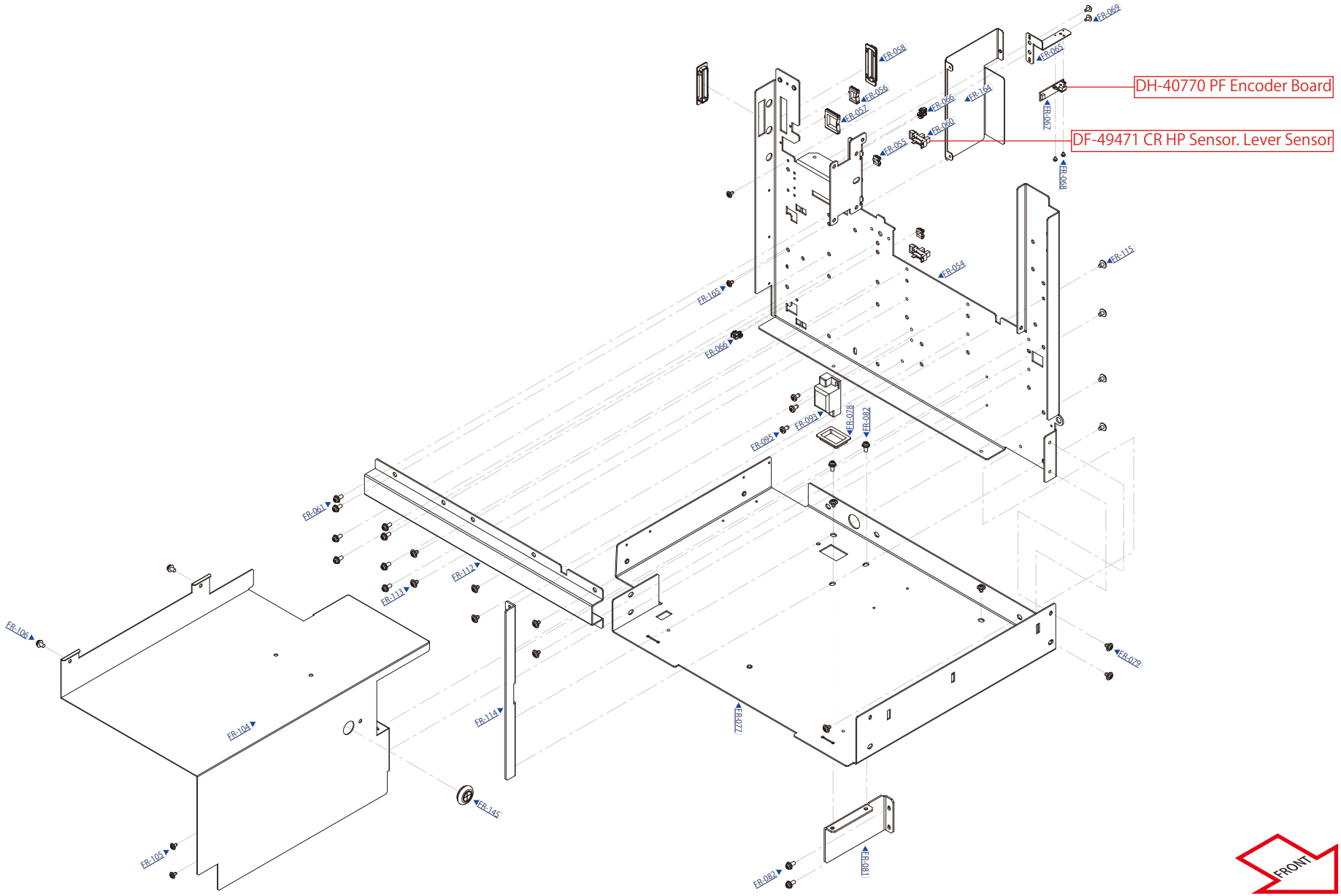
13.3.5. Left

1485203 2023-07-01



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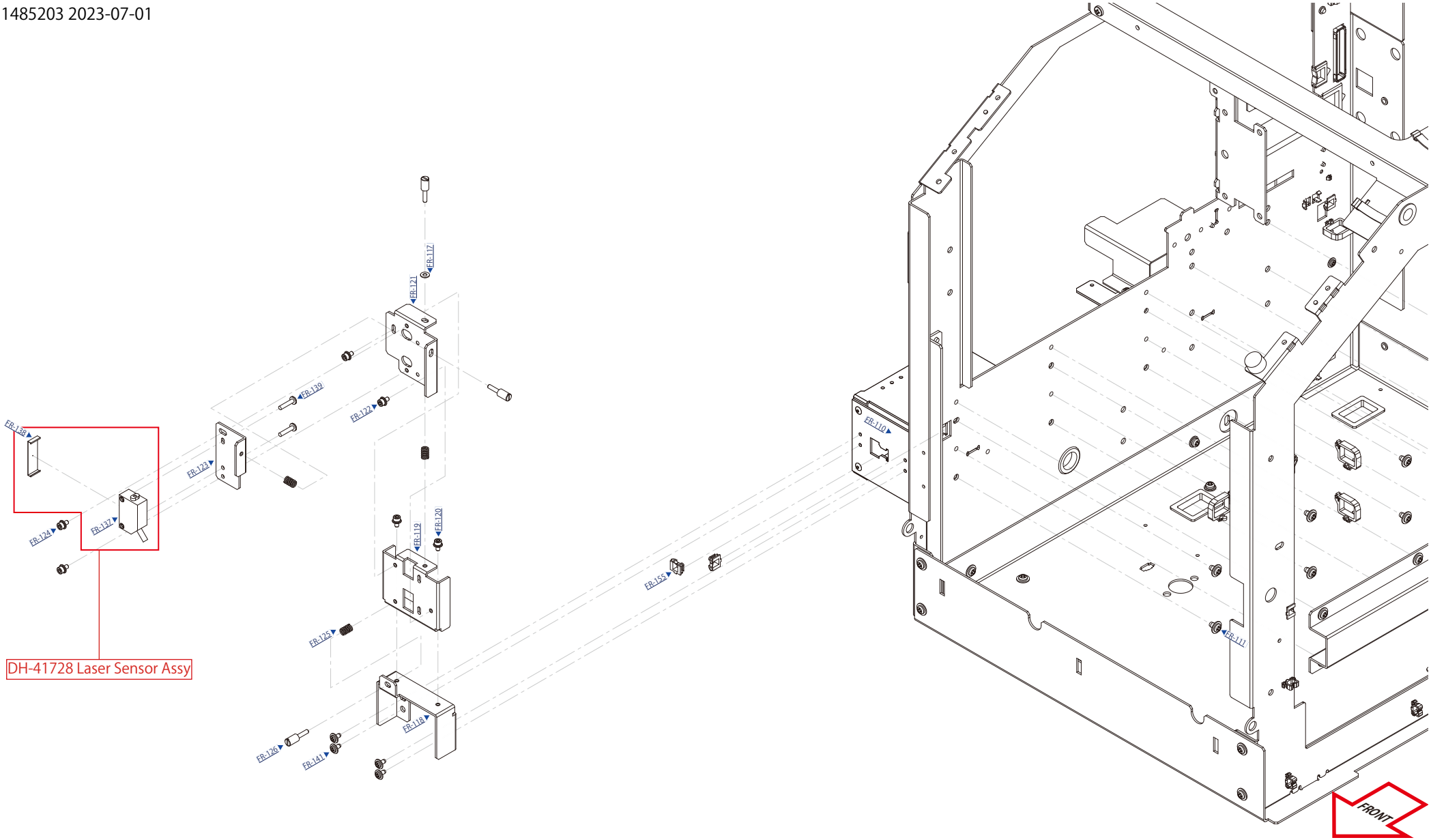
13.3.6. Laser sensor R

1485203 2023-07-01



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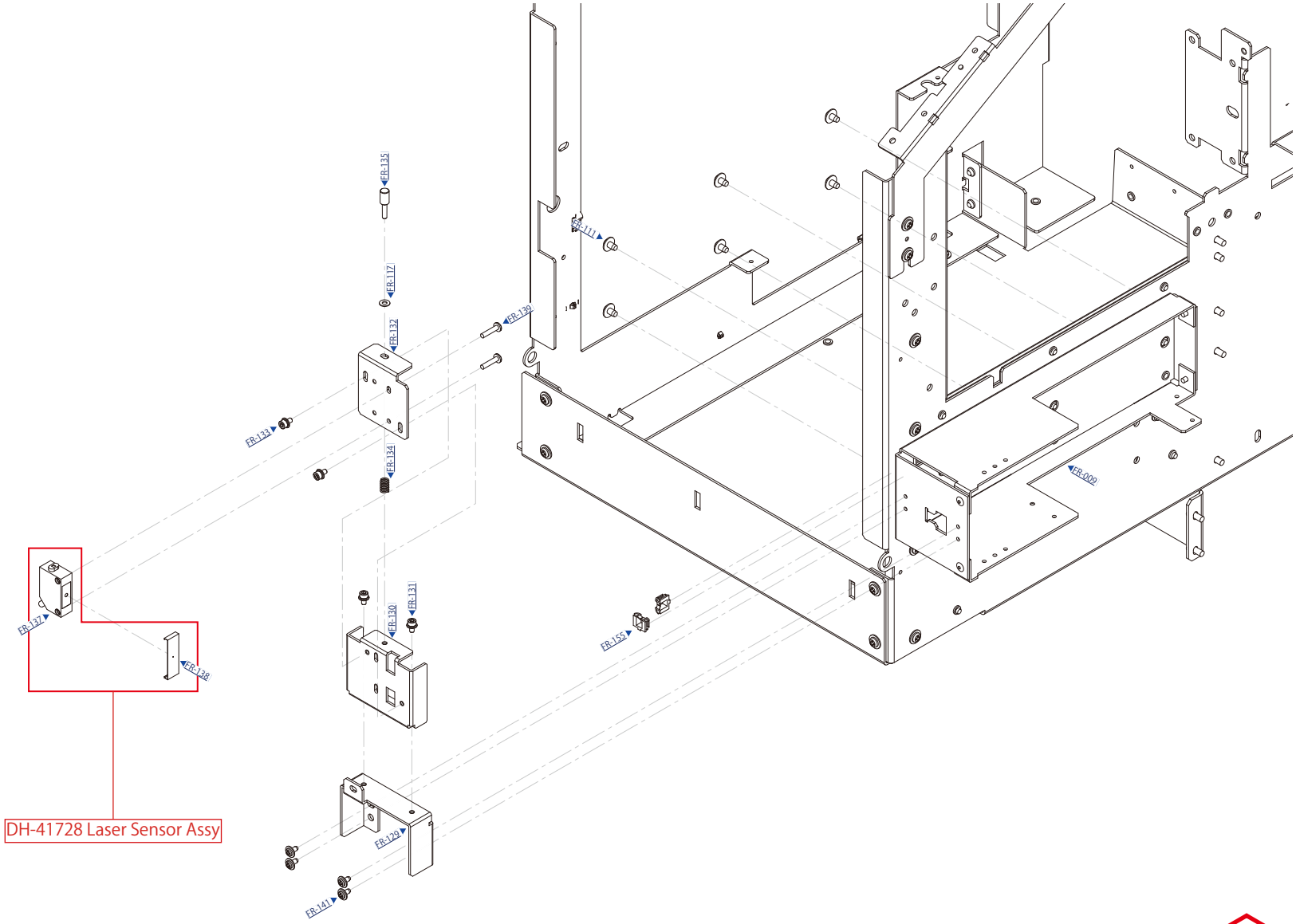
13.3.7. Laser sensor L

1485203 2023-07-01



CONFIDENTIAL

13.4. Y rail

NOTE

- As of July 1, 2023 (No.1485303)

No.	Item	Reference
1	13.4.1. Overview	-
2	13.4.2. Breakdown	-
3	13.4.3. Cable guide	-
4	13.4.4. CR motor	-
5	13.4.5. Return pulley	-
6	13.4.6. Roller strip	-
7	13.4.7. T fence	-
8	13.4.8. Y rail	-

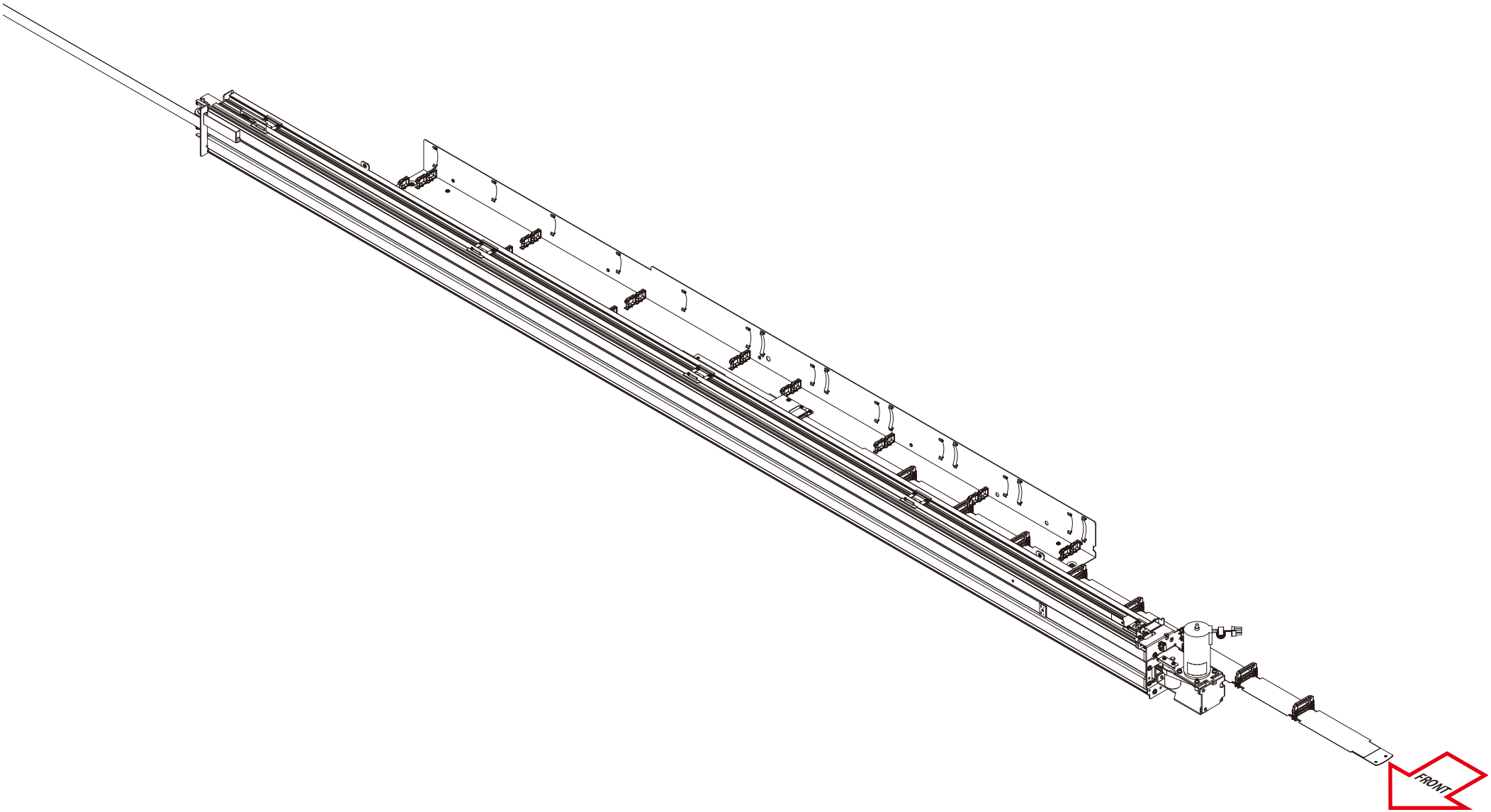
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.4.1. Overview

