

How to use PJUVG5-FL1000E Print Head Recovery Fluid?

1. When to use?

- The 'PJUVG5-FL1000E' print head recovery fluid is useful as a last resort to save a print head in case it was exposed to accidental curing or in case the technician observes permanently impaired nozzles, which cannot be recovered after repeated use of the standard cleaning/purging routines.

2. General Safety Guidelines

2.1. Skin sensitization

UV inks inherently pose a risk for skin sensitization. When carrying out any activity where there is a risk for direct skin contact, at all times please wear an appropriate type of safety gloves.

Nitrile is a correct choice. Please make sure not to choose latex gloves. Latex gloves do not offer any protection to handle UV inks.

2.2. Eye protection

- When handling ink or waste containers, at any time wear the safety goggles shipped with the printer or a similar type.
- Preferably, use goggles with a lens made from Polycarbonate (PC). The polycarbonate will also protect against accidental exposure to LED UV light.
- Never look into direct nor reflected UV light intentionally. The provided eye protection is meant to prevent unintended exposure & eye irritation

2.3. No Food – No Drinks – No Beverages

- Do not bring food, drinks nor beverages in the neighbourhood of the area where UV ink is used, handled or stored.
- Do not consume food, drinks nor beverages in the neighbourhood of the area where UV ink is used, handled or stored.

3. Required Items

- 3.1. PJUVG5-CL3000E – G5 CMF Flush (Cleaning and Maintenance Fluid).
- 3.2. PJUVG5-FL1000E – G5 Print Head Recovery Solution.
- 3.3. Protection goggles.
- 3.4. Appropriate gloves providing protection against UV ink. Nitrile or equivalent.
- 3.5. The G5 Print Head Recovery Solution may emit strong fumes. It is advised to have available respiratory protection.
- 3.6. Black disc filters (6 µm) Part n°FC-105004



- 3.7. Two Syringes: 1x 60 ml type and 1x 20 ml type
- 3.8. Lint free cloths.
- 3.9. Solvent resistant liquid catch tray to collect G5 Print Head Recovery Solution.

4. How to proceed in case the print head is still mounted into the printer?

- 4.1. Make sure to switch the printer OFF.
- 4.2. Ensure clear access to print heads and print head tubing.
- 4.3. Prepare the work area before you start. Ensure the electronics and machine are covered.

Important:

- To carry out the next steps, please take care to use the correct order of fluids. The print head recovery fluid is not compatible with ink. Always use the Cleaning and Maintenance Fluid (CMF) before and after using the recovery fluid.

- 4.4. Using an empty syringe connected to the flushing tube, gently purge print head with air. The goal is to expel any excess ink inside the print head.
- 4.5. Using the 60 ml syringe connected to the flushing tube, flush the print head **using G5 CMF Flush** until clear liquid comes out.
 - In case you are not familiar with the procedure, please refer to topic 6: "How to flush print head?"

NOTE:

- Do not overpressurize the print head, as this will damage it. It is not recommended to exceed 1 bar (100 kPa/15 psi).
Apply only gentle pressure to the syringe. Never use compressed air to purge heads.

NOTE:

- Never purge or flush directly with Acetone, IPA (isopropyl alcohol) or any other chemicals. This could lead to agglomeration of the pigments causing complete nozzle blockage.

Important:

- To carry out the next step, please use a solvent resistant catch tray to collect the G5 Print Head Recovery Solution that you flush through the print head. If you mix the Print Head Recovery Solution with the other waste liquids in the printer's waste collection tray, the mix will thicken and will be difficult to evacuate.

- 4.6. Using the 20 ml syringe, connected to the flushing tube, jet **20 ml G5 Print Head Recovery Solution** through the head nozzles.

Important:

- Please use different syringes for cleaning/maintenance fluid and for print head recovery fluid.

- 4.7. Step 4.6. should be carried out at least 3 times.
While doing this, please observe the state of the nozzles.

- Are there areas with missing nozzles?
- Are there any areas where the print head is leaking?
- Are you getting good jetting pressure?

Ideally, you should be able to observe a regular curtain of jets spraying at relatively low pressure.

