HP Latex R Printer Series

TECHNICAL NEWSLETTERS FROM CUSTOMER ASSURANCE

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HP Latex R Printer Series downtime & recovery procedures

This document provides recommendations on how to prepare the printer for an extended downtime and how to recover it after such period. It is highly recommended to follow these steps to avoid any possible damage.

How to prepare the printer for an extended downtime

NOTE: All the actions described below can be performed by the customer, except the ink tubes flush. If this action is required, it should be done by your service representative.

The white ink, due to its composition, must be recirculated constantly through all the White IDS system to ensure the printing conditions. Not meeting this requirement might end up damaging the printheads and the rest of the IDS components, as well as clogging the white ink tubes.

IMPORTANT: If the procedure described below is not followed, the white printheads and white ink line will most probably get damaged.

Due to this requirement, the printer has been designed to preserve the white ink channel without the need of rearming the printer and to minimize the power consumption when the printer is not being used. **To run in this low power mode the printer needs to be connected to the electrical supply**.

1. Extract the white printheads from the carriage and store them in the maintenance wheel.
2. Insert the auxiliary printheads in the carriage to allow the white recirculation routines.
3. Remove the tank cap and empty the water tank using a manual siphon pump.
   The siphon pump should be purchased locally if not available.
4. Run the **47009 Distilled water system check** diagnostics about 5 times to remove the remaining water in the tubes.
5. Change the printer to **Low power mode**

IMPORTANT: There should be at least 500 ml of ink remaining in the white supply. If the amount of ink remaining in the white supply is lower, replace the ink supply prior to change the printer to low power mode.

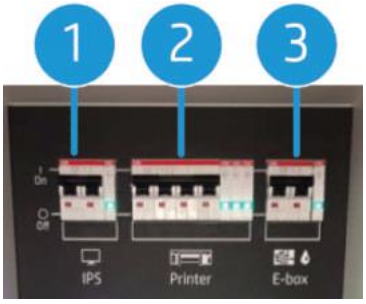
a. Tap the power icon, at the right top of the IPS screen and select **Switch to low power mode**.

b. The printer will boot up in low power mode. To confirm this status, beacon will remain blinking on green and the top bar in the IPS screen will be showed in green as well.

NOTE: In the event of an electrical failure at the customer site, the printer will restart automatically in the Low power mode once the power supply has been restored.

6. The main printer, switch (2), can be lowered.

   It is recommended to keep the IPS computer ON to check remotely any malfunction in the low power mode routines.



IMPORTANT: The E-box switch (3) should always be enabled.
It is also recommended to enable the IPS switch (1).

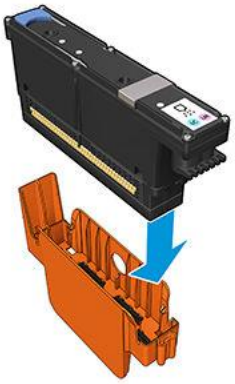
7. Check that the orange printhead caps are available and the rubber is in good condition. If they are not available, or the sealing rubber is not in good condition (broken or deformed), keep the printheads in the carriage and make sure the carriage is left in the capping station when turned OFF.

8. If the orange caps are available, gently clean the black sealing rubber inside with a lint-free microfiber cloth and distilled water in order to remove any dried ink or fibers that could be present. Once clean, make sure to completely dry the black sealing rubber with a dry lint-free microfiber cloth before capping the printhead.

9. Remove the **color, overcoat and optimizer** printheads and **store them in their orange protective caps.** Also make sure to cover the printhead needles with the orange protector rubber as shown in the image below.

IMPORTANT: Ensure that each printhead uses its own orange sealing cap and not one from another color printhead. This is especially important with the optimizer printhead caps, as there's a risk of nozzle damage if they are mixed with the color printheads.

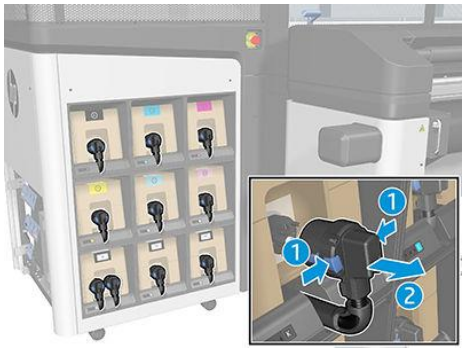
IMPORTANT: If the orange caps (plastic and rubber protector) are not available, leave the printheads in the carriage. The carriage should be in capping position.



