Roland

SOLJET PRO4

XF-640

ECO-SOL MAX3

Ink Switching Method

About this Manual

This manual explains how to switch the ink being used from **ECO-SOL MAX 2** ink (hereinafter called **MAX 2 ink**) to **ECO-SOL MAX 3** ink (hereinafter called **MAX 3 ink**).*
To prevent the MAX 2 ink and the MAX 3 ink from mixing, perform operations according to the procedures given in this manual.

* Colors with MAX 3 ink are different than with MAX 2 ink.



ECO-SOL MAX2 **ECO-SOL MAX3**

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Introduction

Overall Flow

Preparation before Operations

STEP 1: Checking the Package Contents (P. 4)

↓

STEP 2: Checking the Necessary Files (P. 4)

↓

STEP 3: Writing a Memo with the VersaWorks Settings (P. 4)

Switching the Ink

STEP 1: Updating the Printer Unit Firmware (P. 5)
(Required time: Approx. 5 minutes)

↓

STEP 2: Switching the Ink (P. 5)
(Required time: Approx. 20 to 30 minutes)

↓

STEP 3: Cleaning of the Periphery of the Print Heads (Manual Cleaning; P. 6)
(Required time: Approx. 10 minutes)

↓

STEP 4: Replacing the Wipers and Felt Wipers (P. 10)
(Required time: Approx. 10 minutes)

↓

STEP 5: Bidirectional Printing Correction (P. 13)
(Required time: Approx. 5 minutes)

↓

STEP 6: Updating VersaWorks (P. 13)
(Required time: Approx. 10 minutes)

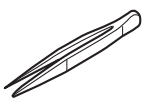
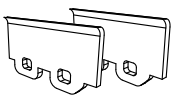
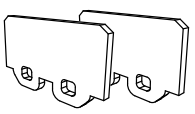
Changes and Precautions

Important: Changes and Precautions after Switching the Ink (P. 17)

Preparation before Operations

STEP 1: Checking the Package Contents

This kit contains the following items. Make sure they are all present and accounted for.

Items used during ink switching			
 Cleaning sticks	 Tweezers (1)	 Gloves (1 set)	 Wipers (2)
 Felt wipers (2)	 Drain bottles (2)	 Drain funnel (1)	
Items used after ink switching (not used during ink switching)			
 Cleaning liquid (1) (dedicated for use with MAX 3 ink)			

STEP 2: Checking the Necessary Files

The firmware and updater downloaded from http://www.rolanddg.com/ecosolmax3/ are necessary for the operations in this manual.

Check that the following files are present.

- **Firmware: XF640Firm240.exe (in the "Firmware" folder)**
- **Updater: LocalUpdater.exe (Ver. 5.5.0 or later; in the "Roland VersaWorks local updater" folder)**

If the above files are not present, download them from the following URL.
http://www.rolanddg.com/ecosolmax3

STEP 3: Writing a Memo with the VersaWorks Settings

Important

As the final step when you switch the ink, update VersaWorks to a version that supports MAX 3 ink. After the update, because the printer that has been switched to MAX 3 ink will be connected as a new printer, the previous job data and settings will be deleted. Write down the IP address and the settings of the connected printer such as "Quality."

Switching the Ink

STEP 1: Updating the Printer Unit Firmware

Use the file that you have downloaded to update the firmware of the printer unit to a version that supports MAX 3 ink. For the update method, refer to "readme.pdf," the file that you downloaded at the same time as the firmware.

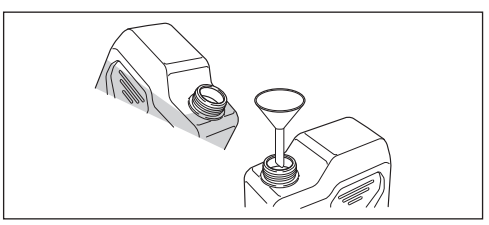
STEP 2: Switching the Ink

1. Display the [CHANGE INK SET] menu.

1. **Press (MENU).**
2. MENU / SUB MENU — **Press (▼) several times to display the screen shown on the left. Press (►).**
3. SUB MENU / INK CONTROL — **Press (▲) several times to display the screen shown on the left. Press (►), then (▲).**
4. INK CONTROL / CHANGE INK SET — **Press (►).**
5. CHANGE INKSET? / [YES] NO — **Press (◄) or (►) to select [YES]. Press (ENTER).**

2. Switch the ink cartridges.

1. EMPTY / DRAIN BOTTLE — **When the screen on the left is displayed, remove the drain bottle and discard the discharged fluid.**
   Use the included drain funnel to transfer the discharged fluid from the printer's drain bottle to the included drain bottle.



⚠CAUTION **Before you detach the drain bottle, be sure to wait for the screen to display "EMPTY DRAIN BOTTLE." After discarding the discharged fluid, promptly attach the drain bottle to the machine.**
Failing to follow this procedure may cause discharged fluid to flow out of the machine and spill, soiling your hands or the floor.

⚠WARNING **Never place discharged fluid or ink near an open flame.**
Doing so may cause a fire.

⚠CAUTION **To store discharged fluid temporarily, place it in the included drain bottle or in a durable sealed container such as a metal can or polyethylene tank, and cap the container tightly.**
Any spillage or vapor leakage may cause a fire, an odor, or physical distress.

Dispose of discharged fluid properly, in accordance with the laws in effect in your locale.
Discharged fluid contains toxic ingredients. Never attempt to incinerate discharged fluid or discard it with ordinary trash. Also, do not dispose of it in sewer systems, rivers, or streams. Doing so may have an adverse impact on the environment.

❷ **Install the drain bottle.**

❸ **Press** ENTER **.**

❹

```
REMOVE SOL CRT.
    12345678
```

Remove all the currently inserted ink cartridges.

❺

```
EMPTY
  DRAIN BOTTLE ↵
```

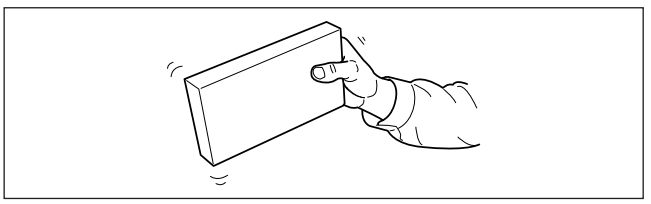
When the screen on the left is displayed, remove the drain bottle and discard the discharged fluid.