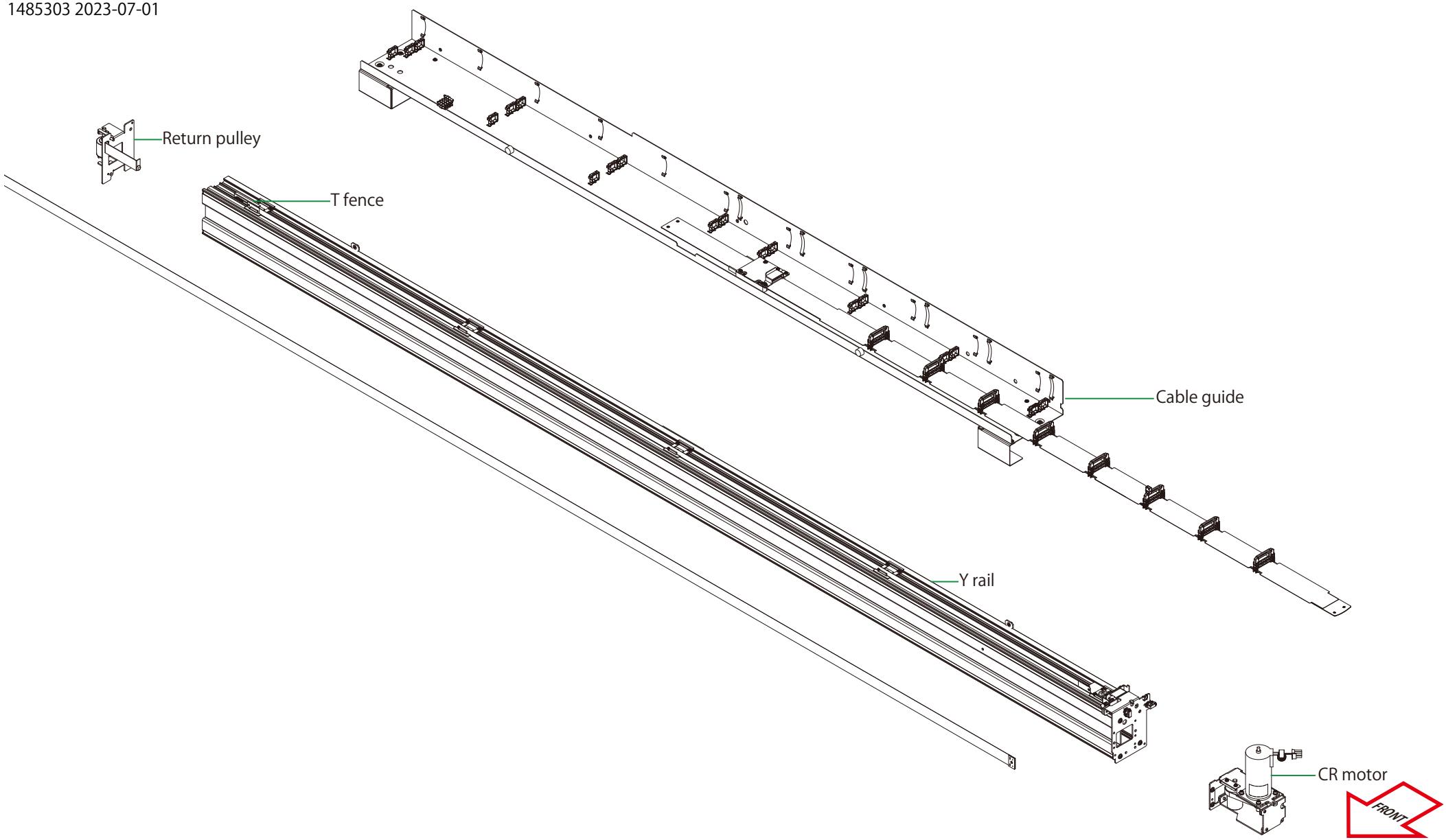
1485303 2023-07-01



CONFIDENTIAL

13.4.2. Breakdown

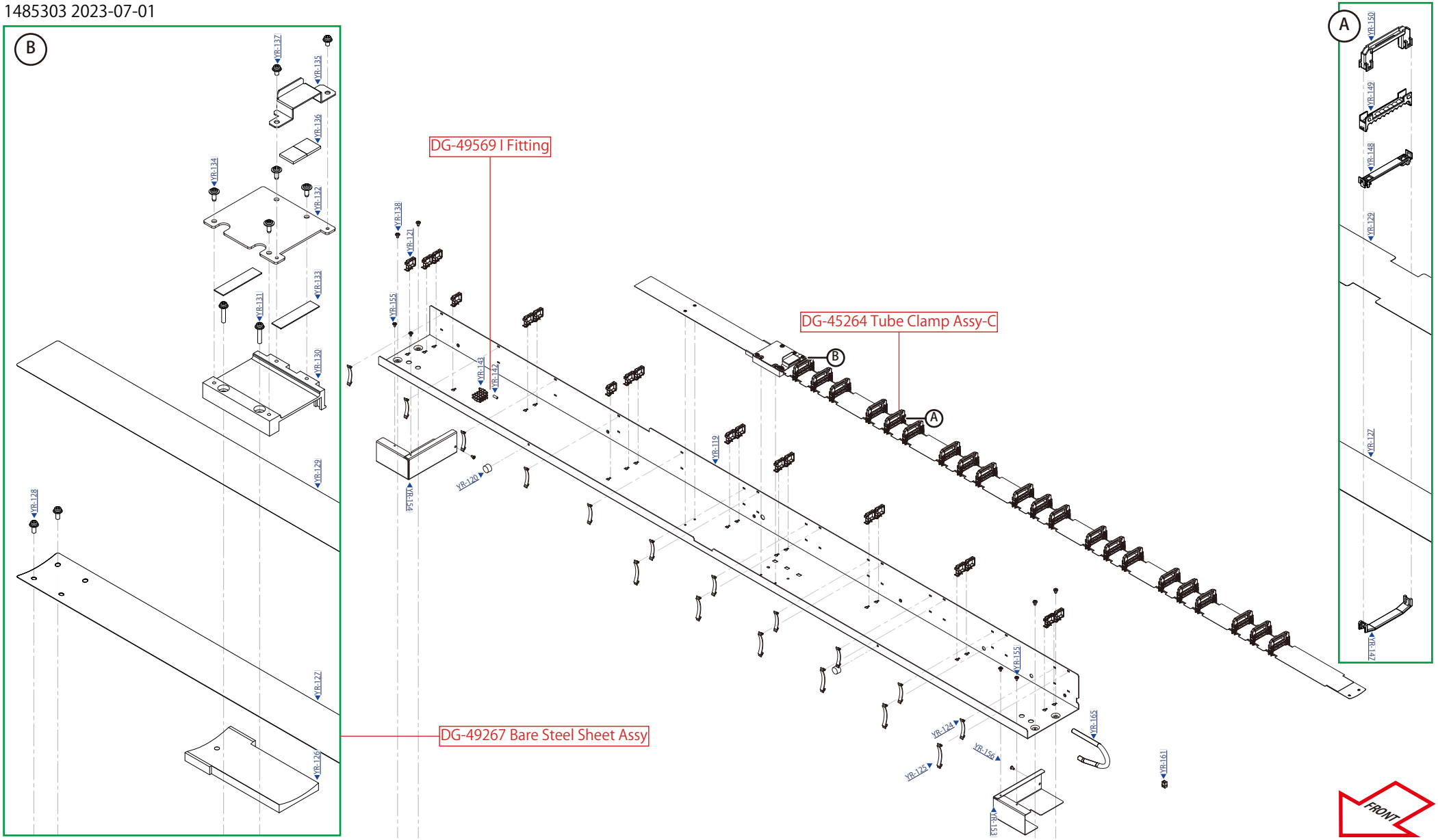
1485303 2023-07-01



CONFIDENTIAL

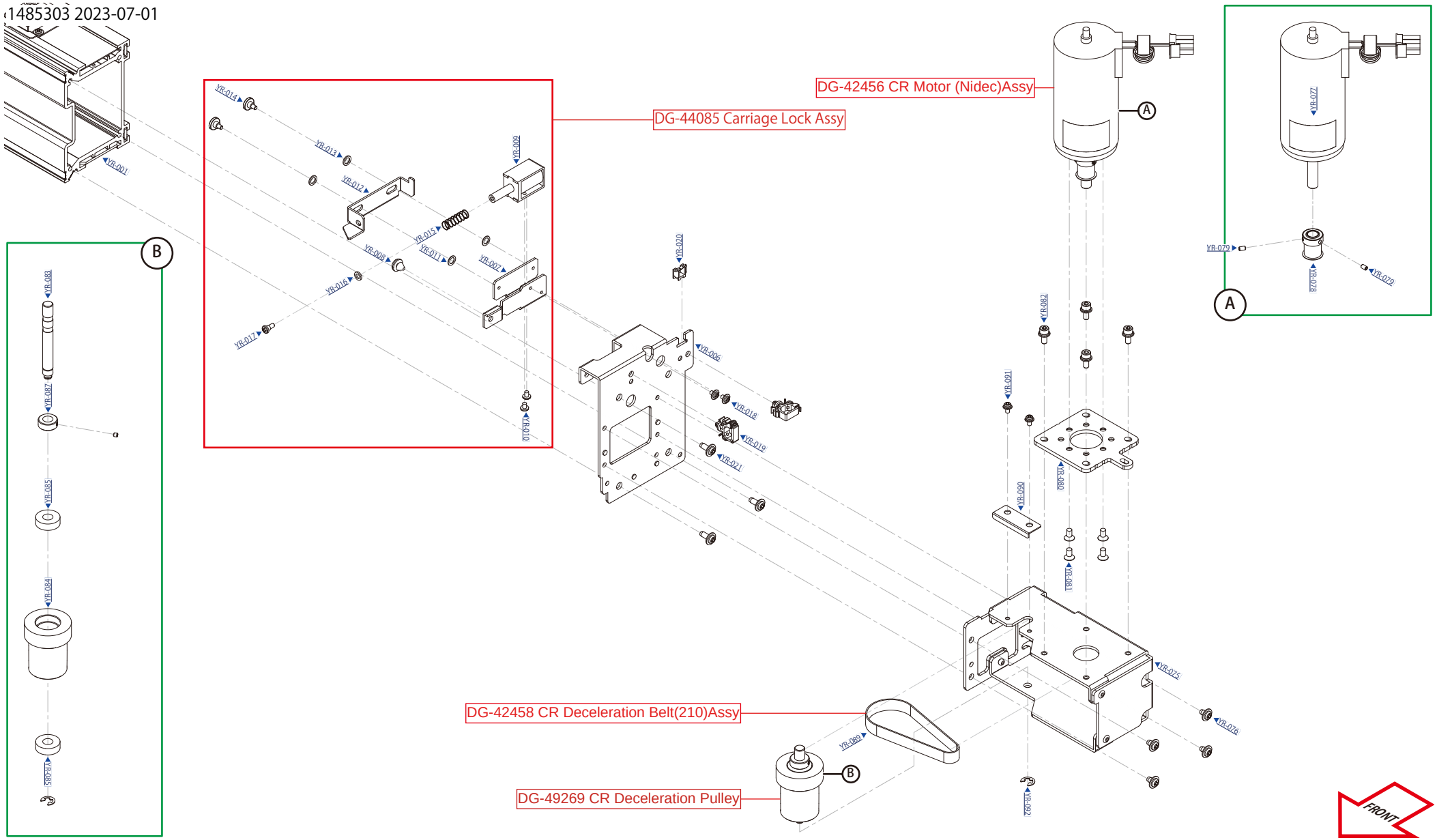
13.4.3. Cable guide

1485303 2023-07-01



CONFIDENTIAL

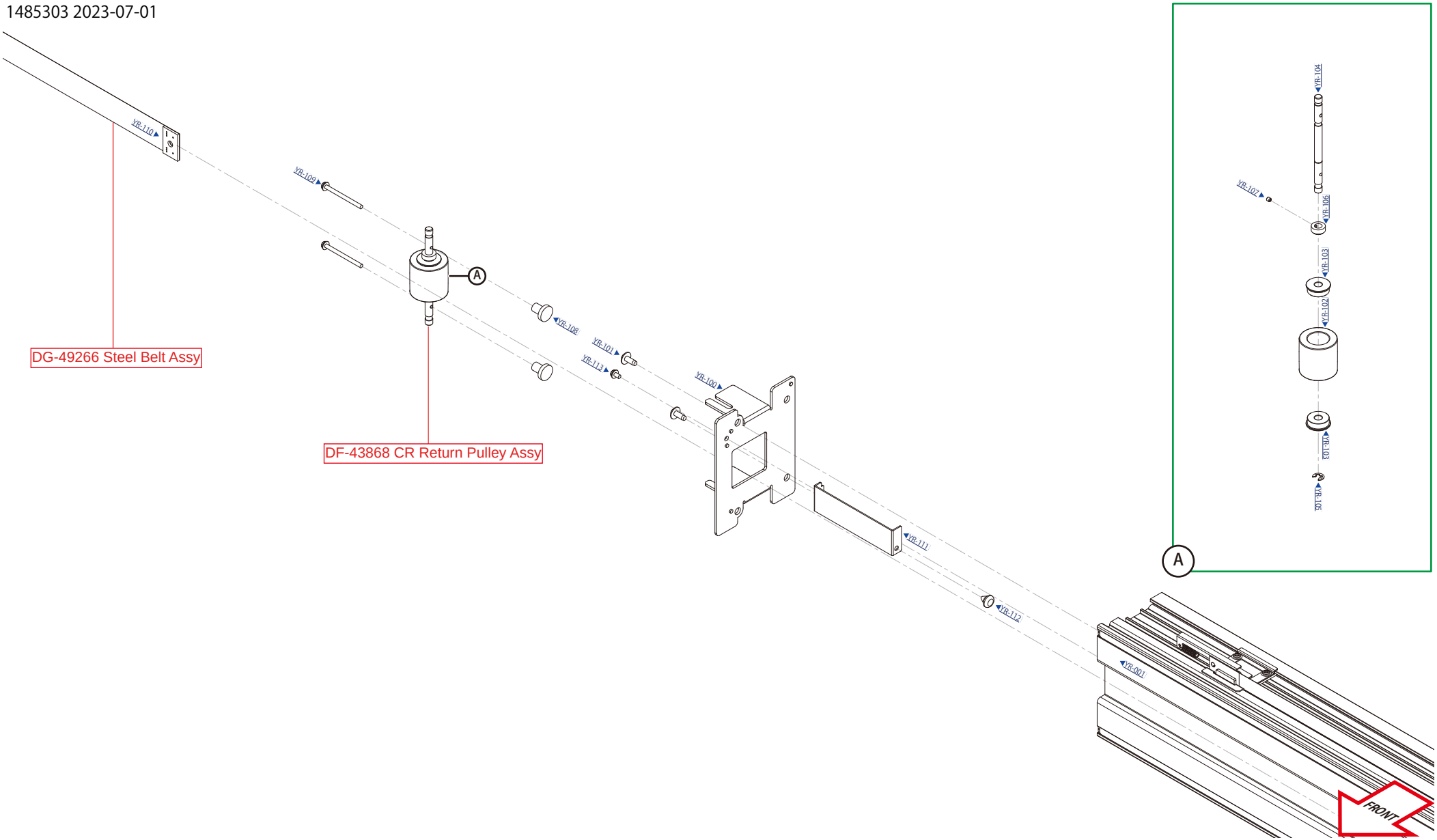
13.4.4. CR motor



CONFIDENTIAL

13.4.5. Return pulley

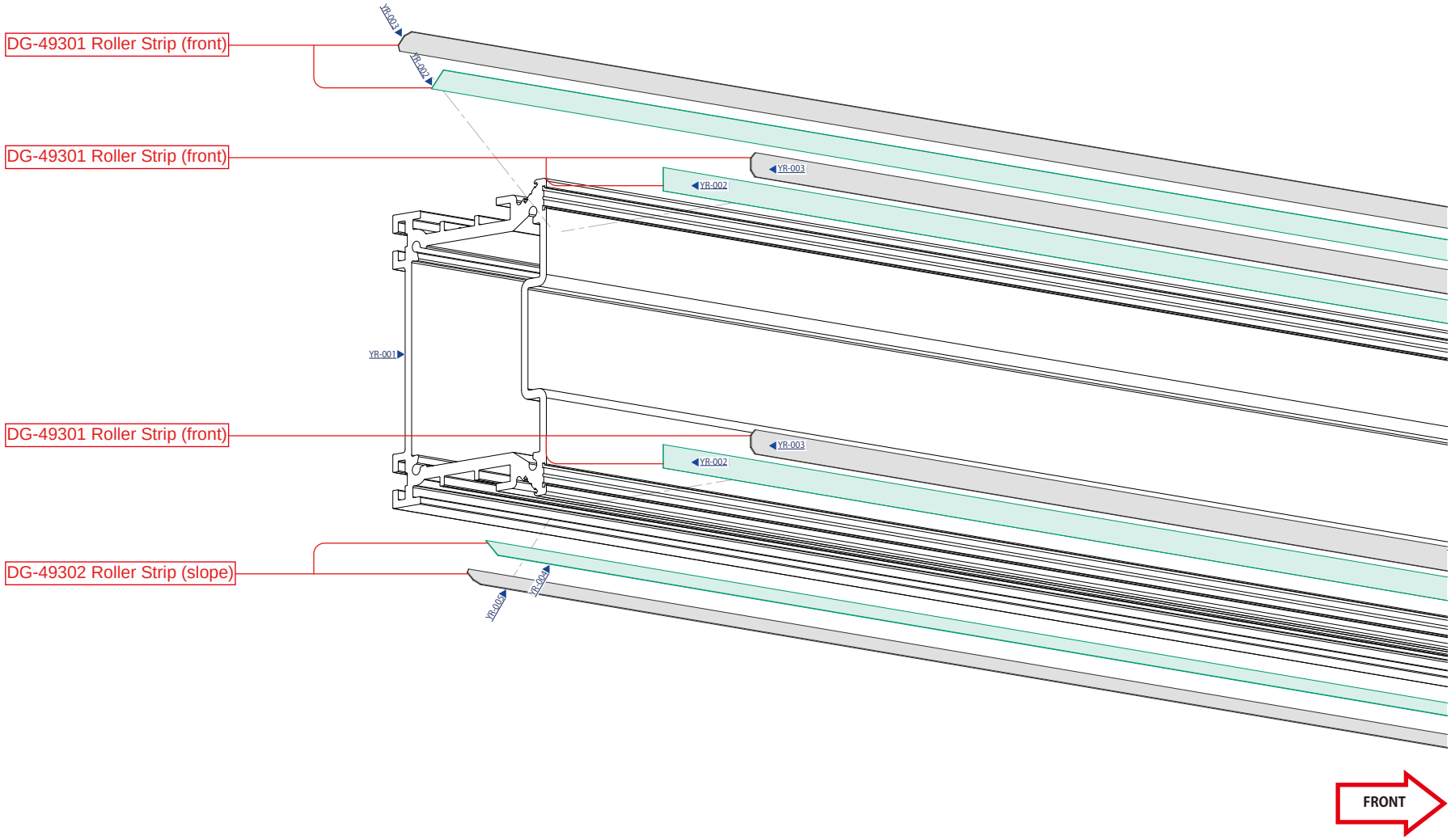
1485303 2023-07-01



CONFIDENTIAL

13.4.6. Roller strip

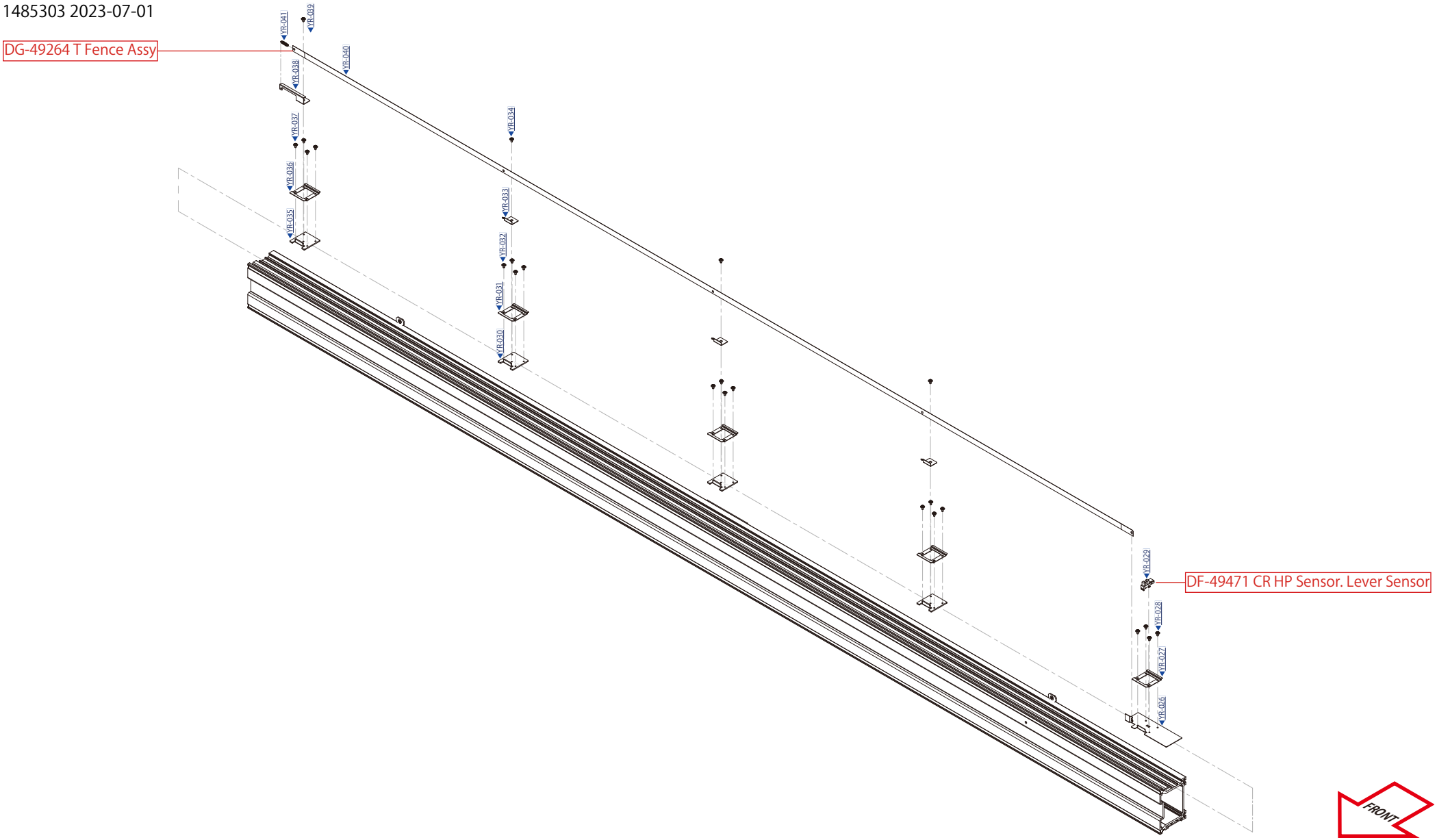
1485303 2023-07-01



CONFIDENTIAL

13.4.7. T fence

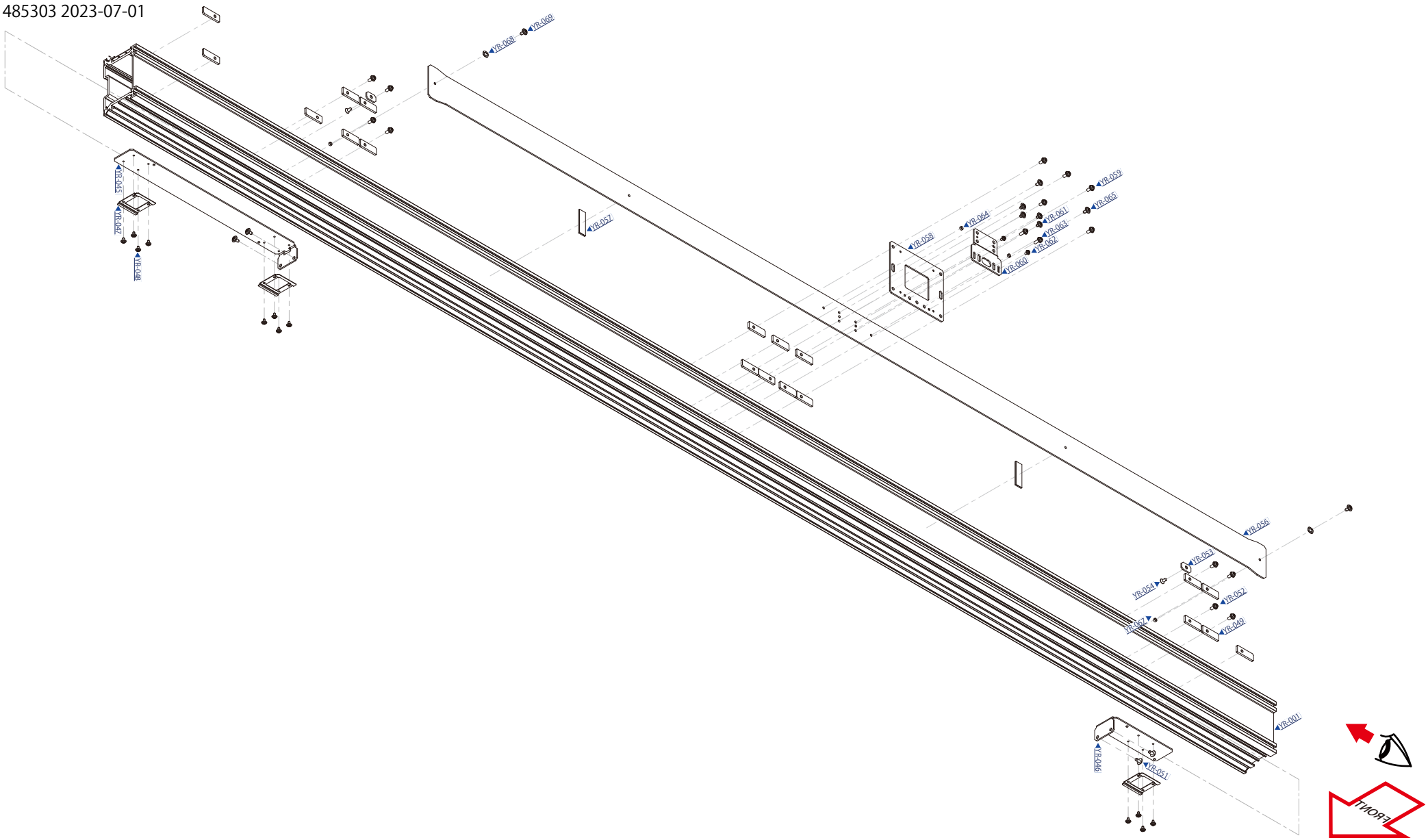
1485303 2023-07-01



CONFIDENTIAL

13.4.8. Y rail

1485303 2023-07-01



CONFIDENTIAL

13.5. CR

NOTE

- As of July 1, 2023 (No.1485402)

No.	Item	Reference
1	13.5.1. Overview	-
2	13.5.2. Breakdown	-
3	13.5.3. Board	-
4	13.5.4. Cursor	-
5	13.5.5. UV lamp base	-
6	13.5.6. Print head	-

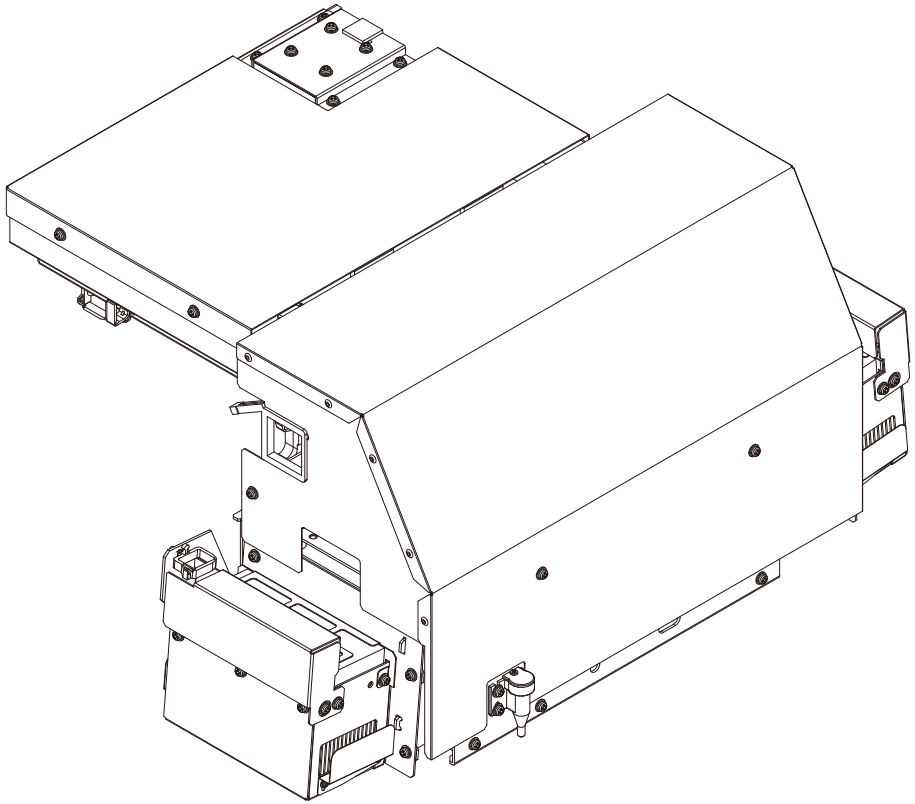
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.5.1. Overview

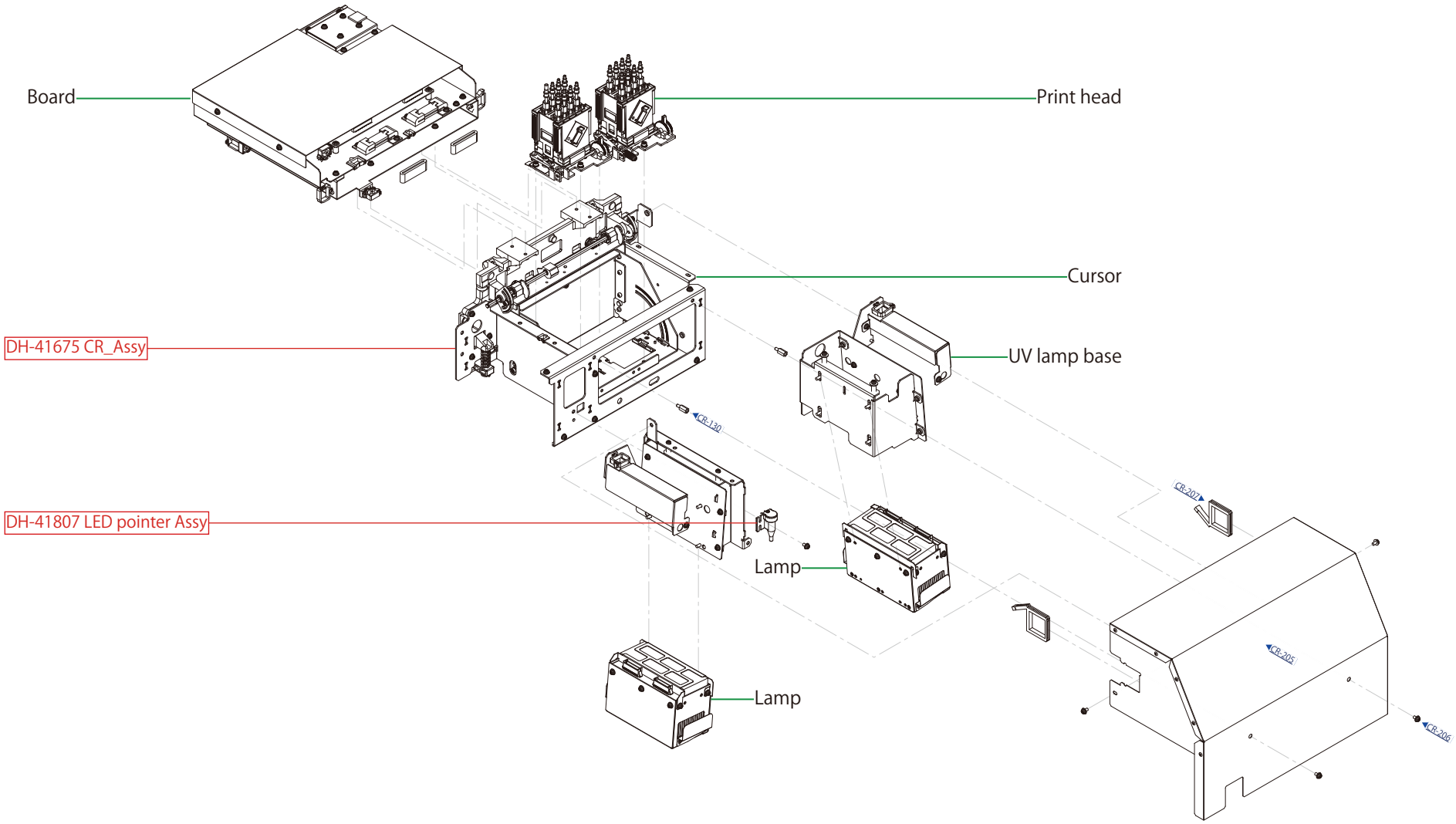
1485402 2023-07-01



CONFIDENTIAL

13.5.2. Breakdown

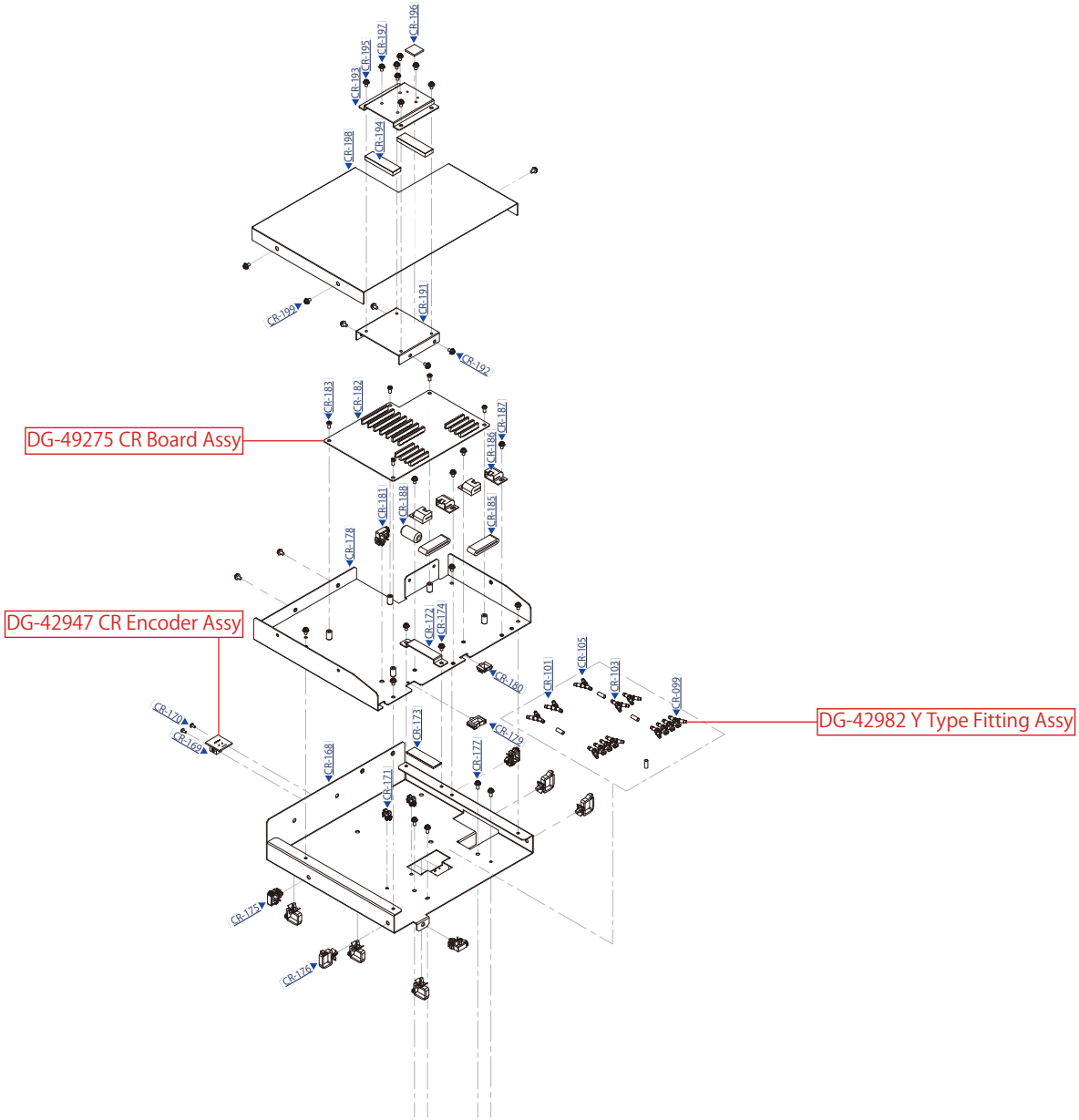
1485402 2023-07-01



CONFIDENTIAL

13.5.3. Board

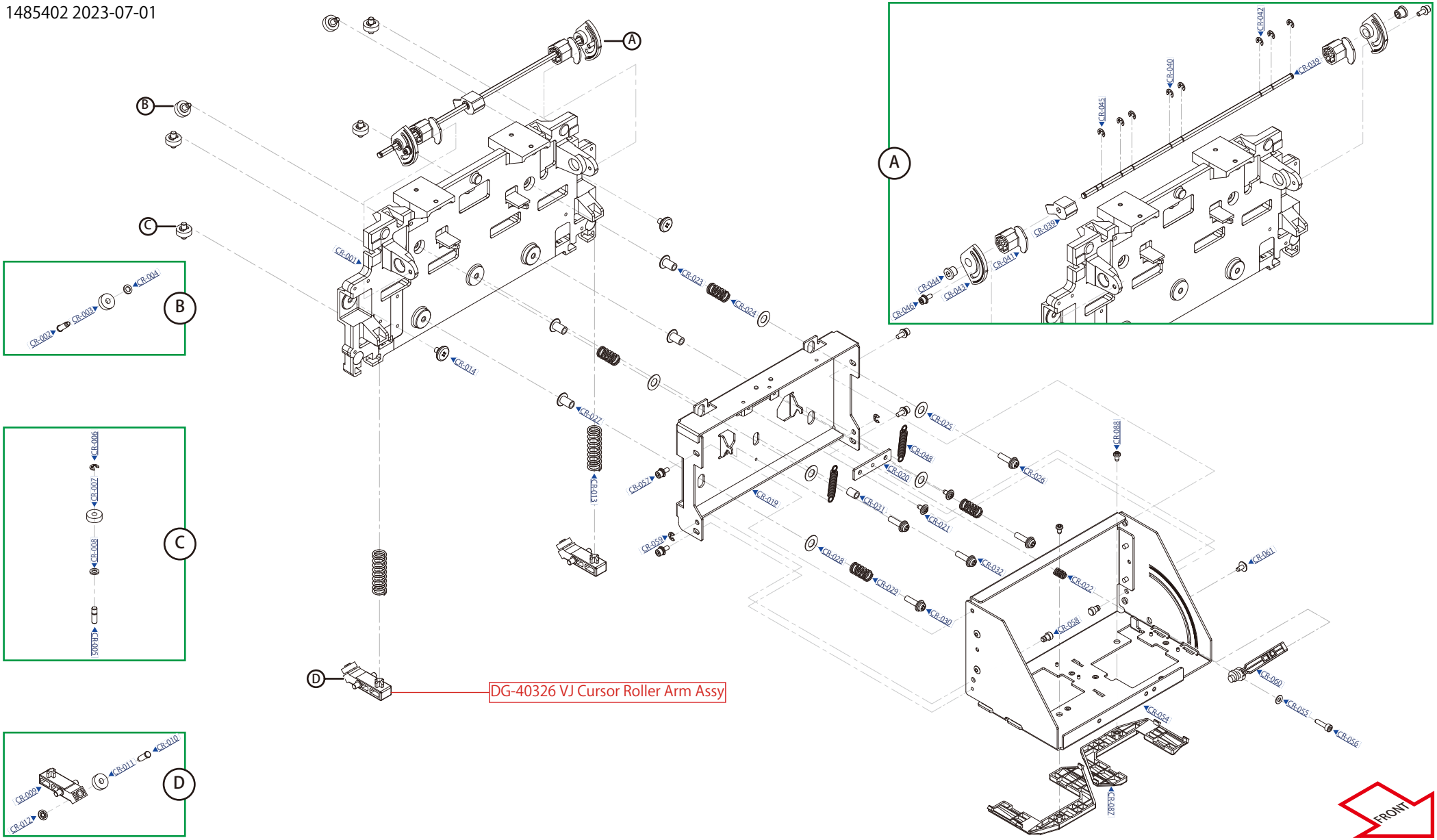
1485402 2023-07-01



CONFIDENTIAL

13.5.4. Cursor

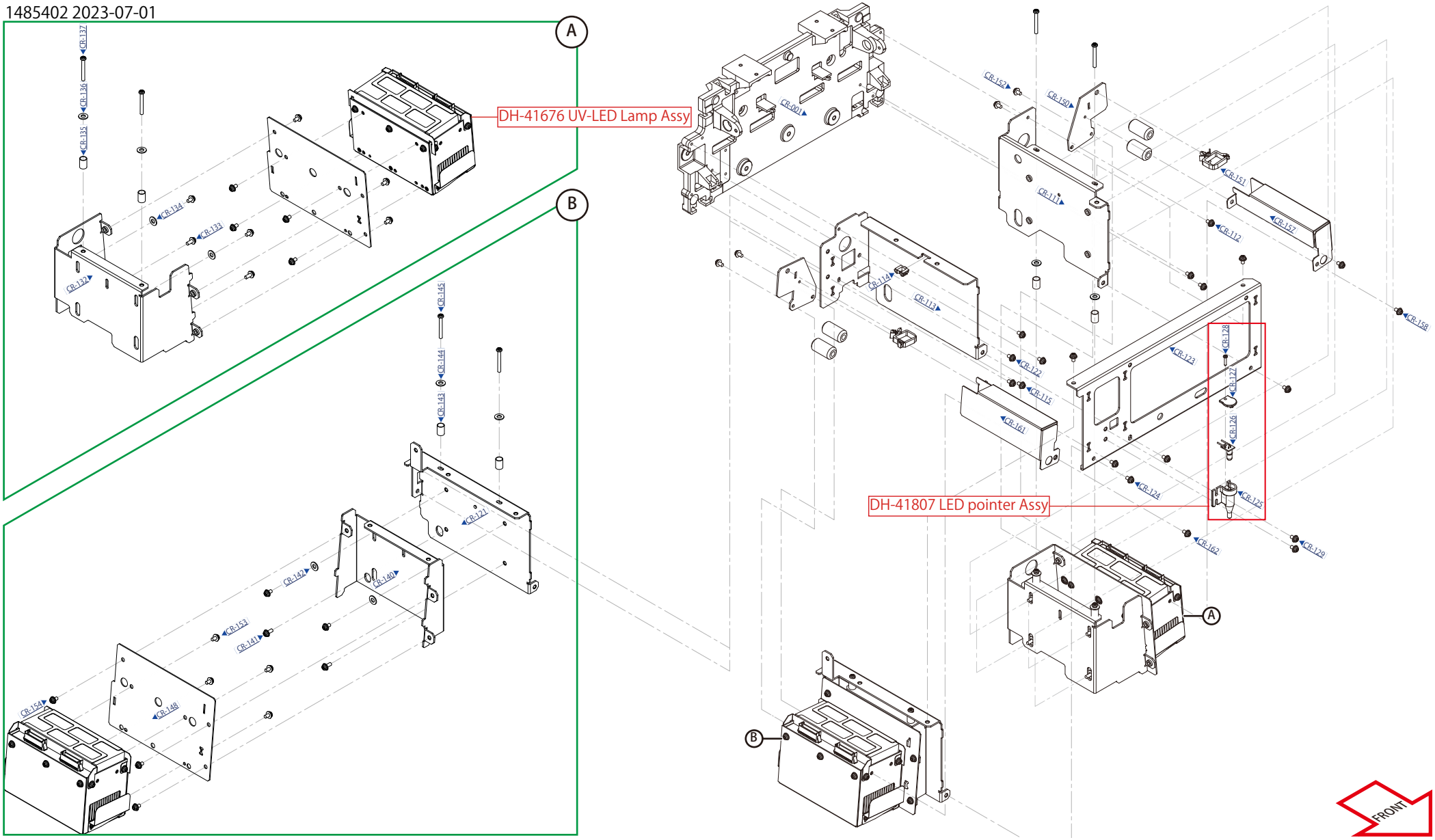
1485402 2023-07-01



CONFIDENTIAL

13.5.5. UV lamp base

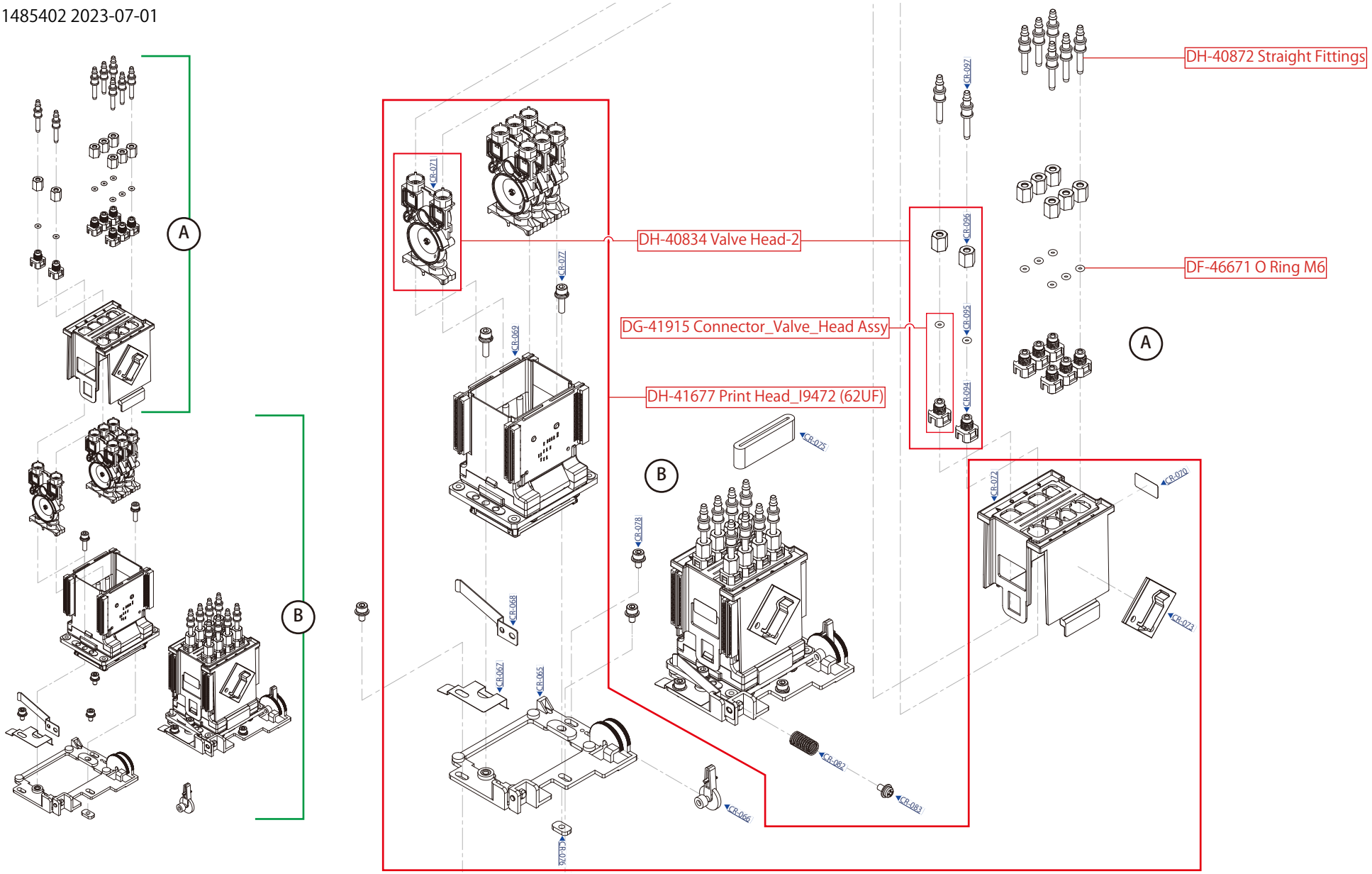
1485402 2023-07-01



CONFIDENTIAL

13.5.6. Print head

1485402 2023-07-01



CONFIDENTIAL

13.6. Maintenance

NOTE

- As of July 1, 2023 (No.1485501)

