

## JV400LX Series

# 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.

### 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 4 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.**

## 1. Installation environment

- Use this printer as much as possible in a dust-free environment. Fans and air-blowers could cause the dust-spewing.
- The using environment of this printer is from 20 to 30°C 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.

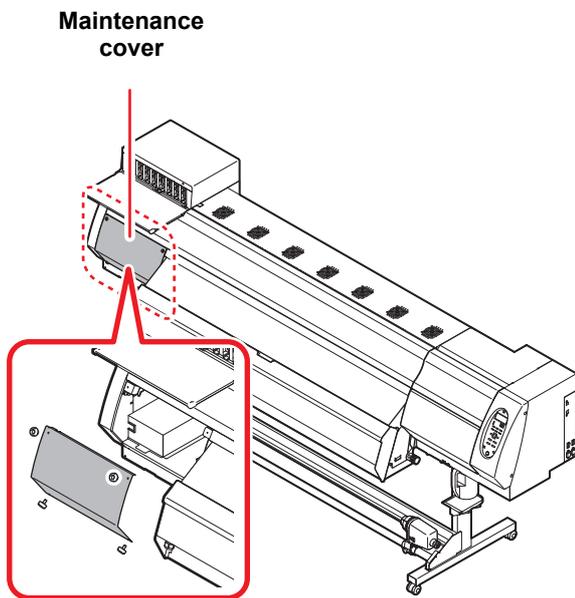
## 2. Daily care and maintenance

### ● Tools required for Maintenance

Item Name	Product No.
Clean stick	SPC-0527
Maintenance washing Liquid LX kit	ML001-Z-K1
Wiper kit 400	SPA-0184
KIMWIPE S-200	SPA-0207

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

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.

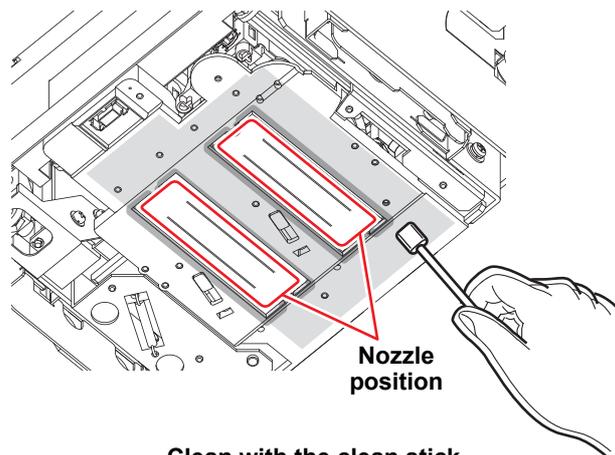
- Move the carriage referring to "Cleaning the Ink Head and the Area around It" Step 1, Chapter 4 of the Operation Manual.

#### 2 Open the maintenance cover.

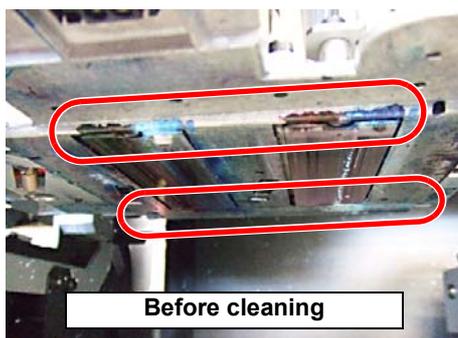
- Remove the screws and open the maintenance cover.

#### 3 Clean the head and the surrounding area.

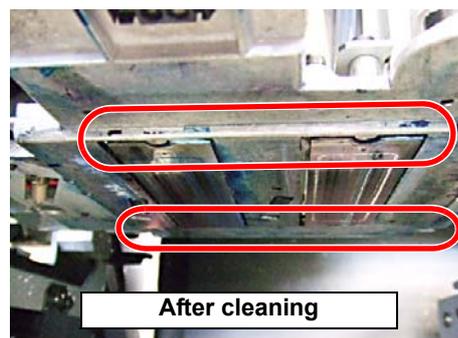
- Gelled ink and dust could stick under the slider (the gray area in the figure below) and the surroundings of the head.
- To prevent gelled/ solid ink ground from pooling at the front and rear of the carriage, Scrape them off with clean stick etc. In this case, never rub the nozzle portion of the head.



Clean with the clean stick.