Use the included drain funnel to transfer the discharged fluid from the printer's drain bottle to the included drain bottle.

❻ **Install the drain bottle.**

❼ **Press** ENTER **.**

❽



Before you insert the new ink cartridge for each color, gently shake the cartridge.

❾

```
SET SOL CRT.
    12345678
```

Set in place new ink cartridges.

```
FILLING INK...
>>>
```

When you set in place the new cartridges, the machine starts filling with ink.

```
OPEN COVER L
```

When the screen shown in the figure appears, the ink cartridge switching operation is finished. Proceed to the next procedure.

STEP 3: Cleaning of the Periphery of the Print Heads (Manual Cleaning)

IMPORTANT!

Important notes on this procedure

- Before attempting this operation, remove any media.
- To prevent the print heads from drying out, finish this procedure in 30 minutes or less. A warning beep sounds after 30 minutes.
- Never use any implements other than the included cleaning sticks. Cotton swabs or other lint-producing items may damage the print heads. If you use up the cleaning sticks, purchase new ones from your authorized Roland DG Corp. dealer.
- Do not use a previously used cleaning stick. Reusing cleaning sticks may reduce the printing quality.
- Do not put a cleaning stick that has been used for cleaning into the cleaning liquid. Doing so will deteriorate the cleaning liquid.
- Never rub the nozzle surface of the print heads.
- Stroke the sponges very gently, applying as little pressure as possible. Never rub, scrape, or crush them.

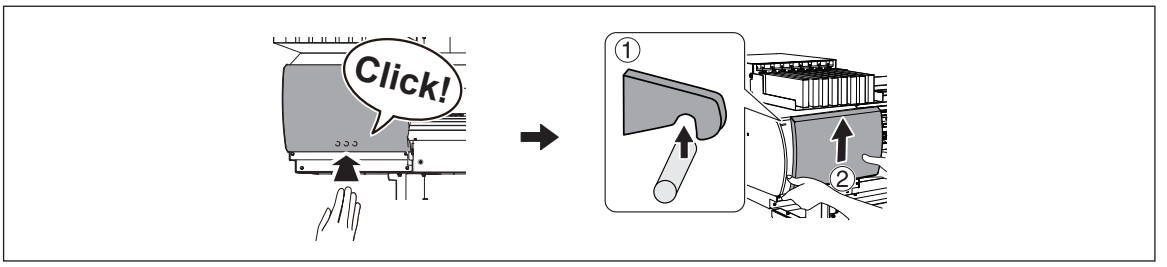
⚠CAUTION **Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.**

Failure to observe these instructions may cause the machine to move suddenly, resulting in injury.

1. Prepare for manual cleaning.

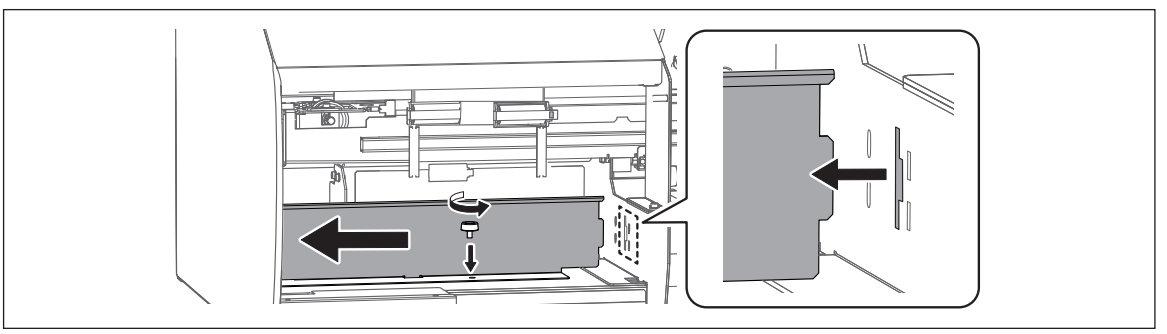
❶ OPEN COVER L

Open the left cover.



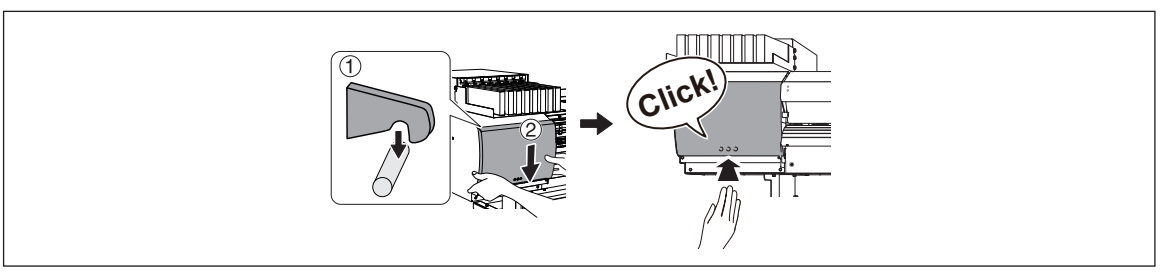
❷ REMOVE CUT RAIL ↵

Remove the cut rail.
Press (ENTER).



❸ CLOSE COVER L

Close the left cover.



❹ OPEN COVER L

Open the left cover.

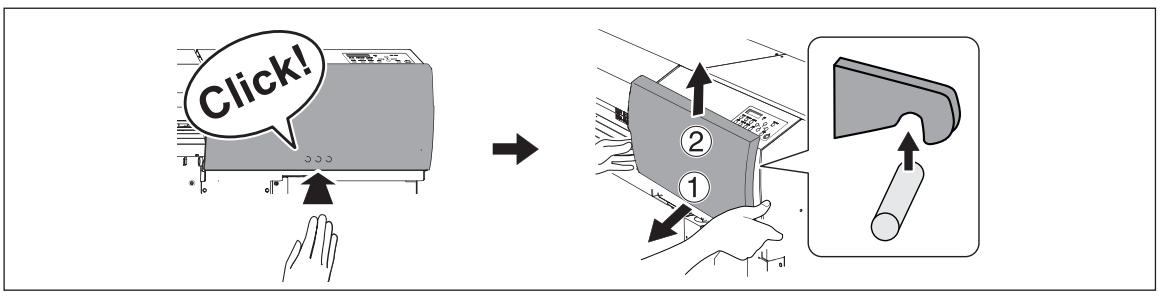
IMPORTANT!

