Service Documents

MIMAKI

JV300-130/160

INSTALLATION GUIDE

MIMAKI ENGINEERING CO., LTD.
URL:http://eng.mimaki.co.jp/

D500939-13

Contents

1. About the Installation Guide

■ Outline

This document is a collection of information for service engineers when setting up JV300 inkjet printers.
During the setup, proceed with the work by referring to this document and the following related documents.

■ Documents related to this unit

Documents other than this document which describe the JV300 are listed below. Refer to these as required.

- Operation Manual (included with product)
- Mechanical Drawing
- Maintenance Manual
- Accessories List

1.1 Description of the Ink Used

■ **Outline**

Hand the “Material Safety Data Sheet (MSDS)” over to the user who will actually use this unit.
Furthermore, explain about the following items with regards to using the product safely.

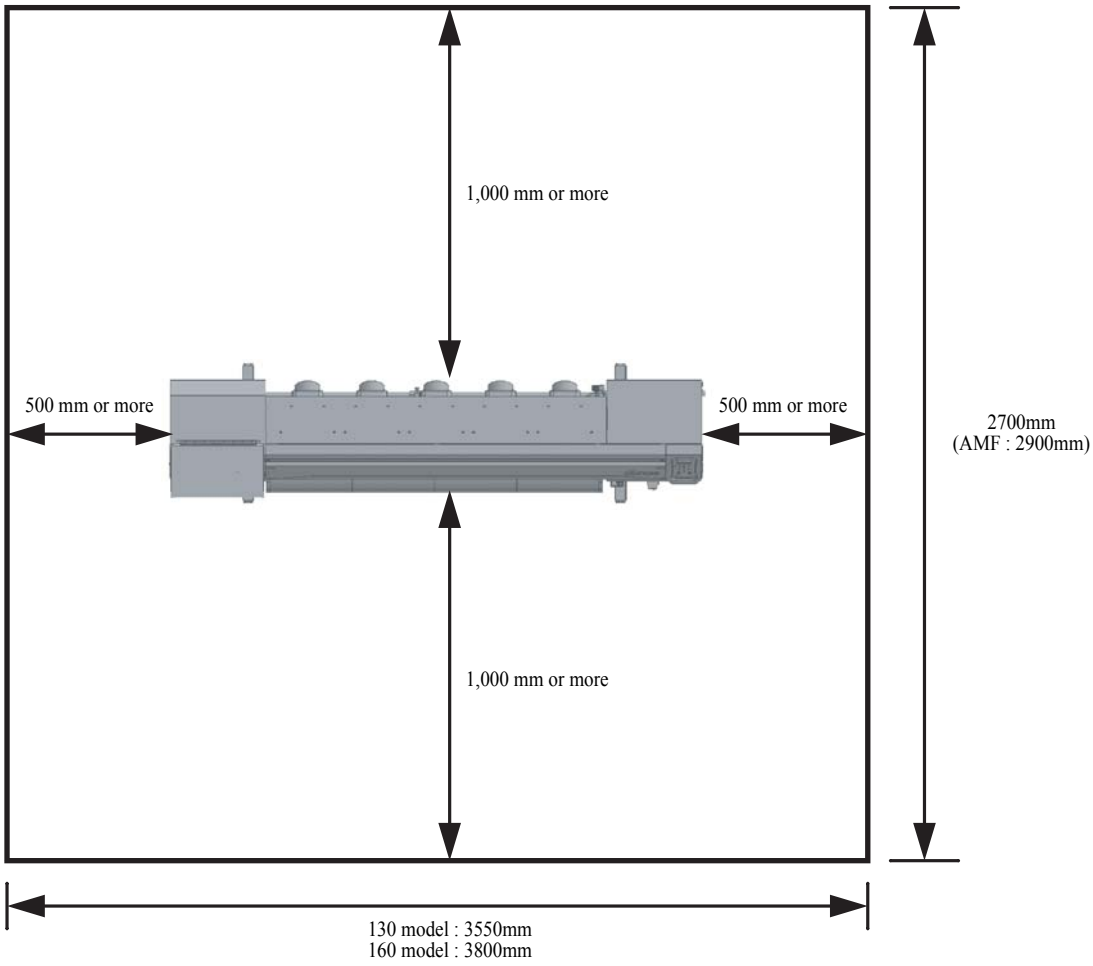
- Usage environment
- Emergency measures

2. Main Unit Specifications

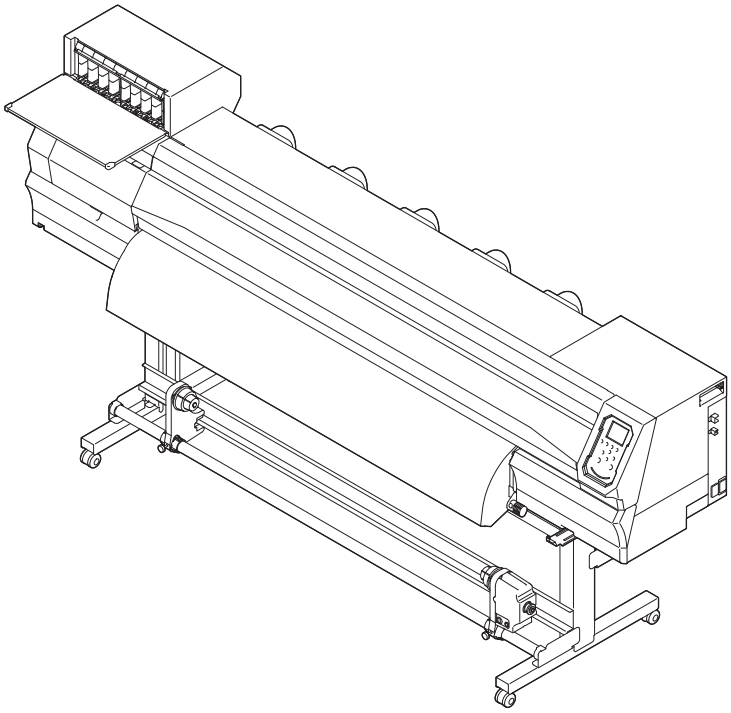
■ **List of main unit specifications**

Item		Specifications		Remarks
		JV300-130	JV300-160	
Power supply specifications		AC100 - 120V / 220 - 240V ±10% x2 50/60Hz ±1Hz		
Power consumption		1440Wx2		Main unit
Installation environment	Usable temperature	20°C to 30°C		In environments outside of the range shown on the left, the ink ejection stability may deteriorate
	Relative humidity	35 to 65% Rh (no condensation)		
	Precision guaranteed temperature	20°C to 25°C		
	Temperature gradient	± 10°C/h or less		
	Dust	Office equivalent		
Weight	Main unit	170 kg	200 kg	
External dimensions (W) x (D) x (H)		2,525 x 700 x 1,392 mm	2,775 x 700 (900) x 1,392 mm “( )” is with the AMF.	

3. Installation Space



4. Printer Assembly



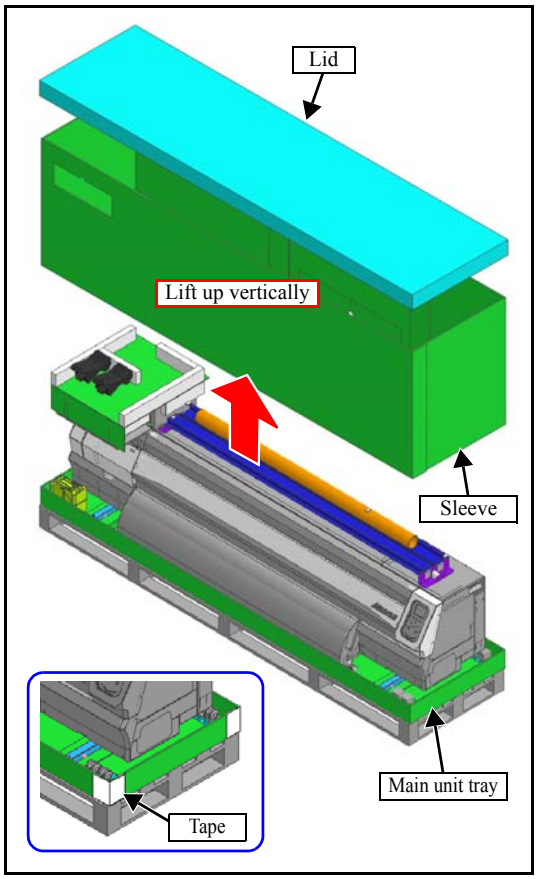
■ **List of work procedures**

Work operation		Description	Refer to
☐1	Unpacking	Unpack the product.	4.1 (p.2)
☐2	Assembling the leg with the main body	Assemble the leg with the main body.	4.2 (p.3)
☐3	Mounting the Accessories	Carry out the work to attach the accessories.	4.3 (p.11)
☐4	Removing the Stopper	Remove the stopper.	4.4 (p.13)
☐5	Storage of packing components	For the storage, put the packing components away.	4.5 (p.14)
☐6	Mounting of tension bar unit	Mount the tension bar unit (option).	4.6 (p.16)

- In order to prevent accidental cuts, always wear gloves when performing disassembly and assembly work.
- When carrying out the work, ensure that there is sufficient surrounding space, and install in a stable location.
- This product is extremely heavy. Take great care when handling the product.

4.1 Unpacking

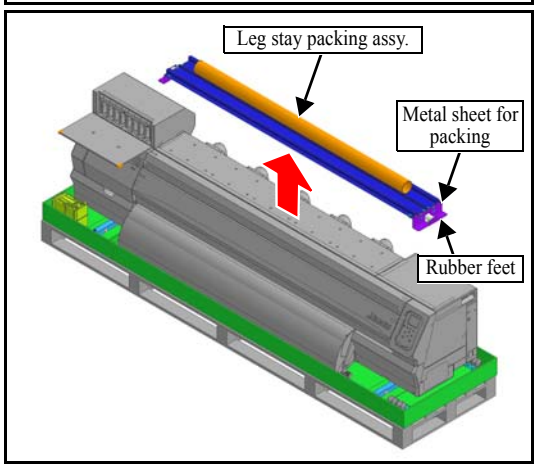
■ **Work procedures**



1. Remove the **lid** and **sleeve** of the box packing the main unit, cut the tapes stuck on 4 corners of the **main unit tray**.

2. Take out each **packing box**.

> IMPORTANT
> ■ Because of the small clearance between the main unit and sleeve, lift the sleeve up vertically to avoid touching the main unit.

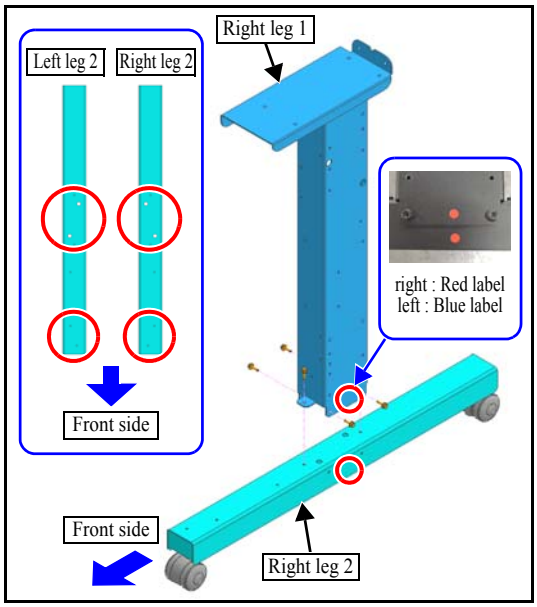


3. Remove the **leg stay packing assy**.

> IMPORTANT
> ■ Do not dispose the metal sheet for packing and the rubber feet since these will be stored by attaching to the main unit after the installation of machine.

4.2 Assembling the Stands and the Device

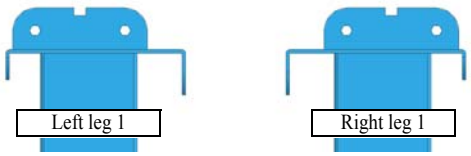
■ Work procedures

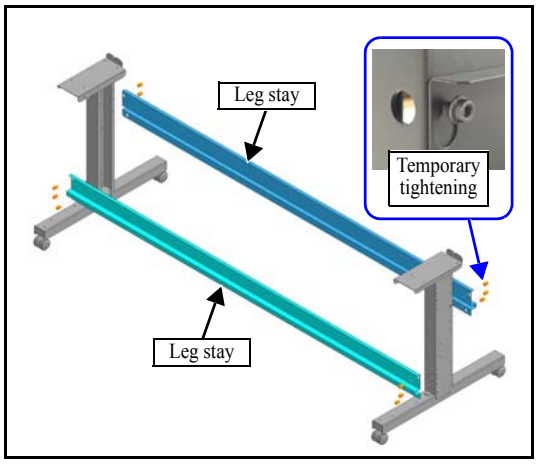


1. Fix the **right leg 2** to the **right leg 1** with the 6 screws (M5x15).
   Assemble the other side as the same.

IMPORTANT
- Be sure to assemble, matching the color of the labels attached on the leg1 and 2.
- Assemble the right leg 1 and left leg 1 correctly.

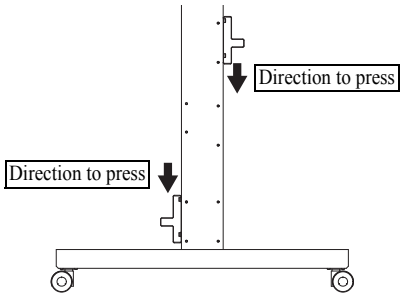
[Front view]

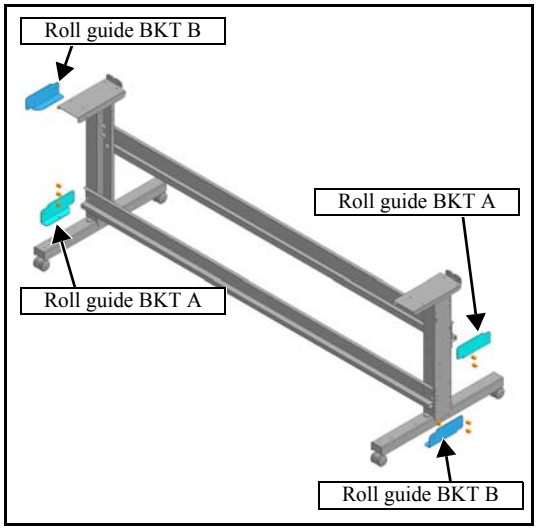




2. Fix the **leg stay** to the leg with the 12 screws (M5x15).

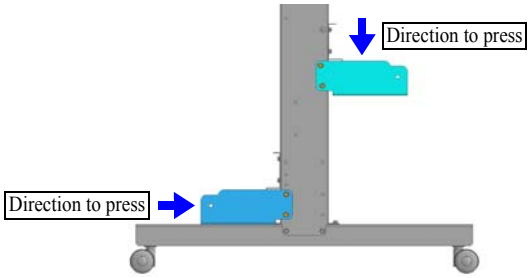
IMPORTANT
- Temporarily fasten the upper screws on the rear leg stay.
- Use the provided hexagonal wrench.
- For the tank tray, make sure that the tank tray is assembled after the assembling of accessories is completed. Otherwise, it may cause an injury by catching a foot or so.
- Hold down the leg stay and fix it.



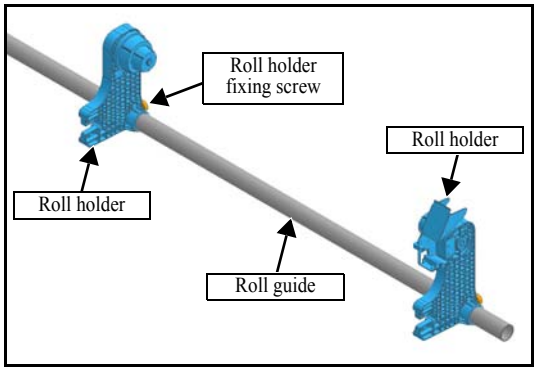


3. Fix the **roll guide BKT A/B** to the leg with the 10 screws (M5x15).

IMPORTANT
- When fixing the roll guide BKT, press it in the direction of the arrow and tighten the screws.

