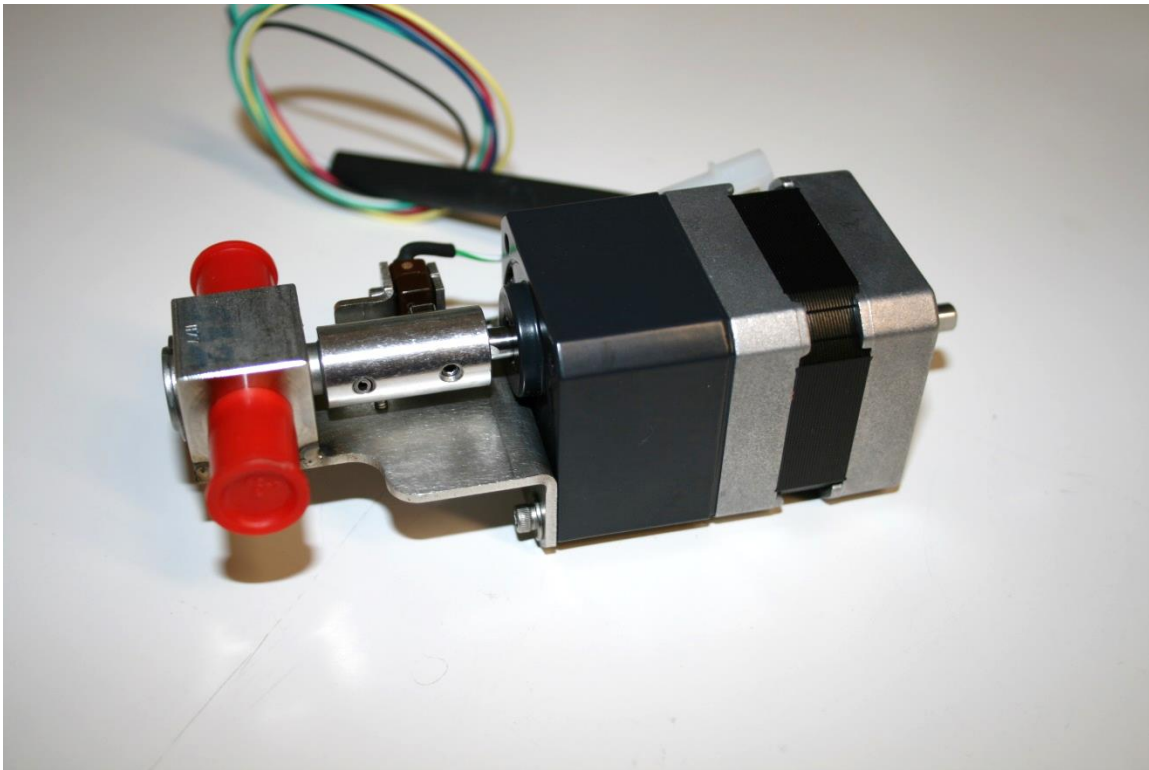


Humidity Generation and Calibration Equipment

THUNDER SCIENTIFIC®
CORPORATION THE HUMIDITY SOURCE

Model 2500

Expansion Valve Motor Coupling and Plug Adjustment For Teflon O-ring



Tech Support Document TSD-0288
Revision Date: August 27, 2018

623 WYOMING BLVD. SE



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Expansion Valve Motor Coupling and Plug Adjustment

1. Disconnect power from the 2500 system.



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



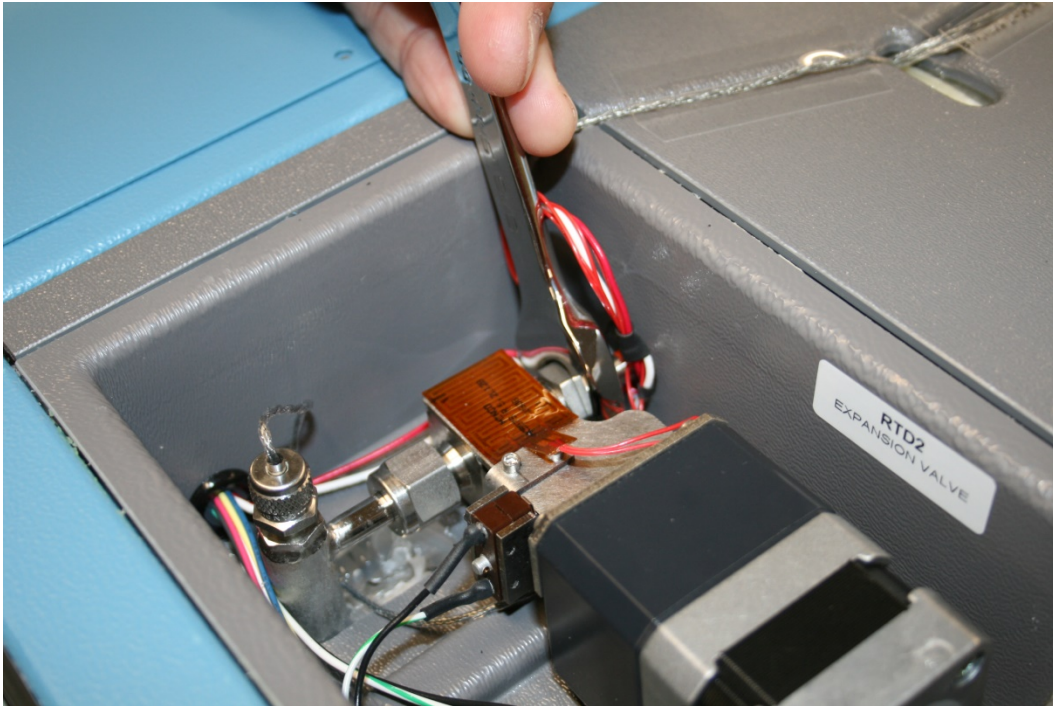
3. Remove the top expansion valve foam insulation.



