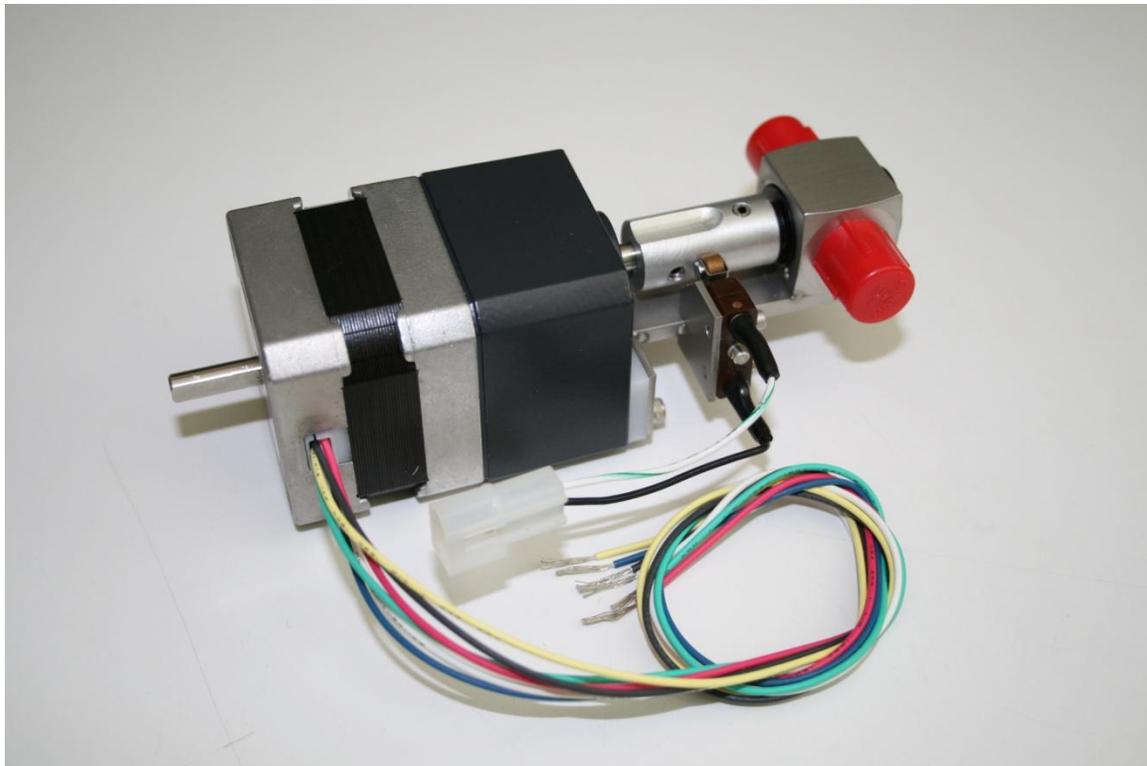


Humidity Generation and Calibration Equipment

THUNDER SCIENTIFIC
CORPORATION THE HUMIDITY SOURCE

Model 2500

Expansion Valve O-Ring Replacement Procedure



Tech Support Document TSD-0205
Revision Date: March 11, 2010



Expansion Valve O-Ring Replacement Procedure