Before cleaning

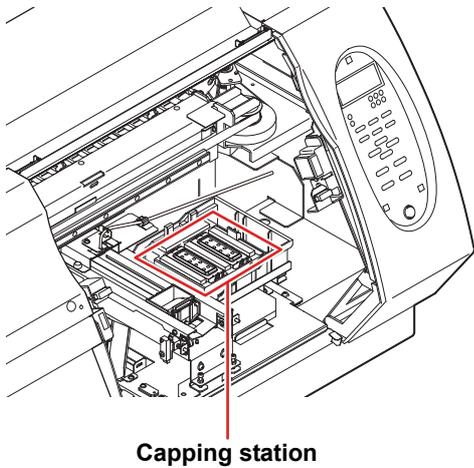


After cleaning

## ● Capping station ("Cleaning the Wiper and Cap" 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 maintenance washing liquid LX suitable for the ink used to avoid the stains on the head.

- Maintenance washing liquid LX kit: Product No. ML001-Z-K1

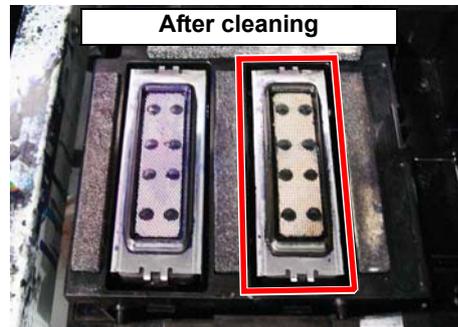
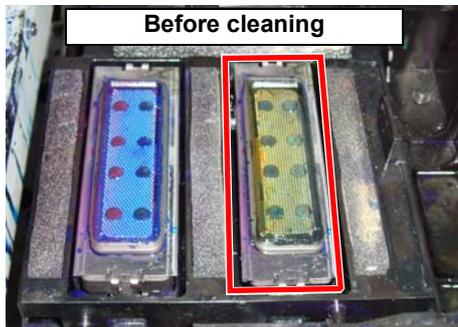
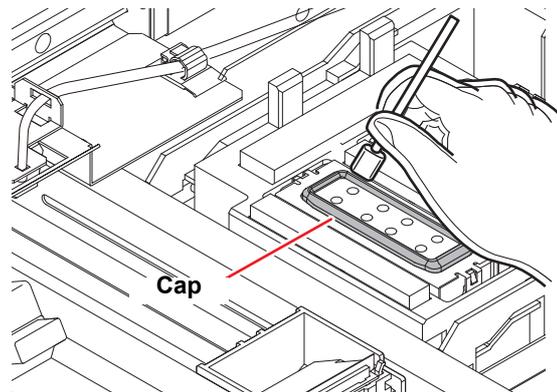


### 1 Move the carriage.

- Move the carriage referring to "Cleaning the Wiper and Cap" Step 1, Chapter 4 of the Operation Manual.

### 2 Clean the cap.

- Dip the clean stick into the maintenance washing liquid LX and wipe off so that you can see color of the cap rubber. Wipe off so that maintenance washing liquid LX will not remain.



Important!

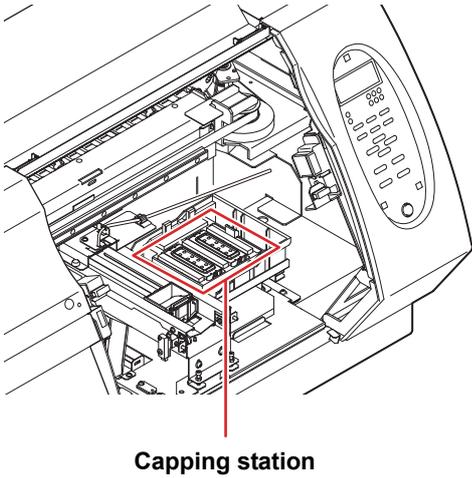
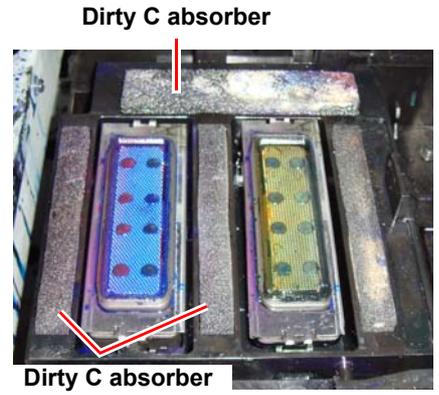
- At this point, clean the cap rubber only. Do not clean the mesh inside the cap. Execute "DISWAY WASH" regularly (about once a week) to clean the mesh inside the cap. (Refer to "Operation Manual" chapter4 )

● **Replacing method of C absorber kit ("Replacing method of C absorber kit" Chapter 4 of the Operation Manual)**

If ink adheres to the C absorber, it is required to replace the C absorber.