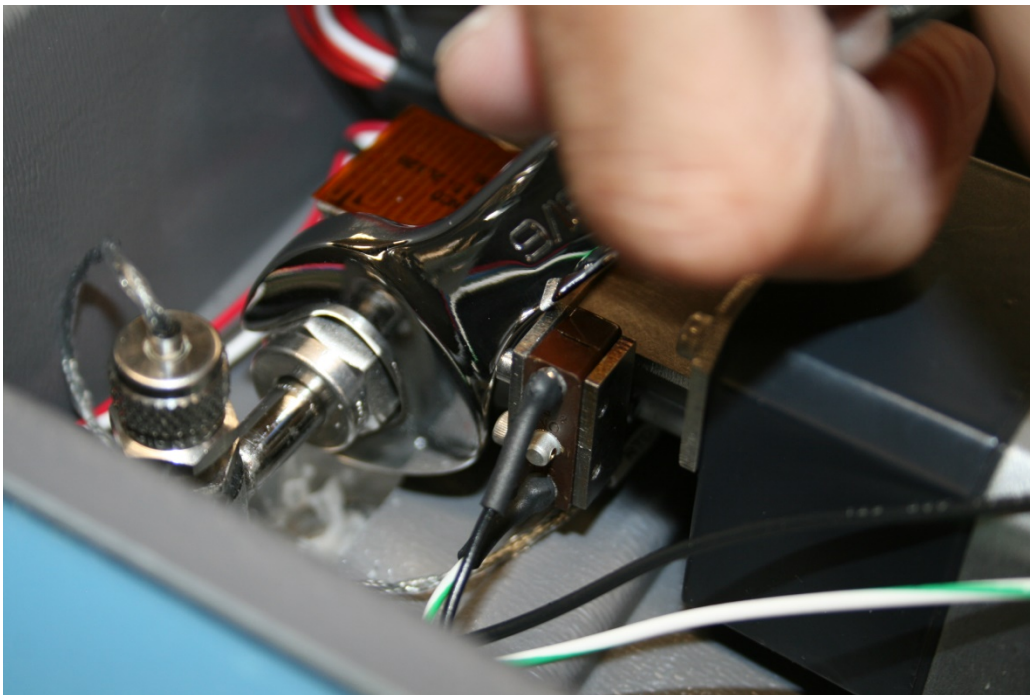
4. Remove the side expansion valve foam insulation.



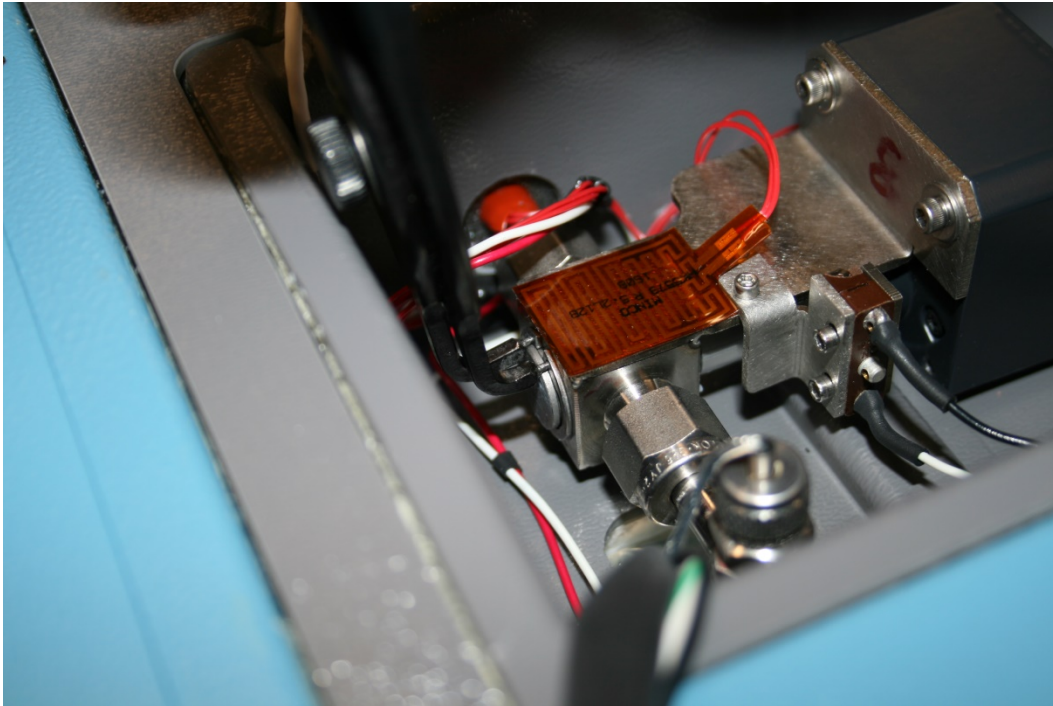
5. Take a 9/16 wrench and loosen the two nuts on both sides of the valve body.



6. When loosening the front nut, be careful not to hit the switch mounting bracket.



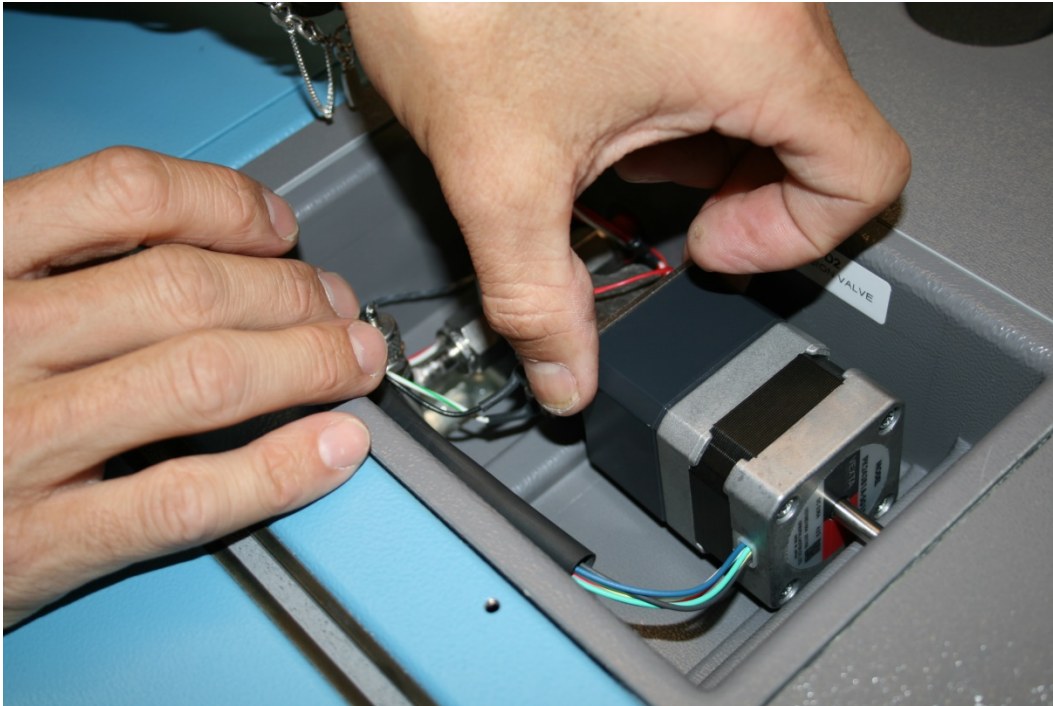
7. Remove the retaining ring located at the base of the valve body, using retaining ring removal pliers.



