RICOH

Pro L4130/L4160 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.

Also, be careful not to spill the ink or maintenance liquid on your skin or clothes when cleaning the 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
Clean stick
Pro Maintenance kit
Wiper
Absorber kit

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

Because the head employs a very precise mechanism, due care needs to be taken when it is cleaned. Using a clean stick, etc., rub off gelatinous ink or dust that may stick to the lower part of the slider and the area around the head. In doing so, never rub the nozzles of the head.

Tools required for cleaning	Clean stick	Gloves	• Goggles	
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· Be sure to wear the attached goggles and gloves when cleaning the area around the head.Otherwise, you may get ink in your eyes.

٠ The ink contains organic solvent. If you get the ink on your skin or in your eyes, wash it away with plenty of water immediately.



- Carriage will move to the left end of this device.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.





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Open the left maintenance cover.

- (1) Turn four screws that fix the maintenance cover to the left, and remove them.
- (2) Remove the maintenance cover.
- If the maintenance cover is hard to remove, use the supplied screwdriver.



Wipe ink sticking to the side of the head off with a clean stick.

- To prevent gelled/ solid ink ground from pooling at the front of the carriage, scrape them off with clean stick etc.
- Clean the side surface of the head (shown in deep gray) with a clean stick.
- Never rub the nozzles.







Press the ENTER key after the cleaning.

Close cover COMPLETED [ENT]



Close the left maintenance cover then press the <u>ENTER</u> key.

• After its initial operation, the machine returns to step1.

Capping station (Cleaning the Wiper and Cap) ("Cleaning the Wiper and Cap" Chapter 4 of the Operation Manual)

Cleaning the Wiper and Cap

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

Tools required for Maintenance	Maintenance kit	Gloves
	Clean stick	Goggles

 Be sure to wear the supplied goggles and gloves when maintaining the capping T station.Otherwise, you may get ink in your eyes. • Do not move the carriage out of the capping station by hand. When it is desirable to move the Caution carriage, press the MAINT. key to execute the carriage-out. • Further, in the cases as explained below, replace the wiper with the new one. (Important!) 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 • When cleaning the wiper, be careful that lint from the clean stick or kimwipe® does not get left on the wiper.Remaining lint may cause image quality to deteriorate. · Clean the wiper completely until the stained ink on the top Top edge of the film edge of the wiper film is washed away after soaking the wiper in the Cleaning Fluid 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 Kimwipe®. Otherwise, lint may remain on the wiper. Reference for cleaning Press the (MAINT.) key in LOCAL. CARRIAGE OUT [ENT] Press the **ENTER** key. MOVE POSITION :STATION MAINT. Press () v to select [STATION MAINT.]. MOVE POSITION :STATION MAINT.



Press the <u>ENTER</u> key.

- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.





Open the right maintenance cover cover then remove the wiper.

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





Put the wiper that you used for one day into a provided case or solvent-resistancecovered-container (glass, earthenware, etc.) and pour Cleaning Fluid.

- Time to immerse the wiper shall be for 1 to 24 hours.
- (Important!)
- If you leave the wiper immersed in Cleaning Fluid too long, the wiper may be deformed.
 Dispose the Cleaning Fluid for soaking the wiper if it gets dirty. (As a guide, replace it in a
- Dispose the Cleaning Fluid for soaking the wiper in tigets dirty. (As a guide, replace it in a week). Regarding disposal of unused Cleaning Fluid, 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-coveredcontainer. 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.







Take out the wiper and remove ink blot etc. with a Kimwipe®.

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





Clean the wiper slider.

• Wipe off the ink sticking of the figure with a clean stick dipped in Cleaning Fluid for maintenance. Wipe off so that Cleaning Fluid for maintenance will not remain.

Clean



Set the wiper at the original position.

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





Clean the area around the wiper.

• Dip the clean stick in the cleaning liquid for maintenance, 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



Enlarged view of the Wiper Slider and Ink Guard W

- Do not clean this part
- Clean this part along the rail



• After its initial operation, the machine returns to step1.

Further, in the cases as explained below, replace the wiper with the new one.

- 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
 - 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.

Replacing the wiper

The wiper is consumable. When the display indicates that it is necessary to check and replace the wiper, immediately replace the wiper with a new one. Also, wipe ink sticking to the lower surface of the slider off.

<LOCAL> REPLACE WIPER[MNT]



- 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.
- A wiper is a consumable. Buy one through the dealer in your region or at our service office.
- When you replace it before the message is displayed, first perform carriage out and then replace it. After replacing, reset the counter for the number of times the wiper was used.

Press the MAINT. key in LOCAL.	REPLACE WIPER EXECUTE [ENT]		



Press the ENTER key.

- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.
- (Important!)

• Until the replacement work is completed, [COMPLETED: ent] is displayed on the screen. After the work up to the Step 4 is completed and you close the right maintenance cover, press the <u>ENTER</u> key.



Open the rght maintenance cover then remove the wiper.

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



REPLACE WIPER COMPLETED

[ENT]



Insert a new wiper.