If a warning beep sounds during the following operations

If the operations are not completed within 30 minutes from the message "OPEN COVER L" shown above is displayed, a warning beep will sound to warn you of the print heads drying out. When the warning beep sounds, attach the left and right covers, close the front cover, and then press (ENTER). This temporarily interrupts the operations. After you interrupt the operations, you cannot continue the operations with the procedures in this manual. ☞ Refer to the user's manual of the model that you are using and perform the operations according to the details listed under **P. 20 "When Operations Are Interrupted"**.

❺ OPEN COVER R

Open the right cover.

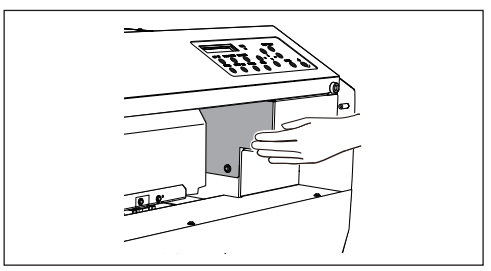


MANUAL CLEANING
FINISHED? ↵

Preparations are complete when this screen appears.

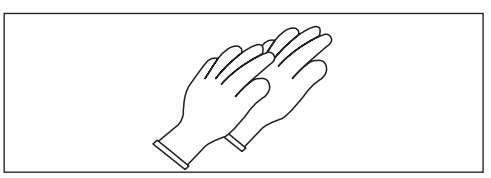
2. Perform the manual cleaning.

❶



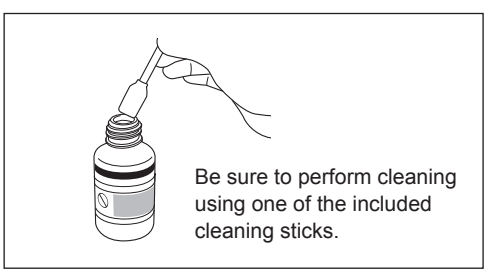
Touch the location shown in the figure to discharge any static electricity.

❷



Put on the pair of gloves (included).

❸

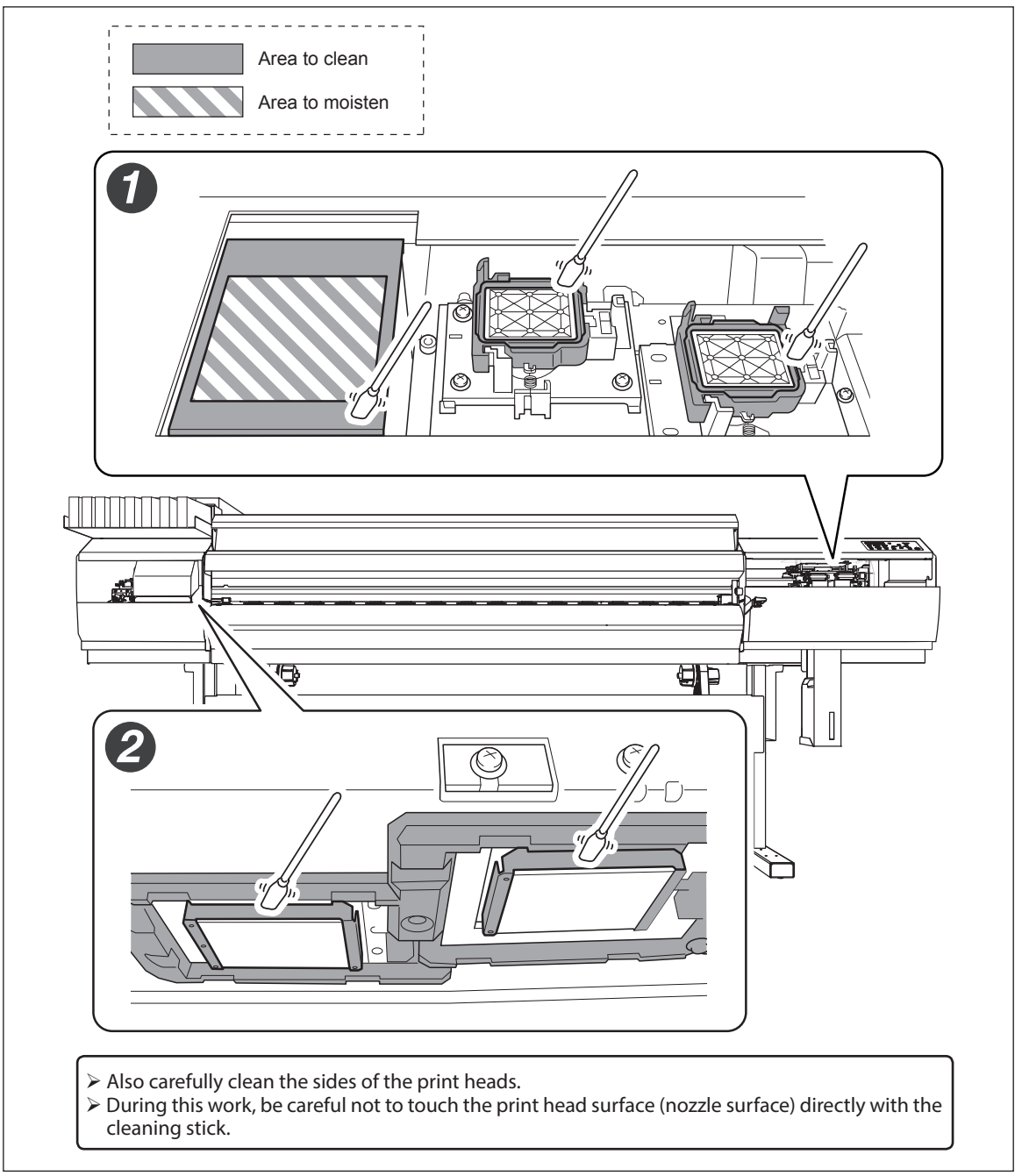


Moisten the cleaning stick with the cleaning liquid.

Use the cleaning liquid that you have been using since before switching the ink. Use the cleaning liquid included with the switching kit only after you have switched the ink.

4 **Clean the locations shown in the following figure.**

Exercise special care in cleaning off any accumulated ink. You can make the accumulated ink easier to clean off by applying cleaning liquid to cleaning locations 1 and 2, and then wiping these locations off with the cleaning stick. Only moisten the part indicated with diagonal lines in location 1 with cleaning liquid on the cleaning stick.