1. Disconnect power from the 2500 system.



2. Using the Torx drive provided remove the Torx screws, and the right top panel.



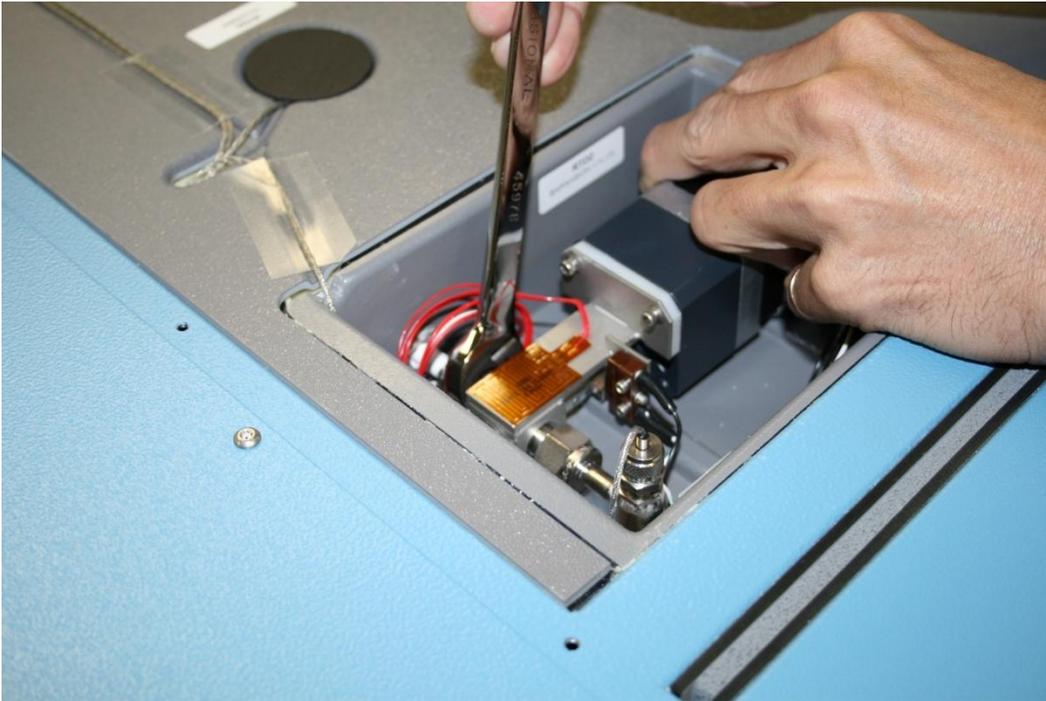
3. Remove the top expansion valve foam insulation.



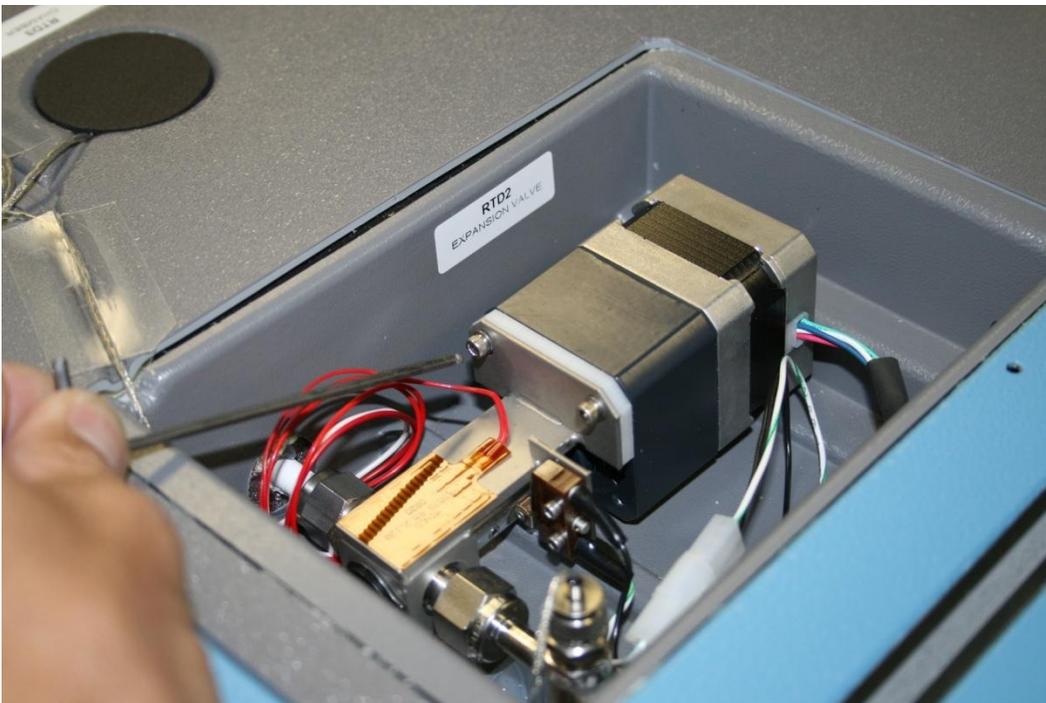
4. Remove the side expansion valve foam insulation.



