

UV INKJET PRINTER**JFX Series****Daily Care Manual****Request for daily care**

Inkjet printer is the precision machine that has highly delicate mechanism. Especially, little dust and paper powder may have effect on a head nozzle firing ink, and may not get normal printing. To use the inkjet printer in good condition, we recommend the following daily care.

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For safe operation

Installation environment and Notes on cleaning

- Use this printer in clean (less dust) environment. The use of fan and ventilator might because of dusty environment.
They brow dust up dust around the printer.
- As using UV curing ink, install this printer in a well-ventilated area.
- Working environmental temperature is 15 to 30° C (59 to 86° F). Avoid using at lower or higher than this.

Notes on cleaning



- Never disassemble the device. Disassembling the device can result in electric shock hazards and breakage of the device.



- Prevent moisture from entering inside the device. If the inner part of the device becomes wet, electric shock hazards and breakage of the device can result.



- Conduct maintenance works after turning off the power switch and detaching the power cable. If not, unexpected troubles can arise.
- Make maintenance after the UV LED has been sufficiently cooled, or burn injury may occur.



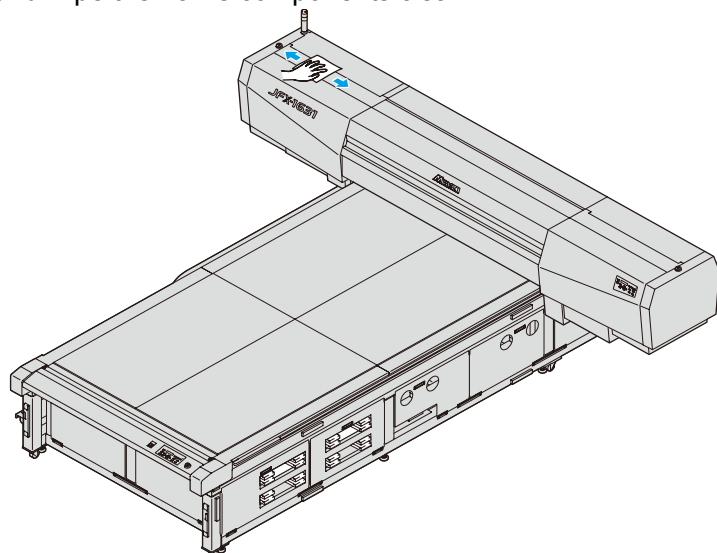
- Do not use benzine, thinner and chemical agents containing abrasives. Such materials can deteriorate or deform the surface of the cover.
- Do not apply lubricating oil or the like inside the device. Such materials can cause the printer mechanism to fail.
- In case water or alcohol mixed into the organic solvent ink, flocculation would be occurred. Be sure that not adhere water or alcohol to not only the nozzle and also near the head, the cap, wiper and so on.



- JFX series is a printer that uses ultraviolet ray curing ink (UV ink).. When implementing the daily care, must wear supplied goggles and gloves.

Maintenance for frame components

If the frame components of the device have stained, dampen a piece of soft cloth with water or neutral detergent diluted with water, squeeze it and wipe the frame components clean.



In case defective printing is not resolved

In the following cases, clean the suction nozzle using the cleaning kit.

- The station interior is severely contaminated.
- Defective printing is not resolved after executing the head cleaning function (☞ Operation Manual Chapter 2).

Contents of the cleaning kit	• Maintenance cleaning liquid (SPC-0568)		
	• Gloves	• Cleaning swab (SPC-0384)	• Goggles



- When cleaning the ink station and head, be sure to wear the supplied goggle and gloves since you may get ink in your eyes.

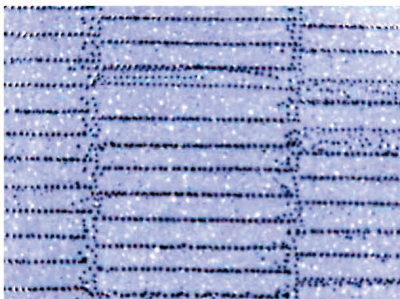


- Do not use alcohol or water.
- If contamination or bending is too severe, replacement of nozzle is required. Ask the service to the dealer or our branch.
- When a new cleaning swab (SPC-0384) is needed, ask the dealer or our branch for new one.

The examples of defective printing

These following examples indicate improper head (nozzle) firing by dust, which effect printing. Confirm the nozzle condition periodically before or during outputting not to use in such as this condition. The nozzle condition can be confirmed with [test print] in this plotter.

