

Rinsing the Sample Selection 14-Port Valve

During normal instrument use, the sample selection 14-port valve may become clogged. In order to remove most clogs and fix most leaks, follow the instructions below.

Materials Needed:

- Flush Kit (Part #: 344345)
- 7/64 Ball Driver (Part #: 011941)

Instructions:

- Try to identify if there are bubbles, if no liquid is being pulled through the lines, or only certain lines are pulling liquid.

- Then check that the buffer and sample lines are fully submerged in liquid and not pulling in any air. Also check that the 10-32 tan nuts are tight.
- Next, run a fast rinse with only the buffer selected. While the fast rinse is running watch the common port line to see if bubbles are leaving the valve via this line (**Figure 1**). If the bubbles appear to be coming from the 14-port valve itself and not from any other source then the valve may be dirty, clogged, or loose.
- Remove the 10-32 tan nuts in positions 4, 9, and 14 from the valve. Then remove the face plate using a 7/64 ball driver, turning each screw a 1/2 turn at a time to avoid cracking the face plate (**Figure 2**).
- Remove and clean the rotary disk with dH₂O (**Figure 3**). Use a pipette tip to clean shaving in the groove on the rotary disk, then replace the disk into the valve.

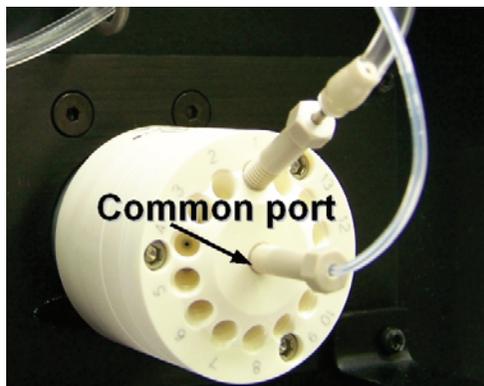


Figure 1. Common port on the sample selection 14-port valve.

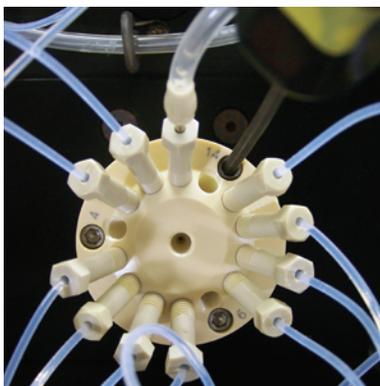


Figure 2. Removing the face plate from the sample selection 14-port valve.

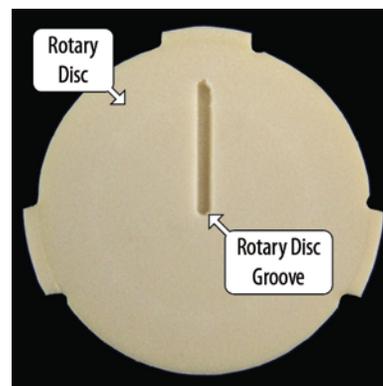


Figure 3. The rotary disk and groove.

- Check the individual ports on the face of the valve to be sure they are not clogged. If they are use the 10 mL Syringe, Female Luer to 1/4-28 Adapter, 1/4-28 Black Tubing Nut, 10-32 Tan Tubing Nut, FEP tubing, a White Flangless Ferrule, and a Tan Ferrule as seen in **Figure 4**, to flush out the ports with dH₂O.
- Once the valve has been flushed and cleaned, replace the face plate by turning the three screws a 1/2 turn at a time. Be sure the screws are tight but do not over-tighten or the face plate may crack.
- Run multiple fast rinses (☞) to see if the problem was fixed.
- If the problem still persists contact a Sapidyne representative for assistance.

Ferrule Installation Instructions:

- The white ferrule slides onto the tubing with the tapered end toward the nut and the flared end toward the valve port. The tan ferrule slides onto the tubing with the tapered end toward the end of the tubing and the flat end toward the nut. When installing and tightening these fittings, be sure to push the tubing all of the way into the valve ports (See **Figures 5** and **6**).

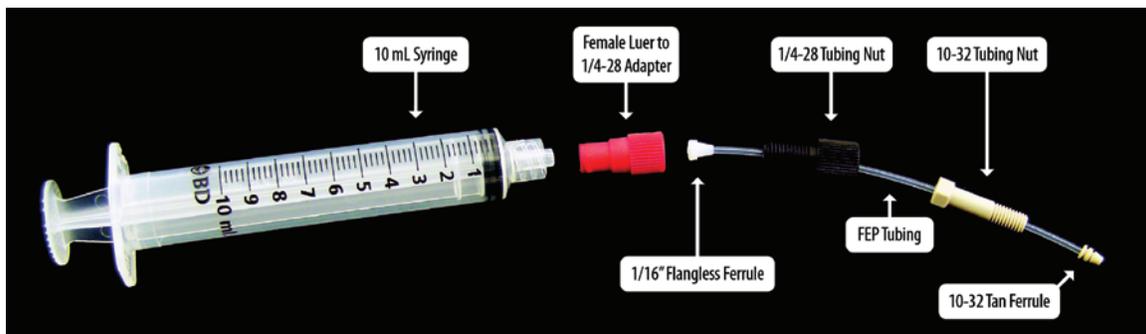


Figure 4. Sample selection 14-port valve flushing apparatus.

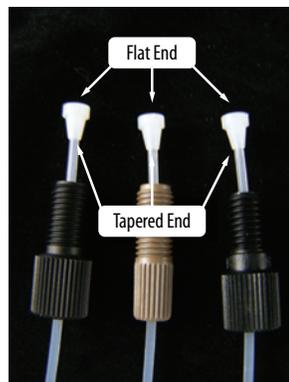


Figure 5. White ferrule with tapered end facing the nut.

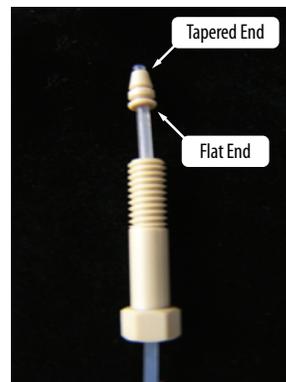


Figure 6. Tan ferrule with tapered end facing away from the nut.