- Also carefully clean the sides of the print heads.
- During this work, be careful not to touch the print head surface (nozzle surface) directly with the cleaning stick.

5 **Press** ENTER **.**

6 CLOSE COVER L — **Close the left cover.**

7 CLOSE COVER R — **Close the right cover.**

OPEN COVER R

When the screen shown in the figure appears, the cleaning of the periphery of the print heads (manual cleaning) is finished. Proceed to the next procedure.

STEP 4: Replacing the Wipers and Felt Wipers

If a warning beep sounds during operation
Attach the left and right covers, close the front cover, and then press ENTER. After this, you cannot continue the operations with the procedures in this manual. Refer to the user's manual of the model that you are using and perform the operations according to the details listed under **P. 20 "When Operations Are Interrupted"**.

⚠CAUTION **Be sure to perform operations as specified by the instructions, and never touch any area not specified in the instructions.**
Failure to observe these instructions may cause the machine to move suddenly, resulting in injury.

1. Replace the wipers.

❶ OPEN COVER R

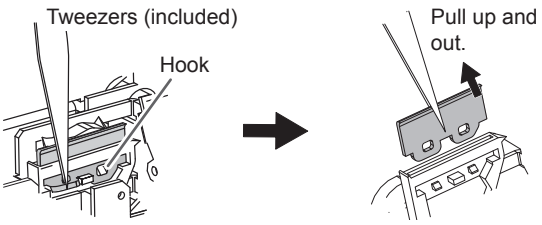
Open the right cover.

REPLACE WIPER
FINISHED? ↵

Preparations are complete when this screen appears.

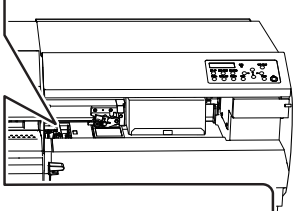
❷ **Replace the first wiper.**

Removing an old wiper

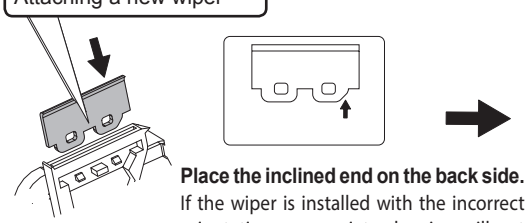


Disconnect the hooks.
Using the tweezers to press on the hook in the hole on the wiper makes it easier to remove the wiper.

Point
If the area is dark and difficult to see, use a flashlight or a similar device to illuminate the area.



Attaching a new wiper



Place the inclined end on the back side.
If the wiper is installed with the incorrect orientation, appropriate cleaning will not be possible.

Attach the part to the hooks.
Be sure to attach the part to the hooks. Failure to do so may result in dot drop-out or other problems.

❸ **Press** ENTER.

❹ CLOSE COVER R

Close the right cover.

❺ OPEN COVER R — **Open the right cover.**

REPLACE WIPER
FINISHED? ↵ — Preparations are complete when this screen appears.

❻ **Replace the second wiper.**
The replacement procedure is the same as for the first wiper. See the illustration under step *1.*-❷.

❼ **Press** ENTER **.**

❽ CLOSE COVER R — **Close the right cover.**

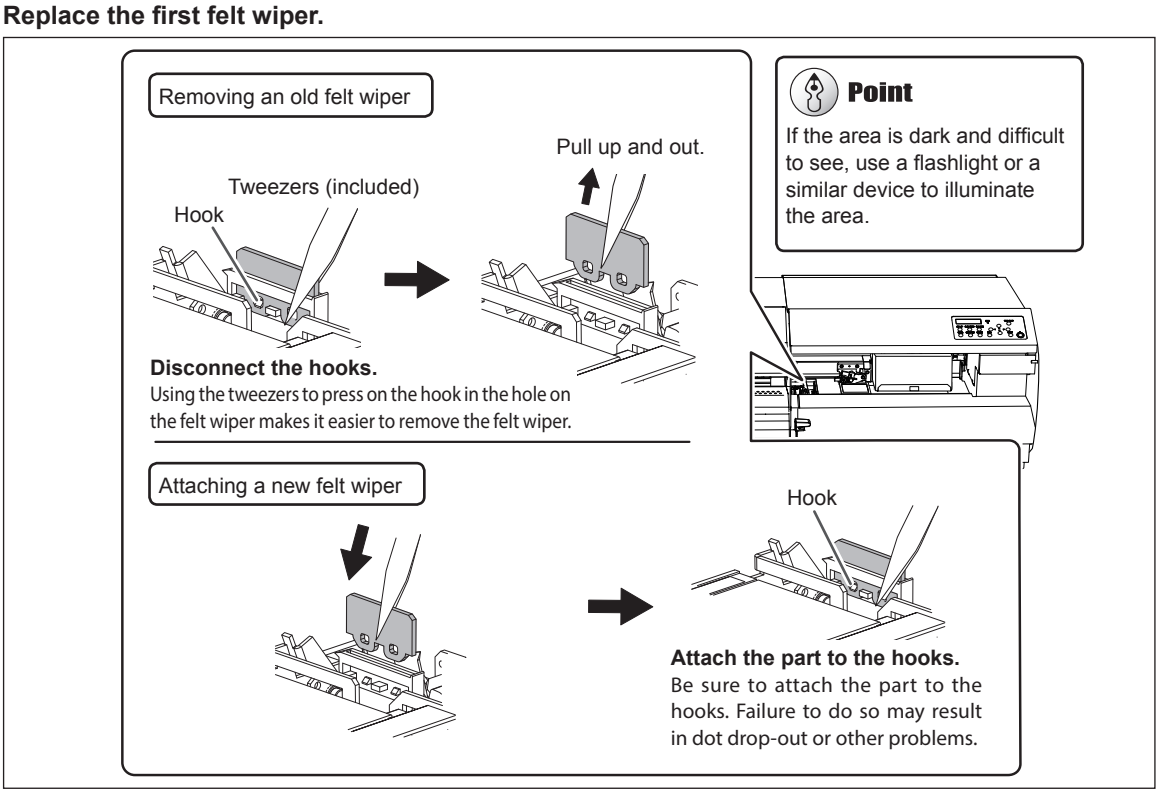
2. Replace the felt wipers.