Deflection



Nozzle out



Ink dropping



Satellite

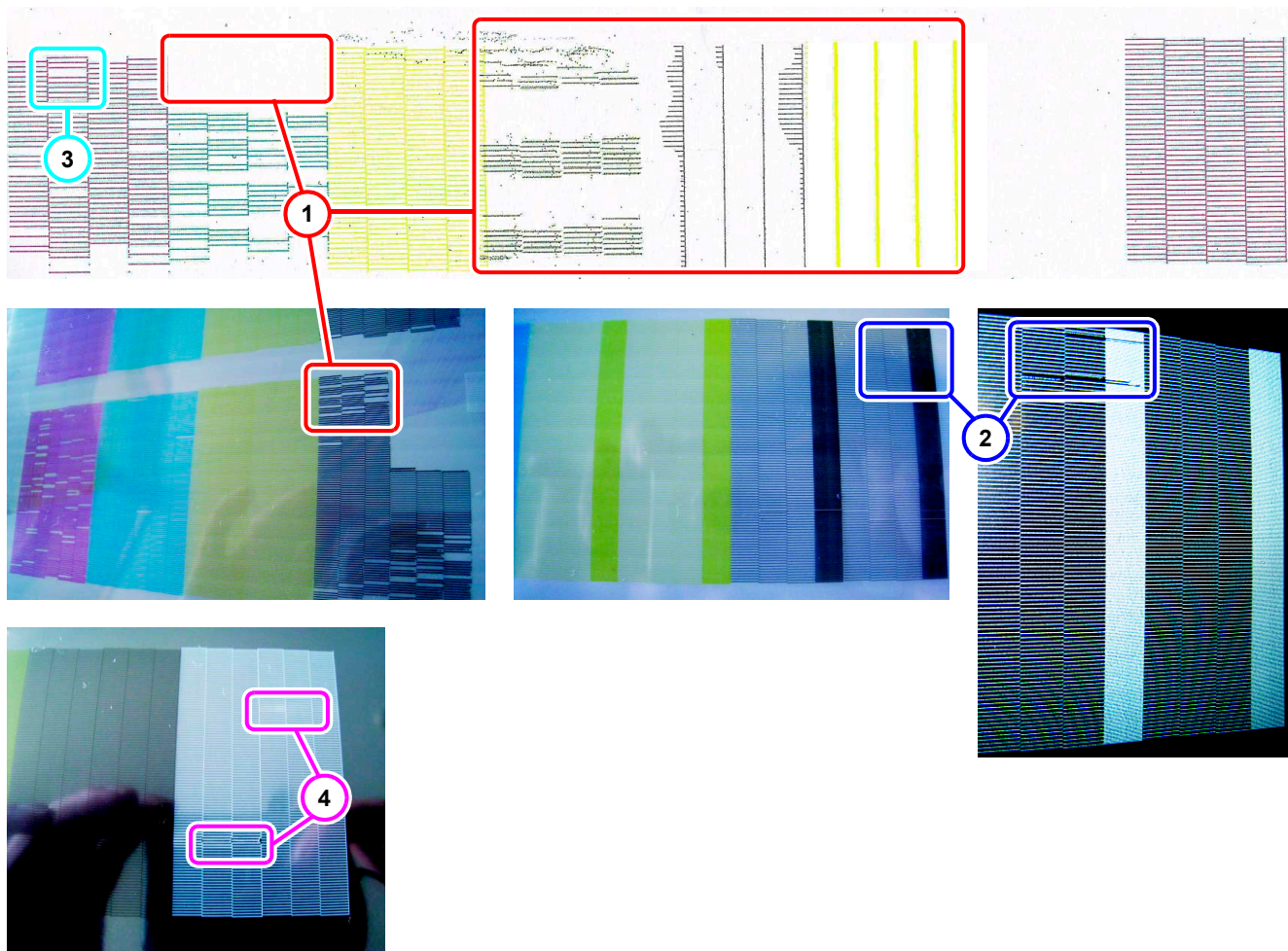


When nozzle clogging or deflection has occurred

When nozzle clogging or deflection has occurred, perform test drawing (☞ Operation Manual Chapter 2) to check the nozzle condition.

The result of test drawing and the maintenance

The following examples are the result of test drawing when nozzle clogging or deflection has occurred.

