

Inkjet printer TS500-1800

Requests for Daily Care and Maintenance

This machine is a precision machine equipped with extremely fine mechanisms. Especially, the nozzle surface of the heads from which the ink is discharged is affected even by a slightest attachment of dust or paper powder and the proper printing results could not be obtained. With a view to using this machine in a better condition, we would like to recommend performing the following care and maintenance on daily basis.

1. When to care

When to care	What to care	Reference Page
Once a day (at the end of the daily work)	Surroundings of the heads	P.2
	Capping station	P.4
	Wiper	P.5
	Wiper blade	P.6
	Wiper ink pan	P.7
	Media press	P.7
	Media sensor	P.7
Once a week (at the end of the work on weekend)	Cleaning the Platen	P.8
	Exterior	P.8
	Waste ink tank	P.8
	Cleaning the float sensor part of external ink supply unit	P.9
Once a week or two weeks	Replacing the carriage filter	P.10
	Replacing the mist filter	P.11
	Replacing the air cleaning filter	P.12
	Replacing the suction fan	P.14
Once a year	Replacing the ink filter at main body side	P.15
	Replacing the ink filter of external ink supply unit	P.16
	Replacing filter element of filter for vacuum	P.18
When the Machine Is Not Used for a Long Time	Perform "Storage Wash"	P.21



■ Tools required for maintenance

- Cleaning stick (SPC-0527)
- Cleaning liquid 03 maintenance kit (ML003-Z-K1)
- Cotton swab
- Gloves
- Soft fabric

2. Daily care



- When possible, use the cleaning stick (SPC-0527) for cleaning around the head/ capping station/ wiper. Using the other cotton bud may attach lint, then it may damage the machine.
- Be sure to perform maintenance for the ink cap and the wiper of capping station every day. If you leave it dirty, dirt may adhere to the nozzle surface, or, dust and dry ink may be rubbed against the nozzle. It may cause discharge defect.
- Clean the bottom of carriage every day so that it will not get dirt from inks or dusts. If you leave it dirty, dust and dry ink may be rubbed against the nozzle at wiping operation when performing head cleaning.
- When you clean the carriage bottom surface, fully be careful not to rub the nozzle surface.

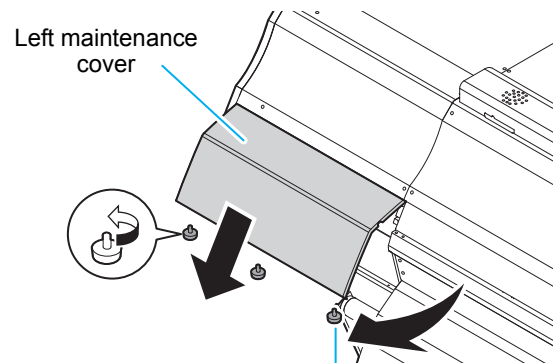
(1) Surroundings of the heads ("Cleaning the Head and the Area around It" Chapter 4 of the Operation Manual)

Important!

- The heads and their surroundings are the parts most liable to be tainted in this machine and if tainted, it could cause adverse effects to the functions of the machine and the results of the printings. Moreover, as the head itself uses very fine mechanisms, sufficient precautions are required for the care and maintenances.

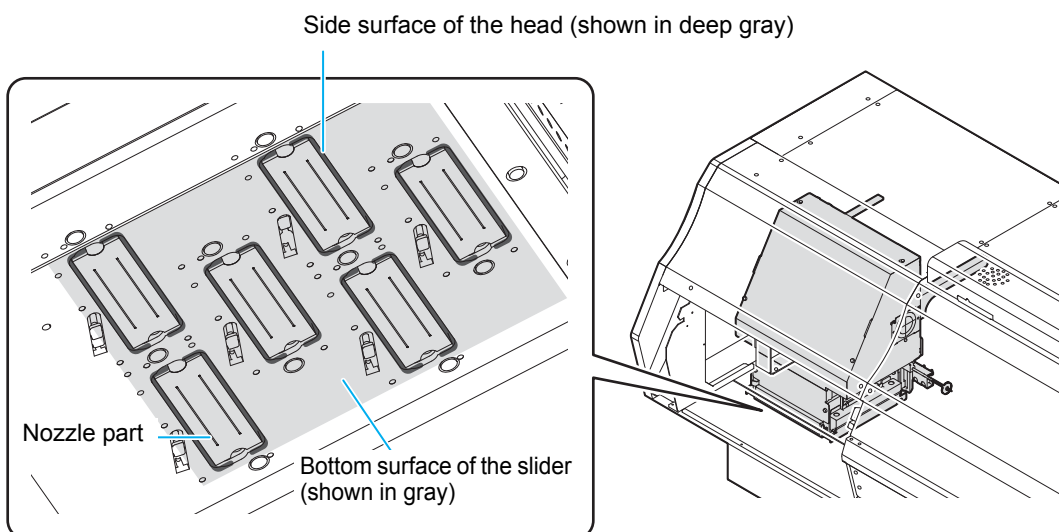
1 Move the carriage to the left and open the left maintenance cover.

- Refer to the Step 1 to 5 of Chapter 4 "Cleaning the Head and the Area around It" of the user's manual to perform the operation.



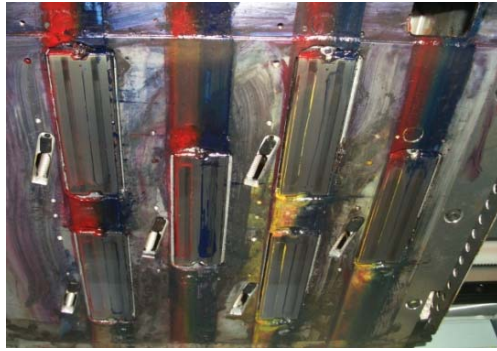
2 Soak the clean stick or the waste cloth in the maintenance cleaning liquid and wipe off an accumulated ink on the side of the head and on the bottom surface of the slider.

- Do not touch the nozzle surface, because the cleaning will be performed in the step 3.



Important!

- Clean the side of the head and the bottom surface of the slider until it looks as shown in the photo below.



Before cleaning



After cleaning

3 Soak the COTTON CIEGAL[®] in the maintenance cleaning liquid and wipe off the mark of the cap rubber attached on the nozzle surface from the rear side to the front side.

COTTON CIEGAL[®]



[Before cleaning]



[After cleaning]



Mark of the cap

Important!

- Immerse much enough so that maintenance liquid may drip from it.
- Do not wipe the nozzle surface with dry COTTON CIEGAL[®].
- If COTTON CIEGAL[®] has fluffed, replace it.
- If ink solid adheres to COTTON CIEGAL[®], change the surface to use for cleaning or replace it.

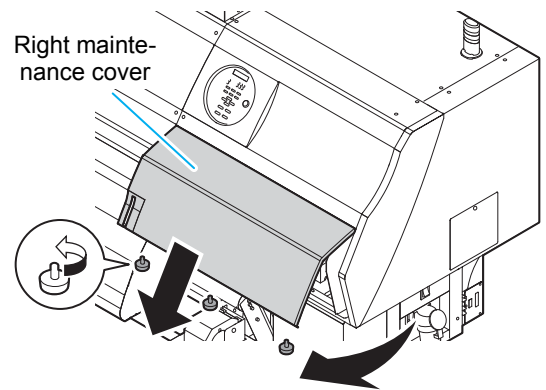
(2) Capping Station ("Cleaning around the wiper" Chapter 4 of the Operation Manual)

The surrounding area of the cap is also liable to be stained by the dust and ink. It is recommended to clean the head frequently using the cleaning liquid for maintenance suitable for the ink used to avoid the stains on the head.

