Roland

IU-1000F

Requests for Daily Care and Maintenance

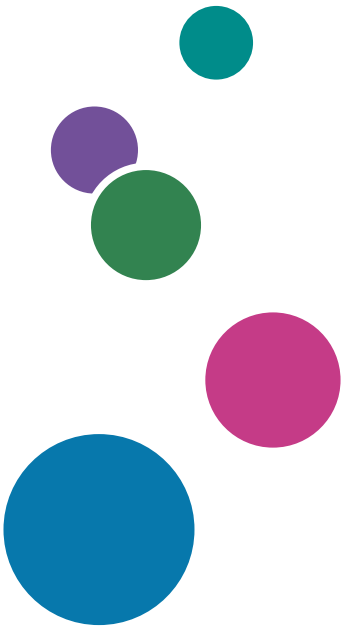
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Original Instructions

For information not in this manual, refer to the PDF files on the supplied CD.



For safe and correct use, be sure to read Safety Information before using the machine.

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1. Before You Start

This section describes the safety precautions before use and the installation environment.

Safety Precautions

⚠DANGER

- Do not touch energized parts when opening covers. Touching them might result in electric shock.

⚠WARNING

- Do not mount the table. Mounting it could result in injury or lowered accuracy of the board face.

- Clean the machine regularly. If dust and dirt accumulate on parts, it might cause short circuit or insulation deterioration, and fire or smoke may result.

⚠CAUTION

- Contact your authorized Roland DG Corporation representative for cleaning the machine's interior. If the machine's interior is not regularly cleaned while dust accumulates, fire and malfunction can result.

⚠WARNING

- Do not place vases, plant pots, cups, toiletries, medicines, small metal objects, or containers holding water or any other liquids, on or close to the machine. Fire or electric shock could result if water or metal objects fall inside the machine.

- Do not touch the UV lamp. As it becomes very hot, touching the UV lamp might cause injury or burns.

- Only perform maintenance after the LED UV lamp has completely cooled down and the cooling fan has stopped. Touching the LED UV lamp while it is hot might cause burns.

- Do not attempt to disassemble or modify the machine. Doing so risks burns and electric shock.

⚠CAUTION

- This machine uses UV-curable ink (UV ink). Make sure to wear goggles and gloves.

- Do not allow water or alcohol to remain on the nozzle surface and the surrounding area of the print heads, or caps and wipers in the maintenance station. If the ink is mixed with water or alcohol, it could form a solid substance.

⚠CAUTION

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

- Do not supply lubricant oil and similar substances to the inside this machine. It could cause the breakdown of this machine.

- Be sure to perform inspections and replace components regularly.

- Some of the internal components of this machine might be fragile. Do not touch the sensors, connectors, LEDs, or other fragile parts. Doing so may cause malfunctions.

About Operating Environments

Conditions for Installation Locations

⚠WARNING

- Make sure that the room where you are using the machine is well ventilated. Otherwise a fire or an electric shock might occur. Be sure to install a ventilator when installing the machine in a sealed room or a room with poor ventilation.

- Keep the machine in an environment free from humidity and dust. Otherwise a fire or an electric shock might occur.

- Do not obstruct the machine's vents. Doing so risks fire caused by overheated internal components.

The following is the recommended range for the operating environment:

- Temperature: 15–30°C (59–86°F)
- Humidity: 40–80%RH
- Altitude: 2,000 m (approx. 6,561.7 ft.) or less

Place the machine on a level surface. The machine must be level within 5 mm (approx. 0.2 inches): both front to rear and left to right.

Place the machine in a stable place where the floor is strong enough to withstand a load of 1,800 N/m^2 or more.

Avoid the following environments when locating the machine. If the machine is placed somewhere where the conditions are different from those recommended, a failure may occur.

- Low temperature and humidity or high temperature and humidity
- Places exposed to direct sunlight
- Places close to heaters, air conditioners, or humidifiers
- Places subject to frequent strong vibration
- Places with poor ventilation
- Dusty areas
- Places close to an oil heater or machine generating ammonia, such as a diazo copy machine

Precautions for users of ultrasonic-type humidifiers

Do not use an ultrasonic-type humidifier near this product. Chlorine or mineral components atomized by an ultrasonic-type humidifier may adhere to the electronic components inside the product, causing it to malfunction.

Precautions about Work Environment

The appropriate print settings and the frequency of maintenance varies depending on the work environment and the media used. Take the correct measures by paying attention to the following information.

Work environment	Considerations
When the print head gap value has been set wide because the fibers stick out of the media.	• The nozzles may be exposed to UV light when there is a large amount of scattered mist. • Increase the number of maintenance operations.
When using media that reflects UV light easily (such as glass or glossy metals).	
When printing on media which is easily charged by static electricity.	Take sufficient antistatic measures such as placing humidifiers near the machine. Due to static electricity, mist or dust may gather easily in the printing area or around the print heads.
When printing in an environment with low humidity (such as in winter).	

2. Daily Care and Maintenance

This chapter describes how to care and maintain the machine.

About the Frequency of Maintenance

⚠WARNING

- Clean the machine regularly. If dust and dirt accumulate on parts, it might cause short circuit or insulation deterioration, and fire or smoke may result.

- Make sure to store cleaning liquid for maintenance in a cool and dark place and in a place that is out of the reach of children.

⚠CAUTION

- This machine uses UV-curable ink (UV ink). Make sure to wear goggles and gloves.

- Be sure to perform inspections and replace components regularly.

Perform maintenance regularly in order to use the machine at its best possible condition. Make sure to keep the nozzle parts of the print heads that discharge ink in good condition as they may affect the printing results due to the adherence of particles or dust.

Maintenance frequency	Maintenance item	Reference
At the end of daily work	Cleaning the areas around the print heads	page 9
	Cleaning the capping station	page 11
	Cleaning the wipers	page 13
Once a week	Cleaning the table and the exterior	page 15
	Cleaning the guide rail cover	page 15
	Cleaning the area around the maintenance station	page 16
	Checking the waste ink tank capacity	page 19
	Checking the dirt on the UV lamp irradiation surface	page 20
Once every 3 months	Replacing the carriage filter	page 22

Maintenance frequency	Maintenance item	Reference
Maintenance when needed	Removing ink adhering to the table	page 25
	Cleaning the nozzle faces of the print heads	page 26
	Cleaning the UV lamp irradiation surface	page 28
	Draining ink accumulating on ink tray in capping station	page 30
	Replenishing ink	page 31
	Replacing the flushing pad	page 33
	Disposing of waste ink	page 35

Tools required for maintenance

Be sure to wear the included UV protective glasses and protective gloves, or the equivalent tools.

The following items from the cleaning kit are disposable: waste cloth (paper towel), non-woven fabric, polyethylene gloves, nitrile gloves, and cleaning stick. Be sure to use new ones instead of reusing them.

- Waste cloth (paper towel)

  Used to clean the table and the exterior of the machine. Do not use it to clean around the print heads or the maintenance station.
- Non-woven fabric

  Used to clean around the print heads and maintenance station. Be sure to use it for cleaning large surfaces.
- Cleaning stick

  Used to clean the nozzle faces of the print heads and the interior of the maintenance station. Be sure to use it for cleaning confined areas such as gaps or uneven surfaces.
- Cleaning liquid for maintenance

  Used to remove dirt that is difficult to wipe off and cured ink. When you purchase the cleaning liquid for maintenance, contact your authorized Roland DG Corporation representative.
- Polyethylene gloves
- Nitrile gloves
- UV protective glasses

Note

- Be sure to wear three sets of protective gloves in the following order: nitrile gloves, polyethylene gloves, and nitrile gloves.
- You can purchase additional consumables required for maintenance. For details, see page 45 "List of Consumables".

Daily Care

This section describes how to clean around the print heads, the capping station, and wipers.

Perform daily maintenance to ensure the safe and long-term use for this machine.

Important

- **Use the cleaning stick when cleaning the areas around the print heads, capping station, and wipers. If you use an ordinary cotton swab, waste threads may be left, and this may cause a secondary failure.**
- **Be sure to provide daily maintenance for the ink caps and wipers located in the maintenance station. If you leave them dirty, dirt may adhere to the nozzle faces, or dust and solidified ink may be rubbed against the nozzles, which may cause a discharge defect.**
- **Be sure to clean the bottom of the carriage every day so that it will not become dirty with adhering ink or dust. If you leave it dirty, dust and solidified ink may be rubbed against the nozzles through the wiping operation during head cleaning.**
- **When cleaning the bottom of the carriage, perform maintenance with due care to avoid scratching the nozzle faces.**

Cleaning Around the Print Heads

Clean around the print heads every day. Dirt around the print heads may cause ink discharge defects.