10. Store the color, overcoat and optimizer printheads vertically in upright positions as show below with the orange cap facing up.

IMPORTANT: Ensure that each printhead is stored with the orange caps facing upwards. Otherwise, the printheads will most probably get damaged.

11. Disconnect the color, overcoat and optimizer ink cartridges.



IMPORTANT:
Make sure that:

- The power switch for the “E-box and ink white” remains on. Recommended as well the “IPS” one.
- The auxiliary printheads are inserted in the carriage.
- The white supply and white intermediate tank are properly installed and connected.
- There should be at least 500 ml of ink remaining in the white supply. If the amount of ink remaining in the white supply is lower, replace the ink supply prior to change the printer to low power mode.

Additional considerations regarding ink flushing and the color intermediate tanks

- If the temperature is below 5 °C/41 °F, the IDS (Color and White) should be flushed.
  See the Service Manual chapter: *Move the printer to a new site (transport temperature below 5°C/41°F*, section 1, *IDS Flush*.
    - The part number for flush tool is K0Q46-67090. This is a service tool and has to be purchased.
    - Keep the removed materials (supplies, intermediate tanks and printheads) above 5 °C/41 °F.

IMPORTANT: Ensure that the removed materials are stored in the above recommended environmental conditions. Otherwise, they may get damaged.

- If the temperature is above 5 °C/41 °F:
    - Color IDS does not need to be flushed.
    - White IDS should be flushed if the printer is completely turned off for more than 1 week (only if the low power mode is not enabled). Call your service representative to empty the ink from the tubes.

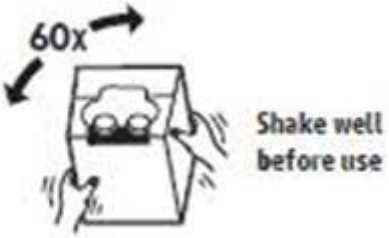
IMPORTANT: If the low power mode is not enabled and the printer is switched off, the white ink line needs to be flushed. This procedure should be done by a certified service engineer. Otherwise, the white ink line may get clogged and require a service intervention to recover the printer.

- Color, optimizer and overcoat intermediate tanks:
    - If the printer is not flushed and the room temperature is not stable, it is better to keep the intermediate tanks installed to compensate volume changes due to temperature variations.
    - In case of a stable temperature, the intermediate tanks should be disconnected.

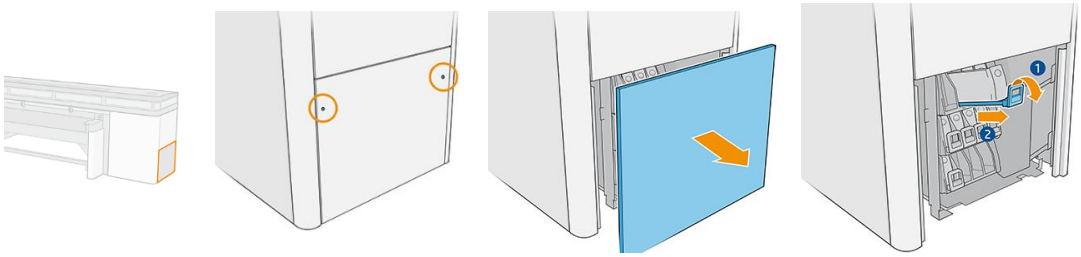
How to prepare the printer for printing again

1. If the ink was flushed, contact your service representative to recover the printer.
2. For Color cartridges, place every cartridge on a flat surface and turn it four times (rotating it through 360 degrees), as indicated on the label, to ensure that the ink is well mixed before using it.

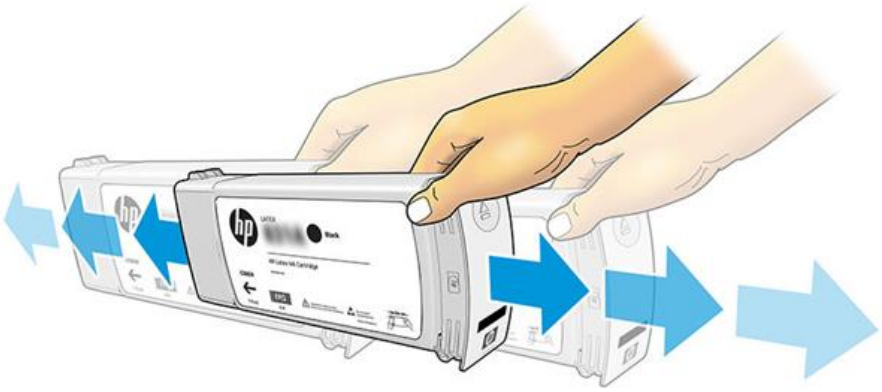
For the White cartridge, shake it 60x times while rotating it to ensure it will be well mixed.



