

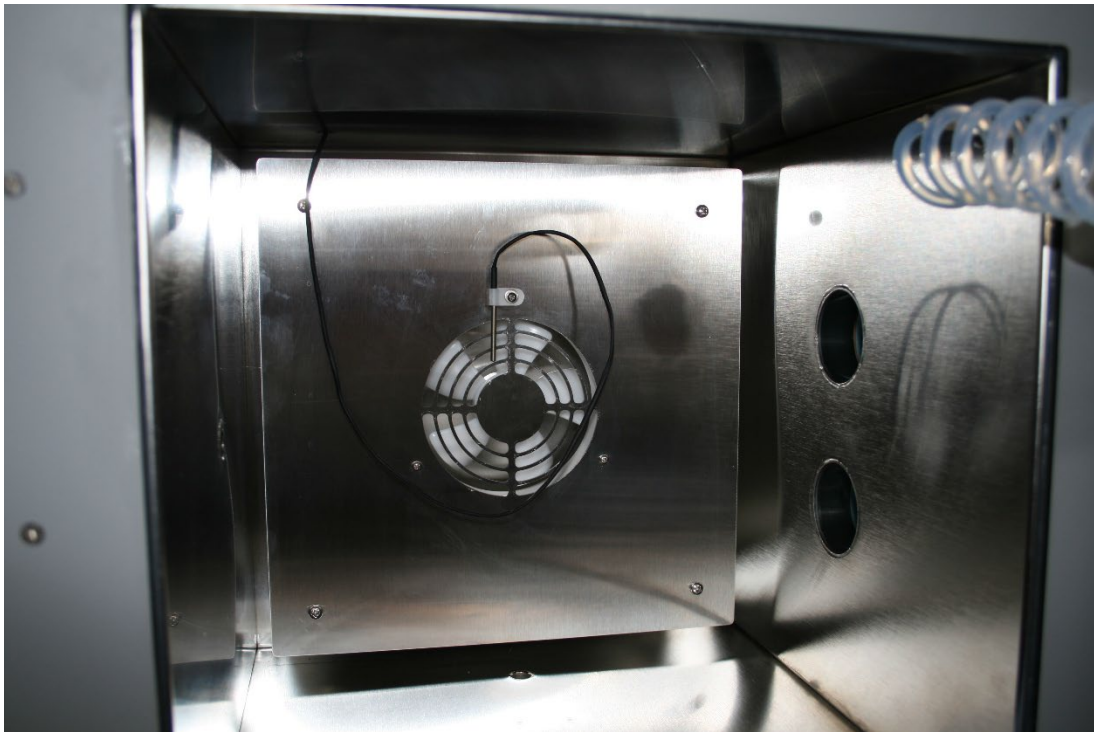
Humidity Generation and Calibration Equipment