**Rough guide for replacement:**

Replace when the concavity and convexity of the surface of the absorber are filled with ink as indicated in the right photo.

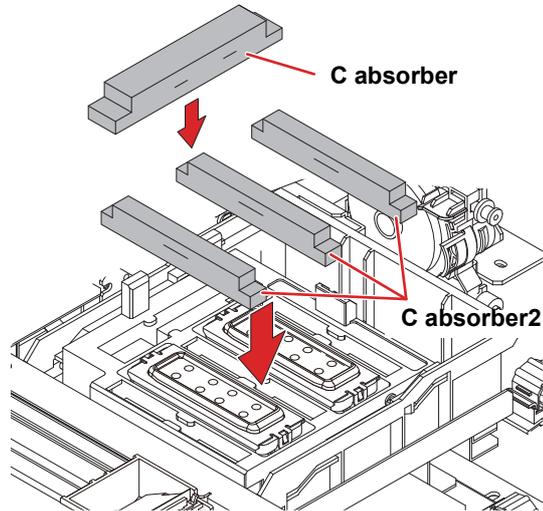


**1 Move the carriage.**

- Move the carriage referring to "Replacing method of C absorber kit" Step 1 to 4, Chapter 4 of the Operation Manual.

**2 Open the right maintenance cover.**

**3 Replace the C absorber.**



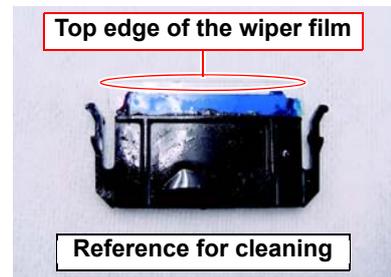
## ● Wiper ("Cleaning the Wiper and Cap" Chapter 4 of the Operation Manual)

Ink, dust, or paper waste is pooled on the wiper. To keep stable printing quality, wash the wiper at the end of the day.

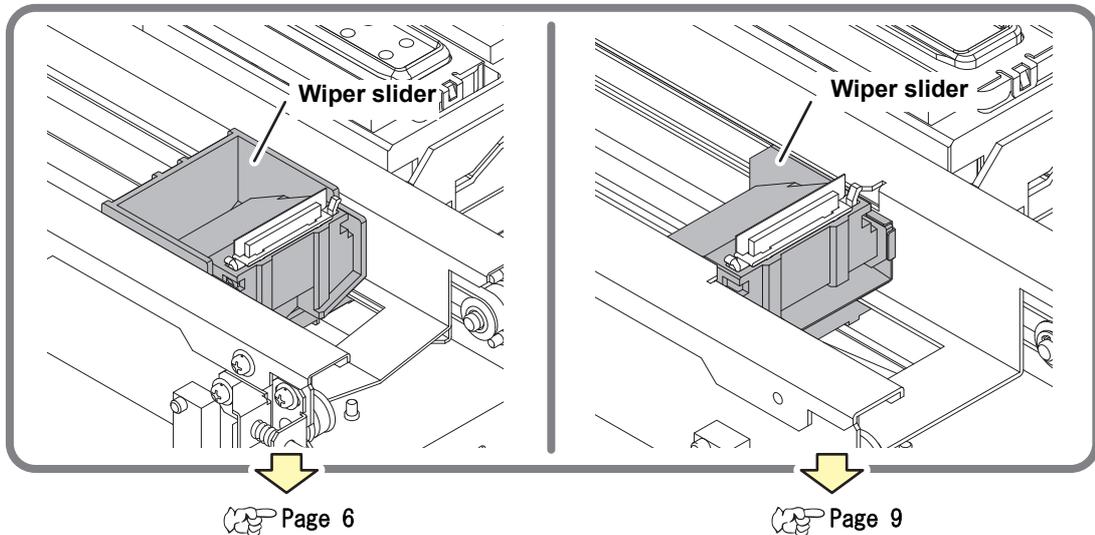
- Maintenance washing liquid LX kit (ML001-Z-K1)
- Kim Wipe® (SPA-0207)