3. Insert the cartridges on the printer and connect the cartridge connector.
4. Remove each intermediate tank as shown below and shake it for 15 seconds before reinstalling. Then insert it back to its original position.



IMPORTANT: In order to avoid mixing positions of intermediate tanks, do this procedure one intermediate tank each time.



5. Turn on all the power switches in case they were disconnected.
6. Tap the power icon, at the right top of the IPS screen, and select **Start in normal mode**.
7. Run the **47010 Water system purge** diagnostic under the **Setup** Menu.

    a. Check that the Cleaning roll is installed.
    b. Fill up the water tank with distilled water.

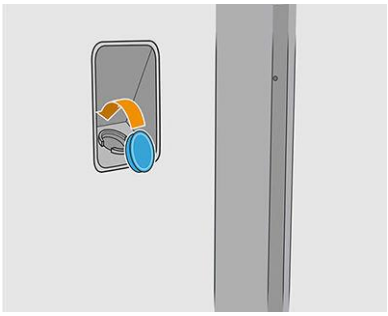
IMPORTANT: Do not use the removed water to refill the tank; use new distilled water instead.

    i. Locate the cap on the output path side cover and open it.
    ii. Refill the tank with distilled water.

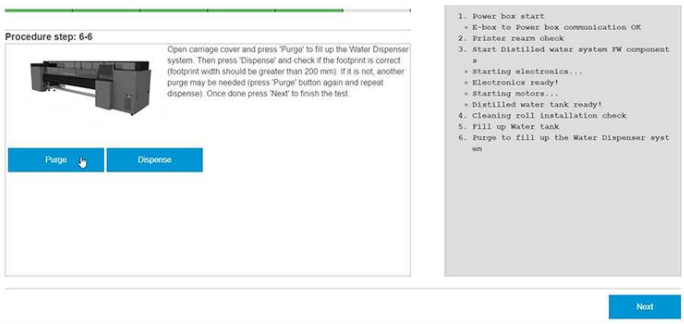
NOTE: The water tank has a maximum capacity of 12 liters.

CAUTION: Be careful while filling the tank, as there is no level indicator. Take care not to spill water outside the tank.

iii. Close the water tank cap and tap **Next**.



c. Open the carriage cover and tap the **Purge** button to fill up the water dispenser system. The cleaning roll will advance 5.08 cm (2 inches) and some water will be purged on the cloth. If no water is present in the cloth, tap again the **Purge** button until the water is fired.

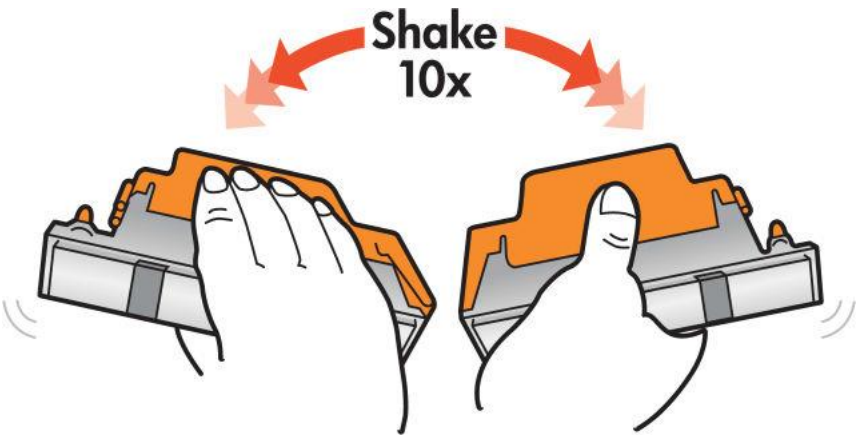


Then, tap **Dispense** and check if the water footprint is correct (the footprint width should be greater than 200 mm). If not, another **Purge** may be needed (tap the **Purge** button again and repeat **Dispense**).

d. Once done, tap **Next** to finish the test.