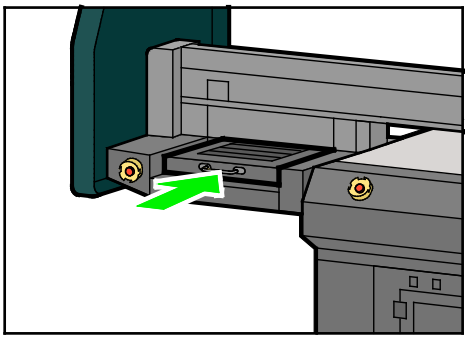
⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Do not place any object on the table as the carriage moves there during cleaning.**

1. **Slide the cover of the left-side ink receiver section carefully into the printer until it stops.**

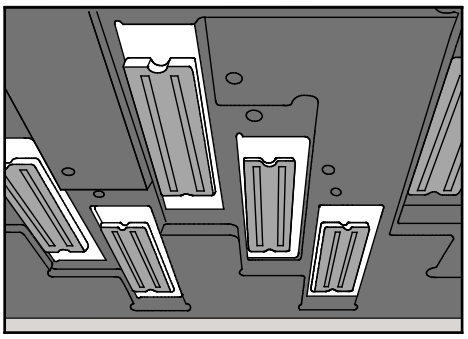


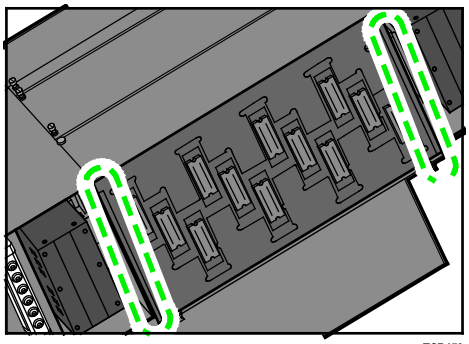
2. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**

3. Click [Start].

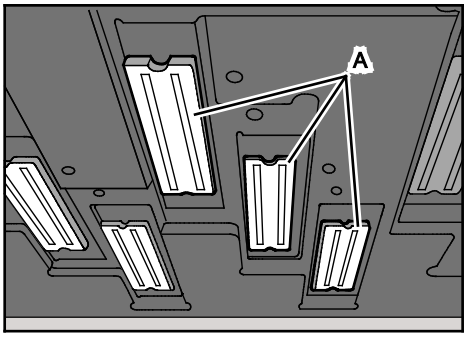
Move away from the gantry as the carriage moves to the left-side ink receiver position.

4. Apply cleaning liquid to non-woven fabric or a cleaning stick, and then use it to wipe off any dust and dirt on the areas around the print heads and carriage.


DVB304


ECD150

- Wipe off completely so that no cleaning liquid remains.
- Do not touch the nozzle faces (A) when cleaning the areas around the print heads. If a cap mark or dirt is left on the nozzle faces of the print heads, see page 26 "Cleaning the Nozzle Faces of the Print Heads".
- Clean the ink on the entire bottom plate and left and right sides of the carriage.

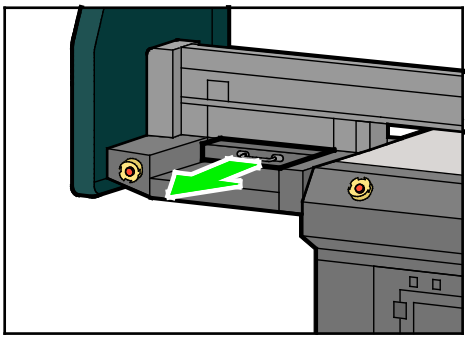


DVB301

5. Click [Exit] to exit the maintenance mode.

Move away from the gantry as the carriage moves to the maintenance station position.

6. **Pull the cover of the left-side ink receiver section to return it to its original position.**



Note

- When you need space to clean the areas around the print heads, adjust the height of the carriage to clean. For details about how to adjust the height of the carriage, see "[Maintenance] Screen", Operating Instructions.

Cleaning the Capping Station

Clean the capping station every day. Dirt on the caps may cause ink discharge defects.

⚠WARNING

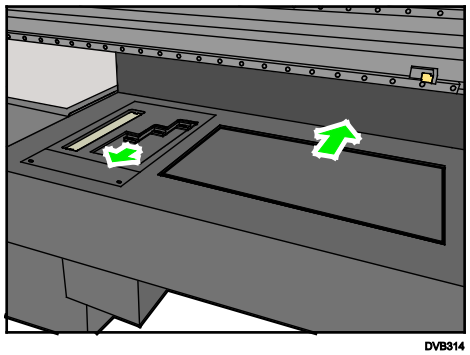
- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

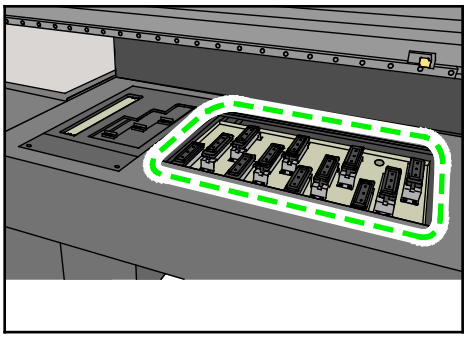
- **Do not place any object on the table as the carriage moves there during cleaning.**
- **Do not move the light-shielding shutter by hand. Doing so may damage it.**
- **Do not forcibly press down the cover around the wiper.**

1. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**
2. **Click [Start].**

   Move away from the gantry as the carriage moves to the left-side ink receiver position. The light-shielding shutter moves to the maintenance position, and you can now clean the capping station.

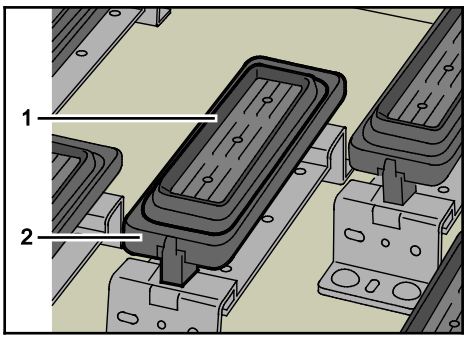


3. Apply cleaning liquid to non-woven fabric or a cleaning stick, and then use it to wipe off any dirt on the caps and their surrounding areas.



ECD306

- If ink adheres strongly to the edge of the cap, make sure to remove it. Do not wipe off ink using excessive force. Otherwise the edge of the cap might deform.
- If there is any ink dirt around the caps, wipe the dirt off.
- Wipe off completely so that no cleaning liquid remains.

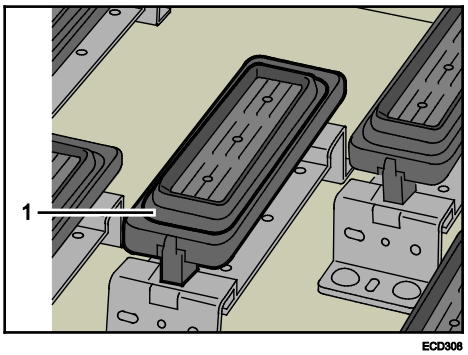


ECD307

1. **Edge of the cap**
2. **Around the cap**

4. After cleaning, confirm that the cap has not come off.

If the cap comes off, push in the cap.



ECD308

1. **Cap**

5. **Click [Exit] to exit the maintenance mode.**

   Move away from the gantry as the carriage moves to the maintenance station position.

Cleaning Wipers

Clean the wipers every day. Dirt on the wipers may cause ink discharge defects.

⚠WARNING

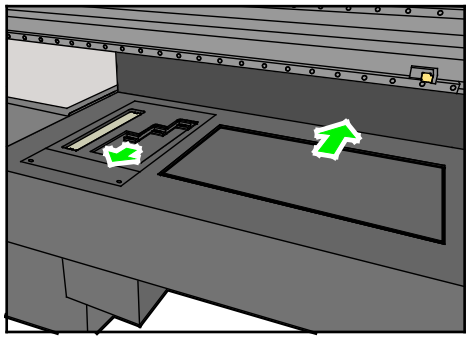
- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Do not place any object on the table as the carriage moves there during cleaning.**
- **Clean the wipers frequently when ink or dust adheres to the areas around the print head. This is necessary to prevent dirt from adhering to the media.**

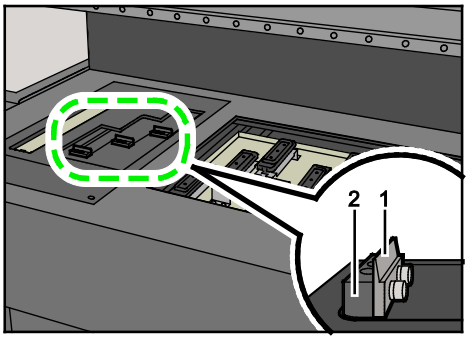
1. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**
2. **Click [Start].**

   Move away from the gantry as the carriage moves to left-side ink receiver position. The wipers move to the maintenance position, and you can now clean the wipers.



3. Apply cleaning liquid to non-woven fabric or a cleaning stick, and then use it to wipe off any dirt on the wipers.

- Wipe off completely so that no cleaning liquid remains.
- Clean the wipers with the securing holder by lightly touching them instead of removing the wipers.
- Do not pull the tip of the wipers. Doing so may cause the wiper attachment position to shift.
- Do not forcibly press down the cover around the wiper.



