

DM3-1810S

FLATBED COLOR INKJET PLOTTER

Daily Care Manual

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

MIMAKI ENGINEERING CO., LTD.

TKB Gotenyama Building, 5-9-41, Kitashinagawa, Shinagawa-ku, Tokyo 141-0001, Japan

Phone: +81-3-5420-8671 Fax: +81-3-5420-8687

URL: <http://www.mimaki.co.jp/>










E-mail: trading@mimaki.co.jp

Table of contents

Precautions during cleaning	4
In case defective plotting is not fixed	5
Routine maintenance	6
Maintenance for frame components	6
Cleaning the ink at the bottom of the slider	6
Cleaning the wiper and ink caps	7
Cleaning the nozzle [Nozzle Cleaning]	10
Cleaning or replacing filter	13
Replacing the flushing tray ink absorber	14
When the waste ink tank becomes full	16
Ink discharge way cleaning [Drain Wash]	17
When not in use the plotter over the long term [Storage Wash]	19
Storage of the cleaning liquid RS for maintenance	23
Storage of media	23
Storage of the ink cartridges	23

Be sure to conduct maintenance works for the machine when necessary or periodically so as to use the plotter for a long time while keeping its plotting accuracy.




Precautions during cleaning

-  • When using the cleaning liquid RS for maintenance, be sure to wear the goggles and gloves.
- 
-  • Never disassemble the plotter. Disassembling the plotter can result in electric shock hazards and breakage of the machine.
-  • Prevent moisture from entering inside the plotter. If the inner part of the plotter becomes wet, electric shock hazards and breakage of the machine can result.
-  • Conduct maintenance works after turning off the power switch and detaching the power cable. If not, unexpected troubles can arise.
Keep to the time limit, 1 hour as power-off. If the power is turned on for more than 1 hour, the nozzle-clogging preventative function does not work. In addition, if the power is turned off for more than 5 days, the ink flushing does not work either.
-  • Do not wipe the nozzles, wiper, or cap of the head with water or alcohol as doing so may cause nozzle clogging or damage to nozzles.
-  • Do not use benzene, 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 plotter. Such materials can cause the plotter mechanism to fail.
-  • Be careful not to allow the cleaning liquid RS for maintenance or ink to adhere to the cover as this may cause deterioration or discoloring of the surface of the cover.

In case defective plotting is not fixed

When the station interior is severely contaminated or defective plotting is not fixed after cleaning by the head cleaning function (☞ Operation manual P.2-12), clean the suction nozzles and the caps using the cleaning kit as follows:

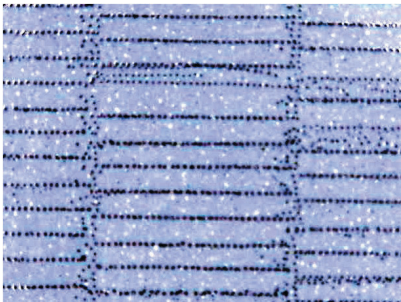
Cleaning liquid RS for maintenance, Gloves, Cleaning swab(SPC-0386), Goggles

-  • When cleaning the station and the heads, be sure to wear the supplied goggle and gloves to protect you from hazardous ink.
-  • Do not use alcohol or water.
-  • Do not move the carriage out of the capping station by hand. Use the appropriate operation key to move the carriage.

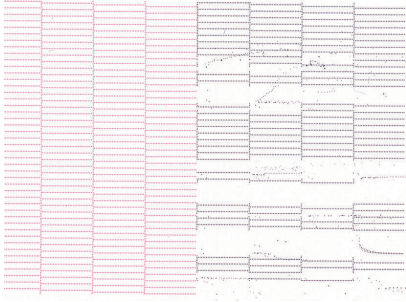
The examples of defective plotting

These following examples indicate defective plotting by using improper heads(nozzles) with dust. Confirm the nozzle condition periodically before or during outputting not to use in such as these condition. The nozzle condition can be confirmed by [test print] in this plotter. (Operation manual page 2.12)