**Important!**

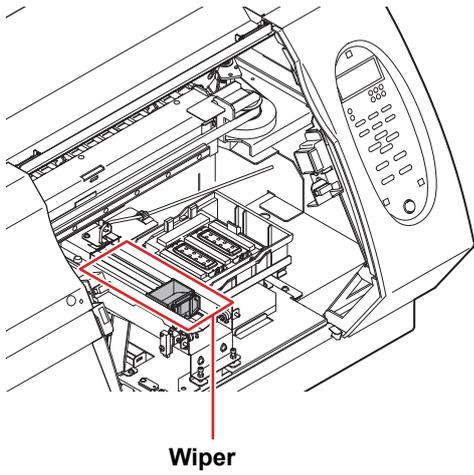
- Clean the wiper completely until the stained ink on the top edge of the wiper film is washed away after soaking the wiper in the maintenance washing liquid LX for 1-24 hours. It is recommended to prepare two or more wipers and use them alternately.
- If cleaning of the wiper is not enough, it may cause nozzle clogging.
- Do not wash the wiper with other than the Kim Wipe® (SPA-0207). Otherwise, lint may remain on the wiper.



- The shape of the area around the wiper has changed. Check the shape of the wiper slider of the machine you are using and perform maintenance in accordance with the shape.



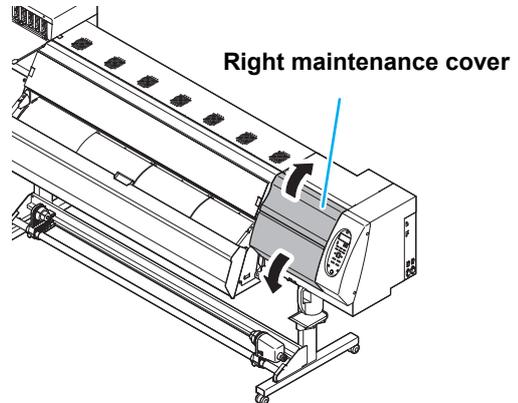
## Procedure1



### 1 Move the carriage.

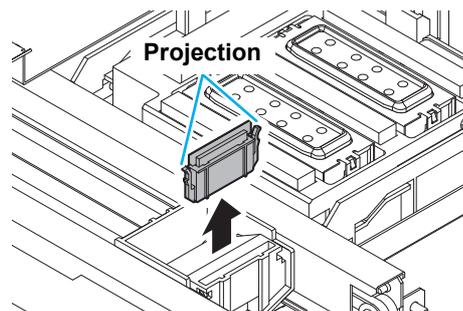
- Move the carriage referring to “Cleaning the Wiper and Cap” Step 1, Chapter 4 of the Operation Manual.

### 2 Open the right maintenance cover.



### 3 Remove the wiper.

- Pull out the wiper by holding the protrusions at its both ends.

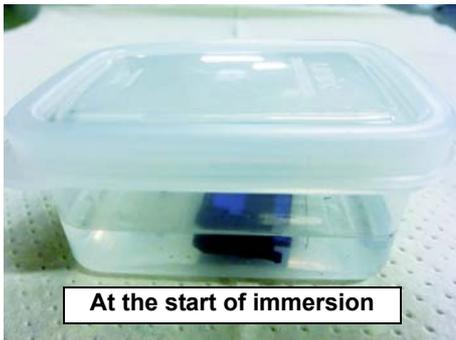


#### 4 Put the wiper that you used for one day into a provided case or solvent-resistance-covered-container (glass, earthenware, etc.) and pour maintenance washing liquid LX.

- Time to immerse the wiper shall be for 1 to 24 hours.



- If you leave the wiper immersed in maintenance washing liquid LX too long, the wiper may be deformed.
- Dispose the maintenance washing liquid LX for soaking the wiper if it gets dirty. (As a guide, replace it in a week). Regarding disposal of unused maintenance washing liquid LX, please ask Industrial waste disposer and pursuant to the regulations of your district.
- For case for immersing the wiper, please use provided case or solvent-resistance-covered-container. In case that you want to immerse the wiper by using your resin case, please make sure to test whether there are no problems such as case deformation before you try.



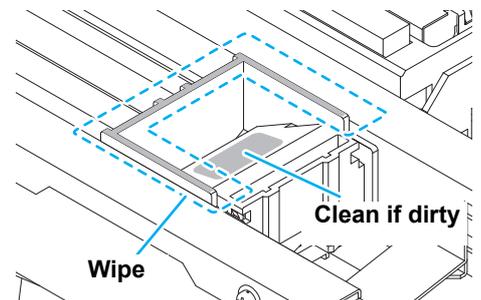
#### 5 Take out the wiper and remove ink blot etc. with a Kim Wipe®.