• Insert a new wiper by holding its both ends.





Close the right maintenance cover then press the <u>ENTER</u> key.

• After its initial operation, the machine returns to LOCAL.





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

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

In addition, when you replace the absorber, clean ink adhering to the capping station at the same time.



• To replace the absorber, the absorber kit separately sold is



Press the ENTER key.

- The carriage moves to the maintenance position.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- . The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.



Carriage



Insert a new absorber.

• Pull out the absorbers (x 4).

the absorber.

- There are two types' absorbers and four in total (absorber x 1, absorber 2 x 3).
- · Be careful not to mess up the positions to which they are inserted.







Press the **ENTER** key after the cleaning.

Close cover COMPLETED [

[ENT]



Close the right maintenance cover then press the ENTER key.

• After its initial operation, the machine returns to step1.

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 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 waterdiluted neutral detergent.

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

Press the MAINT. key in LOCAL.	CARRIAGE OUT
Press the ENTER key.	MOVE POSITION :STATION MAINT.
3 Press • • to select [HEAD MAINT.].	MOVE POSITION :HEAD MAINT.



Press the ENTER key.

- Carriage will move to the left end of this device.
- If the carriage is not covered by the ink cap for a long period of time, the nozzle face of the head may get dry and clogged, resulting in white lines being left in the printed image.
- The buzzer sounds periodically while the carriage is out of the capping station. The buzzer sounds at shorter interval when the print heater temperature is high.





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

Cleaning the Media Transfer Surface ("Cleaning the Media Transfer Surface" Chapter 4 of the Operation Manual)

Cleaning the Media Transfer Surface

The Media Transfer Surface easily gets dirty with lint, paper dust, etc. generated when a media is cut. Wipe off conspicuous stains with a soft-hair brush, a dry cloth, a paper towel, etc.



When the Media Transfer Surface is stained with ink, wipe it off with a paper towel containing a small amount of Cleaning Fluid for maintenance.



- (Important!)
- Before cleaning the Media Transfer Surface, make sure that the Media Transfer Surface has cooled adequately.
- Because dust and dirt are easily accumulated in the slots for holding a media and cutting paper (cutter slot), be sure to clean these parts carefully.

Exterior ("Cleaning the Exterior Surfaces" Chapter 4, Operation Manual)

Cleaning the Exterior Surfaces

When the exterior surfaces of the machine are stained, dampen a soft cloth with water or a neutral detergent diluted with water, squeeze it, and wipe the surfaces with the cloth.



Waste ink bottle ("If a Waste Ink Bottle Confirmation Message Appears" Chapter 4 of the Operation Manual)

If a Waste Ink Bottle Confirmation Message Appears

Ink used in head cleaning, etc. is stored in the waste ink bottle on the lower right side of the machine. This machine counts the accumulated amount of discharged ink. When that reaches a specified amount, the machine displays a confirmation message. (When this message is displayed, consider the replacement of the waste ink bottle.)



- The message is displayed when it reaches 80% (1.6L) of the 2L bottle.

Confirmation Message in LOCAL



The message on the right is displayed.

<LOCAL>
Check waste ink[MNT]



Check the state of the waste ink bottle

- When it is different from the actual amount, press () and correct.
- Check waste ink Level: 80%(1.6L)
- When you correct (80%), press the ENTER key to return to LOCAL.
- When you replace (disposal) and clear the count, perform the procedures in "Replace the waste ink bottle with another". (@P P.14)

Replace the waste ink bottle with another



(2) Insert the waste ink bottle by holding a handle of the tank.



 Waste ink is equivalent to waste oil of industrial waste. Request an industrial waste disposal company for disposal of waste ink.





Close the waste ink bottle guard.





Press the ENTER key.

COUNT CLEAR EXECUTE [MNT]

. The ink discharging amount that is controlled by the machine is reset and the message is cancelled.

Replacing the Cutter Blade

The cutter blade is consumable. When the cutter blade gets dull, replace it with a new one that is recommended by this company.



- The blade is sharp.Be careful not to hurt yourself or anyone else.
- Store the cutter blade in a place that is out of the reach of children. In addition, dispose of used cutter blades according to regional laws and regulations.



• When replacing the cutter blade, it is recommended to place a sheet of paper under the cutter blade. This will help pick up the cutter blade if it drops.





STATION MAINT.

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l	J

Δ

Press () to select [STATION MAINT.].

MOVE POSITION :STATION MAINT.

Press the **ENTER** key.

• The carriage moves to the maintenance position.





Close the right maintenance cover.



Press the ENTER key.

• The screen returns to step1.

Replacing the white ink filter

To prevent nozzle missing due to clogging on the filter, replace the white ink filter periodically.

For replacing the white ink filter, the W filter kit sold separately is required.

Tool required for	W filter kit		Flat-blade screwdriver	
replacement work	Gloves	 Paper towel 		Goggles

The W filter kit is sold separately. Contact a distributor in your district or our office.
Before replacing the white ink filter, check the W filter kit. If there is an abnormality, contact a distributor in your district or our office.