1. **Tip of the wiper**
2. **Securing holder**

4. Click [Exit] to exit the maintenance mode.

Move away from the gantry as the carriage moves to the maintenance station position.

Periodically Care for Once a Week

This section explains how to check the waste ink tank and UV lamp irradiation surface, and how to clean the table, the exterior of the machine, the guide rail cover and the maintenance station.

Perform regular maintenance once a week to ensure the safe and long-term use for this machine.

Cleaning the Table and the Exterior

Make sure to clean the table and the exterior once a week. Depending on the operating environment, particles or dust may adhere to the table or exterior of the machine.

⚠WARNING

- Do not mount the table. Mounting it could result in injury or lowered accuracy of the board face.

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Be sure to prevent ink from adhering to the table by setting sufficient margins or masking the outer part of the media, etc.**
- **If the printing contents are accidentally printed on the table, immediately stop printing and wipe off the adhering ink with a dry cloth. For details about how to remove the ink adhering to the table, see page 25 "Removing Ink Adhering to the Table".**
- **Keep the warning labels on this machine legible. If any of the warning labels become smeared, be sure to wipe off any dirt.**

Maintenance procedure

Wipe the table and the exterior of the machine with a soft and dry cloth, etc. If this does not help you remove dirt, soak the cloth in water and wring it dry, and then use the cloth to wipe the table and the exterior of the machine. After wiping the table and the exterior of the machine with a wet cloth, wipe them with a dry cloth to wipe off water completely.

Cleaning the Guide Rail Cover

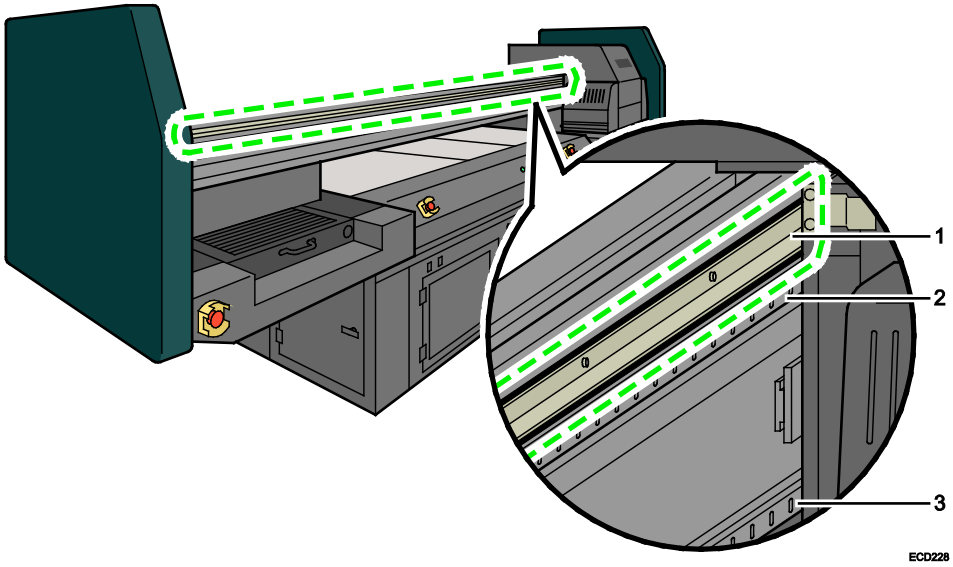
Clean the guide rail cover once a week to prevent dust from getting into the guide rail.

⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

The guide rail cover is located on the upper guide rail.

1. **Wipe the guide rail cover with a soft, dry cloth.**



1. **Guide rail cover**
2. **Upper guide rail**
3. **Lower guide rail**

2. **Move the carriage to access the part under it, and then wipe that part, too, with the dry cloth.**

Cleaning the Area around the Maintenance Station

Clean the area around the maintenance station once a week. Ink may adhere to the surrounding areas.

⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

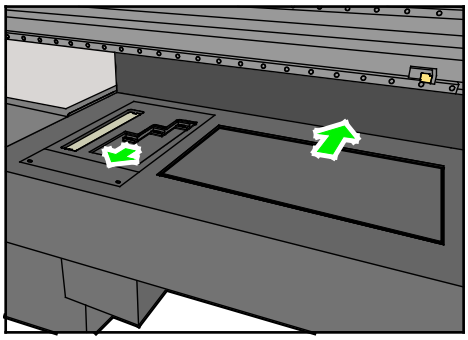
Important

- **Do not place any object on the table as the carriage moves there during cleaning.**
- **If ink or dust adheres around the print head, clean the area frequently. If dirt completely adheres to the area, it will be difficult to clean.**
- **Do not move the light-shielding shutter by hand. Doing so may damage it.**
- **Do not forcibly press down the cover around the wiper.**

1. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**

2. Click [Start].

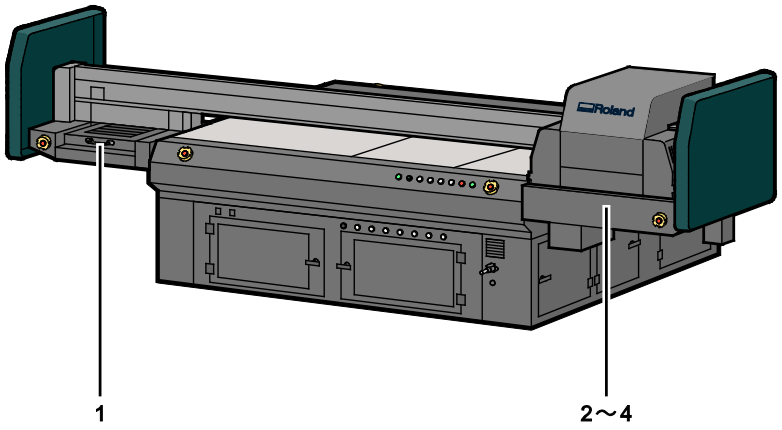
Move away from the gantry as the carriage moves to the left-side ink receiver position. The wipers and light-shielding shutter move to the maintenance position.



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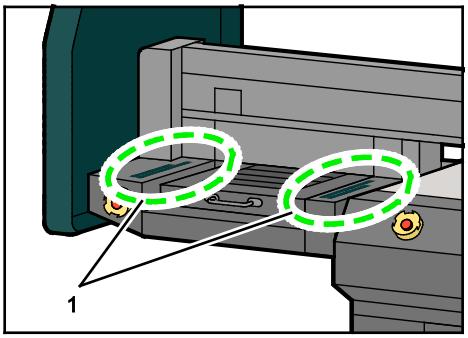
3. Apply cleaning liquid to a paper towel, non-woven fabric, or a cleaning stick, and then use it to wipe off any dirt around the maintenance station.

Wipe off completely so that no cleaning liquid remains. The areas that need to be cleaned are shown below:



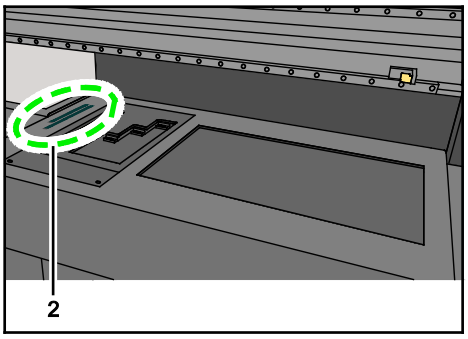
ECD315

1. Ink near the left-side ink receiver



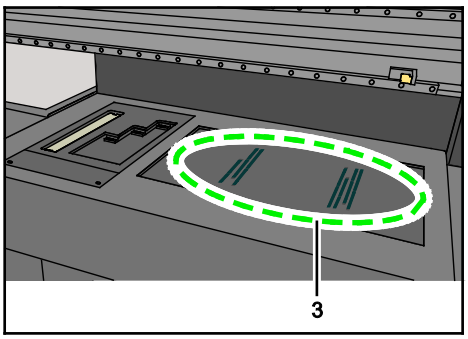
ECD316

2. Adhering ink around the flush receiver



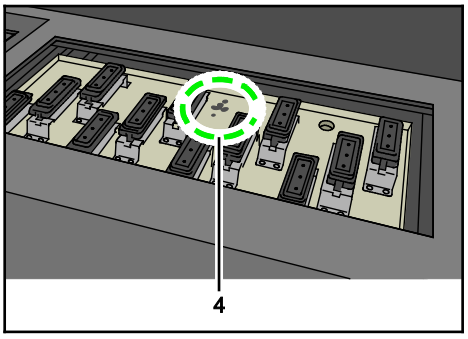
DVB317

3. Ink adhering to the light-shielding shutter



DVB318

4. Ink dripping onto the ink tray below the cap.



ECD319

If ink dripping from the cap accumulates on the ink tray, drain it through the drain cock. For details, see page 30 "Draining Ink Accumulating on Ink Tray in Capping Station".

4. **Click [Exit] to exit the maintenance mode.**

   Move away from the gantry as the carriage moves to the maintenance station position.