- Wipe off well so that any lint etc. do not remain on the top edge of the wiper film.



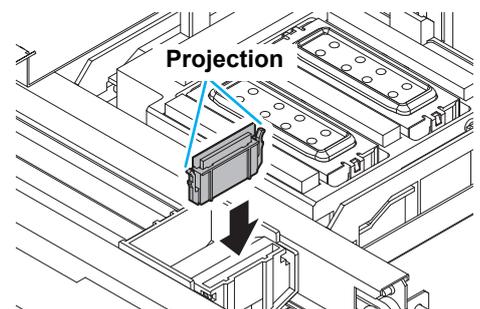
#### 6 Clean the wiper slider.

- Use a clean stick dipped in maintenance washing liquid LX to wipe away any ink that has adhered to the edges of the wiper slider. Also clean the slanting part inside the wiper slider, if it is dirty. Wipe off so that maintenance washing liquid LX will not remain.



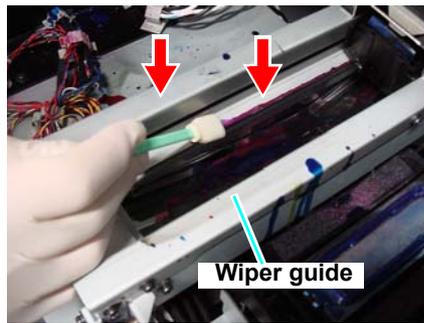
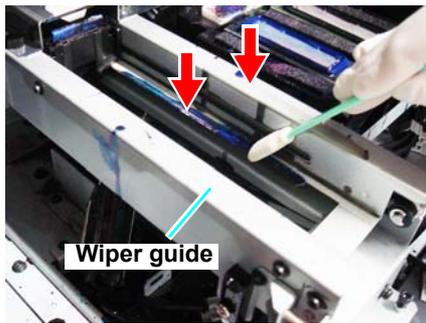
#### 7 Set the wiper at the original position.

- Insert the wiper by holding both ends of the wiper.



## 8 Clean the area around the wiper.

- Dip the clean stick in the maintenance washing liquid LX, and wipe clean the wiper guide upper portions and the portions one level below.



Wiper guide upper portions and portions one level below

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

- Even if you clean the wiper enough, nozzle clogging etc. occurs frequently
- When the wiper is deformed
- When the stuck ink can not be wiped off
- When the warning for wiper replacement is indicated



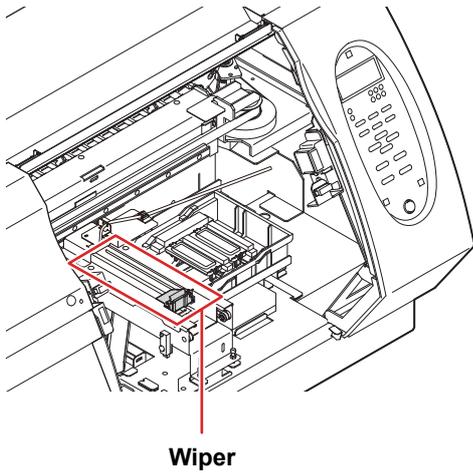
New wiper

Need to replacing

**Important!**

- **When the warning message for replacing wiper is shown, confirm whether there is no damage and fuzz at the top edge of the wiper film. If there is no damage on the top edge of the wiper film, it is possible to use the wiper continuously without replacing it.**

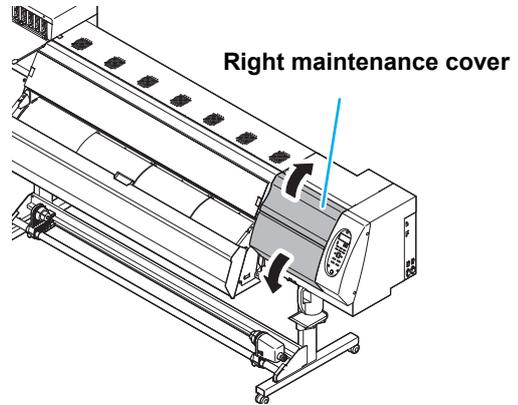
## Procedure2



### 1 Move the carriage.

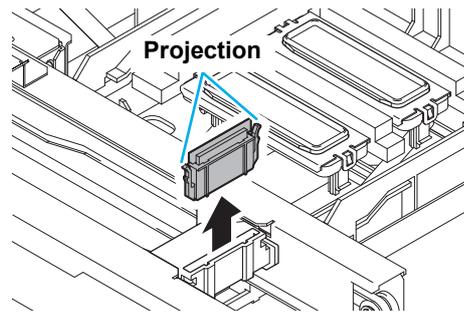
- Move the carriage referring to “Cleaning the Wiper and Cap” Step 1, Chapter 4 of the Operation Manual.