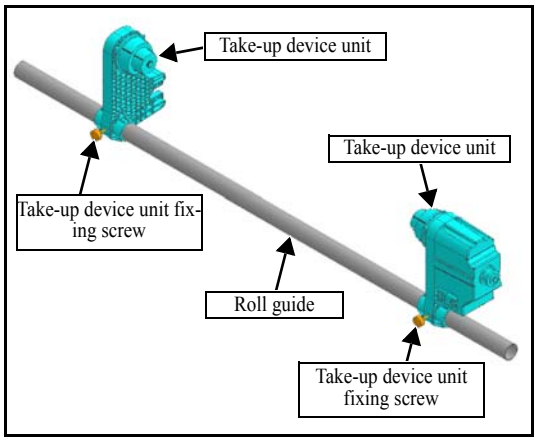


4.2 Assembling the Stands and the Device

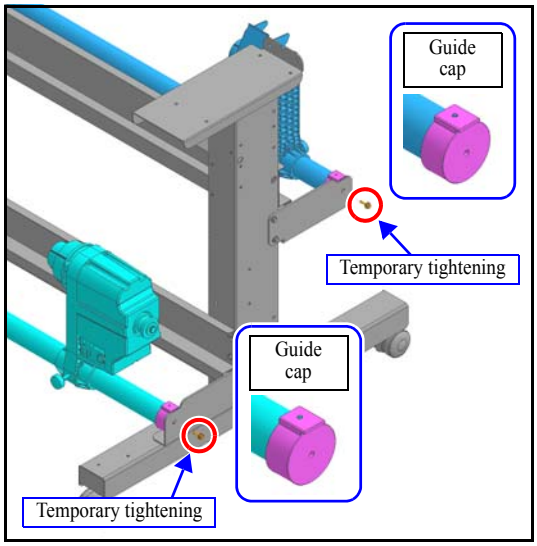


4. Remove the **guide caps**.

5. Put the **roll holders** on the roll guide, and tighten the **roll holder fixing screws**.



6. Put the **take-up device units** on the roll guide, and tighten the **take-up device unit fixing screws**.

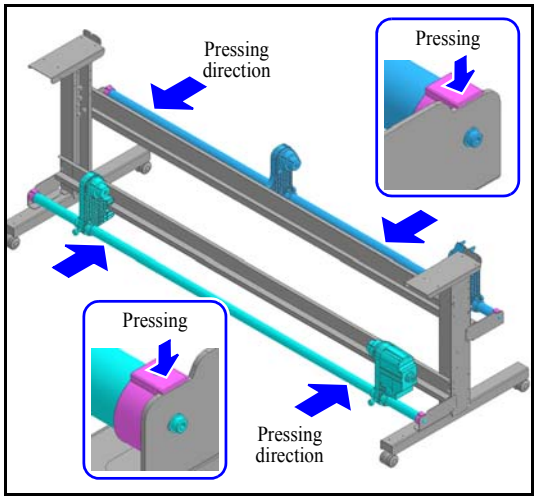


7. Fit the **guide caps** on both sides of the roll holder assy and the take-up device assy, then temporarily tighten them with the 4 hexagon socket head screws (SSWP4x4(R)) (such that the screw touches the roll guide).

IMPORTANT

■ Use the provided hexagonal wrench (size 2).

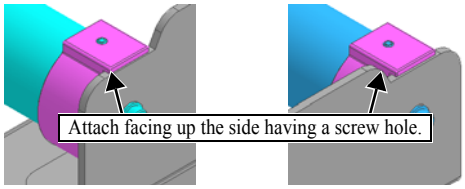
4.2 Assembling the Stands and the Device



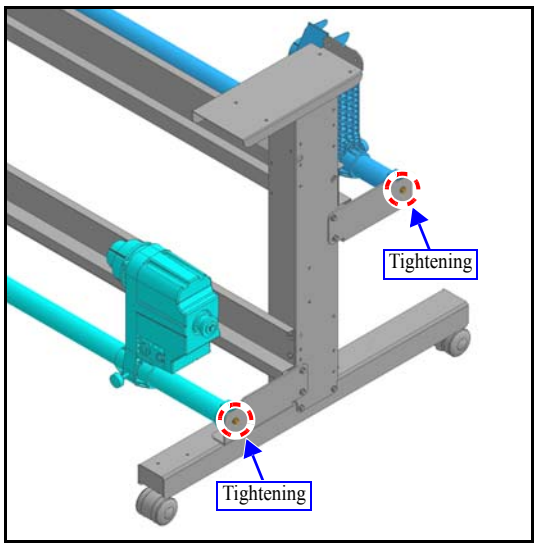
8. While pressing the **roll holder assy** and the **take-up device assy** towards the leg stay, affix the **roll guide BKT**.

IMPORTANT

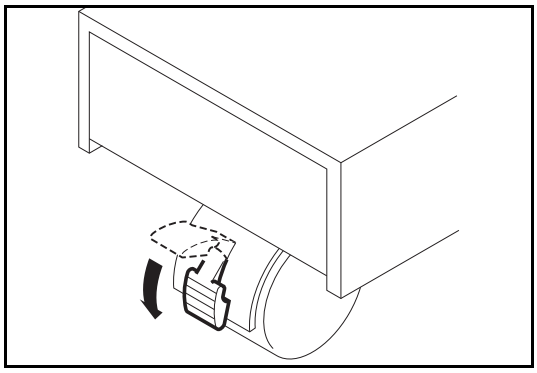
■ Pay attention to the guide caps' orientation.



■ Make the guide cap ridge press against the roll guide BKT. (Refer to the left figure)

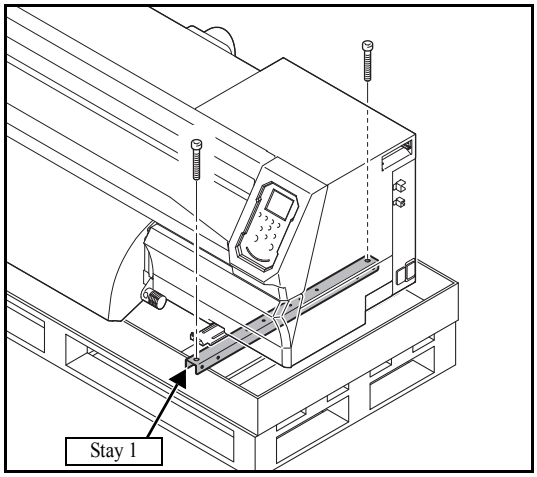


9. Tighten the 4 hexagon socket head screws (SSWP4x4(R)) that were temporarily tightened on the step 7. (Tighten the screw 90°angle once it hits the roll guide.)



10. Lock the four stoppers of the stand.

4.2 Assembling the Stands and the Device

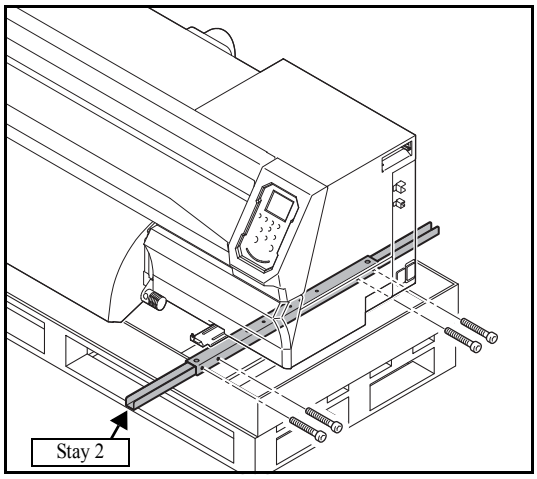


11. Remove screws of the **Stay 1** of both sides of the Main unit.

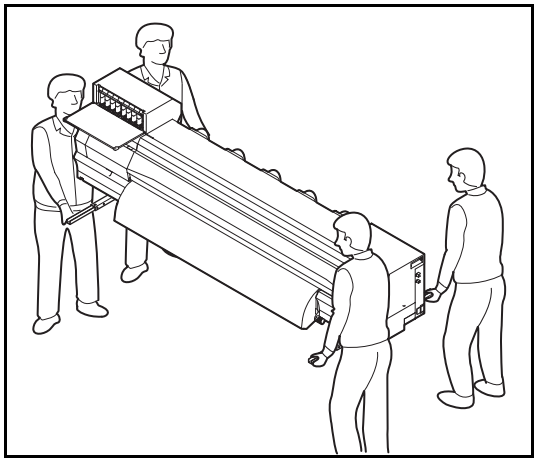
    The Main unit is fixed to the pallet.
    Release the Main unit by removing the screw.

IMPORTANT

■ Use the provided hexagonal wrench (size 6).

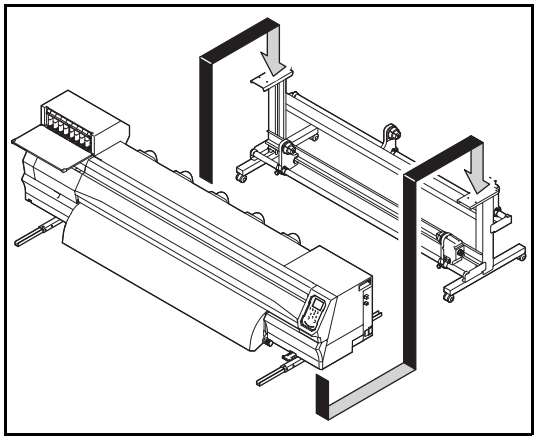


12. Using the 8 screws (CS6x55 Black), attach the **Stay 2** to the Stay 1.



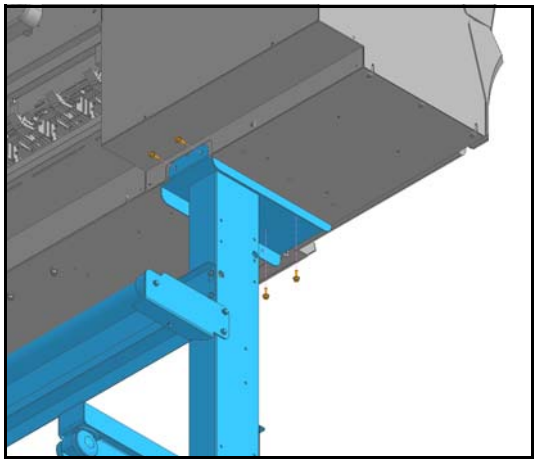
13. Hold the handles of the plotter by four people.

4.2 Assembling the Stands and the Device



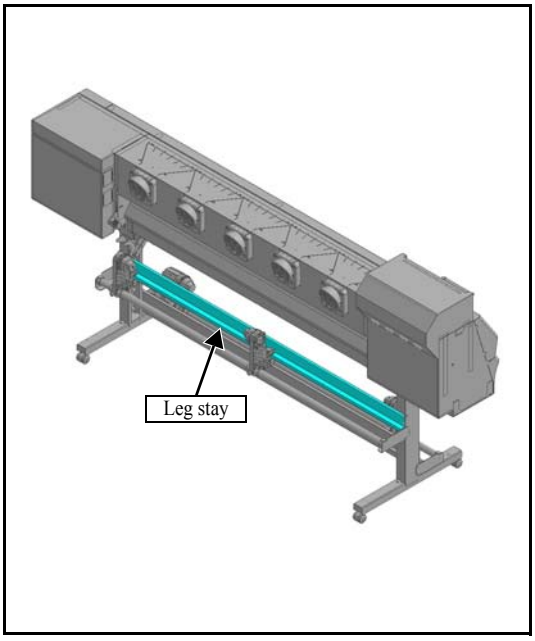
14. Put the front face of the stand first.

    Align the screw hole of the stand and that of the main unit.



15. Fix the main unit and legs with the 8 screws (M5x15).

    Use the provided hexagonal wrench.



If the screw holes of the main unit and of the stand do not fit, follow the steps below.

1. Loosen the 4 screws (M5x15) of the upper stand stay on the back of the main unit, turning one-half with the supplied hexagonal wrench.

   IMPORTANT
   - Be sure to turn “one-half” to loosen the screw.
   - Do not loosen the screw of the lower stand stay on the front of the main unit.

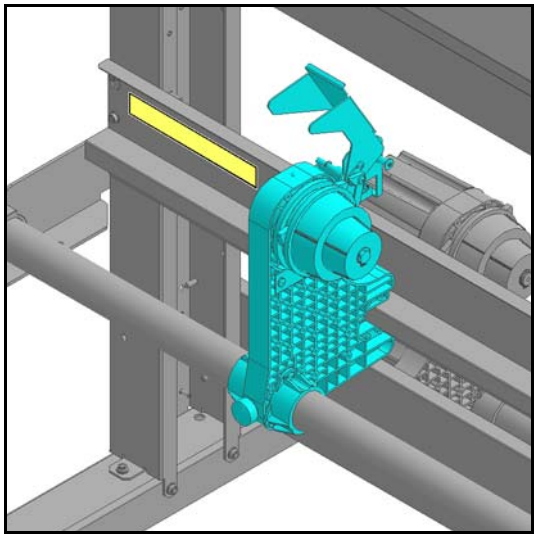
2. Fitting the screw holes of the main unit and the stand, temporarily tighten the 8 screws (M5x15).

3. Fully tighten the screws that were loosened on the step (1).

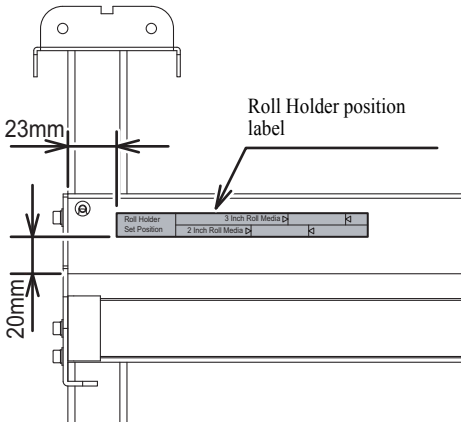
   IMPORTANT
   - Hold down the stand stay and tighten the screw.

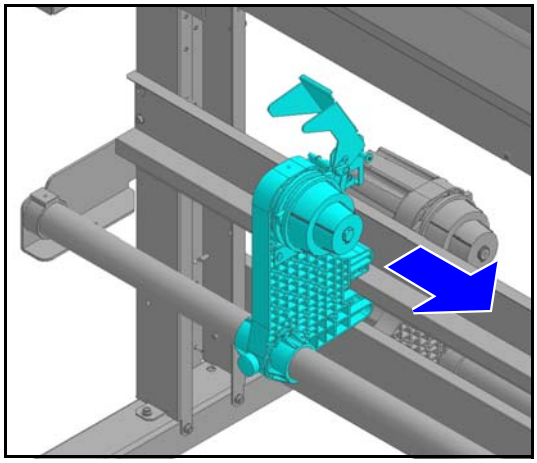
4. Fully tighten the screws that were temporarily tightened on the step (2).

4.2 Assembling the Stands and the Device

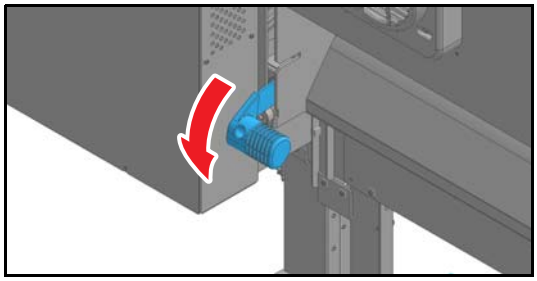


16. Paste the **roll holder position label**.



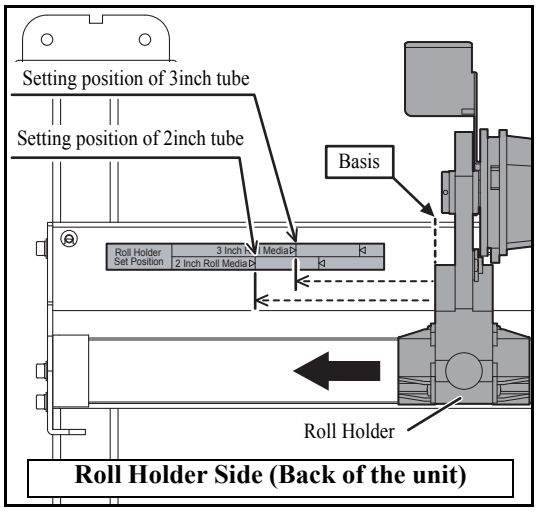


17. Move roll holder to the center of the unit.

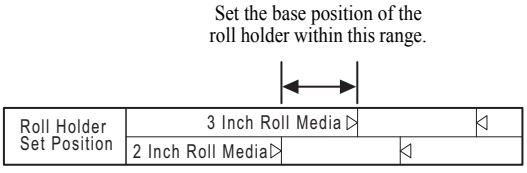


18. Check clamp lever is lowered.

When clamp lever is lifted, push it down.