Checking the Waste Ink Tank Capacity

The waste ink tank accumulates waste ink discharged by head cleaning, etc. If the waste ink tank is full, the machine will make a beeping sound. Therefore, check the capacity of the waste ink tank at least once a week.

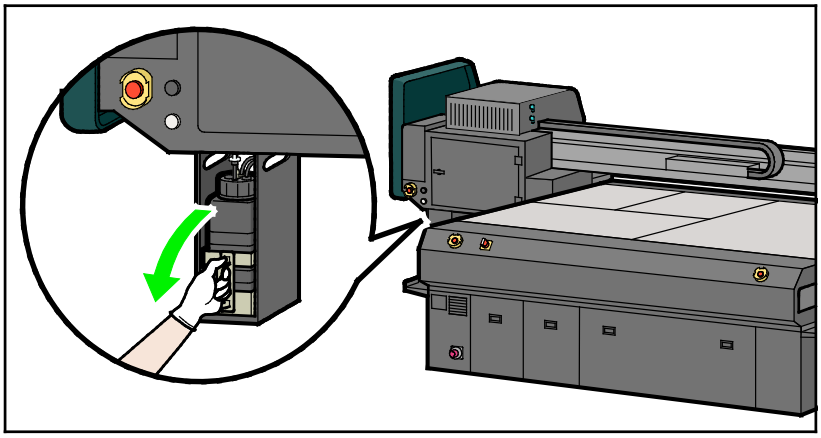
⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

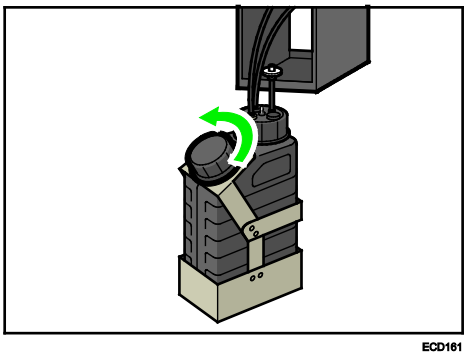
Important

- **Do not check the waste ink tank while the machine is printing or being cleaned.**

1. **Holding the grip on the waste ink tank at the front right of the machine, pull the tank from the back.**



2. **Place the waste ink tank on the floor, and then remove the cap that does not have tubes attached.**



3. **Check the volume of ink visually that is accumulated in the waste ink tank.**

   Check the amount of ink via the viewing window at the center of the waste ink tank. If you need to dispose of the waste ink, see page 35 "Disposing of Waste Ink".

4. **Close the cap of the waste ink tank.**

5. **Return the waste ink tank to the original position.**

   Confirm that the tubes coming out of the waste ink tank are not bent or crushed.

Checking the Dirt on the UV Lamp Irradiation Surface

Check for stains on the UV lamp irradiation surface.

If there is a light-shielding object such as dirt or ink on the UV lamp irradiation surface, it may cause defects in curing ink. This may cause an unevenness in printed results.

⚠WARNING

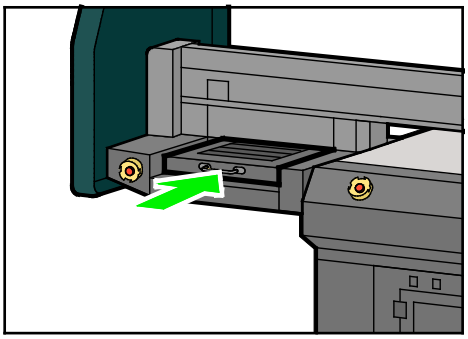
- Only perform maintenance after the LED UV lamp has completely cooled down and the cooling fan has stopped. Touching the LED UV lamp while it is hot might cause burns.

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Do not place any object on the table as the carriage moves there during cleaning.**
- **If the glass of the UV lamp irradiation surface is damaged, you need to replace the components. If you cannot remove dirt or ink has been cured, contact your authorized Roland DG Corporation representative.**

1. **Slide the cover of the left-side ink receiver section carefully into the printer until it stops.**



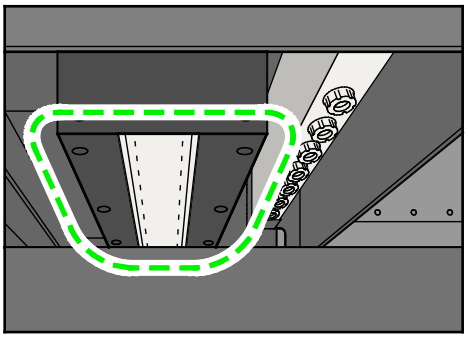
2. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**

3. **Click [Start].**

   Move away from the gantry as the carriage moves to the left-side ink receiver position.

4. **Check for any ink stain or dust on the UV lamp irradiation surface.**

   If it is stained, clean it according to page 28 "Cleaning the UV Lamp Irradiation Surface".

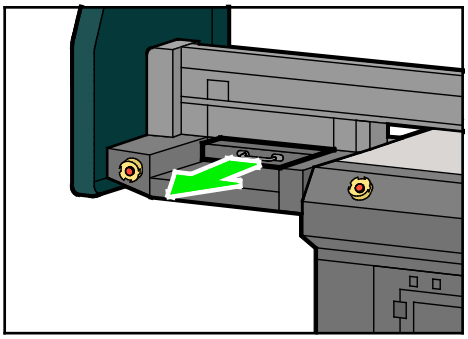


DVB325

5. **Click [Exit] to exit the maintenance mode.**

   Move away from the gantry as the carriage moves to the maintenance station position.

6. **Pull the cover of the left-side ink receiver section to return it to its original position.**



ECD303

Note

- Check for any dirt on the UV lamp irradiation surface when cleaning areas around the print heads or if the jam-detecting feeler detects media.

Periodically Care for Once Every Three Months

This section describes how to replace the carriage filter.

Perform regular maintenance once every 3 months to ensure the safe and long-term use for the machine.

Replacing the Carriage Filter

Replace the carriage filter once every 3 months. If clogging of the carriage filter is caused by dust, etc., air may not be properly fed to the inside of the carriage. This may cause the machine to malfunction.

⚠DANGER

- Do not touch energized parts when opening covers. Touching them might result in electric shock.

⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

⚠CAUTION

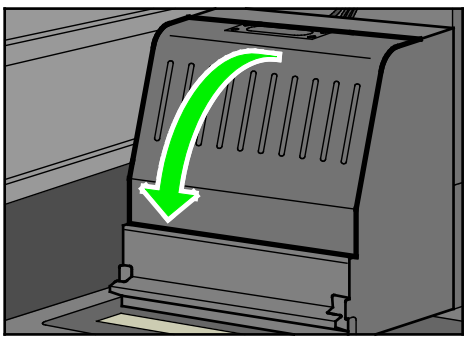
- Some of the internal components of this machine might be fragile. Do not touch the sensors, connectors, LEDs, or other fragile parts. Doing so may cause malfunctions.

Important

- **Only use a genuine replacement filter. Otherwise, malfunction or damage may result.**
- **Do not place any object on the table as the carriage moves there during the replacement procedure.**
- **When replacing a carriage filter, be sure to replace both the left and right filters.**

1. **Click [Maintenance Mode] on the [Print Option] tab in Print Control..**
2. **Click [Start].**

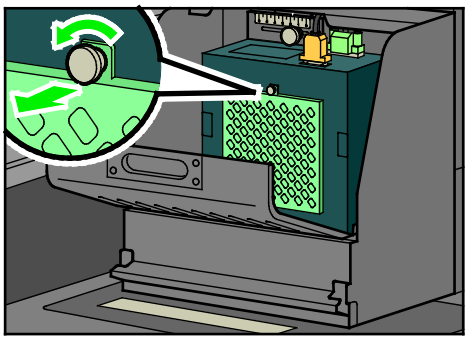
   Move away from the gantry as the carriage moves to the left-side ink receiver position.
3. **Open left UV lamp cover.**



ECD223

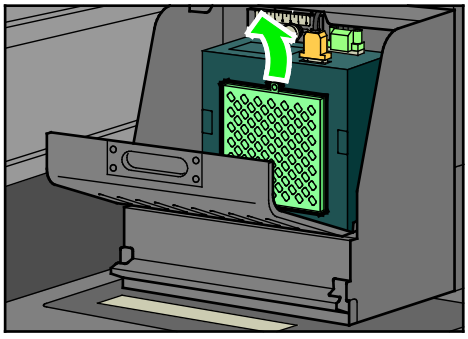
4. Remove the fixing bolt on the filter cover located on the left side of the carriage.

You need to use the removed fixing bolt when securing the filter cover. Make sure not to lose it.



ECD320

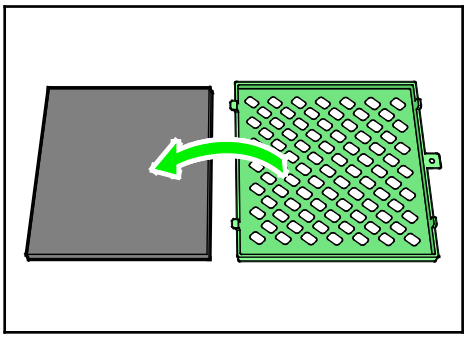
5. Remove the filter cover from the carriage.