THUNDER SCIENTIFIC®

CORPORATION THE HUMIDITY SOURCE

Model 2900

Chamber Fan Component Replacement Procedure



Tech Support Document TSD-0317

Revision Date: December 18, 2025

Revision - D

623 WYOMING BLVD. SE



ALBUQUERQUE, NM 87123-3198
WWW.THUNDERSCIENTIFIC.COM



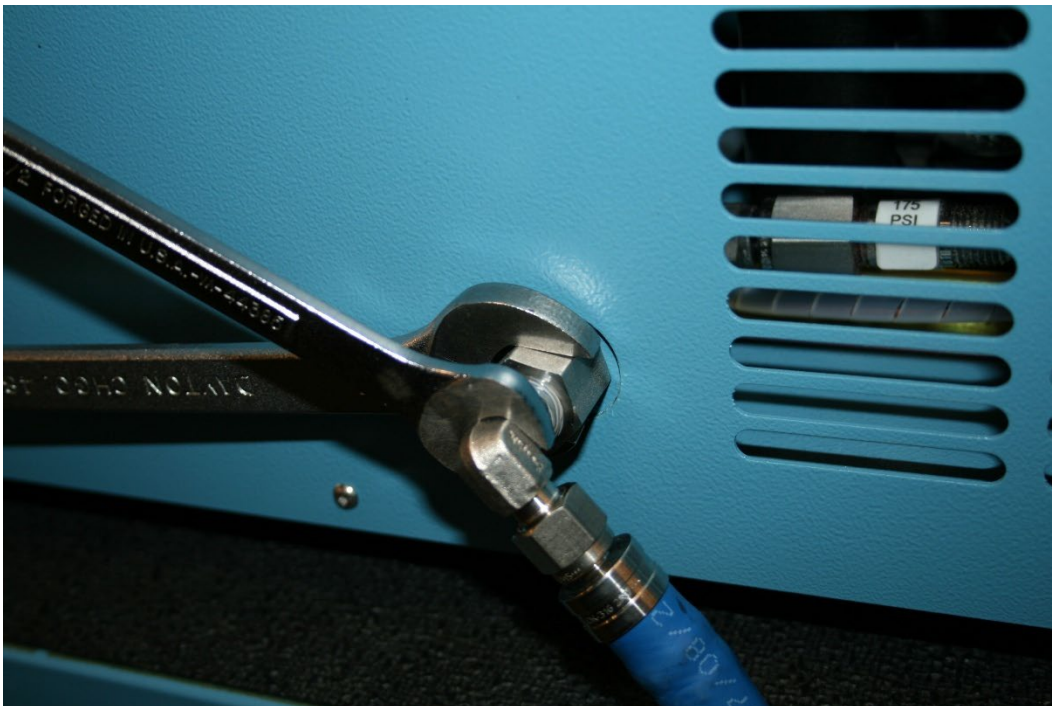
TEL: 505.265.8701
FAX: 505.266.6203

Chamber Fan Components Replacement Procedure

1. First turn off the main power switch and unplug the power cord.



2. Using a 3/4" open end wrench and an 1/2" open end wrench, remove the air-in elbow.



3. Next remove the rear panel using a #10 Torx driver and save screws for later installation.



4. Open the chamber door and place a piece of tape to cover the chamber vent hole.



5. Remove the chamber temperature probe from the probe clip.



6. Using a #2 Phillips head screwdriver, remove the four screws and save for later installation.



7. Pull the chamber fan shroud panel out to gain access to the fan.



8. Using a 1.5mm Allen wrench, loosen the set screw of the Shaft Collar and remove it. Take note of which way the fan is facing.



9. Pull the fan off from behind the center of the fan, not the fan blades.



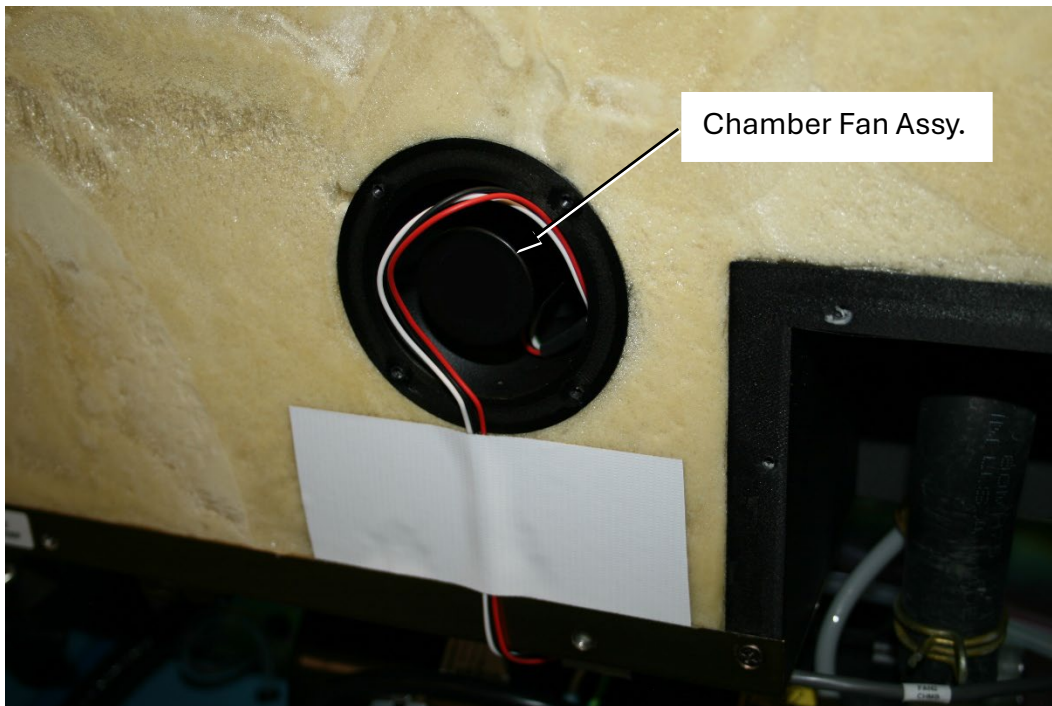
10. Remove the 1/8" Shaft Collar using a 3/32" Allen wrench.