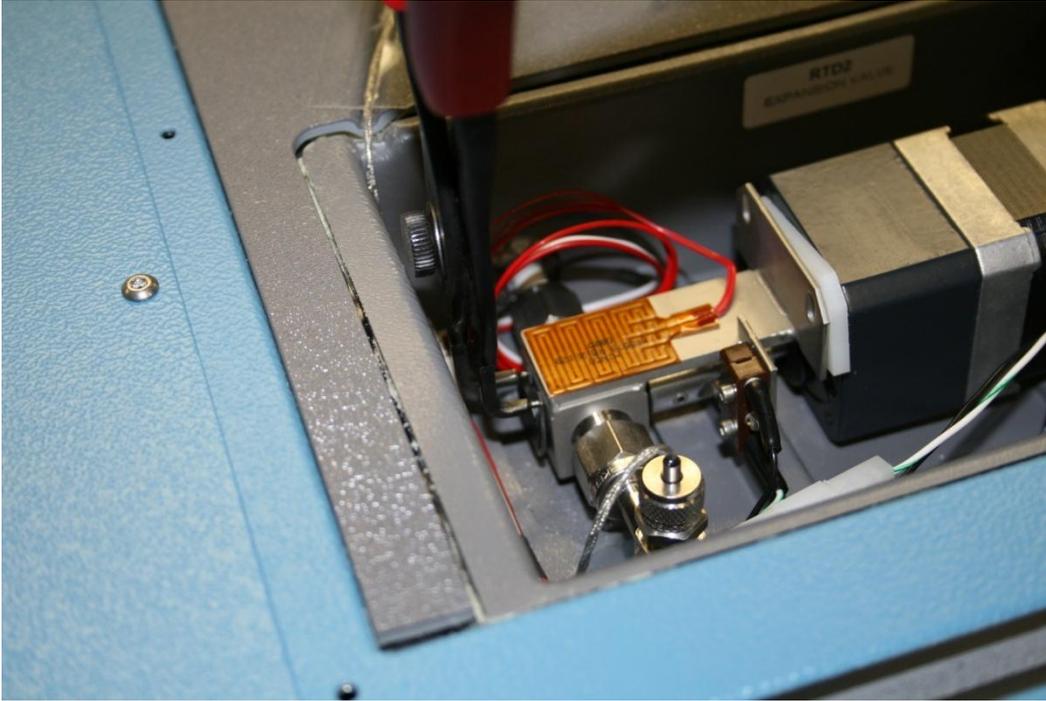
- Using a 9/16 wrench loosen the fittings on both sides of the expansion valve.