ECD321

6. Remove the used filter from the filter cover.

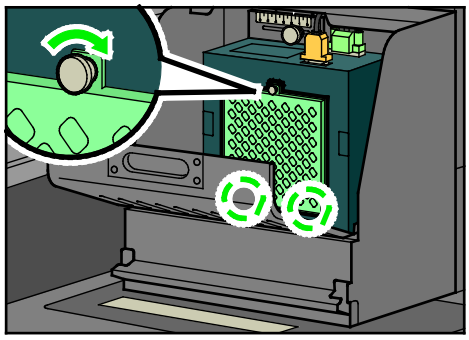
If the filter cover is dirty, clean it with non-woven fabric etc.



DVB322

7. Attach a new carriage filter to the filter cover.

8. **Insert the hooks located at the bottom of the filter cover into the holes of the UV lamp, and then mount the filter cover to the carriage with the fixing bolt.**



9. **Close left UV lamp cover.**
10. **Repeat Steps 3–9 to replace the filter on the right side of the carriage.**
11. **Click [Exit] to exit the maintenance mode.**

    Move away from the gantry as the carriage moves to the maintenance station position.

Maintenance When Needed

This section contains the procedures for removing ink adhering to the table, cleaning the nozzle faces of the print heads, cleaning the UV lamp irradiation surface, replenishing ink, replacing the flushing pad, and disposing of waste ink.

Perform maintenance when needed to ensure the safe and long-term use for the machine.

Important

- **The optimal frequency of maintenance varies depending on the period of service or the operating environment of the machine. In addition, maintenance may be frequently required depending on the types of media to be used or images to be printed. Make any necessary changes to the maintenance frequency according to the operating conditions of the machine.**

Removing Ink Adhering to the Table

If the contents are accidentally printed on the table, stop printing immediately and wipe off the ink with a dry cloth. This section explains how to remove ink in case it adhering to the table has been cured and cannot be wiped off.

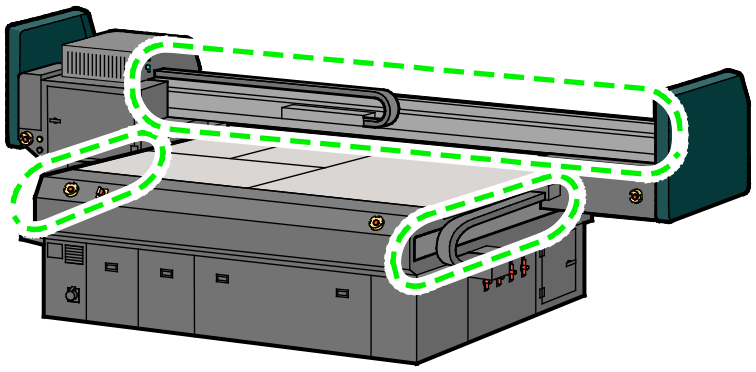
⚠WARNING

- Do not mount the table. Mounting it could result in injury or lowered accuracy of the board face.

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **To prevent a fragment of the removed ink from being scattered on the print heads or the moving parts around the print heads, protect the areas shown below by using vinyl, etc. before removing the ink.**



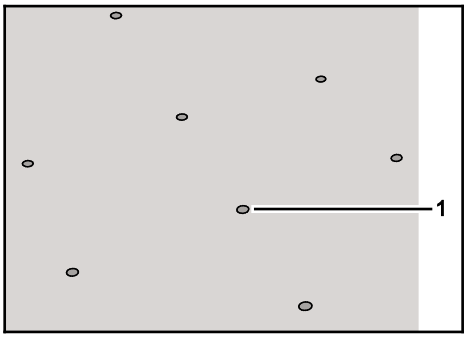
- **If a fragment of the cured ink is left on the table, it may deform the media or cause a vacuuming defect. Completely remove such fragments by using a vacuum cleaner, etc.**

Removing the ink adhering to the tabletop

If the ink adhering to the tabletop has been cured and cannot be wiped off, use a cloth that has been applied with neutral detergent to wipe off the ink.

Removing ink adhering to the vacuum holes

If ink has been cured in the vacuum holes, scrape it out by using an item with a pointed tip. Afterward, remove the scraped pieces of ink. You can also use an adhesive tape such as a duct tape to remove the ink.



1. **Vacuum hole**

Cleaning the Nozzle Faces of the Print Heads

If the machine is left without being used for 1 week or more and the nozzle faces are dirty, clean the nozzle faces of the print heads.

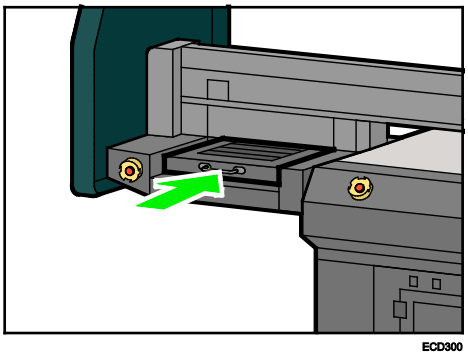
⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Do not place any object on the table as the carriage moves there during cleaning.**
- **Do not scratch the nozzle faces. Doing so might cause malfunction or an ink discharge defect.**

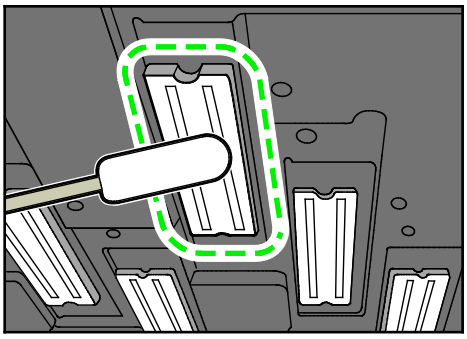
1. **Slide the cover of the left-side ink receiver section carefully into the printer until it stops.**



2. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**
3. **Click [Start].**

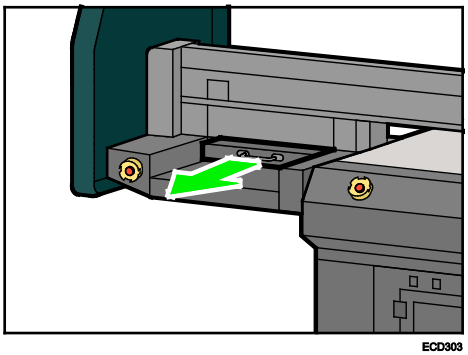
   Move away from the gantry as the carriage moves to the left-side ink receiver position.
4. **Apply cleaning liquid to the cleaning stick, and then use the cleaning stick to apply cleaning liquid to the nozzle faces of the print heads.**

   - You only need to apply cleaning liquid to the nozzle faces. Be careful not to rub the nozzle faces with excessive force.



5. **Click [Exit] to exit the maintenance mode.**

   Move away from the gantry as the carriage moves to the maintenance station position.
6. **Pull the cover of the left-side ink receiver section to return it to its original position.**



Note

- When you need space to clean the nozzle faces of the print heads, adjust the height of the carriage before cleaning. For details about how to adjust the height of the carriage, see "[Maintenance] Screen", Operating Instructions.

Cleaning the UV Lamp Irradiation Surface

If the UV lamp irradiation surface is stained with ink or is dusty, clean it.

If there is a light-shielding object such as dirt or ink on the UV lamp irradiation surface, it may cause defects in curing ink. This may cause an unevenness in printed results.

⚠WARNING

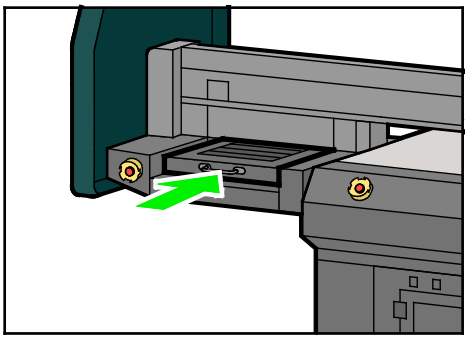
- Only perform maintenance after the LED UV lamp has completely cooled down and the cooling fan has stopped. Touching the LED UV lamp while it is hot might cause burns.

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Do not place any object on the table as the carriage moves there during cleaning.**
- **If the glass of the UV lamp irradiation surface is damaged, you need to replace the components. If you cannot remove dirt or ink has been cured, contact your authorized Roland DG Corporation representative.**

1. **Slide the cover of the left-side ink receiver section contact your authorized Roland DG Corporation representative.**

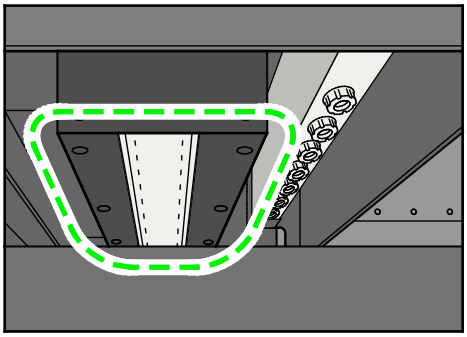


2. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**
3. **Click [Start].**

   Move away from the gantry as the carriage moves to the left-side ink receiver position.