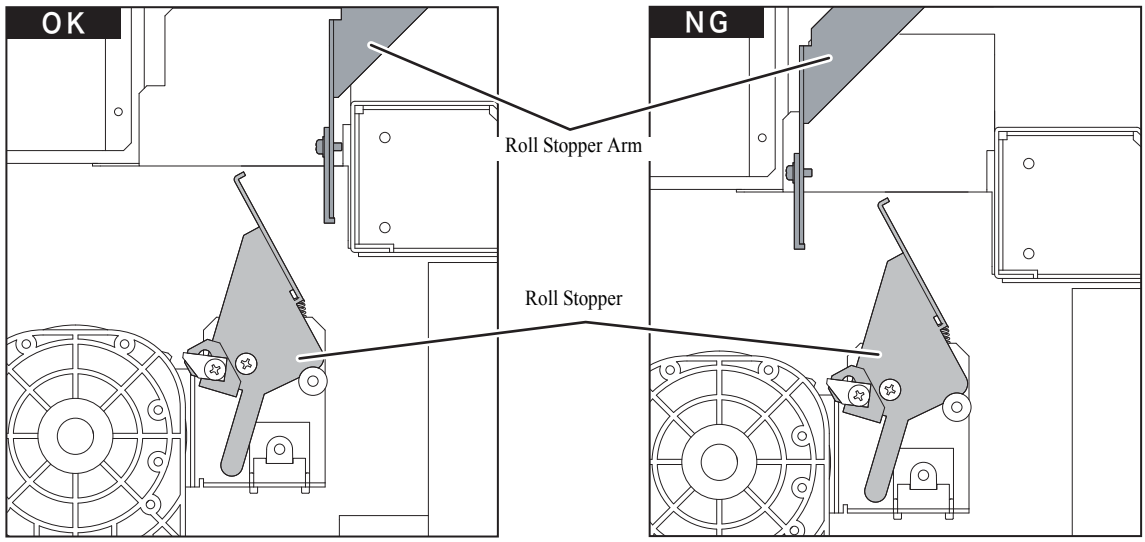


19. Move roll holder to the roll setting position.

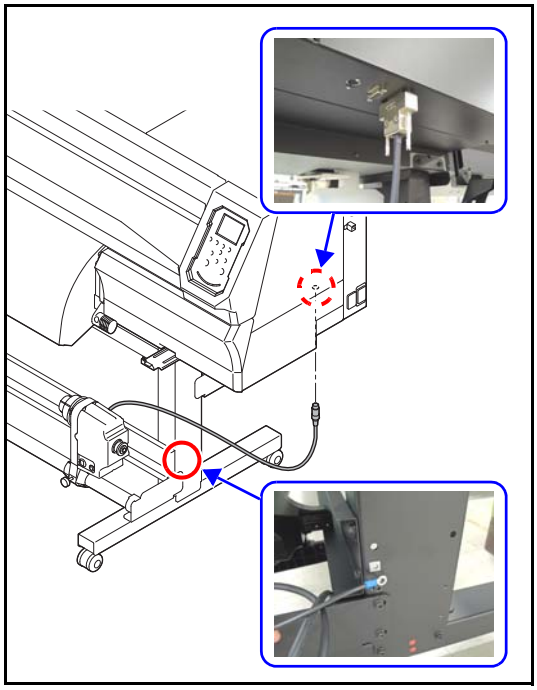


4.2 Assembling the Stands and the Device

20. Check the position of roll stopper arm.



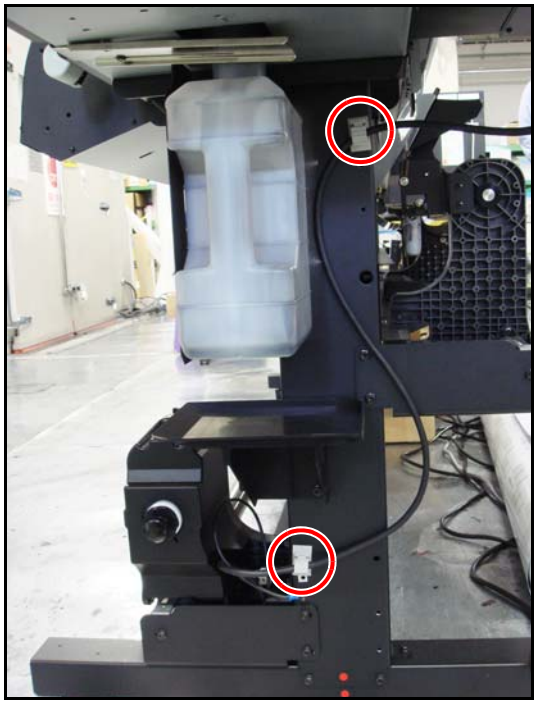
Roll Holder Side (Side of the unit)



21. Insert the cable of the take-up device into the connector on the bottom surface of electric unit.

22. Using the screw (M5x15), connect the **ground line** to the right leg of the take-up device unit.

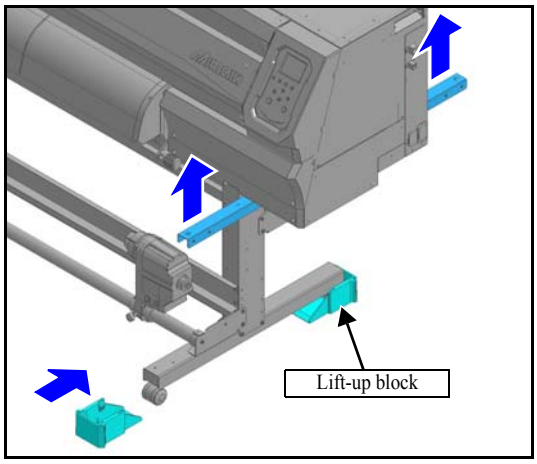
4.2 Assembling the Stands and the Device



23. Fix the cable of the take-up device unit with the cable clamps (x2).

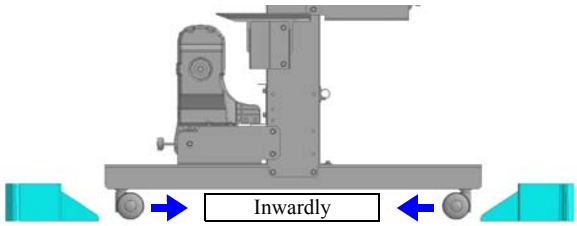
4.3 Mounting the Accessories

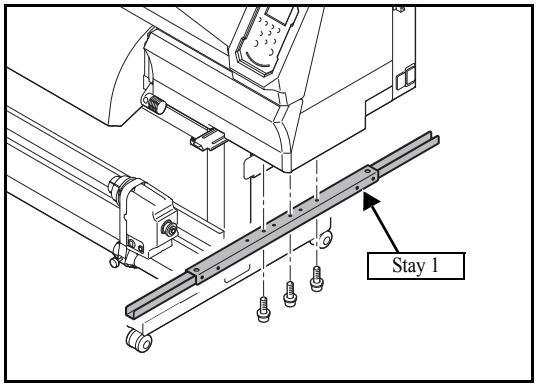
■ **Work procedures**



1. If the installation location is decided, lift up the main unit by the stay, and put the **lift-up block**.

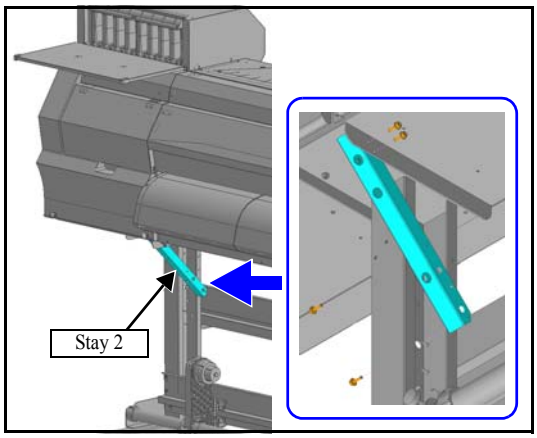
■ When putting the lift-up block, direct the front and rear caster inwardly.





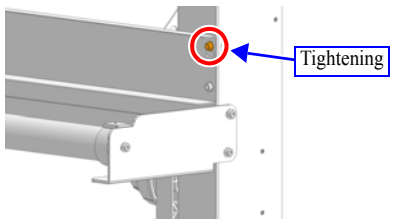
2. Remove the three screws each from the right and leftsides and detach the Stay 1.

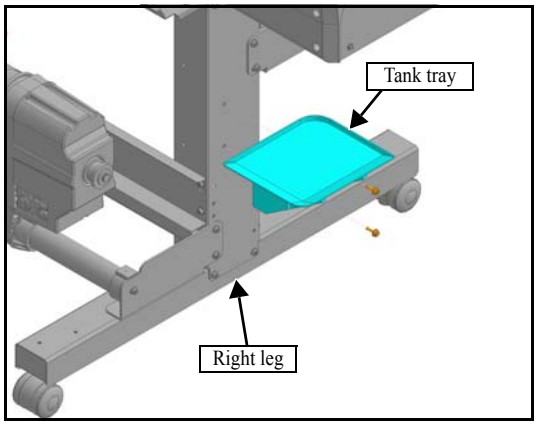
3. Disassemble the stay.



4. Fix the **stay 2** to the screws (M5x15) being used on the stay.

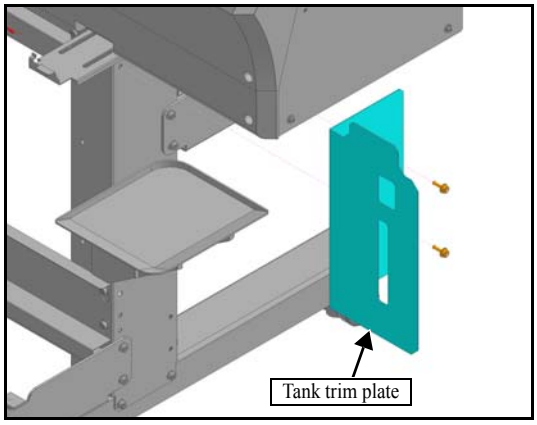
■ After fixing the stay 2, fasten the screws which are fastened temporarily in the procedure 2 of [4.2 Assembling the Stands and the Device -P.3].



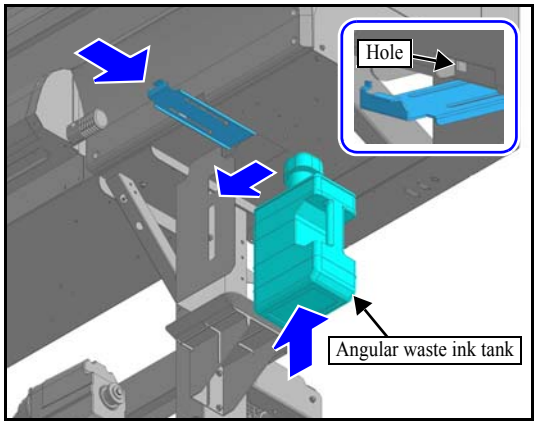


5. Fix the **tank tray** to the right leg with the 2 screws (M5x15).

4.3 Mounting the Accessories



6. Attach the **tank trim plate** to the right leg with the 2 screws (M5x15).

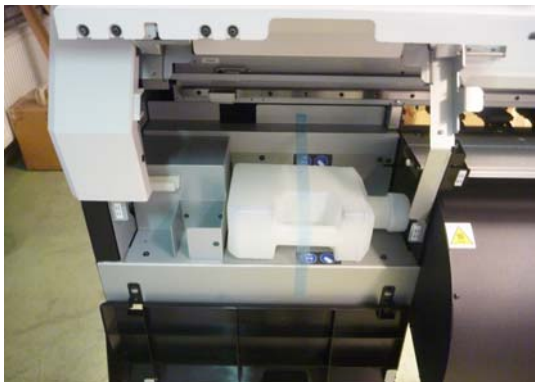


7. Attach the **angular waste ink tank**.

   Insert the angular waste ink tank.

IMPORTANT

■ The waste ink tank is stowed in the maintenance space.

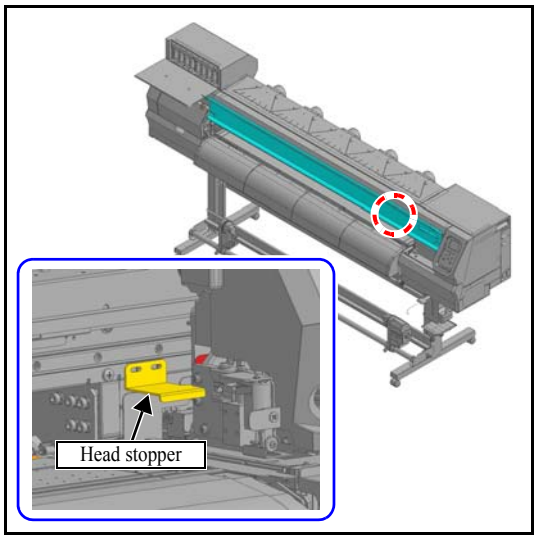


8. Close the **tank stopper**.

   Put a hook of the tank stopper in a hole of the printer then lock it.

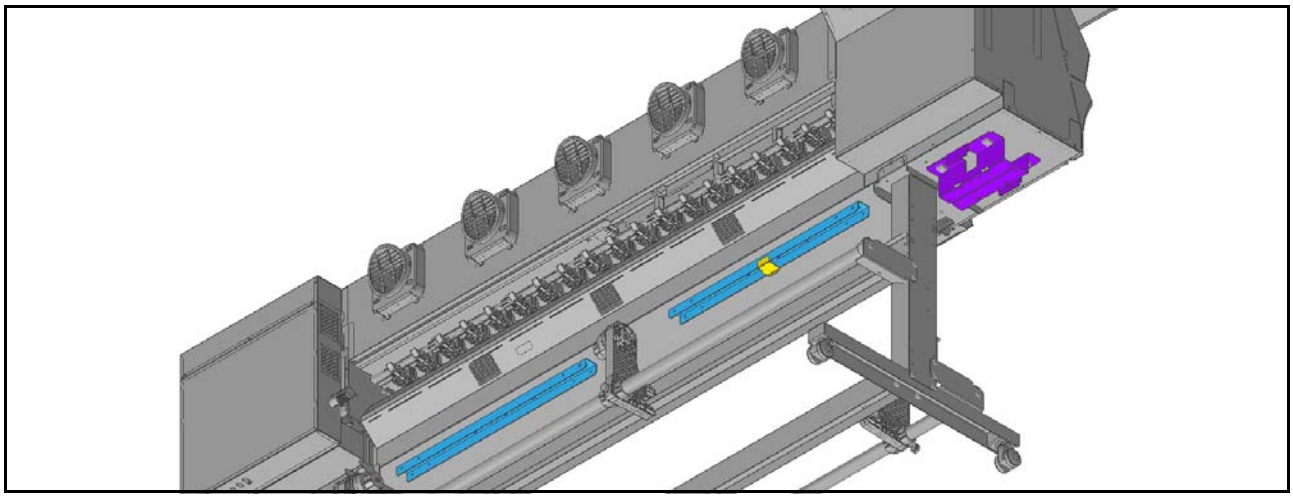
4.4 Removing the Stopper

■ **Work procedures**

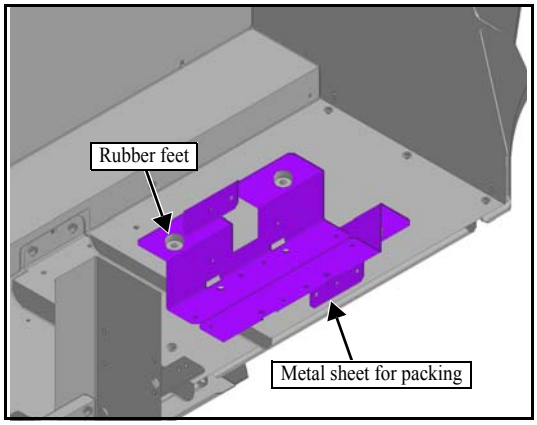


1. Open Front cover, remove the 2 screws (P3x8SMW), and remove **head stopper**.

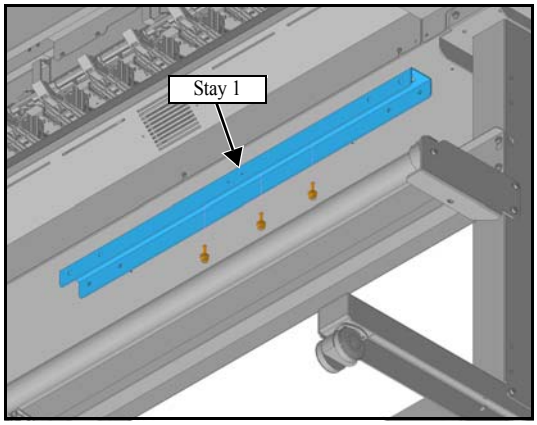
4.5 Storage of packing components



■ **Work procedures**

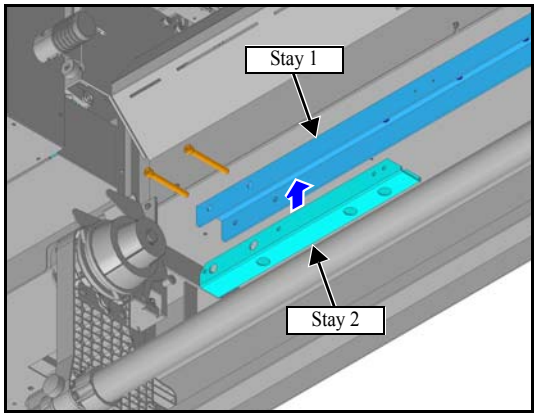


1. Attach the **metal sheet for packing** and the **rubber feet** on the back surface of main unit with the screws (P4x20 SMW x 4).

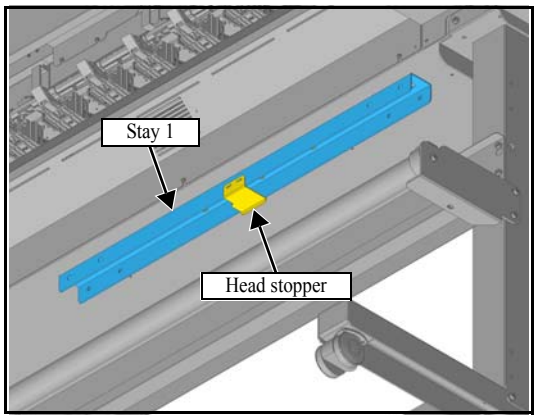


2. Attach the **stay 1** on the back surface of main unit with the screws (CS6x20 SMW x 6).

4.5 Storage of packing components



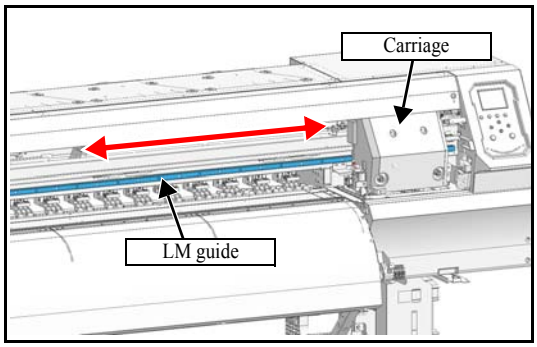
3. Using the screws (CS6x55 black x4), attach the extra **stay 2** to the stay 1.