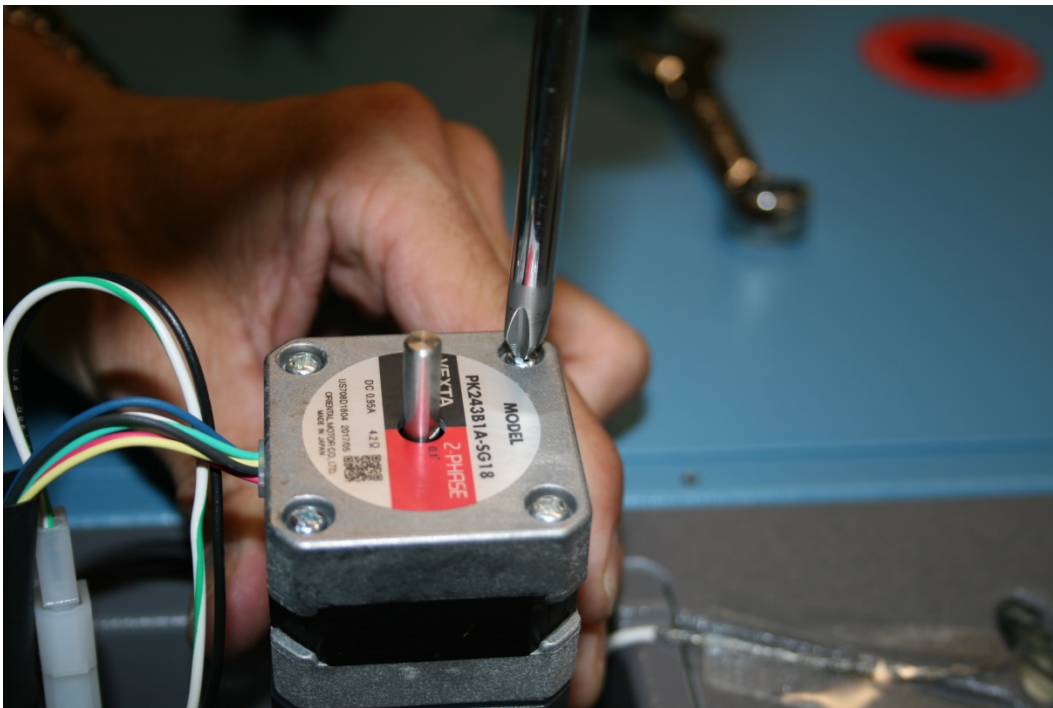
8. Remove Allen screws from the motor bracket.



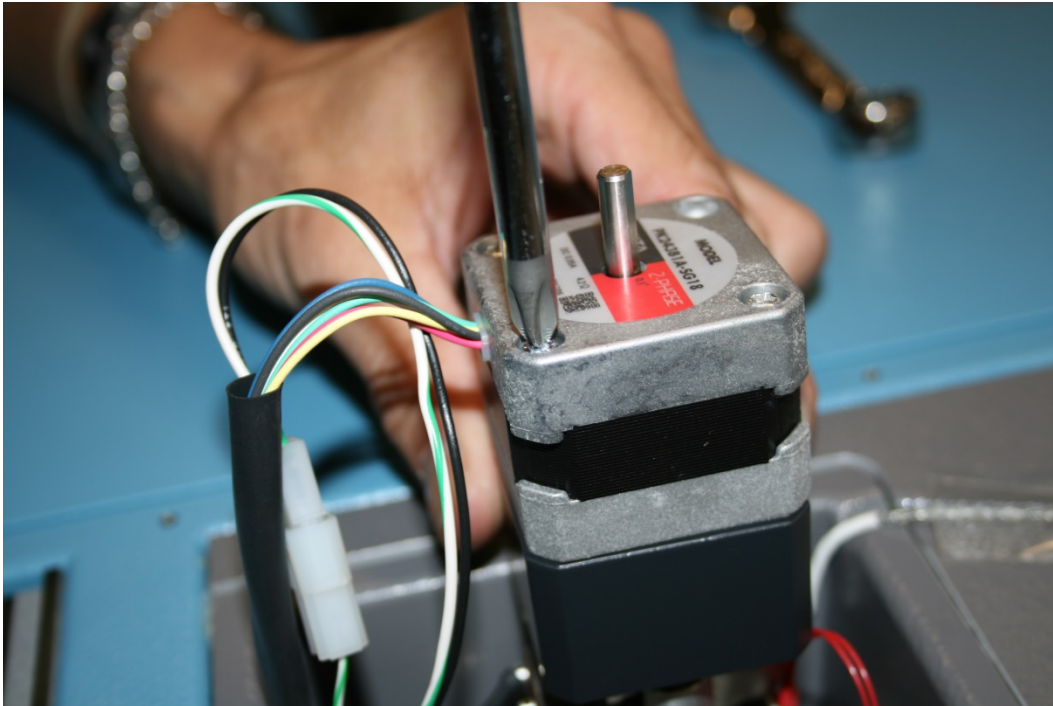
9. Rotate the valve motor 90° up to the vertical position.



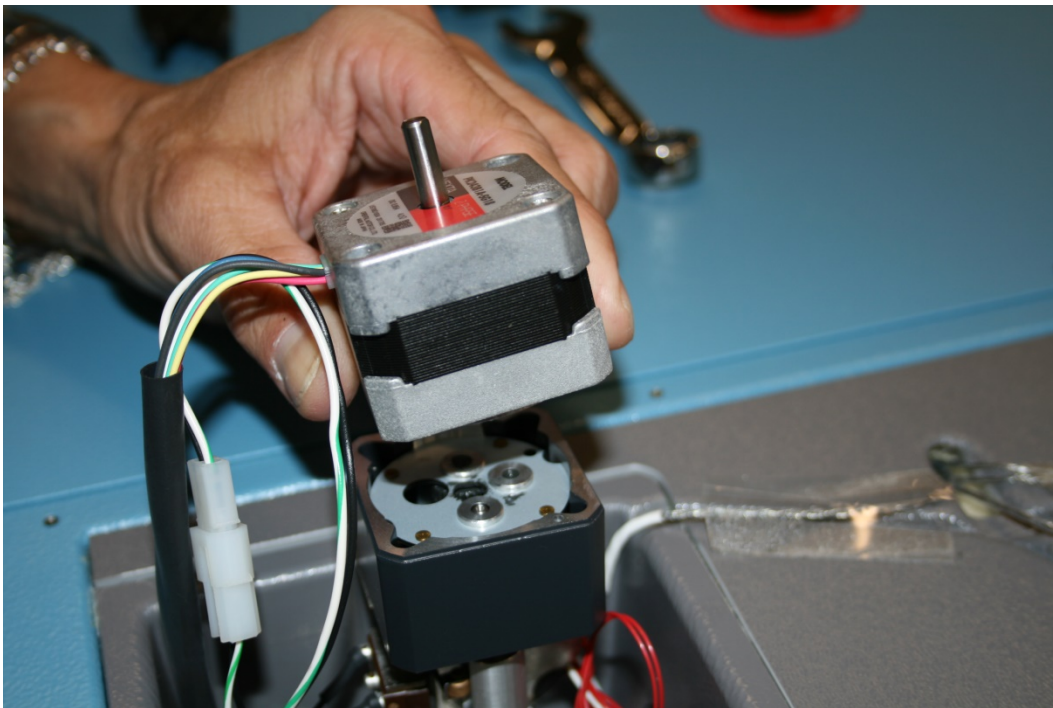
10. Using a Phillips head screwdriver, remove this screw as shown.