- Cleaning liquid 03 maintenance kit (ML003-Z-K1)

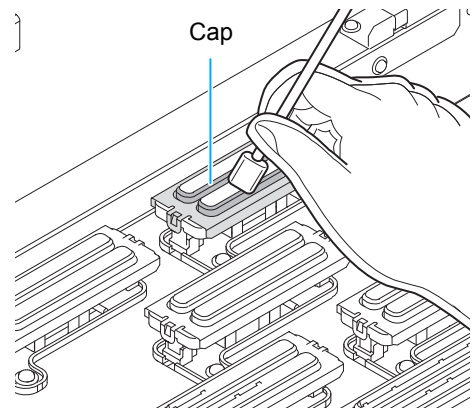
1 Move the carriage and open the right maintenance cover.

- Refer to the Step 1 to 5 of Chapter 4 "Cleaning around the wiper" of the user's manual to perform the operation.



2 Clean the cap.

- Dip the clean stick into the cleaning liquid for maintenance and wipe off the cap. Wipe off so that cleaning solution for maintenance will not remain.

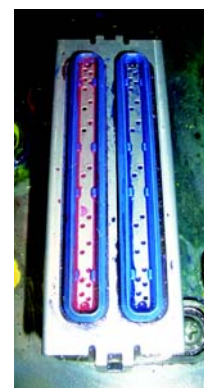


Important!

- Clean the cap rubber until it looks as shown in the photo below.
- After cleaning, make sure that the cap rubber and mesh in the cap are not removed.



Before cleaning



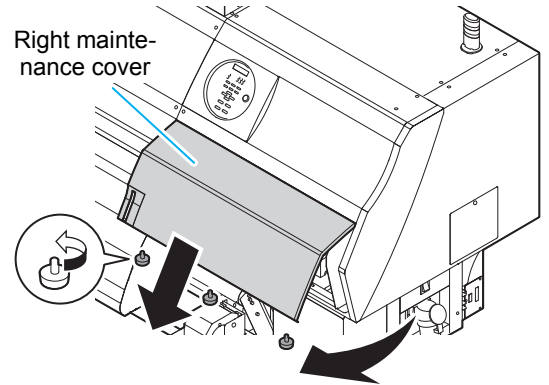
After cleaning

(3) Wiper ("Cleaning around the wiper" Chapter 4 of the Operation Manual)

On the wiper, the ink, dust and paper powder are liable to accumulate. Check the state of the wiper and if it is stained, clean it.

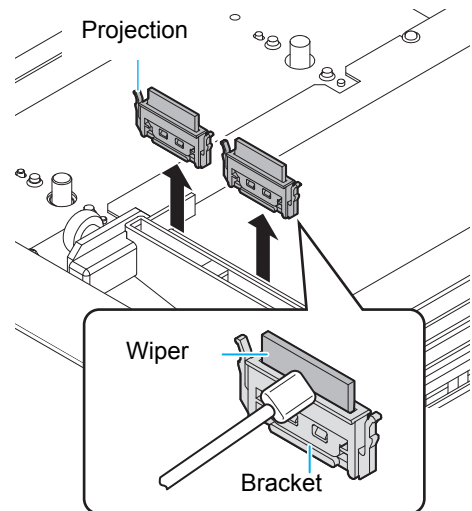
1 Move the carriage and open the right maintenance cover.

- Refer to the Step 1 to 5 of Chapter 4 "Cleaning around the wiper" of the user's manual to perform the operation.



2 Clean the wiper.

- Remove the wiper by holding the protrusions at its both ends.
- Wipe off the ink sticking to the wiper and bracket with a clean stick dipped in cleaning solution for maintenance. Wipe off so that cleaning solution for maintenance will not remain.



Further, in the cases as explained below, replace the wiper with the new one (SPA-0193) in accordance with "Replacing the wiper" on Chapter 4 of the Operation Manual.

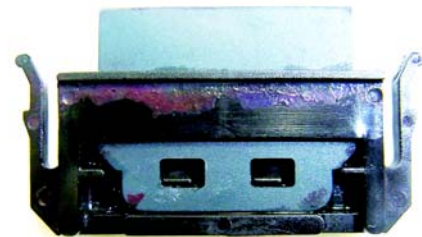
- When the wiper is deformed
- When the stuck ink can not be wiped off
- When the warning for wiper replacement is indicated

Important!

- Clean the wiper until it looks as shown in the photo below.
- After cleaning, make sure the edge of the wiper is horizontal.



Before cleaning



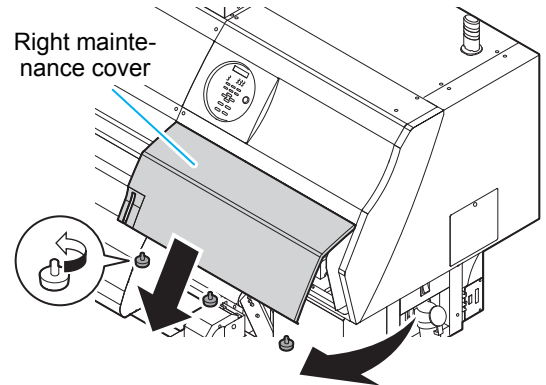
After cleaning

(4) Wiper blade ("Cleaning around the wiper" Chapter 4 of the Operation Manual)

Ink, dust, and paper dust gather on the wiper blade. Check the status of the wiper blade, and if it is dirty, clean it.

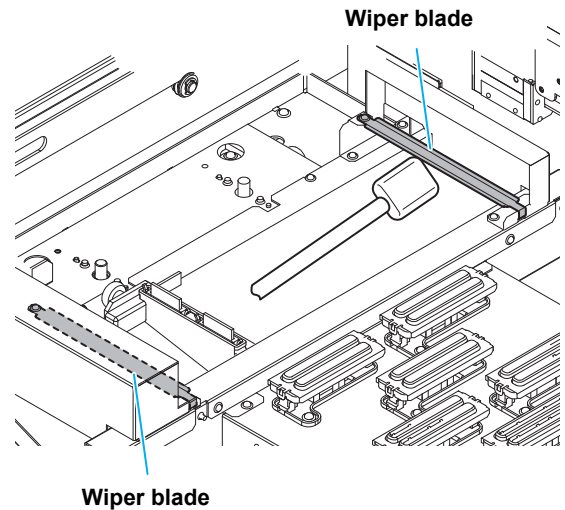
1 Move the carriage and open the right maintenance cover.

- Refer to the Step 1 to 5 of Chapter 4 "Cleaning around the wiper" of the user's manual to perform the operation.



2 Clean the wiper blade.

- Wipe off the ink of the wiper blade with clean stick or waste cloth dipped in cleaning solution for maintenance.



Important!

- Be careful of the wiper blade's edge, and thoroughly clean the side the wiper touches (rear).
- Clean the wiper blade until it looks as shown in the photo below.



