

This procedure helps facilitate the replacement of the pinch valve tubing for the four sets of pinch valves.

1. From the back of the TDF instrument or when tilting the instrument forward identify the left and right IDF/SDF pinch valves, Waste Pinch Valves and the Enzyme Pinch Valve, shown in Figures 1 - 4. **Ensure you have a TDF71 Pinch Valve Tubing Set which contains the 21 individual tubes pre-cut for this task.**

IDF/SDF

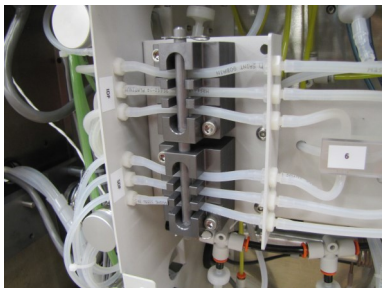


Figure 1

IDF/SDF

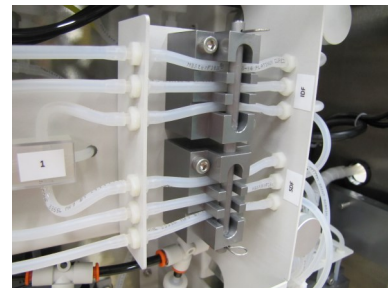


Figure 2

WASTE

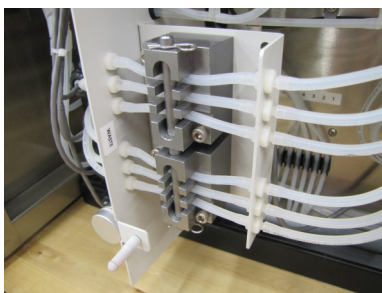


Figure 3

ENZYME

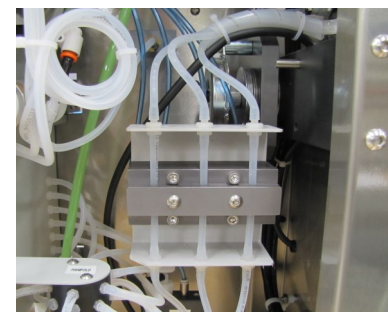


Figure 4

2. The procedure for replacing the IDF/SDF and Waste Pinch Valve tubing is the same and is explained in steps 3 - 9. For instructions on replacing the tubing on the Enzyme Pinch Valve, refer to steps 10 - 16.

3. Remove one of the Hitch Cotter Pins from the pinch bar, as shown in Figure 5.



Figure 5

4. Slide the Pinch Bar out of the Pinch Valve Guide Blocks.
See Figure 6.

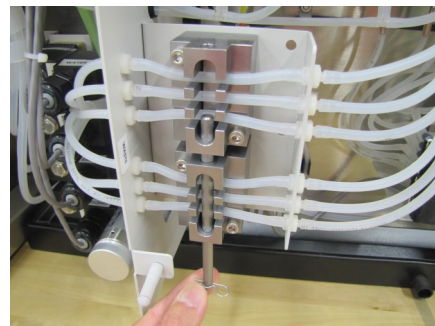


Figure 6

5. Remove the six tubes from the barbed fittings on the left and right side of the Pinch Valve Bracket. See Figure 7.

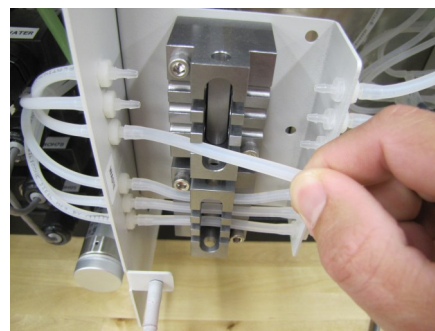


Figure 7

6. Take six of the 3¼" length tubes from the TDF71 package (ref. Figure 8) for each IDF/SDF and Waste Pinch Valve and three for the Enzyme Pinch Valve for a total of 21 tubes. One TDF71 kit was shipped with each new instrument. If more are needed contact ANKOM Technology at: <https://www.ankom.com/contact/technical-services> or call 1-315-986-8090.



Figure 8

7. Replace the 6 Silicone Tubes in each valve, connecting each to the barbed fittings on the left and right side of the Pinch Valve Bracket as depicted in Figure 9.

NOTE: With all tube replacement, be certain of the correct placement before connecting - Avoid excessive disconnecting and reconnecting the same tube.

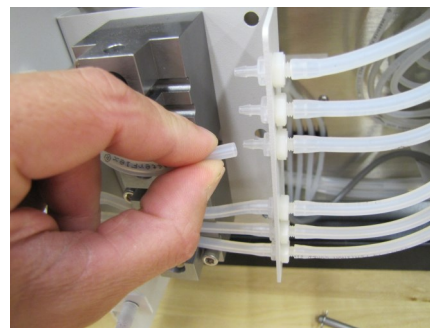


Figure 9

8. Replace the Pinch Bar into the Pinch Valve Guide Blocks, making sure that the tubes are pressed back into the appropriate slots. See Figure 10.

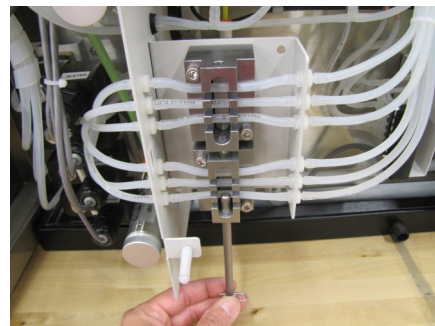


Figure 10

9. Replace the Hitch Cotter Pin in the Pinch Bar, as shown in Figure 11. Repeat steps 3 - 9 with each of the following valves: IDF/SDF Pinch Valves left, IDF/SDF Pinch Valves right, and Waste Pinch Valves.

