

Epson DX5 Print Head Recovery with PHD3

Recovering Epson print heads is no easy task due to their fragility. Unlike most other print heads, they can be easily damaged with pressure, sonic power, fluid chemistry and high temperature. Therefore it's a good idea to avoid using too much of these.

Step 1. Reverse Flush the print head with Suction Method

Set up your print head for reverse flushing using the Suction Method (without the RF cap). Refer to the picture in this document. Put the Ultrasonic Dampening Plate on in the tank first, then install the print head adapter. Use fluid #1DX for eco-solvent print head or 1W for water-based print heads. Fill the fluid up to the print head, so that it would be submerged by 3mm in it. Run Syphon cycle.

Step 2. Forward Flush the print head

Set up your print head as per diagram below. Use fluid # 1DX. For water-based print heads, use fluid 1W. All "W" fluids are designed for water-based Epson heads, while "DX" fluids are for eco-solvent Epson heads. Set fluid temperature to 25°C. Start recovery cycle called **LPRF Foam-Free (F8)**. The Ultrasonic Dampening Plate must be inside the tank. This cycle does not use any ultrasound or air, therefore the risk of print head damage is minimized. Always keep an eye on the pressure. The gauge should not go higher than the MAX Pressure at any moment of time.

Step 3. Test the print head

Epson DX5 print head can be damaged by fluidic pressure if you are trying to check the nozzles by increasing the pressure. Checking nozzles should be done on a printer. Before you put a print head back on your printer, flush it with fluid 1DX (or 1W for water based heads), then flush it with the flushing solution that comes with your inks. This can be done by slowly pushing the fluid with a syringe, applying only a minimal force. Clean the electronics on the print head using the **contact cleaner** spray.

Step 3. Reverse Flush and Forward Flush the print head

If the print head is still showing clogged nozzles, it's recommended to reverse flush it. If you have a Reverse Flushing cap, set up your print head for reverse flushing as shown here. If you don't have RF Cap, use another (suction) method of reverse flushing. Run F8 cycle and add 20 seconds of ultrasound manually during the cycle. After it's completed, set up your print head for Forward Flushing and run it with F8 cycle again, with a 20-second ultrasound.

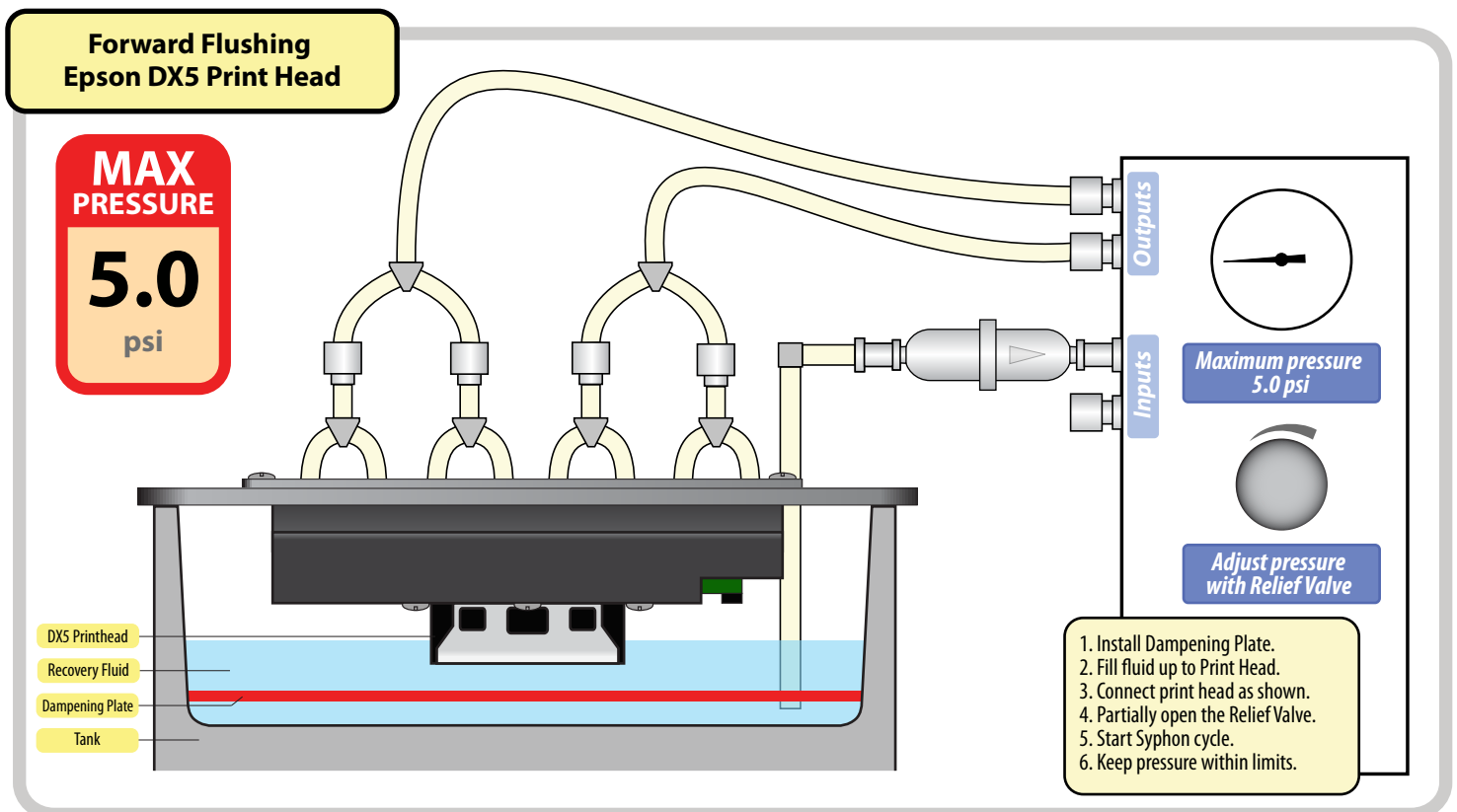
Step 4. Proceed with Forward Flushing

Re-test your print head on a printer. If you don't see improvements in the nozzles condition, increase fluid temperature to 30°C and repeat the cycle. Still no improvement: move on to the next fluid (the fluid with the next number). When changing fluids, follow instructions contained in a separate manual.