The following steps, 8 to 14, need to be followed sequentially in order to maximize the chances of printhead recovery.

8. Only if the printheads had been removed, shake all printheads 10 times according to the following image:



IMPORTANT: If the orange caps (plastic and rubber protector) are not available, do not shake the printheads.

9. Only for the overcoat (OC) printhead, if it had been removed, before inserting the printhead in the printer, follow the *Manual printhead cleaning procedure* which can be found in the Annex of this document.

IMPORTANT: Make sure not to pour any water on the electrical contacts, or any other part of the printhead aside from the nozzles, since it could damage the printhead irreversibly.

10. Only for those printheads which had been removed, insert the printheads by following the standard replacement procedure. When the printheads are inserted, the printer will automatically perform some printhead cleaning routines.

11. Perform a printhead **Hard Clean** routine for all colors.

12. Use the **Nozzle check plot** or alternatively use the Control Print plot to evaluate the printhead health. If the printhead health requires improvements, continue with steps 13 and 14.

13. Perform a printhead **Hard Clean** on all colors where the printhead health requires improvement.

14. Once the Hard Clean is completed, evaluate again the printhead health as recommended in step 12. If the printhead health has been recovered, move to step 15. Otherwise, repeat steps 13 and 14 performing up to 3 Hard Clean routines.

15. Launch a **Printhead alignment**.

16. The printer should be ready to start production.

For any additional help or clarification, please contact the next level of your technical support team.

Annex 1 - Manual printhead cleaning procedure

The manual printhead cleaning procedure should only be done after running the Hard Cleaning routine a minimum of three times, since there are higher risks of damaging the printhead when performing this procedure. Nevertheless, if the procedure described below is performed carefully and gently, it may help to recover the printhead health.

Necessary parts

- Distilled water (Regular water can damage the printhead)
- Lint-free microfiber cloth

IMPORTANT: These parts will not be provided by HP and must be purchased locally.

Steps to be followed

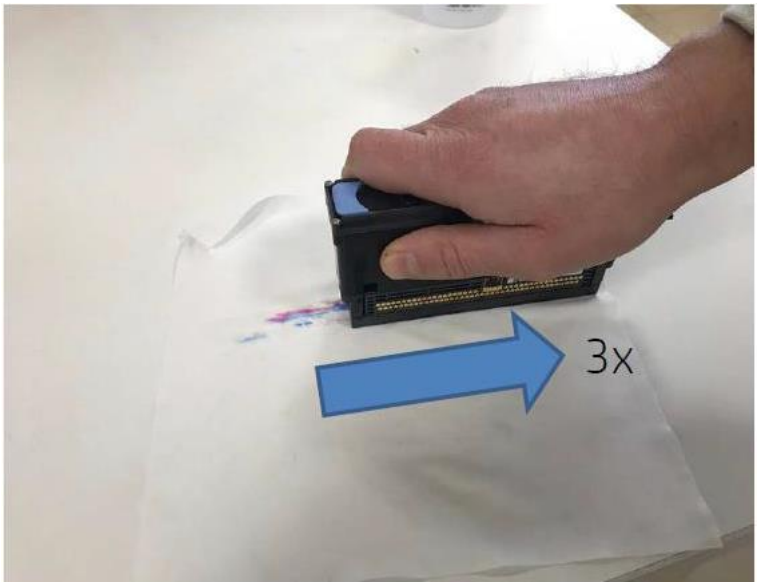
1. Place the printhead with the nozzles facing upwards on a flat surface.

2. Place enough distilled water (a couple of drops should be enough) to cover the nozzles completely and allow some time for the water to soften the ink.

IMPORTANT: Use distilled water only, as regular water can damage the printhead.

IMPORTANT: Make sure not to pour any water on the electrical contacts, or any other part of the printhead aside from the nozzles, since it could damage the printhead irreversibly.

3. Very gently wipe the printhead against a clean area of the lint-free microfiber cloth three times, on a flat surface, in the direction shown.



IMPORTANT: Be very gentle with the nozzle contact when using the lint-free microfiber cloth. Otherwise, it could damage the printhead irreversibly.

IMPORTANT: Be careful not to wipe a printhead against an area were any Optimizer ink may be present. Otherwise, it could damage the printhead irreversibly.

4. Discard the lint-free microfiber cloth according to local regulations, keeping in mind that the ink is not cured and can be transferred to objects, food and skin.