### 2 Open the right maintenance cover.



### 3 Remove the wiper.

- Pull out the wiper by holding the protrusions at its both ends.

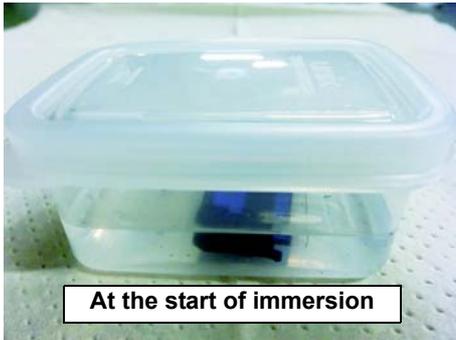


### 4 Put the wiper that you used for one day into a provided case or solvent-resistance-covered-container (glass, earthenware, etc.) and pour maintenance washing liquid LX.

- Time to immerse the wiper shall be for 1 to 24 hours.



- If you leave the wiper immersed in maintenance washing liquid LX too long, the wiper may be deformed.
- Dispose the maintenance washing liquid LX for soaking the wiper if it gets dirty. (As a guide, replace it in a week). Regarding disposal of unused maintenance washing liquid LX, please ask Industrial waste disposer and pursuant to the regulations of your district.
- For case for immersing the wiper, please use provided case or solvent-resistance-covered-container. In case that you want to immerse the wiper by using your resin case, please make sure to test whether there are no problems such as case deformation before you try.



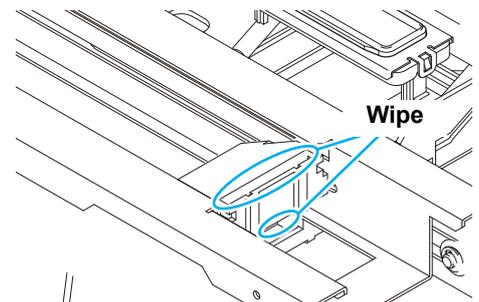
## 5 Take out the wiper and remove ink blot etc. with a Kim Wipe®.

- Wipe off well so that any lint etc. do not remain on the top edge of the wiper film.



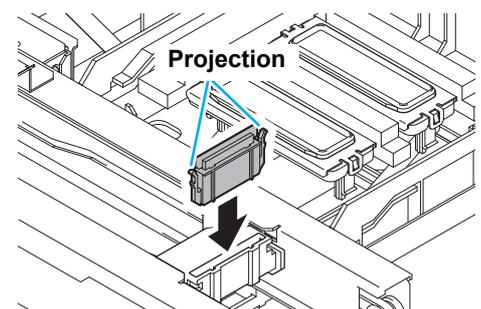
## 6 Clean the wiper slider.

- Wipe off the ink sticking to the wiper slider with a clean stick dipped in maintenance washing liquid LX.  
Wipe off so that maintenance washing liquid LX will not remain.



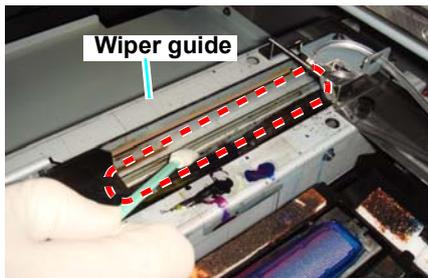
## 7 Set the wiper at the original position.

- Insert the wiper by holding both ends of the wiper.