4. Apply neutral detergent or ethanol to non-woven fabric or a cleaning stick, and then use it to wipe off any dirt on the UV lamp irradiation surface.

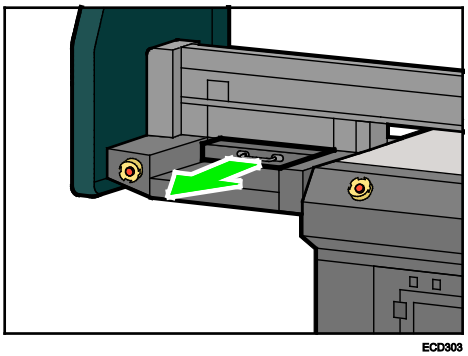
- Wipe off completely so that no neutral detergent or ethanol remains.
- Do not remove adhering ink forcibly from the UV lamp irradiation surface. If you cannot remove the ink, contact your authorized Roland DG Corporation representative.



5. Click [Exit] to exit the maintenance mode.

Move away from the gantry as the carriage moves to the maintenance station position.

6. Pull the cover of the left-side ink receiver section to return it to its original position.

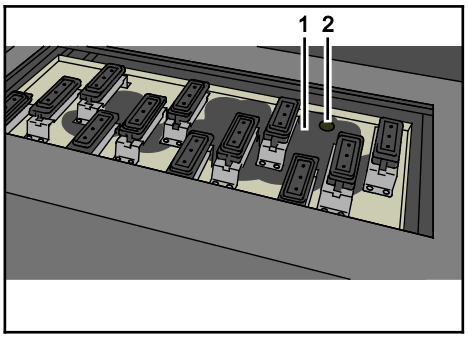


Note

- Check for any dirt on the UV lamp irradiation surface when cleaning areas around the print heads or if the jam-detecting feeler detects media.
- If you need space to clean the UV lamp irradiation surface, adjust the height of the carriage before you start cleaning. For details about how to adjust the height of the carriage, see "[Maintenance] Screen", Operating Instructions.

Draining Ink Accumulating on Ink Tray in Capping Station

If ink accumulates on the ink tray in the capping station, drain it through the drain cock connected to the drain port.

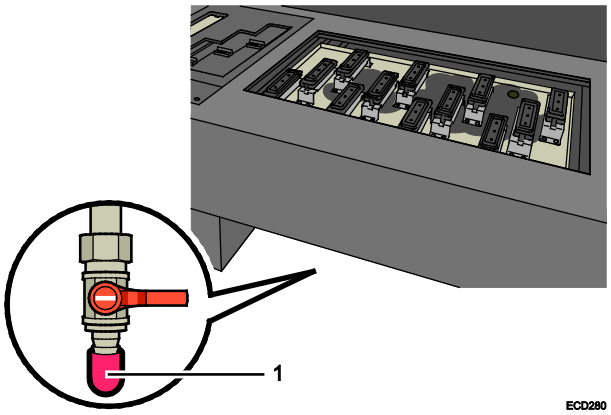


1. **Ink accumulating on ink tray**
2. **Drain port**

⚠WARNING

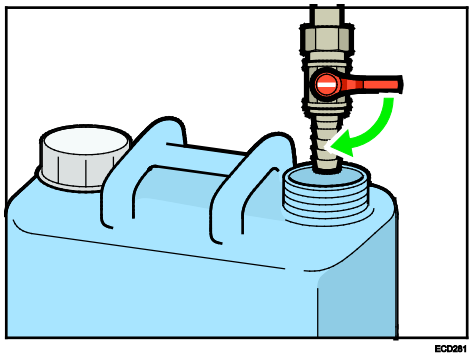
- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

1. **Remove the cap on the drain cock under the capping station.**



1. **Cap on the drain cock**

2. **Open the valve and drain the ink into a dedicated container such as a polyethylene tank.**



3. **Close the valve and reattach the cap.**

4. **Clean the ink stain off the ink tray.**

   For details, see page 16 "Cleaning the Area around the Maintenance Station".

Replenishing Ink

If the remaining amount of ink in the ink tank is low, the machine will make a beeping sound. Prepare an ink bottle to replenish the ink.

⚠WARNING

- Avoid mixing ink with incompatible materials.

- Be careful not to spill ink. Avoid ink flowing into the natural water system or household wastewater. Ink causes irritation and is toxic.

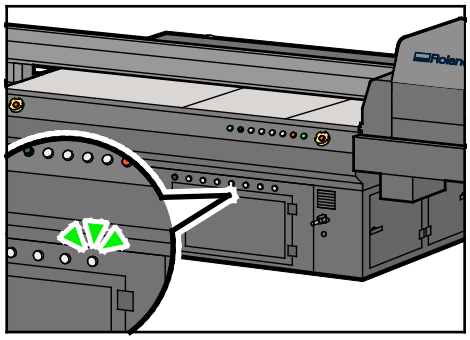
- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

Important

- **Do not place caps or other items on the table as the carriage may move when replenishing ink during printing.**
- **If you want to dispose of used ink, contact a company that handles industrial waste.**

1. Check which lamp is lit from the ink lamps located on the front side of the machine.

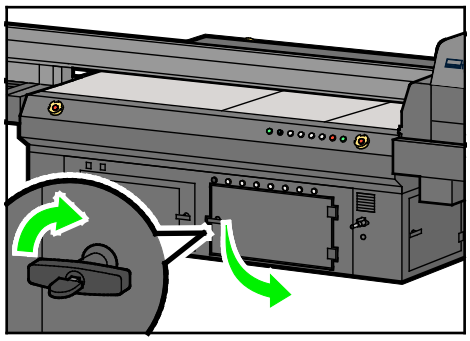
The lamp for which a beeping sound is made is lit.



ECD159

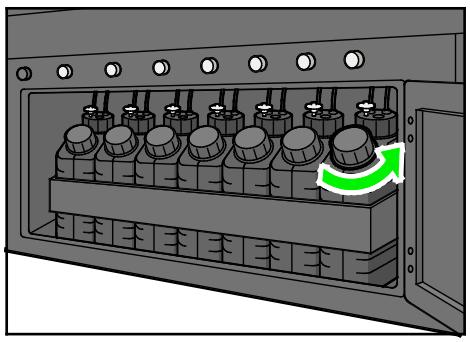
2. Turn the knob clockwise and open the front cover.

If the front cover is locked, use the included key.



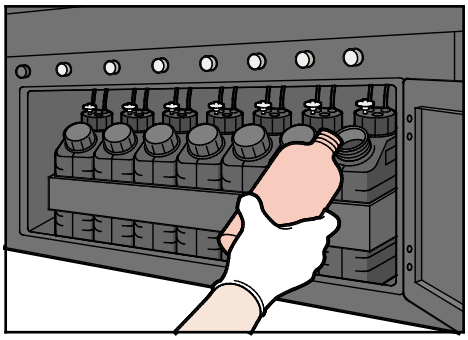
ECD155

3. Open the cap of the ink tanks to be replenished with ink.



DVB157

4. **Open the cap of an ink bottle for replenishing, and then replenish ink into the ink tank.**
   - The buzzer will stop when you finish replenishing ink. Be sure to empty all the ink from the ink bottle.
   - When replenishing white ink, confirm the cap of the ink bottle is closed and shake the bottle well before replenishing.



5. **Close the cap of the ink tank.**
6. **Close the front cover and lock the cover.**

   Be sure to store the key in a safe place.

Replacing the Flushing Pad

Check the amount of ink accumulated on the surface of the pad at least once a week. If 3 mm (approx. 0.1 inches) of ink or more accumulates above the upper surface of the pad, replace the flushing pad.

⚠WARNING

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

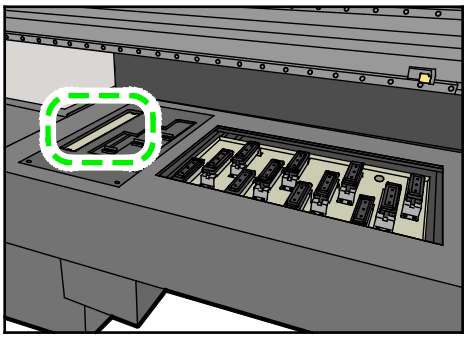
Important

- **Only use a genuine replacement pad. Otherwise, malfunction or damage may result.**
- **Do not place any object on the table as the carriage moves there during replacement.**

1. **Click [Maintenance Mode] on the [Print Option] tab in Print Control.**
2. **Click [Start].**

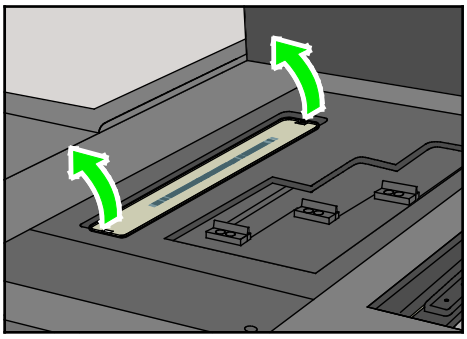
   Move away from the gantry as the carriage moves to the left-side ink receiver position.