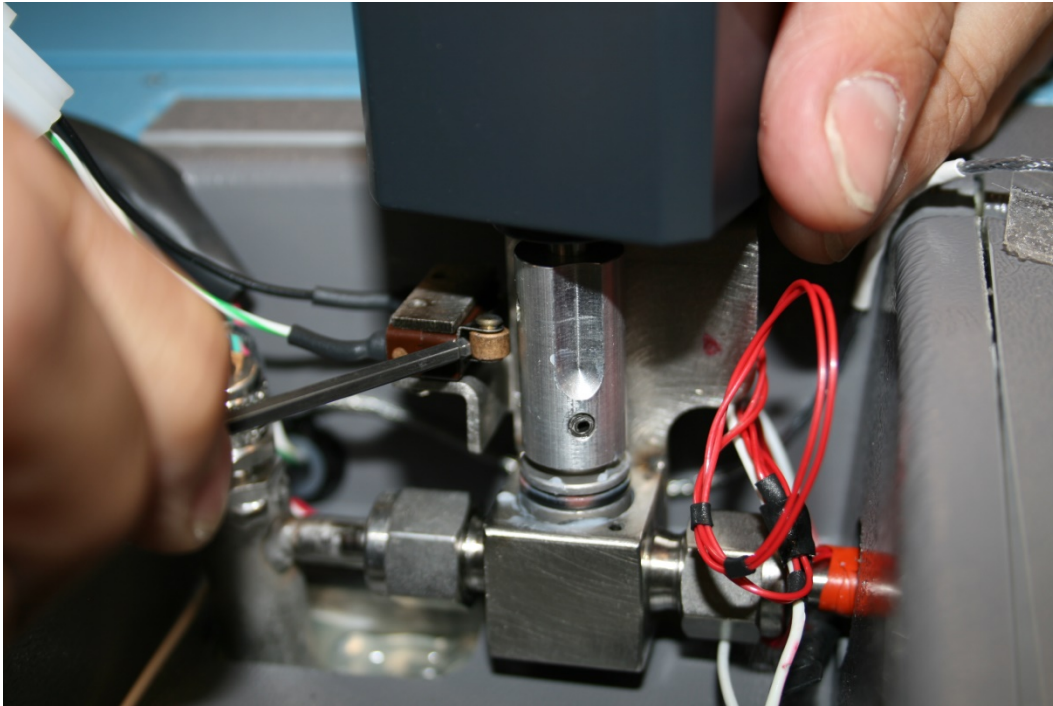
11. Now remove the screw that's diagonal from the first one you removed.



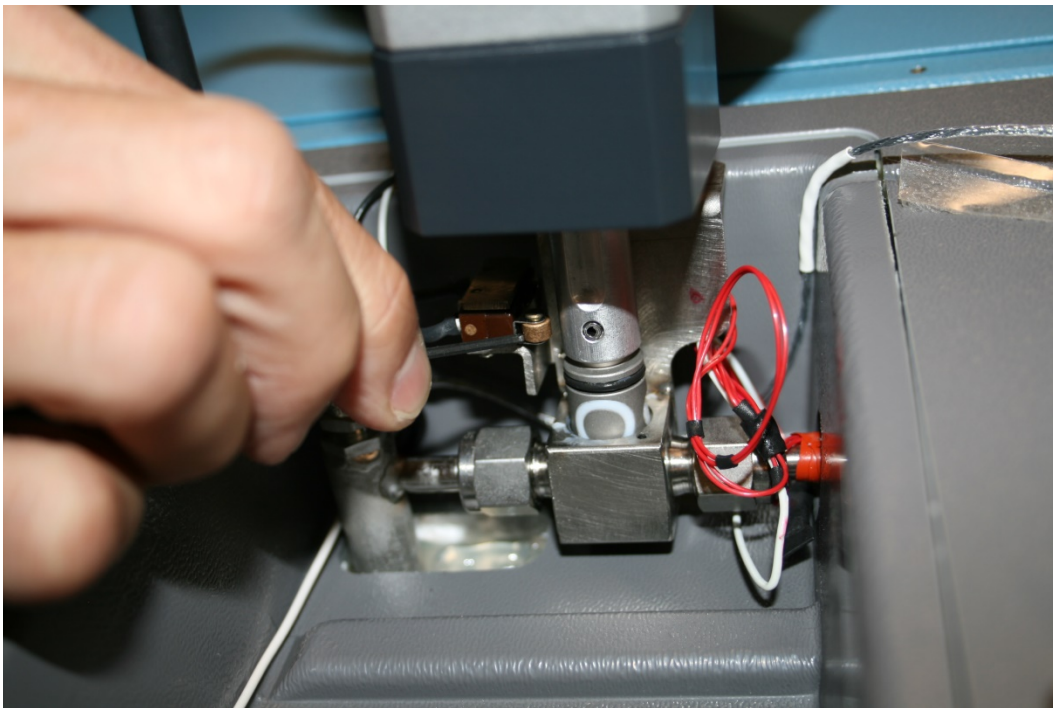
12. Lift off the valve motor and move out of the way.



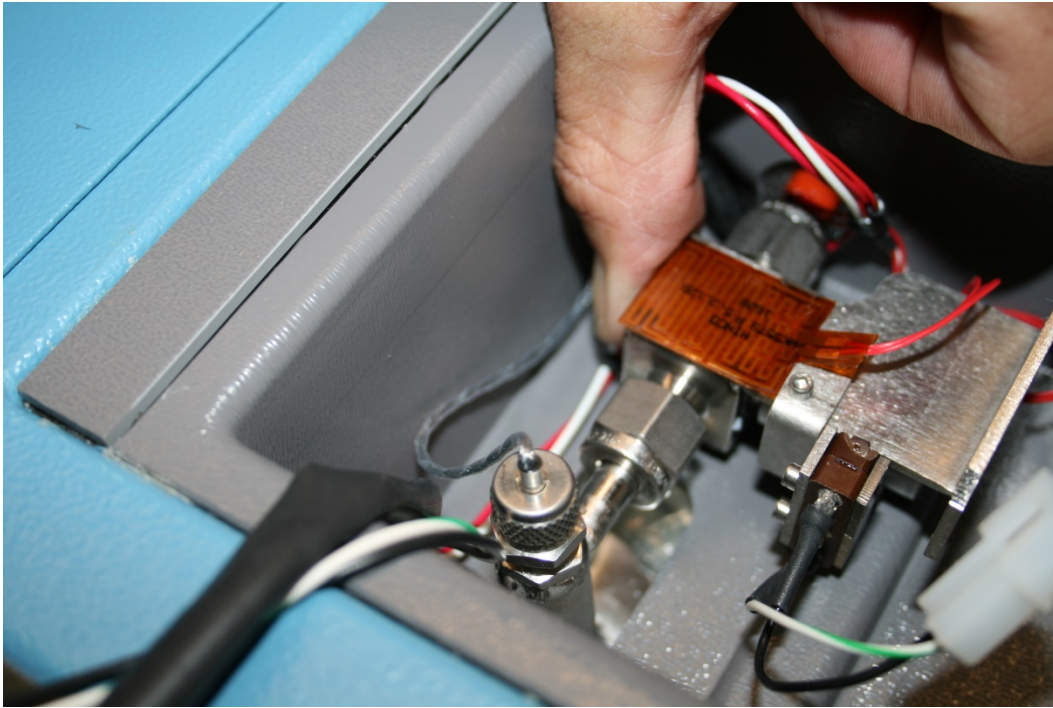
13. Next hold the roller switch back out of the way.