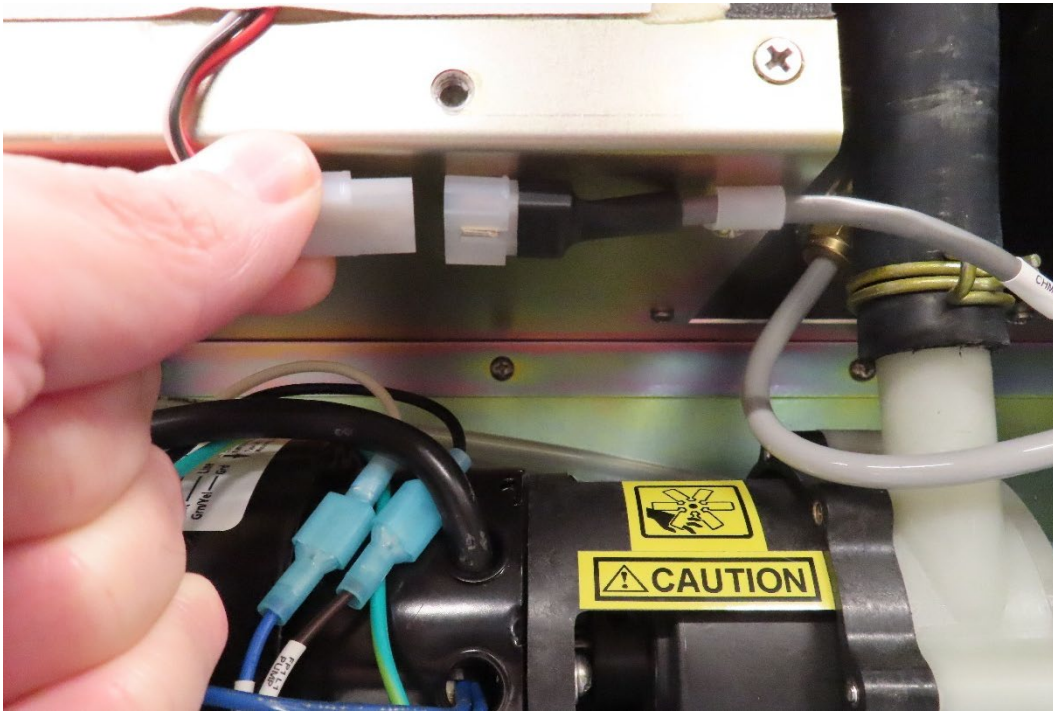
11. Remove the O-Ring. Note: the bearing will be removed in a later step.



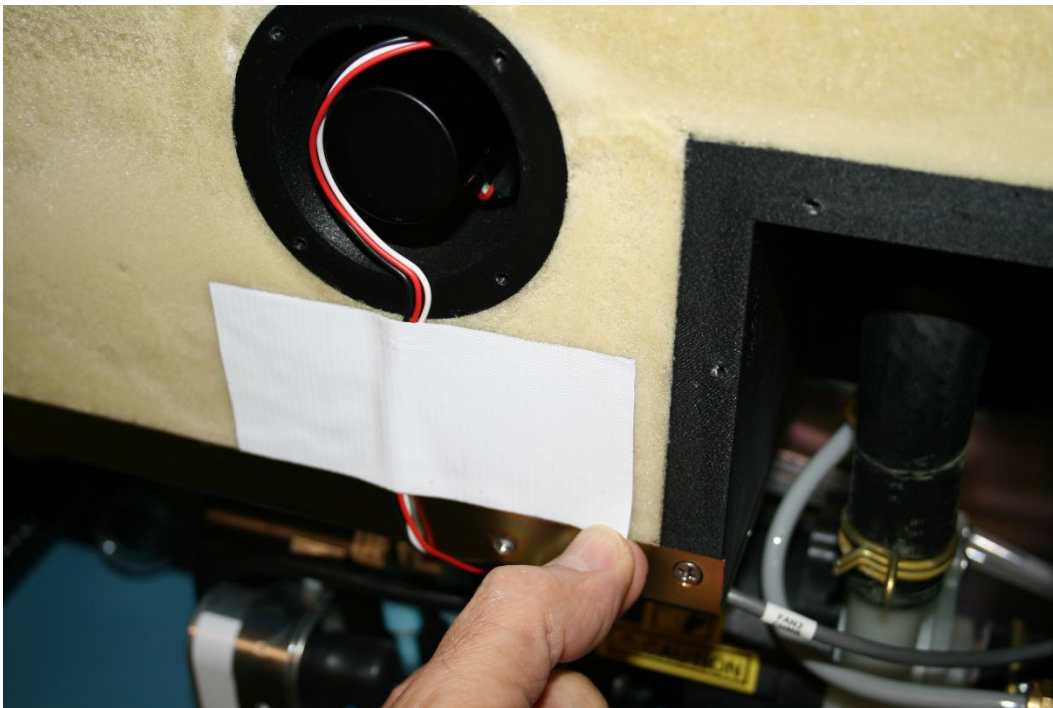
12. Move to the rear of the generator and locate the chamber fan assembly.