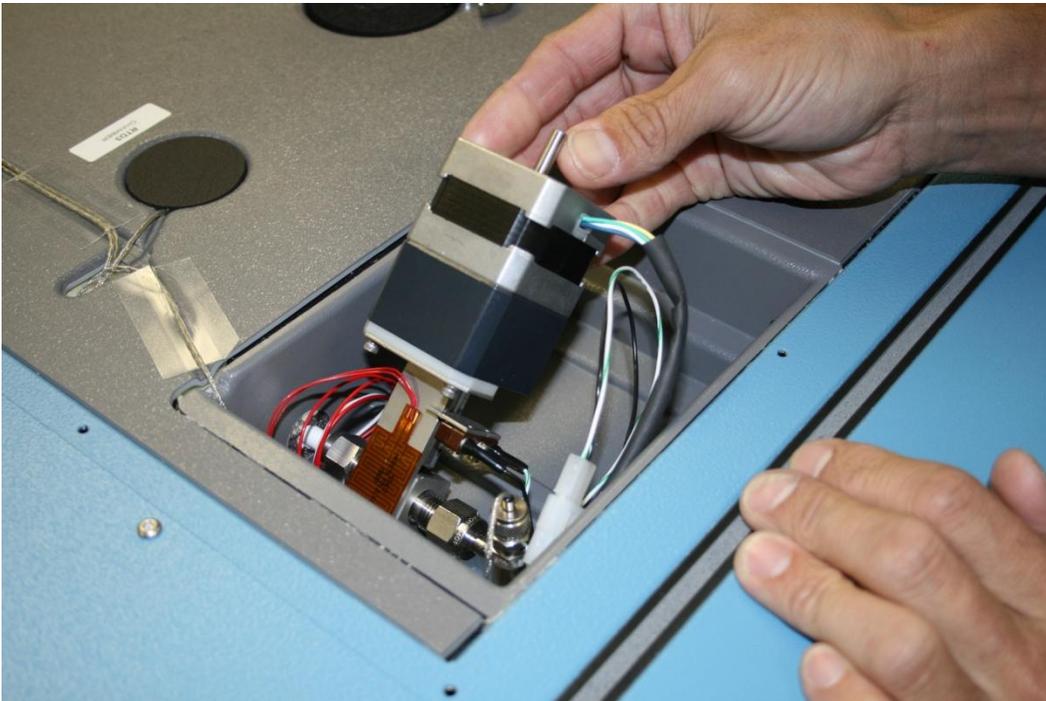
- Remove the two Allen head cap screws that secure motor to the valve bracket.



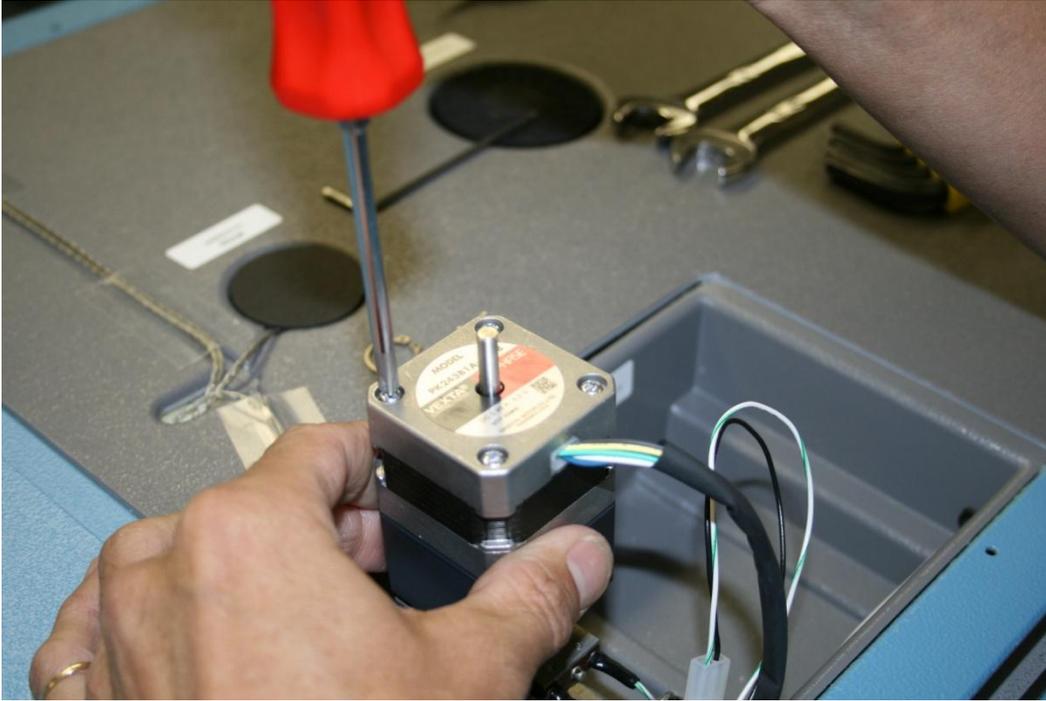
7. Remove the snap ring at the base of the expansion valve.