No.	Item	Reference
1	13.6.1. Overview	-
2	13.6.2. Breakdown	-
3	13.6.3. Wiper	-
4	13.6.4. Cap slider	-
5	13.6.5. Waste fluid pump	-
6	13.6.6. Motor	-

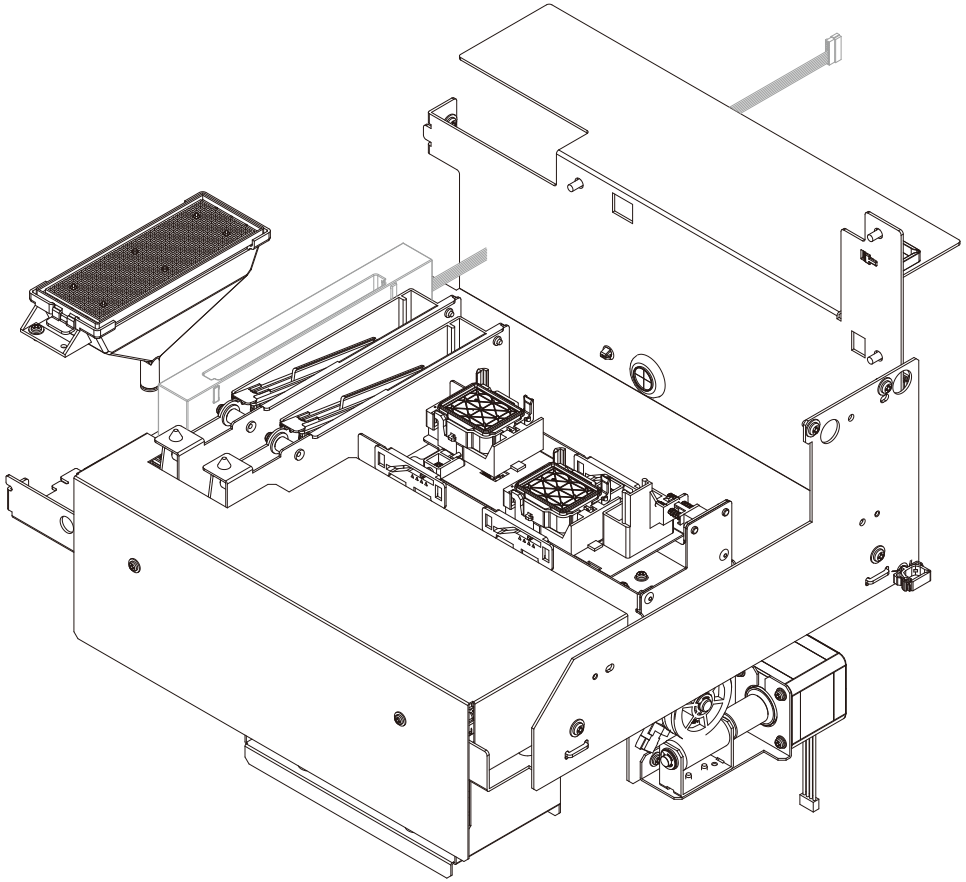
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.6.1. Overview

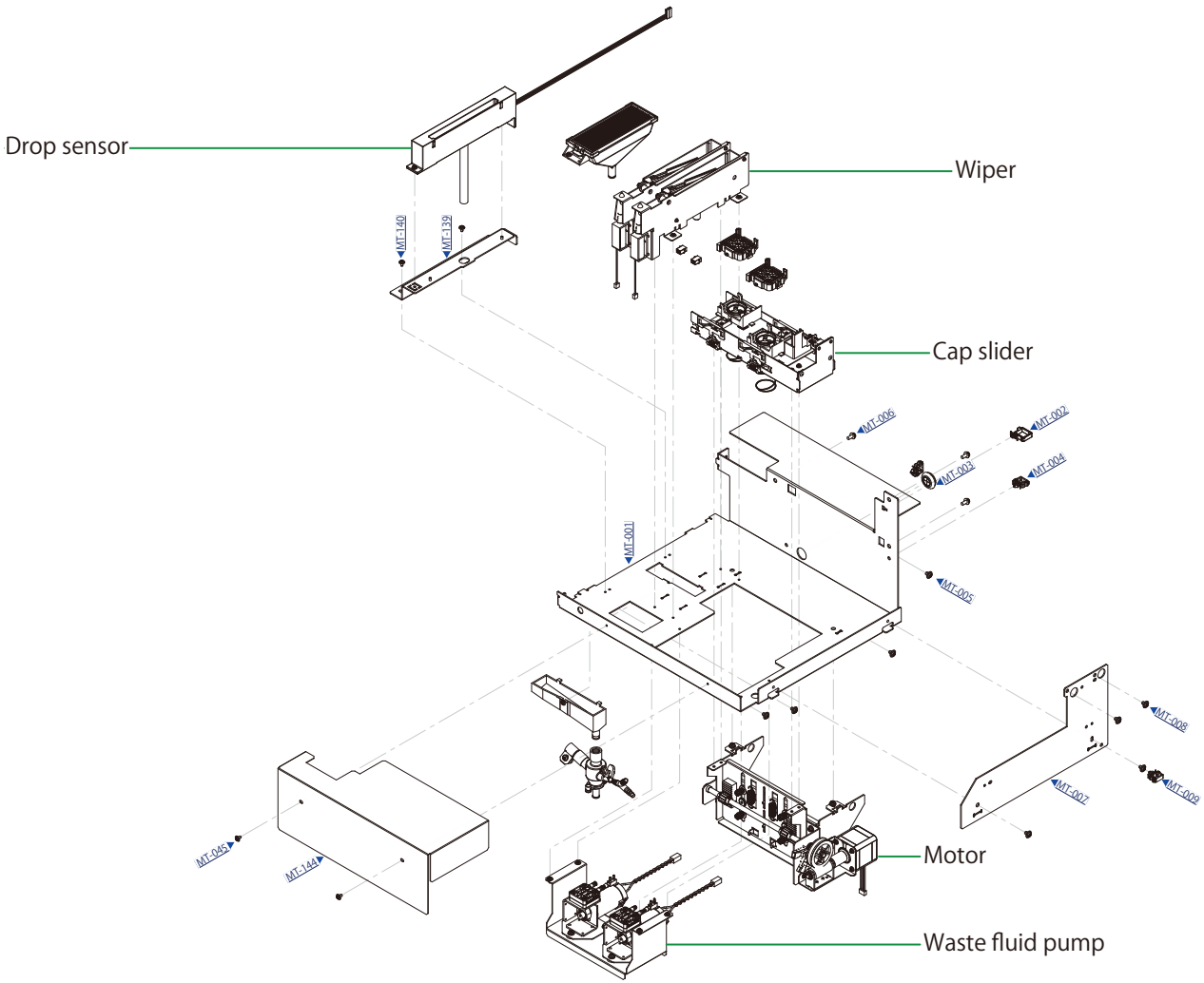
1485501 2023-07-01



CONFIDENTIAL

13.6.2. Breakdown

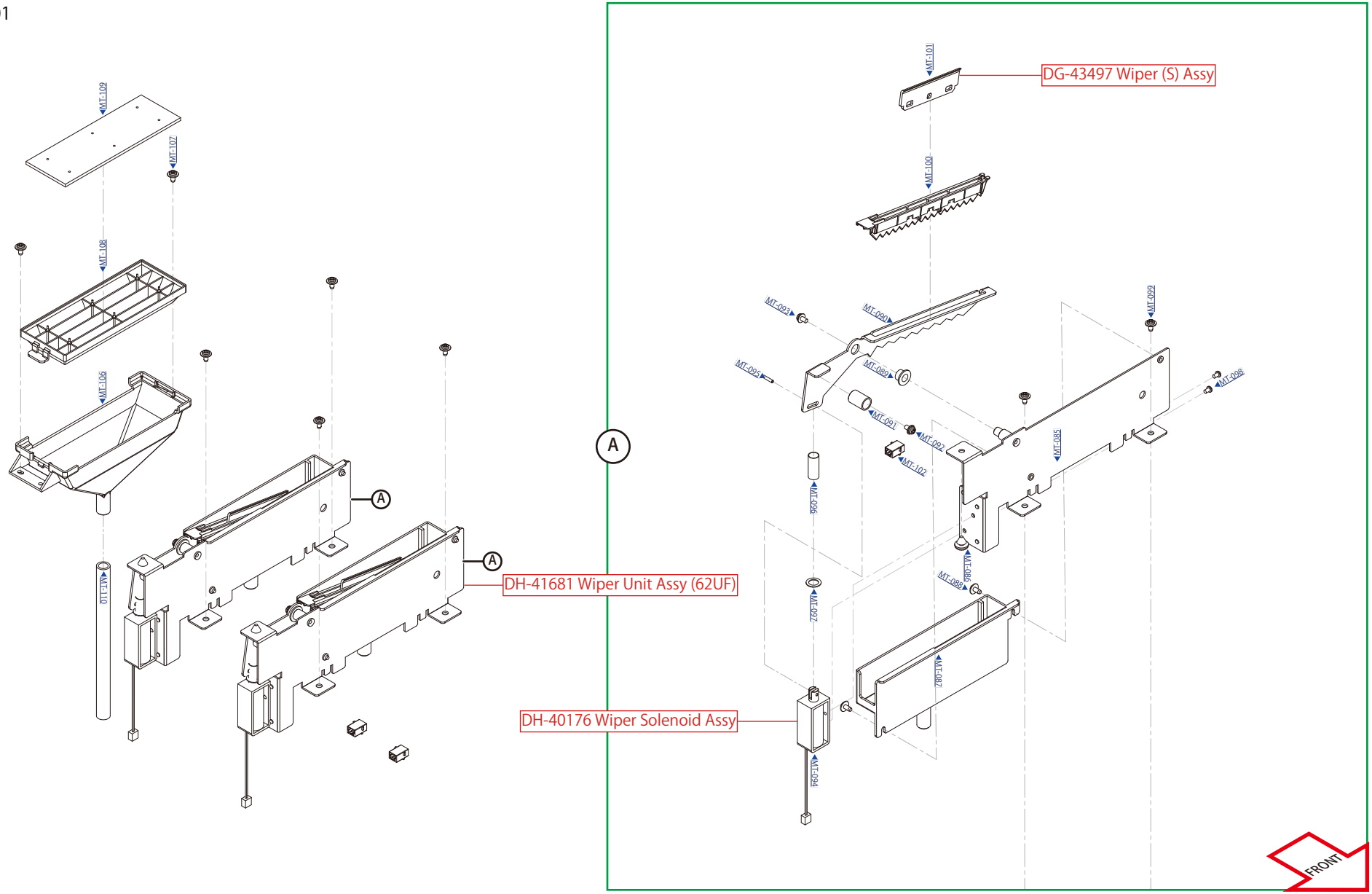
1485501 2023-07-01



CONFIDENTIAL

13.6.3. Wiper

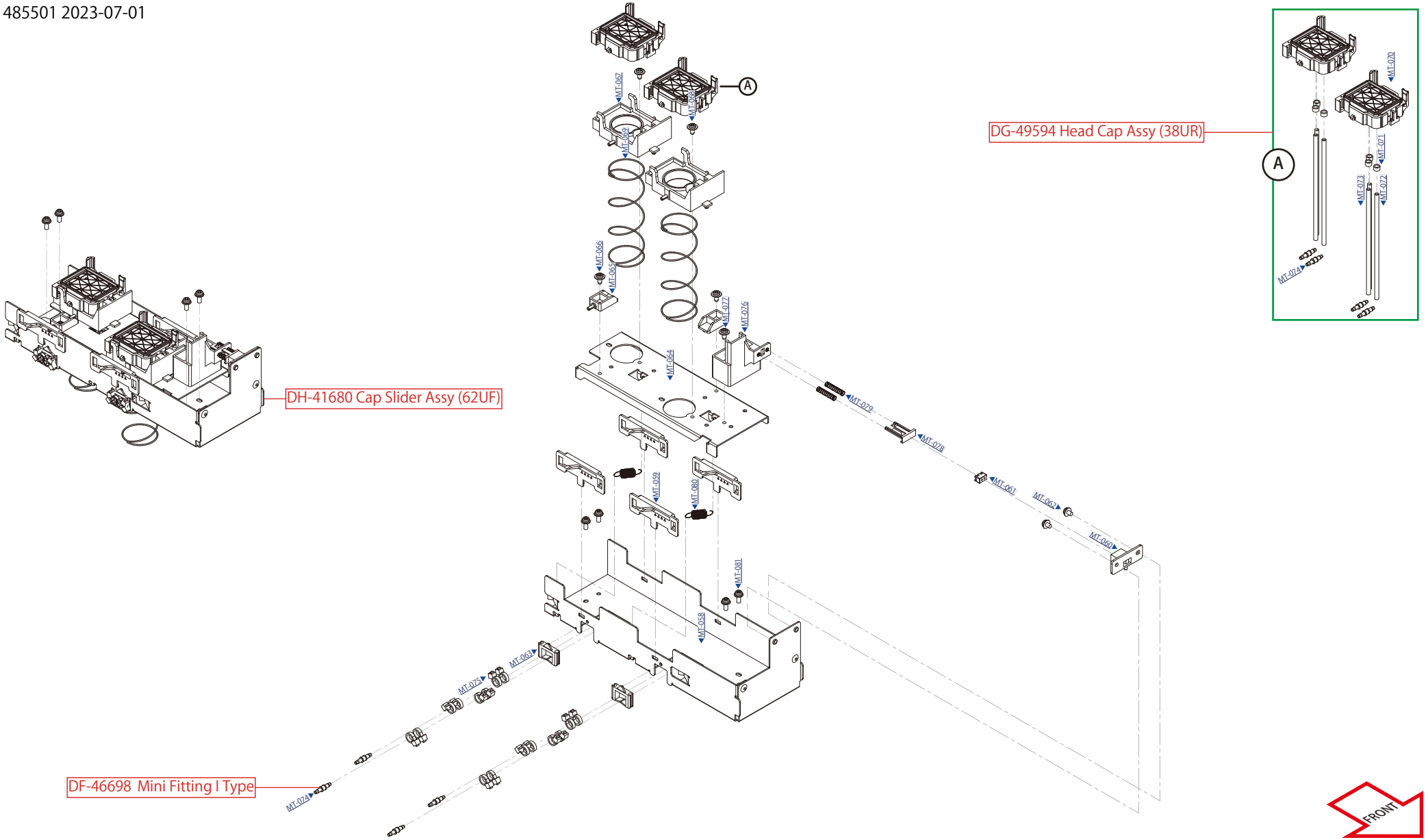
1485501 2023-07-01



CONFIDENTIAL

13.6.4. Cap slider

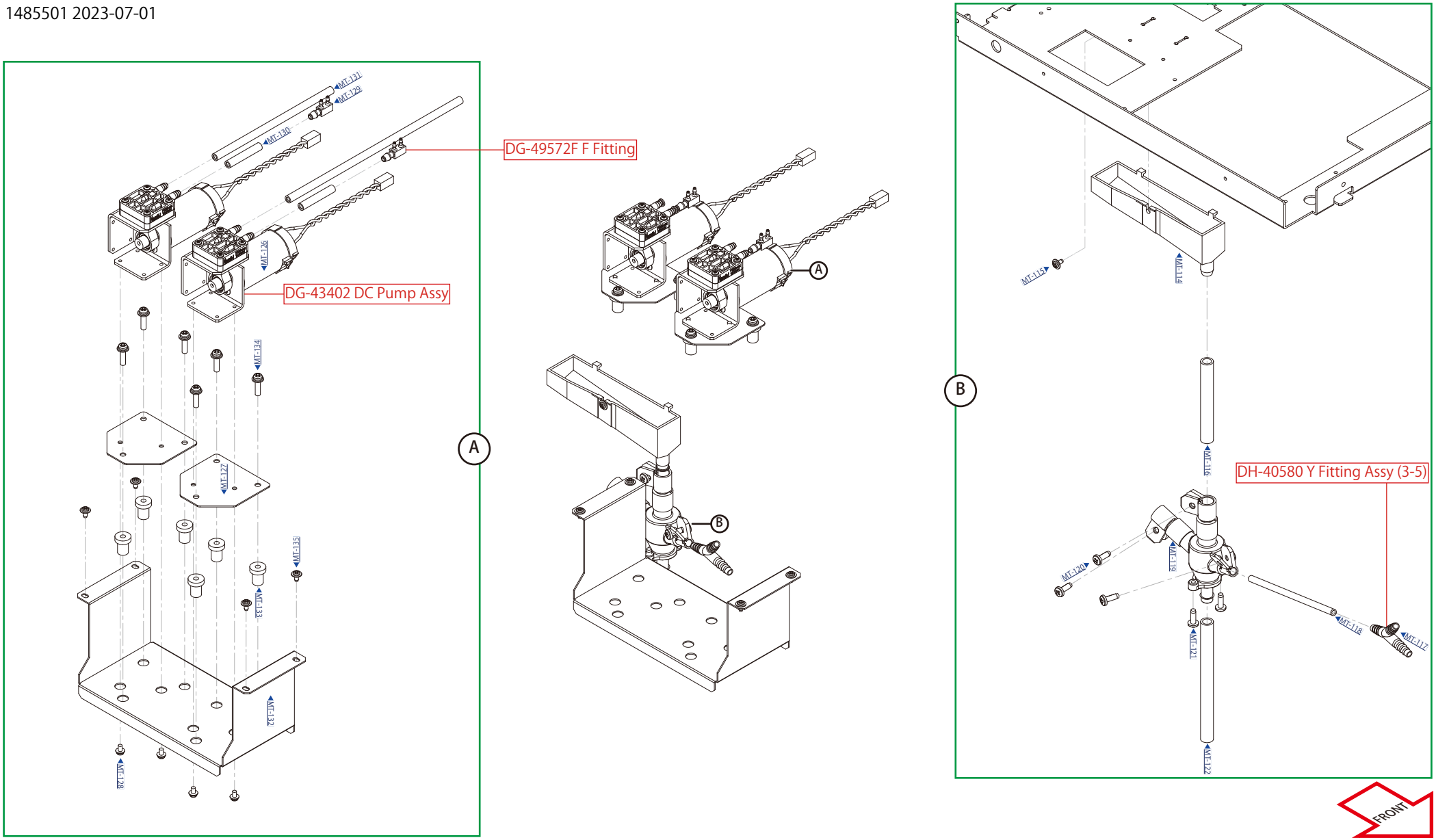
1485501 2023-07-01



CONFIDENTIAL

13.6.5. Waste fluid pump

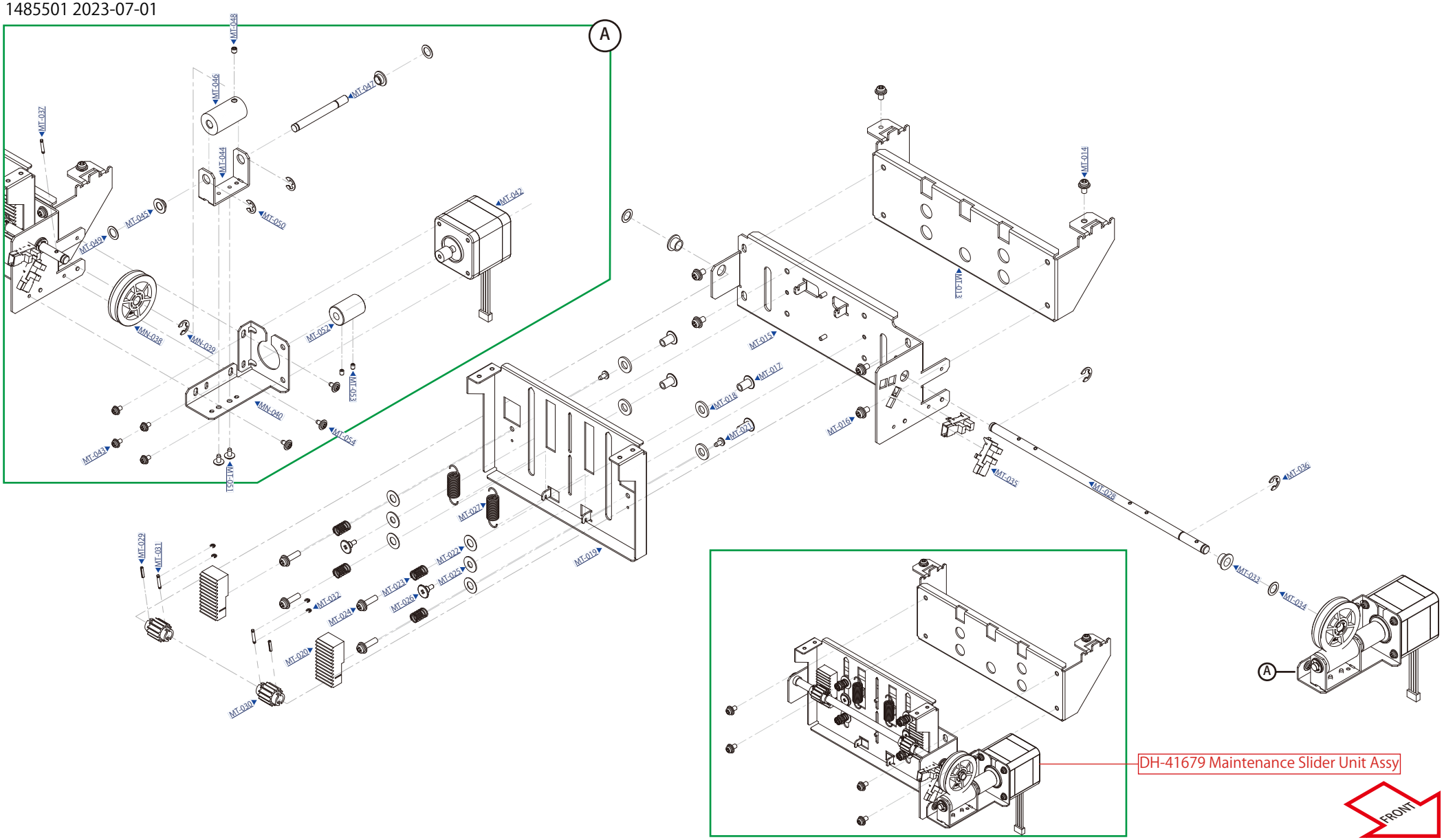
1485501 2023-07-01



CONFIDENTIAL

13.6.6. Motor

1485501 2023-07-01



CONFIDENTIAL

13.7. IH

NOTE

- As of July 1, 2023 (No.1485602)

No.	Item	Reference
1	13.7.1. Overview	-
2	13.7.2. Breakdown	-
3	13.7.3. SC board	-
4	13.7.4. Junction board/Circulation pump	-
5	13.7.5. IC holder slot 1	-
6	13.7.6. IC holder slot 2	-
7	13.7.7. IC holder slot 3	-
8	13.7.8. IC holder slot 4	-
9	13.7.9. IC holder slot 5	-
10	13.7.10. IC holder slot 6	-

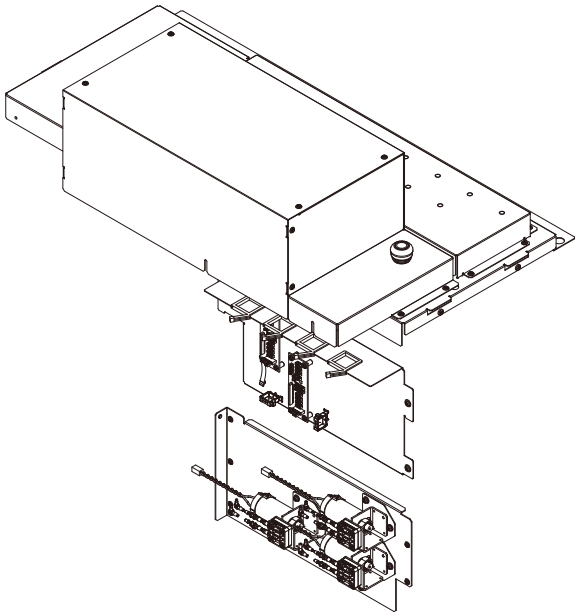
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.7.1. Overview