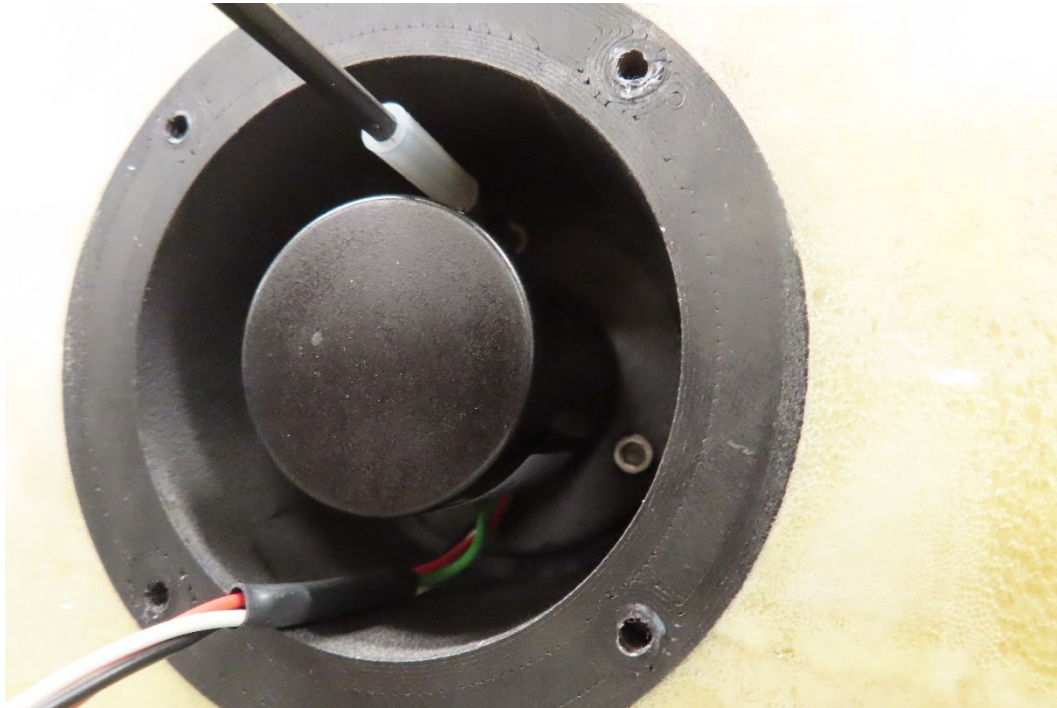
13. Unplug the fan motor harness connector.



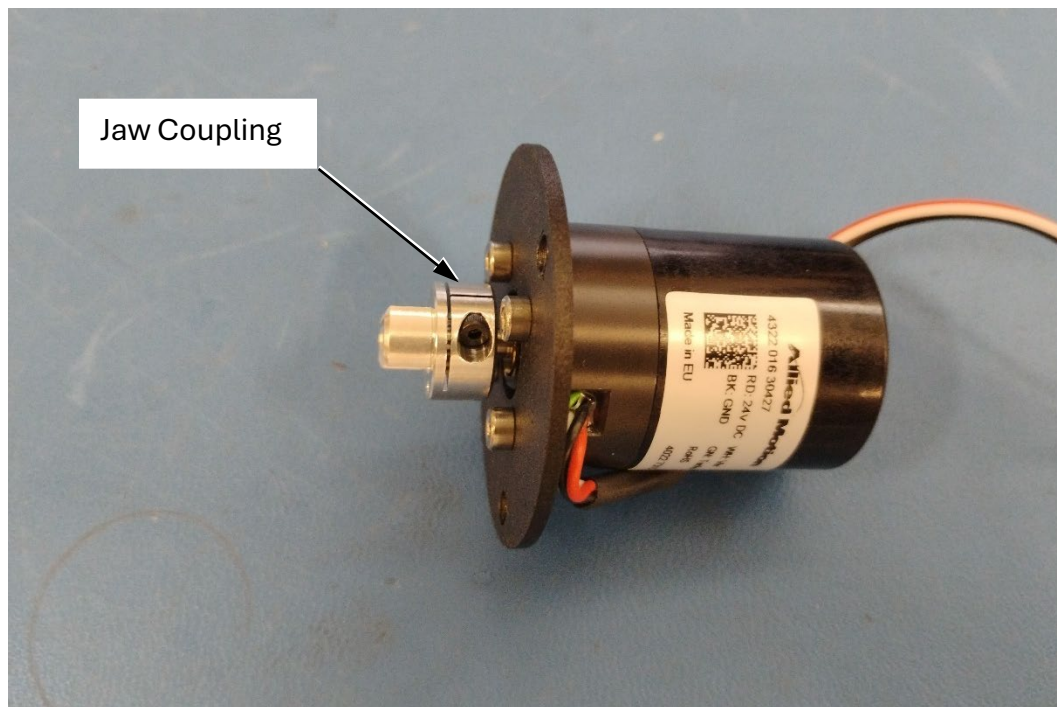
14. Remove the hold down tape.