❶ OPEN COVER R — **Open the right cover.**

REPLACE FELT
FINISHED? ↵ — Preparations are complete when this screen appears.

❷ **Open the front cover.**

❸ **Replace the first felt wiper.**



❹ **Close the front cover.**

❺ **Press** ENTER **.**

❻ CLOSE COVER R — **Close the right cover.**

❼ OPEN COVER R — **Open the right cover.**

REPLACE FELT
FINISHED? ↵ — Preparations are complete when this screen appears.

❽ **Open the front cover.**

❾ **Replace the second felt wiper.**
The replacement procedure is the same as for the first wiper. See the illustration under step *2.*-❸.

3. Exit the [CHANGE INK SET] menu.

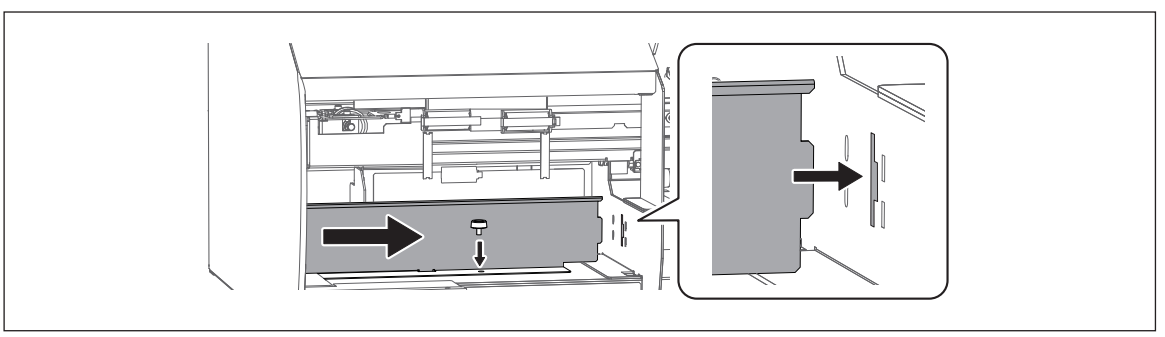
❶ **Close the front cover.**

❷ **Press** ENTER **.**

❸ CLOSE COVER R — **Close the right cover.**

❹ OPEN COVER L — **Open the left cover.**

❺ REPLACE CUT
RAIL ↵ — **Attach the cut rail.**
Press ENTER **.**



❻ CLOSE COVER L — **Close the left cover.**

❼ CLEANING...
>>>>>> — The screen shown in the figure appears, and then cleaning starts.

CHECK
DRAIN BOTTLE ↵ — **Make sure the drain bottle is not overflowing with discharged fluid, and then press** ENTER **.**

SETUP SHEET
◆▸ROLL L 99.9m — When this screen appears, the "Replacing the Wipers and Felt Wipers" step is finished.

STEP 5: Bidirectional Printing Correction

Refer to the user's manual of the printer you are using to perform the bidirectional printing correction.

Title in contents	Menu
Correcting for Misalignment in Bidirectional Printing	**ADJUST BI-DIR SIMPLE SETTING**
Correcting for Misalignment in Bidirectional Printing More Precisely	**ADJUST BI-DIR DETAIL SETTING**

When you are finished, proceed to the next procedure.

STEP 6: Updating VersaWorks

1. Update VersaWorks.

❶ **Refer to http://www.rolanddg.com/ecosolmax3/ and update VersaWorks to a version that supports MAX 3 ink.**

❷ **If VersaWorks is running, exit it.**

From this point, the procedure differs depending on the type of printer that is connected to VersaWorks.

When only a printer that has been switched to MAX 3 ink is connected to VersaWorks (P. 13)

Initialize VersaWorks, and then reconnect the printer to it as a new printer. All the information will be deleted due to the initialization. We recommend that you write down the IP address of the printer that you will reconnect and the settings of the VersaWorks application that you want to continue to use.

When a printer that does not use MAX 3 ink is connected to VersaWorks (P. 15)

Leave the printer that does not use MAX 3 ink connected (leave the information set in VersaWorks). Only reconnect the printer that has been switched to MAX 3 ink as a new printer. All the information of the newly reconnected printer is deleted (the information of the printer that does not use MAX 3 ink remains), so we recommend that you write down the IP address of the printer that has been switched to MAX 3 ink and the settings of the VersaWorks application that you want to continue to use.

When only a printer that has been switched to MAX 3 ink is connected to VersaWorks

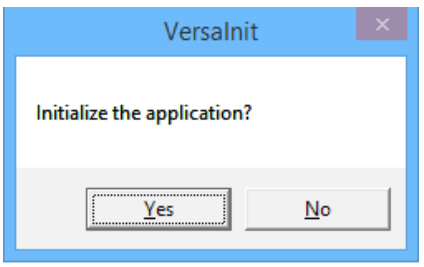
2. Initialize VersaWorks.

❶ **Windows VISTA/7**
① Click the [Start] ( ) menu.
② Click [All Programs] (or [Programs]) > [Roland VersaWorks] > [Initialize Application].

Windows 8
① Right-click in the [Start] screen.
② Click [All apps].
③ Click [Initialize Application] for VersaWorks.

Windows 8.1
① Click on the [Start] screen.
② Click [Initialize Application] for VersaWorks.

❷



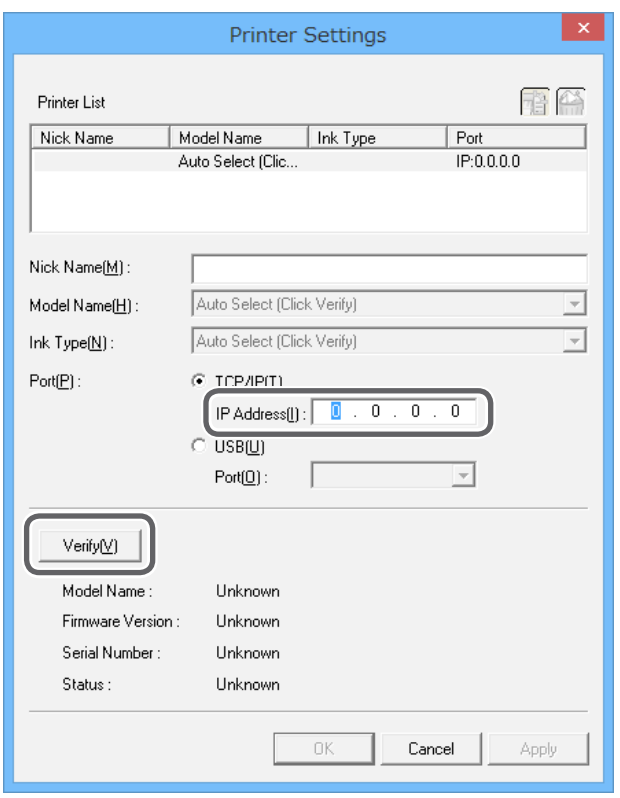
When the message shown in the figure is displayed, click [Yes].