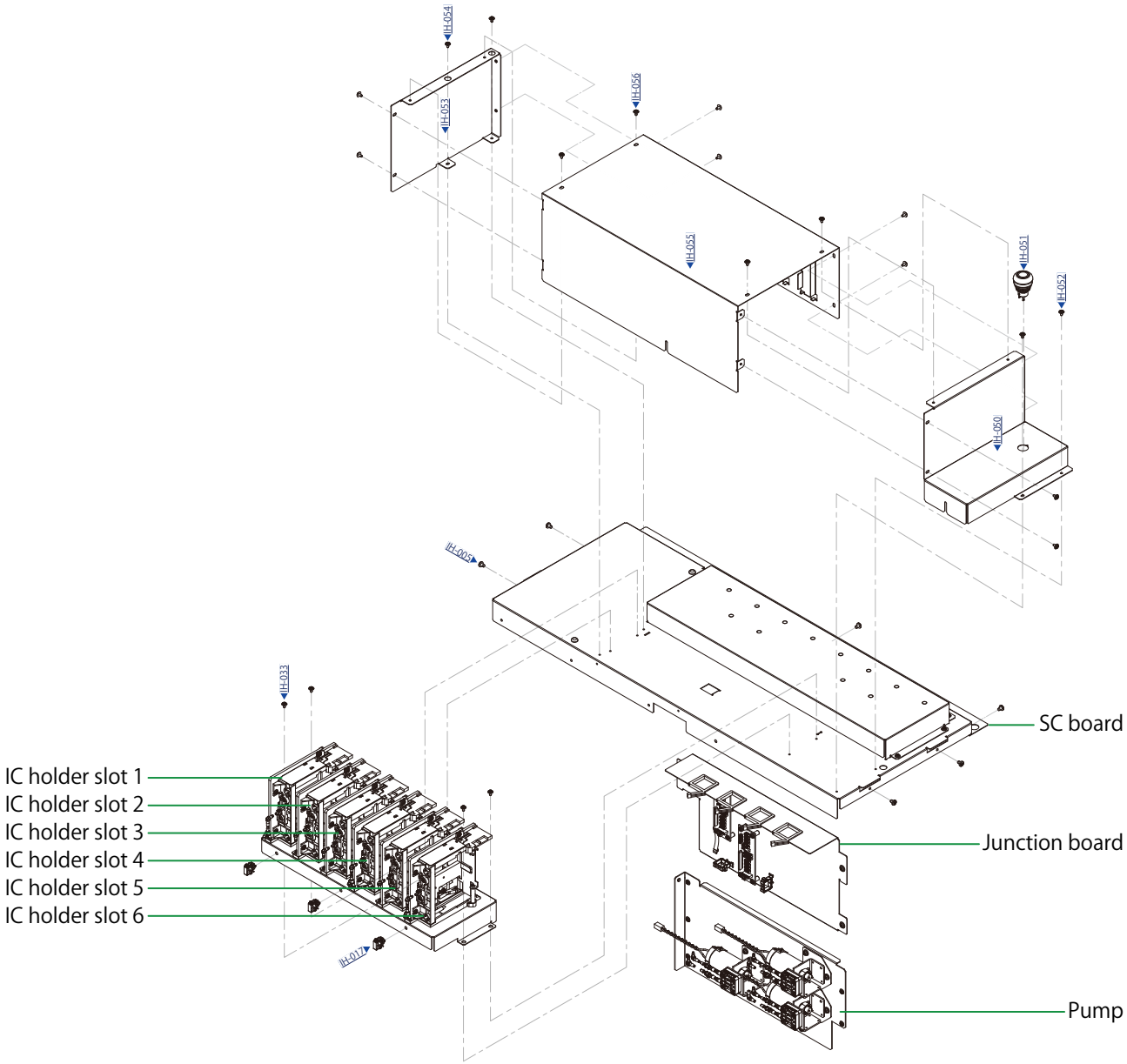
1485602 2023-07-01



CONFIDENTIAL

13.7.2. Breakdown

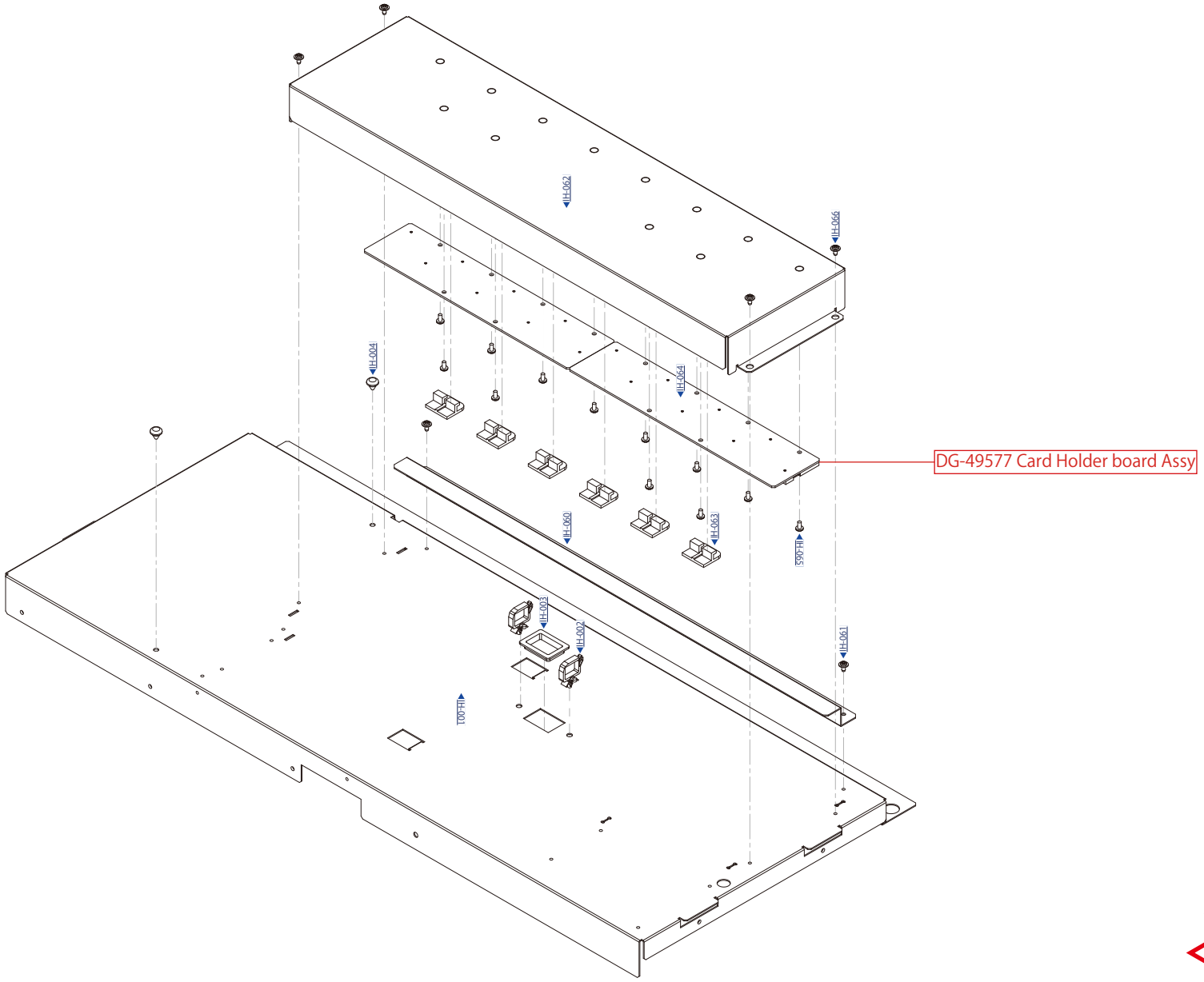
1485602 2023-07-01



CONFIDENTIAL

13.7.3. SC board

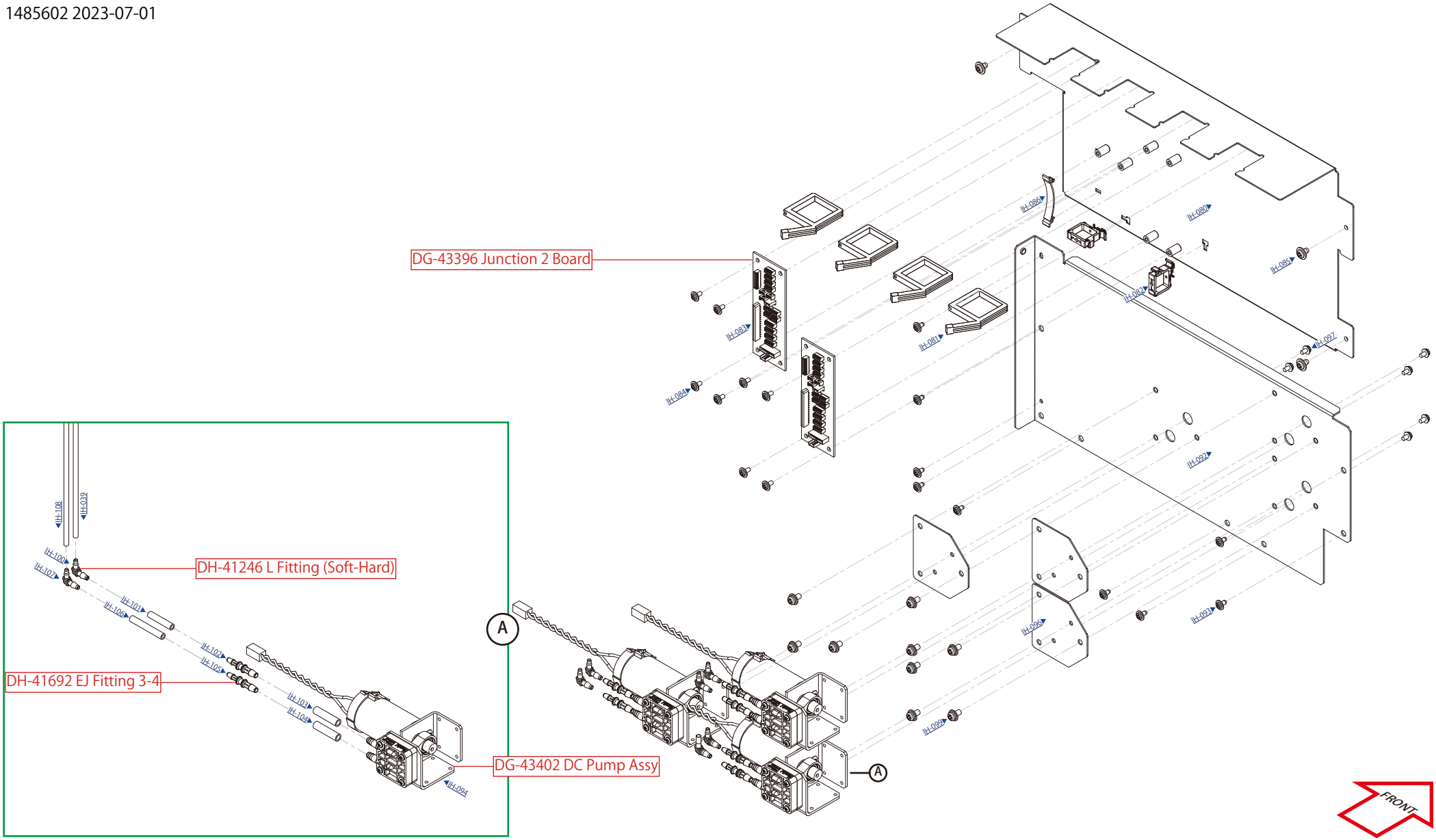
1485602 2023-07-01



CONFIDENTIAL

13.7.4. Junction board/Circulation pump

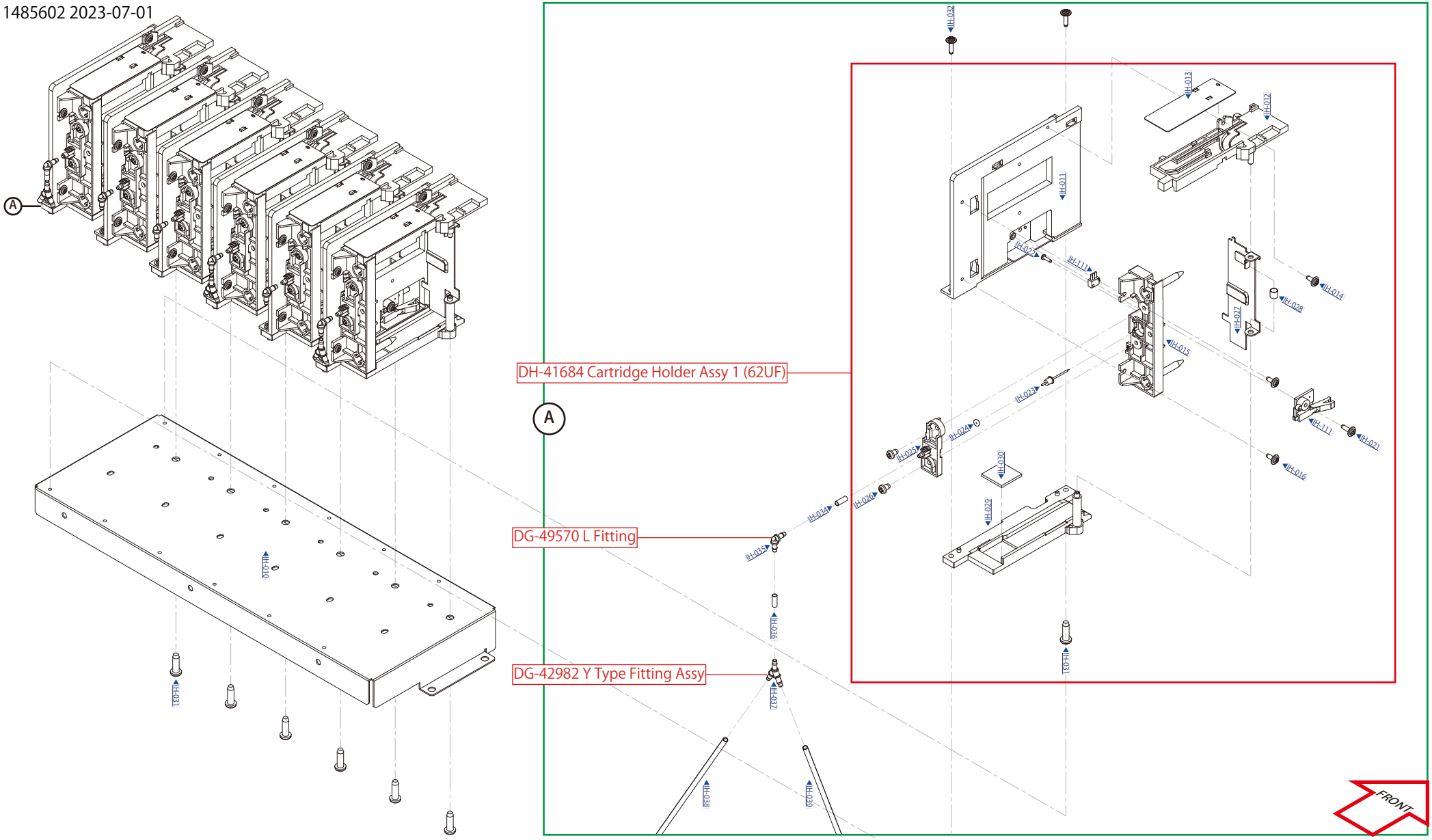
1485602 2023-07-01



CONFIDENTIAL

13.7.5. IC holder slot 1

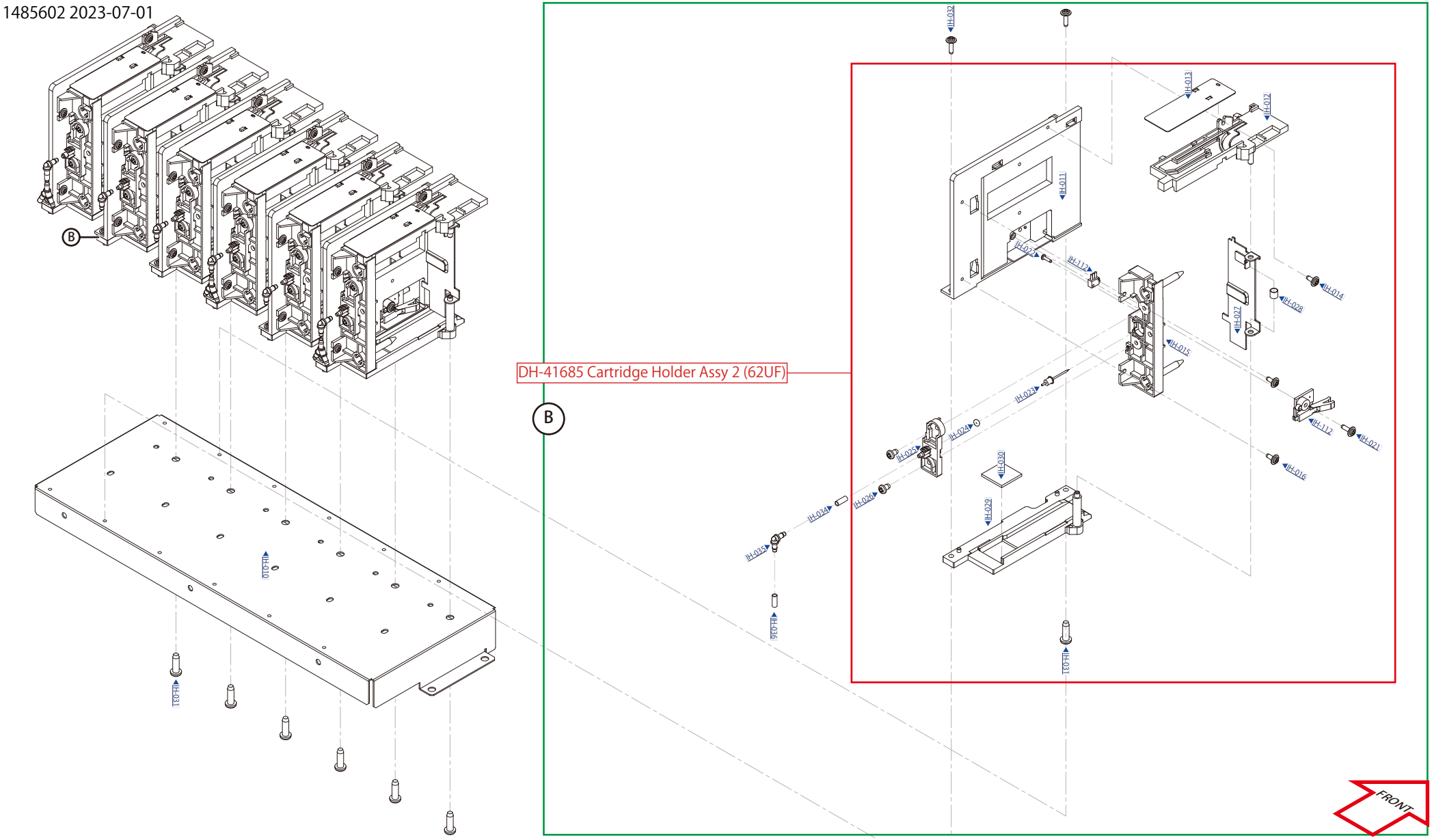
1485602 2023-07-01



CONFIDENTIAL

13.7.6. IC holder slot 2

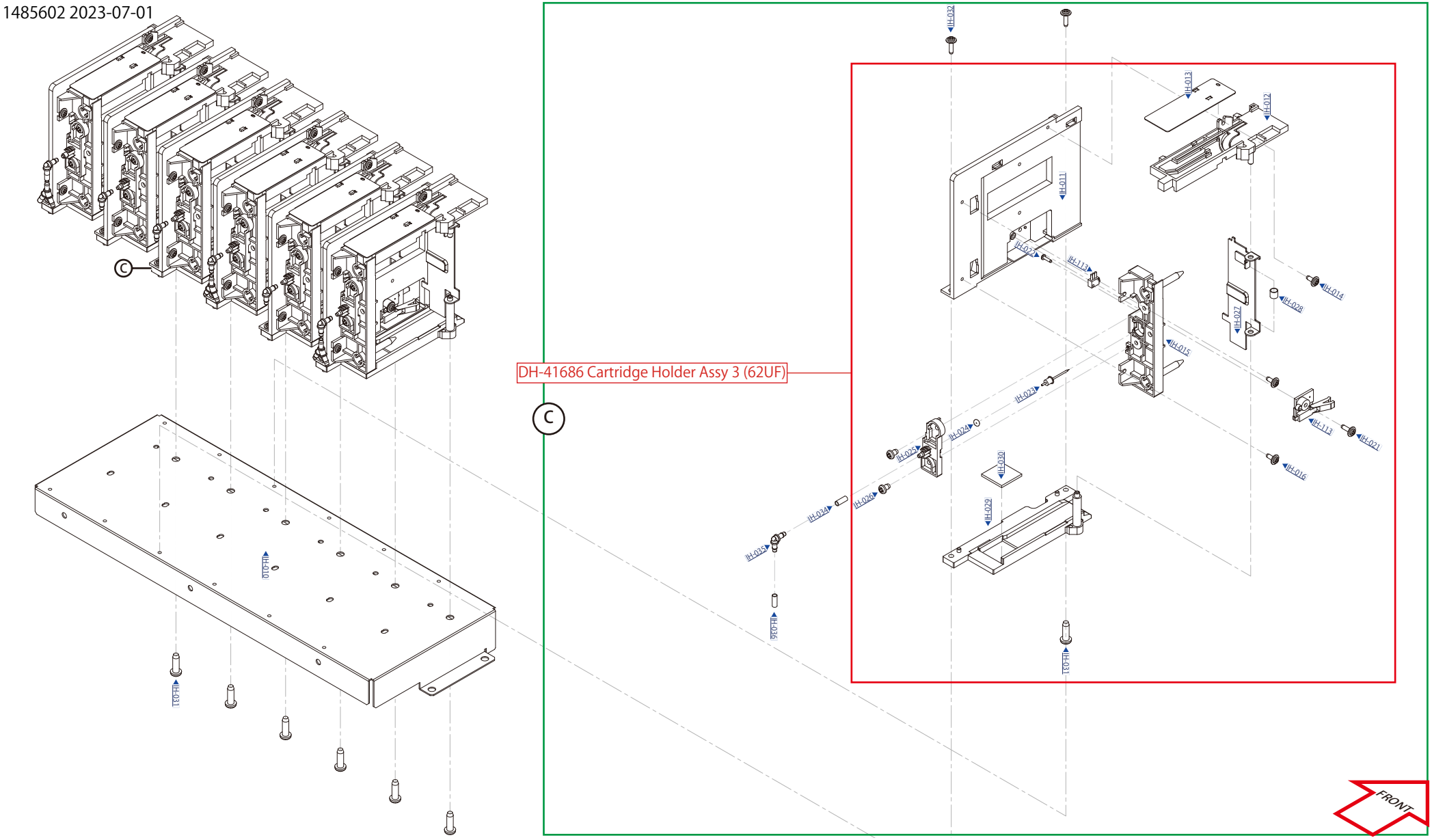
1485602 2023-07-01



CONFIDENTIAL

13.7.7. IC holder slot 3

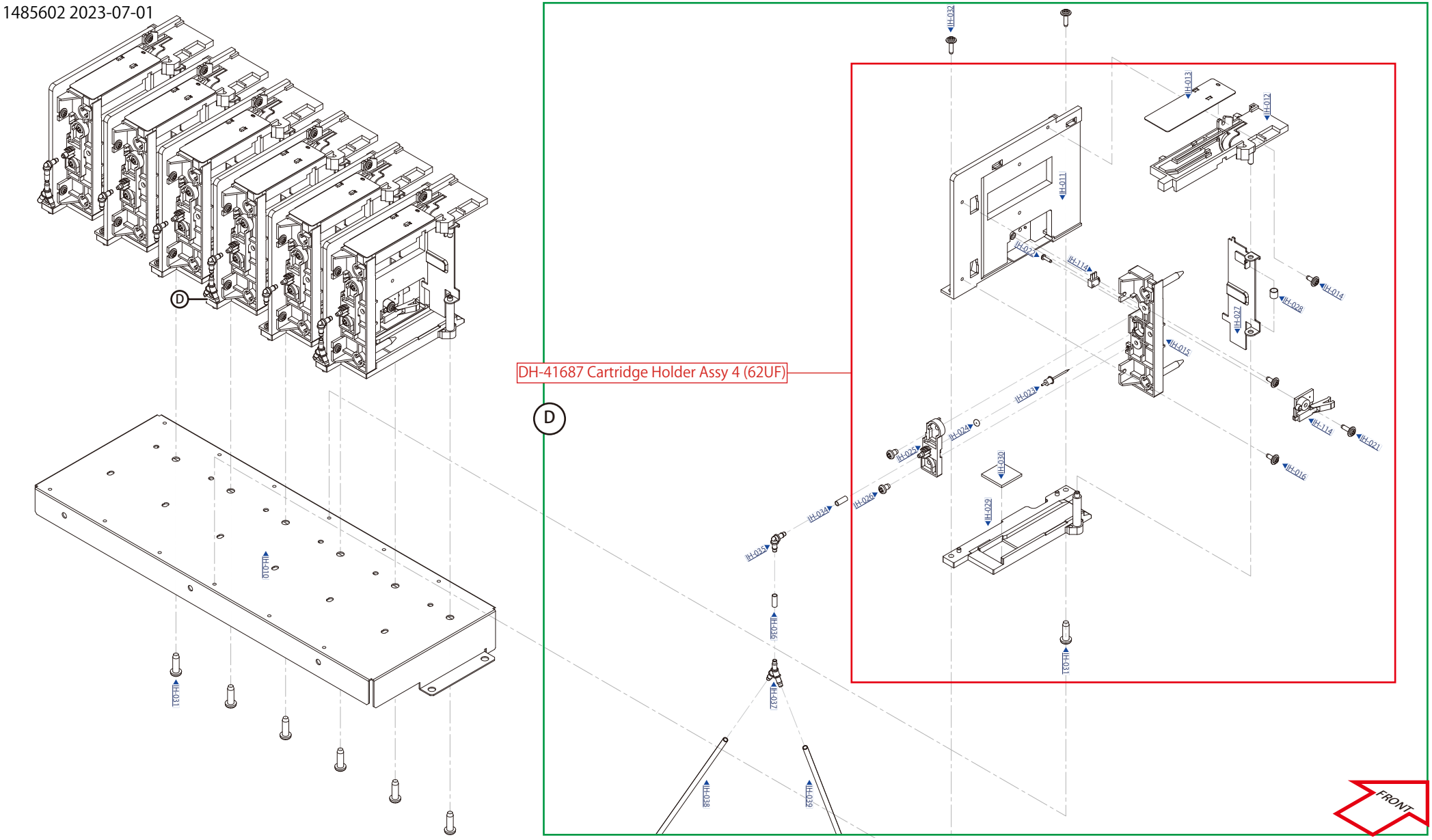
1485602 2023-07-01



CONFIDENTIAL

13.7.8. IC holder slot 4

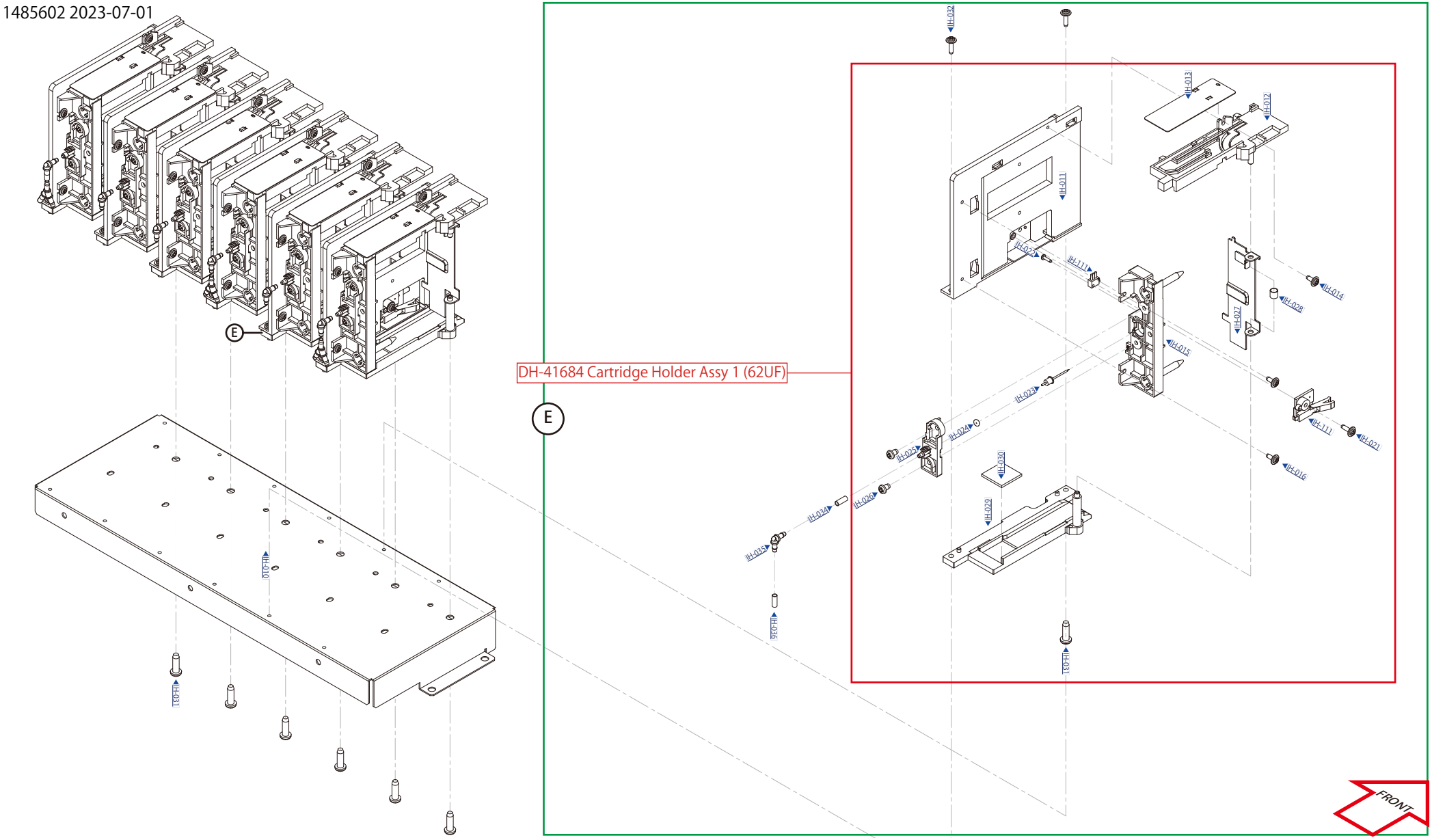
1485602 2023-07-01



CONFIDENTIAL

13.7.9. IC holder slot 5

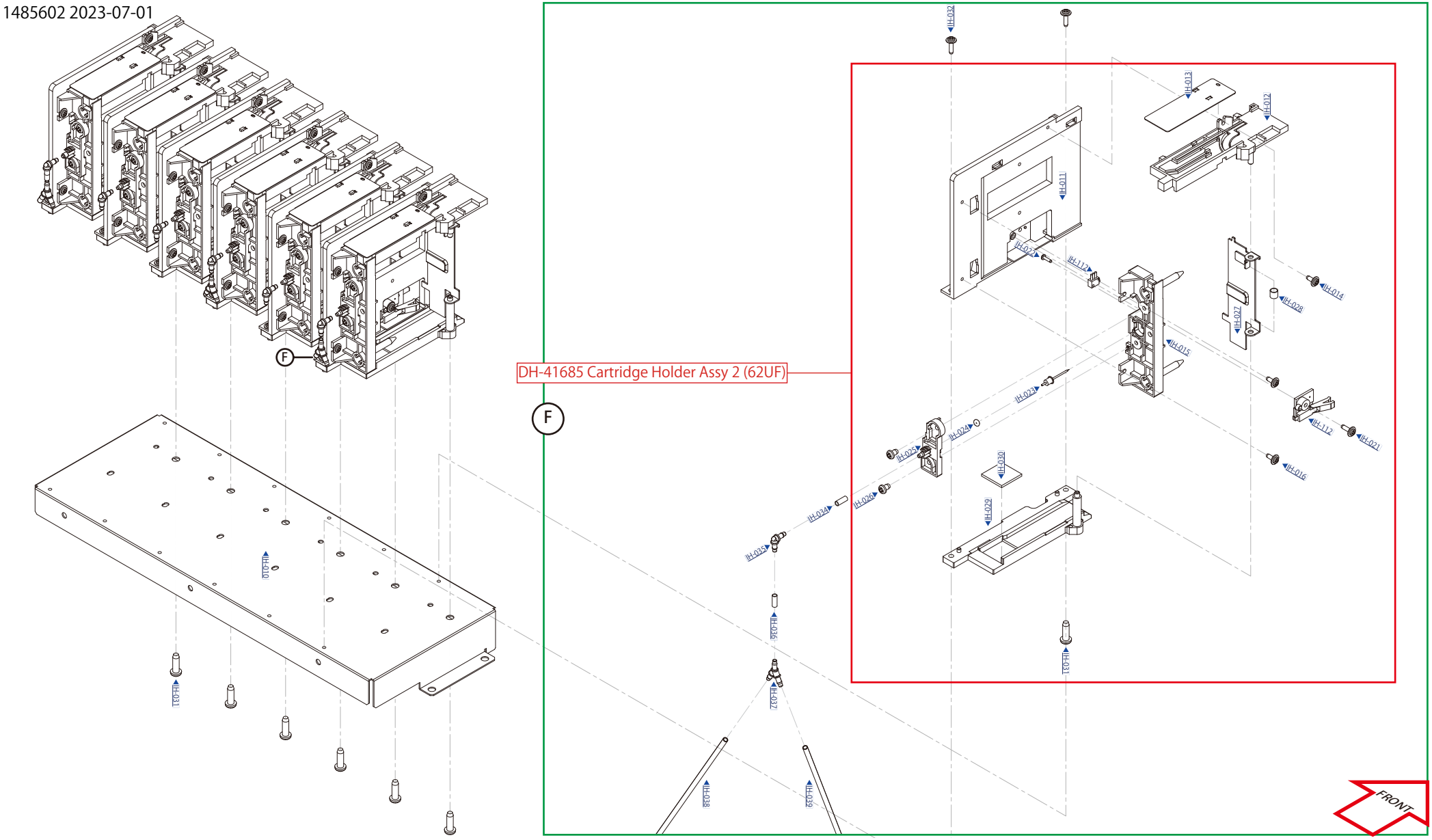
1485602 2023-07-01



CONFIDENTIAL

13.7.10. IC holder slot 6

1485602 2023-07-01



CONFIDENTIAL

13.8. Board

NOTE

- As of July 1, 2023 (No.1485701)

No.	Item	Reference
1	13.8.1. Overview	-
2	13.8.2. Rear	-
3	13.8.3. Clamp	-
4	13.8.4. Electrics	-

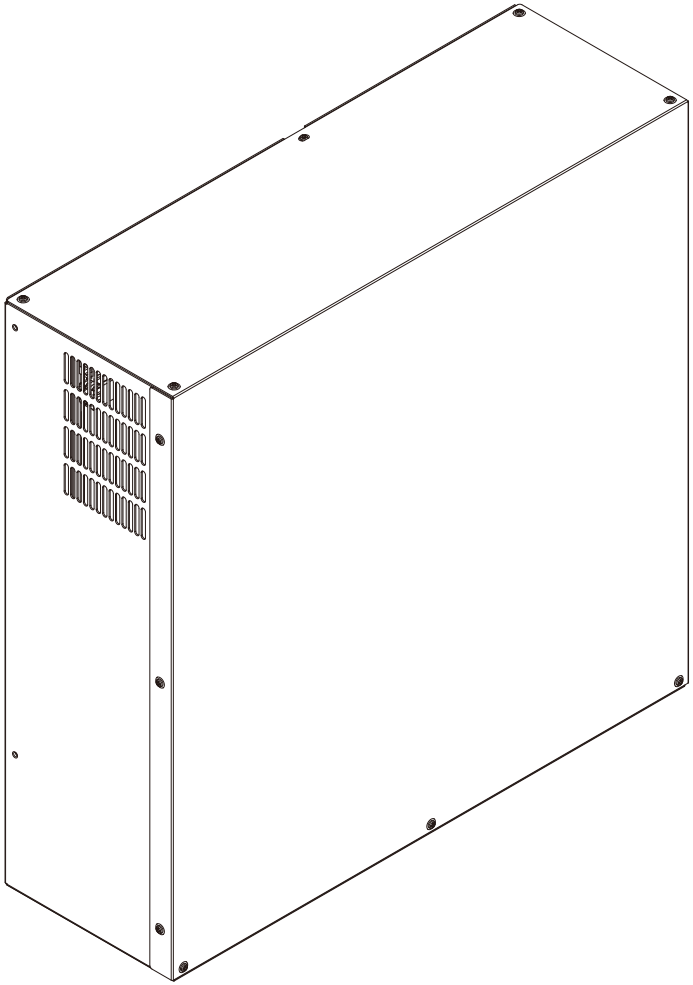
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.8.1. Overview