15. Using a 7/64" Allen wrench to remove the three #6-32 x 3/8" Socket Head Cap Screws and set aside for later installation.



16. Pull out the fan motor and using a 1/16" Allen wrench, remove the Jaw Coupling.



17. Push out the fan motor shaft assembly from inside the chamber and remove the shaft assembly from the rear of the generator and discard.



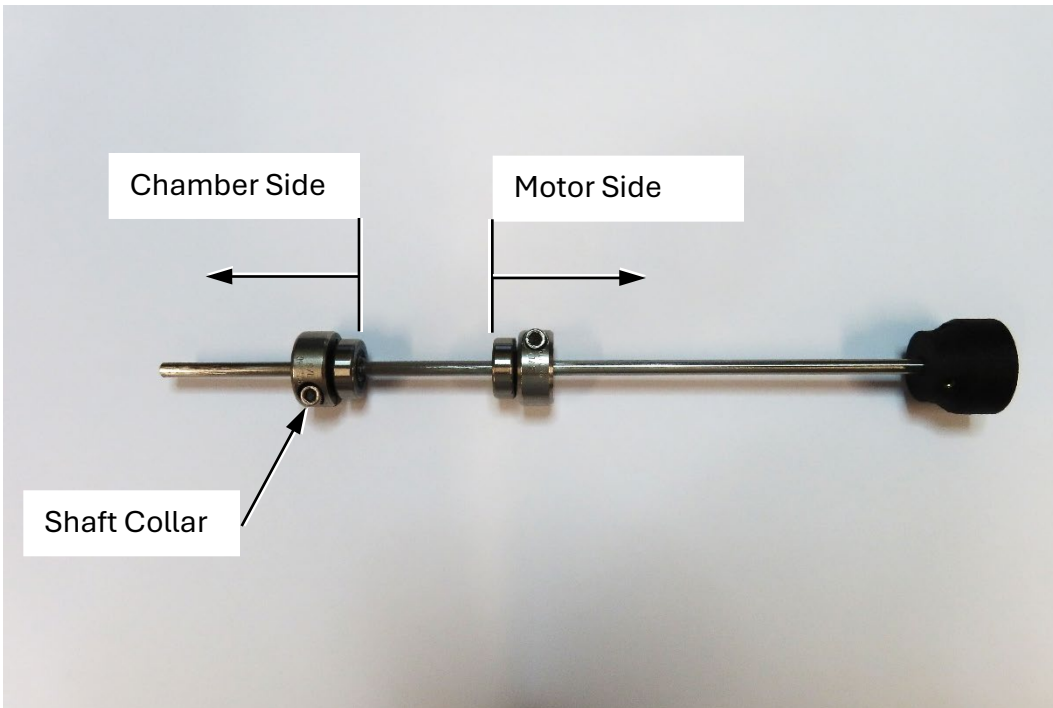
18. From the rear of the generator, use an 8" long screwdriver to push out the chamber side bearing and discard.



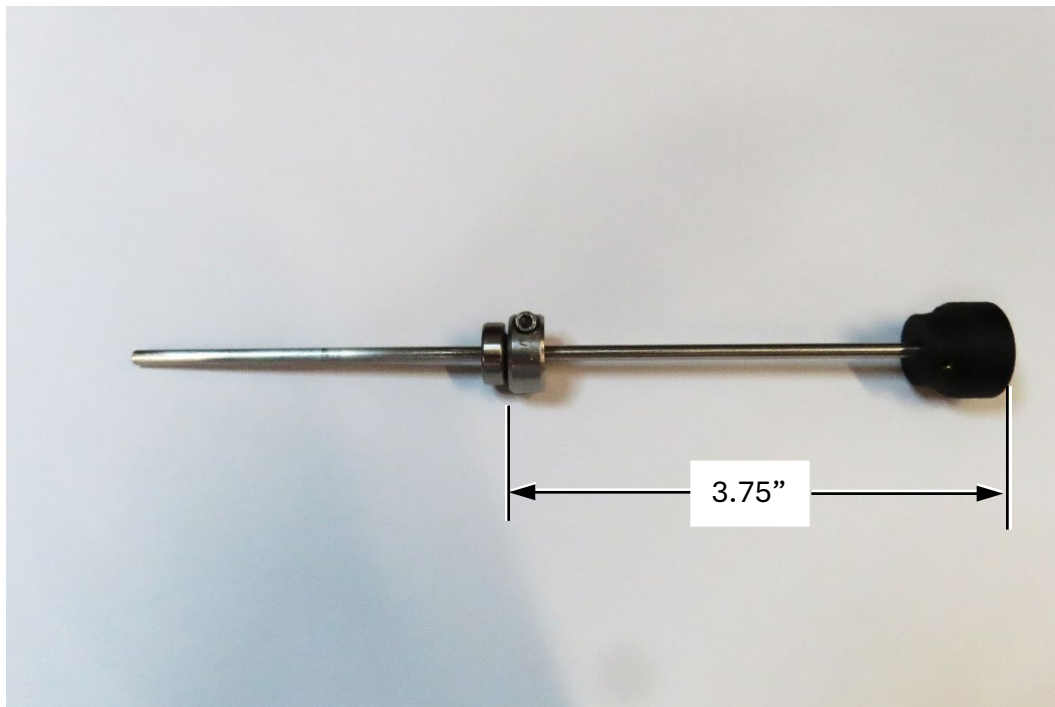
19. Use replacement kit number D23A29322 fan shaft assembly for the following steps.



