

Humidity Generation and Calibration Equipment

**THUNDER SCIENTIFIC**  
**CORPORATION** THE HUMIDITY SOURCE

## *Model 2500*

### **2500 Reservoir Removal and Flush Out procedure**



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623 WYOMING BLVD. SE



ALBUQUERQUE, NM 87123-3198  
[WWW.THUNDERSCIENTIFIC.COM](http://WWW.THUNDERSCIENTIFIC.COM)



TEL: 505.265.8701  
FAX: 505.266.6203

## 2500 Reservoir Removal and Flush Out procedure

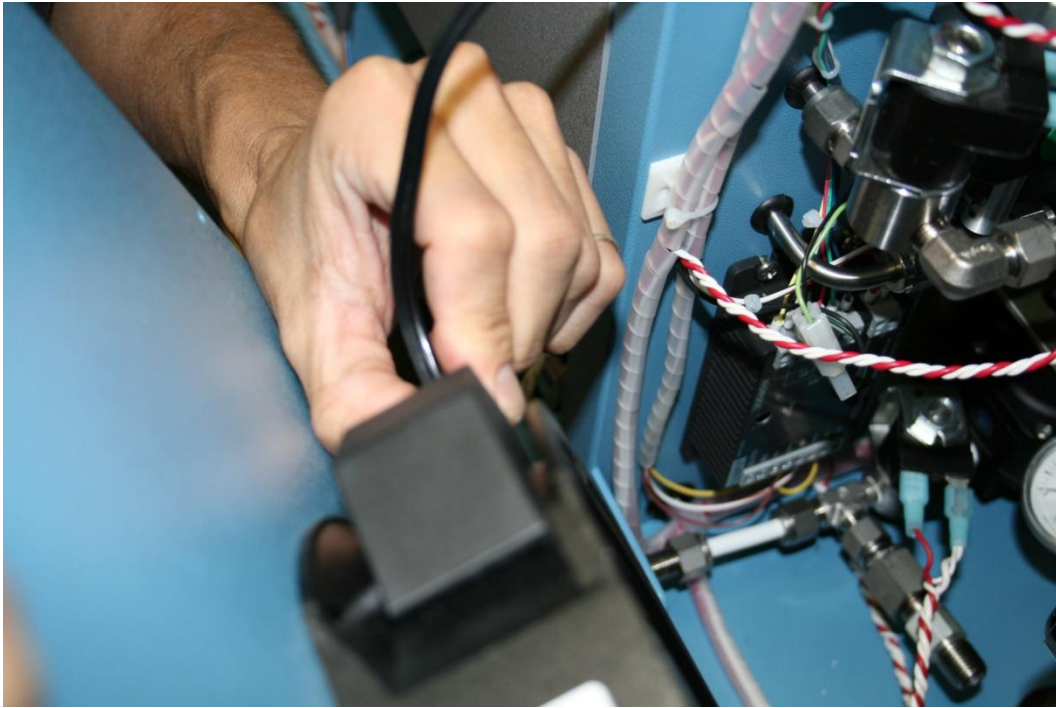
1. Disconnect the main power cable on the rear panel as well as the air in elbow.