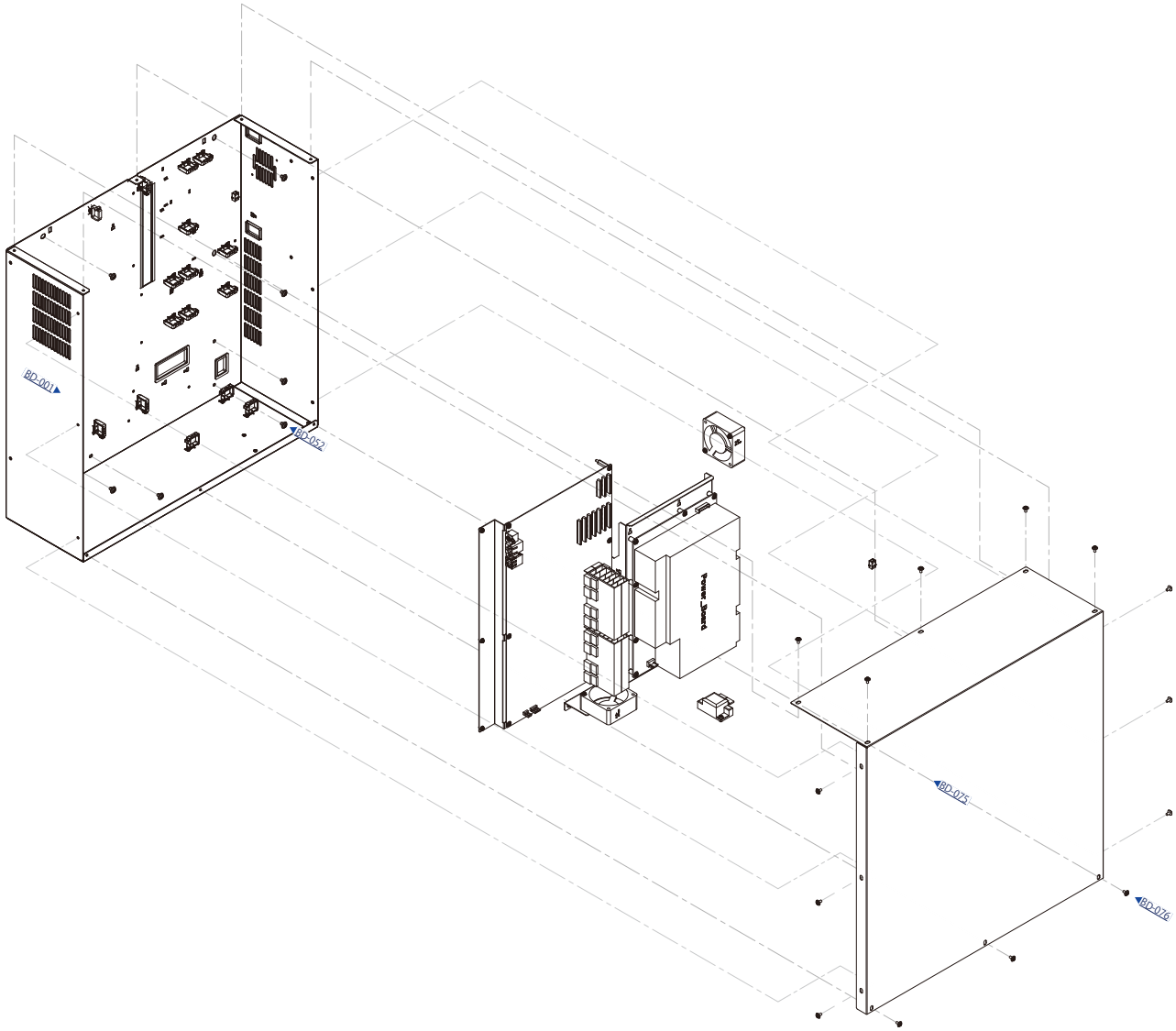
1485701 2023-07-01



CONFIDENTIAL

13.8.2. Rear

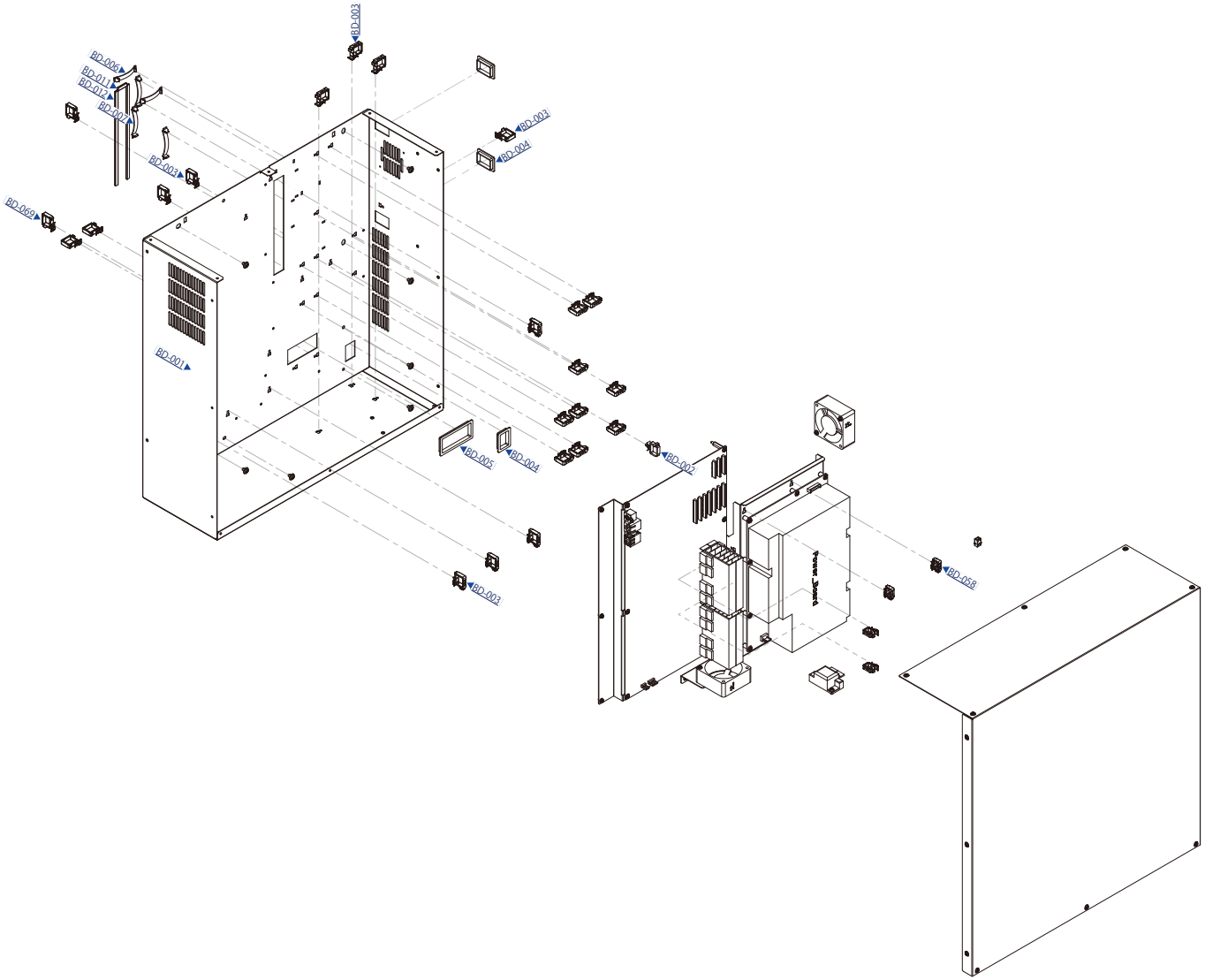
1485701 2023-07-01



CONFIDENTIAL

13.8.3. Clamp

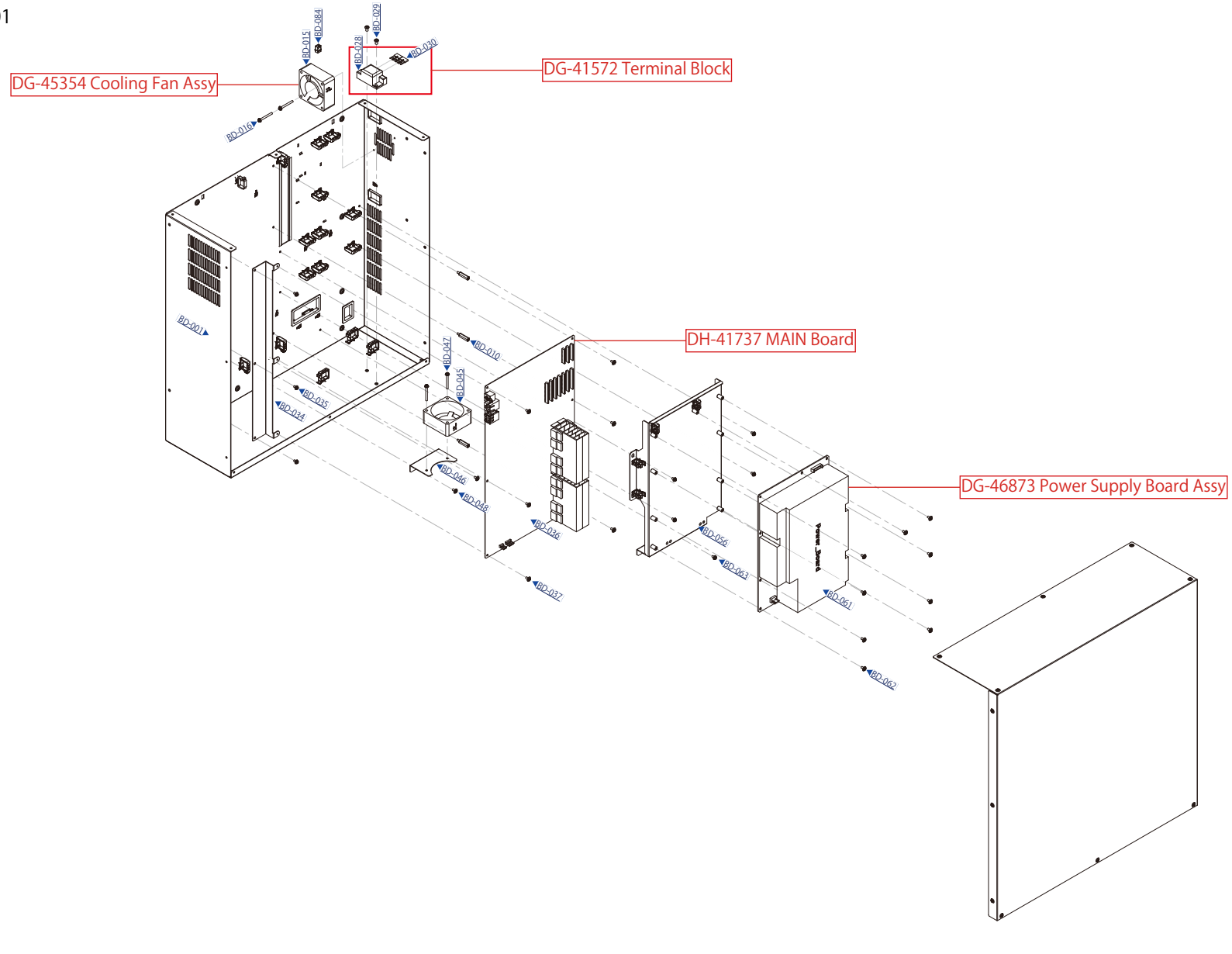
1485701 2023-07-01



CONFIDENTIAL

13.8.4. Electrics

1485701 2023-07-01



CONFIDENTIAL

13.9. Panel

NOTE

- As of July 1, 2023 (No.1442902)

No.	Item	Reference
1	13.9.1. Overview	-
2	13.9.2. Breakdown	-

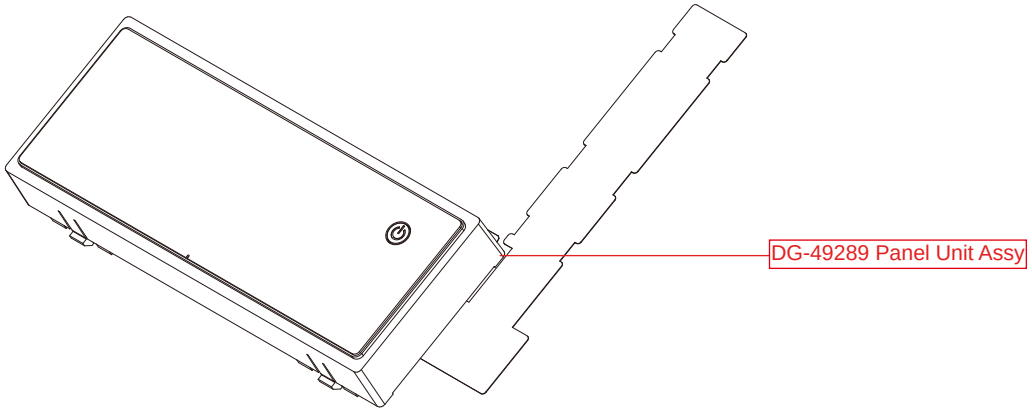
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.9.1. Overview

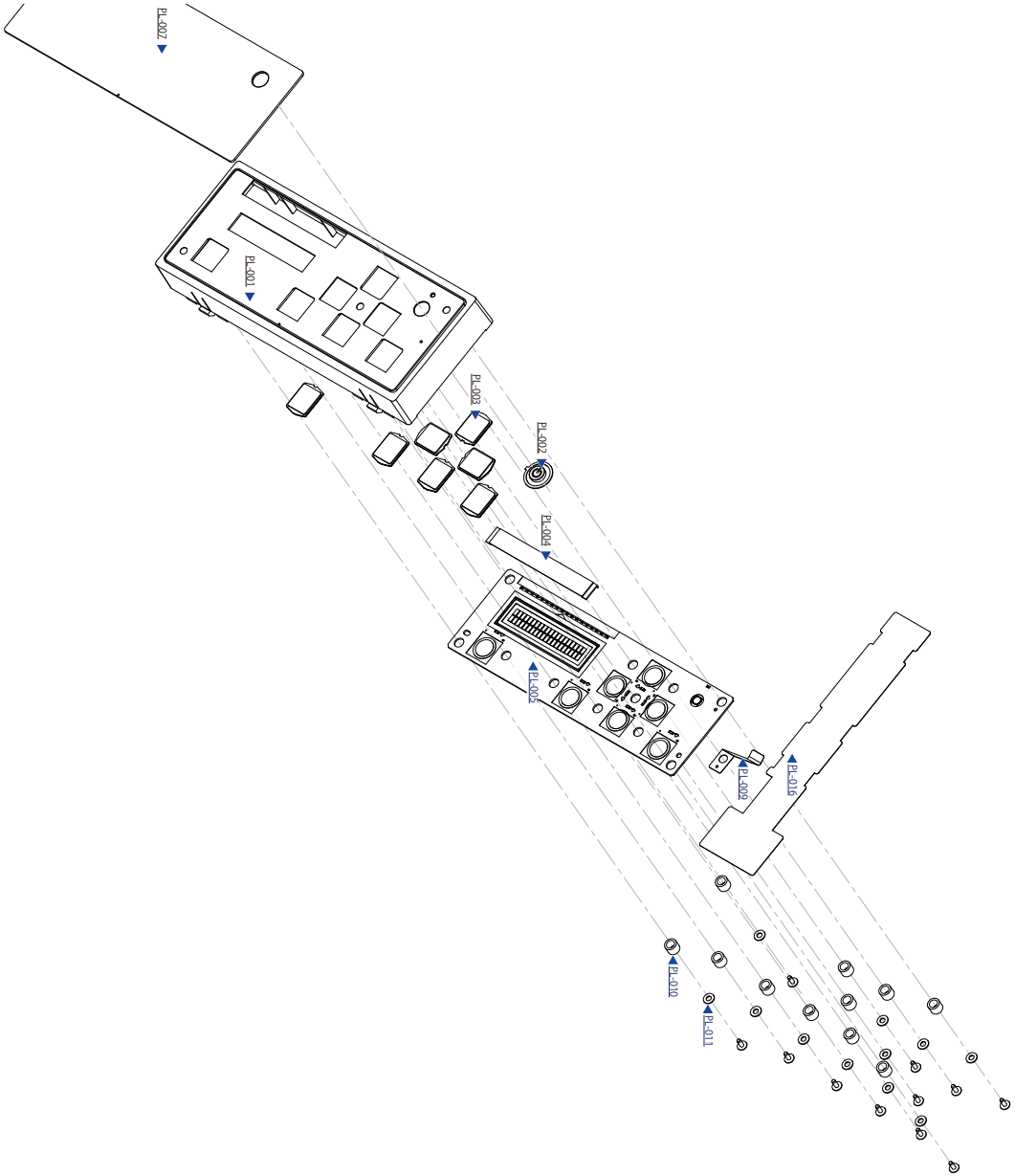
1442902 2023-03-28



CONFIDENTIAL

13.9.2. Breakdown

1442902 2023-03-28



CONFIDENTIAL

13.10. Cover

NOTE

- As of July 1, 2023 (No.1485803)

No.	Item	Reference
1	13.10.1. Overview	-
2	13.10.2. Breakdown	-
3	13.10.3. Side cover/Bottom cover	-
4	13.10.4. Top cover	-
5	13.10.5. Maintenance cover/Sensor cover	-
6	13.10.6. Front cover	-
7	13.10.7. UV LED board cover/IH cover behind	-

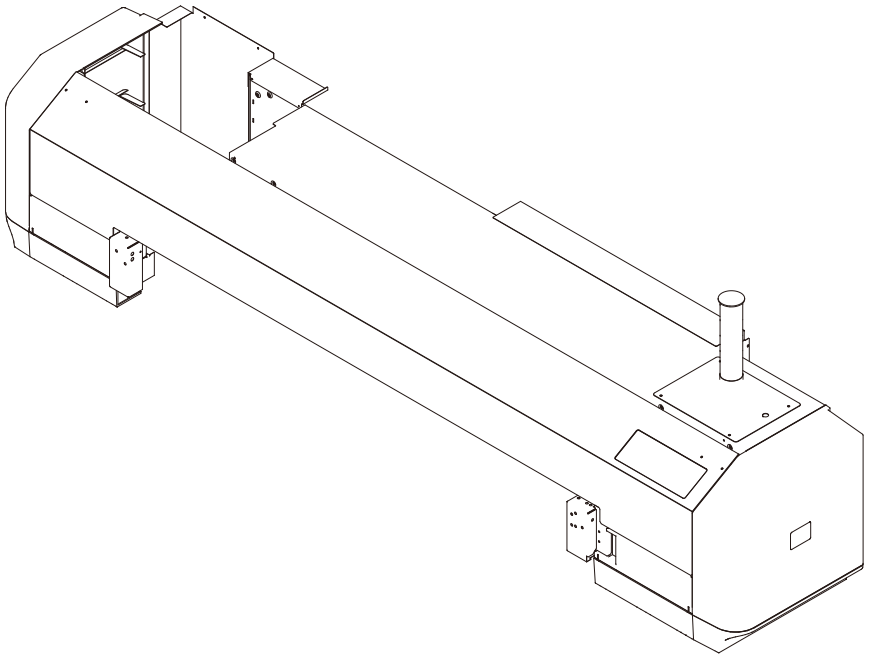
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.10.1. Overview