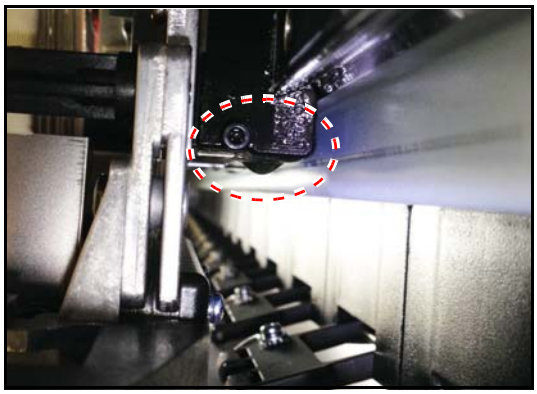
4. Attach the **head stopper** to the stay 1 with the screws (P3x8 SMW x 2).

4.6 Check and cleaning the LM guide

■ **Work procedures**



1. Using manual operation, move the carriage back and forth along its full travel distance several times.

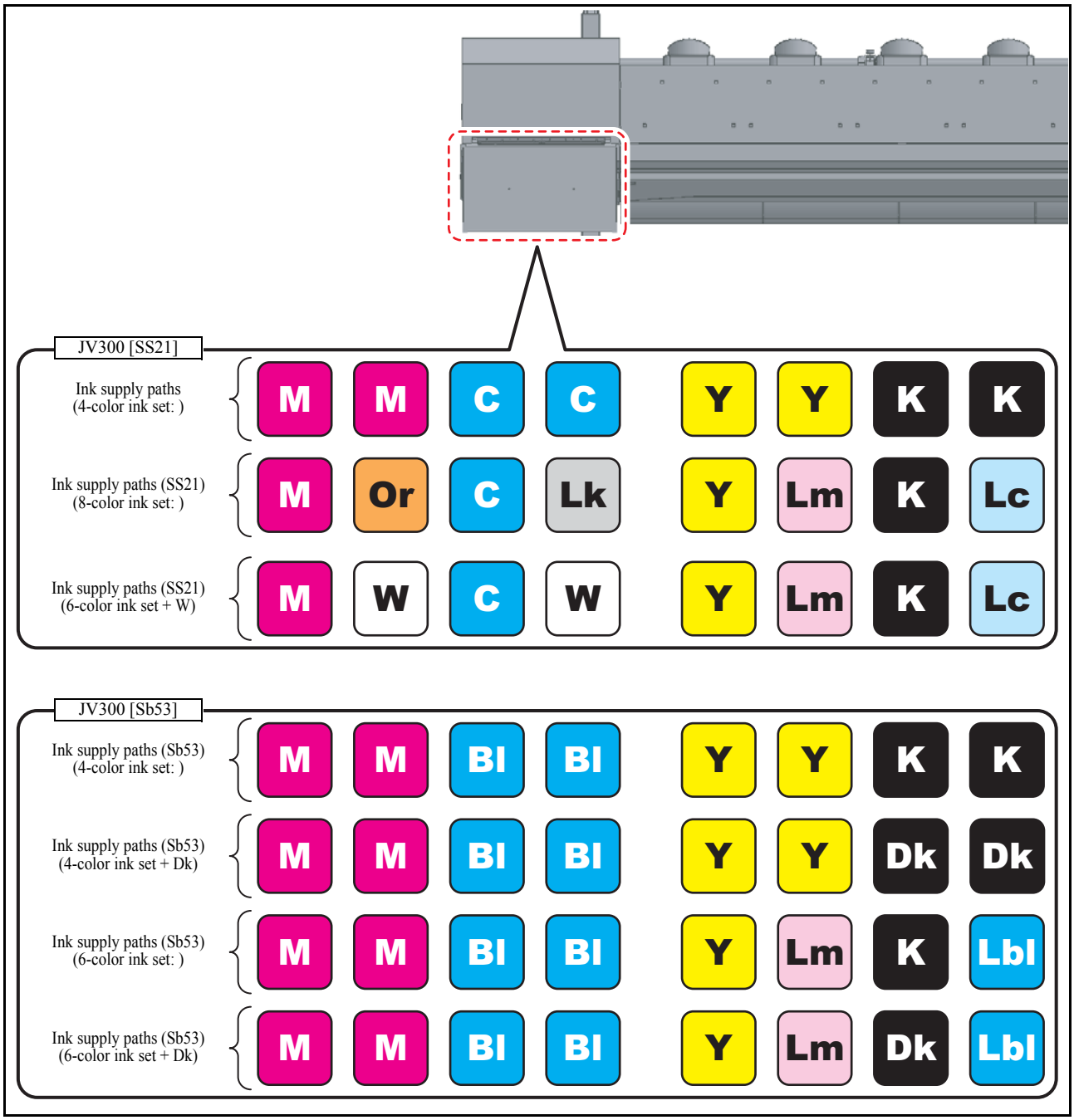


2. Visually check the LM guide left/right ends and the LM guide block unit for formation of grease droplets, and wipe away any grease droplets.

IMPORTANT

■ The grease is applied for the purposes of corrosion prevention and lubrication, so do not remove any more than necessary, and do not use alcohol or similar.

5. Ink Set



■ Outline

For JV300, the above ink setting is available.
Although it has been set to 4 colors at the factory-shipping, by opening / closing of the joint, it is changeable to other colors.
The procedure to change the ink is described in the following.

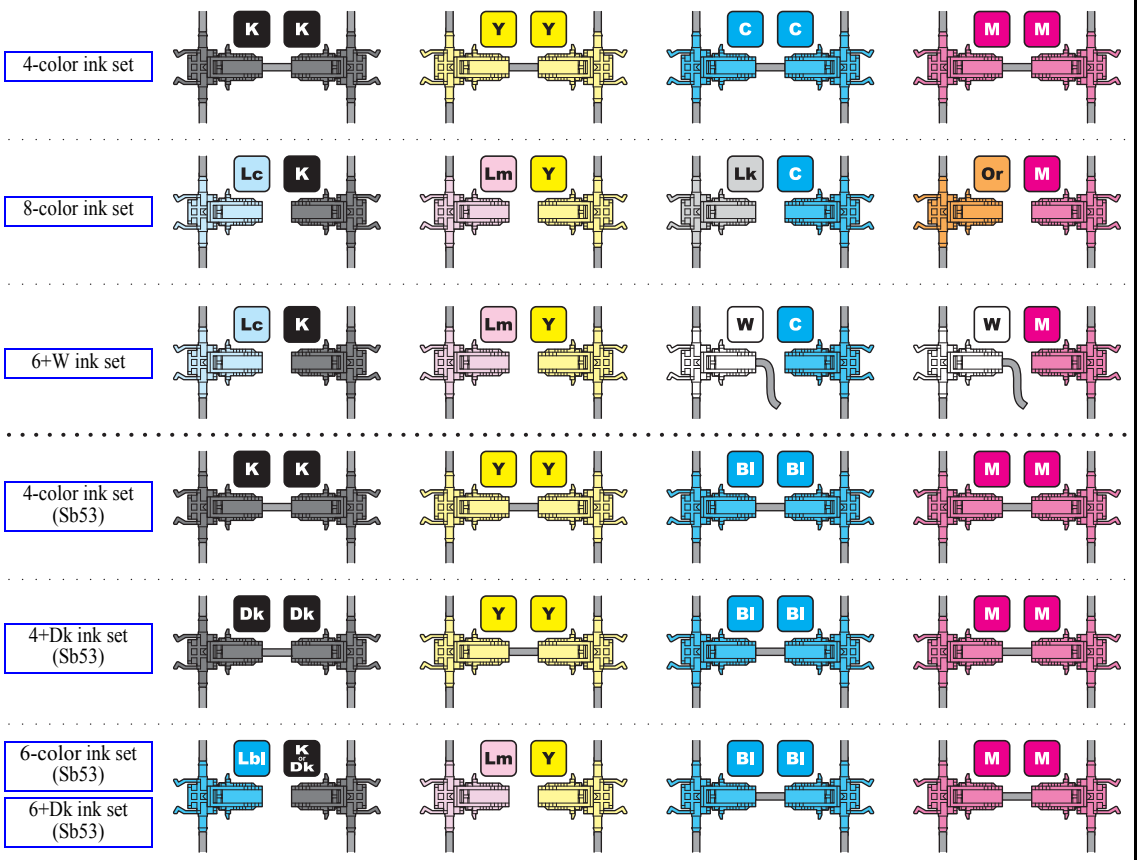
■ List of work procedures

Work operation		Description	Refer to
☐1	Changing of Joint	Confirm the above ink paths, and change the joint concerned.	5.1 (p.2)
☐2	Adjustments When Using Sublimation Transfer Ink		5.2 (p.8)

5.1 Changing the Joints

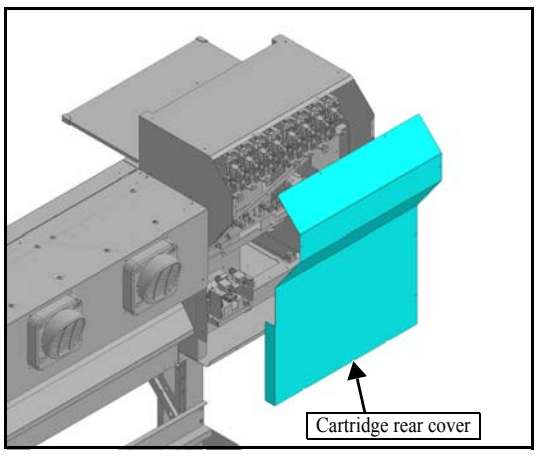
■ Use protective glasses and gloves during work.
Depending on the working condition, ink may reach your eyes or your skin may be roughed due to ink.

■ For the tube route, refer to the following. (The figure viewing from the rear of machine)



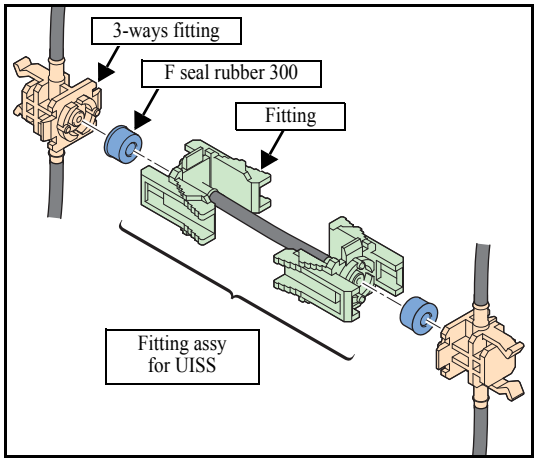
Joint change procedure

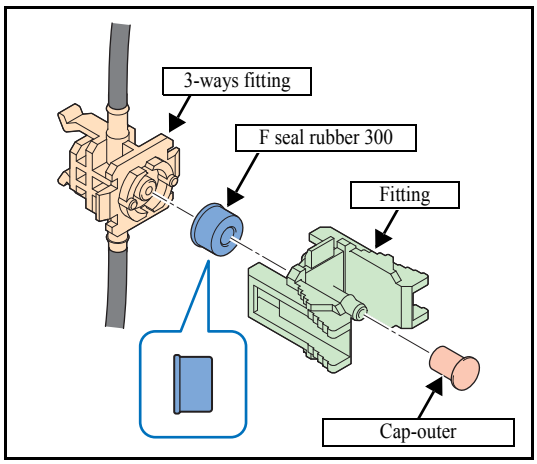
■ **Work procedures**



1. Remove **cartridge rear cover** from the back panel of the main unit.

5.1 Changing the Joints





2. Release the knob of fittingφ2, and remove the **fitting assy for UISS**.

IMPORTANT
- Pay attention not to lose the F seal rubber 300.

3. Attach the **F seal rubber 300** removed in the procedure 2 and the new **Fitting** to the 3-ways fitting.

IMPORTANT
- Attach it so that the step of F seal rubber 300 is at the side of the 3-ways fitting.
- Be sure not to insert the fitting obliquely.
- Be sure to confirm that the hook of the fitting is hanging on the 3-way fitting.

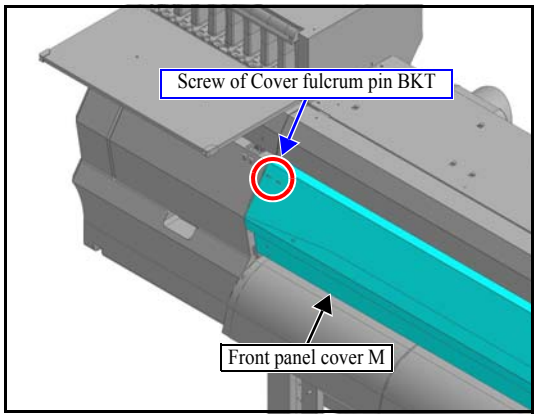
4. Attach the **Cap-outer** to the Fitting.

5. Return the **cartridge rear cover** to the original location, and affix using the screws.

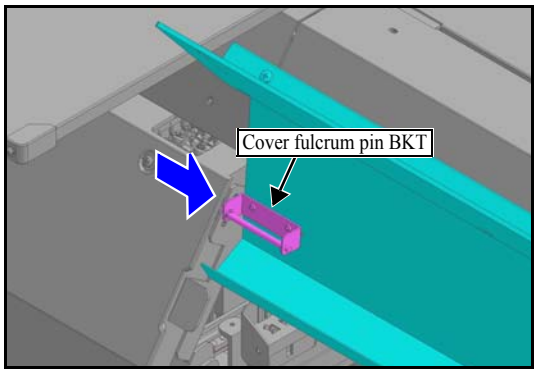
5.1 Changing the Joints

Joint change procedure at the circulation path

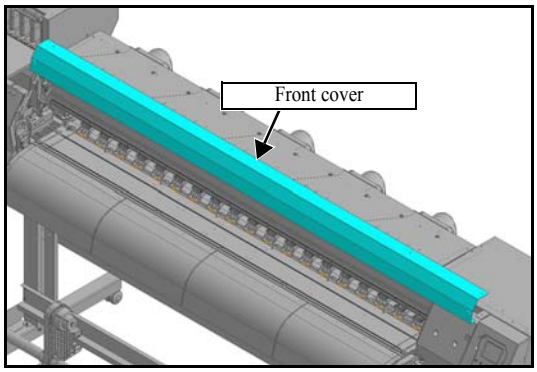
■ **Work procedures**



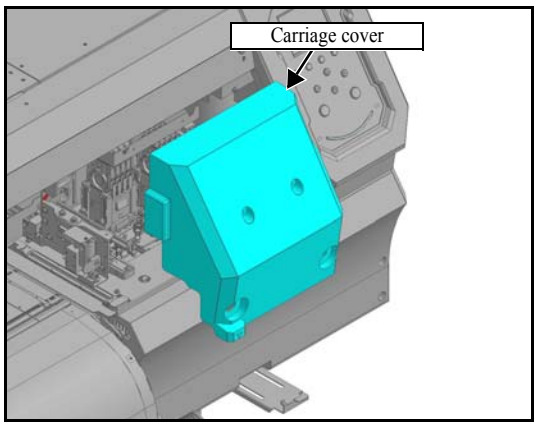
1. Loosen the screw of **cover fulcrum pin BKT** which is at the left side of front panel cover M.



2. Shift the cover fulcrum pin BKT to right, and remove the **front panel cover M**.

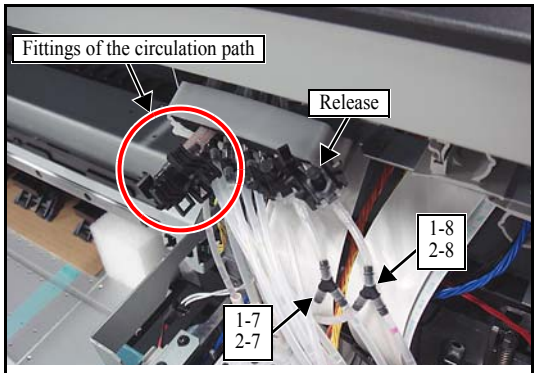


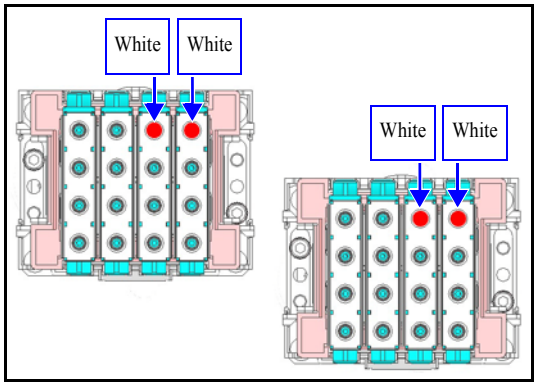
3. Remove the **front cover**.