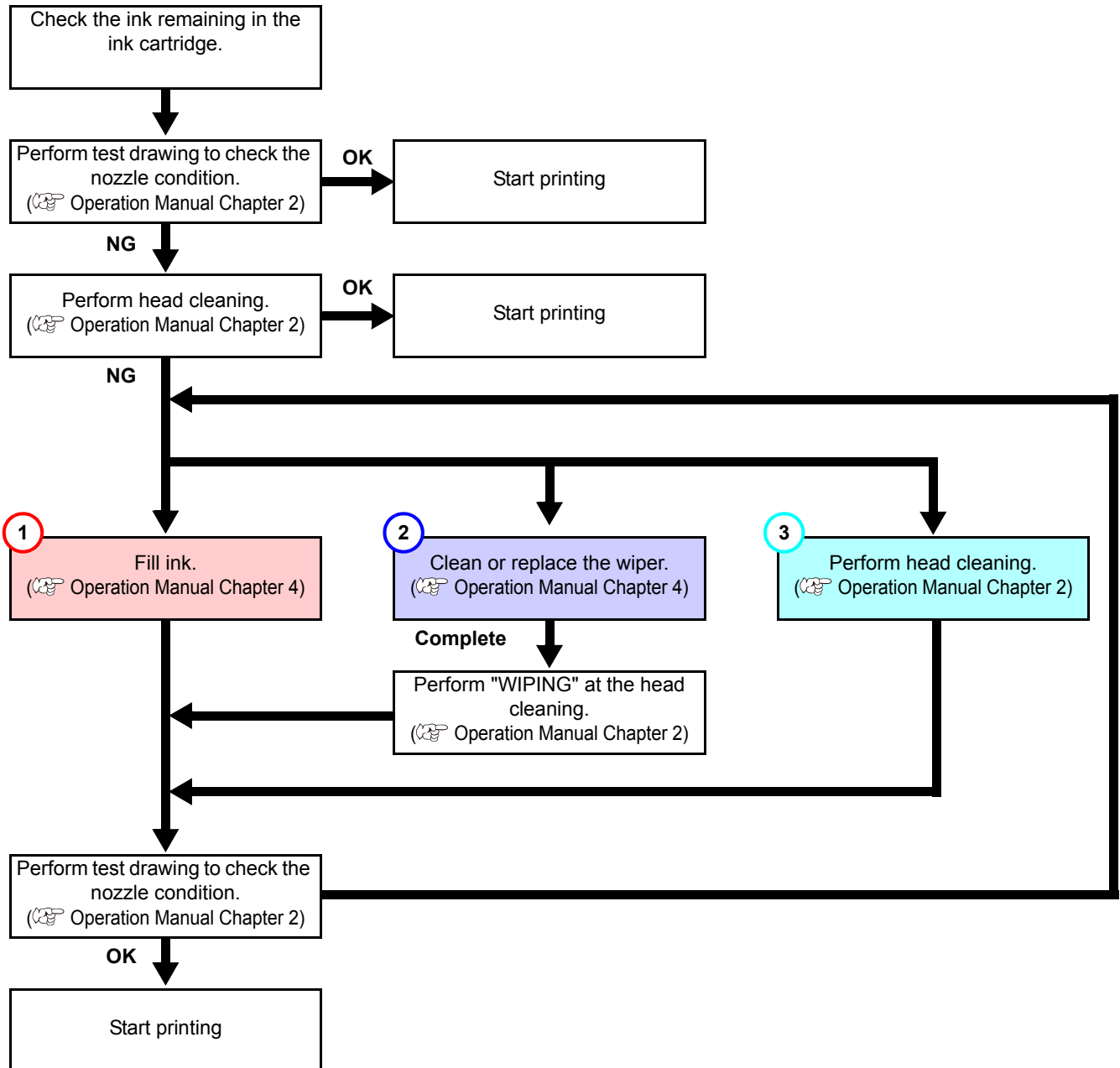


	Test drawing condition	Nozzle condition	How to maintain
1	Dot missing or blur is found in a wide area.	Ink is not filled enough.	Check the ink remaining and fill ink (☞ Operation Manual Chapter 4).
2	Several dots are missed or deflection has occurred.	Dust or ink mist is attached to the nozzle face.	Perform "WIPING" at the head cleaning. If the problem has not been solved, perform "SOFT" or "HARD" at the head cleaning (☞ Operation Manual Chapter 2). If the problem still remains, clean the wiper (☞ Operation Manual Chapter 4)
3	Many dots are missed.	Air bubbles could be mixed in the ink supply.	Perform head cleaning. (☞ Operation Manual Chapter 2)
4	Dots are missed in a small area when white ink is used.	White ink could be settled out.	Pull out the white ink cartridge, and shake it well. Then, perform white maintenance. (☞ Operation Manual Chapter 4)

● Maintenance Flow

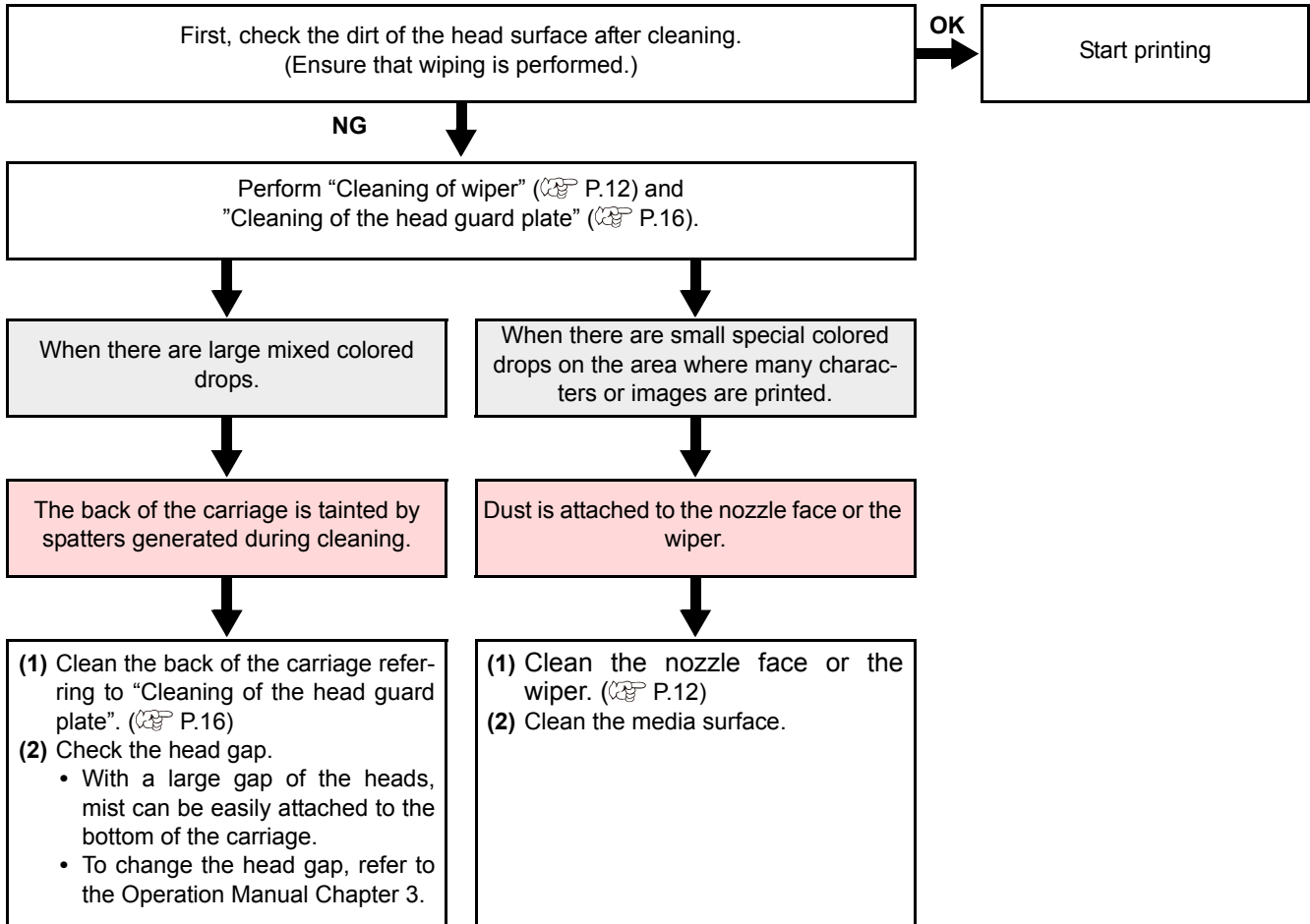
Perform maintenance as the following flow.