3. Reconnect a printer that has been switched to MAX 3 ink to VersaWorks.

❶ **Start VersaWorks.**
The [Printer Settings] screen will appear.

❷ **Set [IP Address] to the IP address of the printer that has been switched to MAX 3 ink.**

❸ **Click [Verify].**

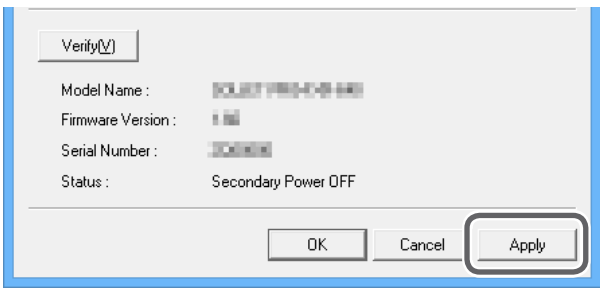


❹



Check that [Ink Type] is the MAX 3 ink.
This indicates that you have successfully reconnected to a printer that has been switched to MAX 3 ink.

❺



Click [Apply].
The printer that has been switched to MAX 3 ink is displayed under [Printer List].

❻ **If there are multiple printers that have been switched to MAX 3 ink, click**  **.**
Repeat steps ❷, ❸, ❹, and ❺ to reconnect to these printers that have been switched to MAX 3 ink.

❼ **Click [OK].**

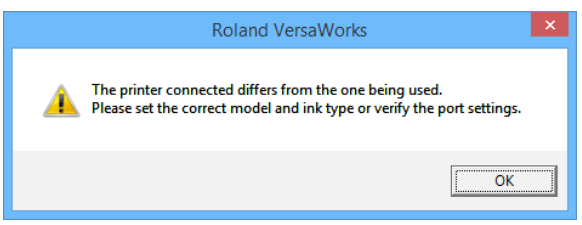
This completes the operations to switch to MAX 3 ink.

When a printer that does not use MAX 3 ink is connected to VersaWorks

2. Temporarily delete the printer that has been switched to MAX 3 ink from VersaWorks.

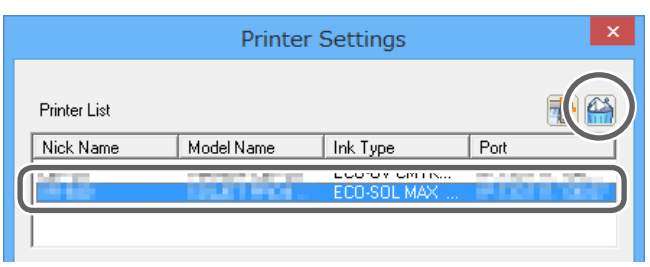
❶ **Start VersaWorks.**

❷



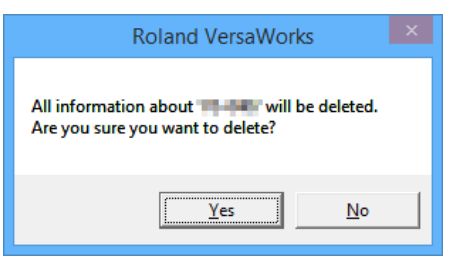
When the screen shown in the figure is displayed, click [OK].
The [Printer Settings] screen will appear.

❸



Select a printer that has been switched to MAX 3 ink under [Printer List], and then click  **.**

❹



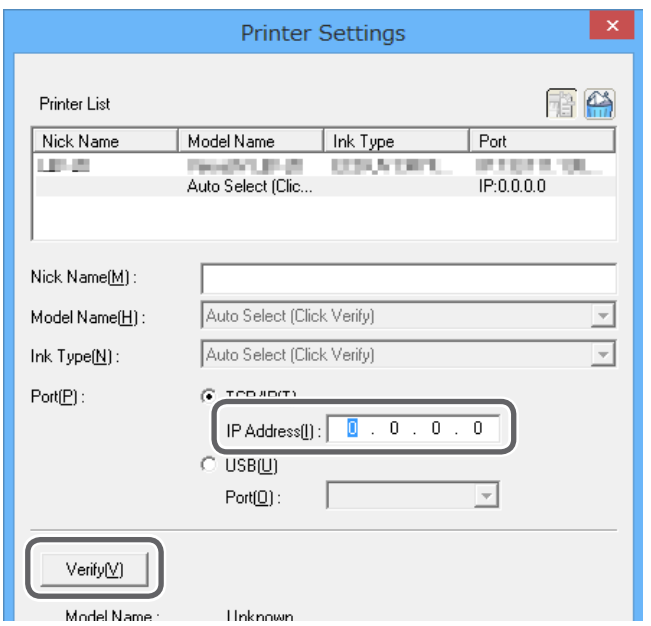
When the screen shown in the figure appears, confirm that you want to delete the selected printer, and then click [Yes].
The selected printer disappears from the [Printer List].

3. Reconnect a printer that has been switched to MAX 3 ink to VersaWorks.

❶ **Click**  .

❷ **Set [IP Address] to the IP address of the printer that was temporarily deleted (the printer that has been switched to MAX 3 ink).**

❸ **Click [Verify].**

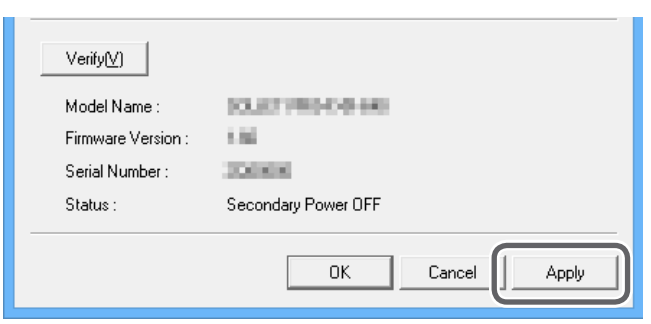


❹



Check that [Ink Type] is the MAX 3 ink.
This indicates that you have successfully reconnected to a printer that has been switched to MAX 3 ink.