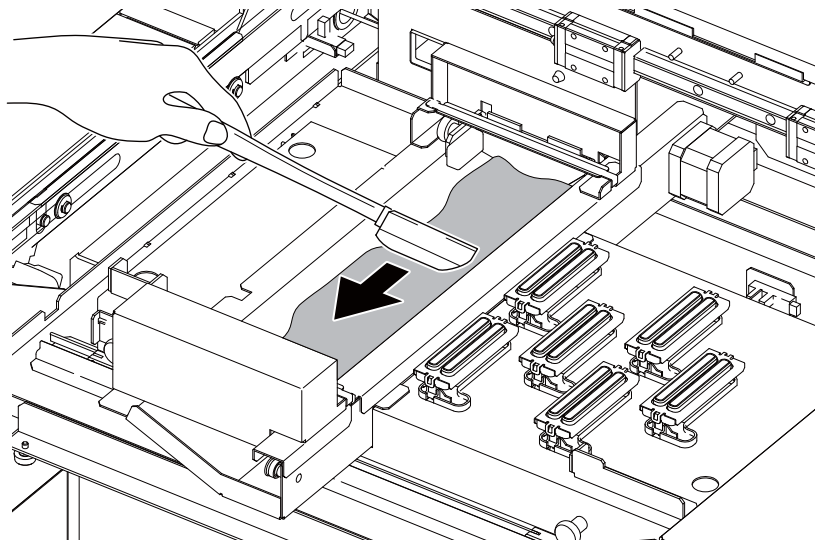
Before cleaning



After cleaning

(5) Wiper ink pan (“Cleaning the Wiper Ink Pan” Chapter 4 of the Operation Manual)

Water-based ink does not flow easily. Ink dries, gets stuck, and accumulates. Use a rubber spatula or the like to frequently push the ink that piles up in the ink pan beneath the wiper towards the waste route.



(6) Media press (“Cleaning the Media Press” Chapter 4 of the Operation Manual)

When the cut dust of the media and other dusts accumulate between the media holder and the platen, it could cause the risks that the transfer of the media could not be performed properly or such dusts stick to the nozzles and this could interfere the proper printings. You are recommended to clean it frequently.

(7) Media sensor (“Cleaning the Media Sensor” Chapter 4 of the Operation Manual)

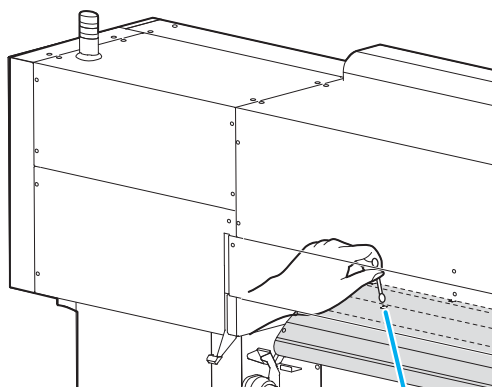
The media sensors are located on the platen (for two positions) in the backside and the bottom surface of the head.

If the dusts and ink accumulate on the sensor, it could cause false detection of the media or the register mark. Wipe off the sensors with soft cloth or clean sticks.



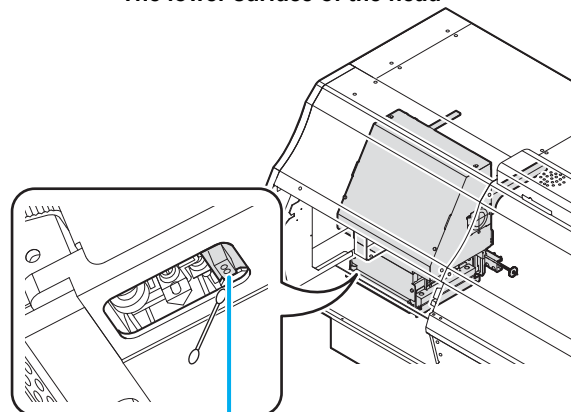
- For the cleaning of the media sensors, never use the solvent.
- When the sensor is heavily stained, wipe off with a cloth soaked in the waterdiluted neutral detergent.

The backside of the machine



Media sensor

The lower surface of the head



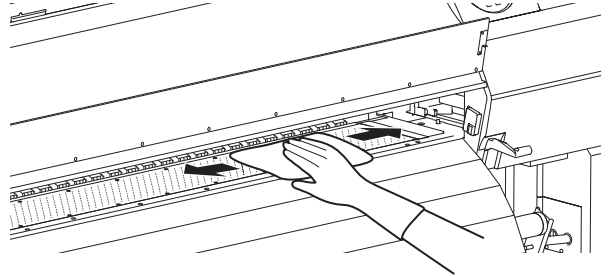
Media sensor

3. Periodically care (Once a week)

Users are advised to perform the maintenance works described below once a week so that the printer will keep its high performance and accuracy over an extended period of its life.

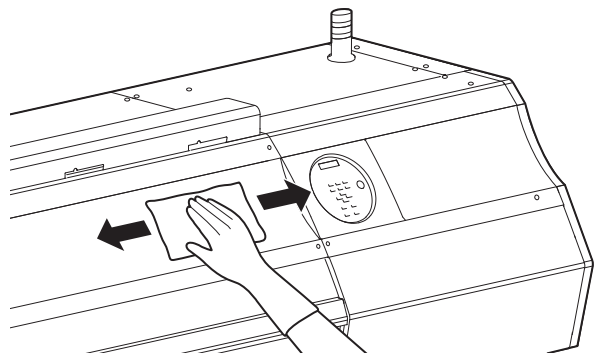
(1) Platen (“Cleaning the Platen” Chapter 4 of the Operation Manual)

Platen is a place where dusts, paper powder, and ink are liable to accumulate. It is therefore suggested to clean it frequently. Wipe out the platen surface and the platen cover with a soft brush or cloth. The grooves for media holder and for cutting the paper (cutter line) are the place where the dusts are especially liable to accumulate. Clean them thoroughly.



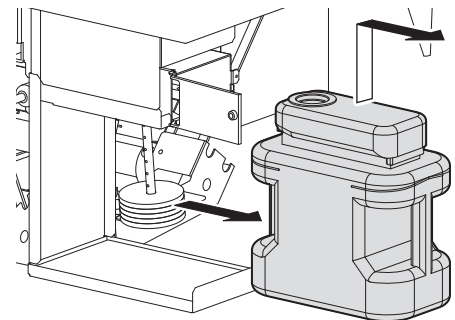
(2) Exterior (“Cleaning the Exterior Surfaces” Chapter 4, Operation Manual)

Depending on the using environment, the dusts or sand powder could stick to the exterior of the main unit. To avoid the entry of the dusts into the moving part of the head, wipe them off with soft cloth dipped into water and squeezed tightly.



(3) Waste ink tank (“If a Waste Ink Tank Confirmation Message Appears” Chapter 4 of the Operation Manual)

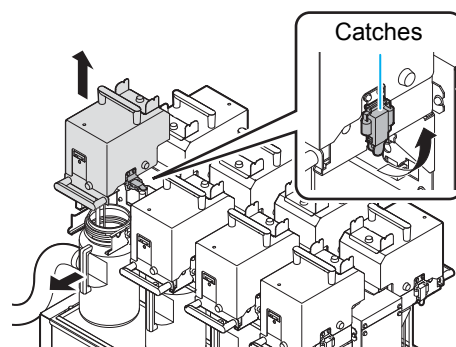
Check whether the waste ink tank is full or not. Take care so that the waste ink never overflows the tank.



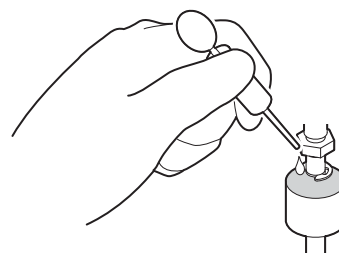
(4) Cleaning the float sensor part of external ink supply unit

Clean it every time you replace ink bottle or once a week.

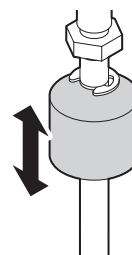
- 1** Remove the ink cover of the ink bottle, and remove the ink bottle.



- 2** Place a few drops of washing liquid on the upper part of the float.

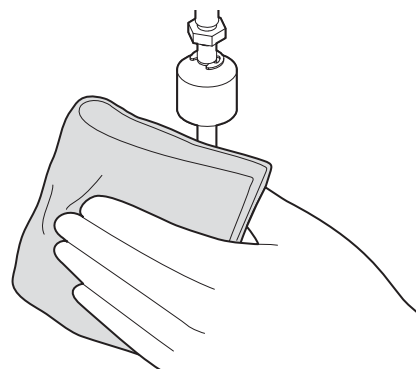


- 3** Move the float up/ down to spread washing liquid evenly.