If the problem does not improve after performing the maintenance flow, repeat the same maintenance until it improves.



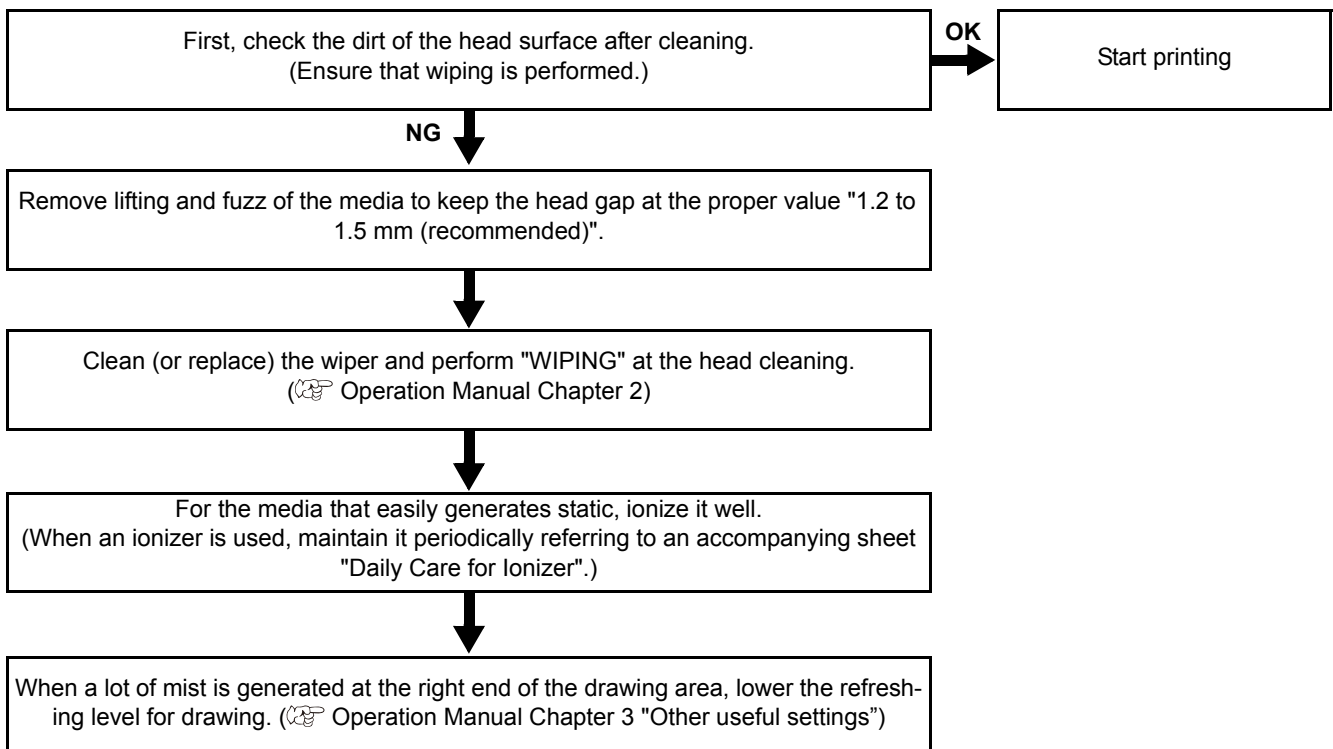
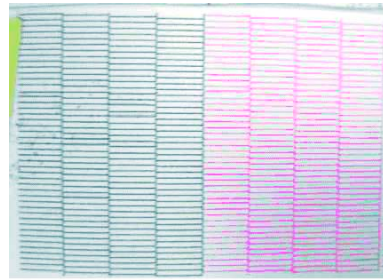
When other discharge problem has occurred