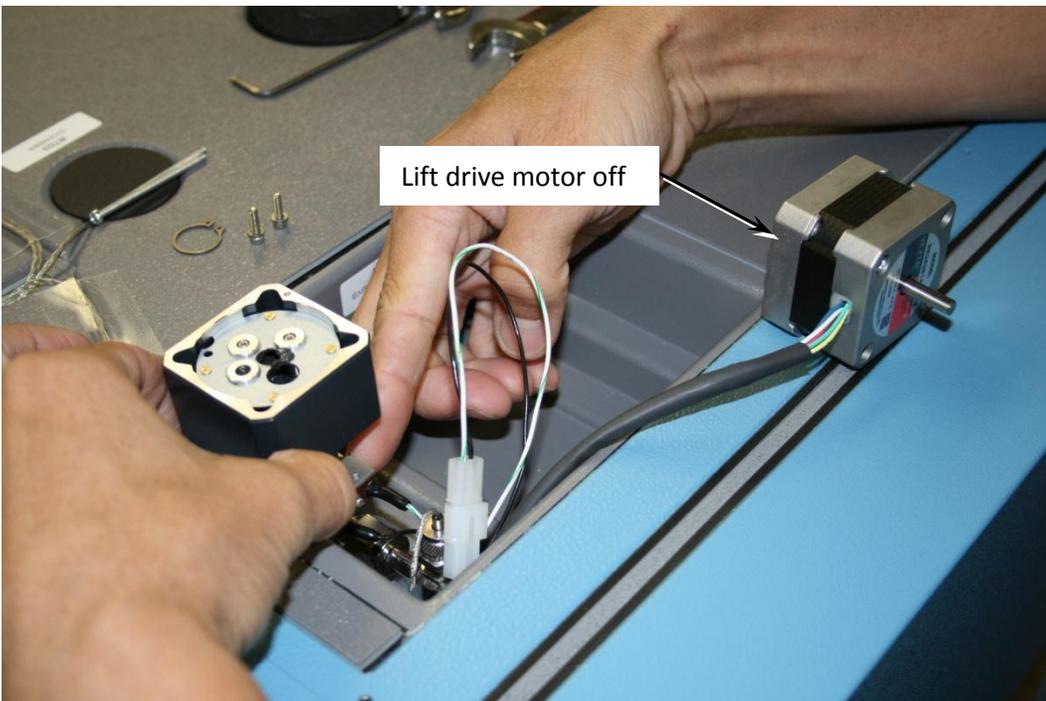
8. Rotate the expansion valve body up as shown.



9. Remove only two Phillips screws at opposite sides of each other on the drive motor as seen in photo.



10. Lift the drive motor off of the valve assembly.



11. Be Careful to hold the micro switch roller arm away from the shaft coupling to prevent bending of the switch roller arm. Remove the valve plug from the body housing.