14. Slowly pull the motor gear assembly out.



15. If the value plug does not slide out easily, you may have to rotate the bracket back into place and push from the bottom to release the plug.



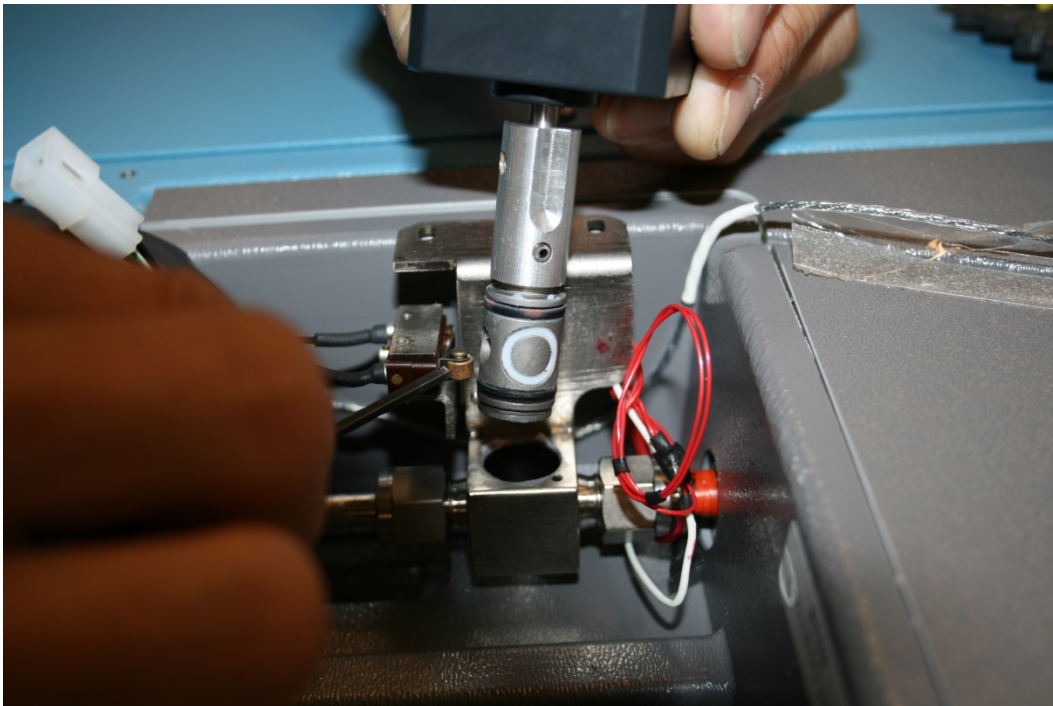
16. Before inserting the valve plug and gear assembly apply Krytox grease.



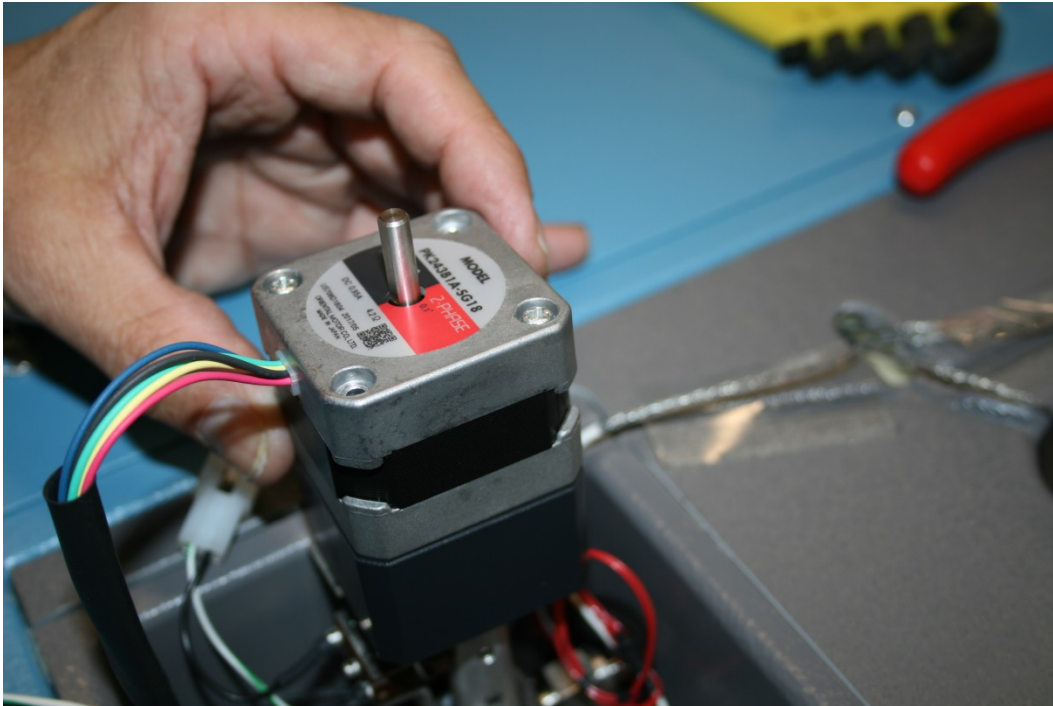
17. Smooth the grease all around the plug.