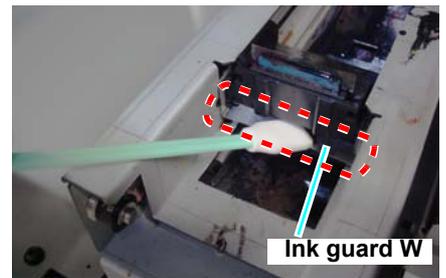
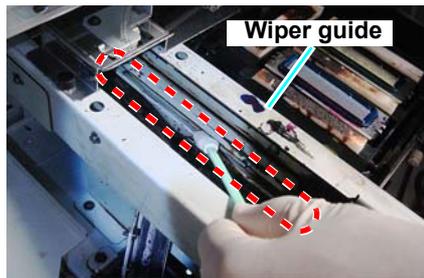


## 8 Clean the area around the wiper.

- Dip the clean stick in the maintenance washing liquid LX, and wipe the space below the wiper guide, and the space between the wiper slider and ink guard W.



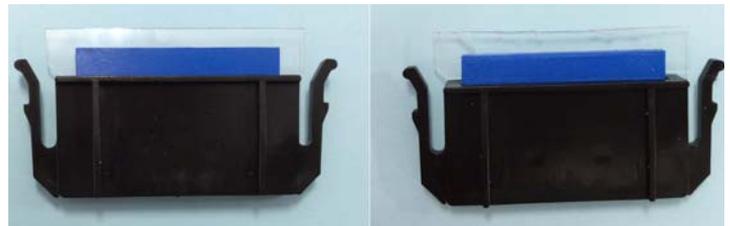
Space below the wiper guide



Space between the wiper slider and ink guard W

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

- Even if you clean the wiper enough, nozzle clogging etc. occurs frequently
- When the wiper is deformed
- When the stuck ink can not be wiped off
- When the warning for wiper replacement is indicated



New wiper

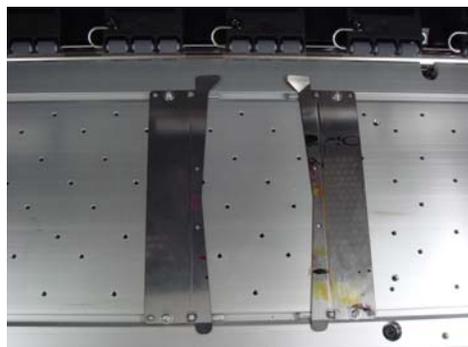
Need to replacing

**Important!**

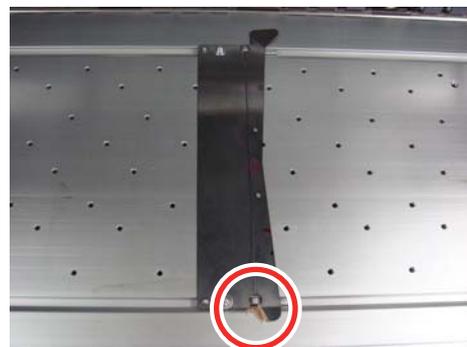
- **When the warning message for replacing wiper is shown, confirm whether there is no damage and fuzz at the top edge of the wiper film. If there is no damage on the top edge of the wiper film, it is possible to use the wiper continuously without replacing it.**

## ● Media press

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.



Media press



Media press with dust

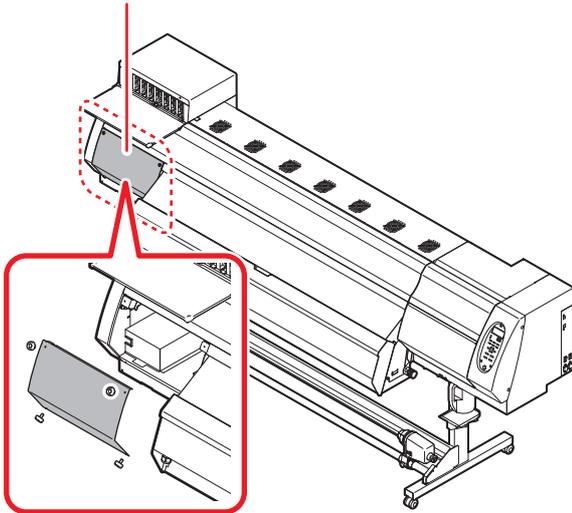
## ● Media sensor ("Cleaning the Media Sensor" Chapter 4 of the Operation Manual)

Two media sensors are provided: one above the platen on the rear surface of the equipment and another on 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 water-diluted neutral detergent.

