

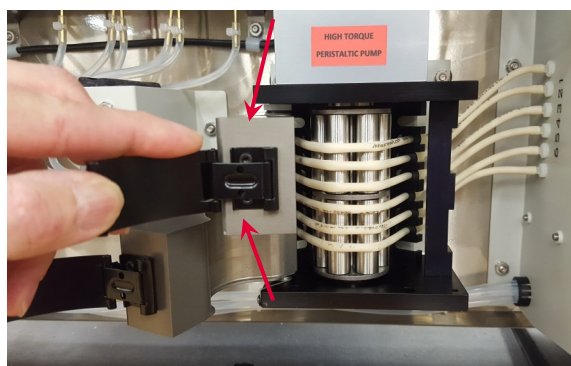
This procedure helps facilitate the replacement of the TDF99 pump tubing.

IMPORTANT: The TDF99 Long-life pump tubes can only be used on instruments outfitted with pumps labeled, "HIGH TORQUE PERISTALTIC PUMP".

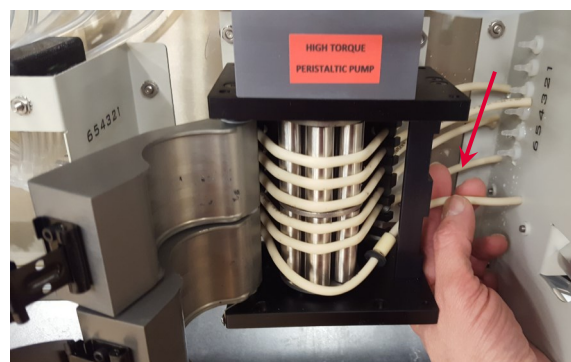
1. Remove the back panel from the TDF instrument by removing the six acorn nuts. This will allow you to access the Pump. Disconnect the tubing from the barbed fittings on the right and left side of the pump as pointed out by the arrows.



2. Open the Pump doors by pulling on the two latches on the right side of the pump, allowing access to the pump tubing.



3. Remove the six pump tubes by pulling back on the black washers/stoppers.

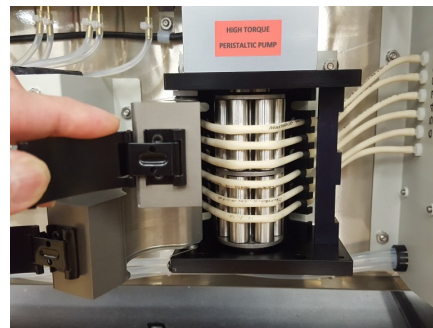


4. Obtain the TDF99 Long-life Pump Tube Replacement Set. Note that one spare set comes with a new TDF analyzer. Additional TDF99 Pump Tube Replacement Sets can be purchased on line at www.ankom.com or call: 1-315-986-8090.



5. Use the TDF107 and grease the inside of the pump doors and each of the 12 rollers. (Figure A) Reinstall the new set of TDF99 Pump Tubes as shown. (Figure B) Make sure the black washers are secured between the tubing comb. Use the middle six slots — the top and bottom slots are left empty. Close the pump doors and snap the latches in place.

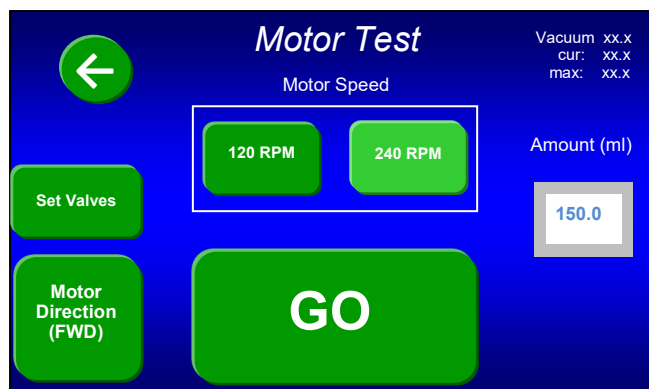
A

B


6. Note the markings 1 - 6 on the right and left side of the pump. Connect the tube ends to the barbed fittings on either side of the pump in their respective positions as designated by the arrows.



7. Before running the TDF instrument, break-in the tubes, by pumping water through them. Do this by performing a **Motor Test** under **Diagnostics**. First, be sure the Distilled Water container is filled and connected. Select **Set Valves** and be sure that the **Water Supply** and **Waste Output** are open. Change the volume to 150 mls and press **GO** to run the pump for about 4-5 minutes. Refill the container and repeat this one time.



8. Lastly perform a volume calibration on the new Pump Tubes. This is found on the touch screen display under **Diagnostics / Service Mode**. Follow the prompts on screen to perform this operation. Once an adjustment has been made, repeat the volume calibration to confirm that the average delivery is now $20.00g \pm 0.25g$. If it is still outside of this range repeat the process. The individual readings from the six positions should be within a range of $20.00g \pm 1.50g$ (18.50g - 21.50g). For optimal performance, pump tubing should be regreased and volume calibration rechecked on a weekly basis. Refer to the ANKOM^{TDF} Dietary Fiber Analyzer Operator's Manual for complete details.