2. Remove the rear panel screws using the Torx drive provided.



3. Hold the rear panel upright and remove fan power cord.

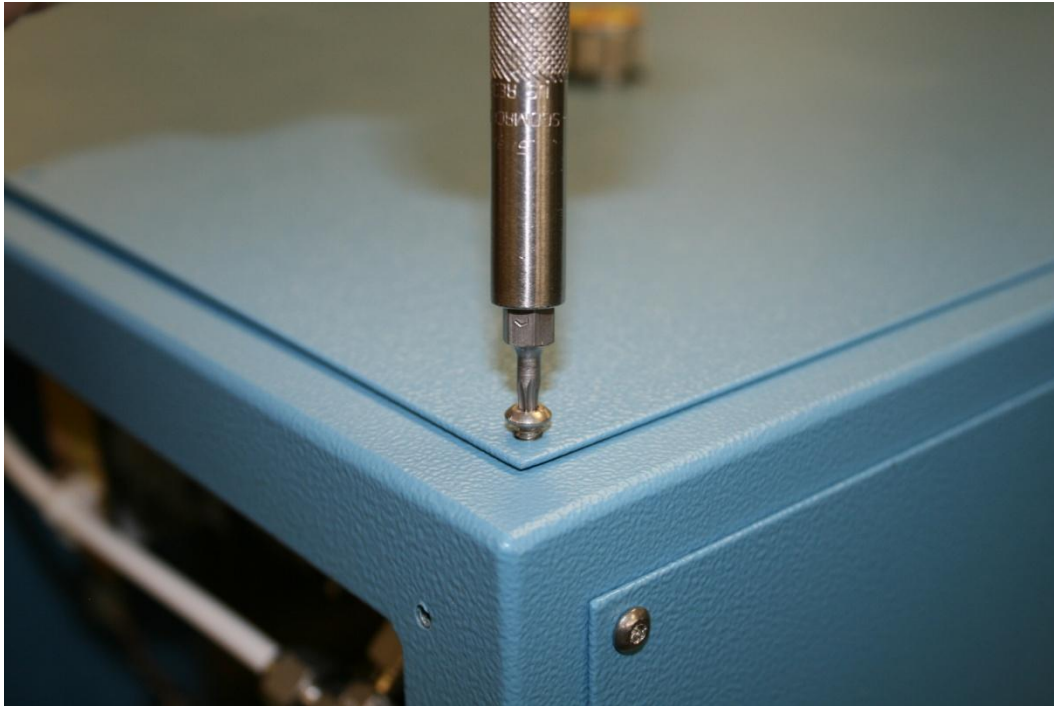


4. Remove the reservoir fill port cap.





5. Remove the top left hand panel over the reservoir using the Torx drive provided.



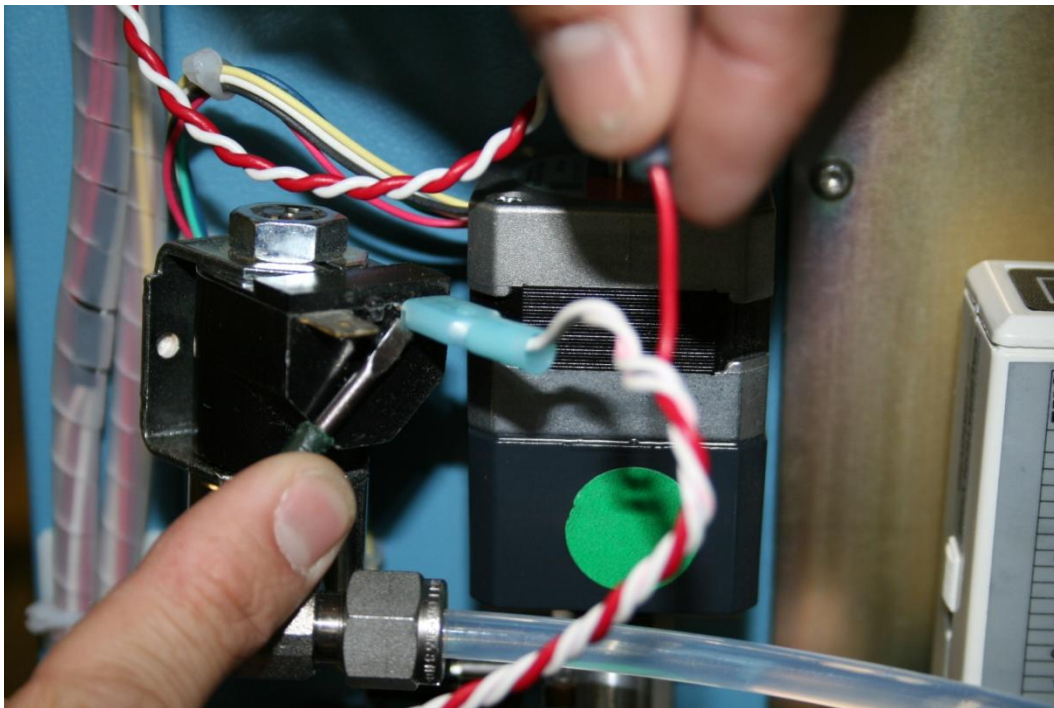
6. Remove the left hand console panel.