Deflection



Nozzle out



Ink drooping



Satellite



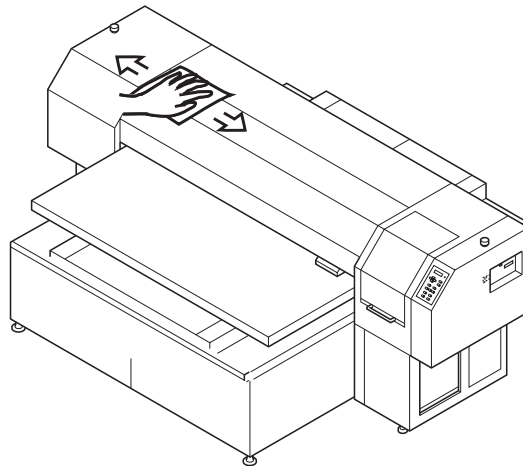
Routine maintenance

Maintenance for frame components

If the frame components of the plotter have become dirty, wipe off the dirt of the frame with soft cloth sopped in water or neutral detergent with water and squeezed. Wipe off dust on the table.

Cleaning Tools :

- Neutral detergent
- Soft cloth (quantity)



Cleaning the ink at the bottom of the slider

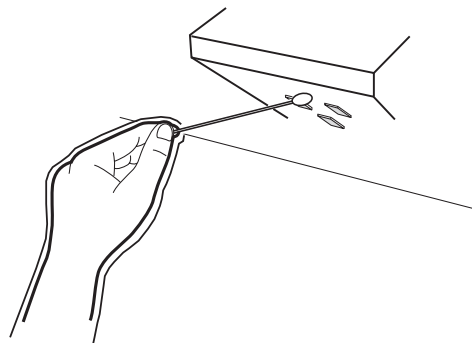
The ink may gel and collect under the slider after a long use. The ink droplets may grow in size and smear the work as a result. To prevent this problem, wet the supplied cotton swab in the cleaning liquid RS for maintenance and use it to remove the ink from under the head in regular intervals.



- Do not use the cotton swab on the head nozzles. The cotton swab may damage the nozzles and cause poor ink delivery.

Cleaning Tools :

- Cleaning liquid RS for maintenance (SPC-0336: Option)
- Cotton swabs
- syringe
- Goggle, Gloves



Cleaning the wiper and ink caps

The ink cap prevents clogging of the head nozzle caused by dried nozzle.

The wiper wipes out ink adhered to the head nozzle.

As the device is used to plot images, the wipers and ink caps gradually become stained with ink and dust. Use the cotton swab to clean the ink and wiper.



- When cleaning the machine, be sure to wear the goggles and gloves to prevent getting ink in your eyes or on hands.



- Remove dust from the wiper before starting head cleaning. A dusty wiper may damage the head and cause defective plotting.



- Clean the two wipers at a time.



- Do not move the carriage out of the capping station by hand. Use the appropriate operation key to move the carriage.



- Do not touch rubber of the new wiper as this may cause clogged nozzles.



- Once the replacement of the wiper and the cleaning of the caps have been completed, immediately press the [ENTER] key to allow the carriage to return to the capping station. If the carriage is left in the aforementioned state for an extended period of time, the nozzles can be clogged.

Cleaning Tools :

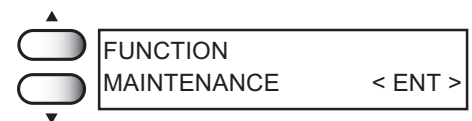
- **Cleaning liquid RS for maintenance (SPC-0336: Option)**
- **Cotton swabs**
- **Goggle, Gloves**

STEPS:

1. Press the [FUNCTION] key.



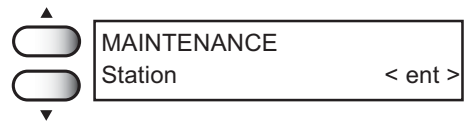
2. Press the XY keys [▲] or [▼] to select [MAINTENANCE].



3. Press the [ENTER] key.



4. Press the XY keys [▲] or [▼] to select [Station].



5. Press the [ENTER] key.



6. Press the [ENTER] key.

The table moves away from you and the Y-bar moves upward. The wiper moves toward you and the carriage moves away from the station.



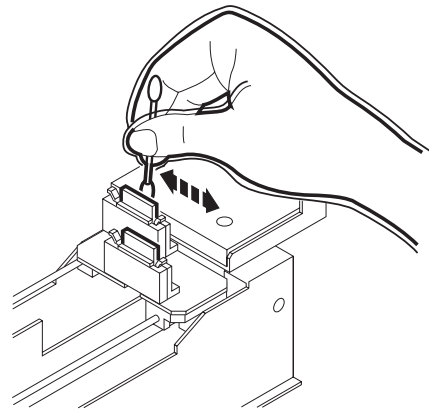
7. Open the station cover and clean the both sides of the wiper.