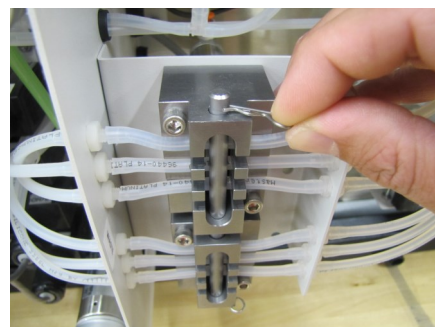


Figure 11

10. **Note: If the Enzyme Pinch Valve is labeled "TDF55" steps 11 and 12 can be skipped because the valve will always be open when it is not energized.** For the version of Pinch Valve that is not labeled "TDF55", to replace the Enzyme Pinch Valve tubing, you will need to open the valve. From the Control Box click the "Diagnostics" button and select "Valve Test". Refer to Figure 13.

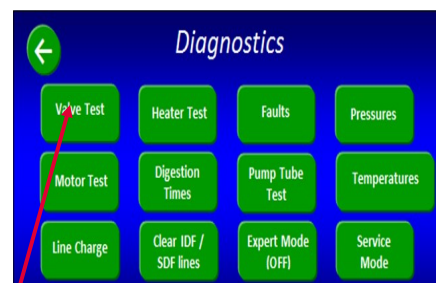


Figure 13

11. From the “Valve Test” screen, open the “Amylase Supply”, “Protease Supply” and “AMG Supply”. This will open the valves allowing access to the Enzyme Valve for replacement of the tubes. See Figure 14.

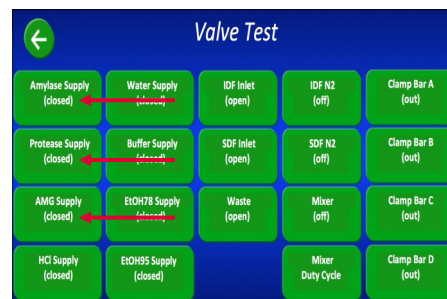


Figure 14

12. Now remove the two screws holding the Enzyme Pinch Bar in place using a 1/8” Allen wrench, as depicted in Figure 15.

NOTE: Early versions of this assembly will require the use of a 5/32” Allen wrench to remove the Enzyme Pinch Bar screws.

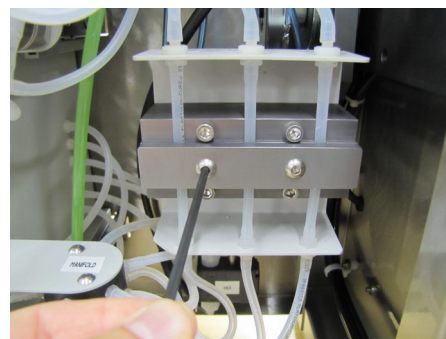


Figure 15

13. Remove and dispose of the three tube pieces within the Enzyme Pinch Valve, as shown in Figure 16.

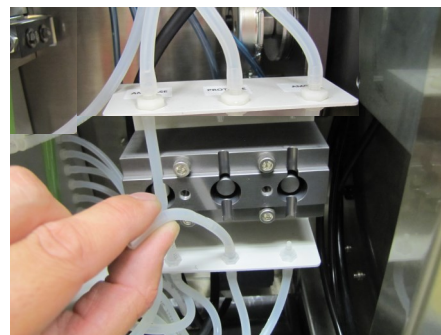


Figure 16

14. Re-install the new (pre-stressed per step 10) silicone tubes into the Enzyme Pinch Valve connecting them to the barbs above and below. See Figure 17.

NOTE: With all tube replacement, be certain of the correct placement before connecting - Avoid excessive disconnecting and reconnecting the same tube.

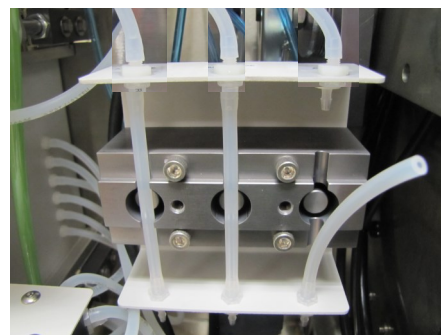


Figure 17

15. Reinstall the Enzyme Pinch Bar with the two screws using a 1/8" Allen wrench, as depicted in Figure 18. The Enzyme Pinch Valves can now be closed using the Diagnostics/Valve Test screen discussed in steps 11 and 12. You do not need to close the valves if you have a TDF55. The Pinch Valve tubing replacement is now complete and your TDF Instrument can now be put back into service.

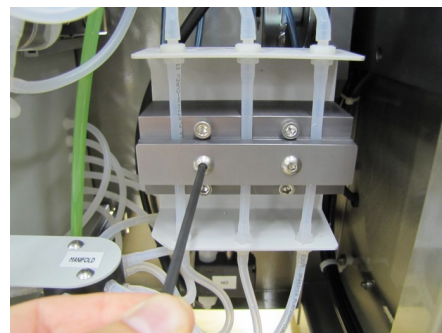


Figure 18