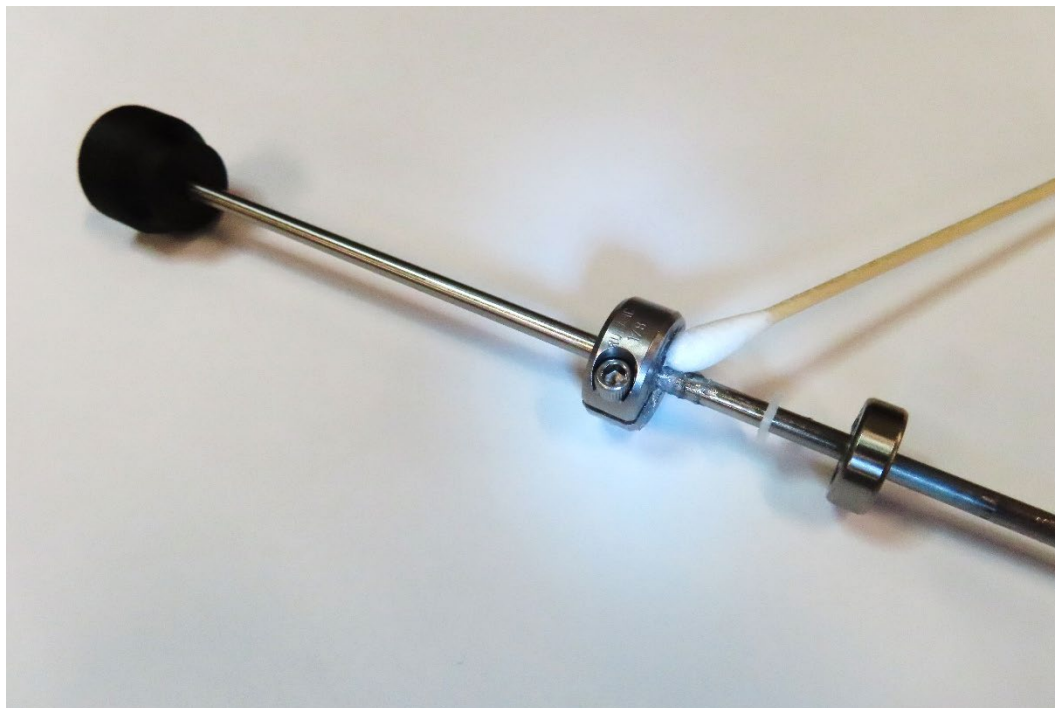
20. Take the fan shaft assembly and remove the chamber side shaft collar using a 3/32 Allen wrench, then slide off the nylon washer and the bearing for chamber side installation.



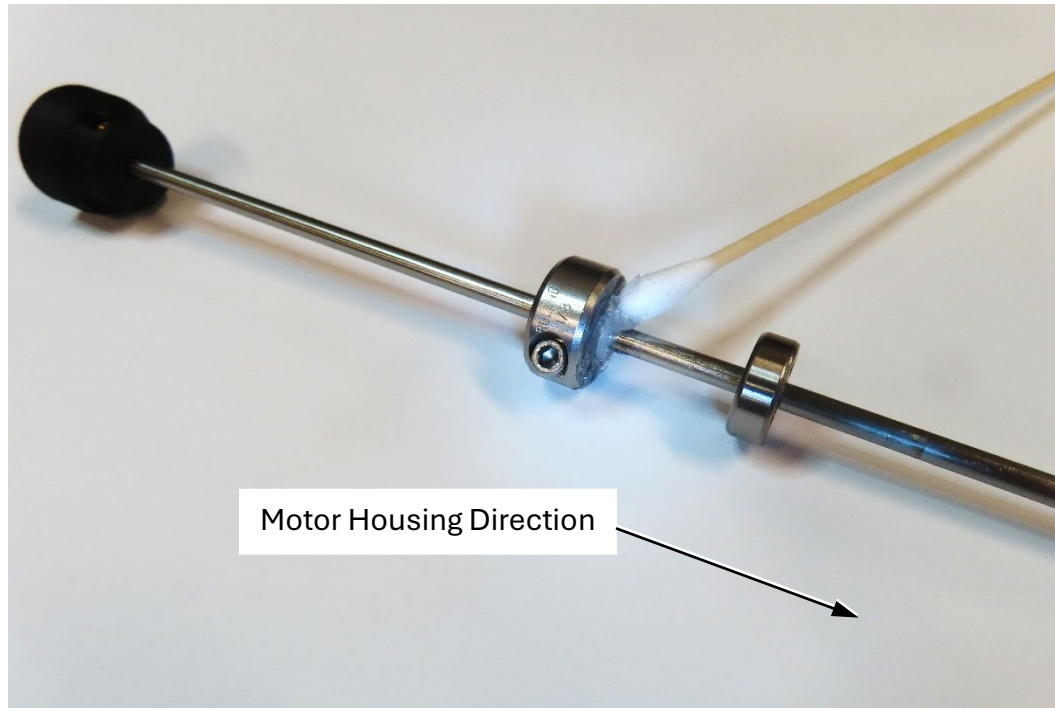
21. The motor side shaft collar must remain in place at this set distance 3.75". This has been pre-set**