7. Remove the reservoir liquid level probe indicator cable.

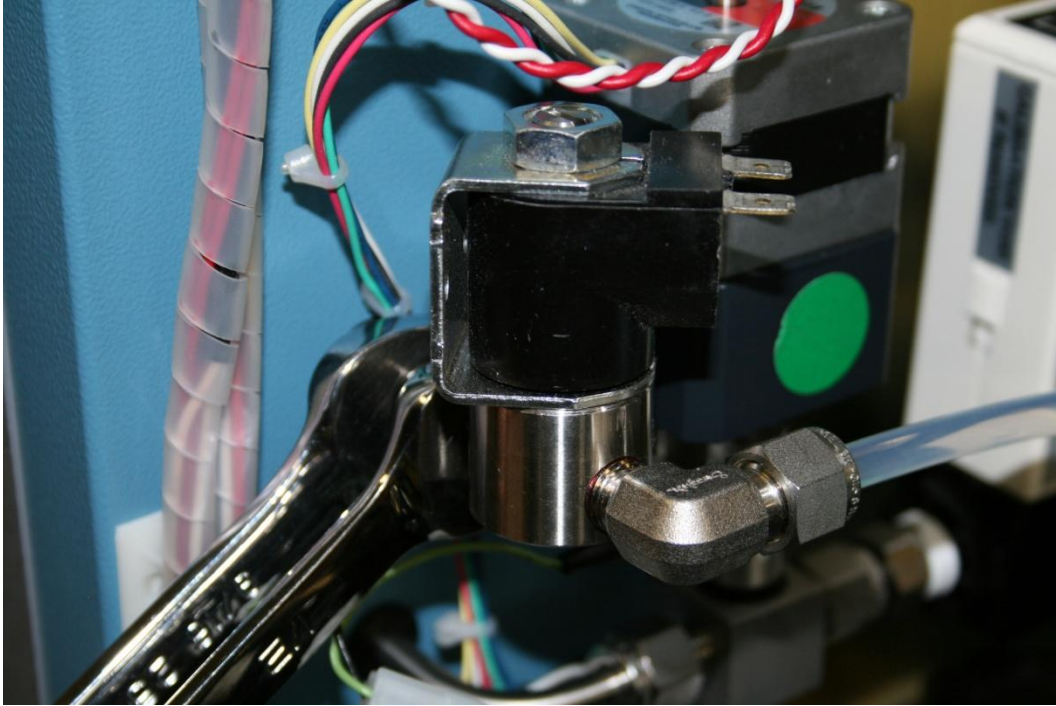


8. Using a flat head screwdriver, slide off the two connections on the pre-sat fill solenoid.

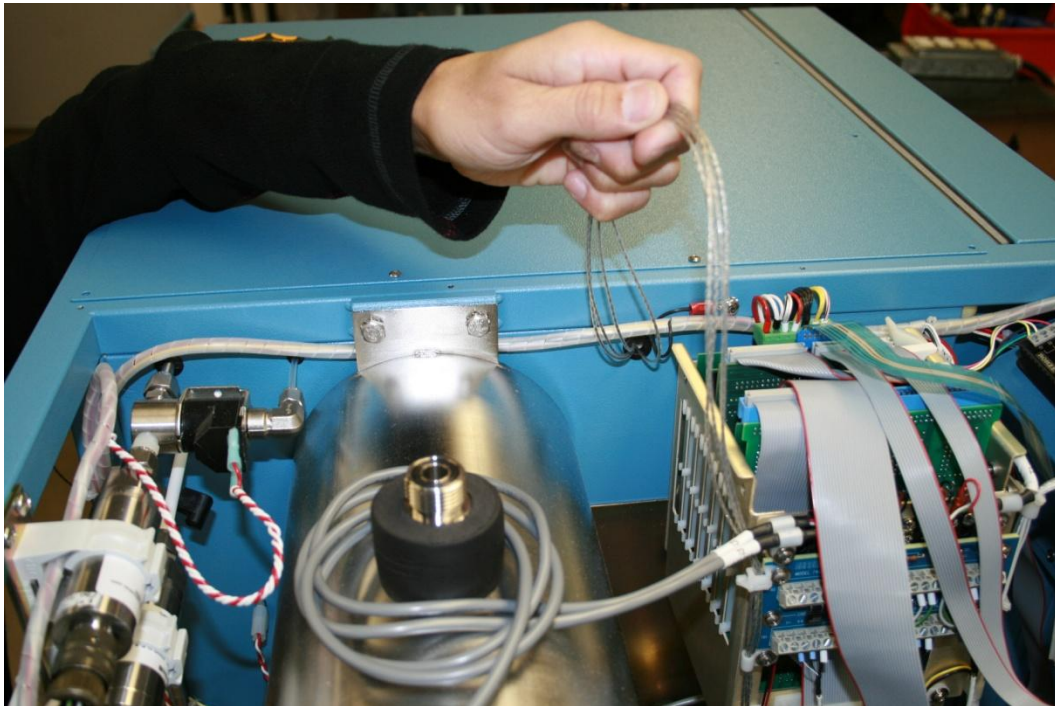




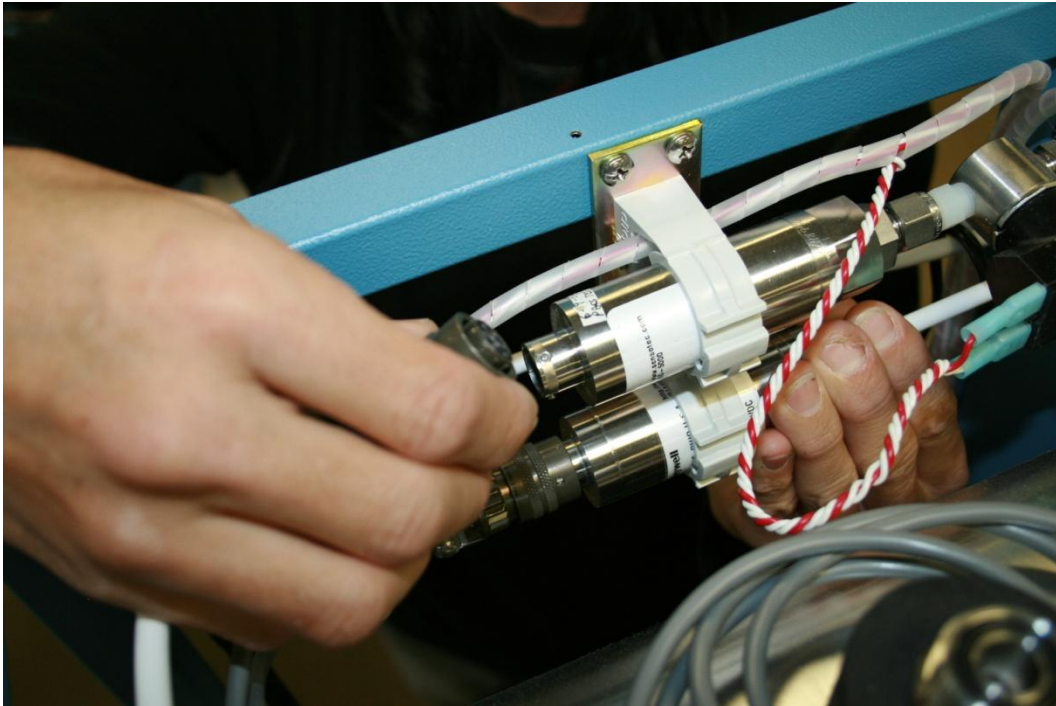
9. Remove the pre-sat fill solenoid using a 9/16 wrench and a 1/2 wrench.



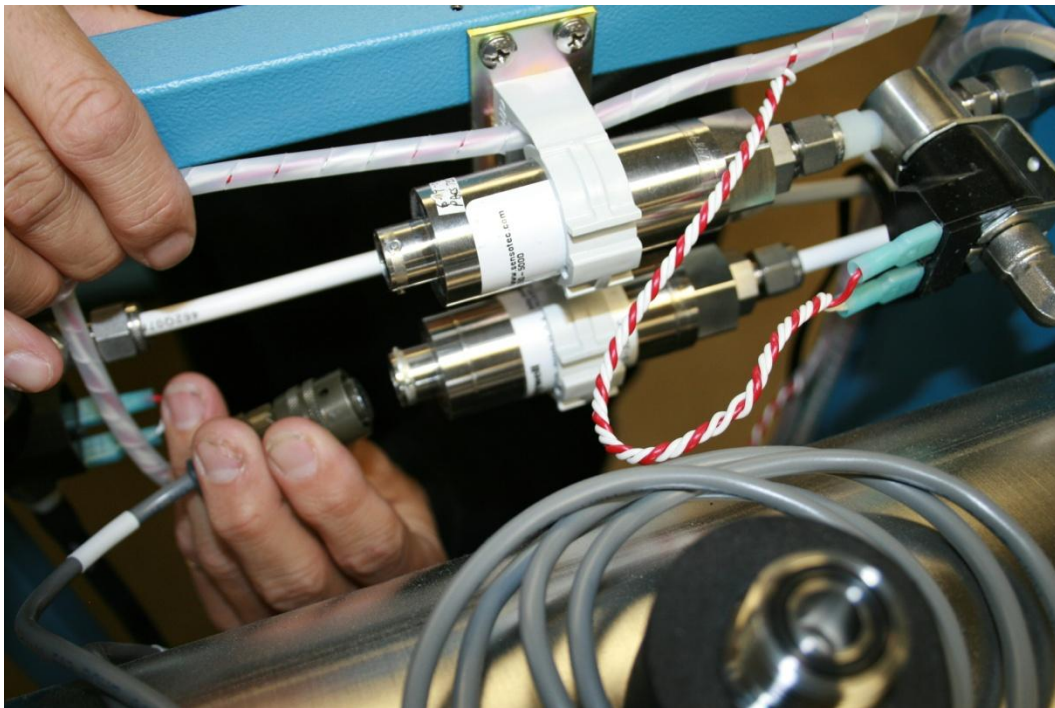
10. Pull back the temperature probe cables that are coiled on top of the reservoir.