When ink drops



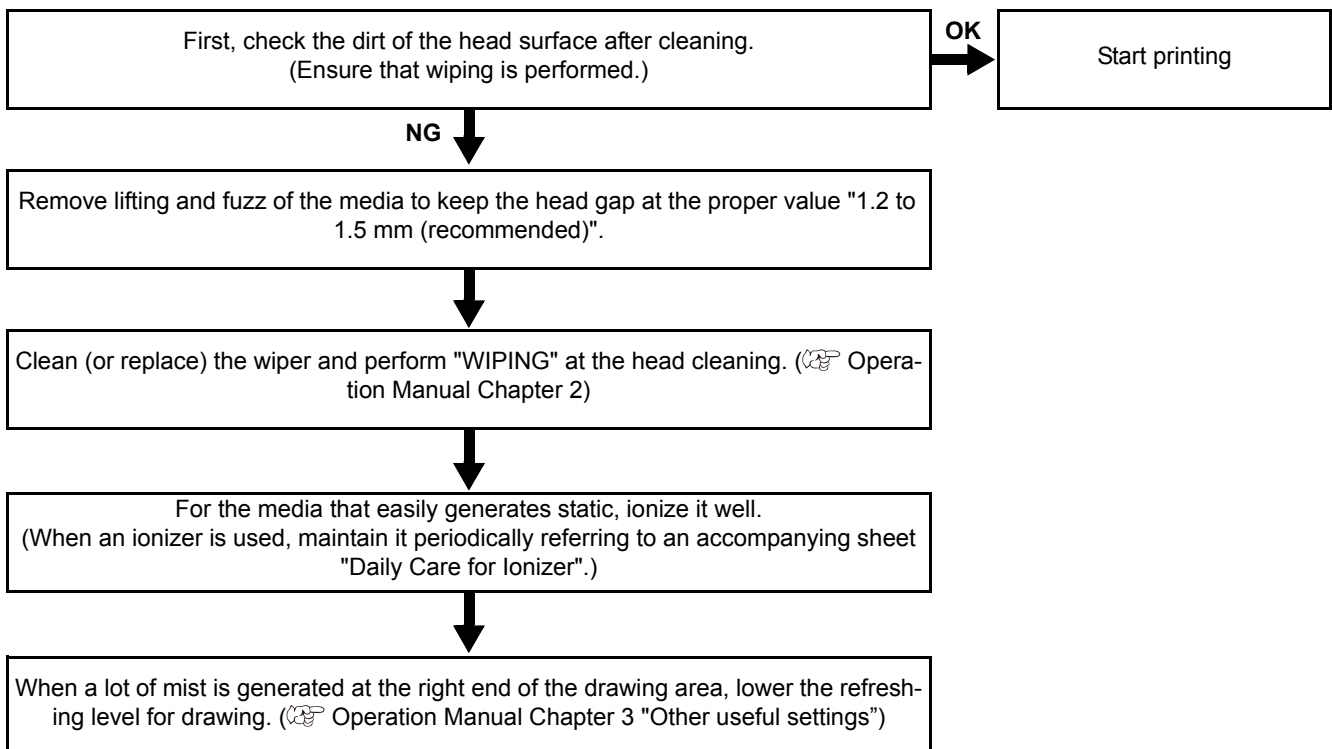
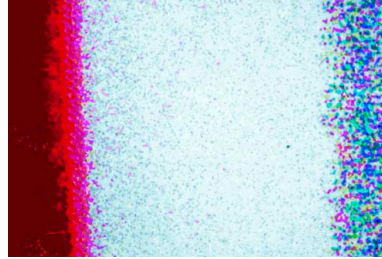
When deflection often occurs

● The example for deflection



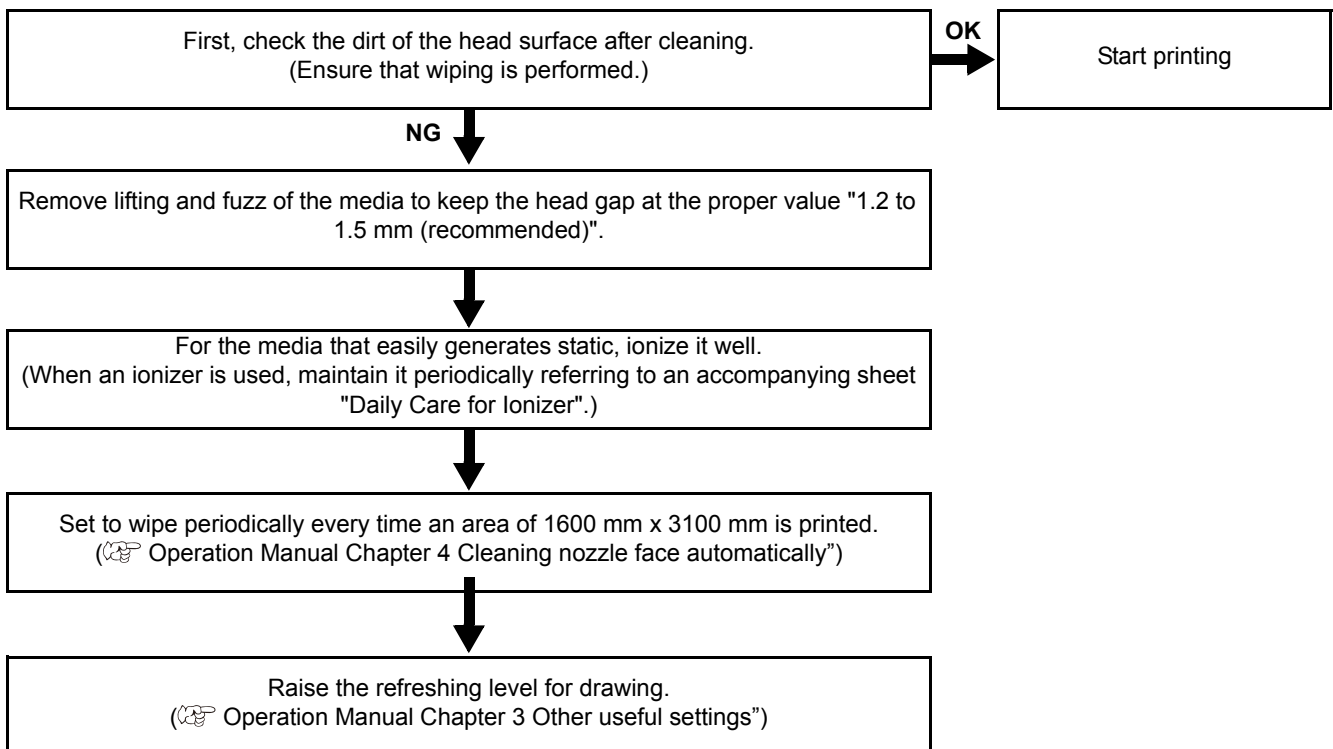
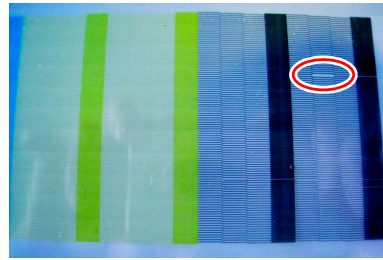
When mist is generated