4. Remove the **carriage cover**.

5.1 Changing the Joints

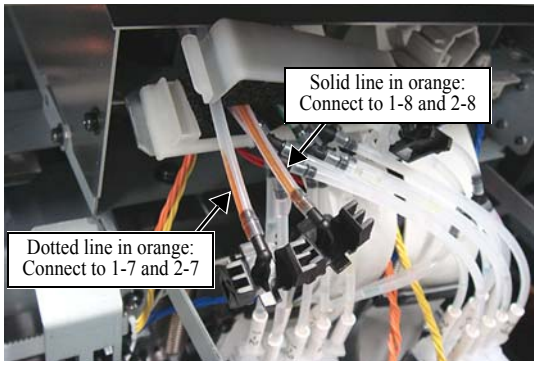




5. Connect the circulation path of the **white ink** of the carriage side.

IMPORTANT

■ For the connection of the circulation route, refer to the following.
- Dotted line in orange : Connect to 1-7 and 2-7.
- Solid line in orange : Connect to 1-8 and 2-8.



[300 model]

IMPORTANT

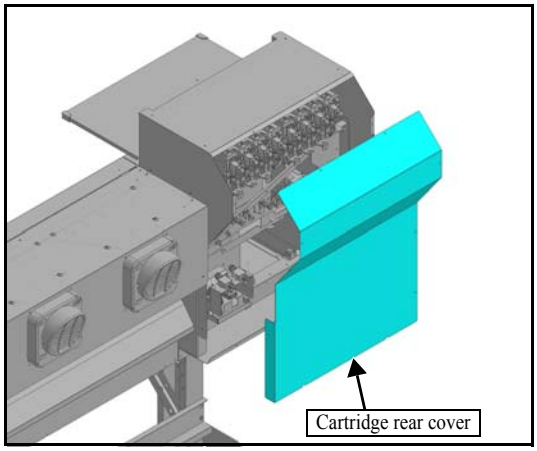
■ For the tube tag, refer to the following.

1-2	1-5	1-7	1-8
1-1	1-3	1-4	1-6
×	×	×	×
×	×	×	×

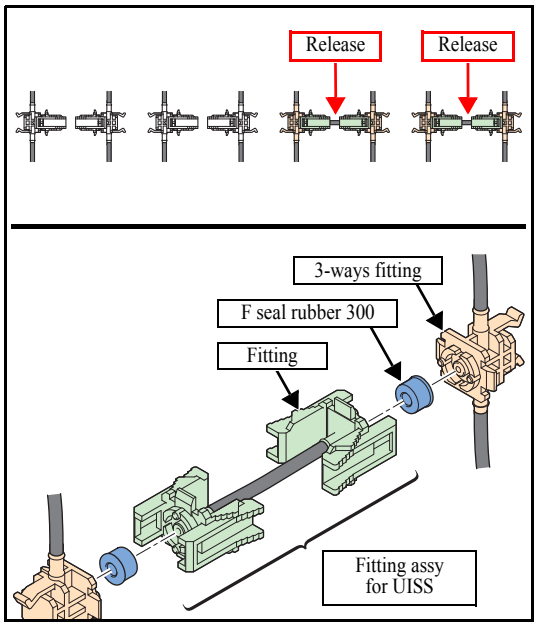
× : Not inserted

2-2	2-5	2-7	2-8
2-1	2-3	2-4	2-6
×	×	×	×
×	×	×	×

5.1 Changing the Joints

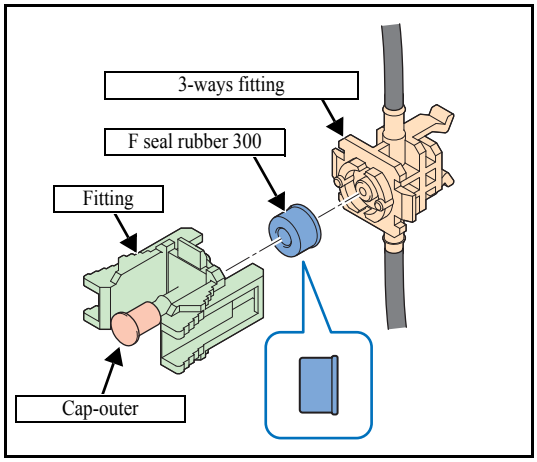


6. Remove **cartridge rear cover** from the back panel of the main unit.



7. Release the knob of fittingφ2, and remove the **fitting assy for UISS**.

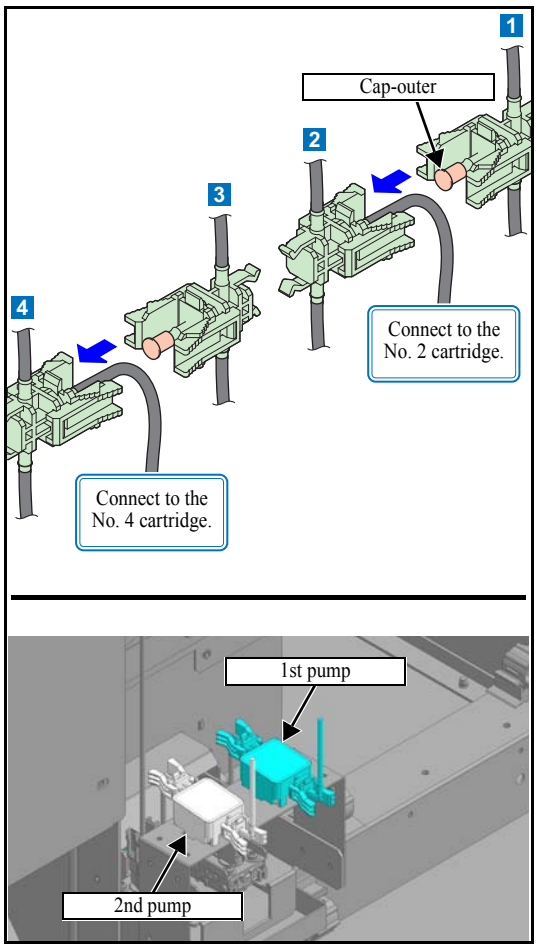
IMPORTANT
■ Pay attention not to lose the F seal rubber 300.



8. Attach the **F seal rubber 300** removed in the procedure 6 and the new **Fitting** to the 3-ways fitting.

IMPORTANT
■ Attach it so that the step of F seal rubber 300 is at the side of the 3-ways fitting.

5.1 Changing the Joints



9. Reconnect the ink route of the white ink on the circulation pump side.

IMPORTANT

■ The cartridge of white ink is at the 2nd and 4th from the right viewing from the back of machine.

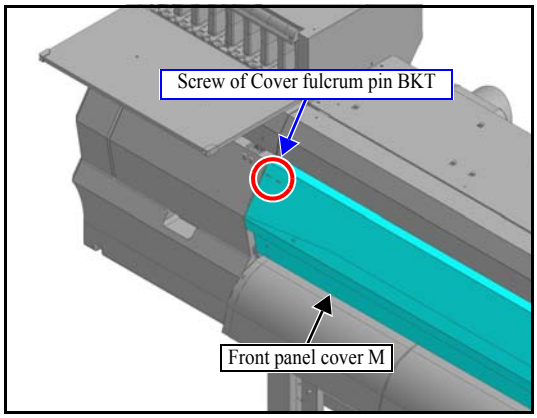
10. Put back Removed covers at the original positions.

5.2 Adjustments When Using Sublimation Transfer Ink

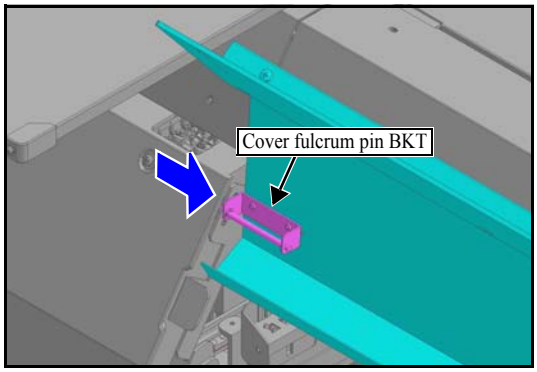
When using sublimation transfer ink (water ink), perform the following adjustments to avoid media cockling.

Adjustment of the Station Height

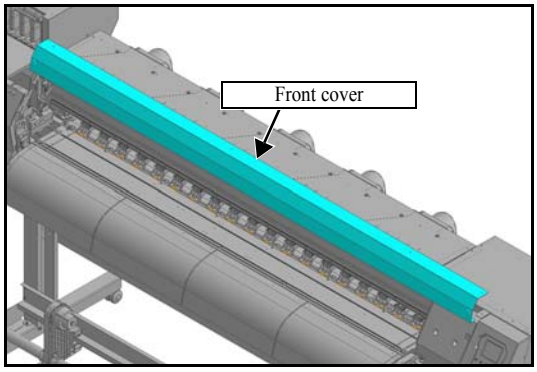
■ **Work procedures**



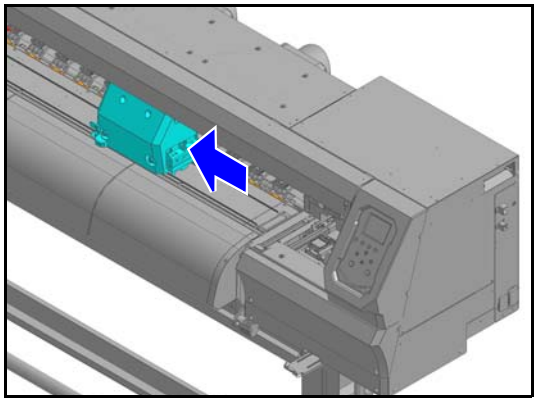
1. Loosen the screw of **cover fulcrum pin BKT** which is at the left side of front panel cover M.



2. Shift the cover fulcrum pin BKT to right, and remove the **front panel cover M**.

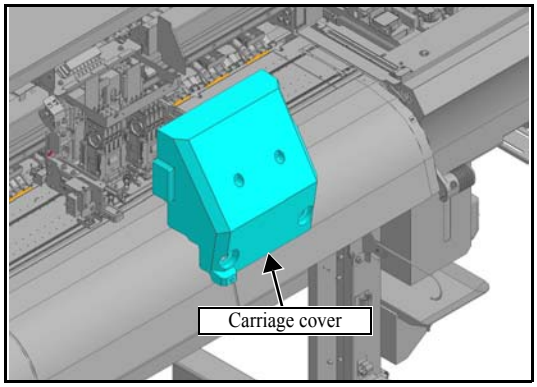


3. Remove the **front cover**.

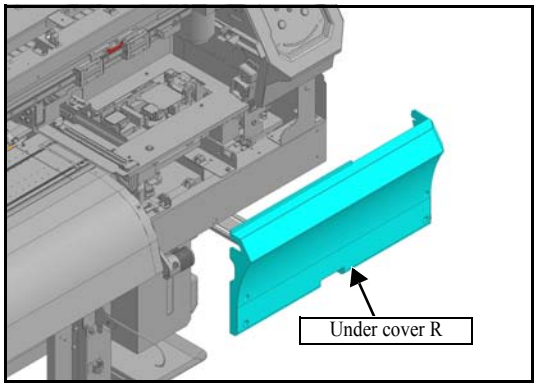


4. Move the head over the platen.

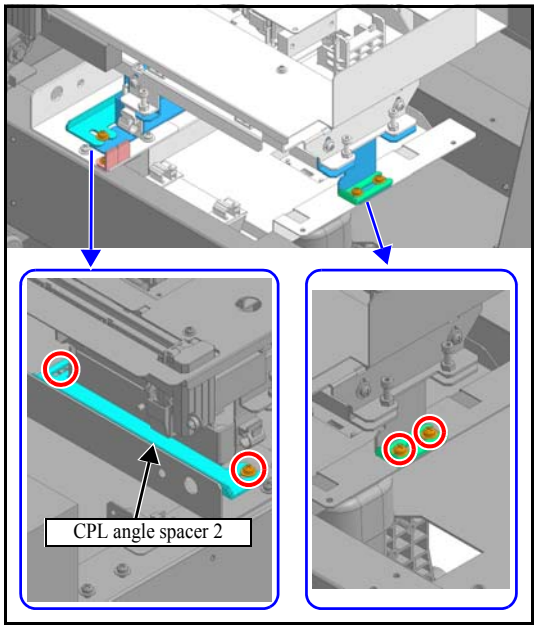
5.2 Adjustments When Using Sublimation Transfer Ink



5. Remove the **carriage cover**.

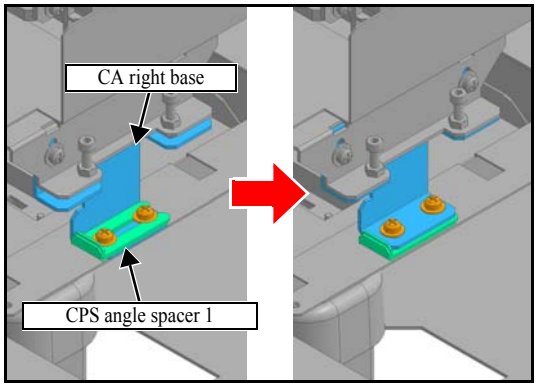


6. Remove the **under cover R**.



7. Loosen the four screws in the left figure.

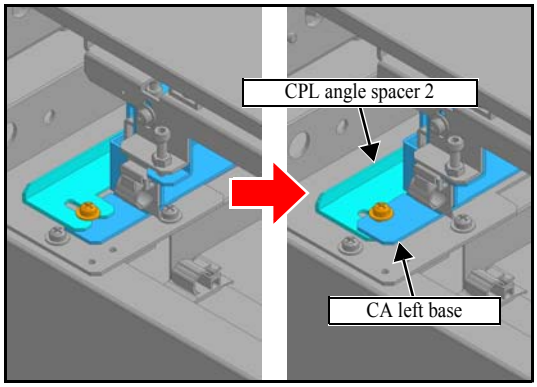
■ Use the accessory driver (150mm) to loosen the CPL angle spacer 2.



8. Pull out the **CPS angle spacer 1**.

9. Insert the **CPS angle spacer 1** pulled out under the **CA right base**.

5.2 Adjustments When Using Sublimation Transfer Ink



10. Pull out the **CPL angle spacer 2**.
11. Insert the **CPL angle spacer 2** pulled out under the **CA left base**.
12. Tighten the four screws loosened in the Step 6.

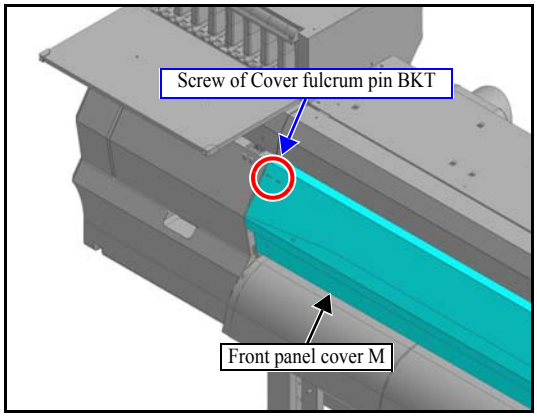
5.2 Adjustments When Using Sublimation Transfer Ink

Head Height Adjustment

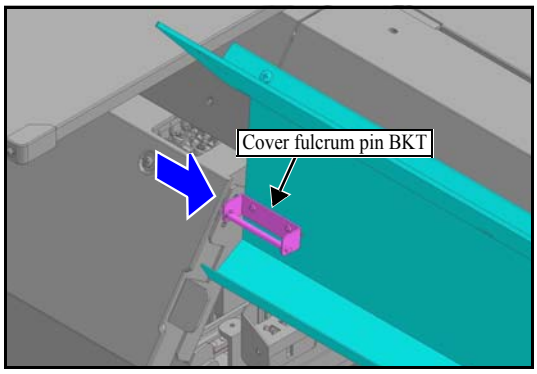
Before performing this work, check the items below:

- The clamp lever is at the lower position.
- The head gap is 2mm (the head height lever is at the lower position).