❺



Click [Apply].
The printer that has been switched to MAX 3 ink is displayed under [Printer List].

❻ **If there are multiple printers that have been switched to MAX 3 ink, click**  .
Repeat steps ❷, ❸, ❹, and ❺ to reconnect to these printers that have been switched to MAX 3 ink.

❼ **Click [OK].**

This completes the operations to switch to MAX 3 ink.

Important: Changes and Precautions after Switching the Ink

Change: When to Perform Manual Cleaning

When using MAX 3 ink, you have to perform manual cleaning at different times than with the conventional ink.
* This manual cleaning is explained in "Manual Cleaning" in the user's manual of the printer that you are using.

Before switching to MAX 3 ink

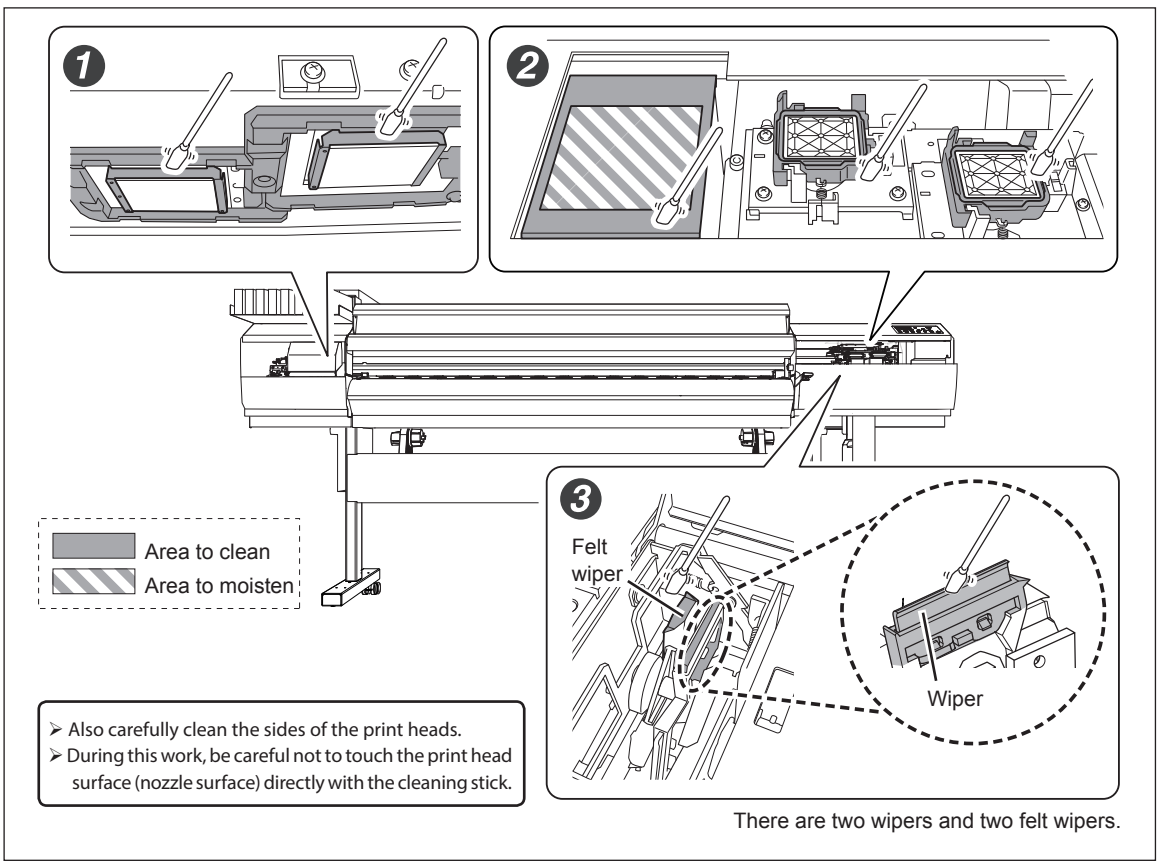
Cleaning timing	Cleaning method	Remarks
Before the start of daily operations	**Normal cleaning**	Carry out a printing test. If dot drop-out occurs, perform cleaning.
When dot drop-outs are not fixed by performing normal cleaning multiple times	**Medium cleaning**	• If dot drop-outs are not fixed by performing medium cleaning, perform powerful cleaning. • This consumes more ink than normal cleaning, and too-frequent use may damage the print heads themselves. Avoid using it more than necessary.
	Powerful cleaning	
• Once per month • When symptoms cannot be improved with medium or powerful cleaning	**Manual cleaning**	• We recommend that you perform this cleaning periodically. • Replacing the wipers and felt wipers is also an effective means of improving the symptoms.

After switching to MAX 3 ink

Cleaning timing	Cleaning method	Remarks
Before the start of daily operations	**Normal cleaning**	Carry out a printing test. If dot drop-out occurs, perform cleaning.
If the message "TIME FOR MAINTENANCE" is displayed (approximately once per week)	**Manual cleaning**	**Refer to "Change: Cleaning Locations During Manual Cleaning" on the next page for details on the cleaning locations.** * "TIME FOR MAINTENANCE" is displayed approximately once per week, but it may be displayed more frequently depending on the usage conditions. When this message is displayed, be sure to perform manual cleaning.
When dot drop-outs are not fixed by performing normal cleaning multiple times	**Medium cleaning**	• If dot drop-outs are not fixed by performing medium cleaning, perform powerful cleaning. • This consumes more ink than normal cleaning, and too-frequent use may damage the print heads themselves. Avoid using it more than necessary.
	Powerful cleaning	
When symptoms cannot be improved with medium or powerful cleaning	**Manual cleaning**	Refer to "Change: Cleaning Locations During Manual Cleaning" on the next page for details on the cleaning locations. Replacing the wipers and felt wipers is also an effective means of improving the symptoms.

Change: Cleaning Locations During Manual Cleaning

Clean the locations indicated in the following figure when performing manual cleaning after switching to MAX 3 ink. Exercise special care in wiping off any accumulated ink. You can make the accumulated ink easier to clean off by applying cleaning liquid to the cleaning locations, and then wiping these locations off with the cleaning stick. Only moisten the part indicated with diagonal lines in location ❶ with cleaning liquid on the cleaning stick.