11. Disconnect the transducer data cable (T2).



12. Disconnect the transducer data cable (T3).

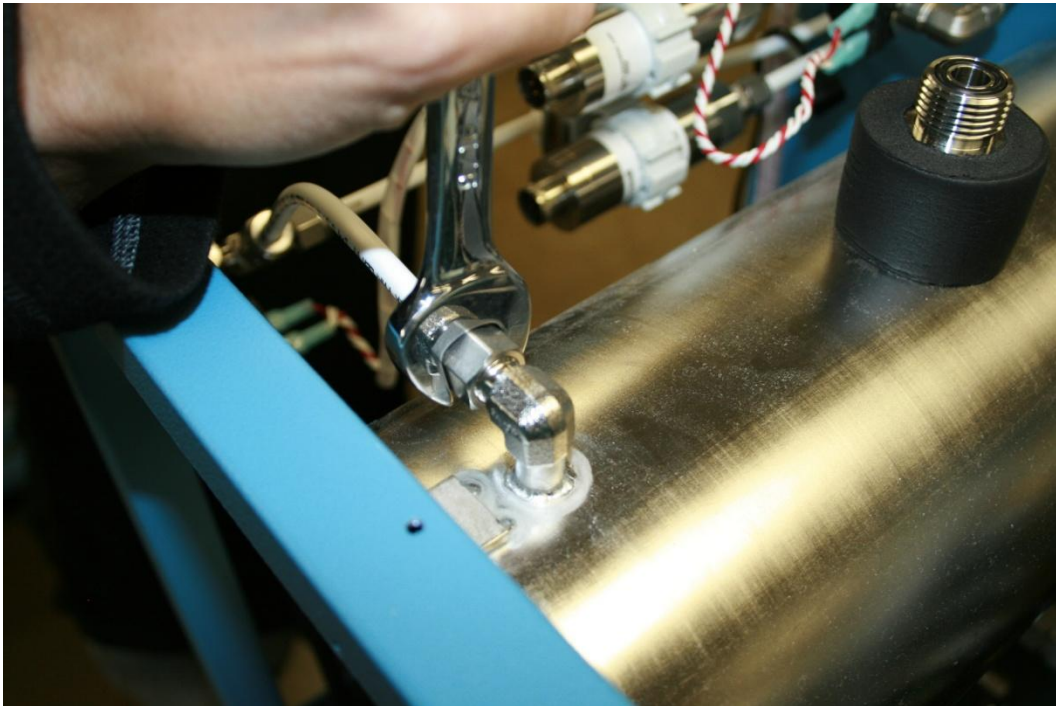




13. Pull back the transducer cables that are coiled on top of the reservoir.

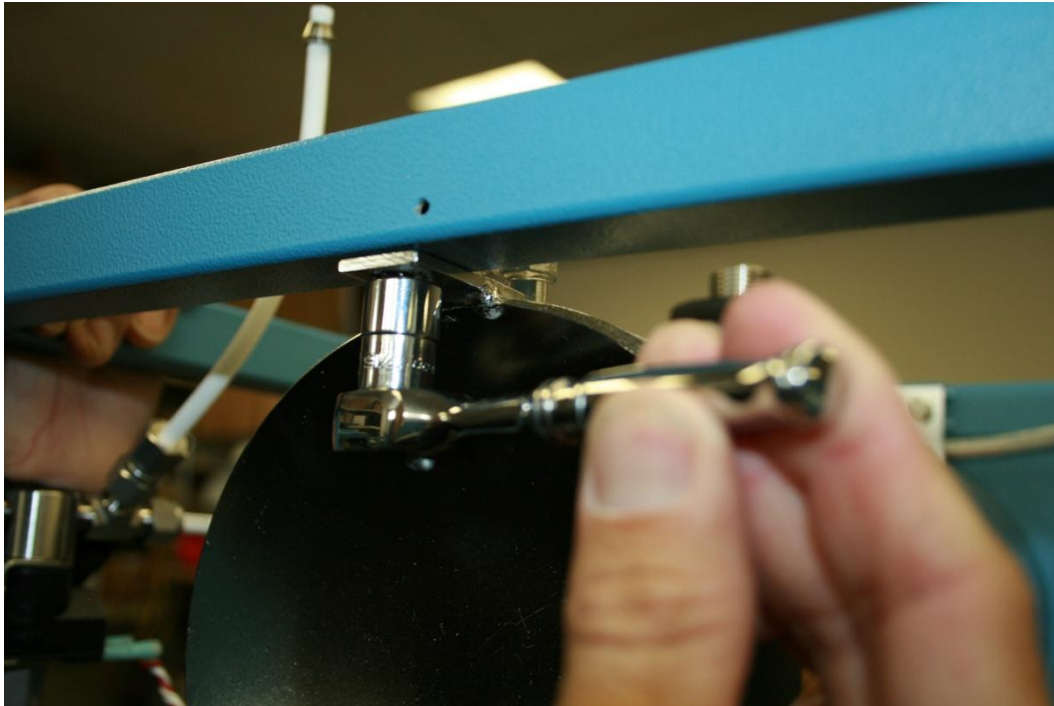


14. Using a 9/16 wrench loosen and pull away from the reservoir, the pressure balance tube.

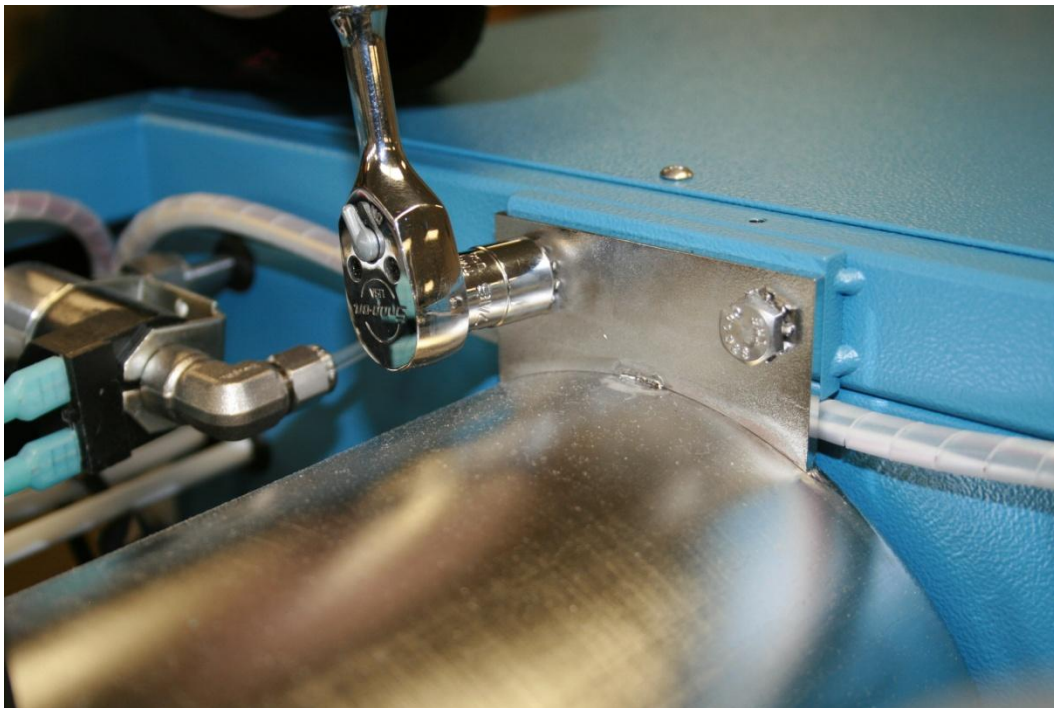




15. Loosen the bolt on the under-side of frame rail using a 7/16 socket head wrench.



16. Loosen both 7/16 bolts that secure the reservoir to the frame.



17. Holding both the reservoir and the pre-sat solenoid together, remove all three 7/16 bolts and slide out the reservoir.



18. Next take the reservoir to a sink or bucket to drain the foreign matter from the reservoir.





19. Using a 9/16 wrench, remove the reservoir to pre-sat solenoid tube from the reservoir.



20. Remove the reservoir liquid level probe assembly from the reservoir using a 9/16 wrench. Be careful not to scrape the sides of the probe when removing it, because damage could occur to the Teflon sleeve.





21. Remove the insulation from the reservoir fill port.



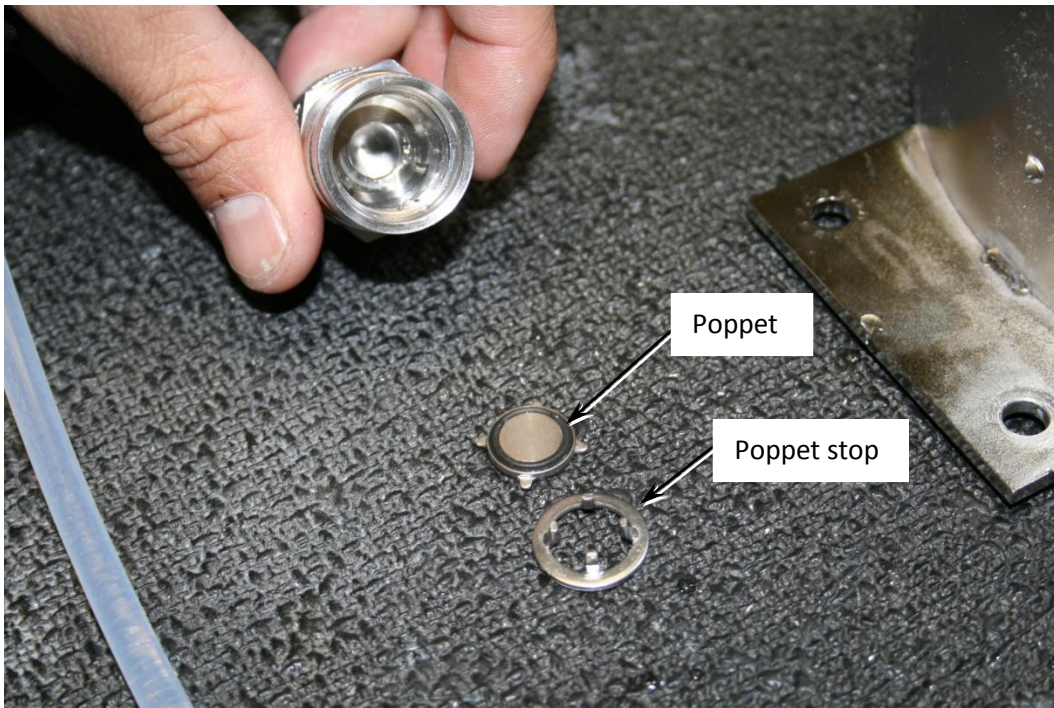
22. Remove the reservoir fill port assembly using an adjustable wrench.