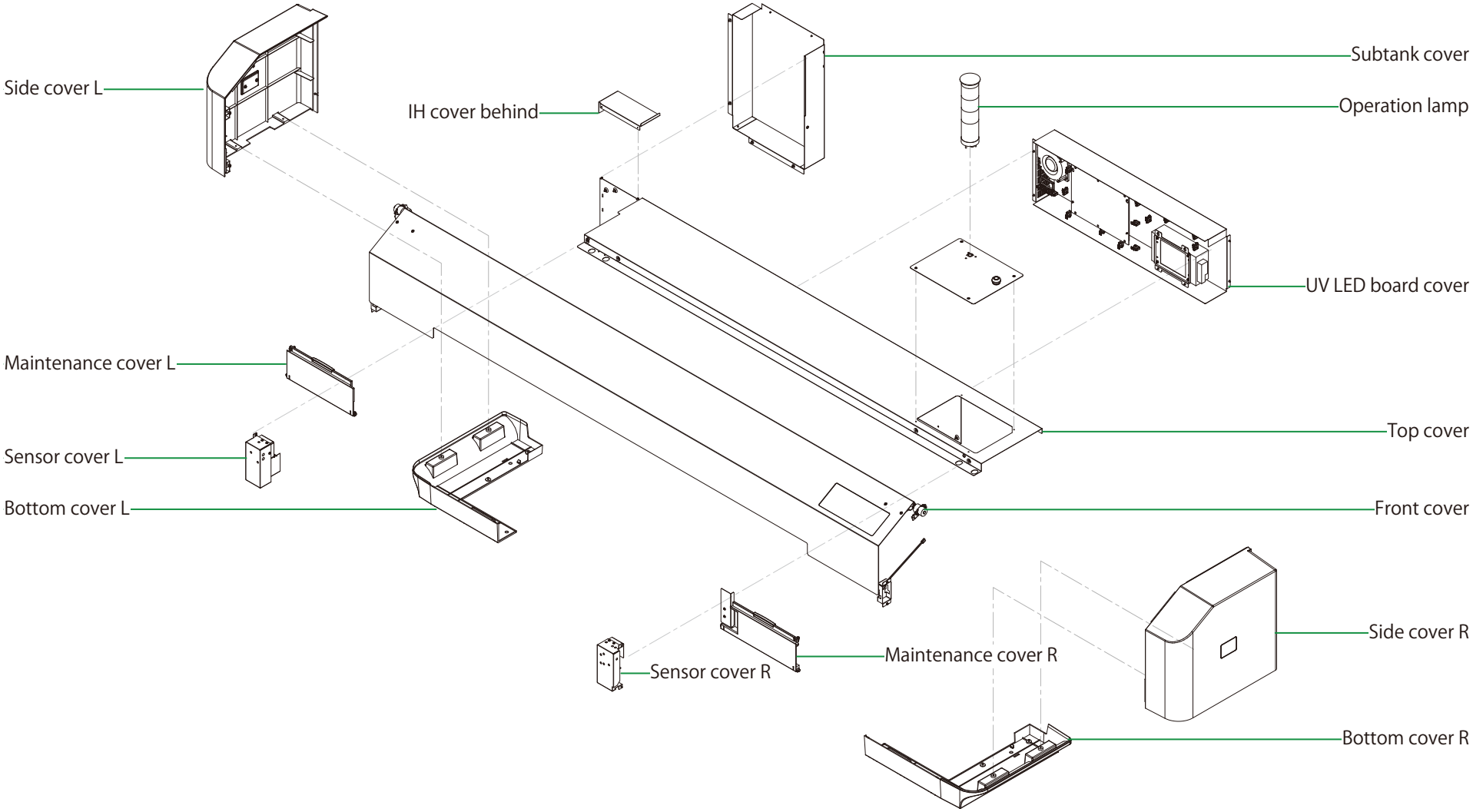
1485803 2023-07-01



CONFIDENTIAL

13.10.2. Breakdown

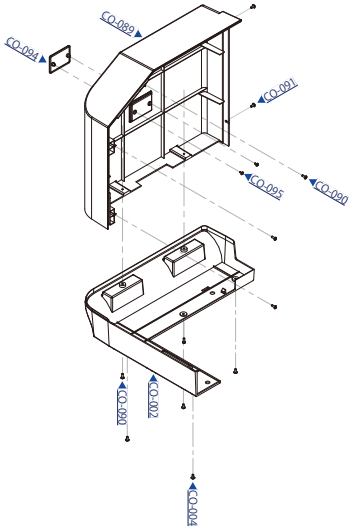
1485803 2023-07-01

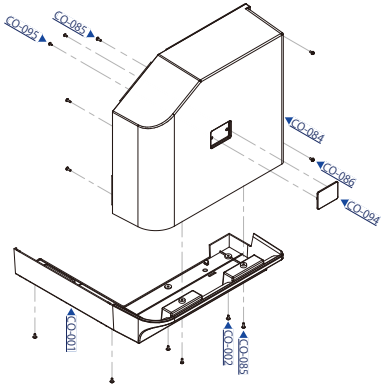


CONFIDENTIAL

13.10.3. Side cover/Bottom cover

1485803 2023-07-01

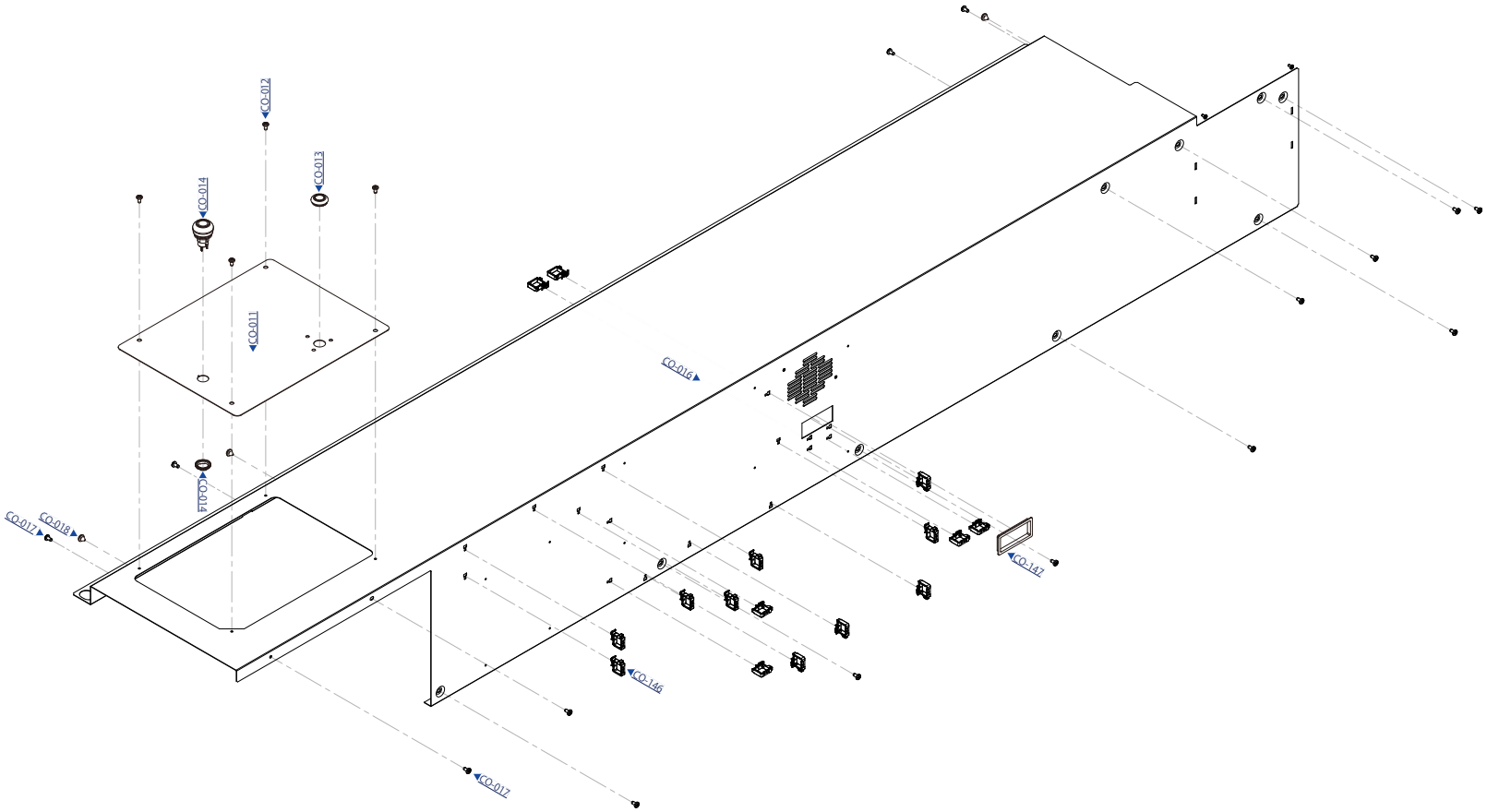




CONFIDENTIAL

13.10.4. Top cover

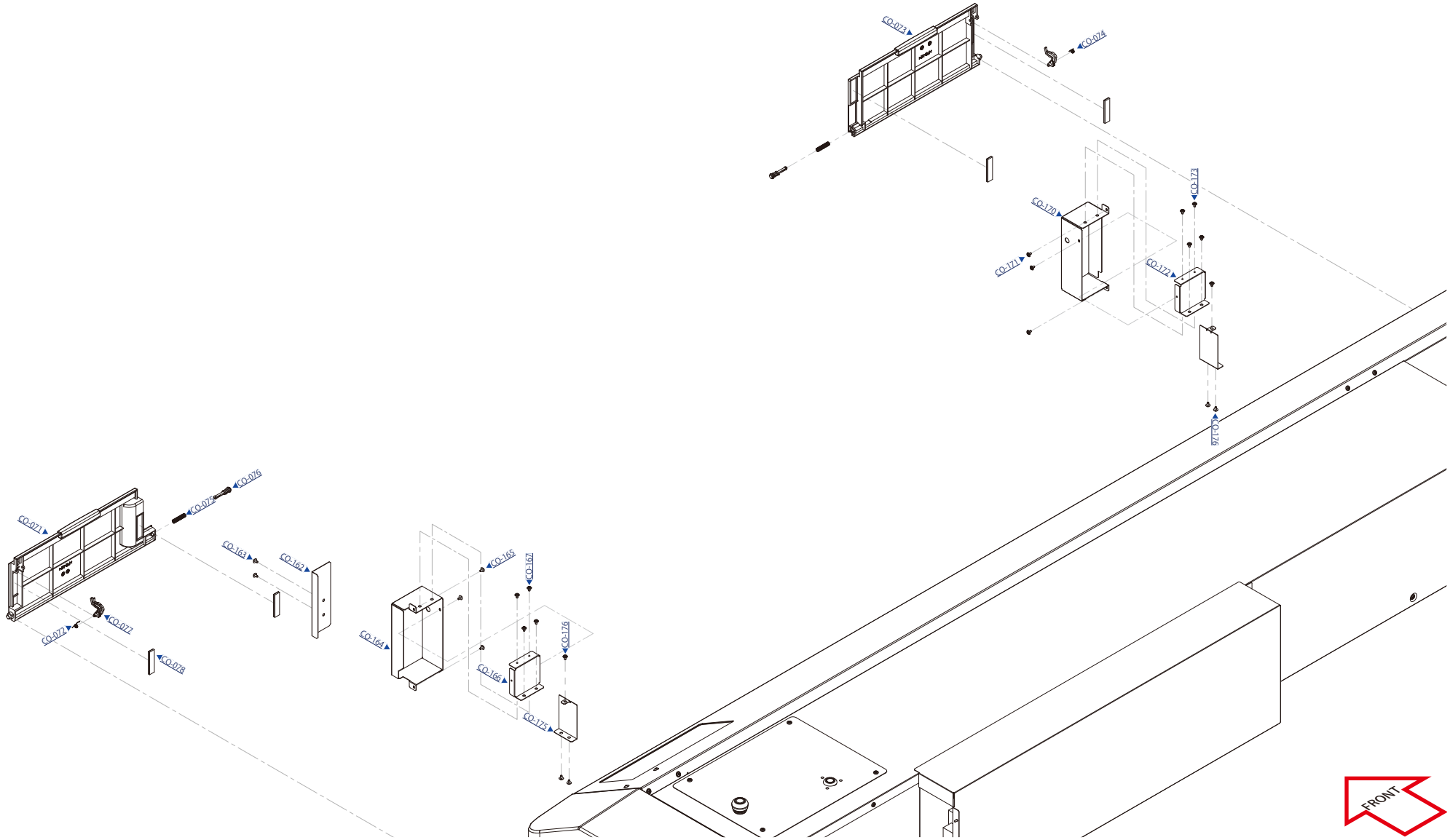
1485803 2023-07-01



CONFIDENTIAL

13.10.5. Maintenance cover/Sensor cover

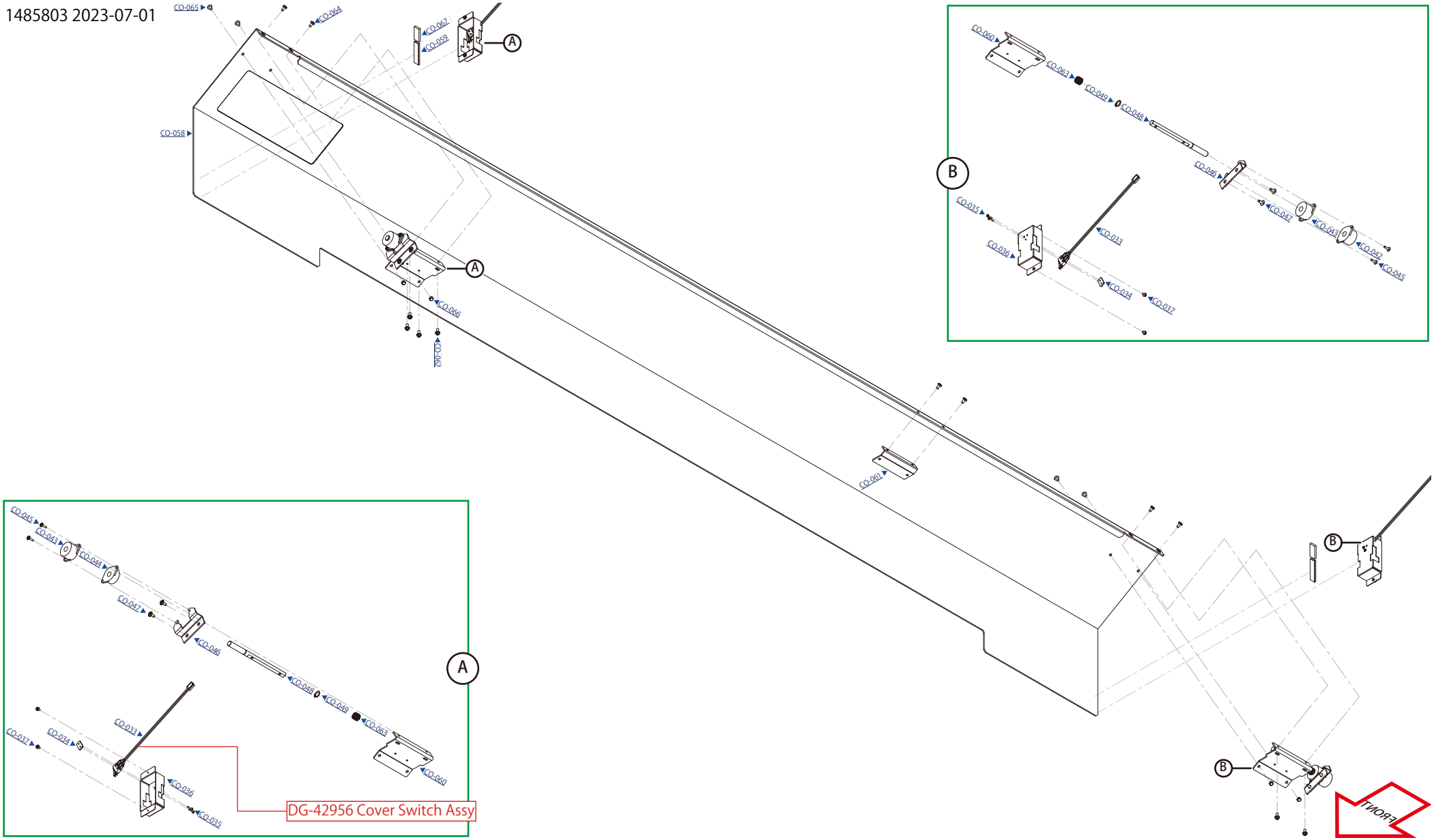
1485803 2023-07-01



CONFIDENTIAL

13.10.6. Front cover

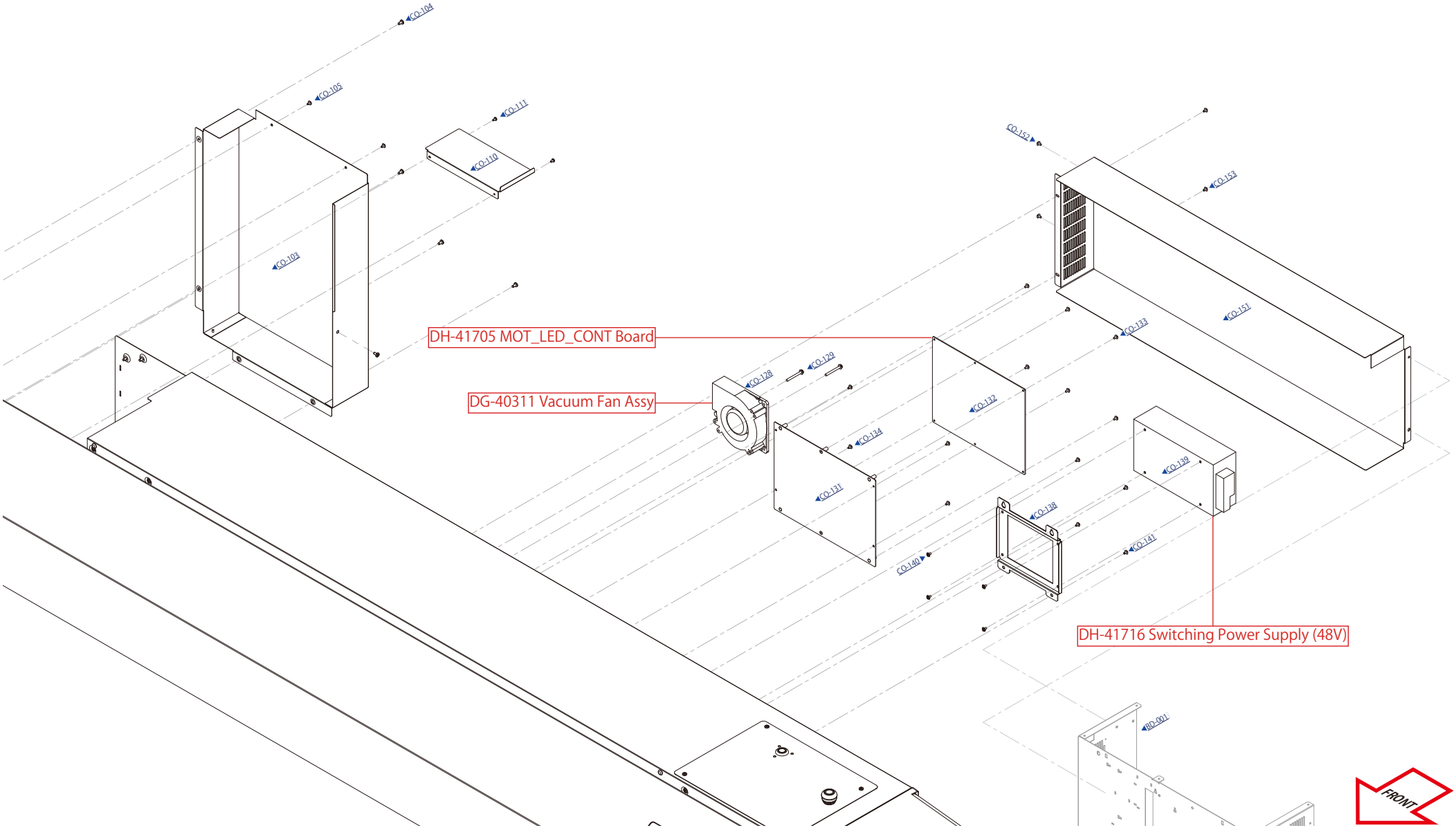
1485803 2023-07-01



CONFIDENTIAL

13.10.7. UV LED board cover/IH cover behind

1485803 2023-07-01



CONFIDENTIAL

13.11. Base frame cover

NOTE

- As of July 1, 2023 (No.1491001)

No.	Item	Reference
1	13.11.1. Overview	-
2	13.11.2. Breakdown	-
3	13.11.3. Front door/side cover	
4	13.11.4. Top	-
5	13.11.5. Right	-
6	13.11.6. Left	-
7	13.11.7. Front	-
8	13.11.8. Power supply	-
9	13.11.9. Z motor cover	-

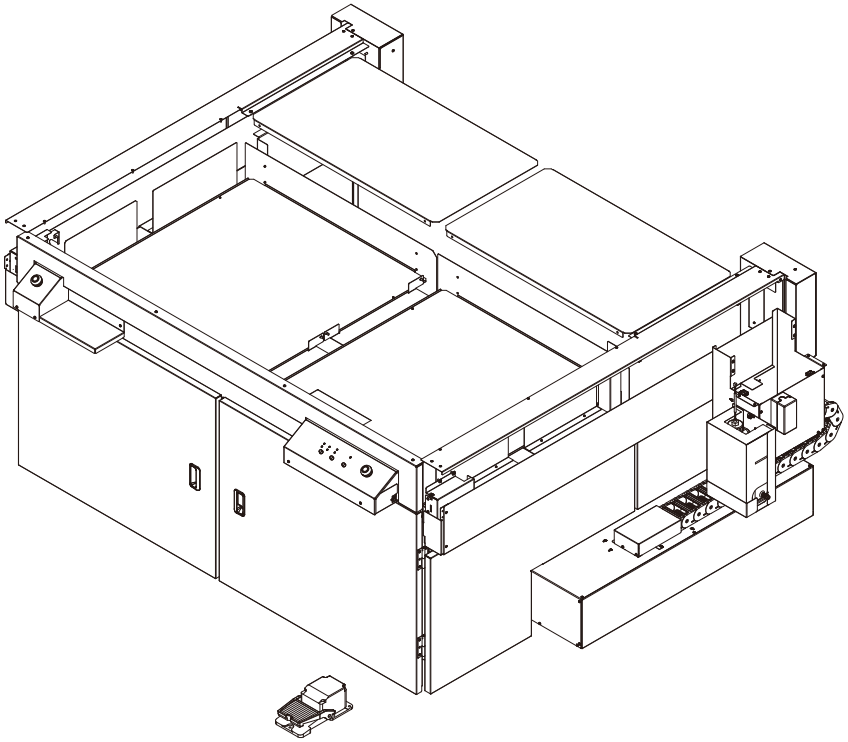
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.11.1. Overview