Factors Contributing to Epson Print Head Destruction

1. Too much ultrasonic power.
2. High internal pressure.
3. Aggressive chemistry of fluids.
4. Excessive temperature.

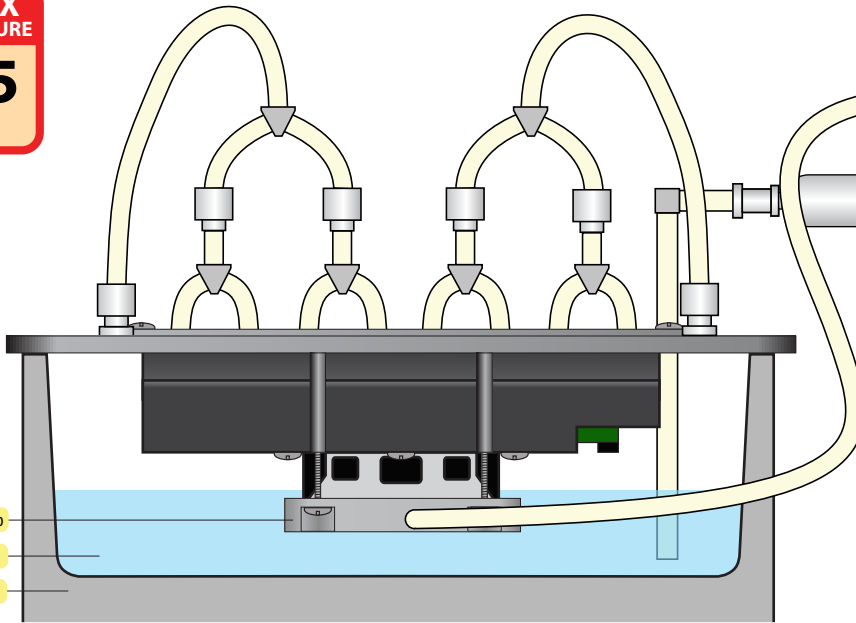
Keep these factors down!



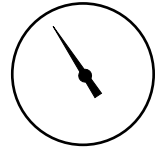
Reverse Flushing DX5 head with Reverse Flushing cap

**MAX
PRESSURE**
15
psi

DX5 Reverse Cap
Recovery Fluid
Tank



Outputs



Maximum pressure
0.10 Mpa / 15 psi

Inputs

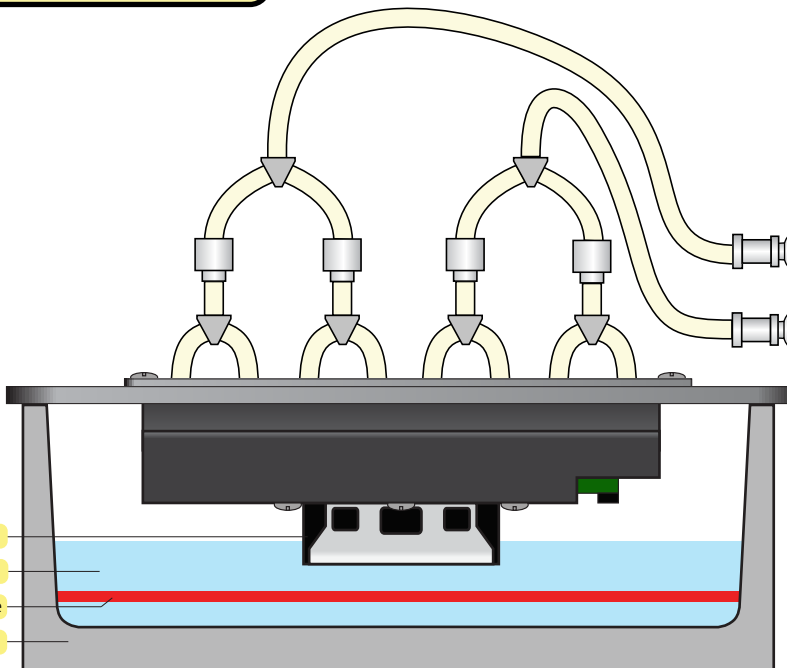


Adjust pressure
with Relief Valve

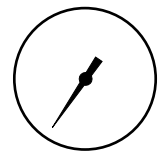
1. Install Reverse Flushing cap.
2. Install 1st stage filter(s).
3. Connect RF cap tubing to output.
4. Plug the second output port.
5. Connect print head to adapter.
6. Run LPRF cycle.

Reverse Flushing DX5 head using Suction Method

DX5 Printhead
Recovery Fluid
Dampening Plate
Tank



Outputs



Pressure at zero

Inputs



Relief Valve
must be open

1. Plug both output ports.
2. Open Relief Valve (one turn).
3. Install Dampening Plate.
4. Connect print head as shown.
5. Fluid must reach the print head.
6. Run Syphon cycle.