Remove the ink at the wiper and the bracket using a cotton swab dampened with cleaning liquid RS.



- If dirt of curl is serious, replace the wiper with a new one. At the time of replacement, be sure to terminate the plotter operation and follow the wiper replacement procedure.

(👉 Operation manual page 5.9)

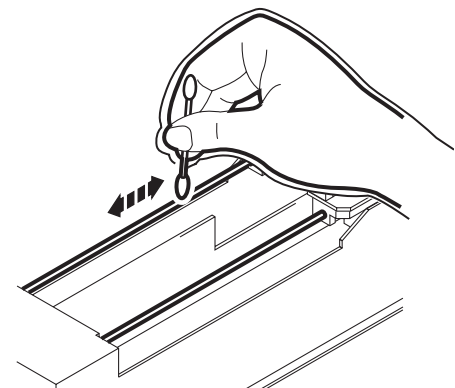


8. Clean the wiper guide shaft using a cotton swab or cloth.

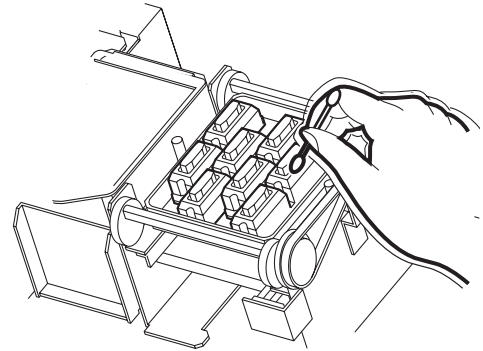
If dirt is hard to remove, use a cotton swab of cloth dampened with the cleaning liquid RS.



- Extremely dirty wiper guide shaft may cause operational failure of the wiper, resulting in error display.



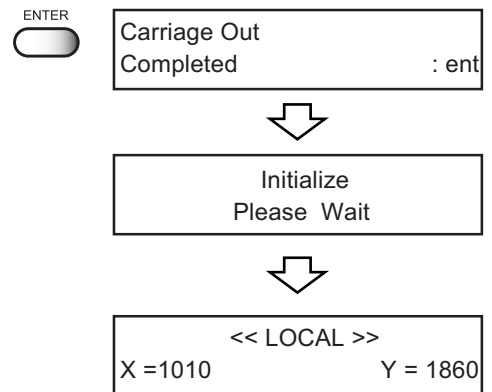
9. Wipe off ink or dirt adhered to the rubber of the cap using cotton swab.



10. The station cover is closed, then press **[ENTER]** key.


Execute the initial operation.

11. The plotter enters the **LOCAL** mode.



Cleaning the nozzle [Nozzle Cleaning]

Clean up the nozzle as for nozzle clogging.

If nozzle clogging cannot be resolved even after cleaning several times, execute the [Ink Filling] function. ( Operation manual page 5.11)

If this error cannot be resolved with these functions, contact the dealer.



- Two colors (two cartridges) per head are used. If the remaining amount of one ink is extremely greater than another ink's amount, it may flow into the cartridge which has lesser ink to make their ink-head even.

Execute the [Ink Filling] function ( Operation manual page.5-11) if the inks are mixed.

- Operate it in the head only with the nozzle clogging.

Cleaning Tools :

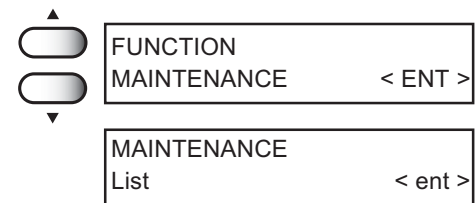
- **Cleaning liquid RS for maintenance (SPC-0336: Option)**
- **Pipette**
- **Goggle, Gloves**

STEPS:

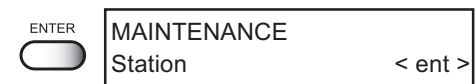
1. Press the [FUNCTION] key in the LOCAL mode.



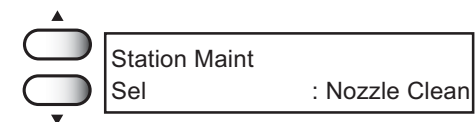
2. Press the XY [▲] or [▼] keys to select [MAINTENANCE].