22. Slide the bearing and nylon washer away from the shaft collar and apply DOW Molykote 111 silicone to the smooth side of fixed shaft collar.



23. Slide the washer against the shaft collar and apply more silicone, then slide the bearing until it touches the washer and apply silicone to the outer diameter of the bearing.



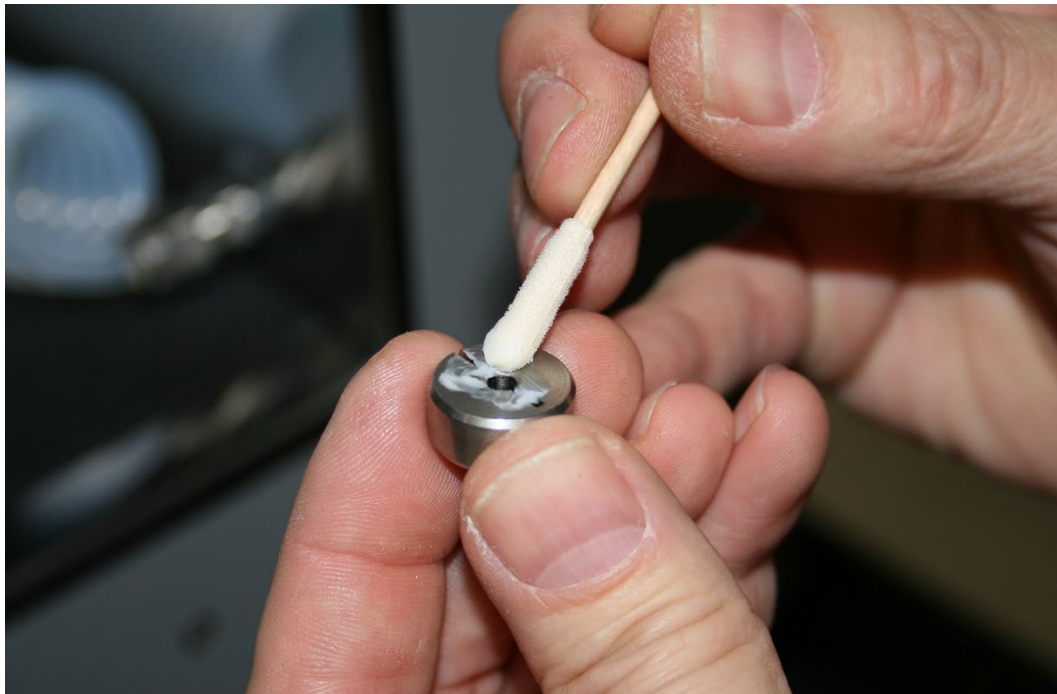
24. Install the fan shaft assembly into the motor housing and push until it's fully seated.