Daily Precautions

Do not leave the front, left, and right covers open.

Only open the front cover when necessary, such as when setting media. In all other situations, be sure to close the front cover. Be sure to close the left and right covers after performing maintenance.
This machine periodically performs automatic maintenance, but this will not be performed if the front cover is open. If the machine is left with the front cover open, the print heads may malfunction.

If the message "TIME FOR MAINTENANCE" is displayed, be sure to perform manual cleaning.

If the message "TIME FOR MAINTENANCE" is displayed on the printer screen, be sure to perform manual cleaning.

☞ P. 17 "Change: When to Perform Manual Cleaning"

Regarding ink cartridge storage

Store ink cartridges with their seals intact and in a well-ventilated location at a temperature of -5°C to 40°C.
However, do not store ink cartridges for a prolonged period of time in low or high temperature environments.

When Not in Use for a Prolonged Period, Precaution 1

In advance, insert ink cartridges that have a large amount of ink remaining.

If the ink runs out, the machine will not be able to periodically perform automatic maintenance. If the machine is left in this state, the print heads may malfunction. If you know that you will not use the machine for a prolonged period, insert ink cartridges that have a large amount of ink remaining.

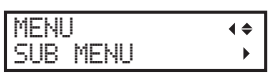
When Not in Use for a Prolonged Period, Precaution 2

Discard the discharged fluid in advance of prolonged periods of disuse.

If you know that you will not use the machine for a prolonged period, follow the procedure below to discard the discharged fluid.

Procedure

❶ **Press (MENU).**

❷ 

Press (▼) several times to display the screen shown on the left.
Press (►), then (▲).

❸ 

Press (►), then (▲).

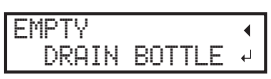
❹ 

Press (ENTER).

❺ 

When the screen on the left is displayed, remove the drain bottle and discard the discharged fluid.

⚠CAUTION **Before you detach the drain bottle, be sure to wait for the screen to display "EMPTY DRAIN BOTTLE."**
Failing to do so may cause discharged fluid to flow out of the machine and spill onto your hands or the floor and cause a stain.

❻ 

Attach the emptied drain bottle to the machine once more.
Press (ENTER).

❼ 

Press (ENTER).

❽ 

Press (MENU) to go back to the original screen.

⚠WARNING **Never place discharged fluid or ink near an open flame.**
Doing so may cause a fire.

⚠CAUTION **To store discharged fluid temporarily, place it in the included drain bottle or in a durable sealed container such as a metal can or polyethylene tank, and cap the container tightly.**
Any spillage or vapor leakage may cause a fire, an odor, or physical distress.

Dispose of discharged fluid properly, in accordance with the laws in effect in your locale.
Discharged fluid is flammable and contains toxic ingredients. Never attempt to incinerate discharged fluid or discard it with ordinary trash. Also, do not dispose of it in sewer systems, rivers, or streams. Doing so may have an adverse impact on the environment.

When Operations Are Interrupted

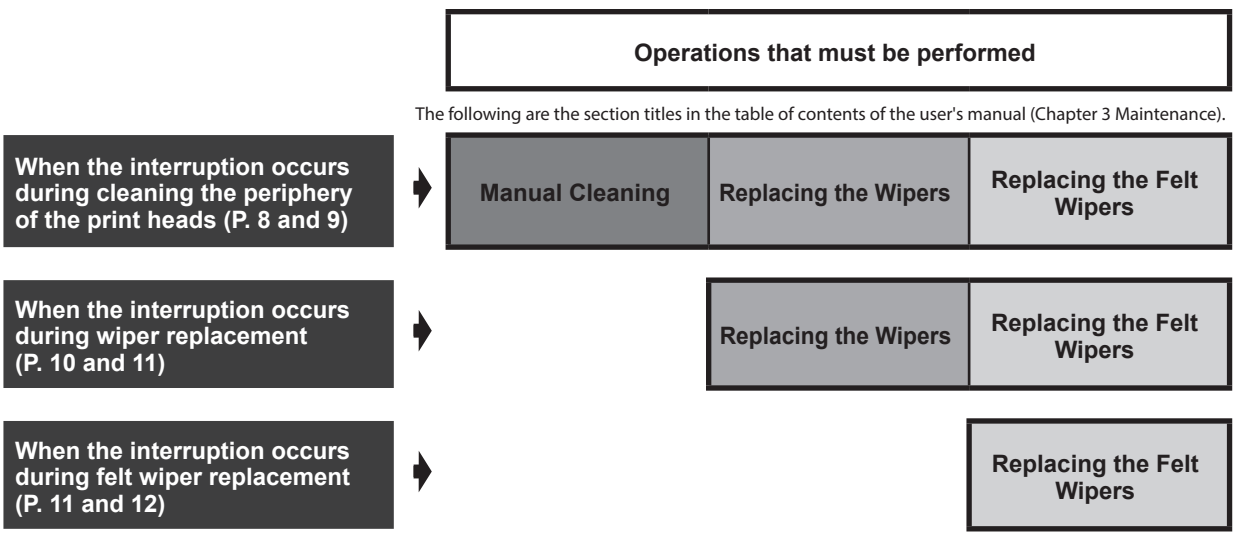
When the Message "STOPPED FOR MOTOR PROTECTION" Is Displayed

This message indicates that the machine's operations have been canceled in order to prevent pump motor malfunctions arising from overheating.
If this message is displayed, press the sub power switch to turn the sub power off. Then, wait 10 minutes before turning the sub power switch on again. The operation will continue from the point where it was interrupted.

When the Cleaning/Wiper Replacement Operation Is Interrupted

- **STEP 3: Cleaning of the Periphery of the Print Heads (Manual Cleaning)**
- **STEP 4: Replacing the Wipers and Felt Wipers**

If you interrupt the above operations partway through the procedure, you cannot continue the operations with the procedures in this manual.
The subsequent work to perform varies depending on the point when the operations were interrupted. Refer to the following sections, and then perform operations according to the corresponding page of the user's manual of the model that you are using.



If you do not perform all the operations, color mixing between the MAX 2 ink and MAX 3 ink will occur. If you interrupt operations partway through the procedure, be sure to perform the remaining operations from the point the procedure was interrupted.



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