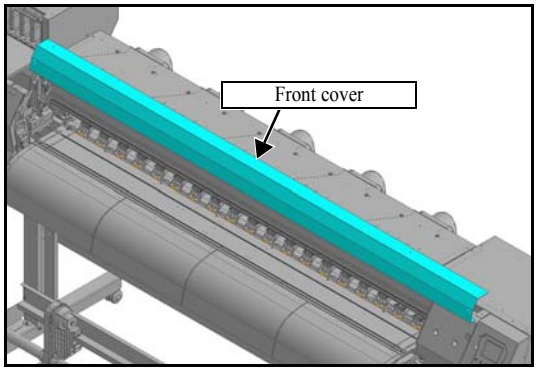
■ Work procedures



1. Loosen the screw of **cover fulcrum pin BKT** which is at the left side of front panel cover M.

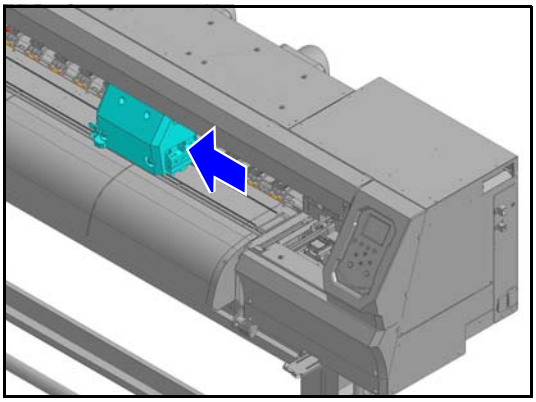


2. Shift the cover fulcrum pin BKT to right, and remove the **front panel cover M**.

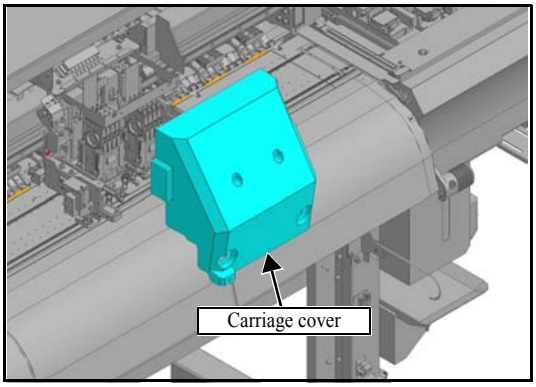


3. Remove the **front cover**.

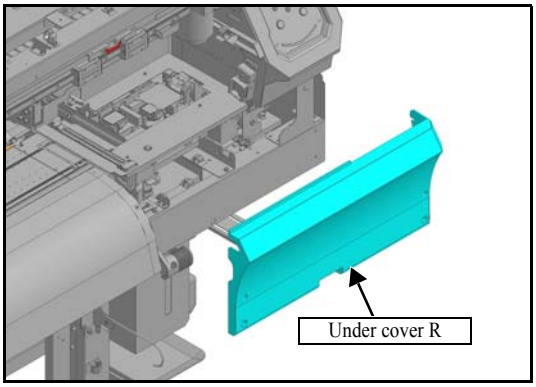
5.2 Adjustments When Using Sublimation Transfer Ink



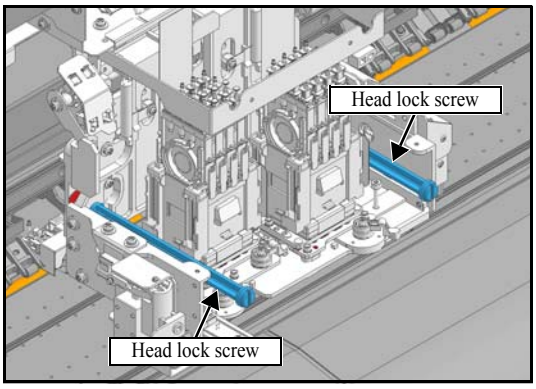
4. Move the head over the platen.



5. Remove the **carriage cover**.

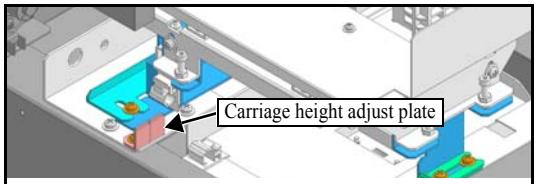


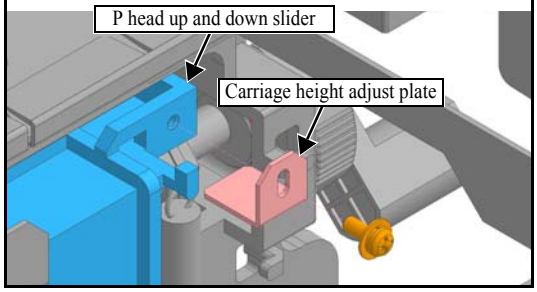
6. Remove the **under cover R**.



7. Loosen the **head lock screw** with a standard screw driver or a coin.

5.2 Adjustments When Using Sublimation Transfer Ink

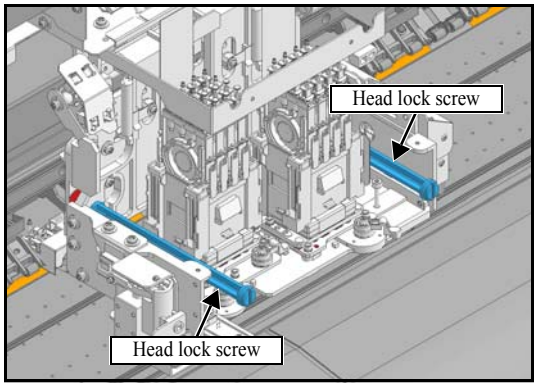




8. Remove the **carriage height adjustment plate**, and attach it to the **P-head up and down slider**.

- At shipping, the height adjustment spacers (3 types) are not inserted.
- The number of spacers used is different depending on the media used by a user.
- Be sure to match the carriage height-adjustment plate to the number of sheets of the spacers which are inserted at the station.

Media thickness	Number of Spacers used
At shipping	0
3 mm ~ 4 mm	1
4 mm ~ 5 mm	2



9. Tighten the **head lock screw** with a standard screw drive or a coin.

10. Put back Removed covers at the original positions.

6. Power Supply Related

■ **List of work procedures**

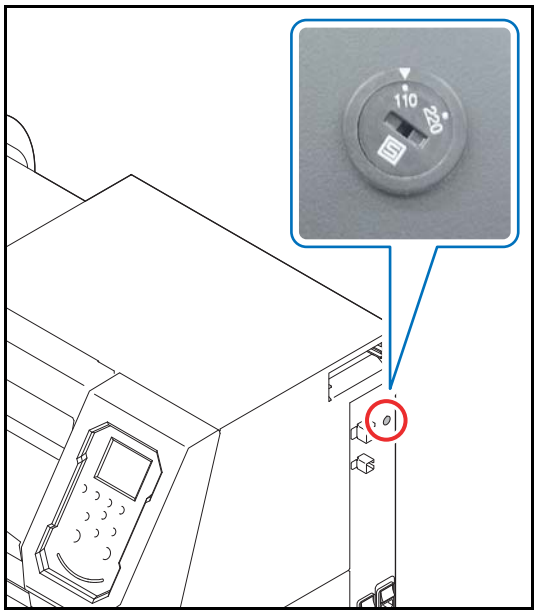
Work operation		Description	Refer to
☐1	Setting the Voltage Selector	Set the voltage selector	6.1 (p.2)
☐2	Connecting the Power Cable	Connect the power supply cable	6.2 (p.3)
☐3	Turning the Power On	Turn on the power supply	6.3 (p.4)
☐4	Turning the Power Off	Turn off the power supply	6.4 (p.5)

6.1 Setting the Voltage Selector

■ **Outline**

The device voltage should be switched to 100 to 120V or 200 to 240V to match the power supply voltage.

> **Caution**
>
> ■ Because the device may be damaged by an incorrect setting, do not change the setting after installation.



1. Switch the voltage selector switch to the side for the voltage you are using.

> **IMPORTANT**
>
> ■ 220V at shipping.

6.2 Connecting the Power Cable

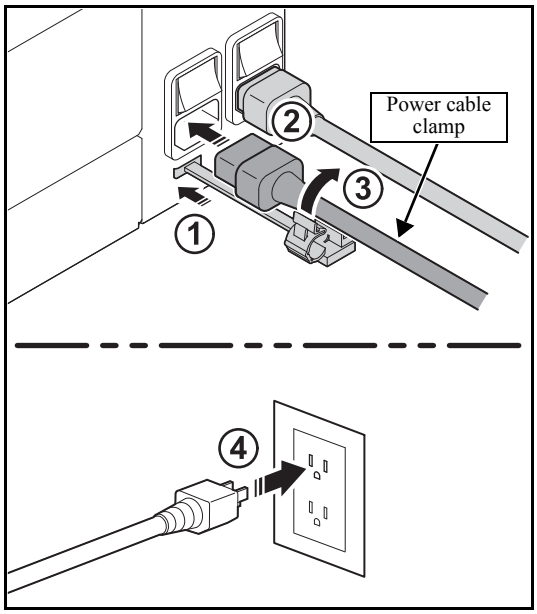
■ Outline

This device connects to the included power cable.
If you do not use the included power cables, use cable that match your region.
Connect the power cables into a power outlet with the following specifications.

Voltage	AC100 - 120V / 220 - 240V
Frequency	50/60Hz
Capacity	AC100 - 120V: 1440W AC220 - 240V: 1920W

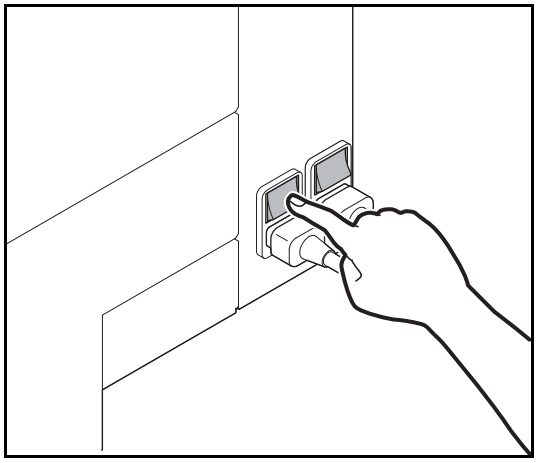
Caution

- Always connect the cables to a power outlet near the device so that the cables can be easily removed.
- When plugging the cables into the power outlets, connect the cable into outlets on a separate circuit from other devices. Because of the large power consumption, the power supply breaker may be tripped.
- Power supply cables should be connected to an earthed outlet. Otherwise, there is a risk of electrical shock or of damaging the device.
- When connecting the power cables, ensure that the power switch of the device is off.

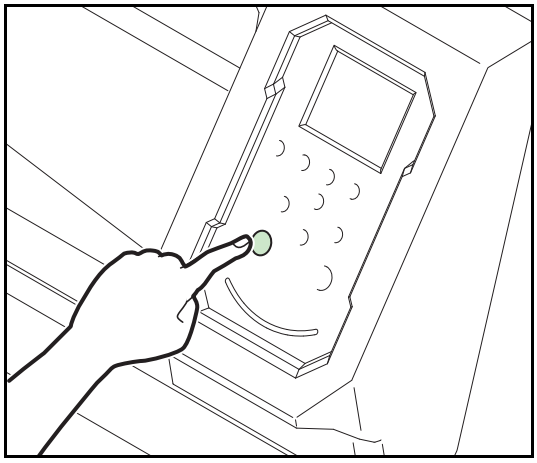


1. Insert the **power cable clamp** into the power supply box.
   300 model : **Power cable x 2**
2. Insert the **power cable** into the inlet of this device.
3. Lock the power cable.
   Run the power cable through the clamp, and lock the clamp until it clicks.
4. Insert the **power plug** into a plug socket.

6.3 Turning the Power On



1. Turn on the main power supplies of this device.
   When pushing the power switch, which is on the side of this machine, to the " | " side, the main power will be on.



2. Turn the power on, by pressing the [END/POWER] key.

3. When the power is turned on, the firmware version is displayed.

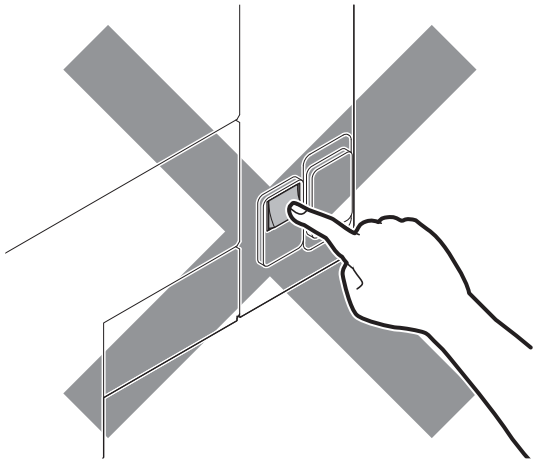
6.4 Turning the Power Off

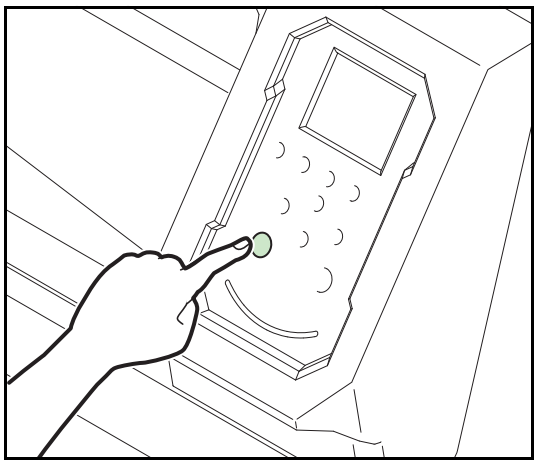
■ Outline

When turning the power off, check that the unit is not receiving data, and there is no remaining un-output data. Furthermore, check that the head is in the capping station.

IMPORTANT

- If you turned the power off without performing capping, turn the power back on again. Return the head to the capping station to prevent the head from drying out.
  If the power is turned off during plotting, the head might not be parked in the capping station. Leaving the head for a long time without capping may cause nozzle blockages.
- Do not turn off the main power switch on the side, as this will stop the function for preventing nozzle blockages from functioning.





1. Turn the power off, by giving the [END/POWER] key a long press.
2. The confirmation screen of power OFF is displayed.

7. Outputting Plots

■ List of work procedures

Work operation		Description	Refer to
☐1	Initial Ink Fill	Execute the initial ink fill	7.1 (p.2)
☐2	Test Print	Check that there are no plotting problems, such as missing nozzles or bent paths	7.2 (p.8)
☐3	Cleaning the Heads	Carry out if a drawing failure occurs in the test print.	7.3 (p.10)
☐4	Dot Position Adjustment (Service mode)	Execute dot position adjustment if misalignments occur during bidirectional plotting	7.4 (p.11)
☐5	Dot Position Adjustment (User menu)	Execute dot position adjustment if misalignments occur during bidirectional plotting	7.5 (p.14)

7.1 Performing the Initial Ink Fill

Caution

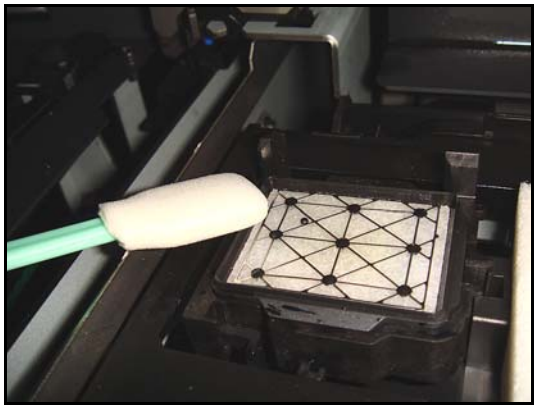
■ The machine can not recognize if the filling fluid cartridge has been set or removed. Be sure to check the condition before performing each operation.

IMPORTANT

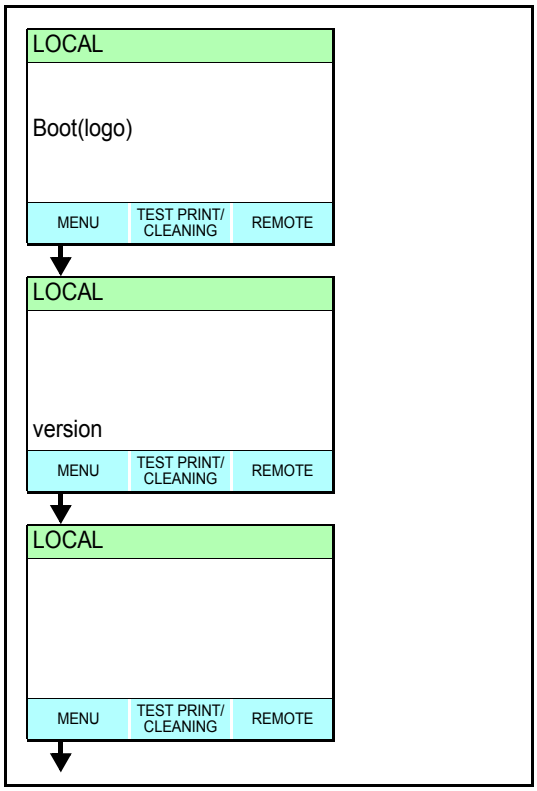
■ Set a cartridge of the filling fluid or the ink according to the displayed.
Set the cartridges in the order correctly.

■ Be sure to use a new cartridge or one with at least half the ink remaining.

■ Working procedure 1 (Ink set selection)



1. Dip the clean stick into the washing solution, and moisten the edges of cap.

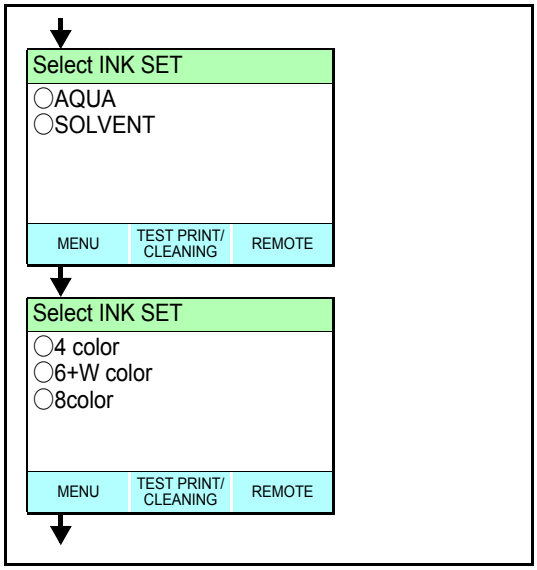


2. Turn the power to the device on.
When the power is turned on, the firmware version is displayed.

IMPORTANT

■ Ensure the front cover is closed.