12. Remove the valve plug from the body housing as shown.



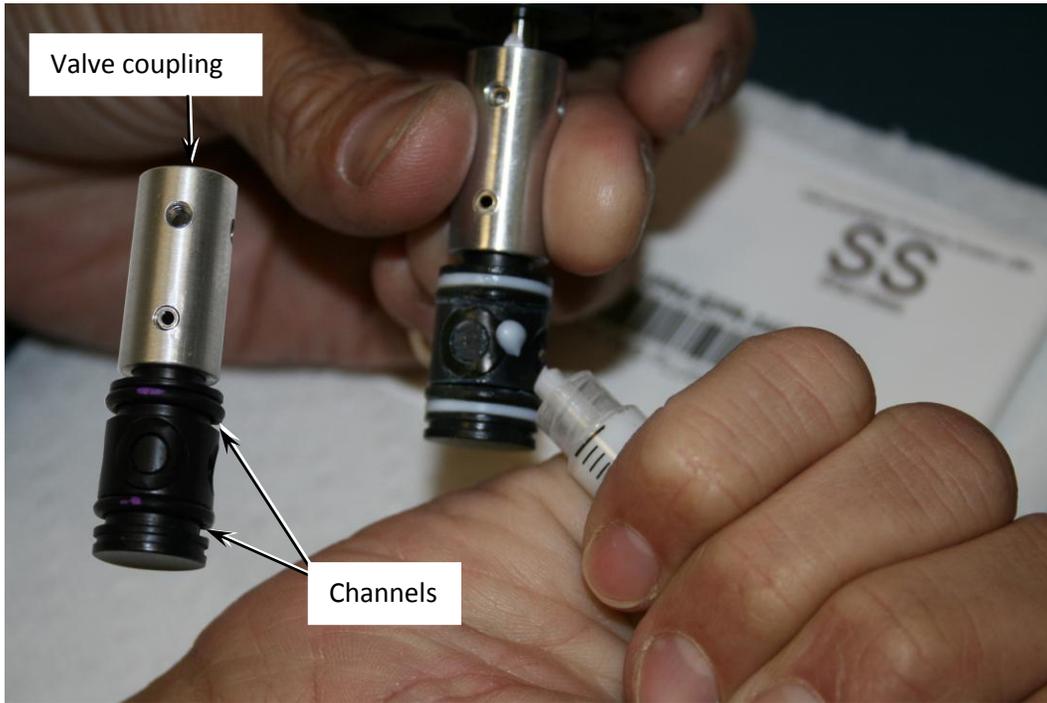
13. Remove O-rings. You may have either the plug on the right or left, replace only the ones that came with your system.



14. Replace O-rings with kit number KITPR4EPR.



15. Re-grease O-rings and valve plug as shown. If you have the one on the left, make sure the O-rings are pushed up towards the valve coupling and add the grease in the channels.



16. Use Krytox® 240AB Grease part number KRYTOX O-RING LUBRICANT.



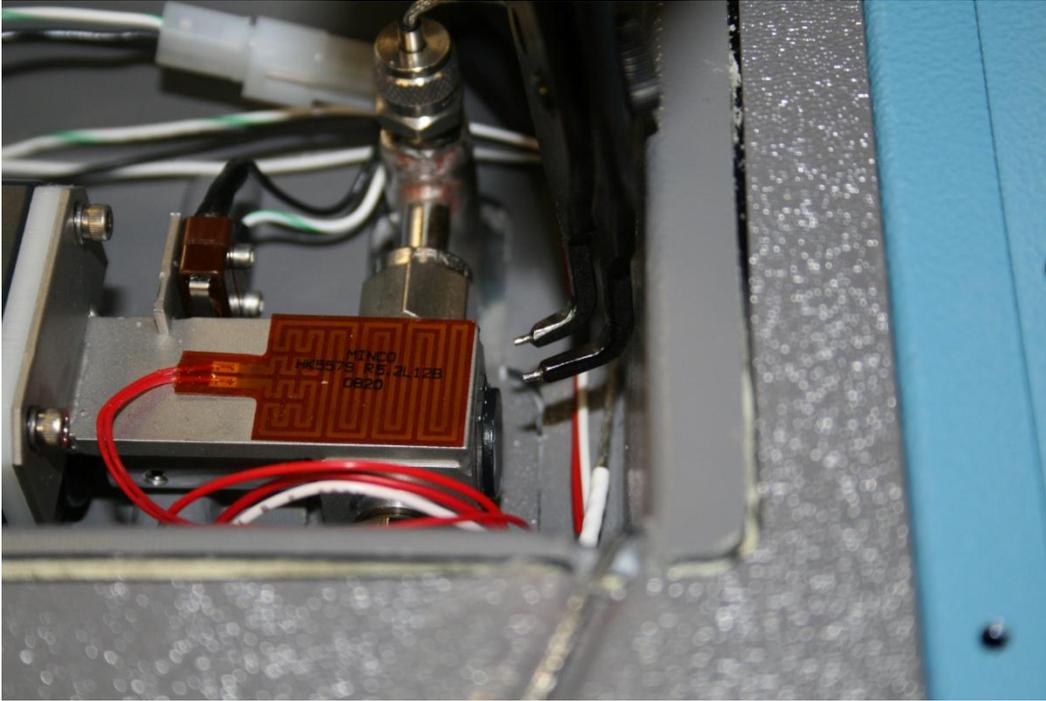
17. Replace the valve plug into the valve body and hold the micro switch roller arm away from the shaft coupling.