23. At the base of the reservoir fill port assembly there will be some parts that need to be saved.



24. The parts that need to be saved are the poppet and the poppet stop.



25. Next thoroughly rinse the inside of the reservoir using alcohol.



26. Flush thoroughly with water until clean.





27. Remove the reservoir to pre-sat solenoid tube from the solenoid using a 9/16 wrench.



28. Flush the tube with alcohol until clean.



29. Next clean the liquid level probe assembly with alcohol.



30. Blow dry the liquid level probe assembly.



31. Insert the liquid level probe assembly back into the reservoir (See step 20 for precautions) at the fitting on the end.

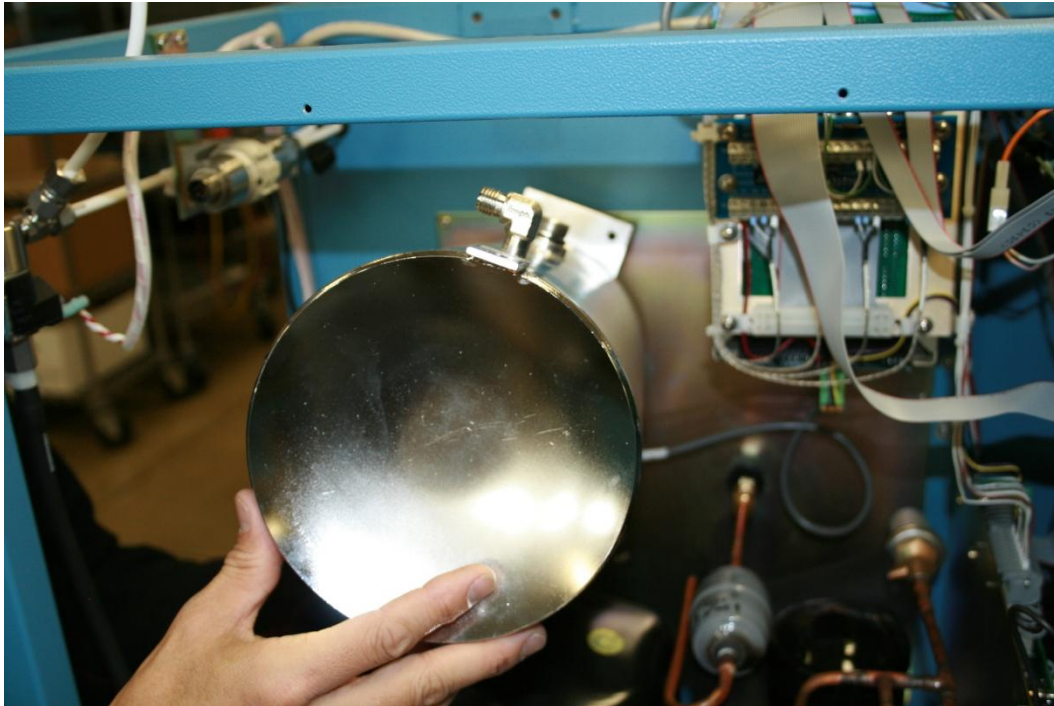


32. Tighten the nut of the liquid level probe assembly, but do not over tighten and make sure the probe lead faces the front of the system.