- 4.8. Once you are satisfied that you have sufficiently purged the print head, using the 60 ml syringe, flush the remaining G5 Print Head Recovery Solution from the head **using G5 CMF Flush**.
 - In case you are not familiar with the procedure, please refer to topic 6: "How to flush print head?"

Make sure to purge **at least 40 ml of G5 CMF Flush** through each channel of the print head(s) that you have worked on.

- 4.9. Replace the disc filters on the print head inlet(s) & outlet(s) you have worked on.
Reconnect any tubing and ensure tight seals.
- 4.10. Clean up work area.

- 4.11. Switch the printer ON and follow the start-up procedures.
- 4.12. Fill the print head with ink using the standard procedure. Ensure that sufficient ink has gone through the print head outlet tube so that all G5 CMF flush and air bubbles are removed.
 - In case you are not familiar with the procedure, please refer to topic 7: "How to fill the print head with ink?"

5. **How to proceed in case the print head was removed from the printer?**

- 5.1. Using an empty syringe, gently purge the print head with air. The goal is to expel any excess ink still inside the print head.

NOTE:

- Do not overpressurize the print head, as this will damage it. It is not recommended to exceed 1 bar (100 kPa/15 psi).
Apply only gentle pressure to the syringe. Never use compressed air to purge heads.

- 5.2. **Using the 60 ml syringe and a 6-µm filter**, flush the print head **using G5 CMF Flush** until clear liquid comes out.

NOTE:

- Never purge or flush directly with Acetone, IPA (isopropyl alcohol) or any other chemicals. This could lead to agglomeration of the pigments causing complete nozzle blockage.

- 5.3. **Using the 20 ml syringe and a 6-µm filter**, jet **20 ml G5 Print Head Recovery Solution** through the print head.
- 5.4. Step 5.3. should be carried out **at least 3 times**.
While doing this, please observe the state of the nozzles.
 - Are there areas with missing nozzles?
 - Are there any areas where the print head is leaking?
 - Are you getting good jetting pressure?Ideally, you should be able to observe a regular curtain of jets spraying at relatively low pressure.
- 5.5. If the nozzles or combined nozzle areas are not recovered, **fill the print head with G5 Print Head Recovery Solution** and leave the combination standing overnight:
 - Place the print head on a lint-free cloth **soaked with G5 Print Head Recovery Solution**.
 - Close the ink inlet ports to prevent evaporation of the Recovery Solution.

Important:

- **Make sure not to spill any liquid onto the electronics or onto the connectors of the print head.**

- 5.6. After storage overnight, repeat flushing through the print head using the **20 ml syringe and a 6-µm filter using G5 Print Head Recovery Solution**. Always remember using a 6-µm disc filter. Again this should be done at least 3 times. While doing this observe the state of the nozzles:
 - Are there areas with missing nozzles?
 - Are there any areas where the print head is leaking?
 - Are you getting good jetting pressure?

- 5.7. Once you are satisfied that you have sufficiently purged the print head, using the **60 ml syringe and 6- μ m filter**, flush the remaining G5 Print Head Recovery Solution from the head **using G5 CMF Flush**.

Make sure to purge **at least 40 ml of G5 CMF liquid** through the print head(s) that you have worked on.

Important:

- After re-mounting the print head, the cleaning and maintenance fluid (CMF) can be evacuated during the ink load procedure.

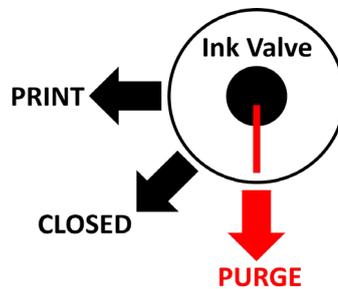
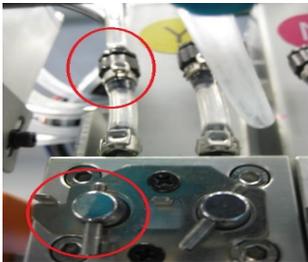
- 5.8. Replace the 6- μ m filters on the print head inlet(s) & outlet(s) and re-mount the print head. Finish as if you would mount a new print head.

6. How to flush print head PJ-2508?

- 6.1. Fill the 60 ml syringe with 60 ml of G5 CMF Flush and remove the air.
- 6.2. Open the print head flushing tube and connect the syringe.