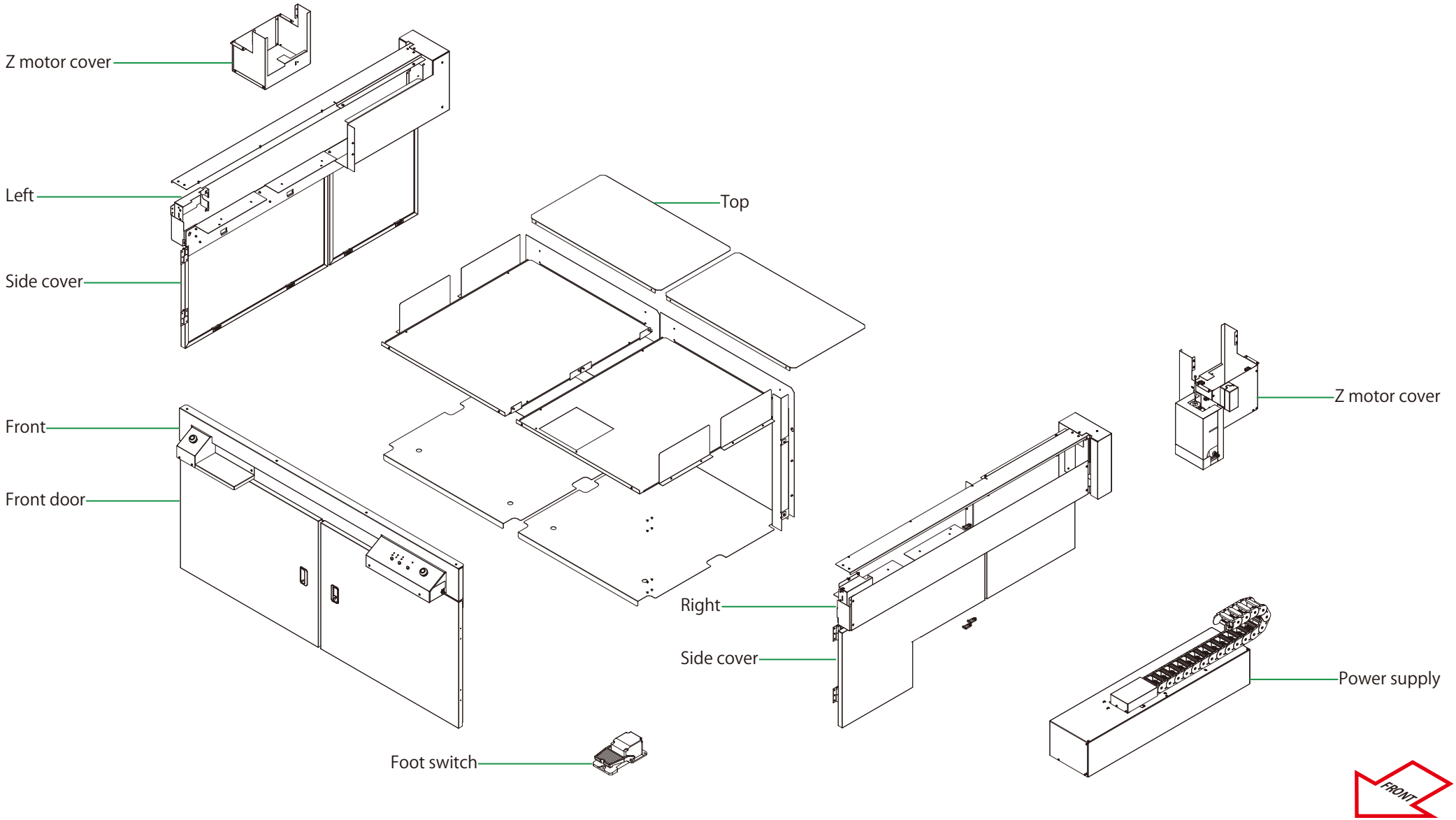
1491001 2023-07-01



CONFIDENTIAL

13.11.2. Breakdown

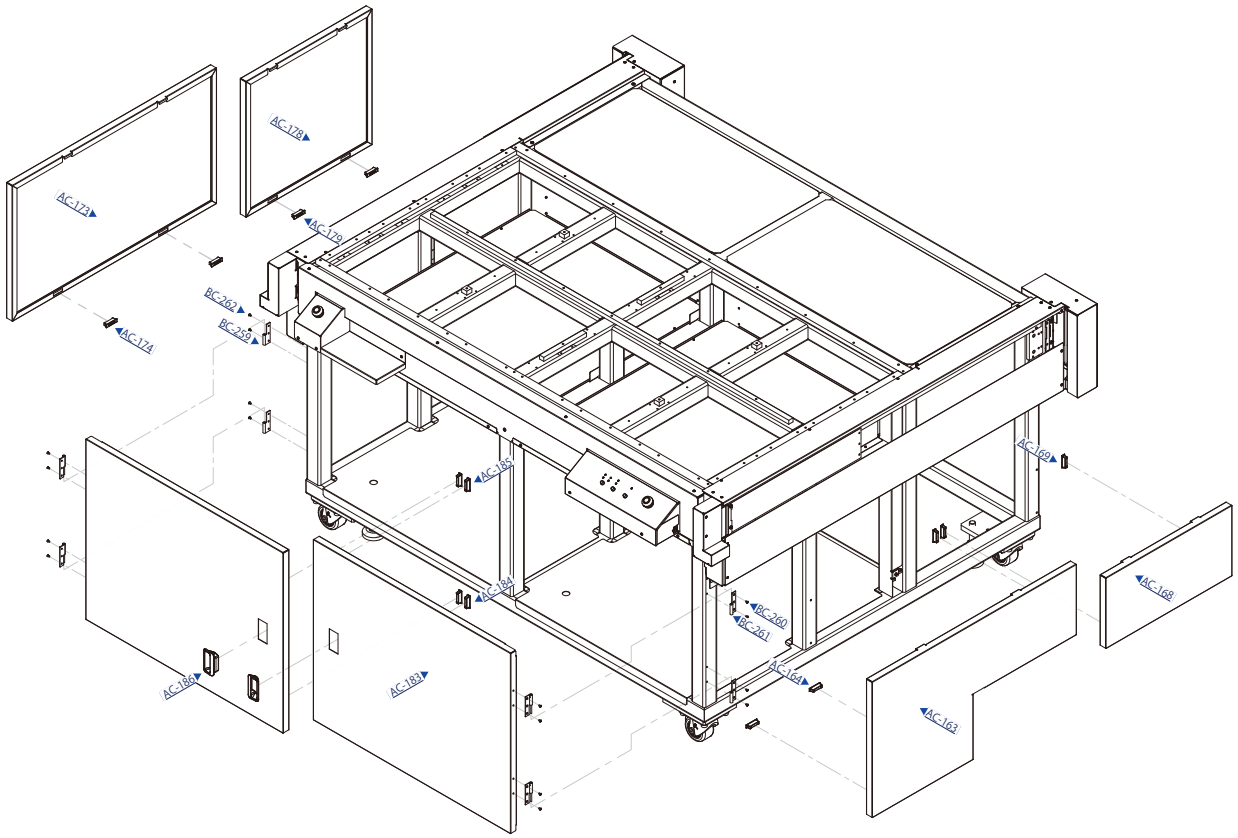
1491001 2023-07-01



CONFIDENTIAL

13.11.3. Front door/side cover

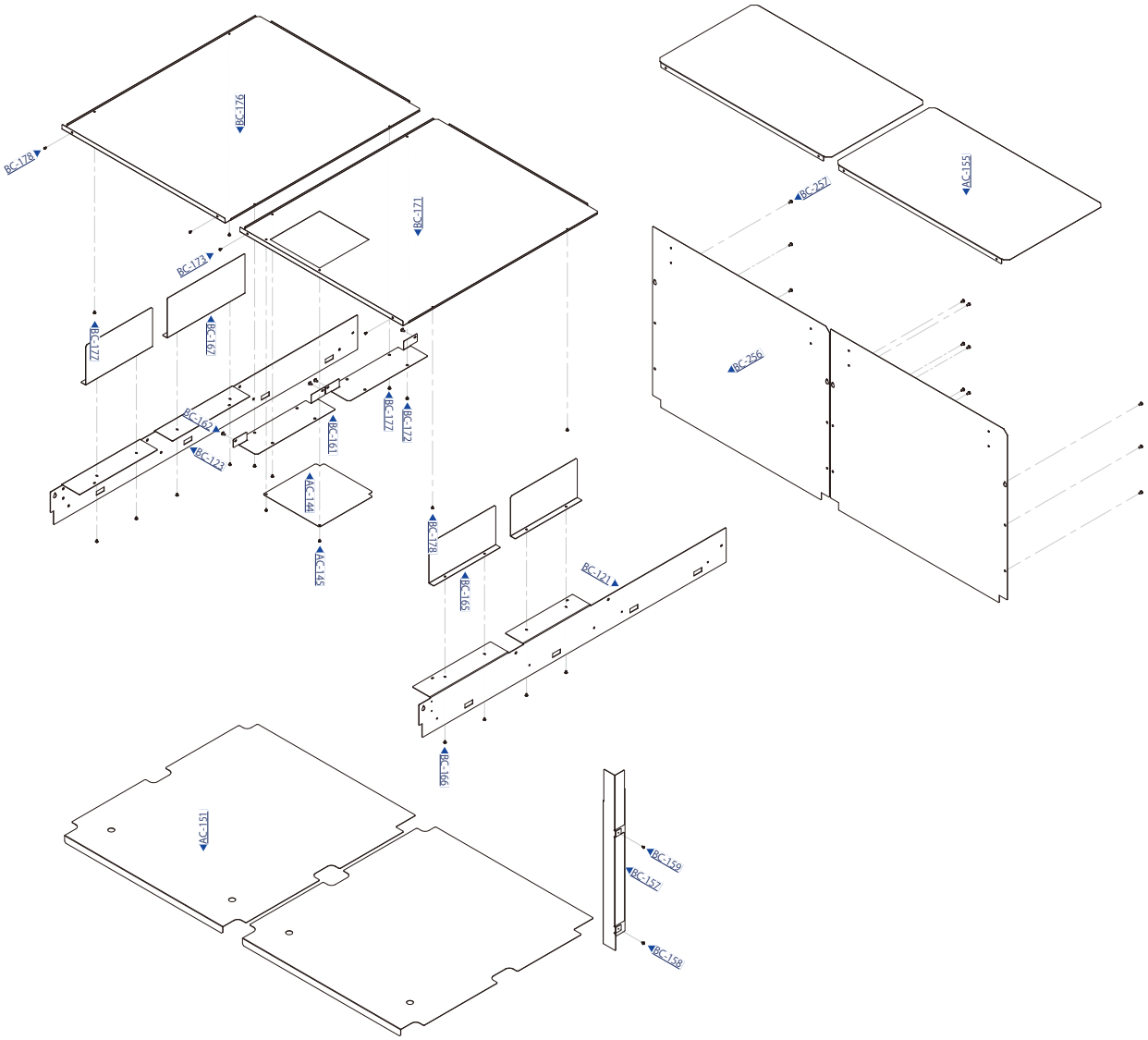
1491001 2023-07-01



CONFIDENTIAL

13.11.4. Top

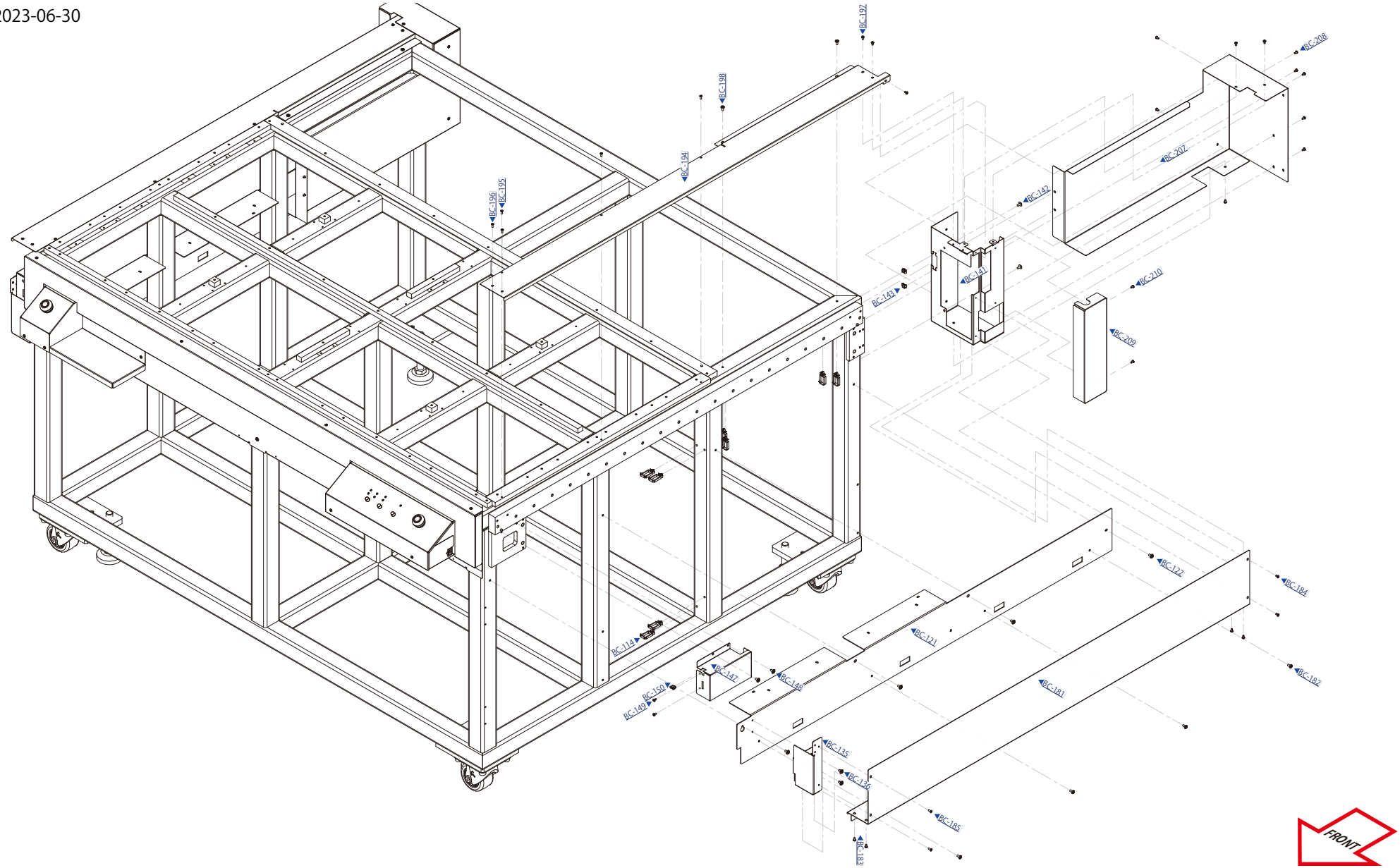
1491001 2023-07-01



CONFIDENTIAL

13.11.5. Right

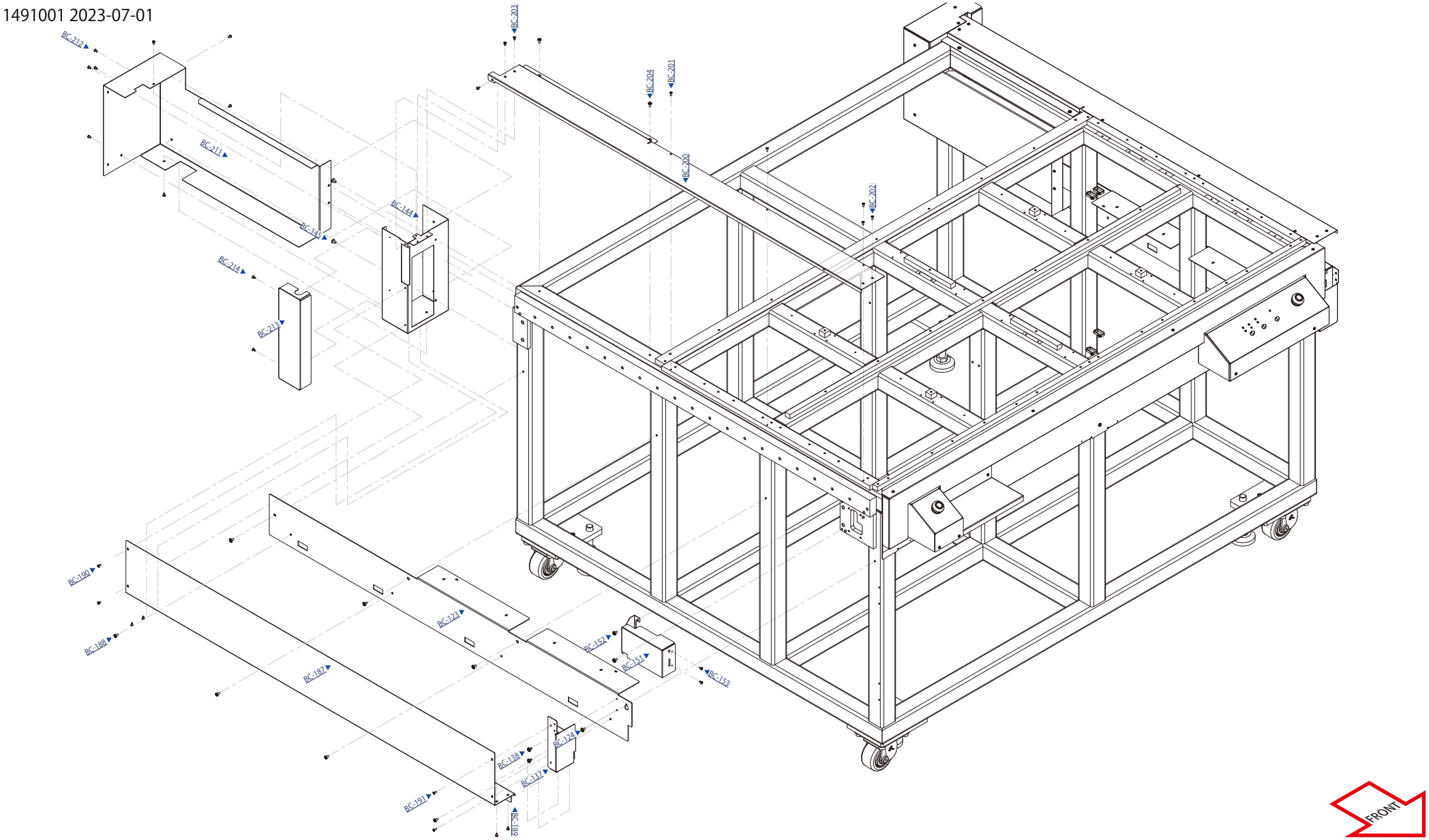
1491001 2023-06-30



CONFIDENTIAL

13.11.6. Left

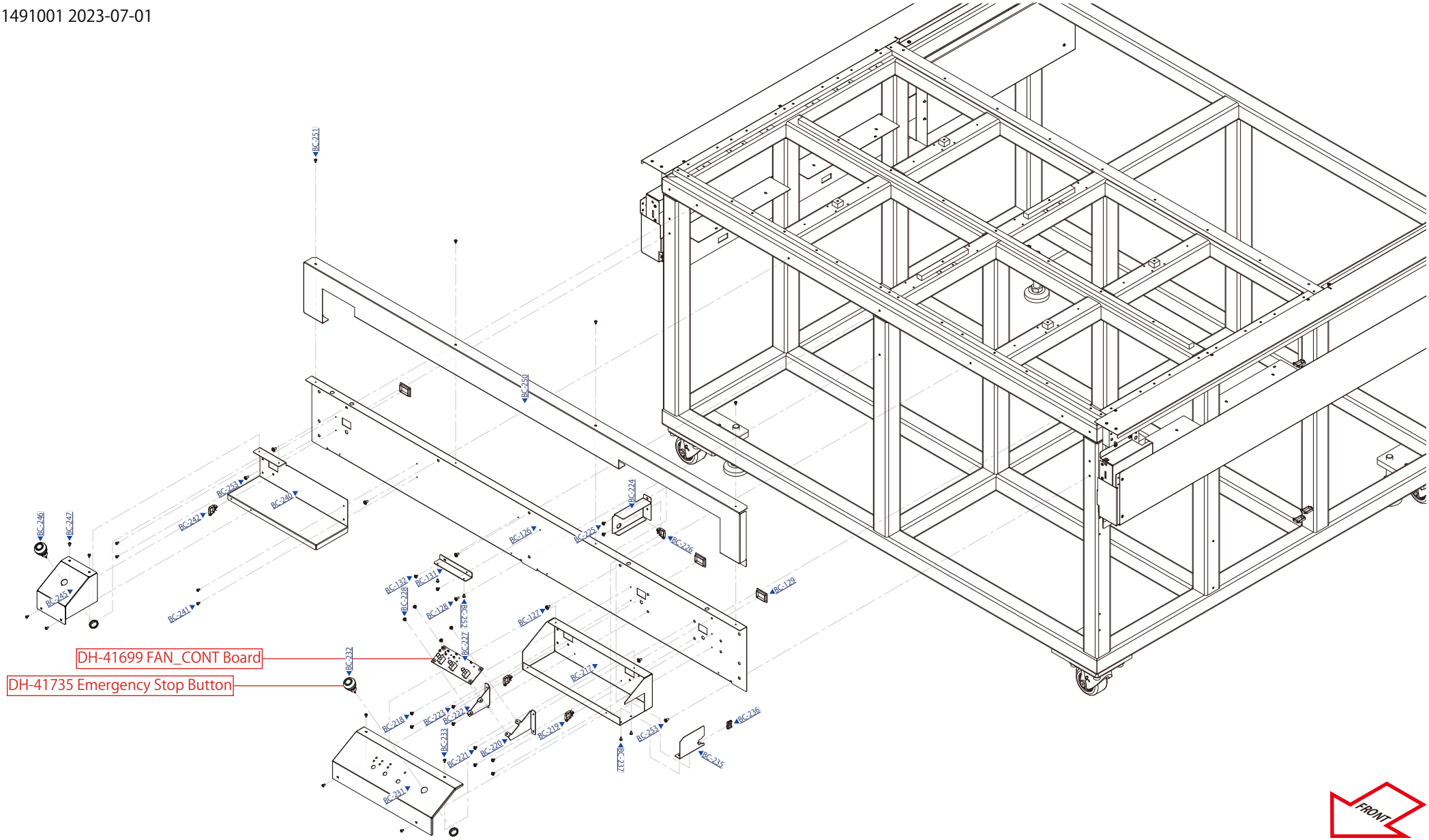
1491001 2023-07-01



CONFIDENTIAL

13.11.7. Front

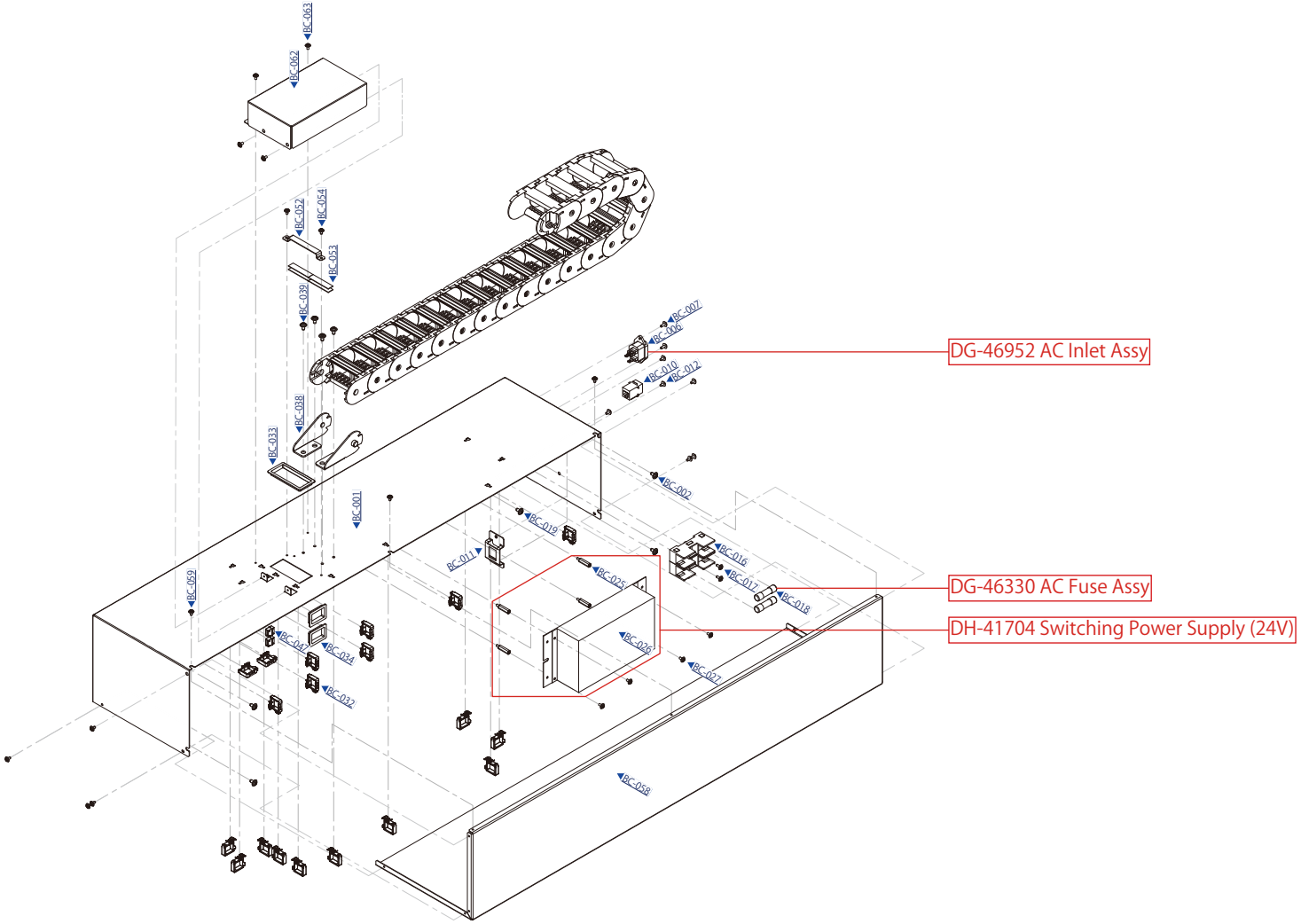
1491001 2023-07-01



CONFIDENTIAL

13.11.8. Power supply

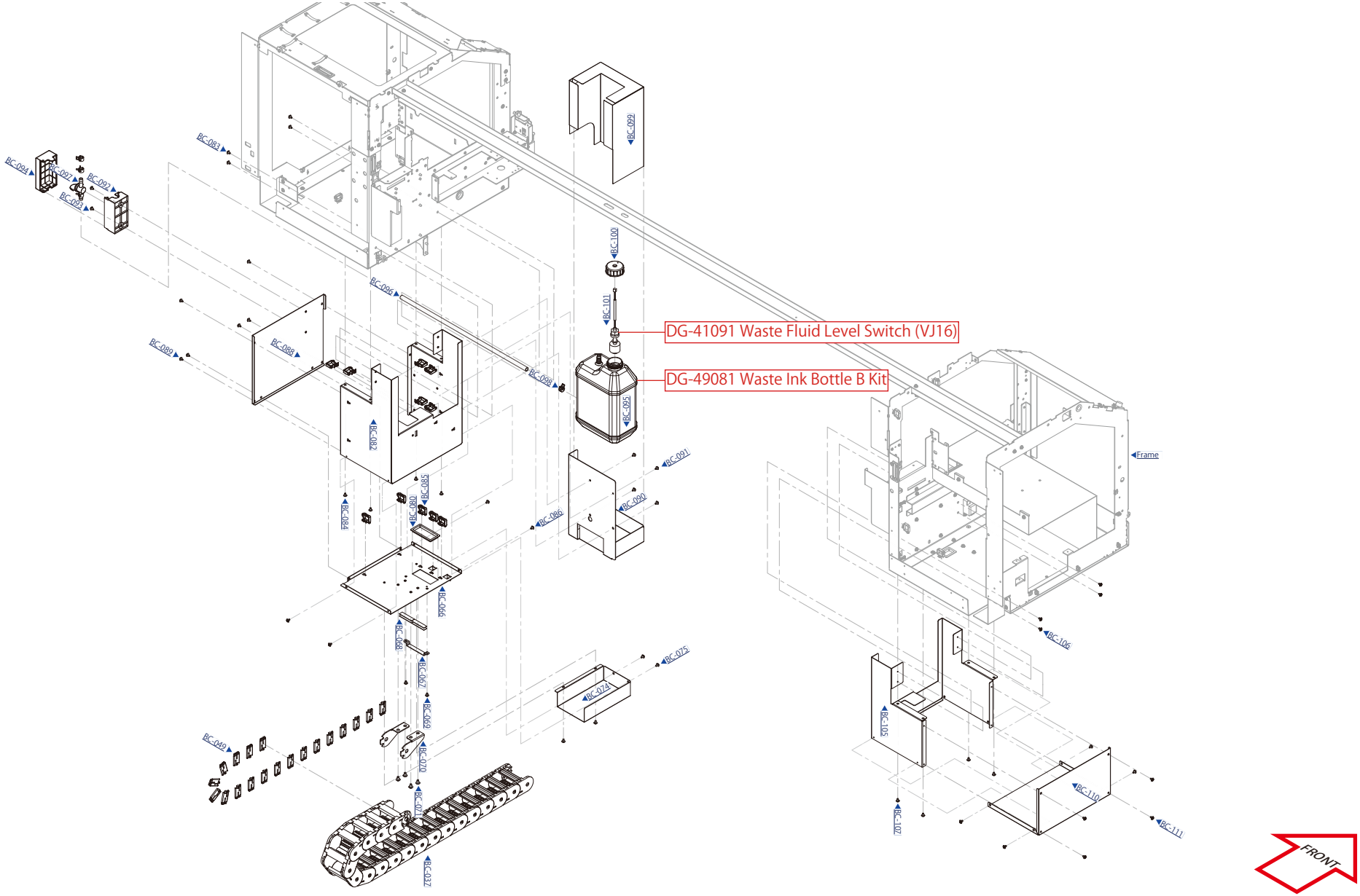
1491001 2023-07-01



CONFIDENTIAL

13.11.9. Z motor cover

1491001 2023-07-01



CONFIDENTIAL

13.12. Accessories

NOTE

- As of July 1, 2023 (No.1486102)

No.	Item	Reference
1	13.12.1. Breakdown	-
2	13.12.2. HCIPADPT	-
3	13.12.3. Jig	-

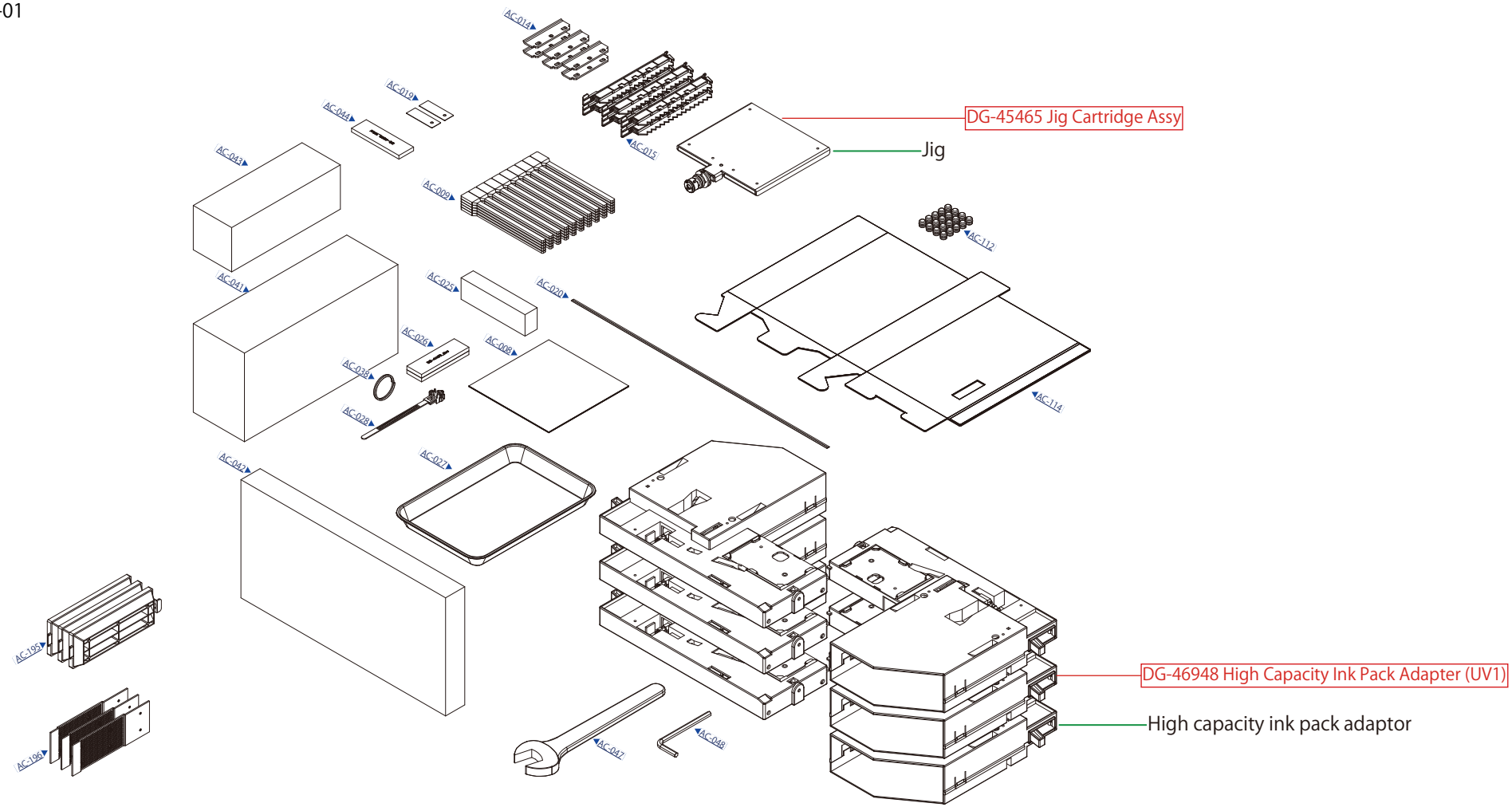
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.12.1. Breakdown

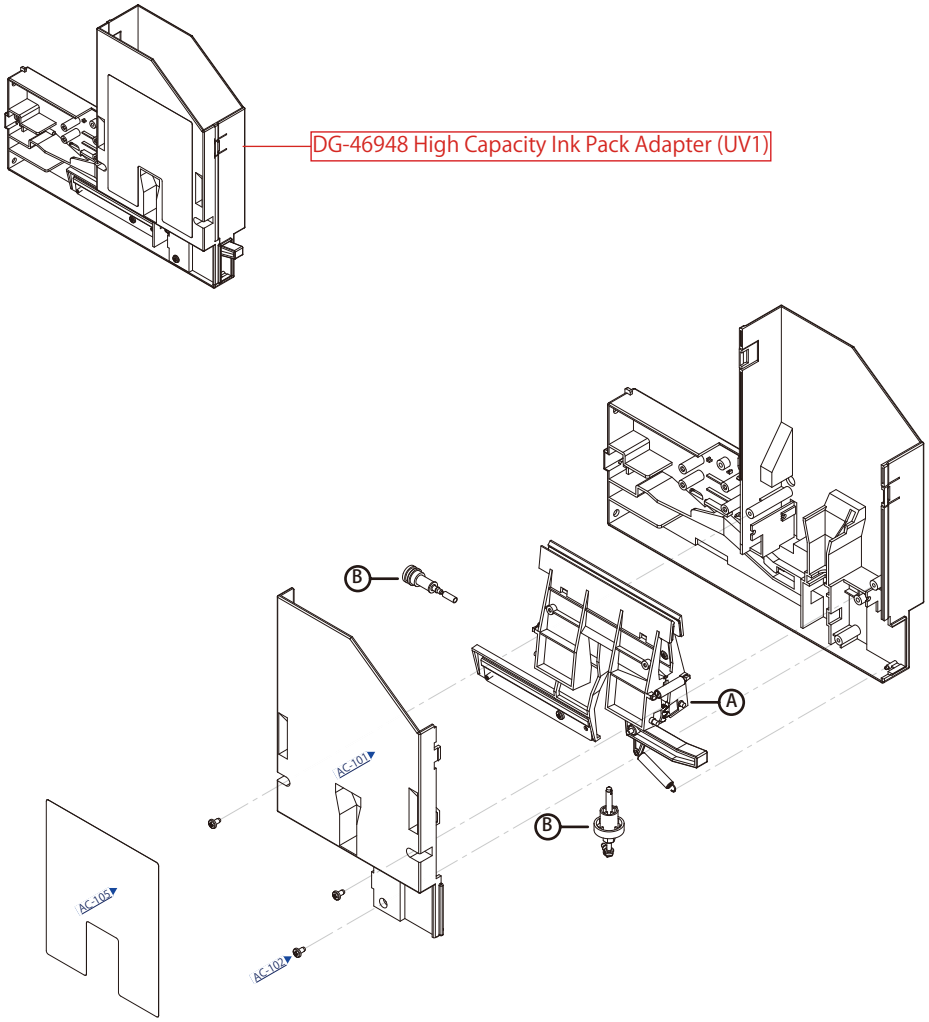
1486102 2023-07-01

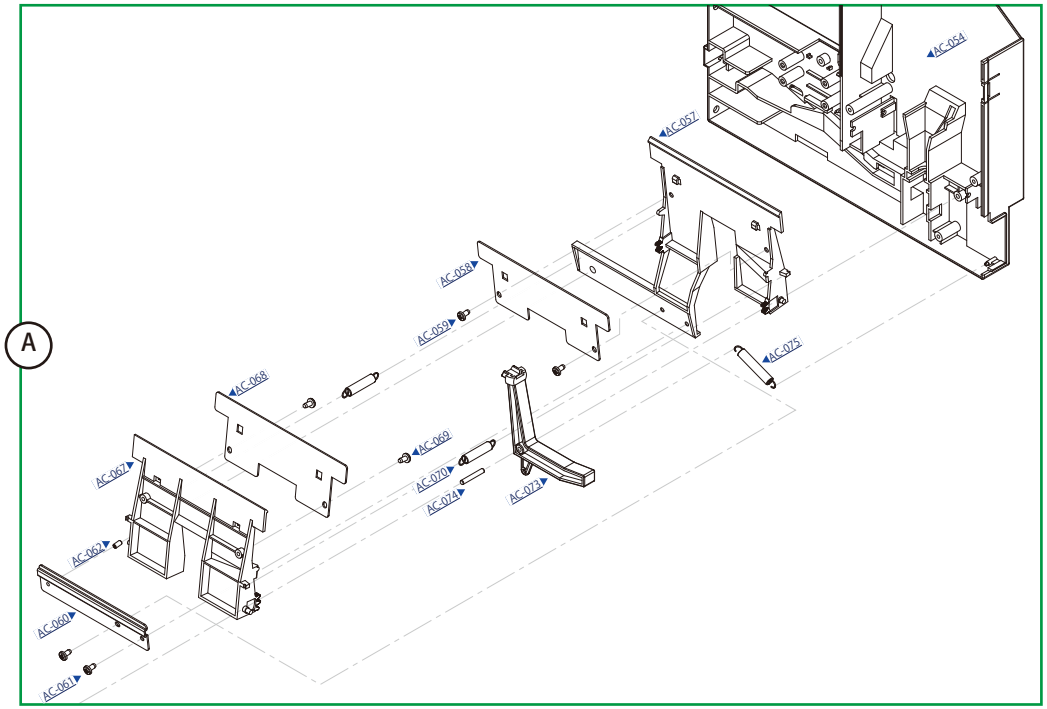


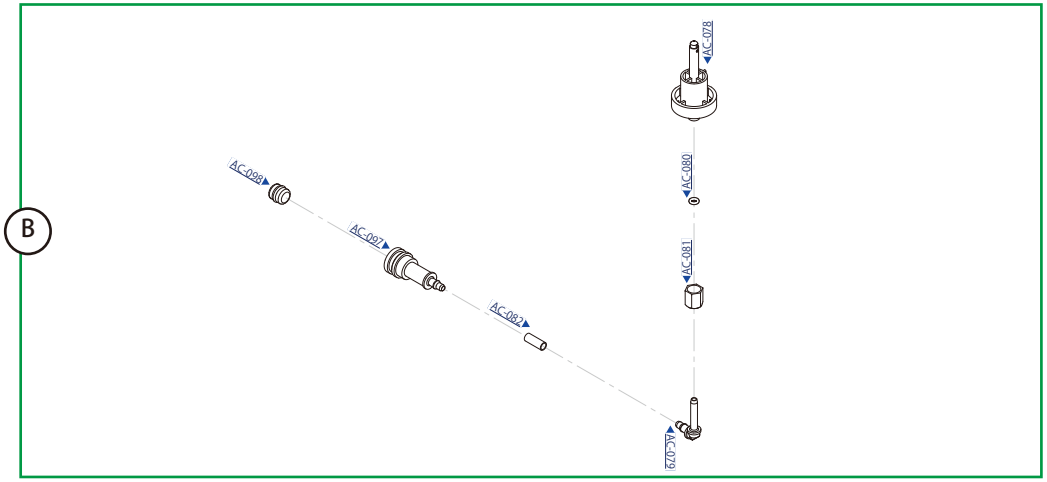
CONFIDENTIAL

13.12.2. HCIPADPT

1486102 2023-07-01



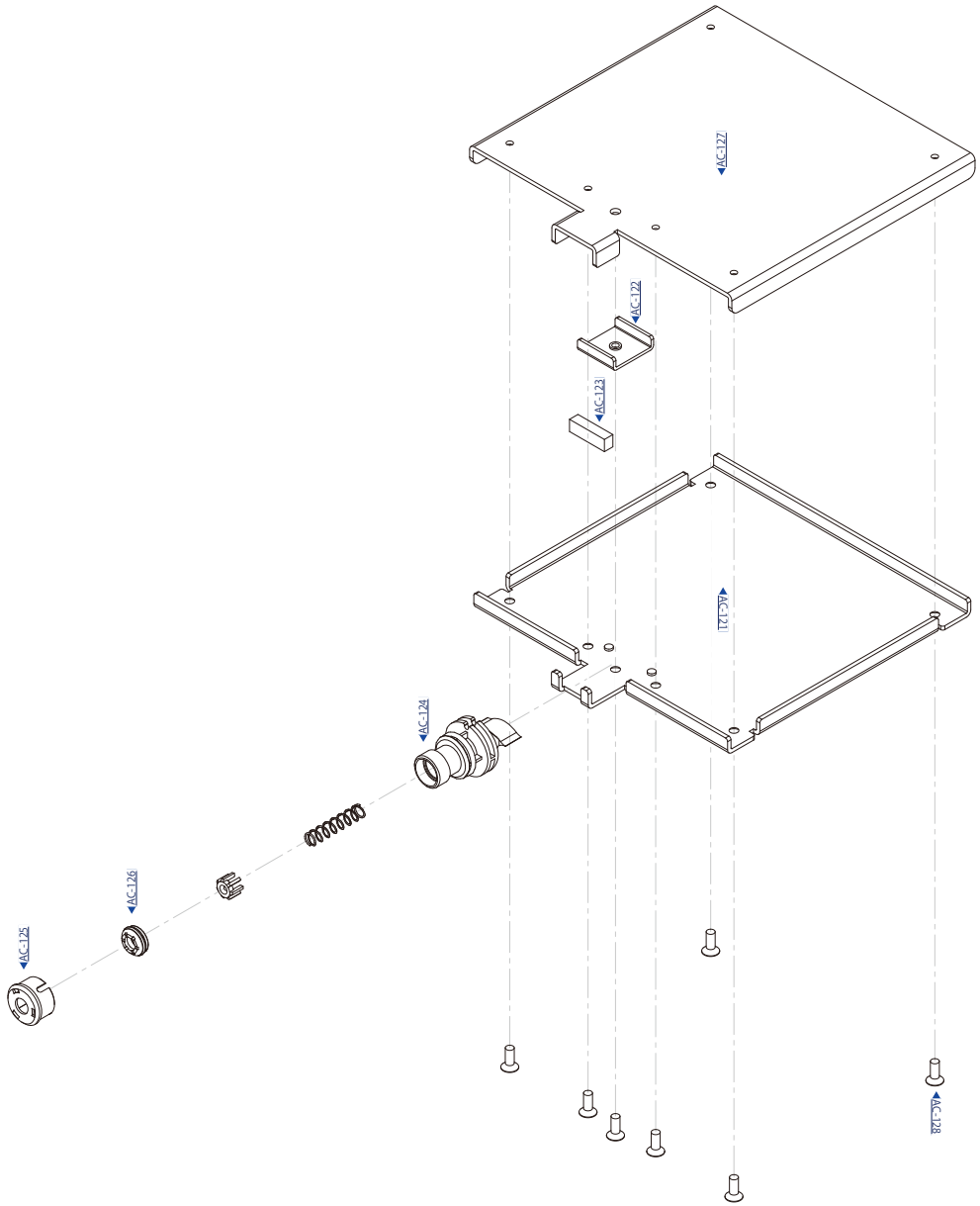




CONFIDENTIAL

13.12.3. Jig

1486102 2023-07-01



CONFIDENTIAL

13.13. UV lamp

NOTE

- As of July 1, 2023 (No.1489701)

No.	Item	Reference
1	13.13.1. Overview	-
2	13.13.2. Breakdown	-

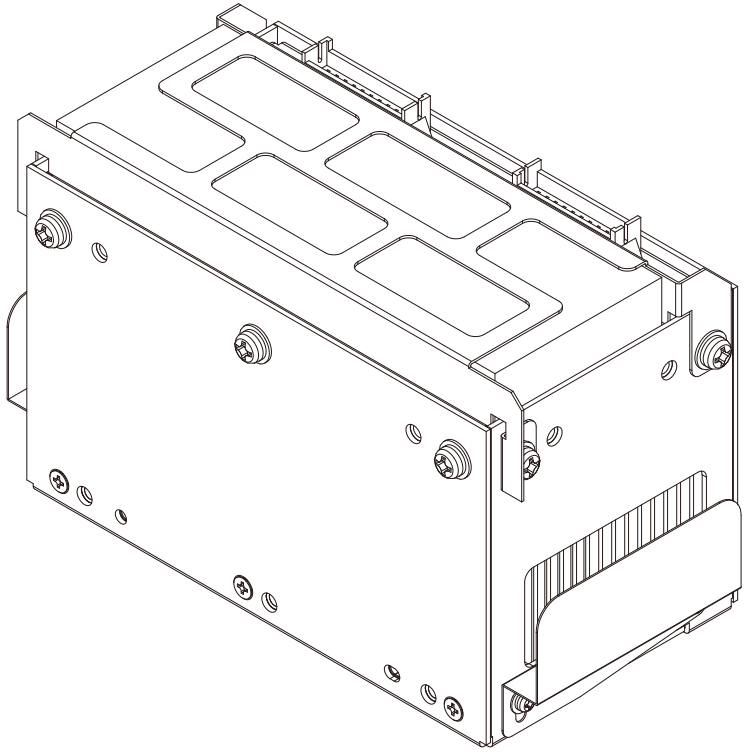
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.13.1. Overview

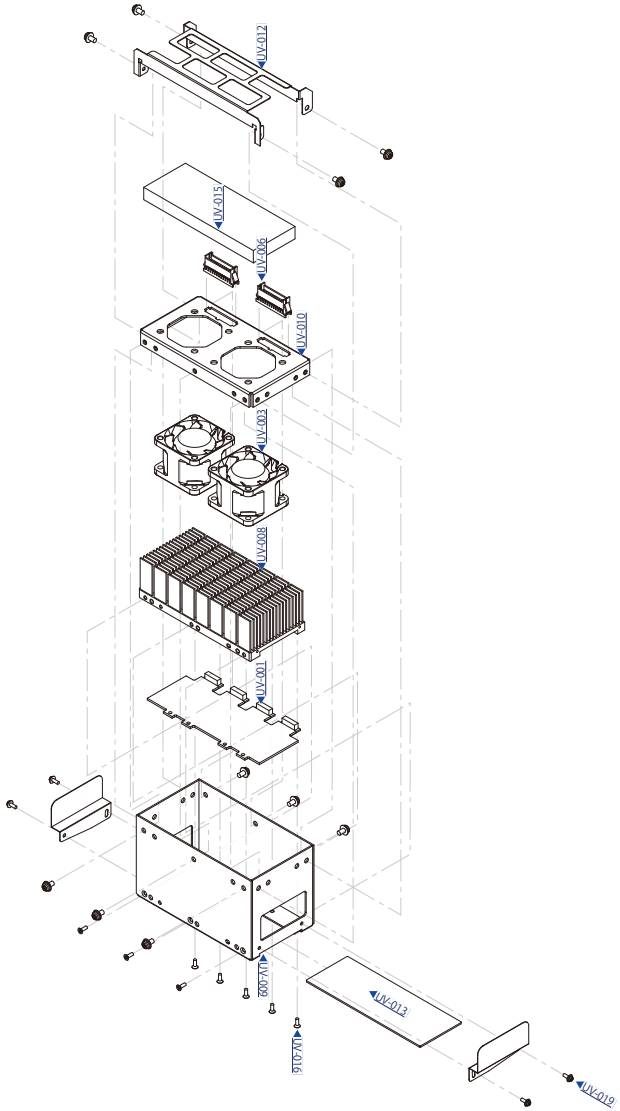
1489701 2023-07-01



CONFIDENTIAL

13.13.2. Breakdown

1489701 2023-07-01



CONFIDENTIAL

13.14. Dust cover

NOTE

- As of July 1, 2023 (No.1490202)

No.	Item	Reference
1	13.14.1. Overview	-
2	13.14.2. Left-front	-
3	13.14.3. Right-front	-
4	13.14.4. Left-rear	-
5	13.14.5. Right-rear	-

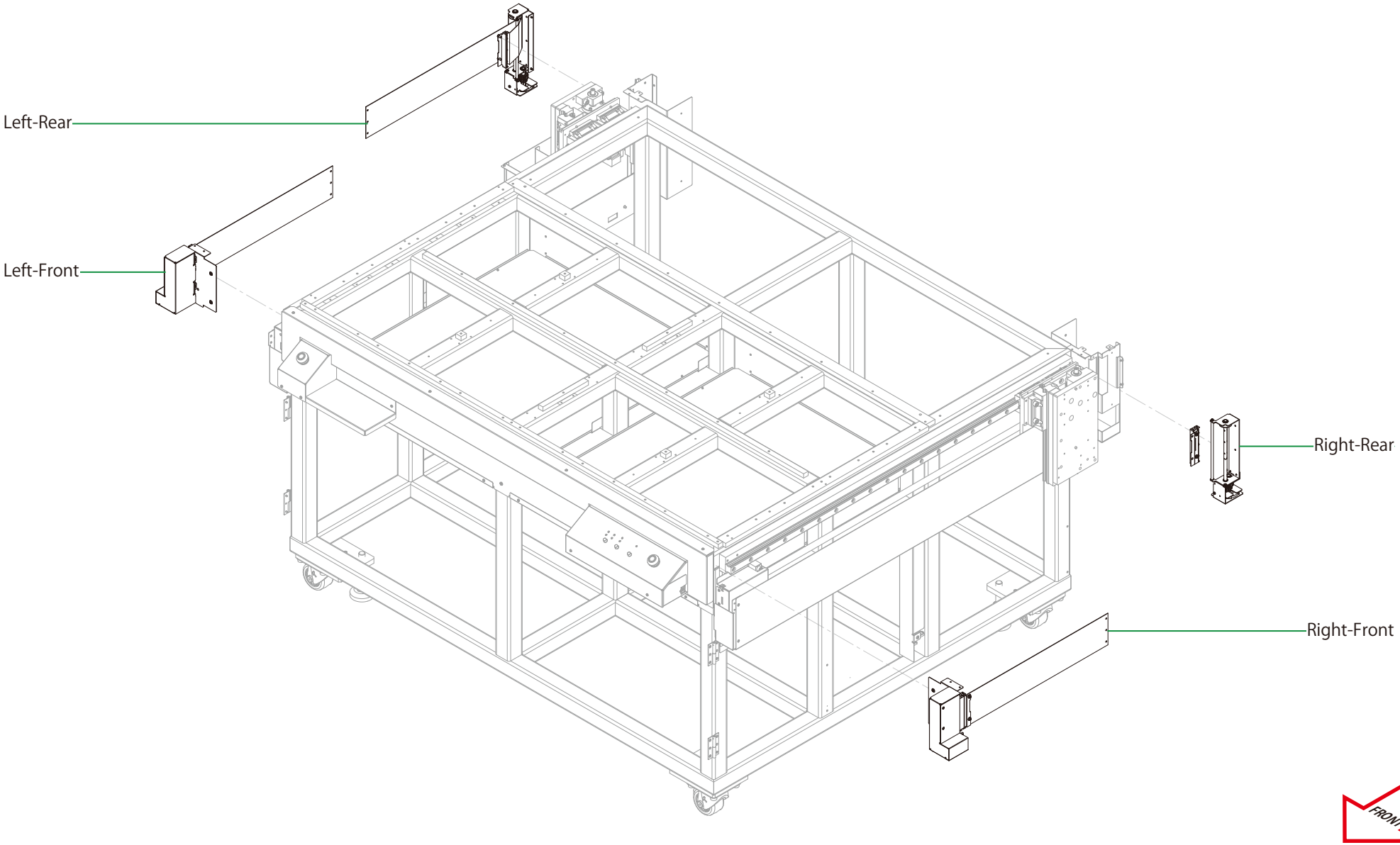
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.14.1. Overview