3. Press the [ENTER] key.
[Station] is displayed.

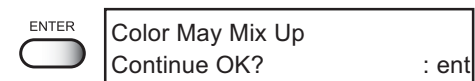


4. Press the XY [▲] or [▼] keys to select [Nozzle Clean].



5. Press the [ENTER] key.

The table moves backward, the Y-bar moves to the top, the wiper moves forward, and the carriage moves on the table.




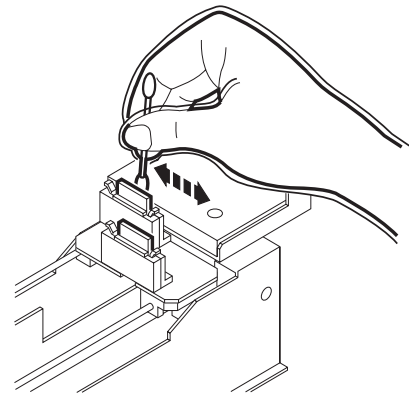
6. Open the station cover and clean the both sides of the wiper.

Remove the ink at the wiper and the bracket using a cotton swab dampened with the cleaning liquid RS.



- If dirt of curl is serious, replace the wiper with a new one. At the time of replacement, be sure to terminate the plotter operation and follow the wiper replacement procedure.

( Operation manual page 5.9)

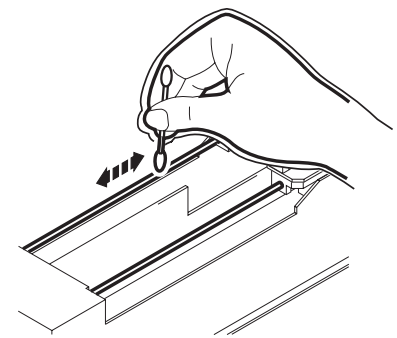


7. Clean the wiper guide shaft using a cotton swab or cloth.

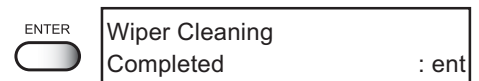
If dirt is hard to remove, use a cotton swab of cloth dampened with the cleaning liquid RS.



- Extremely dirty wiper guide shaft may cause operational failure of the wiper, resulting in error display.

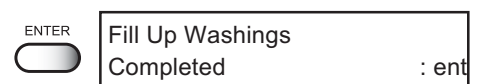
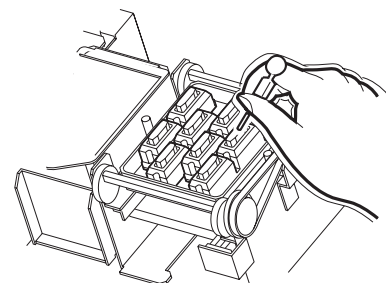


Clean the wiper and press the [ENTER] key.



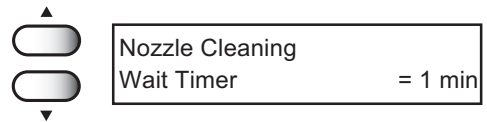
8. Fill the cap with the cleaning liquid RS using a pipette.

Close the station cover, and press the [ENTER] key.



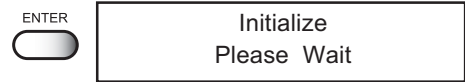
9. **Press the XY [▲] or [▼] keys, select the time to leave. (1-99 minutes: 1 min unit)**

Normally set 1 min.

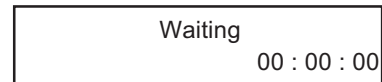


10. **Press the [ENTER] key.**

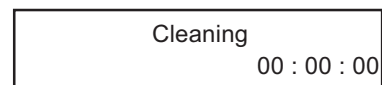
The initial operation is performed.



Remaining time is displayed.



After remaining time is over, execute cleaning.
It displays the remaining cleaning time.



11. **Cleaning is completed, the menu returns the LOCAL mode.**



Cleaning or replacing filter

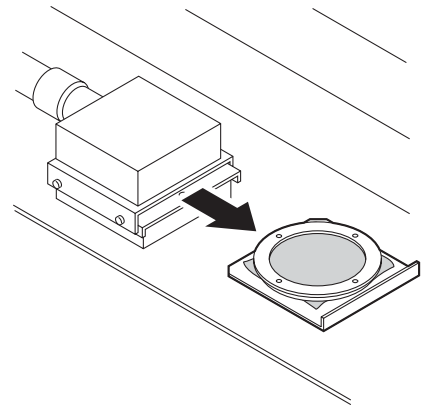
This plotter is provided with two filters under the right and left of the absorption table.
When the filter is clogged, the media absorbability will be weakened.
If filter is soiled with dusts, clean it with vacuum cleaner, etc.
If the filter is clogged by ink adhesion, replace the filter.