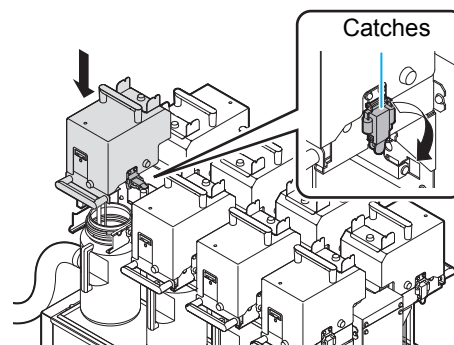


- 4** When the float comes to move smoothly, wipe washing liquid adhering to the float and the pipe with a waste cloth etc.

- Move the float up/ down again and check that there is no abnormality.



- 5** Set the ink bottle on the ink holder, and attach the ink cover.



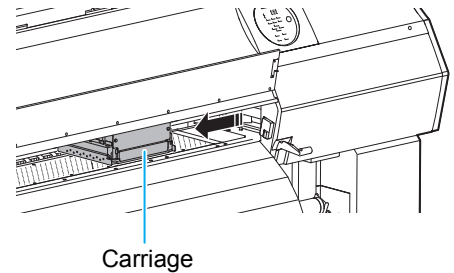
4. Periodically care (once in a week or two weeks)

(1) Replacing the carriage filter

Replace it once in a week or two weeks.

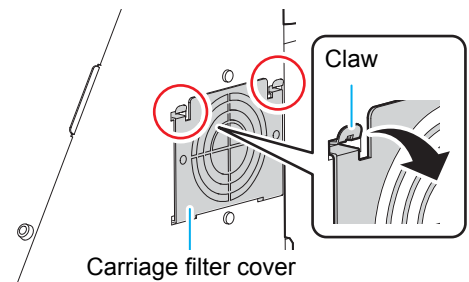
1 Move the carriage.

- Refer to the Step 1 to 4 of Chapter 4 “Cleaning around the wiper” of the user’s manual to perform the operation.

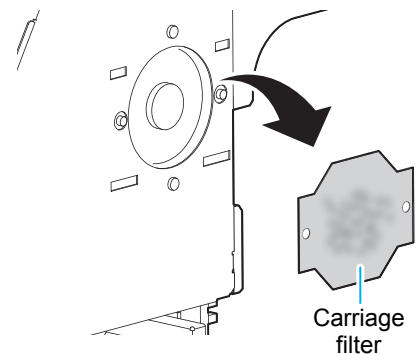


2 Remove the carriage filter cover at the left and right of the carriage.

- Remove the carriage filter cover of right and left of the carriage.
- Pinch the claw attached to the upper part of the carriage filter cover and pull it to the front.



3 Remove the used carriage filter cover.

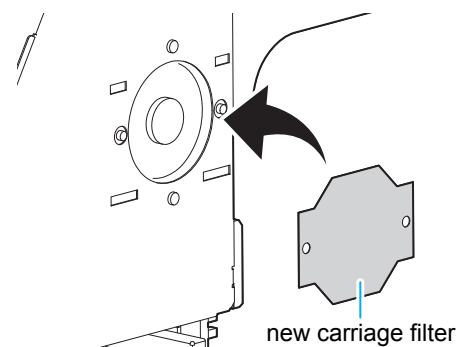


4 Mount a new carriage filter (SPA-0189).

- Insert the holes of right and left of the carriage filter into the convex part of the carriage.

Important!

- The carriage filter is located at right and left of the carriage.
Replace both filters at the same time.



5 Return the carriage filter cover to the original status.

6 When replacement has been completed, press the **ENTER** key.

Close a cover
COMPLETED [ENT]

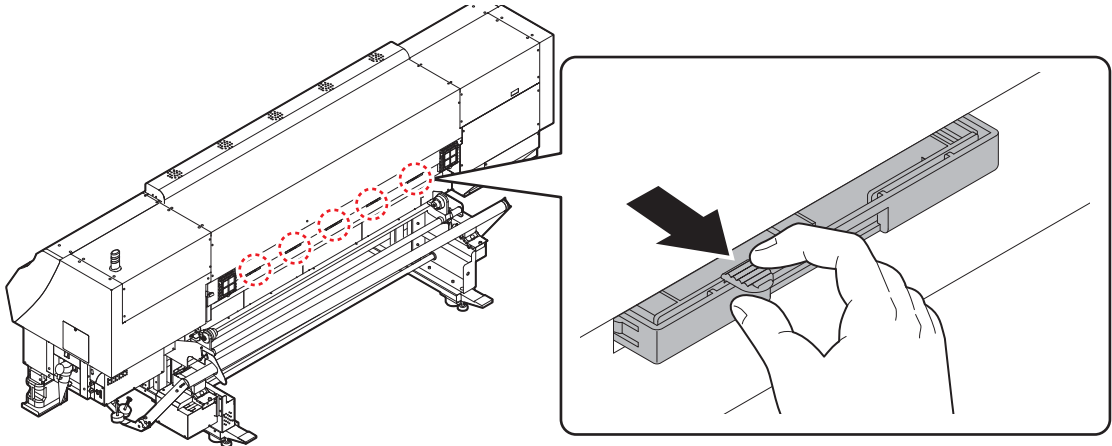
7 Close the right maintenance cover and press the **ENTER** key.

(2) Replacing the mist filter

Replace it once in a week or two weeks.

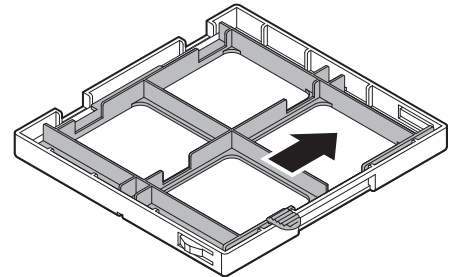
1 Pull out the mist filter ASSY located at the rear surface of the main body.

- There are 5 mist filter ASSY at the rear surface of the main body (parts indicated with circles in the figure).
- Hold the mist filter ASSY's tab with your finger and thumb, and pull out the mist filter ASSY.



2 Removed the used filter.

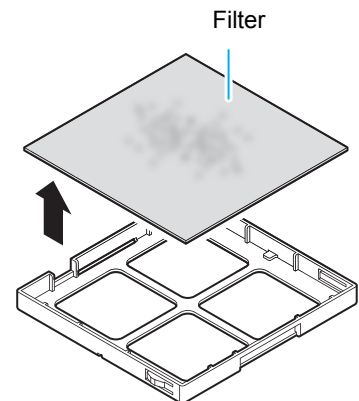
(1) Slide the filter holder a little, and remove it.



(2) Removed the used filter.

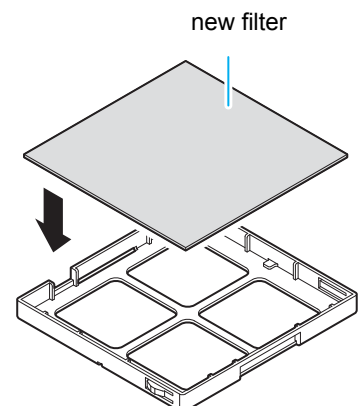
Important!

- Ink at printing adheres to the mist filter ASSY. When replacing the filter, it is recommended to perform the work with a sheet of paper placed.