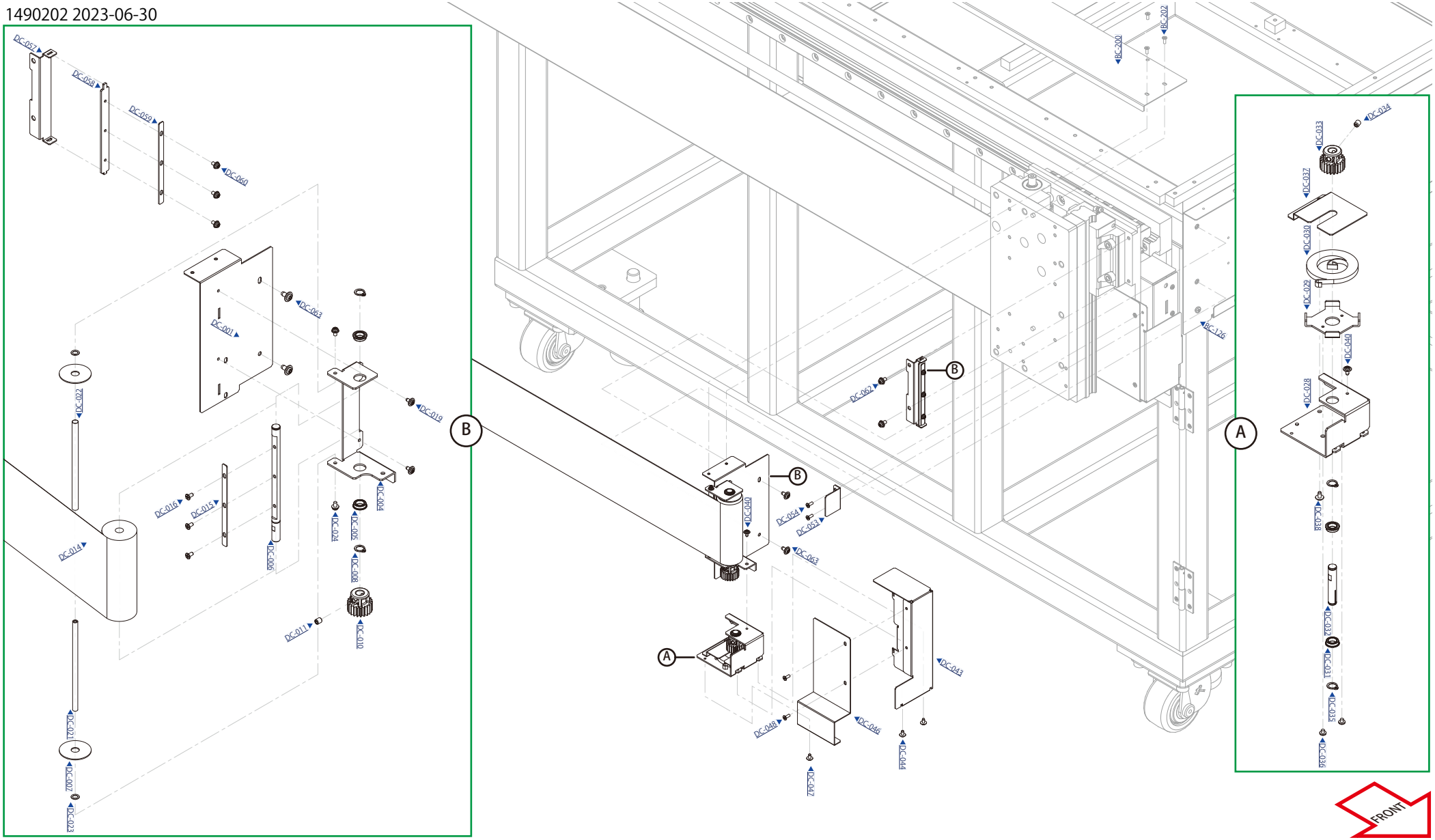
1490202 2023-06-30



CONFIDENTIAL

13.14.2. Left-front

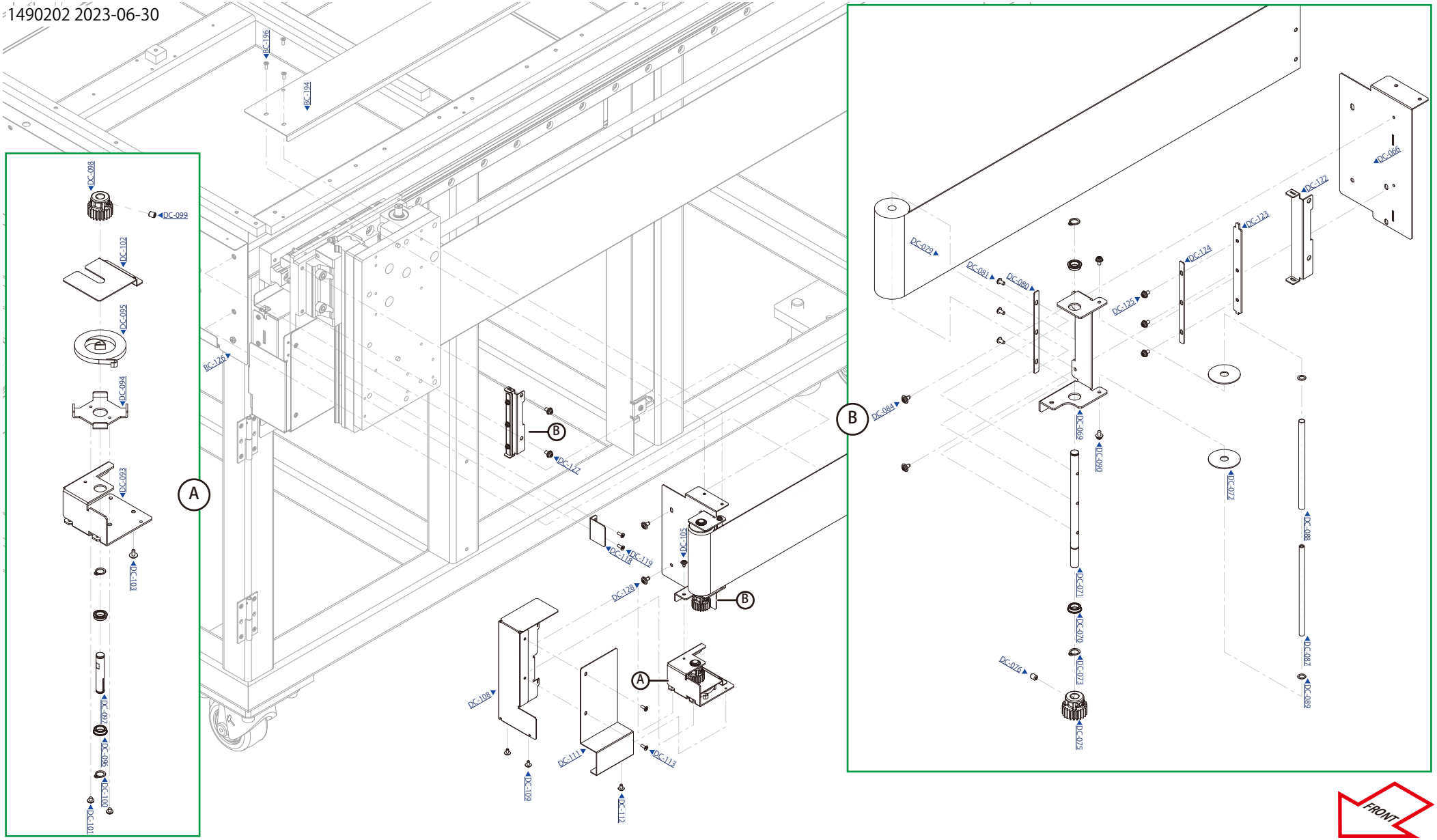
1490202 2023-06-30



CONFIDENTIAL

13.14.3. Right-front

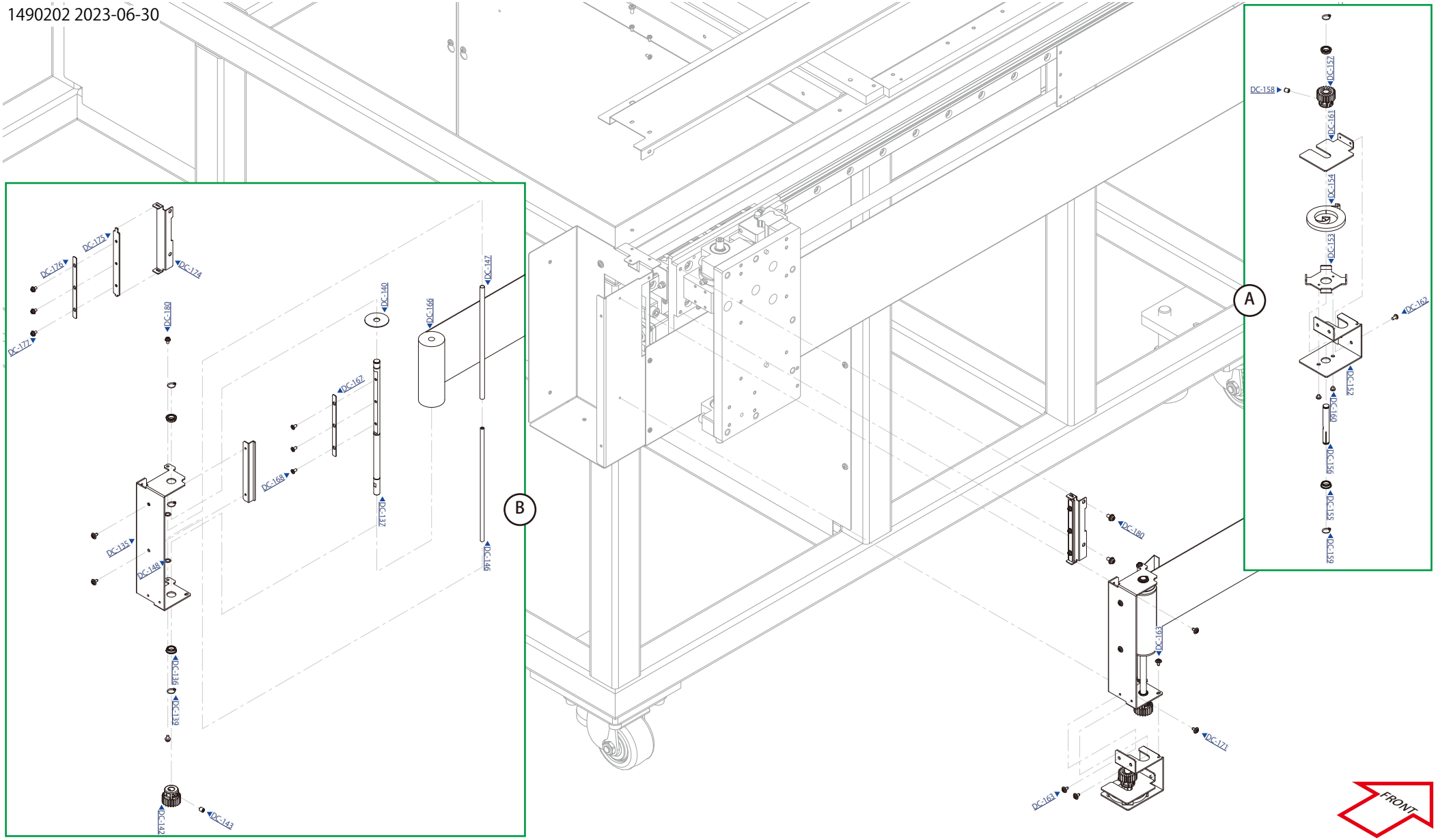
1490202 2023-06-30



CONFIDENTIAL

13.14.4. Left-rear

1490202 2023-06-30



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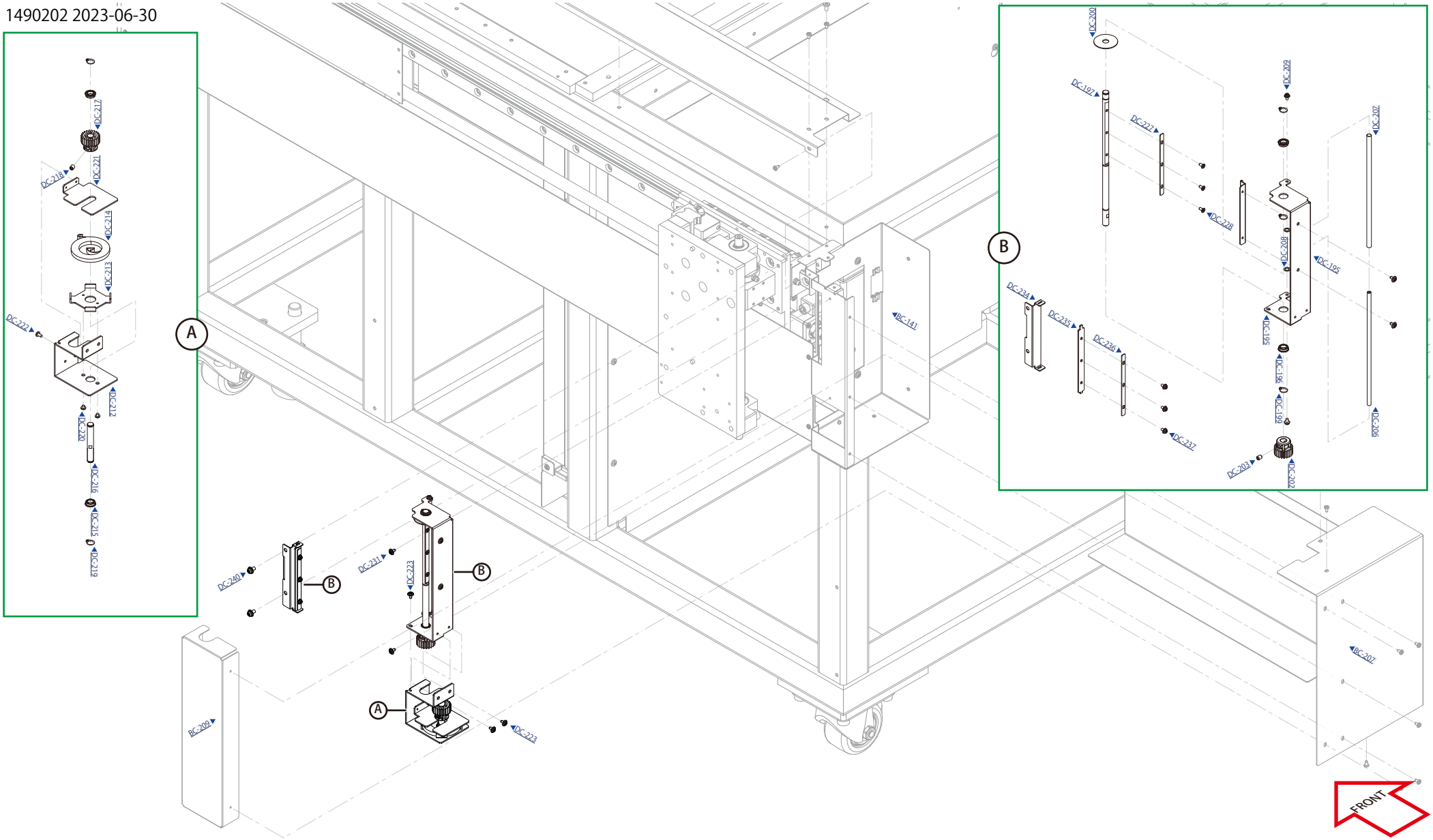
13.14.5. Right-rear

1490202 2023-06-30



CONFIDENTIAL

13.15. Drop sensor unit

NOTE

- As of July 1, 2023 (No.1471202)

No.	Item	Reference
1	13.15.1. Overview	-
2	13.15.2. Breakdown	-

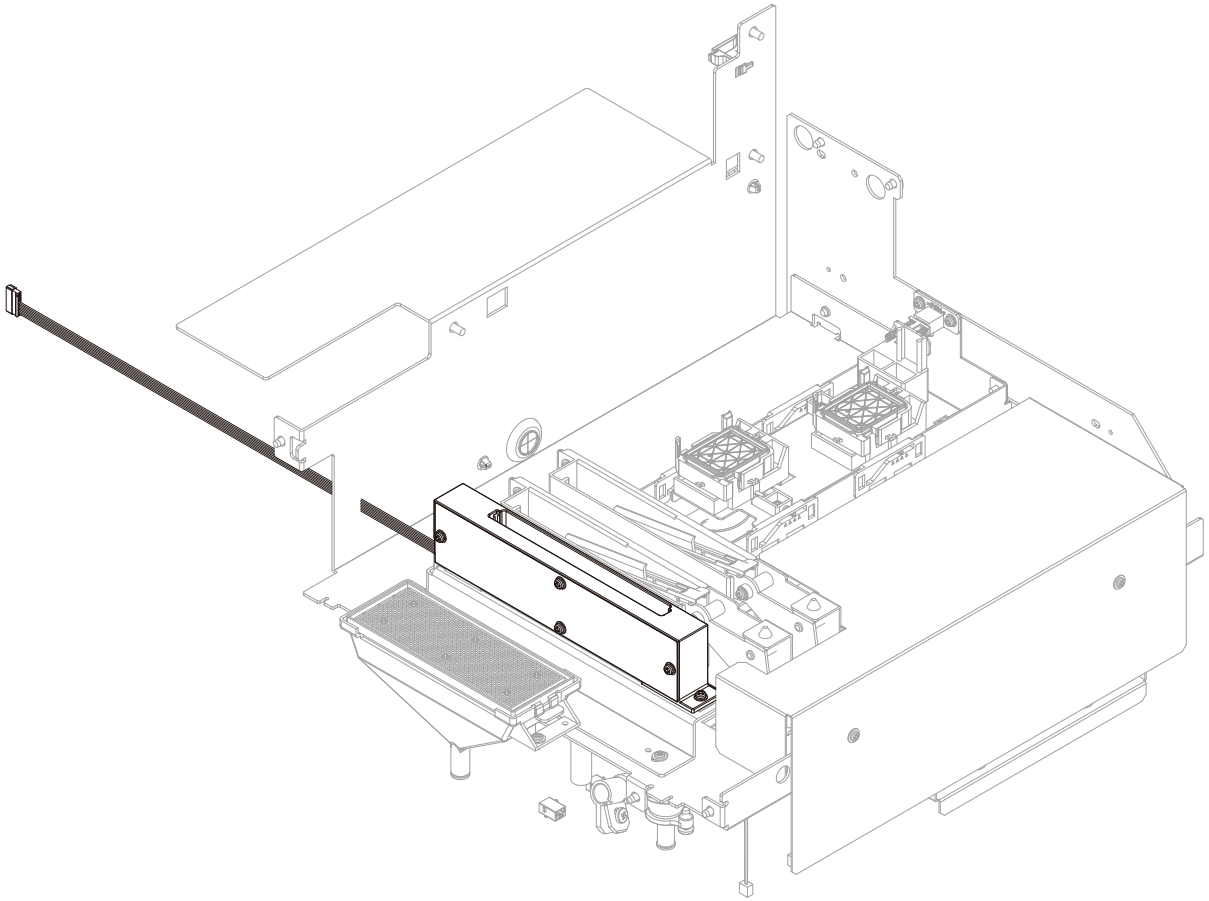
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.15.1. Overview

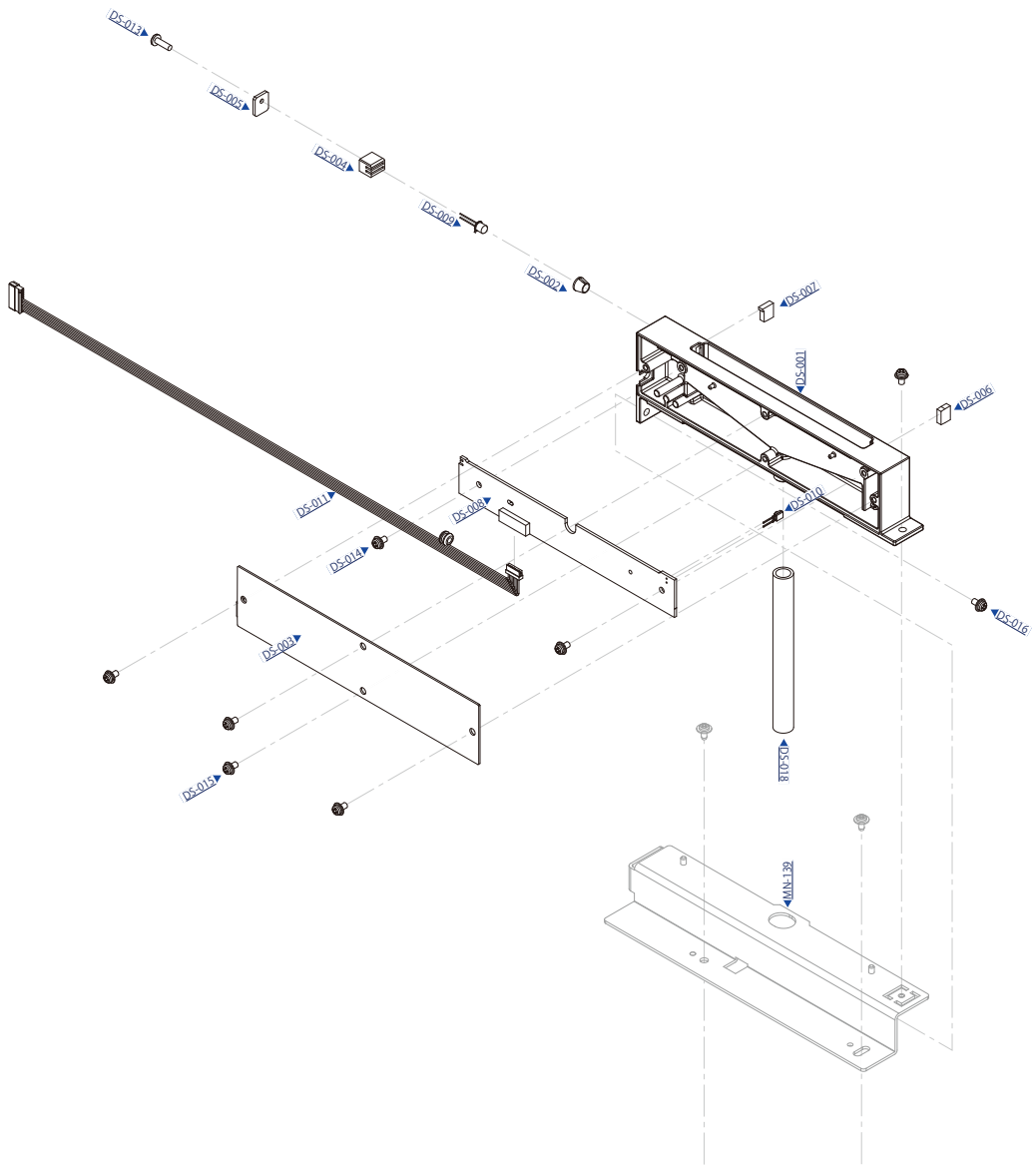
1471202 2023-07-01



CONFIDENTIAL

13.15.2. Breakdown

1471202 2023-07-01



CONFIDENTIAL

13.16. Operation lamp

NOTE

- As of July 1, 2023 (No.3116600)

No.	Item	Reference
1	13.16.1. Overview	-
2	13.16.2. Breakdown	-

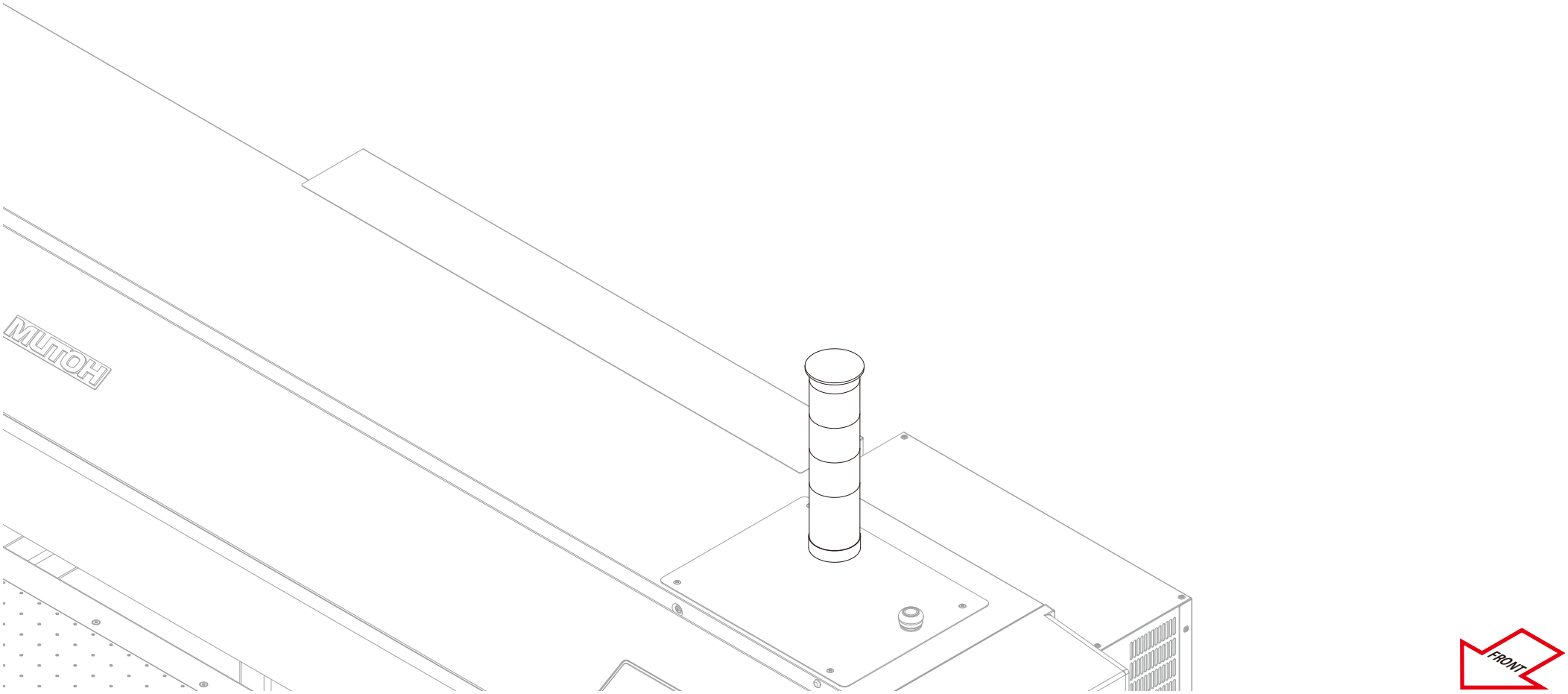
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.16.1. Overview

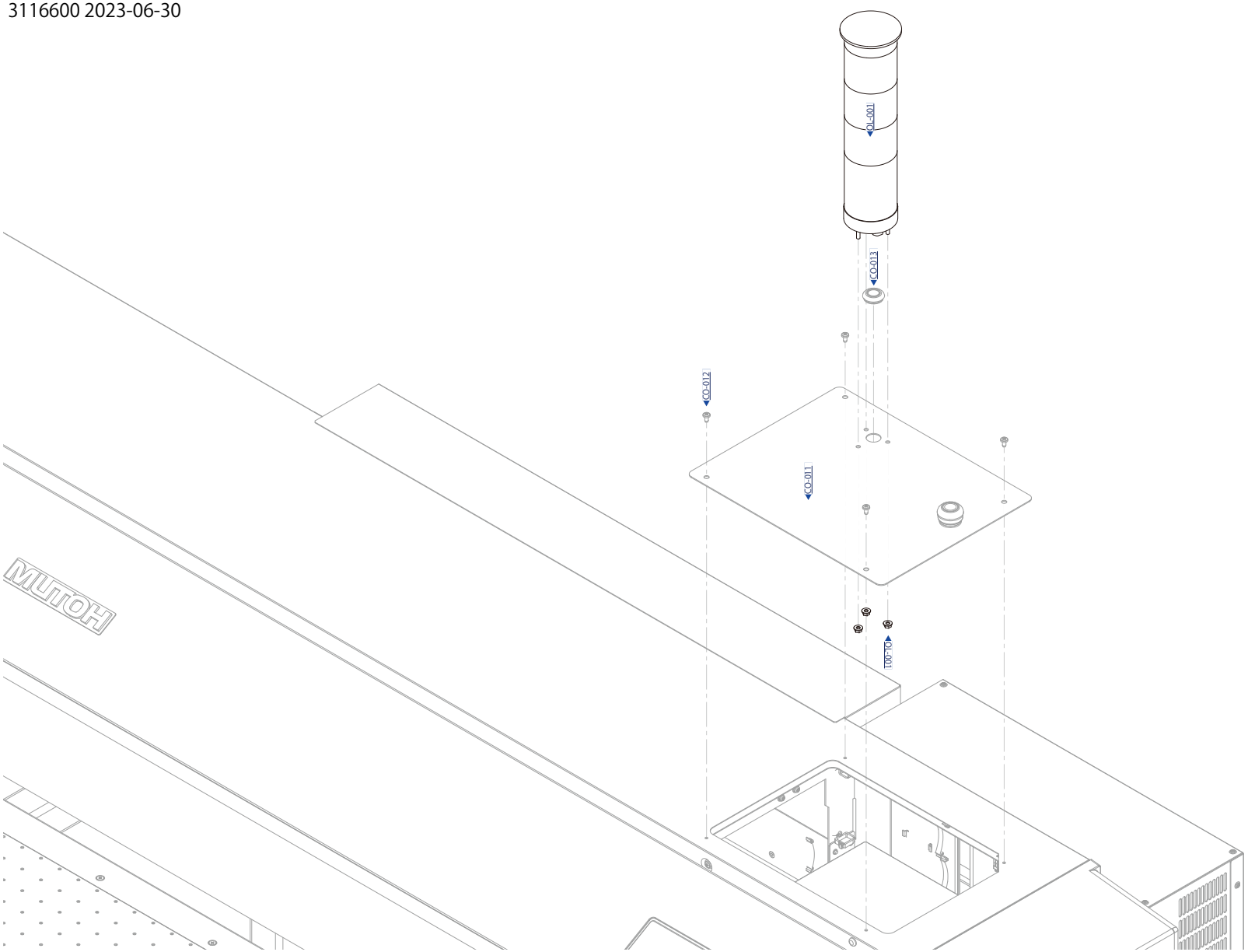
3116600 2023-06-30



CONFIDENTIAL

13.16.2. Breakdown

3116600 2023-06-30



CONFIDENTIAL

13.17. Foot switch

NOTE

- As of July 1, 2023 (No.3116800)

No.	Item	Reference
1	13.17.1. Overview	-

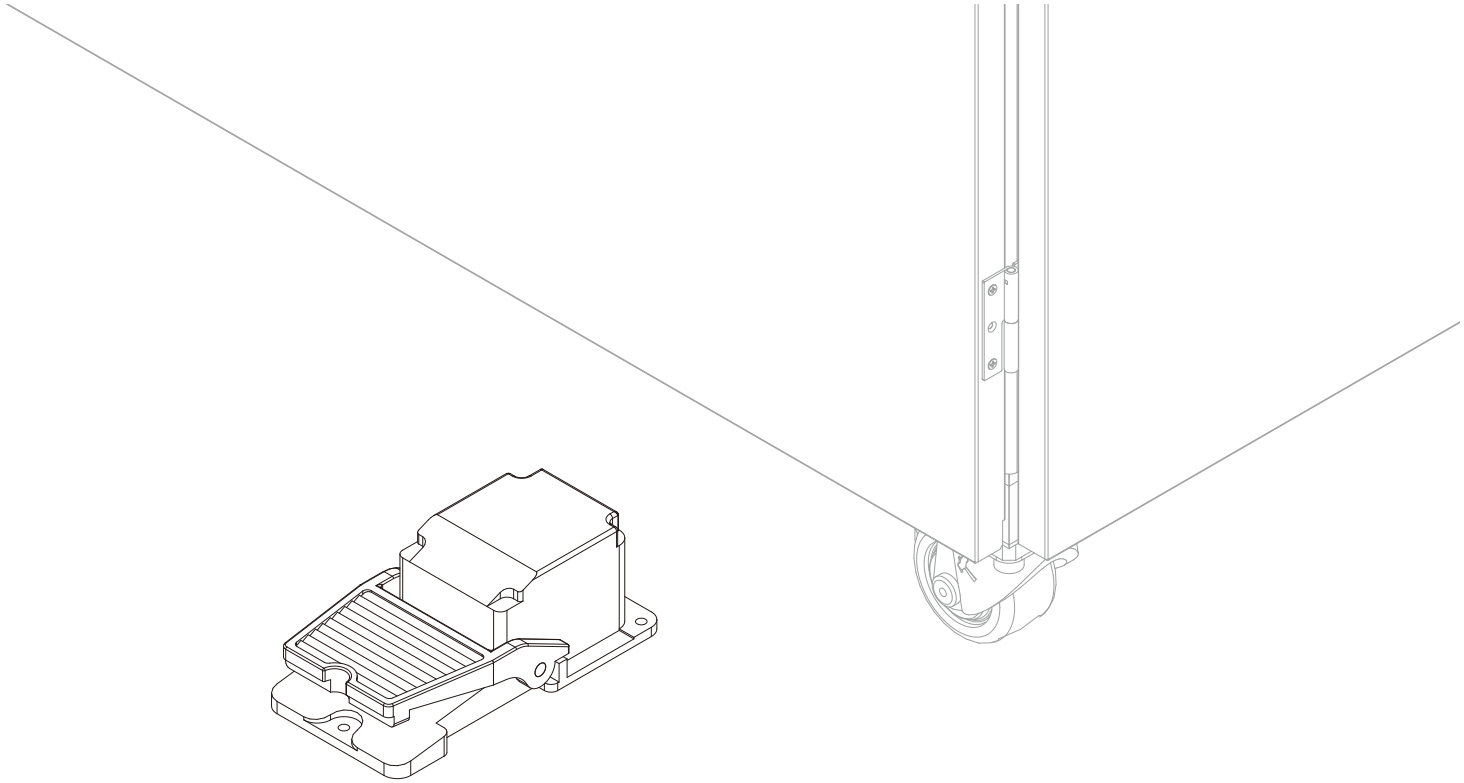
TIP

index=> 13. Explodid view

CONFIDENTIAL

13.17.1. Overview

3116800 2023-07-01



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