Outfit :

- Filter for replacing 100pcs (Order No. M-3)

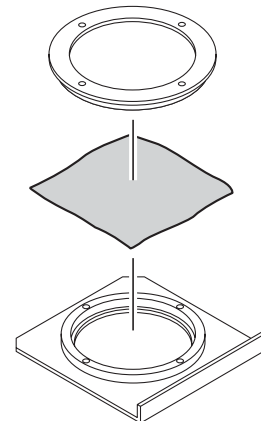
STEPS:

1. Remove the filter holder from the filter unit.



2. From the filter holder, remove the filter and replace with a new filter.

Position the filter folded in four and fix it with its all circumference held.



3. Install the filter holder on the filter unit.

Replacing the flushing tray ink absorber

Replace the ink absorber in the flushing tray if it appears to be clogged. Clogged ink absorber may cause ink mists and smeared head nozzles.

In addition, ink bounce causes some ink drips on the nozzle during flushing. Some ink drips may cause some trouble on ink firing.



- Check the ink absorber for clogging at the end the day's operation.

Outfit :

- Ink absorber (Order No. M-3)

STEPS:

1. Press the [FUNCTION] key.



FUNCTION SETUP	< ENT >
-------------------	---------

2. Press the XY [▲] or [▼] keys to select [MAINTENANCE].



FUNCTION MAINTENANCE	< ENT >
-------------------------	---------

Press the [ENTER] key.



MAINTENANCE List	< ent >
---------------------	---------

3. Press the XY [▲] or [▼] keys to select [Station].



MAINTENANCE Station	< ent >
------------------------	---------

4. Press the [ENTER] key.



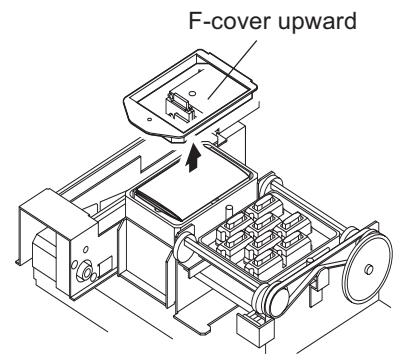
Station Maint Sel	: CarriageOut
----------------------	---------------

5. Press the [ENTER] key.

The table moves away from you and the Y-bar moves upward. The wiper moves toward you and the carriage moves away from the station.

6. Open the station cover.

7. Remove the F-cover upward from the flushing tray.



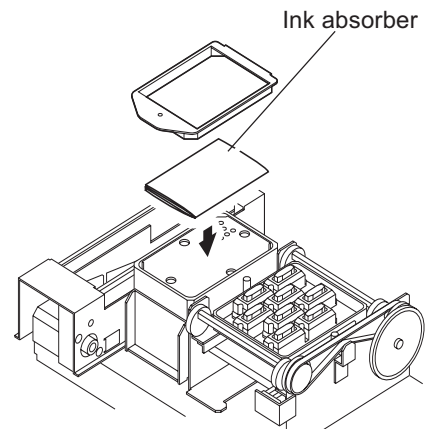
8. Remove the ink absorber.

9. Place a new ink absorber (supplied) on the tray.

Place the ink absorber (as folded) at the center.



- Make certain the ink absorber is placed flat and touching the tray. Otherwise, it may interfere with the head nozzles.



10. Place the F-cover from above.



- Place the F-cover all the way down. A floating cover may cause trouble.

11. Close the station cover, then press the [ENTER] key.

The initial operation is performed.



Carriage Out Completed	: ent
---------------------------	-------

12. Return to the LOCAL mode.

<< LOCAL >>	
X =1010	Y = 1860

When the waste ink tank becomes full

Waste ink used for cleaning the heads will gather in the waste ink tank.

When the message “Near Full” or “Full” appears (☞ Operation manual page 2.21), immediately replace the tank with a new waste ink tank.