When white ink filter replacing time message is displayed

When time to replace the white ink filter has come, the white ink filter replacing message is displayed.



The message to inform you of time to replace the white ink filter is displayed.

<LOCAL> ReplaceFILTER(White)

- When time to replace the white ink filter has come, the white ink filter replacing message is displayed in the LOCAL status.
- You can also check the message to inform you of time to replace the white ink filter by pressing the <u>ENTER</u> key in the LOCAL status.



Replace the white ink filter.

• Referring to P.13 "Confirmation Message in LOCAL", replace the white ink filter.



Fill up the white ink.

• Referring to P.19 "Filling the white ink", fill white ink.



Clear the white ink filter used days.

• Referring to P.22 "Clearing white ink filter used days", reset the white ink filter used days.

Replacing the white ink filter

Turn off the power supply of the printer and replace the white ink filter.



When replacing the white ink filter, be sure to wear the attached goggles and the gloves. Ink may get in your eyes.

POWER OFF

Organic solvent is used for ink.
 If it adheres to your skin or gets in your eyes, immediately wash off with water enough.



Turn OFF the power of the printer.

• After turning off the power supply with the power switch at the operation panel, move the main power switch (2 switches) at the right surface to "o" side.



Open the W filter maintenance cover.

• Remove the screw of the W-filter maintenance cover, and open the cover.





Replace the white ink filter.

- (1) Remove the fitting and the filter.
- (2) Attach new filter and fix it with the fitting.
 - If the fitting is not fixed enough, ink may leak. Tighten the fitting firmly.

(Important!)

- When removing the filter, ink in the tube may splash or drop. Before removing the filter, cover around the filter with paper towels etc.
 - When replacing the filter, be careful not to fold the tube.





Attach the W filter maintenance cover.

Turn on the power supply of the printer and fill white ink.



• When replacing the white ink filter, be sure to wear the attached goggles and the gloves. Ink may get in your eyes.

Organic solvent is used for ink.

If it adheres to your skin or gets in your eyes, immediately wash off with water enough.



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Turn ON the power of the printer.

<LOCAL>





9	 Press the ENTER key. Ink filling starts. When ink filling has been completed, the air purge selection screen 	** FILL UP ** PLEASE WAIT
	is displayed.	END< >START
10	Press the key and show the damper select display.	SELECT DAMPER :MMCC
11	Press the () key and select the damper [YKWW].	SELECT DAMPER :YKWW
12	Press the ENTER key.	AIR PG POSITION MOVE START [ENT]
13	 Press the ENTER key. The carriage moves above the wiper. 	PLEASE WAIT
	 When the carriage moving has been completed, the air purge start screen is displayed. 	AIR PG START [ENT]



Open the right maintenance cover.



Prepare air purge.

- Open one port and attach the jig on the port.
 - (Important!)
- The two ports at the right side is the target for ink filling.
- When attaching the jig, ink may leak. Put a paper towel etc. around the port.





16	 Press the ENTER key and perform air purge. Start pushing ink out. (The screen to wait for air purge completion is displayed.) (1) Ink pushed out flows to the jig. (2) Flow ink for about 30 sec. after ink started to flow. (3) After flowing ink for about 30 sec., close the port. (4) Change the jig to another port, flow ink for about 30 sec. in the same way. (5) After flowing ink for about 30 sec., close the port. (5) After flowing ink for about 30 sec., close the port. (6) When removing the jig, ink may leak. Put a paper towel experiment. 	AIR PG COMPLETED [ENT] Ink Reference value : About 10cm
17	Press the ENTER key. • Pushing out ink stops.	CAPPING POSITION MOVE START [ENT]
18	Close the right maintenance cover.	
19	 Press the ENTER key. The carriage moves to the cap position. When the carriage moving has been completed, the air purge start screen is displayed. 	PLEASE WAIT AIR PG END< >START
20	 Press the key. The screen to check air purge valve CLOSE is displayed. 	AIR PG VALVE CLOSE COMPLETED [ENT]
21	Open the right maintenance cover.	
22	Close the air purge valve. Using a flat-blade screwdriver, rotate the air purge valve so that the slope 	t of it may be vertical.
23	Close the right maintenance cover.	
24	 Press the ENTER key. Cleaning is performed. When cleaning has been completed, the screen returns to [FILL UP INK] of the maintenance menu. 	** CLEANING **
25	Press END the key several times to end the setting.	

Clearing white ink filter used days

Clear the used number of days of the white ink filter to return it to "0" day.



Select [USAGE] of the maintenance menu.

(1) Press the FUNCTION key in the Local.

(2) Select [INFORMATION] by pressing the keys then press the enter key.

(3) Select [USAGE] by pressing the keys then press the ENTER key.

• The wiping Information is displayed.



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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





Ink dropping

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.



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
- Absober kit
- Pro Maintenance kit
- Waste ink bottle 2 liters
- Cutter blades
- Clean stick for the surroundings of the head 50pcs
- W filter kit

Memo

Memo

Memo

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