3 Attach new mist filter (SPA-0190) and the filter holder.

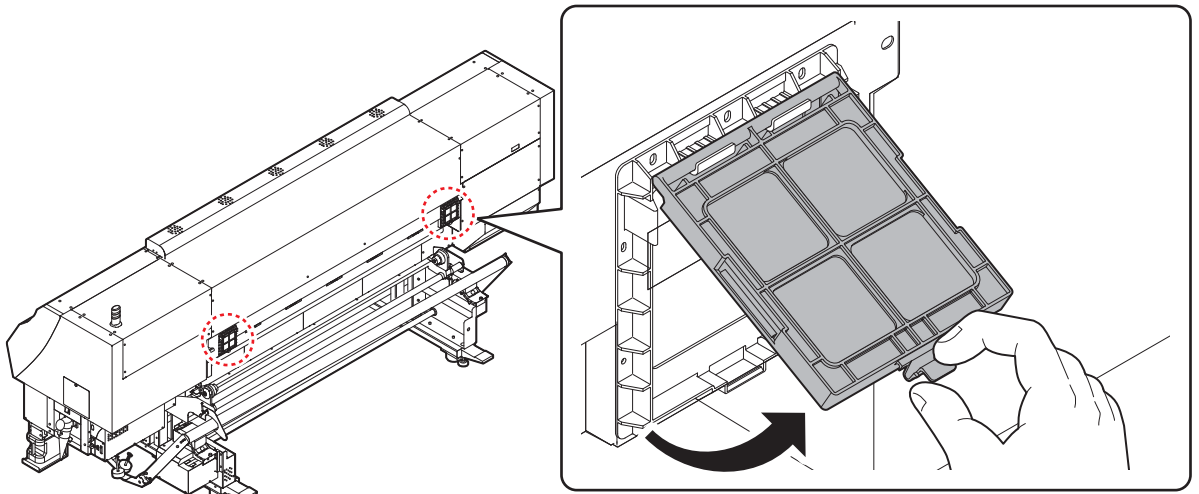
4 Attach the mist filter ASSY to the original position.



(3) Remove the left and right mist filter ASSYs on the rear of the main body.

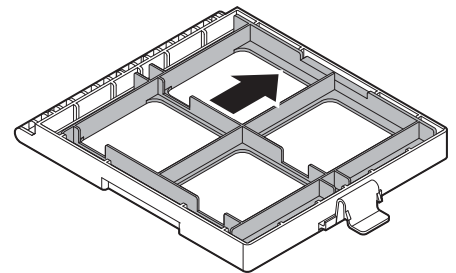
- There are 2 mist filter ASSY at the rear surface of the main body (parts indicated with circles in the figure).
- Push up the mist filter ASSY's tab, and swing the ASSY upward to remove it.

Important! • Ink at printing adheres to the mist filter ASSY. When removing the filter, it is recommended to perform the work with a sheet of paper placed.



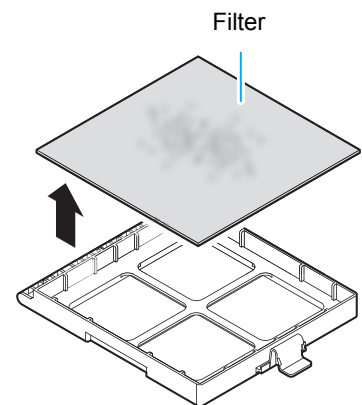
5 Removed the used filter.

(1) Slide the filter holder a little, and remove it.



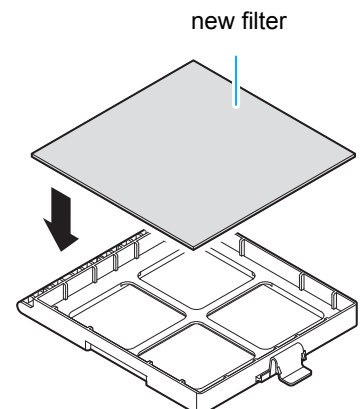
(2) Removed the used filter.

Important! • Ink at printing adheres to the mist filter ASSY. When replacing the filter, it is recommended to perform the work with a sheet of paper placed.



6 Attach new mist filter (SPA-0190) and the filter holder.

7 Attach the mist filter ASSY to the original position.

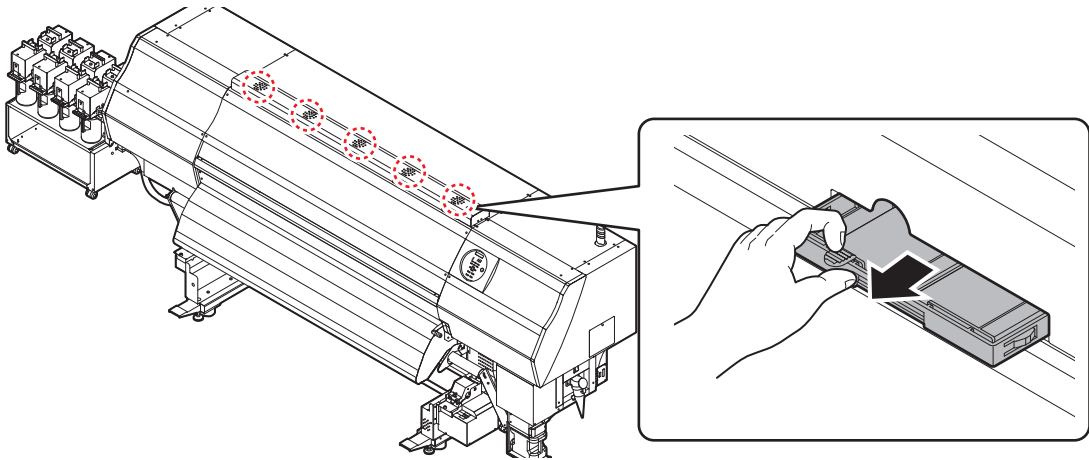


(4) Replacing the air cleaning filter

Replace it once in a week or two weeks.

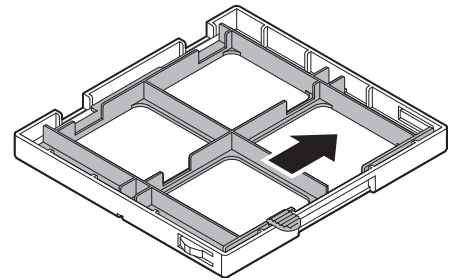
1 Pull out the air cleaning filter ASSY located at the upper part of the main body

- There are 5 air cleaning filter ASSY at the rear surface of the main body (parts indicated with circles in the figure).
- Hook your finger on the hole in front and pull the air cleaning filter ASSY down to remove.



2 Removed the used filter.

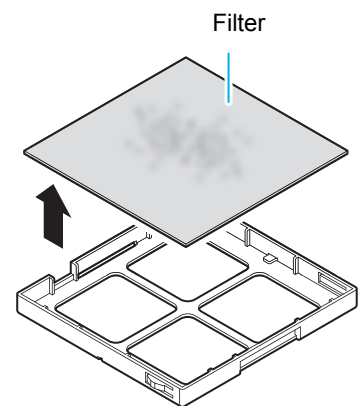
(1) Slide the filter holder a little, and remove it.



(2) Removed the used filter.

Important!

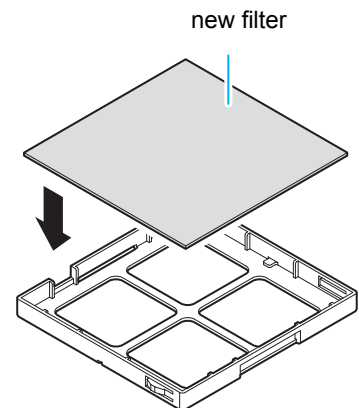
- Ink at printing adheres to the air cleaning filter ASSY. When replacing the filter, it is recommended to perform the work with a sheet of paper placed.