Waste Ink Tank
Ink Tank Near Full

Waste Ink Tank
Ink Tank Is Full



- Contact your local MIMAKI distributor or call a local MIMAKI office if you need a spare waste ink tank.
- Prepare a polyethylene tank for emptying waste ink.



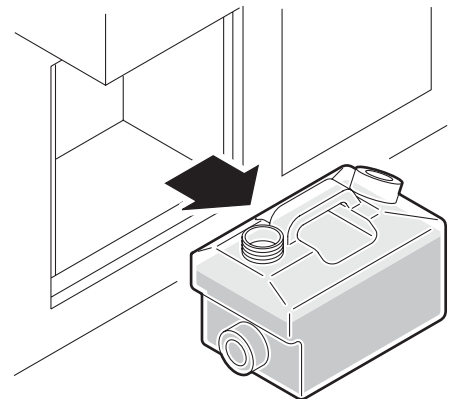
- If ink is dripping, wait until it stops dripping.
- Dispose a long-term unused waste ink regardless of its amount.

STEPS:

1. Pull out the tank toward you.



- When pulling out the waste ink tank, hold the opening of the waste ink tank with paper and then slowly pull it out to prevent waste ink from spattering.
- Before replacing ink, put paper on the floor to prevent it from being stained with ink.



2. Dump waste ink into a separate polyethylene tank.




- Request an industrial waste processor for processing of empty cartridges.

3. Put the empty waste ink tank back in the plotter.


Ink discharge way cleaning [Drain Wash]

The ink discharge way may become clogged by coagulated ink. It must be cleaned at regular intervals to avoid clogging.

Ink discharge way: Tubing between the cap and the waste ink tank



- When cleaning the plotter, be sure to wear the goggles and gloves to prevent from getting ink in your eyes or on hands.



CAUTION

- Do not move the carriage out of the capping station by hand.
- Use the appropriate operation key to move the carriage.

Cleaning Tools :

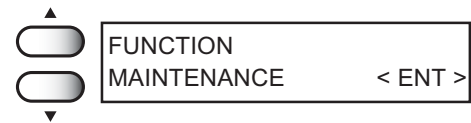
- Cleaning liquid RS for maintenance (SPC-0336: Option)
- Goggle, Gloves
- Pipette

STEPS:

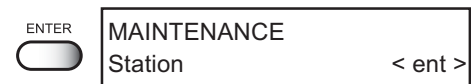
1. Press the [FUNCTION] key once.



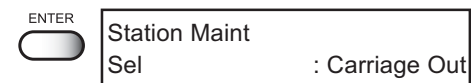
2. Press the XY [▲] or [▼] keys to select [MAINTENANCE].



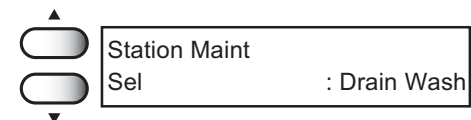
3. Press the [ENTER] key.
[Station] is displayed.



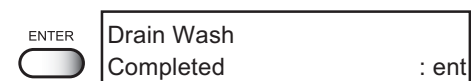
4. Press the [ENTER] key.
[Carriage out] is displayed.



5. Press the XY [▲] or [▼] keys to select [Drain Wash].

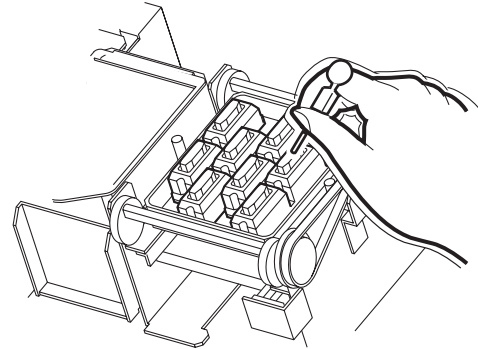


6. Press the [ENTER] key.
The table moves backward, the Y-bar moves to the top, the wiper moves forward, and the carriage moves on the table.
Dry suction starts in cycles consisting of 10 seconds of suction followed by 10 seconds of pause.



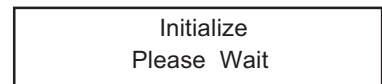
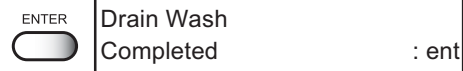
7. Open the station cover.

8. Remove the cleaning liquid RS with a pipette. During the suction pause period, drop the cleaning liquid RS until just before it overflows from the cap. Repeat at all other caps.