● The example for mist



When dots are missed during drawing

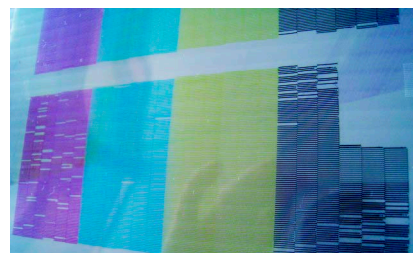
● The example for dot missing



When dots are missed after leaving it for a short time

If it occurs immediately after the replacement of ink, then refill ink. (☞ Operation Manual Chapter 4 "In case defective printing is not resolved")

● The example for dot missing



Notes for working environment

Performing frequency of the print setting or maintenance is greatly influenced by the printing environment or the condition of the media used. Use this machine with a full understanding of the followings.

Working environment	Consideration
In the gritty and dusty place	<ul style="list-style-type: none"> To keep the nozzle face clean, set to wipe periodically every time it prints about 1500 mm. (☞ Operation Manual Chapter 4 "Cleaning nozzle face automatically") Change the setting of periodic wiping depending on the amount of dust.
When the head gap is set wide because fibers stick out of media	<ul style="list-style-type: none"> UV light can expose the nozzle when there is a lot of scattered mist. Raise the refreshing level for drawing (☞ Operation Manual Chapter 3 "Other useful settings"), and set the periodic wiping (☞ Operation Manual Chapter 4 "Cleaning nozzle face automatically"). Increase performing frequency of every maintenance.
When the media that reflects UV light well is used such as glasses or glazed metal	
When there is an infrequently-used ink (print head)	<ul style="list-style-type: none"> An infrequently-used print head can be unstable to discharge ink comparing with the other print heads. Raise the refreshing level for drawing (☞ Operation Manual Chapter 3 "Other useful settings") to raise the usage rate of the head.
When printing on the media on which static can be charged	<ul style="list-style-type: none"> Put humidifiers on to avoid charge. Static may collect mist or dust around the printing area or the head. To print continuously for a long time, set the periodic wiping. (☞ Operation Manual Chapter 4 "Cleaning nozzle face automatically")
When printing in a dry place (such as in winter)	
When printing on a markedly uneven media (or object)	<ul style="list-style-type: none"> To keep the head gap the same, set extra media outside the suction area where a printing media is set. Leaving the head that has been degraded by reflected light may cause failure that needs replacing of the head.

Maintenance when needed

Important! A proper maintenance schedule is determined by the operator who observes throughout a period of use of the printer.

- Some media need maintenance every time of printing.
- The maintenance schedule differs depending on the image to be printed. For example, when the image is almost filled, perform maintenance frequently.

Cleaning of the UV LED unit

Remove ink or dust attached to the UV LED periodically.

- Important!**
- Clean the UV LED with care in order not to scratch an irradiation part on the bottom of the unit. If there is a certain amount of dirt or a light shielding object on the irradiation part, ink may not cure well and it may cause banding.

Removal of ink attached to the table

If necessary, remove ink attached to the table with an alcohol-impregnated cloth. Be careful not to scratch the table face when removing cured ink.

- Important!**
- Caution when using solvent**
- Leaving the table after attachment of ink may make the ink removal hard with alcohol only. When using a special solvent, contact our office before use. It may cause a failure of the machine.

Removal of the vacuum hole clogging on the table

The vacuum holes on the table can be clogged with ink. Remove the ink in the vacuum holes when needed. Be careful not to leave a part of cured ink on the table.

Cleaning of the bottom of the carriage

Remove ink attached to the bottom of the carriage.

Cleaning of the print head nozzle face with a cleaning swab

When an image is printed on a special media, or when this machine is not used for a long time, the nozzle may not be cleaned only with a normal cleaning.

Soak a specified cleaning swab into the washing liquid, and wipe out things adhered on the nozzle face. Perform this work under the direction of our service engineer.

Cleaning of the ionizer

Clean it referring to an accompanying sheet "Daily care for ionizer".

Cleaning of wiper

1

Turn ON the power.

2

Open the right maintenance cover.

- Remove the screws (2 pcs) and open the right maintenance cover.