3. Remove the used flushing pad located on the left side of the maintenance station.



ECD165

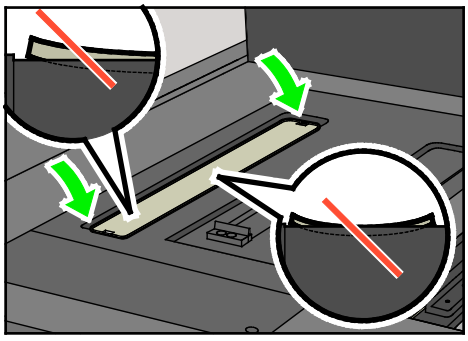
Remove the pad from the grooves located at both ends.



ECD166

4. Attach a new flushing pad.

- Do not press the pad too strongly. Otherwise the pad might crush, causing defects in cleaning.
- Attach the pad firmly. When printing is performed with the upper surface of the pad rising above the flush receiving section, it interferes with the print heads. This may cause an ink discharge defect.



ECD167

5. Click [Exit] to exit the maintenance mode.

Move away from the gantry as the carriage moves to the maintenance station position.

Disposing of Waste Ink

The waste ink tank accumulates unnecessary ink discharged by head cleaning, etc.

If the waste ink tank is full, the machine will make a beeping sound. Dispose of the waste ink in the waste ink tank.

⚠WARNING

- Avoid mixing ink with incompatible materials.

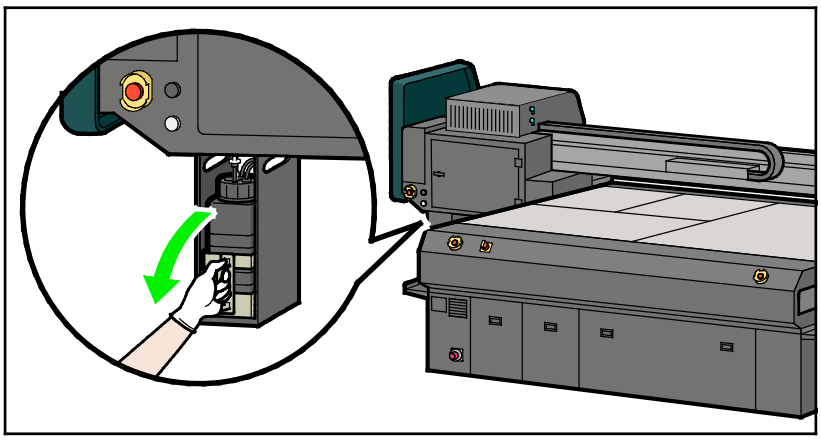
- Be careful not to spill ink. Avoid ink flowing into the natural water system or household wastewater. Ink causes irritation and is toxic.

- Be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

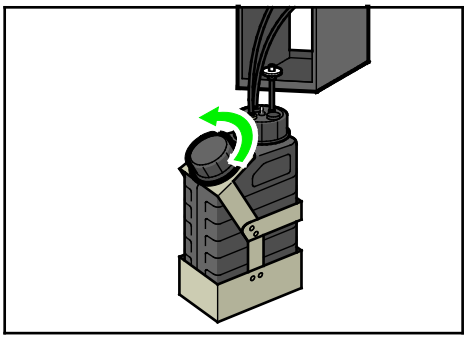
Important

- **Do not replace the waste ink tank while the machine is printing or being cleaned.**
- **If you moved the waste ink to a polyethylene tank, contact a company that handles industrial waste.**
- **Some components such as photopolymerization initiators are toxic to aquatic animals. Do not flow these components in natural water such as rivers or domestic wastewater such as that from bathrooms or roads.**
- **Before disposing of the waste ink from the machine, spread paper or some other material around the area to keep ink from dirtying your workspace.**

1. **Holding the grip on the waste ink tank at the front right of the machine, pull the tank from the back.**

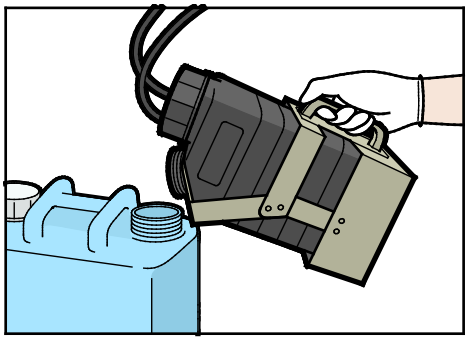


2. **Place the waste ink tank on the floor, and then remove the cap that does not have tubes attached.**



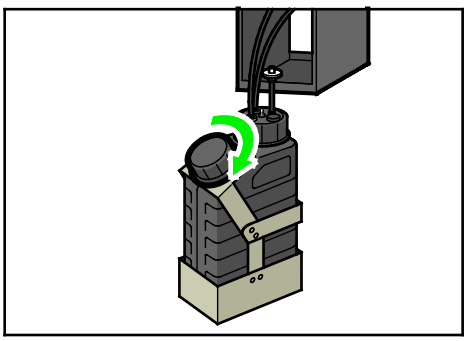
ECD161

3. **Pour the waste ink into a dedicated container such as a polyethylene tank.**



ECD162

4. **Wipe off any ink on the waste ink tank, and then close the cap.**



ECD163

5. **Return the waste ink tank to its original position.**

Confirm that the tubes coming out of the waste ink tank are not bent or crushed.

3. Appendix

This chapter explains storage methods for media and ink bottles, how to resolve nozzle defects, and a list of consumables you can purchase.

About Ink

This section describes supported ink and precautions for handling ink bottles.

Unless handled appropriately, UV ink might cause harmful effects. Before disposing of UV ink or using the machine, be sure to read the Safety Data Sheet (SDS) and follow the descriptions.

Supported Ink

Important

- **When replacing the ink with a different type, contact your authorized Roland DG Corporation representative. This cannot be done by the customer, because it requires an operation such as cleaning the ink path.**

On this machine, you can use any of the following 3 types of UV ink:

Ink type	Characteristics	Color
US-BK, CY, MG, YE, WH	Wide color gamut	Black, Cyan, Magenta, Yellow, White
UE-BK, CY, MG, YE, WH	High adhesion and wide color gamut	Black, Cyan, Magenta, Yellow, White
US-PR, US-GL	Can be used in common with the above ink	Primer, Gloss

If the remaining amount of ink in the ink tank is low, the machine will make a beeping sound. Do not print while the buzzer is sounding. If the buzzer sounds during printing, stop using the printer as soon as printing is complete and add ink. We recommend contacting your authorized Roland DG Corporation representative and purchase a new ink bottle. For details about how to replenish ink, see page 31 "Replenishing Ink".

If you use white ink, we recommend performing head cleaning every day. We also recommend performing a test print beforehand for transparent media.

If the white, clear, or primer ink is installed but it is not used, perform head cleaning once a day. See "Cleaning Print Head Nozzles", Operating Instructions.

Storage Conditions for Ink Bottles

Take the following precautions when storing ink bottles:

⚠WARNING

- Make sure to store ink bottles in a cool and dry place.

- Make sure to store ink in a cool, dark place. Also store the ink in a place that can be locked so that the ink is out of the reach of children.

Store ink bottles at the following temperatures:

Ink type	Storage temperature
US-PR	5–35°C (41–95°F)
US-BK, CY, MG, YE, WH	4–23°C (39.2–73.4°F) *1
UE-BK, CY, MG, YE, WH, US-GL	5–35°C (41–95°F)

*1 Can be stored at a maximum temperature of 28°C (82.4°F) for 3 weeks continuously out of a year.

Important

- **Make sure to store ink bottles in a place that is not exposed to direct sunlight and is free from high humidity.**
- **Make sure to store ink bottles in a place lower than 1 m (approx. 3.3 ft.). If ink bottles are stored in a place higher than 1 m (approx. 3.3 ft.), the cap may come off when an ink bottle falls, and ink inside the bottle will splash.**
- **Ink may freeze if stored in a cold place for a long period of time. If ink freezes, it may become unusable as it may deteriorate. Make sure to store ink in an environment where ink will not freeze.**

Expiration Dates of Ink Bottles

The expiration dates of ink bottles when stored unopened under the specified storage conditions are as follows:

For details about storage conditions for ink bottles, see page 38 "Storage Conditions for Ink Bottles".

Ink type	Color	Expiration date
US-PR	Primer	12 months after production
US-BK, CY, MG, YE, WH	Cyan/Magenta/Yellow/Black/White	18 months after production
UE-BK, CY, MG, YE, US-GL	Cyan/Magenta/Yellow/Black/Gloss	24 months after production*1
UE-WH	White	12 months after production

*1 This is the expiration date when stored at a temperature of 25°C (77°F). If stored at a temperature of 25.1 to 35°C (77.2 to 95°F), the expiration date is 18 months.