3 Attach new mist filter (SPA-0190) and the filter holder.



- For the filter used when replacing the air cleaning filter, the same filter (SPA-0190) with P.11 "Replacing the mist filter" is used.



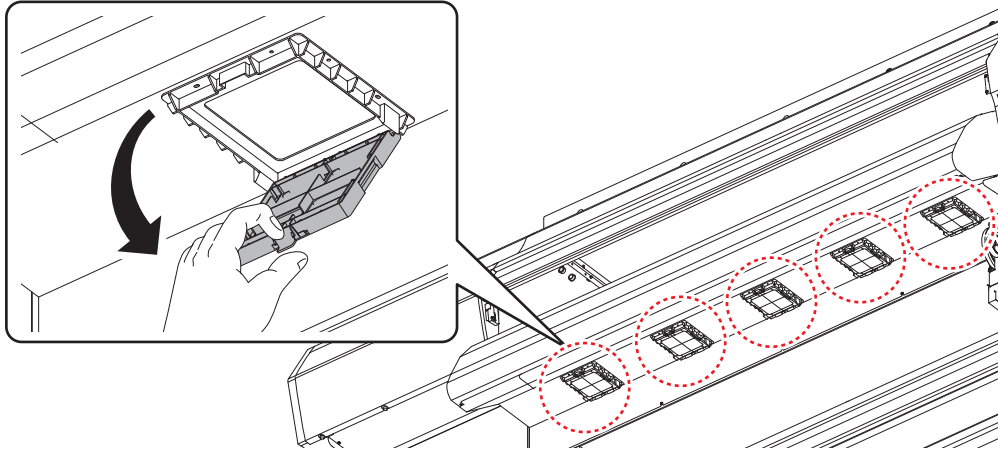
4 Attach the air cleaning filter ASSY to the original position.

(5) Replacing the suction fan

Replace it once in a week or two weeks.

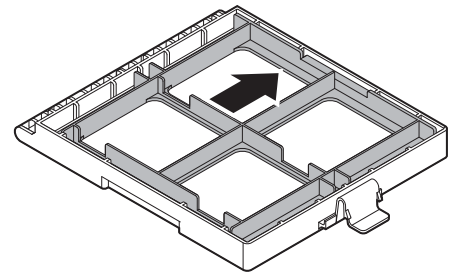
1 Remove the mist filter ASSYs at the bottom of the post heater.

- There are 5 mist filter ASSYs at the bottom of the post heater (at the locations circled in the figure).
- Push down the mist filter ASSY's tab, and swing the ASSY downward to remove it.



2 Removed the used filter.

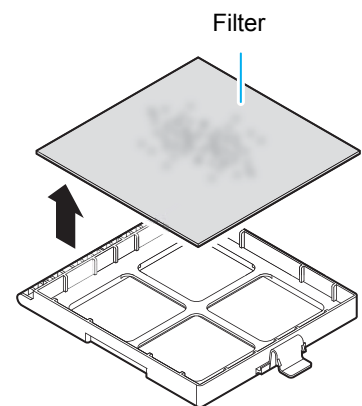
(1) Slide the filter holder a little, and remove it.



(2) Removed the used filter.

Important!

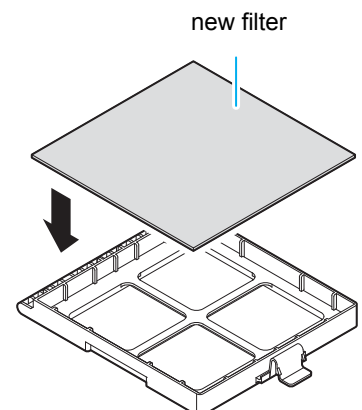
- Ink at printing adheres to the air cleaning filter ASSY. When replacing the filter, it is recommended to perform the work with a sheet of paper placed.



3 Attach new mist filter (SPA-0190) and the filter holder.



- For the filter used when replacing the air cleaning filter, the same filter (SPA-0190) with P.11 "Replacing the mist filter" is used.



4 Attach the air cleaning filter ASSY to the original position.

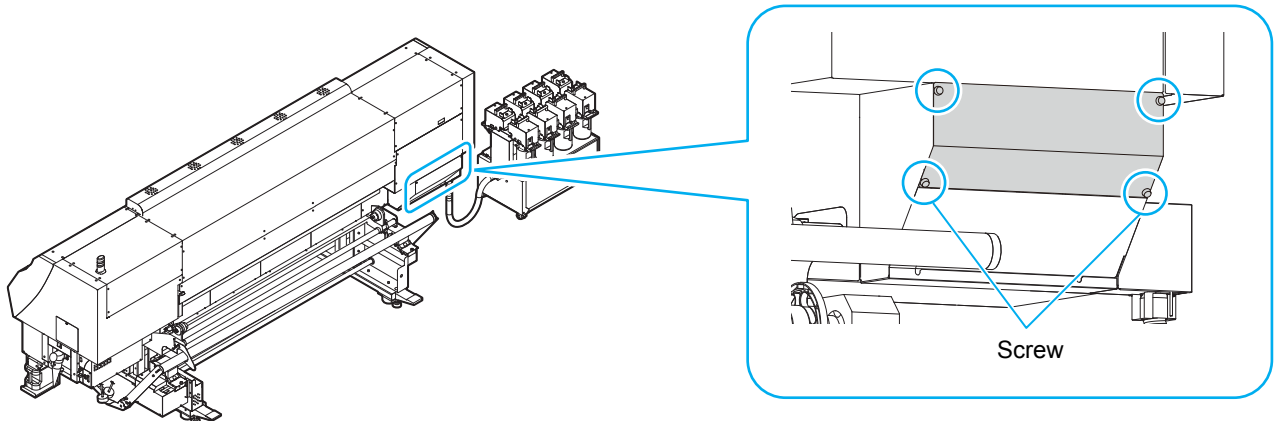
5. Periodically care (Once a year)

(1) Replacing the ink filter at main body side

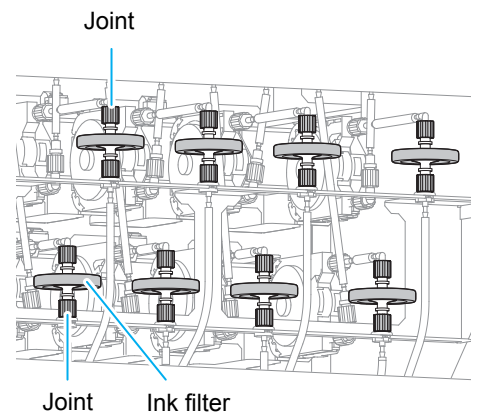
Replace it once a year.

1 After turning off the main power switch, open the rear maintenance cover (right) of the rear surface right side of this machine.

- Remove the screws (for 4 positions) of the rear surface maintenance cover (right).



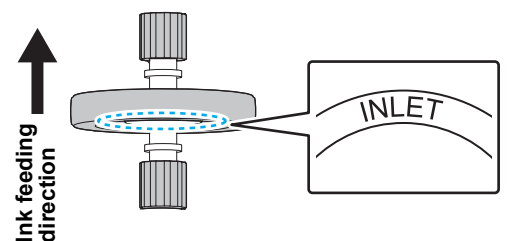
2 Loosen the joints of upper/ lower of the ink filter.



3 Replacing the used ink filter.

4 Attach new ink filter (SPA-0196), and tighten the joint.

- When attaching the ink filter, be careful of the ink feeding direction.
- Face the side of the filter with "INLET" written on it downwards and attach the filter.