Maintenance cover



### Cleaning the media sensor at the bottom surface of the heads.

#### 1 Move the carriage to the left.

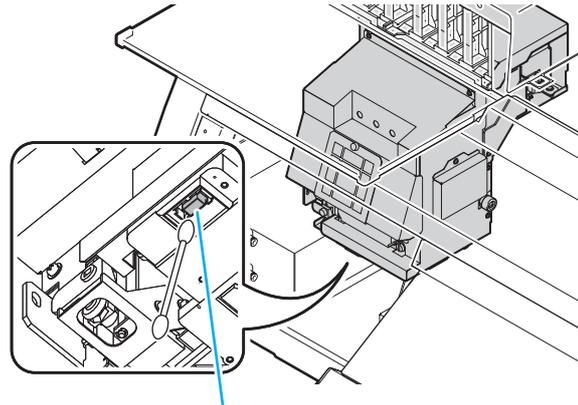
- Move it with reference to "Cleaning the Ink Head and the Area around It" Step 1, Chapter 4 of the Operation Manual.

#### 2 Open the maintenance cover.

- Remove the screws and open the maintenance cover.

#### 3 Clean the media sensor.

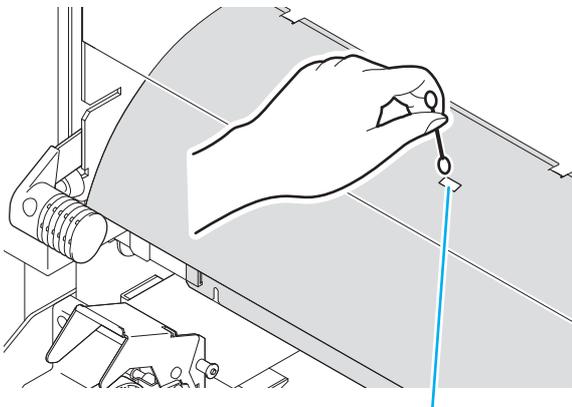
- Wipe off the dusts and stuck ink with soft cloth or clean sticks.



Media sensor on the head

### Cleaning of the media sensor at the rear surface of the machine

Wipe off the dusts and stuck ink with soft cloth or clean sticks.



Media sensor

● **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.

● **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

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

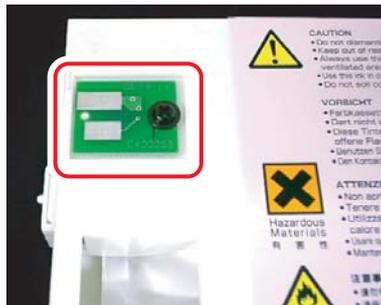
Check whether the waste ink tank is full or not. Take care so that the waste ink never overflows the tank.

### 3. Storing of the media

Store the media in the location where the dusts are not liable to accumulate and away from direct sunlight. Avoid storing the media in a place subjected to high temperature and high humidity, as the media abhors humidity, too.

### 4. Storing of the cartridges

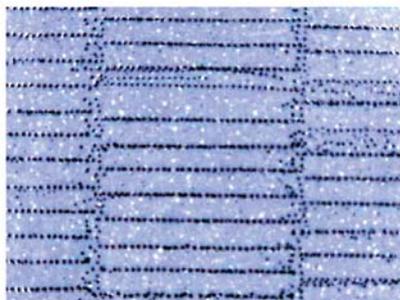
Store the cartridges in a place avoiding direct sunlight and high humidity. As the cartridges are fine and precise articles, avoid dropping or crushing them. Do not make dirty touching or discharge static electricity to the board mounted on the ink cartridges.



The board mounted on the ink cartridge

### 5. Examples of image quality deteriorate

Typical examples of the defects created on the printings by the defective discharge at the head (nozzle) caused by the dusts etc. Check the status of the nozzles periodically before and during the outputting so that the printer is not used under such conditions. The state of the nozzles can be checked by way of "Test Print" of this printer. ("Test Printing" Chapter 2 of the Operation Manual)



Deflection



Nozzle out



Ink drooping



Satellite

## 6. 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.

### 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)

**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.**

## 7. When the printer is not used for a long period (Chapter 4, Operation Manual)

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.

## 8. Supplies

- Wiper kit 400 (Product No. SPA-0184)
- C absorber kit (Product No. SPA-0185)
- When the solvent ink is used: Maintenance washing Liquid LX kit (Product No.: ML001-Z-K1)
- Waste ink tank 2 liters (Product No.: SPA-0117)
- Cutter blades (Product No.: SPA-0107)
- Clean stick for the surroundings of the head 50pcs (Product No.: SPC-0527)
- W filter kit (Product No.: SPA-0187)
- Kim wipe (Product No.: SPA-0207)



**You can also download the latest manual from our website.**

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