3

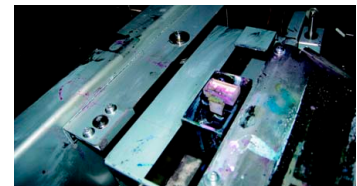
Select the “STATION” in the maintenance menu.

- (1) Press the **FUNCTION** key in the local mode.
- (2) Select the [MAINTENANCE] by pressing the **▲** or **▼** key, and press the **ENTER** key.
- (3) Press the **ENTER** key again.

4

Select the [MENT:WIPER EXCHG] by pressing the **▲** or **▼** key, and press the **ENTER** key.

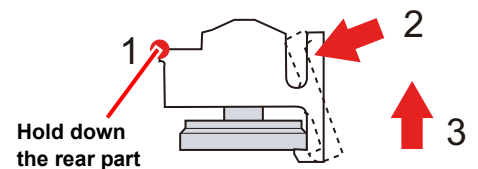
- The carriage automatically moves from the standby position to the left front cover on the left.
- The wiper will move toward you.



5

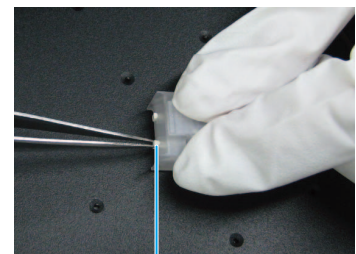
Remove suction nozzle Assy.

- (1) Hold down the rear part of the suction nozzle Assy.
- (2) Push the protrusion in front to back
- (3) Pull up the suction nozzle Assy.



6

Remove the wiper M with tweezers.

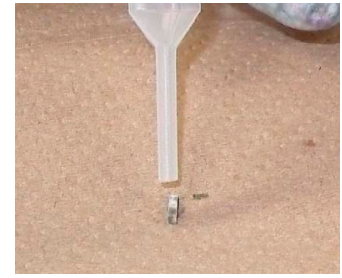


Wiper M

7

Drip wiper M with several drops of cleaning liquid and clean it with non-woven cloth.

- Avoid using the material that will leave dust or fiber after use such as paper towel.
- When remarkable deformation or wear is seen on the wiper M, replace it with the new one.



8

Check the inside of the suction nozzle and clean them if they are dirty.

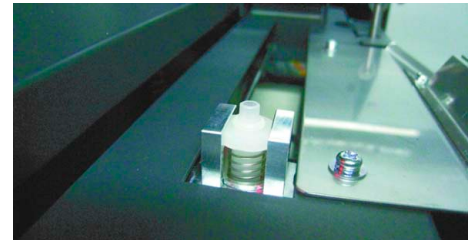
- (1) Remove hardened ink or the attached dirt using a stick with fine tip.
- (2) Using the dropper, drip several drops of cleaning liquid inside the suction nozzle and clean with non-woven cloth.



9

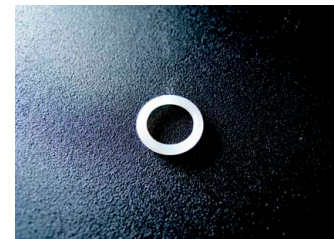
Check around the O ring under the suction nozzle, and clean it if it is stained.

- Around the O ring, uncured ink is sticking. Wipe it out with nonwoven cloth.



10

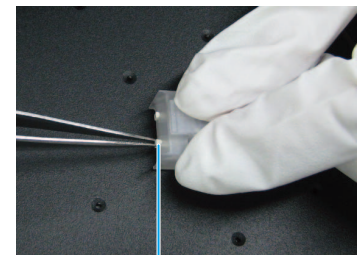
Remove the O ring with tweezers, and clean it.



11

Attach the wiper M to the suction nozzle.

- Adjust the wiper M and the suction nozzle so that they are on the same height.

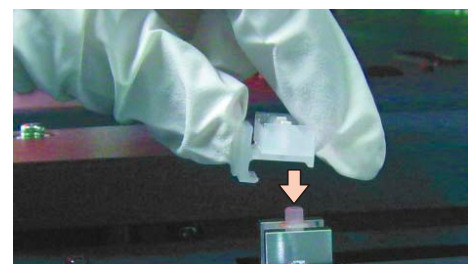


Wiper M

12

Attach the suction nozzle Assy pressing it firmly under the suction nozzle.

- The wiper M will stick out by around 0.5 mm after being attached.



13

When the cleaning is completed, press the **ENTER** key.

- The initial movement will be performed.

14

Press the **END** key several times to finish.

How to recover improper nozzle firing

When not using this plotter for a long time or according to environmental temperature, nozzle may be unstable in firing. In the case of this, follow below procedures to recover nozzle.



- In case the nozzle doesn't recover after implementing these procedures, contact with our customer service or agency you purchased, and need to replace heads and so on.

1

Daily care

- Implement all parts noted on this article.

2

Normal cleaning ( Operation Manual Chapter 2)

- Implement normal cleaning along the instruction manual after daily care above-mentioned.
- Repeat cleaning and test printing, and confirm the nozzle still clogging or not.



- In case nozzle clogging is not resolved with all these procedures, contact with our customer service or make service call to the agency you purchased.

When the waste ink tank becomes full

The ink used for head cleaning or flushing is gathered in the waste ink tray.

When the waste ink tray is full, an error is displayed. When an error appears, dispose of the waste ink into the waste ink tank as follows.

When the tank is filled with waste ink, the following error message is displayed.