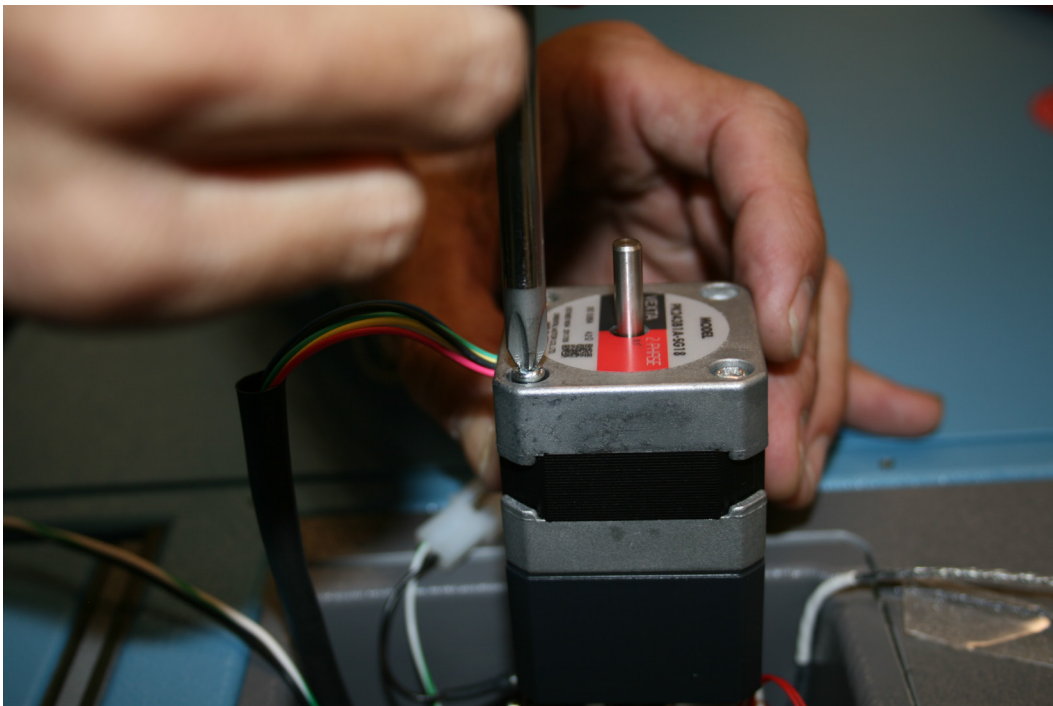
18. Before you put the value plug in place, make sure that the white Teflon O-ring is facing as shown, then move the roller switch out of the way and slowly push it into place carefully not to damage the Teflon O-ring at the top when inserted into the body.



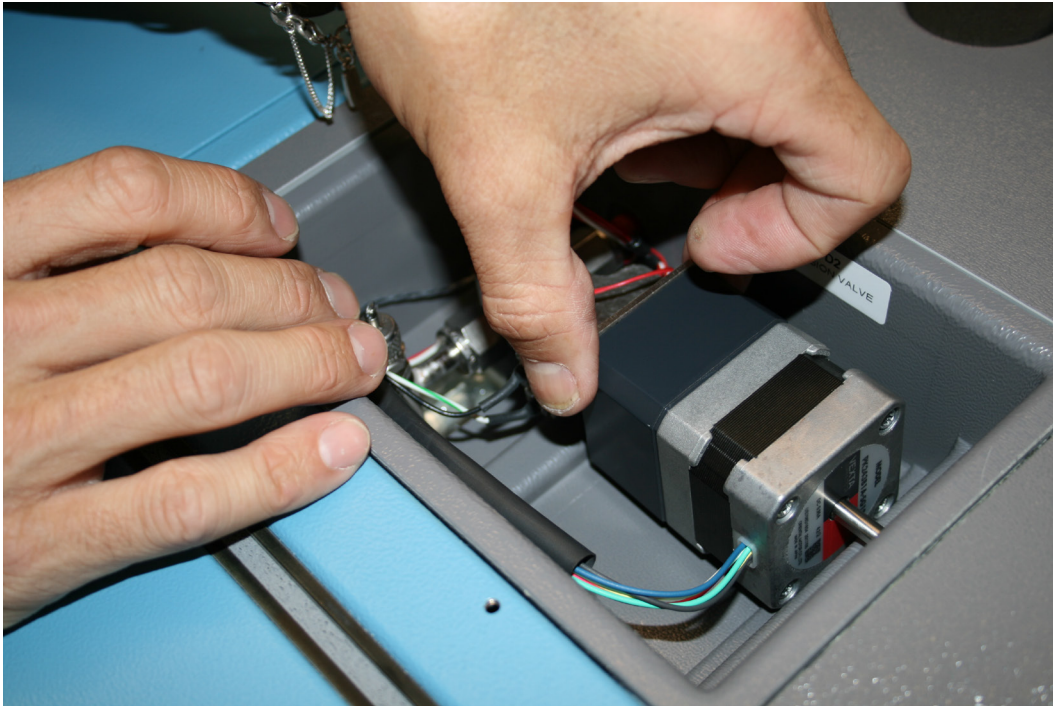
19. Put back on the motor assembly and make sure the wires facing as shown.



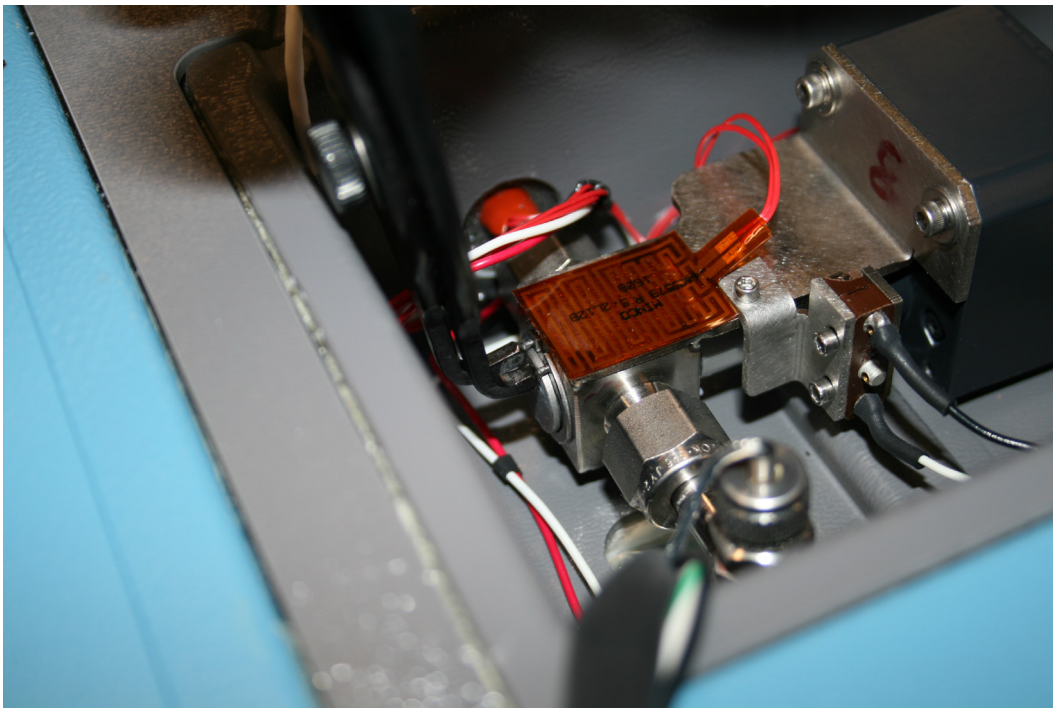
20. Put the two screws back into place.



