

Procedure for Replacing Check Valves

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Versions

Version	Notes	Personnel	Date
1.0	Initial Release	JPT	2022-11-08

Introduction

There are five check valves used in the ink supply vacuum pump control system. They are prone to wearing out or failing due to use outside of recommended operating conditions or failure to properly clean them after an ink overflow event. The symptoms of a failed check valve are instability in Reservoir or Weir Vacuums (seen in the Pump Info section on the Home page of the Web Interface), physical chattering of the check valve, and/or extensive ink contamination that cannot be cleaned out with isopropyl alcohol. The arrow on the side shows the direction of airflow.



Equipment & Materials Required

- A replacement check valve, PPSI P/N 00-17360
- Needle nose pliers
- Small flathead screwdriver
- Optional: extra blue vacuum hose

1.0 Procedure

1. Place the DICEblade that is being worked on in the Capped position.
2. Turn OFF circulation pump (leave Reservoir and Weir vacuums ON)
 - a. Give enough time for the Reservoir to fill with all the ink.
 - b. The Weir may show ~6% of ink remaining, and this is normal.
 - c. Vacuum stability may be lost and drip ink out of the printheads. This is also normal, just click Drain Tray if it is not already draining the Drip Tray.
3. Disconnect the suspected check valve from the vacuum lines, using a needle nose pliers or small flathead screwdriver to pry the vacuum hose off without damaging it. If the vacuum hose gets cut or damaged, this can compromise the stability of the vacuum setpoint so the damaged segment of vacuum hose should be replaced.
4. Connect the new check valve in the same orientation as the old check valve.
 - a. NOTE: Until the new check valve is connected, the vacuum pumps will be working extra hard to maintain vacuum, and ink will be dripping out of the printheads. Steps 3 and 4 should be done quickly to avoid excessive ink loss and pulling air into the printheads.
5. Once the new check valve is installed, resume circulation and purge if needed to stabilize vacuums. Check the Pump Info on the web interface to see if the pump rpms have calmed down/are comparable to other ink supplies.