7.1 Performing the Initial Ink Fill



3. Select the ink type.

   AQUA: Aqueous ink (sb53, etc.)

   SOLVENT: Solvent ink (SS21, etc.)

4. Press the [ENTER] key.

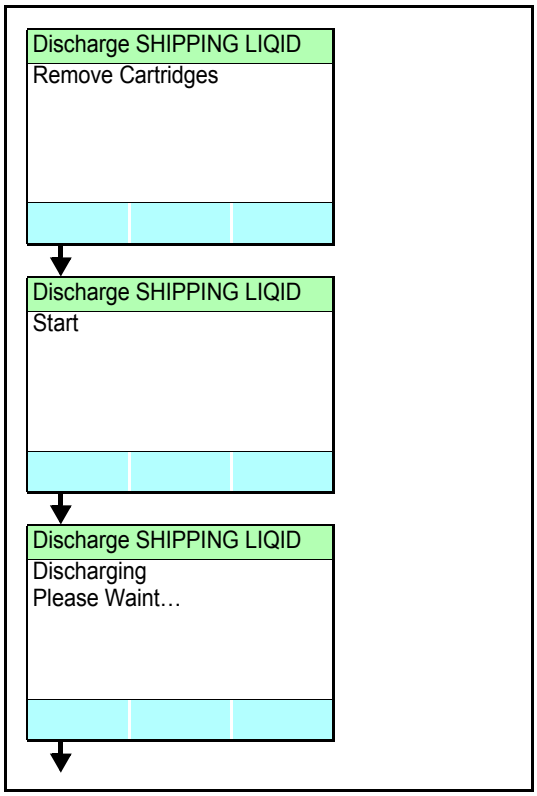
5. Select the ink set.

6. Press the [ENTER] key.

IMPORTANT

- Ink set can be select at installation or at performing head cleaning **(the user cannot replace it)**.
- When you change the ink set, change the joint of the ink path. (5.1 (p.2))

■ **Working procedure 2 (Filling fluid discharging)**



7. Remove the cartridge.

8. Press [ENTER], and discharge the filling fluid within the ink route.

IMPORTANT

- Be sure to confirm that no cartridge has been set.

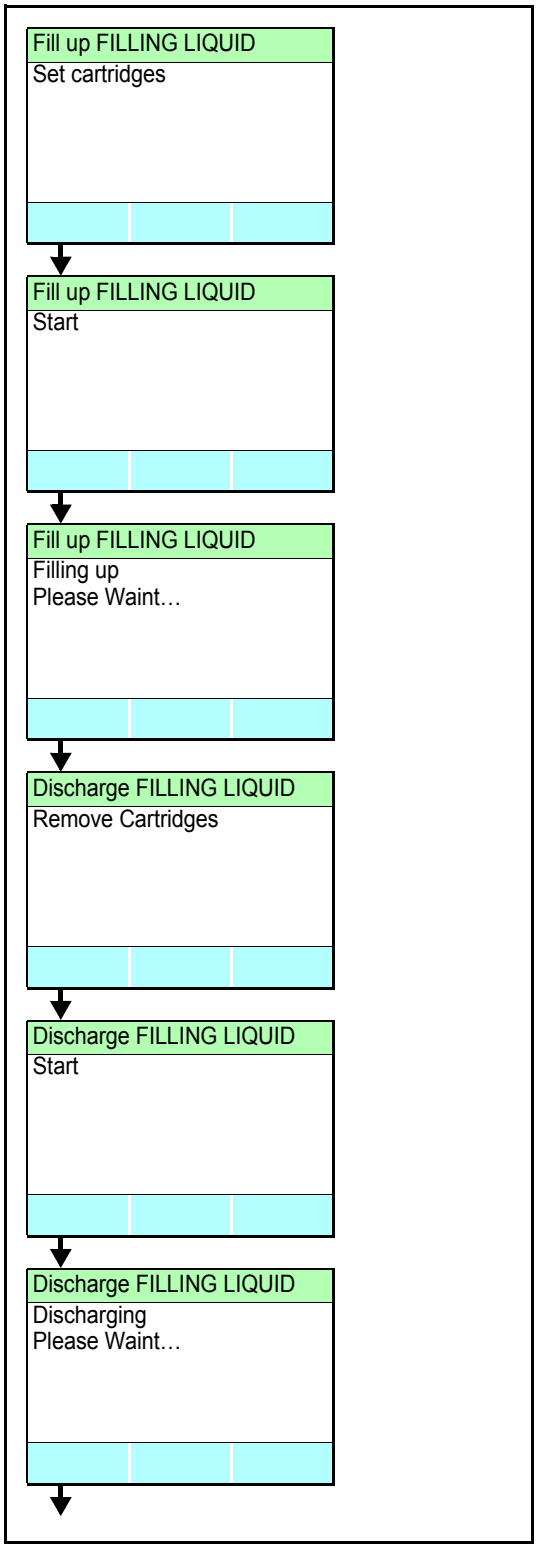
9. Press the [ENTER] key.

7.1 Performing the Initial Ink Fill

■ **Working procedure 3 (Filling fluid filling)**

IMPORTANT

■ Only implement “Fill up FILLING LIQUID” when you selected “SOLVENT” for the ink type.
If you selected “AQUA”, proceed to step 14.



10. Set the filling fluid cartridge, and press [ENTER].

IMPORTANT

■ The next operation is not started automatically even when the filling fluid cartridge is set.
Carry out the next operation after confirming that the cartridge has been surely set.

11. Press [ENTER], and start the filling of filling fluid.

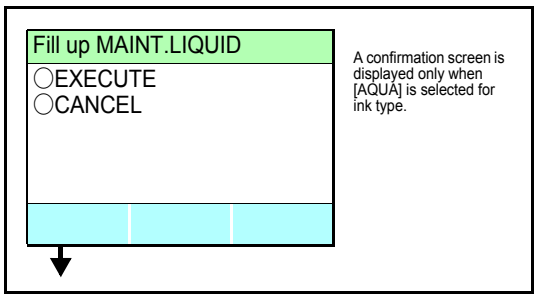
12. Remove the filling fluid cartridge, and then press [ENTER].

IMPORTANT

■ The next operation is not started automatically even when the filling fluid cartridge is removed.
Carry out the next operation after confirming that the cartridge has been surely removed.

13. Press [ENTER], and start the discharging of filling fluid.

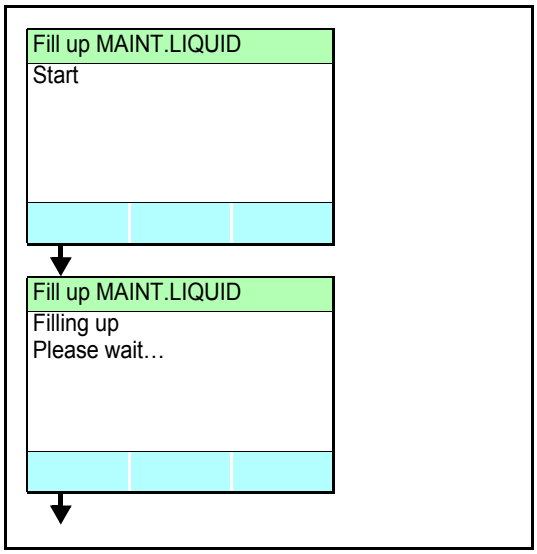
7.1 Performing the Initial Ink Fill



14. Select whether or not to fill up the maintenance liquid.
    (Displayed only when [AQUA] is selected for ink type)

    If you selected cancel, proceed to Step 18.

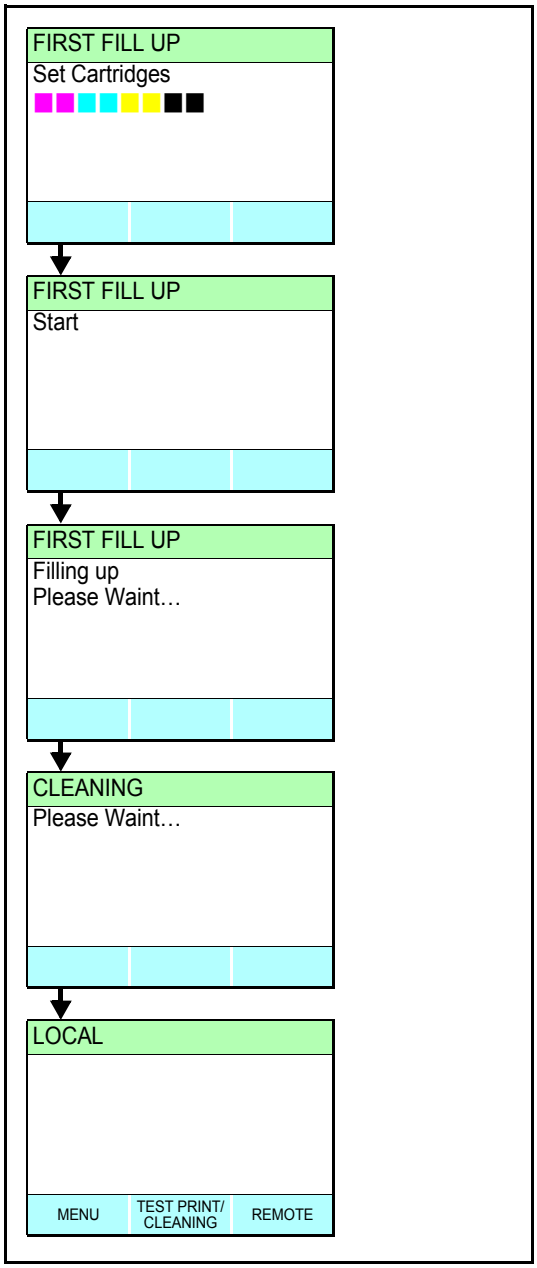
15. Set the removed filling maintenance washing cartridge to the washing cartridge of the right side of main unit.



16. Press the [ENTER] key, and start fill up the rout of the maintenance washing liquid.

7.1 Performing the Initial Ink Fill

■ **Working procedure 4 (Ink filling)**



17. Install each ink cartridge in the ink station.

IMPORTANT
The color of ink to insert into each ink station is predetermined.
Install the ink cartridges to match the cartridge labels below the ink station.

■ When the correct ink cartridge is set, it moves to the next screen. (The ink IC is recognized.)

18. Press [ENTER], and start the ink filling.

IMPORTANT
■ If the ink filling could not be performed normally by the operation described above, execute the following [Cleaning] or [Ink filling (Maintenance)].
■ When you performed [5.2 Adjustments When Using Sublimation Transfer Ink -P.8], adjust the head below after ink filling has been completed.
MAINTENANCE MANUAL 4.2.1 SLANT ADJUST
4.2.2 STAGGER ADJUST
4.2.4 DROP. POS

7.1 Performing the Initial Ink Fill

■ Outline of Cleaning

When nozzle missing is less	Normal
When nozzle missing is many	Hard

IMPORTANT

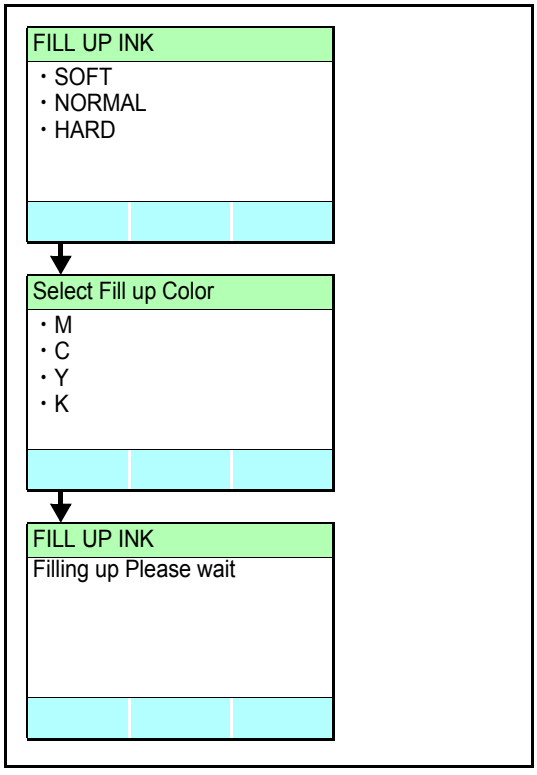
■ For the working procedures, refer to [7.3 Cleaning the Heads].

■ Outline of Ink filling (Maintenance)

Carry out by selecting the corresponding color if it could not be recovered by the cleaning.

When nozzle missing is less	Soft
When nozzle missing is many	Normal

■ Working procedure



1. Select [FILL UP INK].
2. Select the nozzle having the nozzle missing.
3. Press the [ENTER] key.

7.2 Performing a Test Print

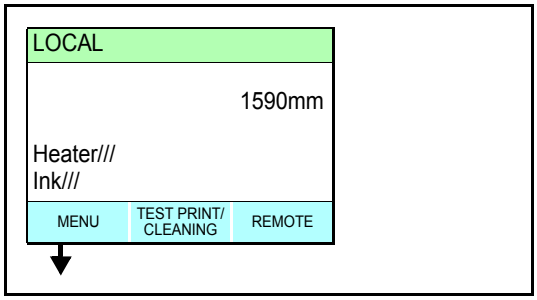
■ Outline

Perform a test print to check that there are no ejection problems (smears or gaps) such as blocked nozzles.

- If you are using loose-leaf media, load media with a size larger than A4 size portrait.
- If you are using roll media, wind back the roll media by hand to remove any slack before beginning printing. Otherwise, this could cause poor printing quality.

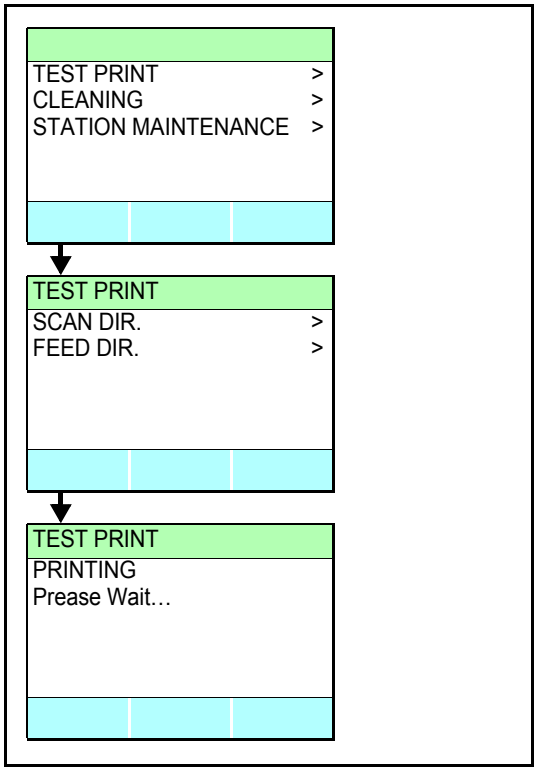
Items to check before the test print	Is media loaded (Operation Manual)
	Is the origin point set
	Is the head cap adjusted (Operation Manual)

■ Work procedures



1. Press the [FUNC2] key in local mode.

- Press [▲] [▼] to change the orientation of the test pattern.
- Refer to the Operation Manual for details on the test print direction.

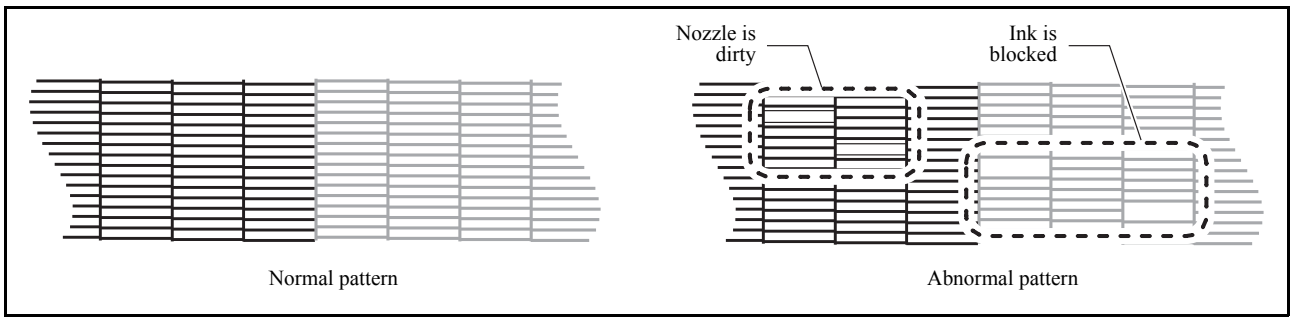


2. Press the [▼] key then the [ENTER] key.
   The test print begins.
   When the printing finishes, the printer returns to local.