9. Close the front cover, and press the [ENTER] key.

Dry suction continues for 30 seconds and then the plotter is put in LOCAL mode.



10. Return to the LOCAL mode.




When not in use the plotter over the long term [Storage Wash]

When not in use the plotter over a week, perform [Storage Wash] function to clean the head nozzle and ink discharge way.

After performing the function, store the plotter.



- Two colors (two cartridges) per head are used. If the remaining amount of one ink is extremely greater than another ink's amount, it may flow into the cartridge which has lesser ink to make their ink-head even.
Execute the [Ink Filling] function ( Operation manual page 5.9) if the inks are mixed.

Cleaning Tools :

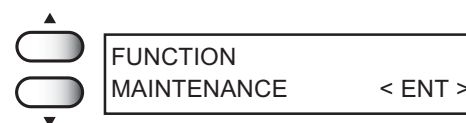
- Cleaning liquid RS for maintenance (SPC-0336: Option)
- Goggle, Gloves
- Pipette

STEPS:

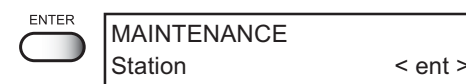
1. Press the [FUNCTION] key once.



2. Press the XY [▲] or [▼] keys to select [MAINTENANCE].



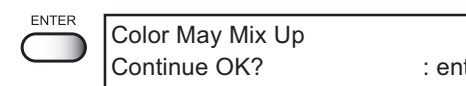
3. Press the [ENTER] key.
[Station] is displayed.



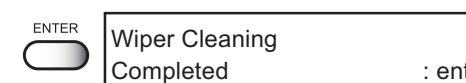
4. Press the XY [▲] or [▼] keys to select [Storage Wash].



5. Attention about the ink mixing is displayed.
Press the [ENTER] key.

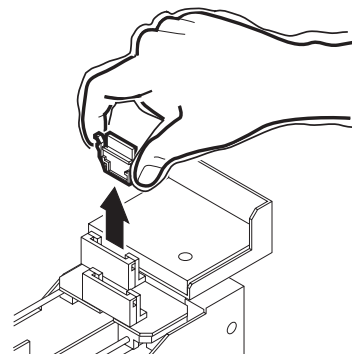


6. Press the [ENTER] key.
The table moves backward, the Y-bar moves to the top, the wiper moves forward, and the carriage moves on the table.



7. Open the station cover.

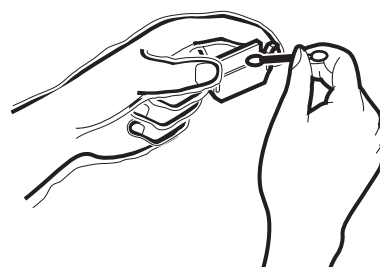
-
8. Take off the wiper with holding projections at the tips of wiper.



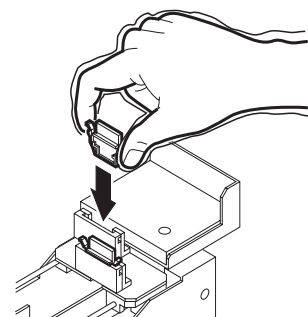
9. Use a cotton swab soaked with the cleaning liquid RS to clean off ink blots on wiper and bracket.



- If dirt of curl is serious, replace the wiper with a new one. At the time of replacement, be sure to terminate the plotter operation and follow the wiper replacement procedure.



10. Insert the clean wiper with holding both projections at the tips of wiper.



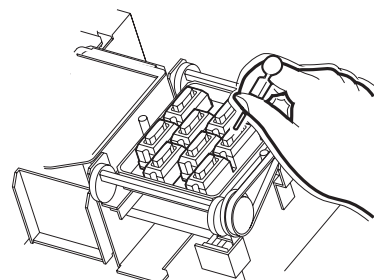
11. Press the [ENTER] key.



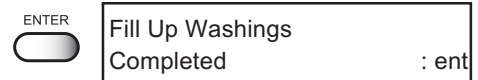
Wiper Cleaning
Completed : ent

Fill Up Washings
Completed : ent

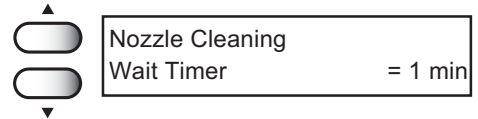
12. Fill the cap with the cleaning liquid RS using a pipette.