!WASTE INK TANK
WASTE INK TANK FULL

Disposing of waste ink

1

Attach the waste ink tank.



2

Turn on a cock.

- The waste ink in the waste ink tray is transferred into the waste ink tank.



3

When the error disappears, remove the waste ink tank.

4

Dispose waste ink into the prepared polyethylene tank.

- Before replacing ink, put paper on the floor. (To prevent the floor from being stained with ink)
- Dispose the waste ink pursuant to the regulations of your district.



- Contact the local dealer or call our branch if you need a spare waste ink tank.
- Prepare a polyethylene tank for emptying waste tank.



- If ink is at discharging, such as at head cleaning, conduct the operation after the discharging is completed.
- Take measures for avoiding spattering of waste ink, such as covering an opening of a tank with tissue paper, at handling the waste ink tank.

Avoiding dripping of ink droplet at printing

Cleaning of the head guard plate

Ink droplets caused by drawing may appear on a head guard plate on a bottom face of the carriage. As they can cause stain on media by dripping of ink droplets or drawing trouble, conduct cleaning of the bottom face of the carriage periodically.

Articles required for cleaning	• Maintenance cleaning liquid (SPC-0568)		
	• Cleaning Swab (SPC-0384)	• Gloves	• Goggles



- Do not remove the unspecified parts.

1

Turn on the power.

- After the initial movement, the system turns to the local mode.

2

Press the **FUNCTION key in the local mode.**

FUNCTION
VIEW <ENT>

3

Select the [MAINTENANCE] with pressing the **▲ or **▼** key.**

FUNCTION
MAINTENANCE <ENT>

4

Press the **ENTER key.**

MAINTENANCE
STATION <ent>

5

Press the **ENTER key.**

- The carriage automatically moves from the standby position to the left front cover on the left.

STATION
MENT : CARRIAGEout

6

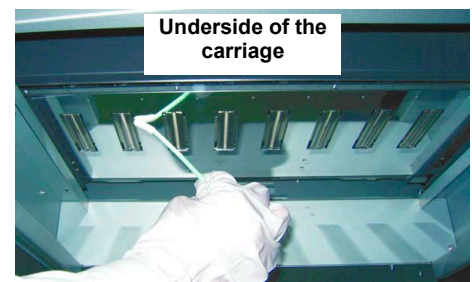
Press the **ENTER key.**

- The carriage is lifted down to the cleaning position.
- When the movement is completed, you may now move the carriage manually.

7

Instill the cleaning liquid to the swab and clean the side of the head.

- Avoid wiping the nozzle surface of the head. It would cause the nozzle clogging.
- In case you want to buy special cleaning swab, please contact your sales agent or our branch office.



8

Press the  key after completing the cleaning

- Initial operation is executed.

9

Press the  key several times to turn the system to the local mode.

What to do when this machine is not used

Perform the followings when this machine is not used.

When this machine is not used for "two days or less"

Check before stopping the use	<ul style="list-style-type: none">• Set the [WAITING] level of REFRESH to "Level 3". (Operation Manual Chapter 3 "Other useful settings")• Set the media thickness to "0 mm" to lower the carriage height to the lowest position. (Operation Manual Chapter 3 "Registering the thickness of the media")
Check before restarting the use	<ul style="list-style-type: none">• Perform test drawing. (Operation Manual Chapter 2 "Test drawing")• Perform head cleaning depending on the nozzle condition. (Operation Manual Chapter 2 "Execution of head cleaning")



- Leave the power of the machine [ON] while this machine is not used.

When this machine is not used for "three to seven days"

Check before stopping the use	<ul style="list-style-type: none">• Set the power of this machine to [OFF].
Check before restarting the use	<ul style="list-style-type: none">• When white ink is used, perform "WHITE MAINTENANCE". (Operation Manual Chapter 4 "Regular maintenance for white ink")• Perform test drawing. (Operation Manual Chapter 2 "Test drawing")• Perform head cleaning depending on the nozzle condition. (Operation Manual Chapter 2 "Execution of head cleaning")

When this machine is not used for "eight days or more (for a long time)"



- If this machine is not used for a long time (eight days or more), ask your distributor or our office beforehand.

Check before stopping the use	<ul style="list-style-type: none">• Turn the power of this machine [OFF].• Clean the ink discharge path. (Ask our service engineer.)
Check before restarting the use	<ul style="list-style-type: none">• Check that there is adequate amount of mixed liquid in the water tank of the water heating device. (Operation Manual Chapter 4 "Replacing water in water heater tank")• Run the washing liquid through the ink path. (Ask our service engineer.)• Shake the ink cartridge well and set it.• Fill ink. (Operation Manual Chapter 4 "In case defective printing is not resolved")• Perform test drawing. (Operation Manual Chapter 2 "Test drawing")• Perform head cleaning depending on the nozzle condition. (Operation Manual Chapter 2 "Execution of head cleaning")

How To Store

Storage Of Antifreezing Liquid And Washing Liquid

Be sure to store the Antifreezing liquid and the washing liquid in a cold and dark place. Store the Antifreezing liquid and the washing liquid in a place that is out of the reach of children.

Storage Of Media

Media should be stored in the little dust area, and not in direct sunlight. Avoid storing the media in the area with high temperature and high humidity.

Storage Of Ink Cartridge

Store the ink cartridge in no direct sunlight, an humidity. As it's a delicate product, do not drop it. The board on an ink cartridge (right picture) should not be contaminated and not discharge static electricity.