- 6.3. Turn the ink valve to the PURGE/FLUSH position.



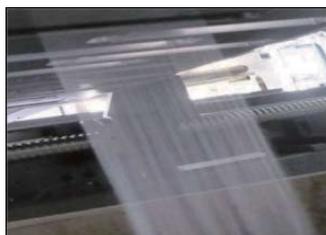
- 6.4. Open the corresponding print head outlet tube and put it through a hole in the base plate.



- 6.5. Gently pump the fluid through until 10 ml is left



- 6.6. Close the print head outlet and push the **remaining 10 ml of G5 CMF Flush through the print head nozzles.**



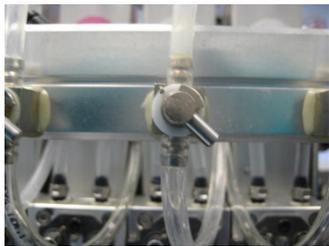
Visual of a nice even curtain of fluid jetting through the nozzles

7. How to fill a PJ-2508UF print head with ink?

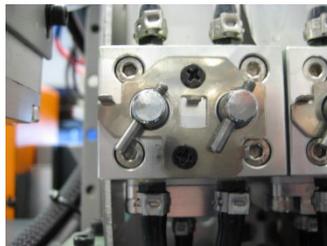
7.1. Turn spitting OFF



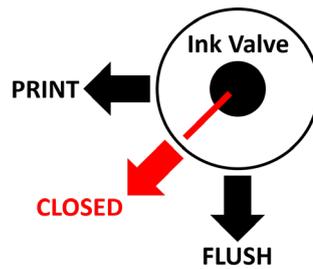
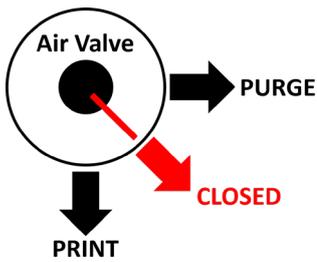
7.2. Check if **air** and **ink valves** are in **closed position**.



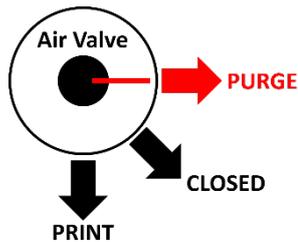
Air Valve



Ink Valve



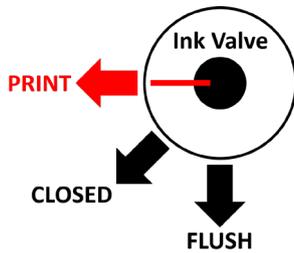
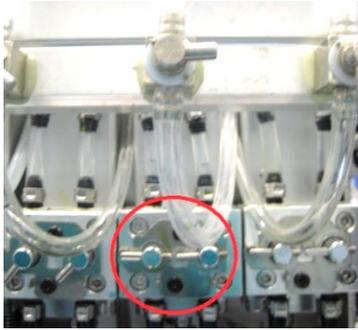
7.3. Set the AIR valve to PURGE



7.4. Open the corresponding print head outlet tube and put it through a hole in the base plate.



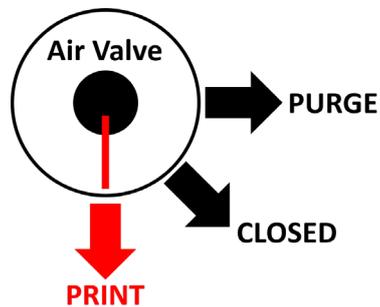
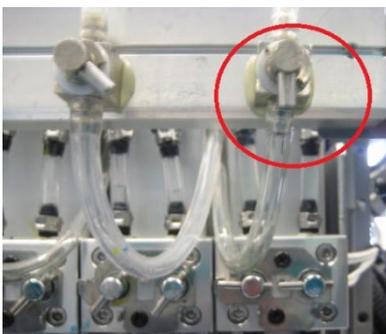
7.5. Set the ink valve to PRINT and push the PURGE button.



7.6. As soon as pure ink is purging out of the print head outlet, pinch the outlet using a clamp and screw the cap back on to close the tube.



7.7. Set the air valve to PRINT.



7.8. Wipe the nozzle plate using a lint free cloth.