21. Rotate the assembly back into place.



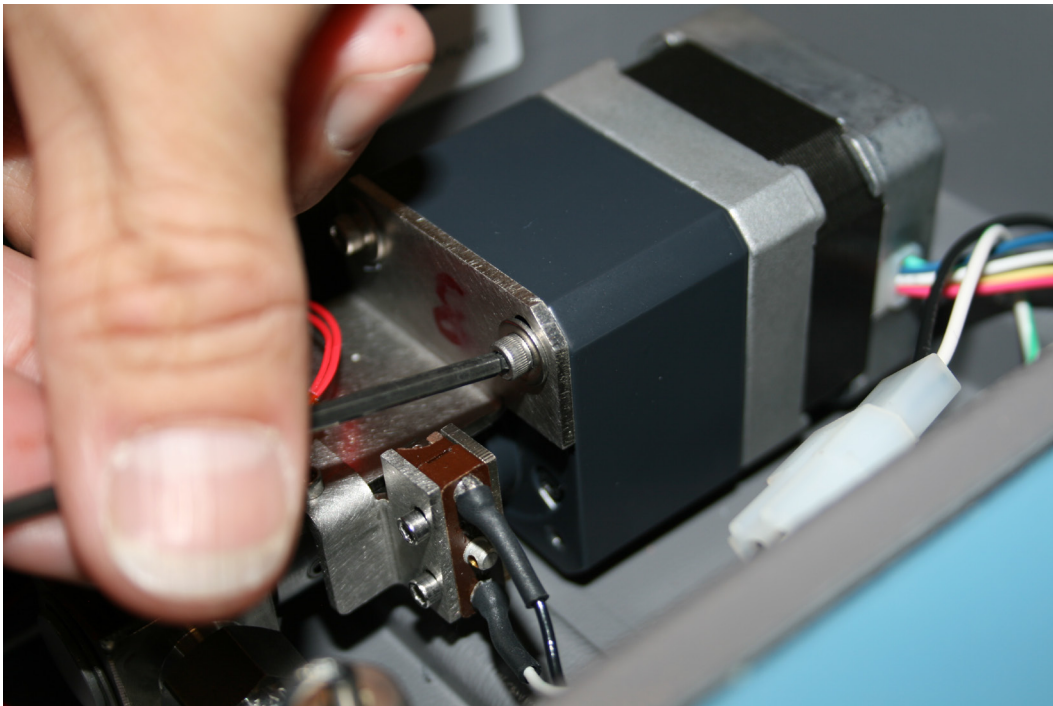
22. Insert the retaining ring back into place taking care not to bend it this will help keep it centered.



23. Insert the two Allen screws and washers using a 3/32" Allen wrench in the motor mounting bracket.



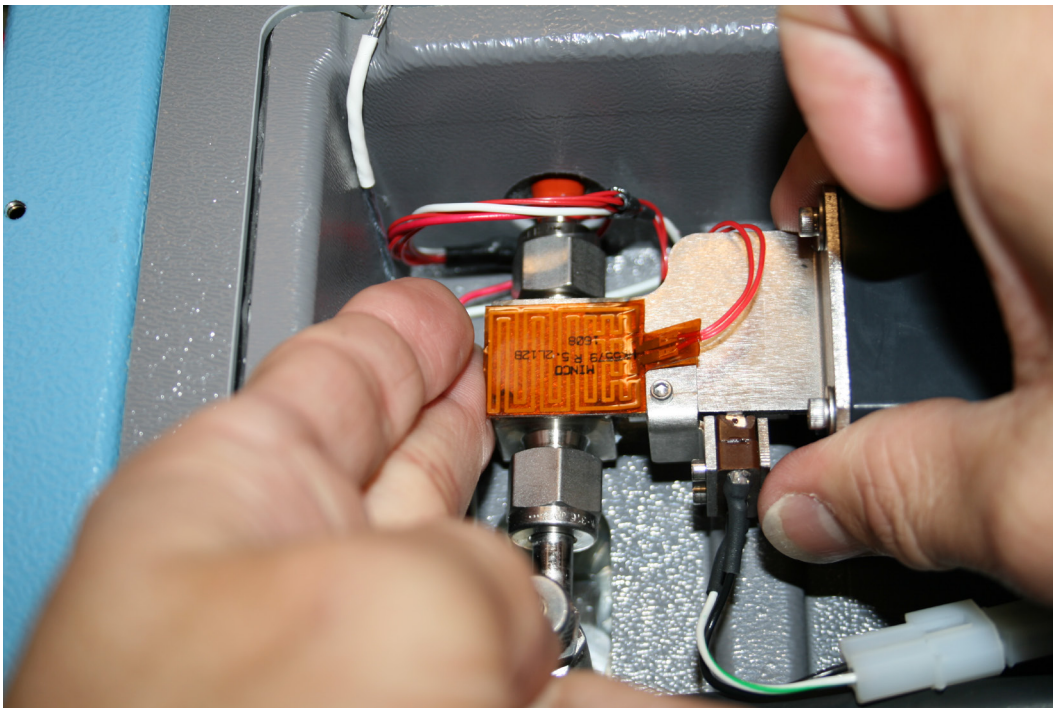
24. Only tightening the Allen screws to a loose fit.