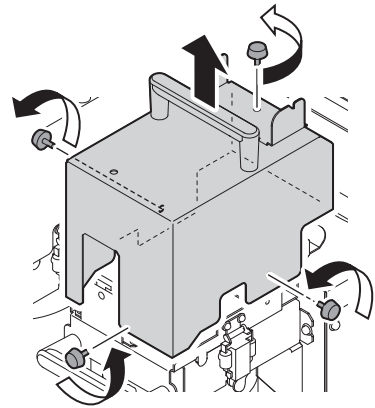
5 Return the rear surface maintenance cover (right) to the original position, and turn on the main power switch.

(2) Replacing the ink filter of external ink supply unit

Replace it once a year.

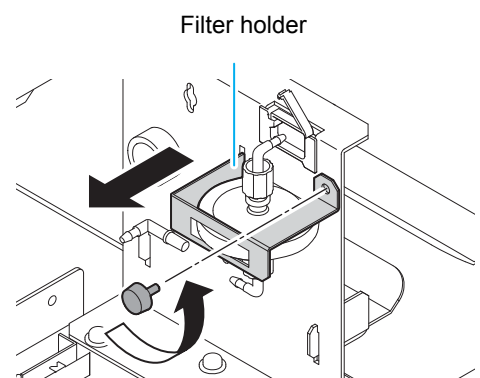
1 Turn off the main power switch, and then remove the ink cover.

- Remove the screws (for 4 positions) of the ink cover, and remove the cover.

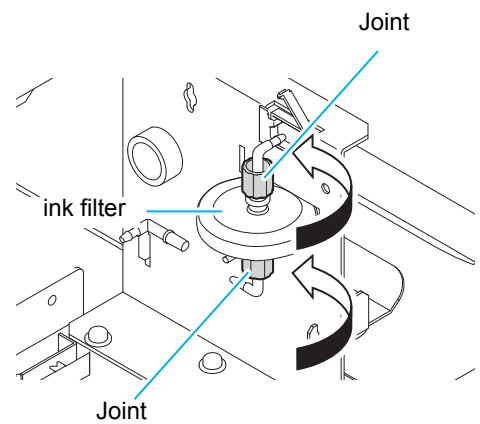


2 Replacing the filter holder.

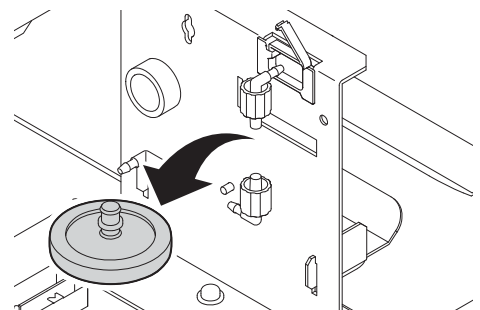
- Remove the screw of the filter holder, and remove the filter holder.



3 Loosen the joints of upper/ lower of the ink filter.

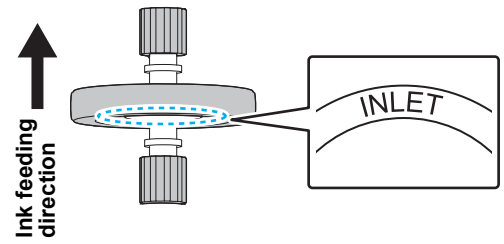


4 Replacing the used ink filter.

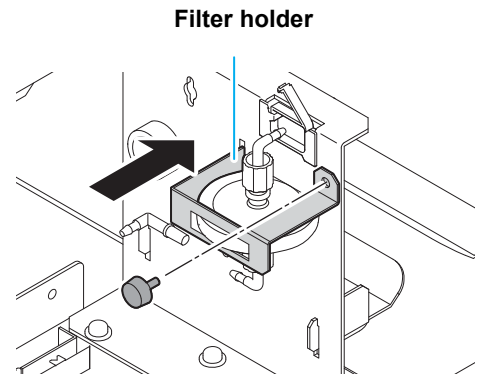


5 Attach new ink filter (SPA-0196), and tighten the joint.

- When attaching the ink filter, be careful of the ink feeding direction.
- Face the side of the filter with "INLET" written on it downwards and attach the filter.



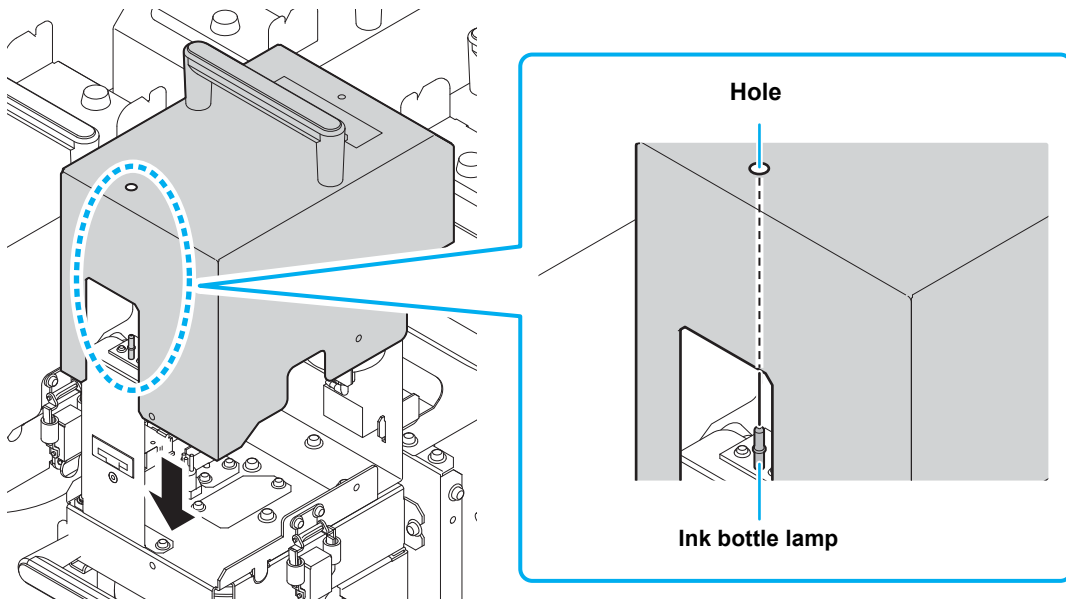
6 Attach the filter holder.



7 Return the ink cover to the original position, and turn on the main power switch.

Important!

- When returning the ink cover to the original position, attach it so that the hole on the ink bottle lamp matches the hole on the ink cover. If the holes do not match, it may cause ink bottle lamp damage.

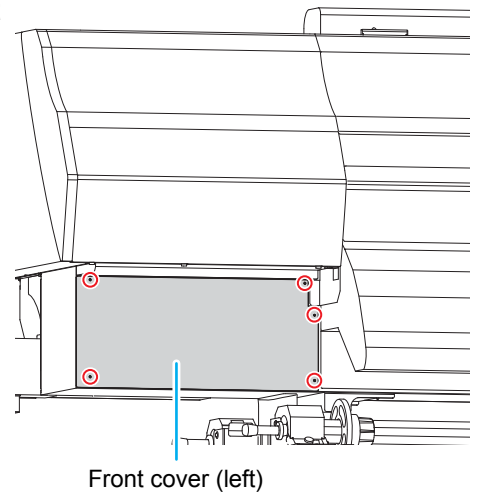


(3) Replacing filter element of filter for vacuum

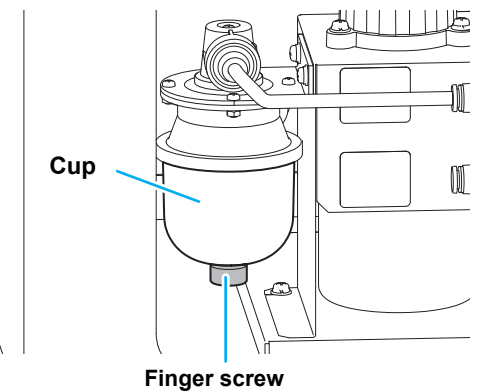
Replace it once a year.