Important

- **Use the ink bottles within 3 months after unsealing it. In addition, do not use an ink bottle if its shelf life has expired.**

Precautions for Handling Ink Bottles

Take the following precautions when handling ink bottles:

⚠WARNING

- Be careful not to spill ink. Avoid ink flowing into the natural water system or household wastewater. Ink causes irritation and is toxic.

- Avoid mixing ink with incompatible materials.

- While handling ink bottles, be sure to wear gloves and goggles during the work. Otherwise, ink may drip or be scattered.

⚠CAUTION

- Do not give a shock to the ink bottles. Doing so might cause the ink to leak.

Important

- **Shake gently before use.**
- **Do not disassemble ink bottles, refill or add ink to the ink bottles.**
- **Do not hit or swing around the ink bottles. Doing so might cause the ink to leak.**

About Media

This section describes the size and weight specifications of media that can be used with this machine, and how to store and handle media.

Size and Weight Specifications of Supported Media

Supported media size and weight are shown below:

Media size:

600 × 450 – 2,510 × 1,310 mm (approx. 23.6 × 17.7 – 98.8 × 51.6 inches)

Printable size:

600 × 450 – 2,500 × 1,300 mm (approx. 23.6 × 17.7 – 98.4 × 51.2 inches)

Media thickness:

110 mm (approx. 4.3 inches) or less

Media weight:

45 kg/m^2 or less

How to Store Media

Take the following precautions when storing media:

Important

- **Make sure to store media in a place that is not exposed to direct sunlight and is free from humidity and dust.**
- **For media that warps easily, store the media, for example, by placing it on a smaller table, so that the media warps down. Warped up media may be impossible to vacuum on the table.**
- **When storing the media printed in [Draft] mode, do not pile them on top of each other. Doing so may cause the media to stick to each other.**

Precautions for Handling Media

Take the following precautions when handling media:

⚠CAUTION

- Make sure to wear protectors such as safety shoes and gloves when using heavy media. Using heavy media without wearing protections might cause an injury.

Important

- **While handling media, be sure to wear gloves during the work. If handling media with bare hands, the media may become dirty from fingerprints or grease on your hands.**
- **Make sure to use the media recommended to maintain consistent print quality.**
- **Do not use media immediately after unpacking. Media may expand or contract by the temperature or humidity in a room. Leave the media for at least 30 minutes near the machine, and then set the media.**
- **Do not use warped media. Otherwise, the carriage and the media may interfere or print quality can be affected. Remove any warps, and then set the media.**
- **Do not use media that cannot be vacuumed due to warps or shifts while the carriage moves. Secure the media with a tape, etc.**
- **If using mirrors, glass, or glossy metal, increase the number of times maintenance is performed. If UV light is reflected, it will cure ink in the print heads, which will be the cause of malfunction.**
- **The printed media may contain an unreacted ink component. As an unreacted ink component may be harmful to the human body, do not use the printed media for the following purposes:**
  - **Food wrapping**
  - **Items that children may put into their mouth by mistake (such as toys).**
  - **Cloth or leather that may come into direct contact with the human body (such as clothing and accessories).**
  - **Medical devices, etc. that may come into direct contact with the human body or may be inserted into the human body.**

How to Resolve Nozzle Defects

This section explains how to recover the machine when nozzle defects are not resolved after cleaning is performed.

1. Perform daily maintenance of the machine.

- Clean around the print heads, capping station, wipers, and maintenance station.
  See page 9 "Cleaning Around the Print Heads".
  See page 11 "Cleaning the Capping Station".
  See page 13 "Cleaning Wipers".
  See page 16 "Cleaning the Area around the Maintenance Station".
- After cleaning, print nozzle check pattern.
  For details, see "Test Printing", Operating Instructions.

If there is any problem with the printing result, proceed to the following procedure:

2. Clean the nozzle faces.

- If the machine is not used for 1 week or more or the nozzle faces are dirty, clean the nozzle faces.
  See page 26 "Cleaning the Nozzle Faces of the Print Heads".
- After cleaning, print nozzle check pattern.
  For details, see "Test Printing", Operating Instructions.

If there is any problem with the printing result, proceed to the following procedure:

3. Perform head cleaning.

- Perform head cleaning using Print Control.
  For details, see "Cleaning Print Head Nozzles", Operating Instructions.
- After cleaning, print nozzle check pattern.
  For details, see "Test Printing", Operating Instructions.

If there is any problem with the printing result, proceed to the following procedure:

4. Remove air bubbles.

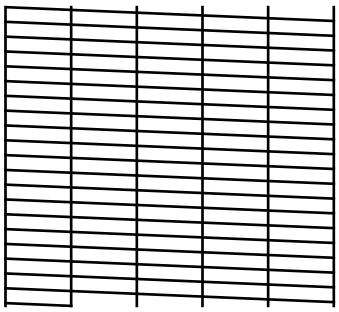
- Unnecessary ink and air mixed inside the print heads are discharged.
  For details, see "If Ink Mixes or Missing Nozzles Occur due to Aeration", Operating Instructions.
- After removing air bubbles, print nozzle check pattern.
  For details, see "Test Printing", Operating Instructions.

If you cannot resolve the nozzle defects after performing the procedures 1 to 4 above, print nozzle check pattern after 8 hours or more have elapsed. If you still cannot resolve the defect, you need to replace the print heads. Contact your authorized Roland DG Corporation representative.

Example of Defects in Printing

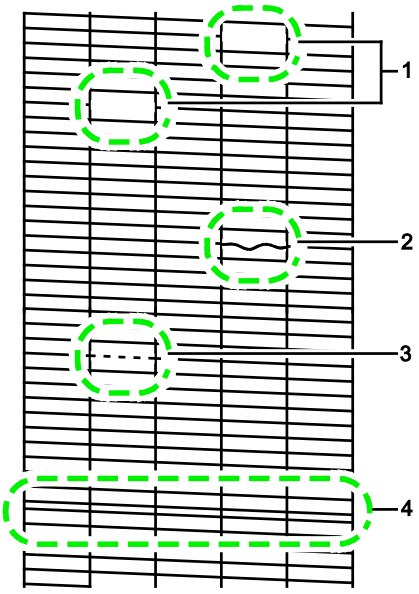
This section describes a typical example of a print head (nozzle) discharge defect caused by dust, etc. which affects printing. Perform test printing and check the condition of the nozzles regularly before printing. For details about how to print a test pattern, see "Test Printing", Operating Instructions.

Normal printing result



CFT168

When there are discharge defects in the heads



DVB195

1. **Missing nozzles have occurred.**
2. **The test pattern is wave-like.**
3. **The test pattern is intermittent.**
4. **The intervals in the test pattern are not equal. (Bending lines have occurred.)**

If there are any problems with the print quality, check the following table. If you still cannot print as expected, contact your authorized Roland DG Corporation representative.

Problem	Cause	Solution
Fading or streaks appear on the printed image, or the colors mix during printing.	• Ink is clogged in the print head nozzles. • The print head nozzle faces are dirty. • The entire bottom plate and left and right sides of the carriage are dirty.	• Perform head cleaning. For details, see "Cleaning Print Head Nozzles", Operating Instructions. • Clean the maintenance station. See page 16 "Cleaning the Area around the Maintenance Station". • Clean around the print heads. See page 9 "Cleaning Around the Print Heads".
The printed image is blurred, or double lines appear on the image.	The ink drop position is misaligned between color nozzles.	Perform [Color Offset]. See "Color Offset Adjustment", Operating Instructions.
When performing bidirectional printing, the printed image is blurred, or double lines appear on the image.	The forward and backward printing positions are misaligned.	• If you increase the print head gap value, use unidirectional printing. • Perform [Bi-Direction Offset]. See "Adjustment for Misalignment in Bidirectional Printing", Operating Instructions.
The image is smudged during printing.	The print head nozzle faces, wipers, or cap unit is dirty.	Perform the following: 1. Clean the wipers. See page 13 "Cleaning Wipers". 2. Clean the capping station. See page 11 "Cleaning the Capping Station". 3. Clean the areas around the print heads. See page 9 "Cleaning Around the Print Heads". 4. Perform head cleaning. For details, see "Cleaning Print Head Nozzles", Operating Instructions.

Note

- Depending on the type or conditions of the media to be used, you may not obtain the print result you expect. Make sure to use appropriate media. For details about appropriate media, see page 40 "About Media".

List of Consumables

These consumables are used for periodic maintenance and cleaning of this machine.

Maintenance Kit

Name	Quantity
Carriage filter	4 pieces
Flushing pad	3 pieces

Cleaning Kit

Name	Quantity
Waste cloth (paper towel)	1 box (50 sheets)
Non-woven fabric	1 box (100 sheets)
Polyethylene gloves	7 pairs
Nitrile gloves	14 pairs
Cleaning stick	12 sticks

Cleaning Liquid

Name	Sales unit
Cleaning liquid (US-CL)	1 bottle

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November, 2019 M0DW7013
R1-191130 FA01977