25. Grab both sides of the motor so that you can feel if it's aligned to the center of the bracket.



26. While still holding both sides, push on the plug at the base to move it in slightly.



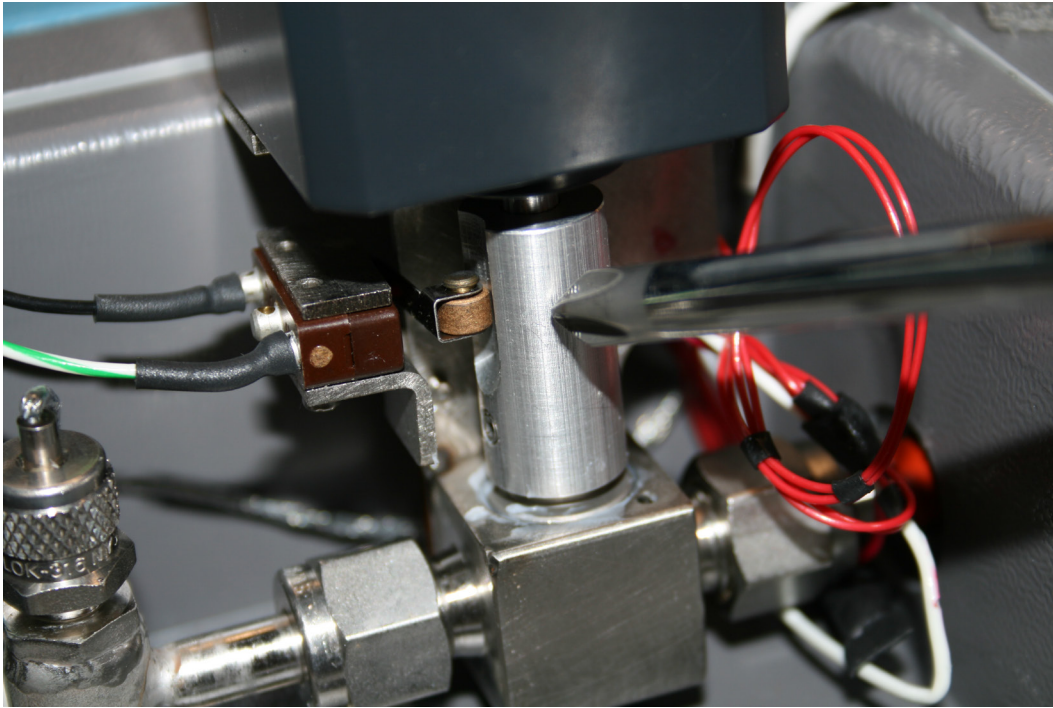
27. Now while still holding for alignment, tighten each of the screws 1/8 turn at a time until snug to maintain alignment.



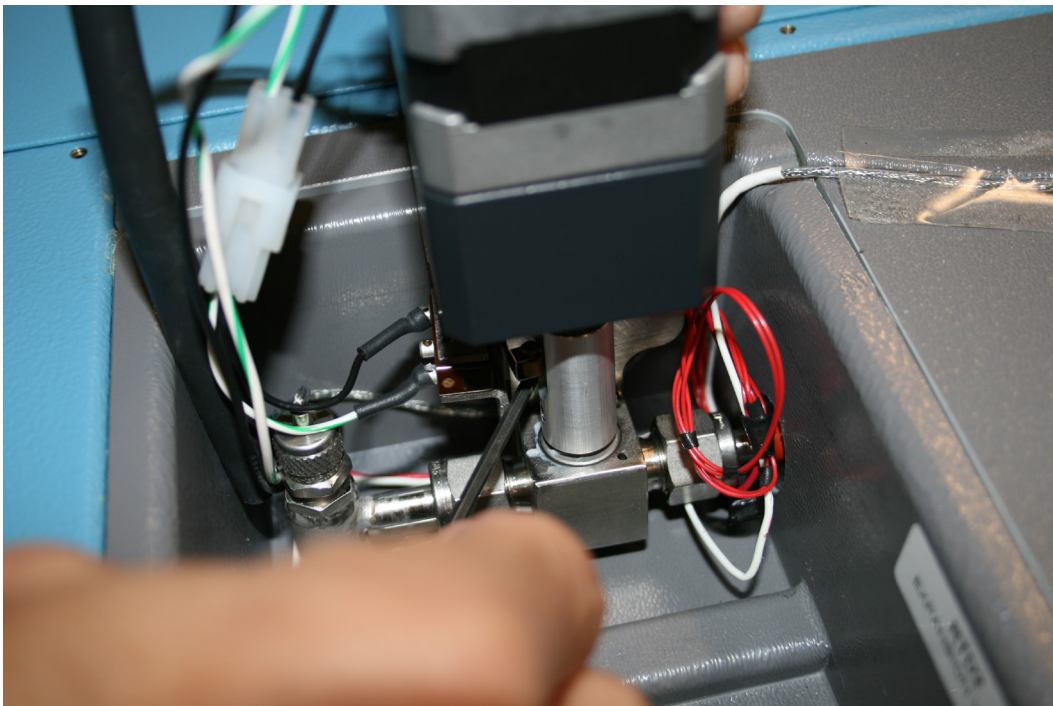
28. Rotate the Expansion valve assembly 90° to the vertical position.



29. Turn on the main power switch and observe the Expansion valve coupling to notice if the roller switch lines up in the center of the valley of the coupling.



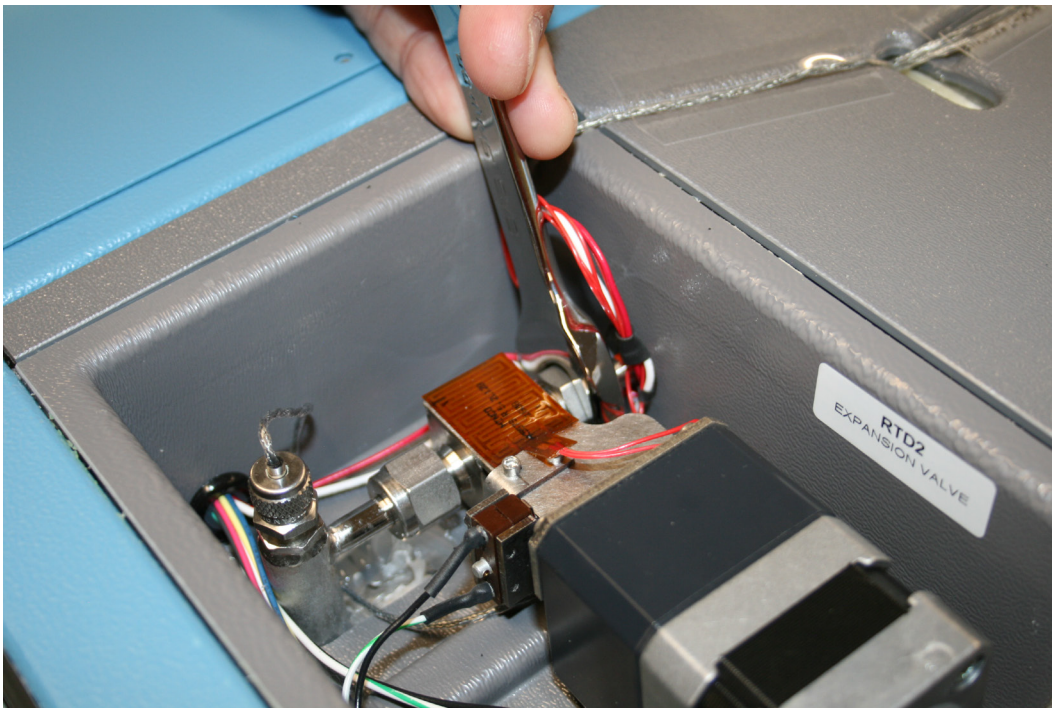
30. If alignment doesn't occur, an audible warring will sound. At this point you will have to adjust the roller switch bracket slightly by using the Allen wrench between the switch bracket and the coupling.



31. Try the main power switch again to see if it works this time.



32. If it works this time, then proceed to tightening the two value body nuts.



33. Put the foam insulation back in place and install the top panel. This procedure is finished.

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