1 Turn off the main power switch, and open the front cover (left) under the left maintenance cover.

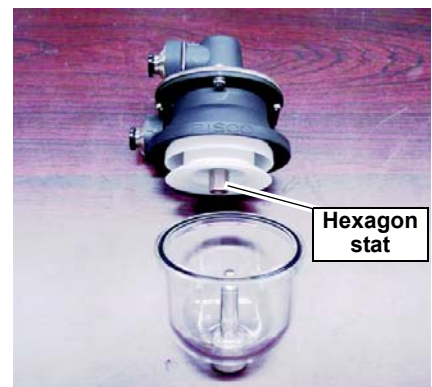
- Remove five screws fixing the front cover (left) with a driver, and remove it.



2 Loosen the finger screw of the filter for vacuum and remove the cup part.

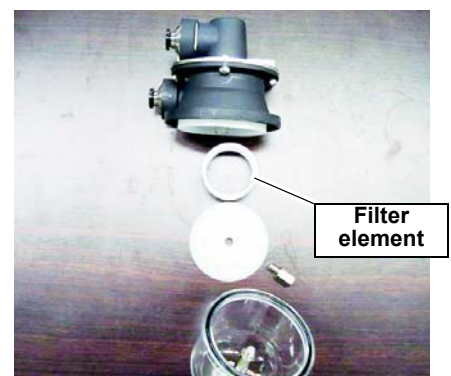


3 Replace the filter element.



4 Attach new filter element (SPA-0209) and return the filter for vacuum to the original status.

5 Turn on the main power switch.



6. 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.

7. Storage of ink bottle

Be careful of the followings to store.

- Store the ink bottle in no direct sunlight, and no high humidity.
- As it's a delicate product, do not drop it.
- Ink IC should not be contaminated and discharged static electricity.
- Be sure to store the ink bottle and the ink IC together.



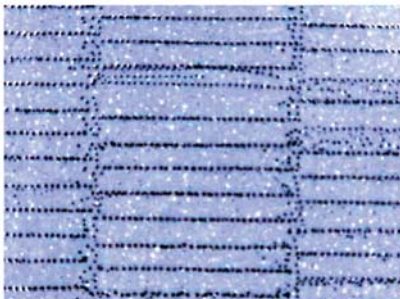
Ink bottle and Ink IC

8. 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 printing] in this plotter. (Operation manual Chapter 2 “Test Printing”)



1.Deflection



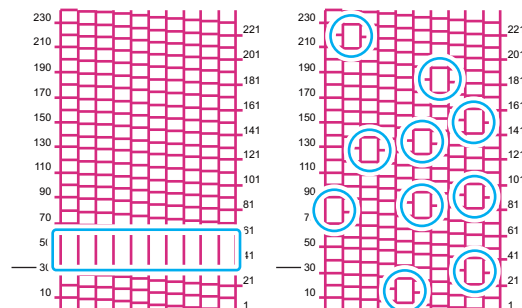
2.Nozzle out



3.Ink dropping



4.Satellite



5.Mixing in air

9. Recovery method of defective nozzle discharge

When this printer has not been used for an extended period of time, or depending on the environmental temperature, the discharge at the nozzles could become unstable. In such a case, the following methods may be taken to recover the status of the nozzles.

For symptoms 1 to 4 in P.19 “The examples of defective printing”

1. Daily maintenance and care

- Perform the cleaning of the parts described in this document.

2. Performing Head Cleaning (normal). Refer to Chapter 2 of Operation Manual.

- After having performed the care and maintenance stated in step 1, perform the cleaning of the heads in accordance with the procedures stated in Operation Manual.

Perform test printing and check
(Chapter 2 of Operation Manual)

In the event nozzle missing etc. have not been improved

3. Performing Head Cleaning (hard). Refer to Chapter 2 of Operation Manual.

- If the nozzle missing does not disappear even after repeating the head cleaning (normal) several times, reset the cleaning mode to "hard" and perform the cleaning again.

Perform test printing and check
(Chapter 2 of Operation Manual)

In the event nozzle missing etc. have not been improved

4. Perform the cleaning of the head nozzles. Refer to Chapter 4 of Operation Manual.

- Perform the cleaning of the head nozzles. In this case, leaving time of the cleaning liquid for maintenance shall be made [1 minute].

Perform test printing and check
(Chapter 2 of Operation Manual)

In the event nozzle missing etc. have not been improved

5. Perform the cleaning of the head nozzles again. Refer to Chapter 4 of Operation Manual

- Reset the leaving time of the cleaning liquid for maintenance to [10 minutes], and perform the cleaning of the head nozzles again.

Perform test printing and check
(Chapter 2 of Operation Manual)

For symptoms 5 in P.19 “The examples of defective printing”

1. Daily maintenance and care

- Perform the cleaning of the parts described in this document.

2. If nozzle missing due to color mixture of ink or aeration Refer to Chapter 5 of Operation Manual.

- Perform air removal according to the procedure in the Operation Manual.

Perform test printing and check
(Chapter 2 of Operation Manual)

Important!

- If the nozzle missing has not been improved even with the above operations, please call us or your sales agent from whom you purchased this printer.

10. When the printer is not used for a long period

When the printer is not to be used for a period of one week or above, perform the cleaning of the heads and nozzles and the ink discharging channel before storing this printer.

11. Supplies

Product Name	Product No.	Product Name	Product No.
Cleaning liquid 03 maintenance kit	ML003-Z-K1	Filter element	SPA-0209
Waste ink tank	SPA-0197	Carriage filter	SPA-0189
Cutter blades	SPA-0192	Mist filter	SPA-0190
Clean stick for the surroundings of the head 50pcs	SPC-0527	Wiper kit	SPA-0193
Ink filter white	SPA-0196		

12. Safety Precautions

CAUTION



Make sure to wear the attached **goggles and gloves**.



The ink, if mixed with water or alcohol, generates condensed substances. Pay attention not to deposit water or alcohol to the nozzle surface, surrounding area of the heads, caps and wipers.



To secure the stability of the ink discharge, when the printer is not used (output) for an extended period of time, it could become necessary to discharge periodically a small amount of ink (flushing), depending on the kinds of the ink.

When not using for an extended period of time, execute the [CUSTODY WASH] function of this equipment, ("When the Machine Is Not Used for a Long Time (CUSTODY WASH)" Chapter 5 of Operation Manual) and put off the power switch on the front, only. Leave the main power switch at the side of the equipment on and keep the cable socket inserted into the plug.



Never disassemble this machine. It could cause electrical shock, fire and breakage.



Keep away the moisture from the inside of this machine. If the inside is moistened, it could cause electrical shock, fire and breakage.



Perform the maintenance and care after switching off the power and taking off the power cable. Otherwise, it could cause unexpected accidents.



Avoid using benzene, thinner, and chemicals containing abrasive compounds. The surface of the cover could be degenerated or deformed.



Do not supply lubricant oil etc. to the inside this machine. It could cause the breakdown of this machine.

13. Installation environment

- Use this printer as much as possible in a dust-free environment. Fans and air-blowers could cause the dustspewing.
- The using environment of this printer is from 20 to 30°C (68°F to 86°F) in temperature and from 35 to 65 % in relative humidity. Avoid the use of this printer at a temperature and humidity higher or lower than the indicated ranges.



You can also download the latest manual from our website.

© 2014 MIMAKI ENGINEERING CO., LTD.

D202351-15-19092014

IT

FW :2.20