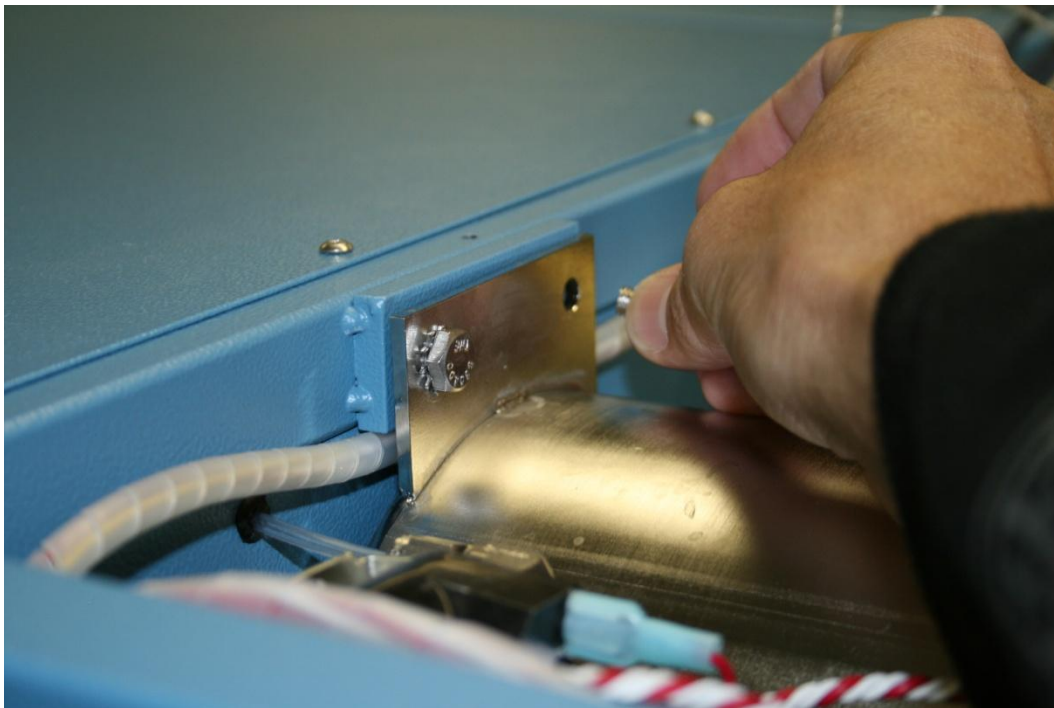




33. Insert the reservoir back into the system.



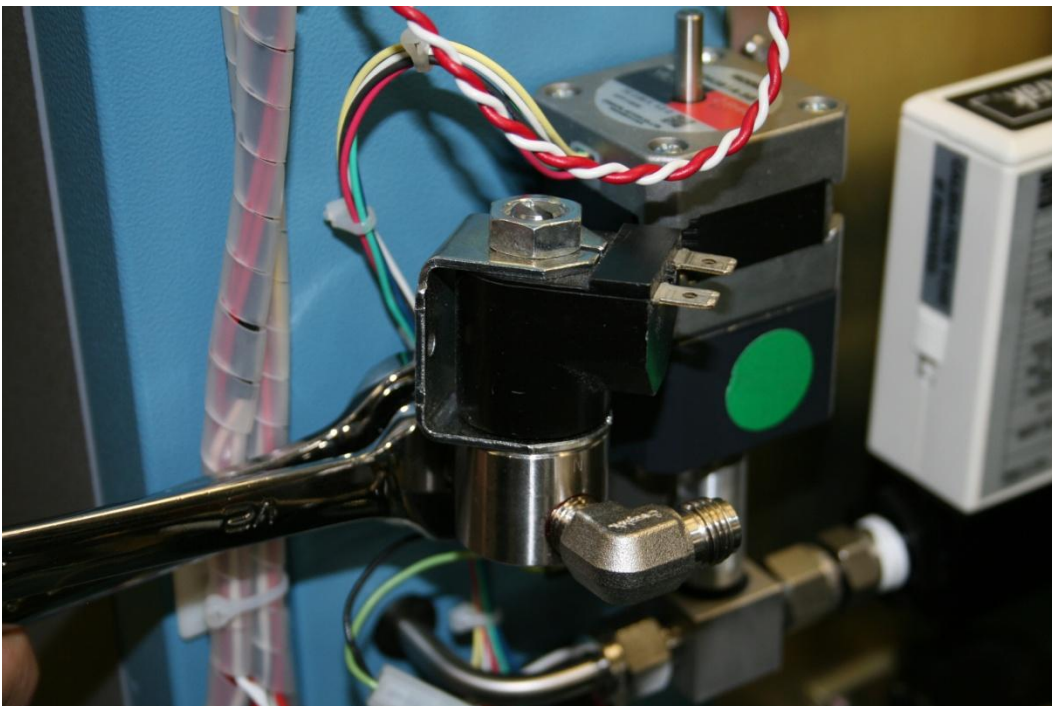
34. Use the same hardware to attach the reservoir.



35. Reattach the reservoir to pre-sat solenoid tube, do not over tighten.

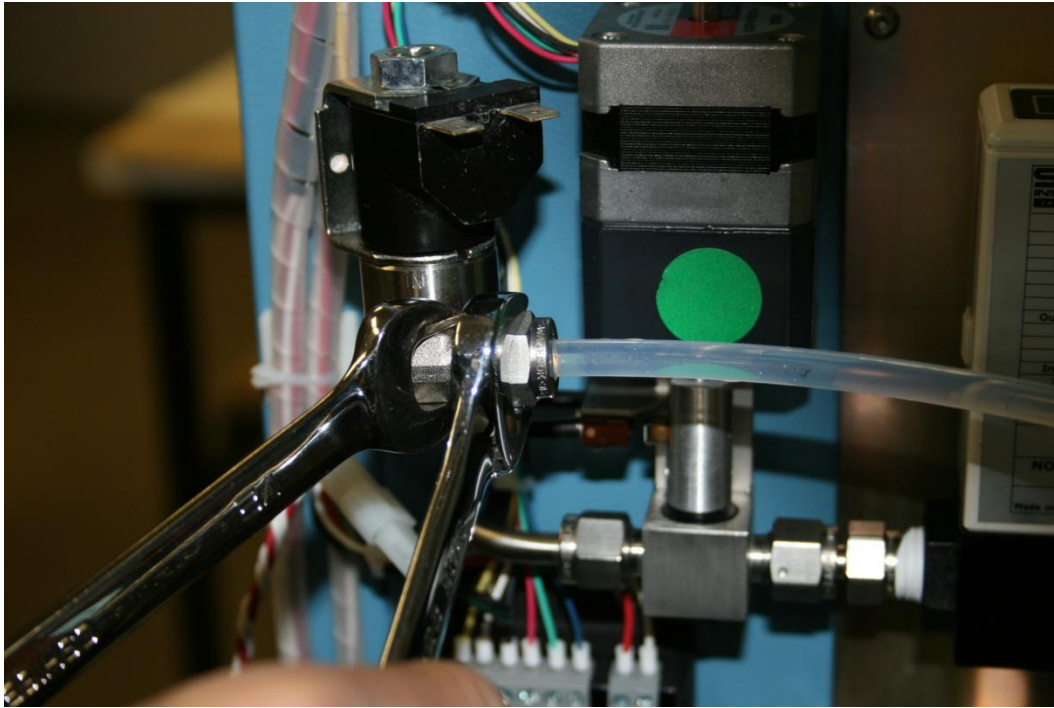


36. At this point you will need to clean out the pre-sat fill solenoid (see the cleaning solenoid 4 procedure).

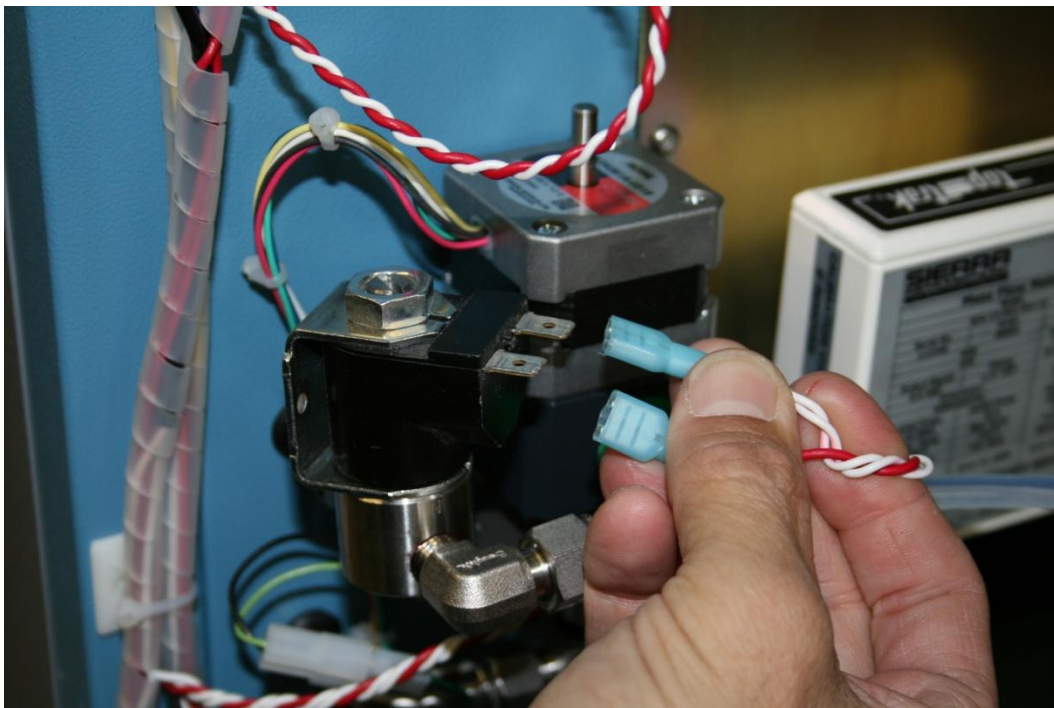


37. Reattach the pre-sat fill solenoid using a 9/16 wrench and a 1/2 wrench making sure that the elbow is level with the frame.