7.2 Performing a Test Print

3. Check the results of the test print.

   If the result is normal, the operation is finished.
   If the result is abnormal, execute head cleaning (7.3 (p.10)) or ink filling (Operation Manual).



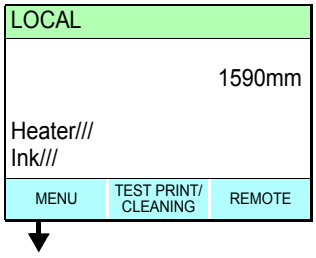
7.3 Cleaning the Heads

■ Outline

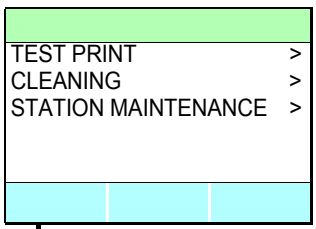
There are three kinds of head cleaning. The type to use depends on the results of the test plot (7.2 (p.8)).

Normal	When there are gaps in lines
Soft	When you only want to execute a head wipe (when lines are bent)
Hard	When the print quality does not improve even after performing normal cleaning

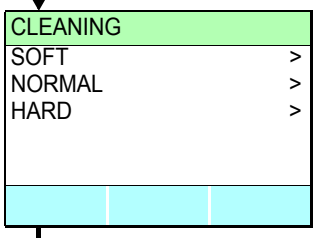
■ Work procedures



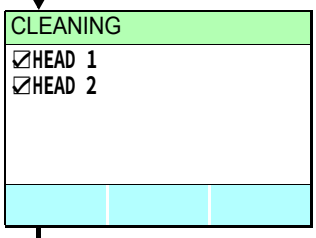
1. Press the [FUNC2] key in local mode.



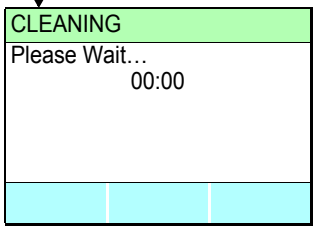
2. Select [CLEANING] and press the [▸] key.



3. Press [▲] [▼] and select the cleaning type.



4. Select the head to be cleaned.



5. Press the [ENTER] key.
   - The remaining cleaning time is displayed in the bottom level of the display.
   - When the cleaning finishes, the printer returns to local.
6. Execute the test plot again and check the results.
   - Repeatedly perform cleaning and test plot until the test plot result is normal.

IMPORTANT

Execute the following settings after performing head cleaning.
- Feed Correction (Operation Manual)
- Dot position adjustment (7.4 (p.11)), (7.5 (p.14))

7.4 Dot Position Adjustment (Service mode)

■ Outline

Draw the built-in patterns, and compensate the parameter so that the drop positions of other heads are on the same line as the drop position of reference head (Head 1A) in the Y-direction. To each of the discharged waveforms, execute [SiDir], [ReDir] and [BiDir] in each resolution. Perform adjustment in accordance with the following chart.

WF4(Large droplet waveform)

	Y-resolution									
	360	540			720			1440		
	BiDir	SiDir	ReDir	BiDir	SiDir	ReDir	BiDir	SiDir	ReDir	BiDir
Std	O*1	△	△	△	X	X	X	X	X	X
Hi	X	O	O	O	O	O	X	X	X	X

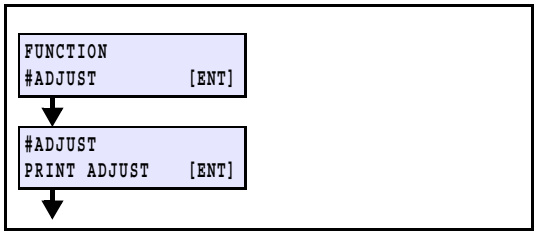
*1: The adjustment value for WF4/720dpi Hi is reflected in the WF4/360dpi Std single and reverse direction adjustment values (excluding bidirectional).

WF3(Small droplet waveform)

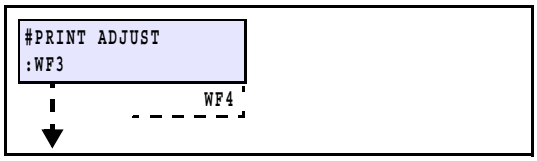
	Y-resolution									
	360	540			720			1440		
	BiDir	SiDir	ReDir	BiDir	SiDir	ReDir	BiDir	SiDir	ReDir	BiDir
Std	O	△	△	△	O	O	△	△	△	△
Hi	X	O	O	O	O	O	O	X*2	X*2	O

*2: The adjustment value for WF3/720dpi Std is reflected in the WF3/1440dpi Hi single and reverse direction adjustment values (excluding bidirectional).

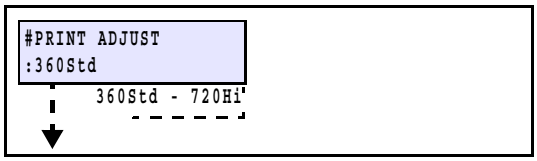
■ Work Procedures



7. Display [#ADJUST] -> [PRINT ADJUST].

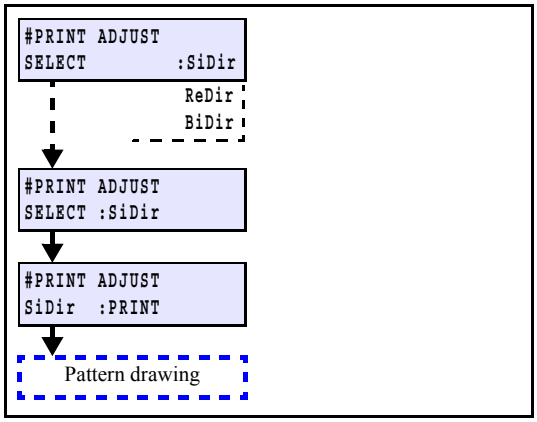


8. Select the waveform.
   [▲]/[▼] : Switches
   [ENTER] : Confirms (Next)



9. Select the Y-resolution and scanning speed.
   [▲]/[▼] : Y-resolution & Scanning speed change
   [ENTER] : Confirms (Next)

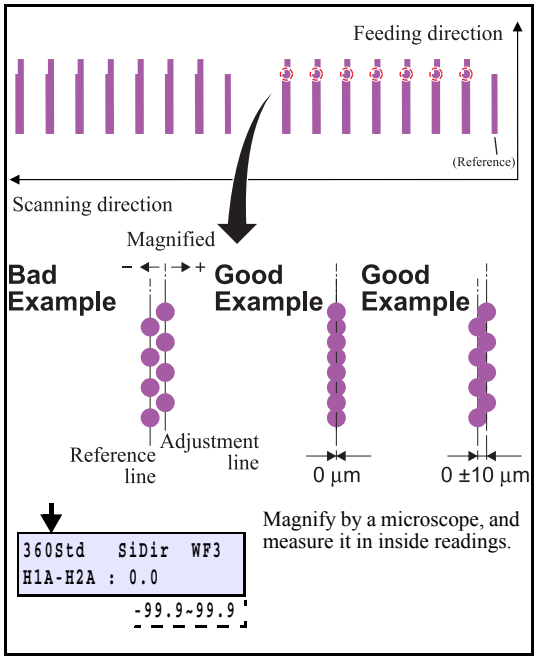
■ Forward adjustment



10. Select "SiDir" on the [SELECT] display.
    [▲]/[▼] : Switches
    [ENTER] : Confirms (Next)

11. Press the [ENTER] key to draw the pattern.
    [ENTER] : To start Pattern drawing
    [▶] : To the compensation display (Without drawing)

7.4 Dot Position Adjustment (Service mode)



12. Check and compensate the patterns.

    Input the adjustment value (the measured value: µm) so that the impact dots of the H2A line is at the same position in the Y-direction, referring to the reference nozzle H1A line.

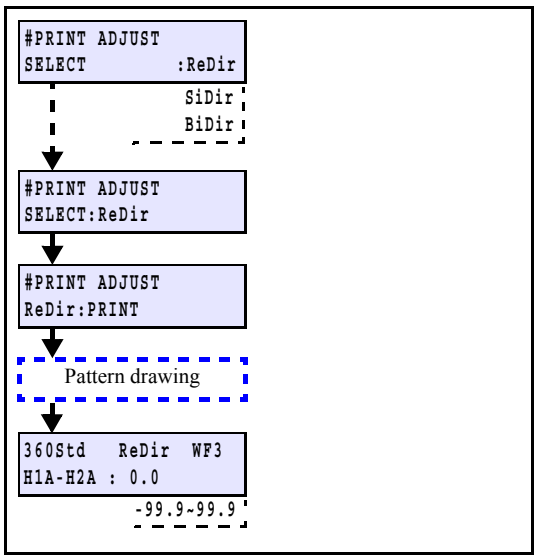
    [▲]/[▼] : Compensating value input (Input unit: 20 µm)
    [ENTER] : Confirms (Next)

> **IMPORTANT** Input the compensating value, referring to the left figure, if the displacement on the drop position of head applied for the compensation occurs either right or left against the reference head.

13. When compensated, draw and check the patterns again.

> **IMPORTANT** Repeat "Drawing -> Checking (Compensating)" until any compensation is not required.

■ Return adjustment



14. On the [SELECT] display, select "ReDir", and adjust it in the same way as "SiDir".

    [▲]/[▼] : Switches
    [ENTER] : Confirms (Next)

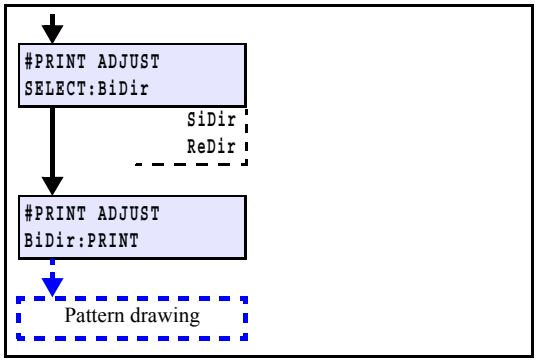
15. Press the [ENTER] key to draw the pattern.

    [ENTER] : To start Pattern drawing
    [▶] : To the compensation display (Without drawing)

16. When compensated, draw and check the patterns again.

> **IMPORTANT** Repeat "Drawing -> Checking (Compensating)" until any compensation is not required.

■ Going and returning adjustment



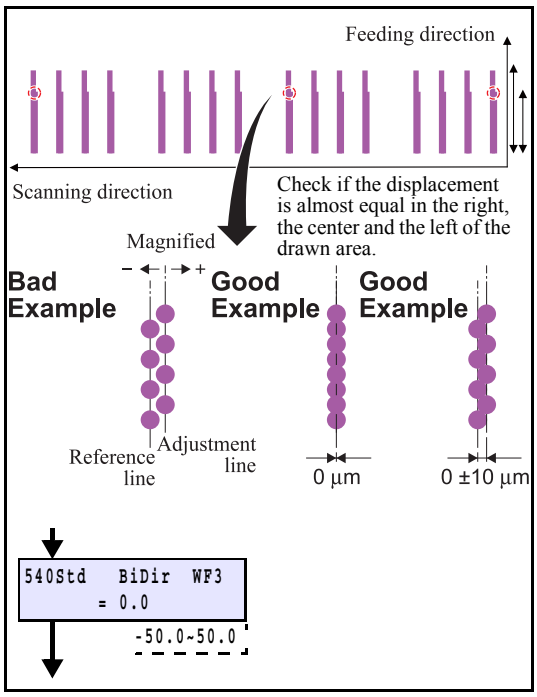
17. Select "BiDir" on the [SELECT] display.

    [▲]/[▼] : Switches
    [ENTER] : Confirms (Next)

18. Press the [ENTER] key to draw the pattern.

    [ENTER] : To start Pattern drawing
    [▶] : To the compensation display (Without drawing)

7.4 Dot Position Adjustment (Service mode)



19. Check and compensate the patterns.

    The reference lines are drawn in going, and then the adjustment lines are drawn at the same Y-coordinate positions in returning. The position where the lines above are overlapped on one vertical line is specified as the correct dot position (H1A: M-color fixed)
    Confirm that the dots are on the same line.

    * The adjusting procedure is the same although the drawing pattern is different depending on mode.
      [▲]/[▼] : Compensating value input (Measured value)
      [ENTER] : Confirms

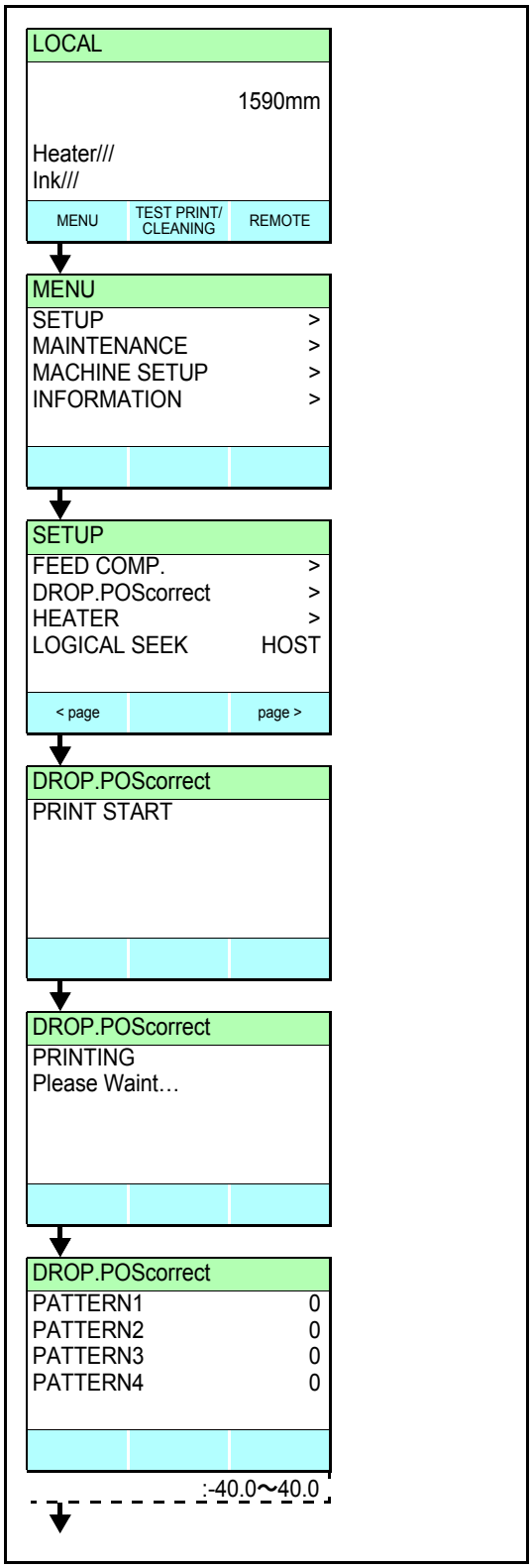
    If the displacement is significantly different in the right and left, other reasons are considered.

20. When compensated, draw and check the patterns again.

    IMPORTANT
    Repeat "Drawing -> Checking (Compensating)" until any compensation is not required.

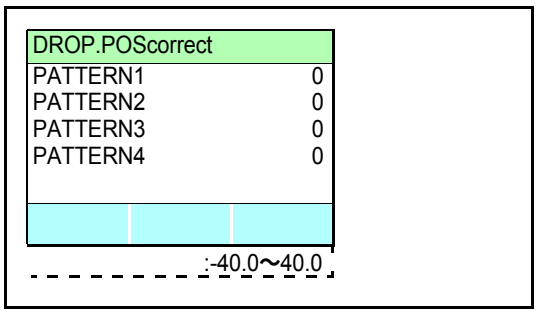
7.5 Dot Position Adjustment (User menu)

■ **Work procedures**



1. Load the media and set the print origin.
2. Press the [MENU] key in local mode.
3. Select [SETUP] and press the [▸] key.
4. Select [DROP.POScorrect] and press the [▸] key.
5. Press the [ENTER] key.
6. Press the [ENTER] key to start the pattern print.
   Multiple test patterns are printed.
   (The are called patterns 1, 2, 3, etc. in printing order)
7. Press [▲] [▼] to correct the dot position of pattern 1.
   - Correction value: –40 to 40
   - Check the test pattern to ensure the correction value is the position where the outgoing direction and return direction form a single straight line.
   - If the correction value is not in the range of –40 to 40, adjust the head height and then repeat the procedure from Step 2.
8. Press the [ENTER] key.

7.5 Dot Position Adjustment (User menu)



9. Correct the dot positions for pattern 2 onwards in the same way as Step 6, then press the [ENTER] key.

IMPORTANT

Print patterns 1 to 8. Each matches the following chart.

No.	Waveform	Y-resolution	Speed
PATTERN1	WF4	360	Std
PATTERN2	WF4	540	Std
PATTERN3	WF3	540	Hi
PATTERN4	WF3	540	Std
PATTERN5	WF3	540	Hi
PATTERN6	WF3	720	Std
PATTERN7	WF3	720	Hi
PATTERN8	WF3	1440	Hi

10. Press the [END] key several times to finish.

MEMO

MEMO

MEMO

D500939-13-19062014

IT
FW: 1.3