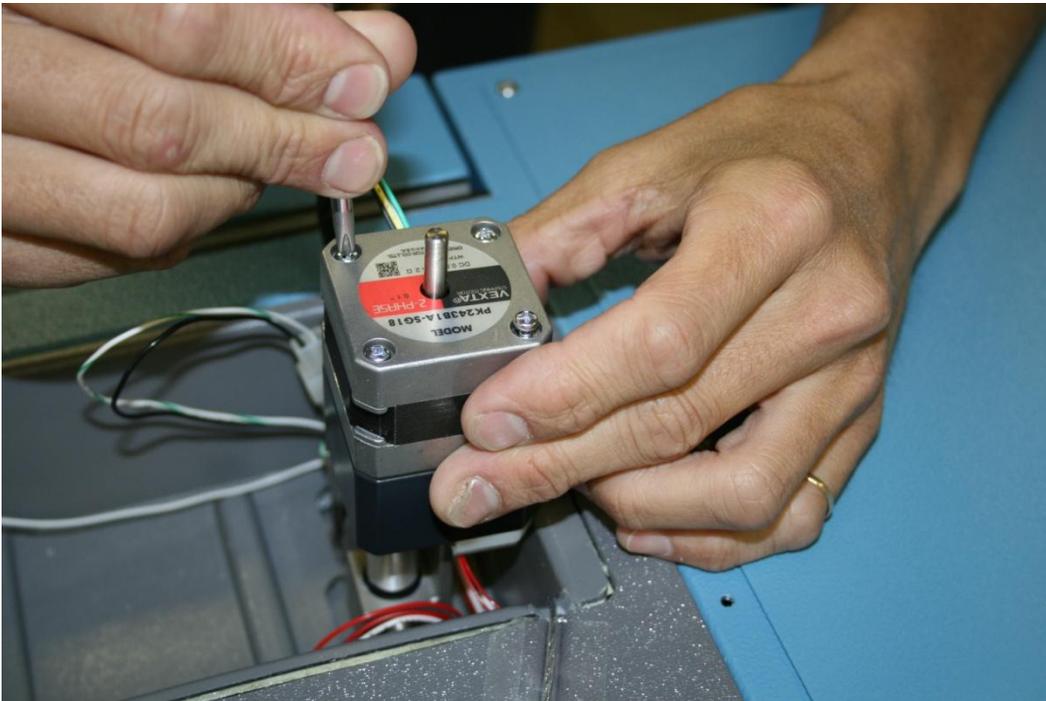
18. Slide the motor insulation plate between the valve and motor. Insert the Allen head cap screws through the valve mounting bracket, but do not tighten fully yet.