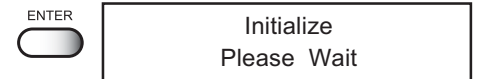
13. Close the station cover, and press the [ENTER] key.



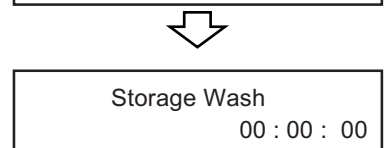
14. Press the JOG [▲] or [▼] keys, select the time to leave. (1-99 minutes: 1 min unit)
Normally set 1 min.



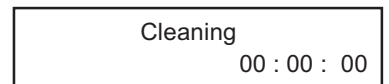
15. Press the [ENTER] key.
The initial operation is performed.



Remaining time is displayed.



After remaining time is over, execute cleaning.
Remaining cleaning time is displayed.




After cleaning the nozzles, the Y-bar moves to the top. The wiper moves toward you and the carriage moves away from the station.

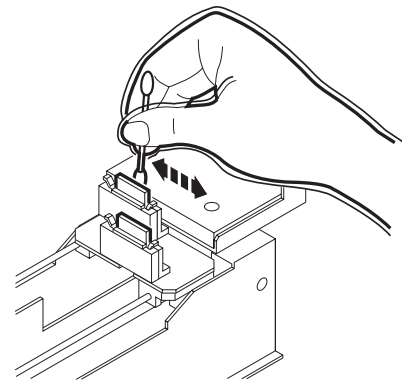
16. Open the station cover and clean the both sides of the wiper.

Remove the ink at the wiper and the bracket using a cotton swab dampened with the cleaning liquid RS.




- If dirt of curl is serious, replace the wiper with a new one. At the time of replacement, be sure to terminate the machine operation and follow the wiper replacement procedure.

( Operation manual page 5.9)

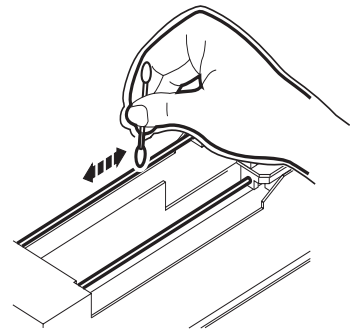


17. Clean the wiper guide shaft using a cotton swab or cloth.


If dirt is hard to remove, use a cotton swab or cloth dampened with water.



• Extremely dirty wiper guide shaft may cause operational failure of the wiper, resulting in error display.



18. Clean the wiper and press the [ENTER] key.

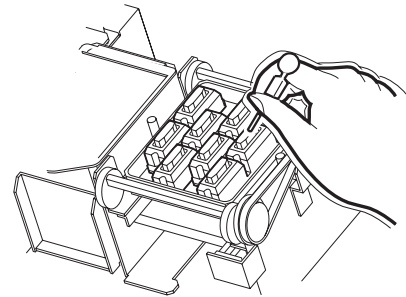


Wiper Cleaning
Completed : ent

19. Fill the cap with the cleaning liquid RS using a pipette.

Dry suction starts in cycles consisting of 10 seconds of suction followed by 10 seconds of pause.

Repeat the performance of the air aspiration several times to clean up the ink discharge way. Perform the operation for the each cap.



20. Close the station cover, and press the [ENTER] key.

Carriage returns the station to the initial operation performed.



Drain Wash
Completed : ent

Initialize
Please Wait



21. Return to the LOCAL mode.

<< LOCAL >>
X = 1010 Y = 1860

Storage of the cleaning liquid RS for maintenance

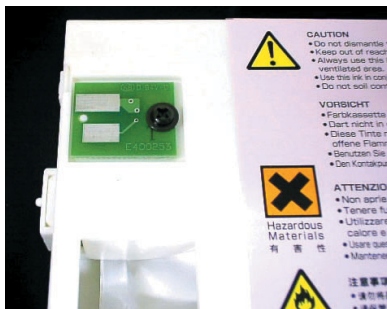
- Be sure to store the cleaning liquid RS for maintenance in a cold and dark place.
- Store the cleaning liquid RS for maintenance out of reach of children.

Storage of media

Store media away from direct sunlight, high temperature, high humidity, and high levels of dust.

Storage of the ink cartridges

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





D201260-1.10-30032007

Printed in Japan

© MIMAKI ENGINEERING Co., Ltd. 2007

IT

FW: 5.10