38. Reattach the reservoir to pre-sat solenoid tube using a 9/16 wrench and a 1/2 wrench, be sure not to over tighten.

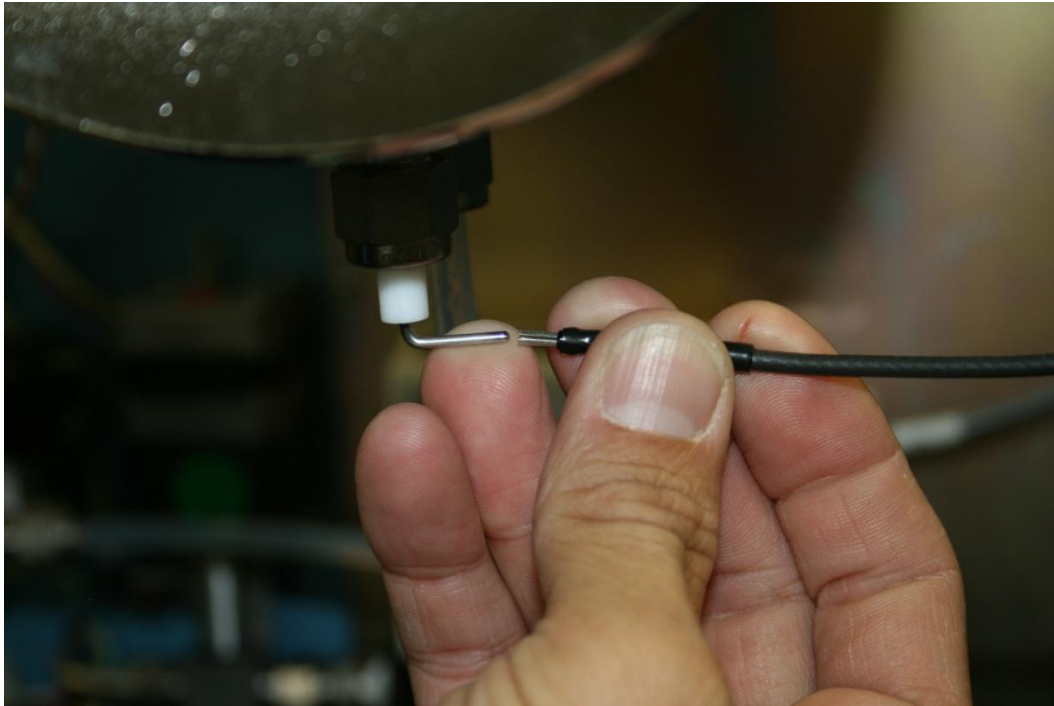


39. Reconnect the wires back to the solenoid.





40. Reconnect the liquid level probe indicator cable.



41. Place the poppet stop over the center of the reservoir fill port.



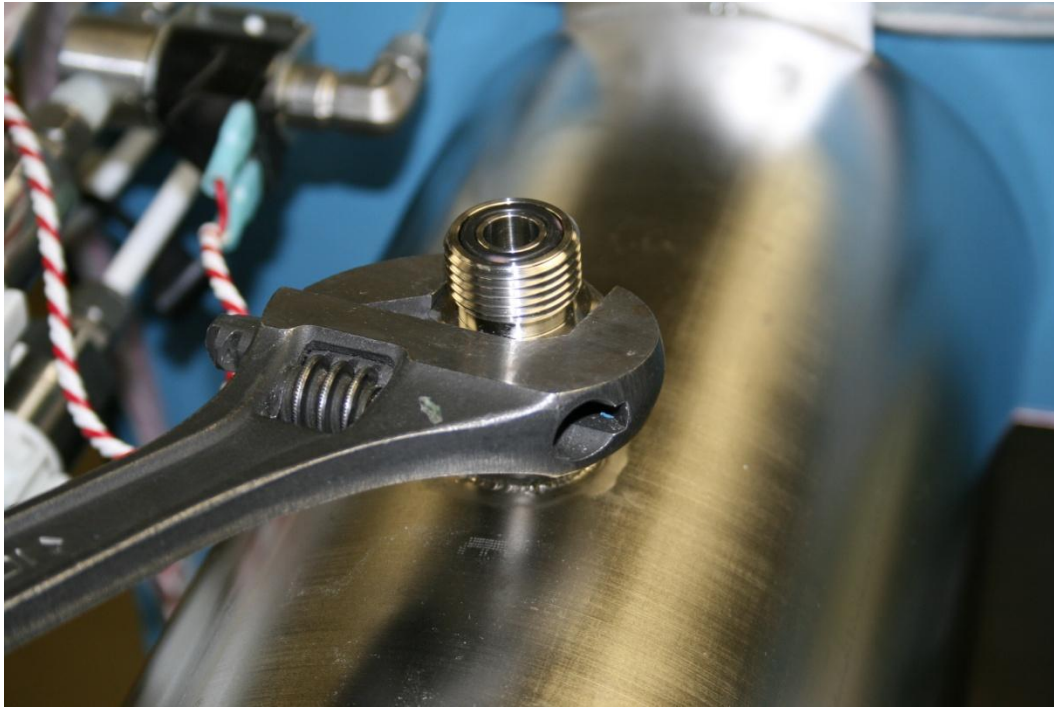
42. Place the poppet on top of the poppet stop and centered on the reservoir fill port.