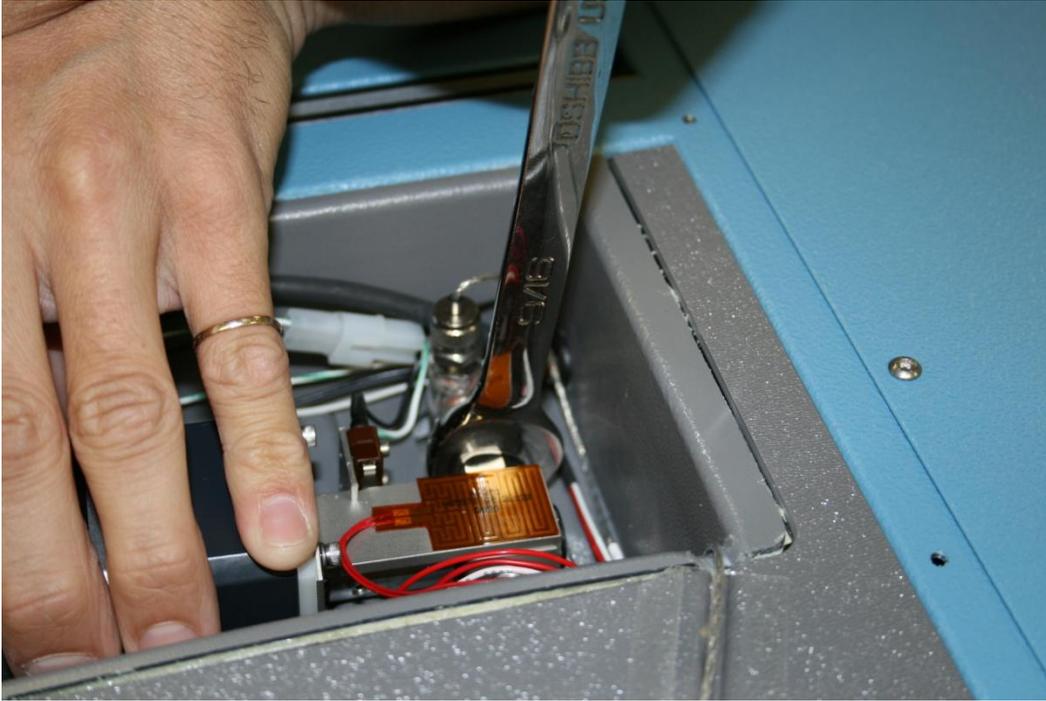
19. Replace the plug retaining ring and finish tightening the Allen head cap screws evenly.



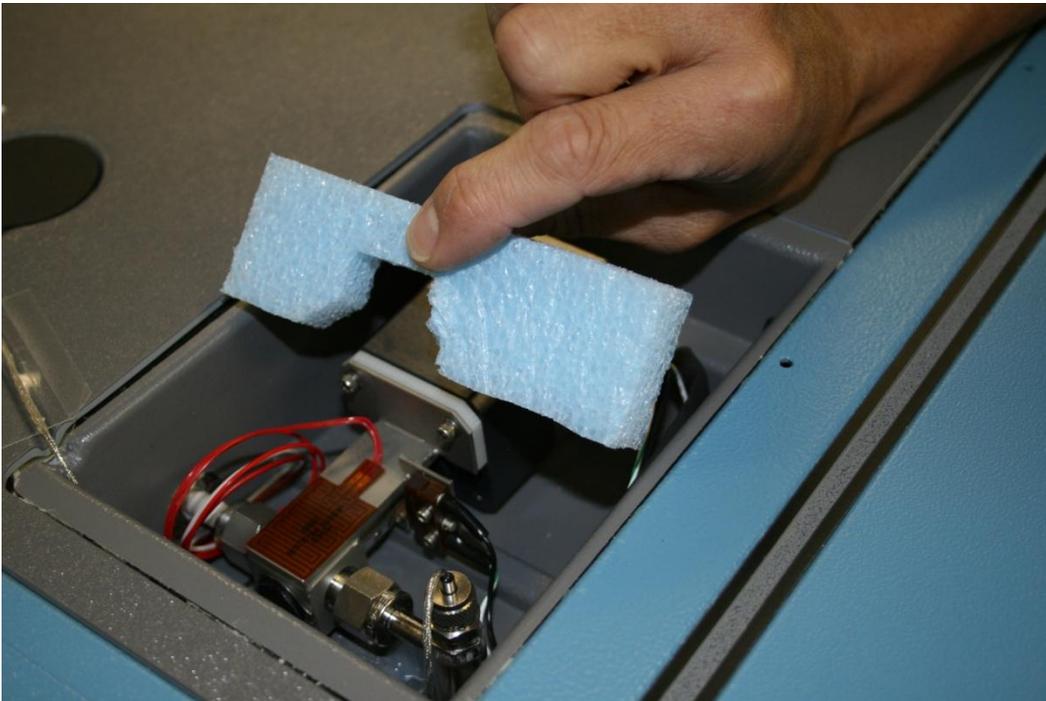
20. Replace the valve motor and insert the two Phillips head screws.



21. Rotate the motor back into position and tighten both nuts.



22. Replace the side foam insulation.



23. Next replace the top insulation foam.



24. Put the top chamber panel on and replace the Torx head screws.



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