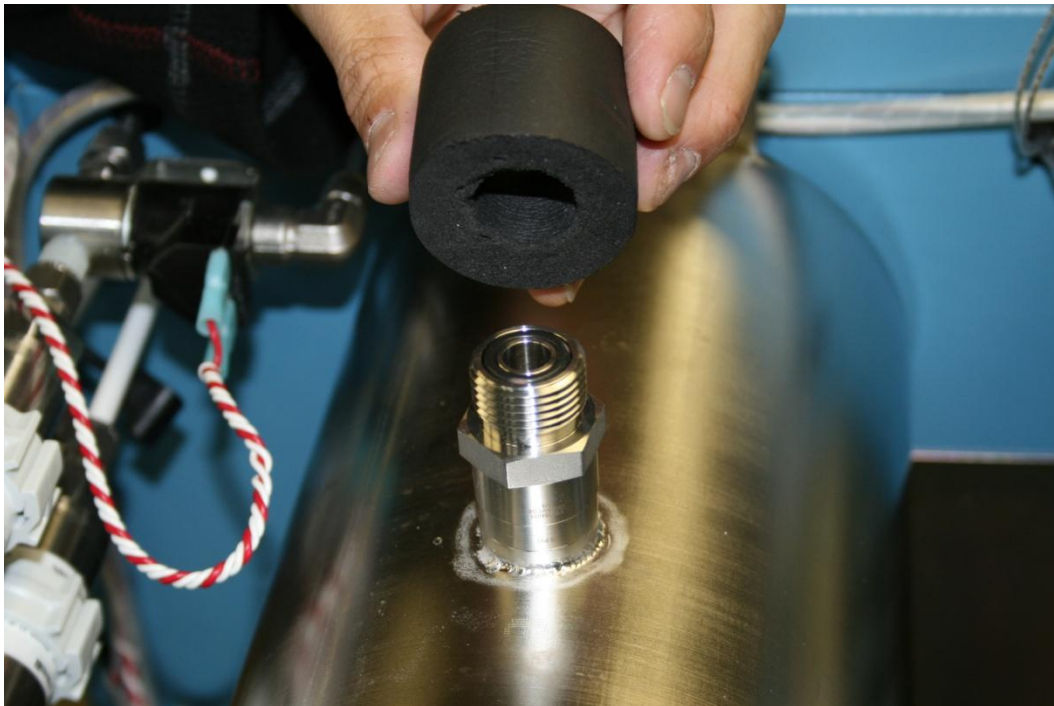
43. Take a long cleaning swab and feed it through the fill port extension and place the swab on the poppet to hold it in place. Then slide the fill port extension over the poppet and screw into place.



44. Using an adjustable wrench tighten the fill port extension, do not over tighten o-rings are present.

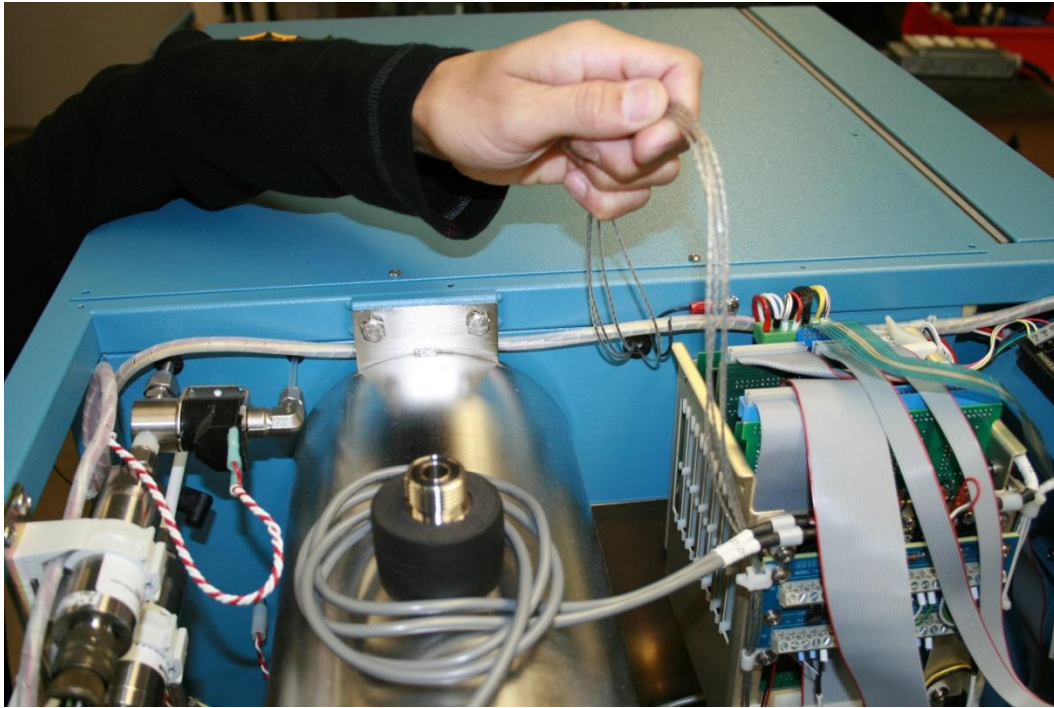


45. Slide the insulation over the fill port extension.

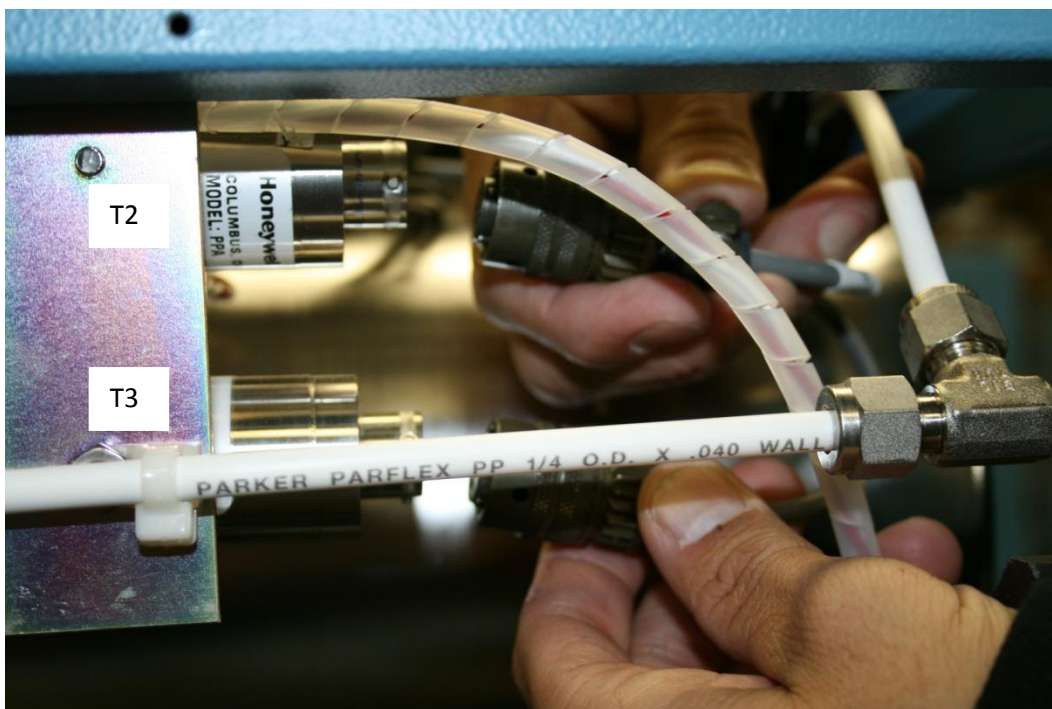




46. Replace the transducer cables and the temperature probe cables coiled over the fill port extension.



47. Reconnect the transducer cables to T2 and T3.



48. Refill the reservoir with distilled or deionized water only.
49. Replace all console panels and make sure to reconnect the fan power plug as well as the air in fitting and the main power cable on the rear panel.

Please Call 1-800-872-7728, Fax 1-505-266-6203, or E-mail [support@thunderscientific.com](mailto:support@thunderscientific.com) should you have any questions.