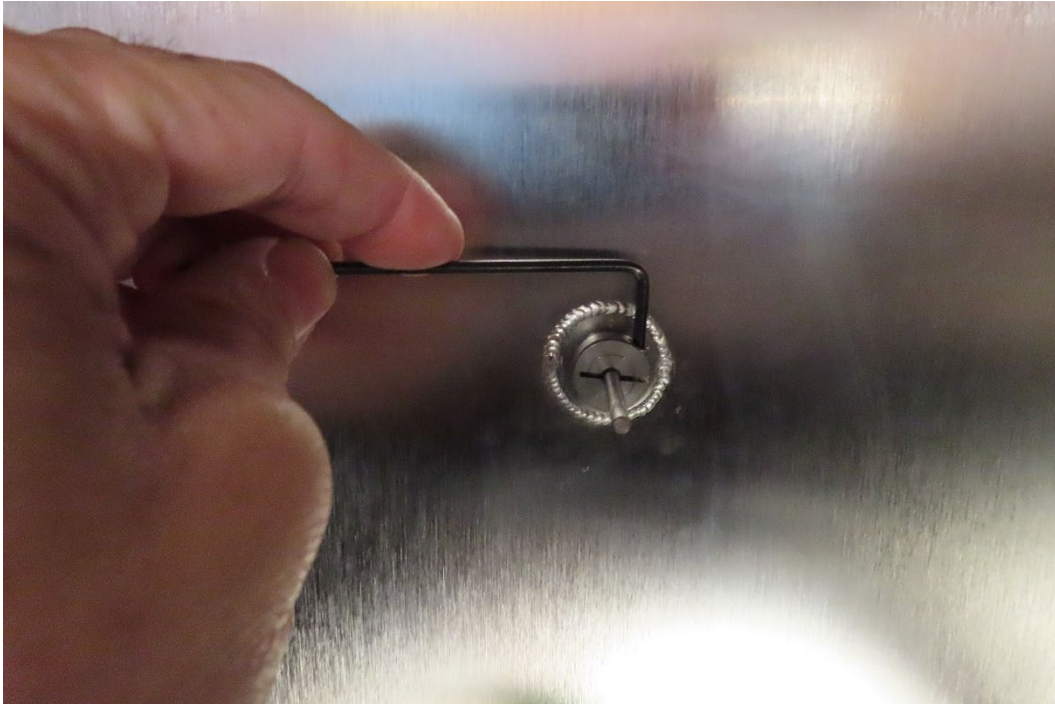
25. Now take the bearing that was removed from the repair kit in the previous steps and apply silicone to the outer diameter of the bearing and slide it on the shaft until it sits in the bearing housing in the chamber wall. Apply more silicone to the face.



26. Slide on the nylon washer until it touches the bearing and take the shaft collar and apply more silicone to the smooth side of the collar.



27. Slide on the shaft collar until it touches the nylon washer, then tighten the set screw using 3/32 Allen wrench. Do not overtighten.



28. Install the new fan, making sure to push evenly on the hub and not the blades. Ensure the fan collar clamp faces towards the back, with the smooth side facing forwards.



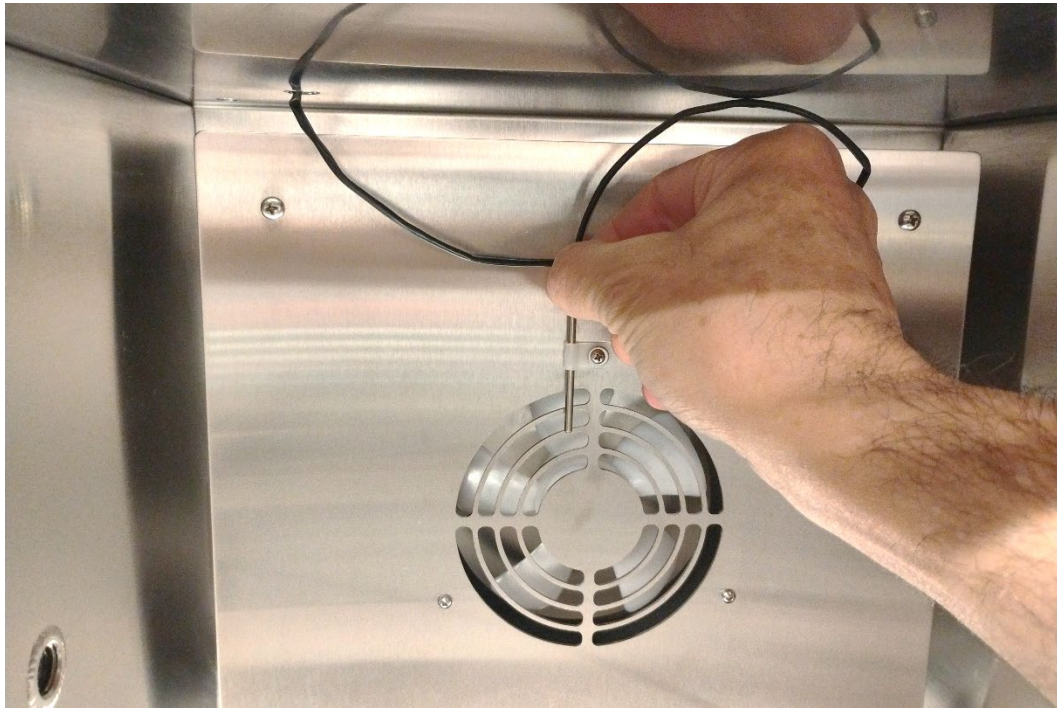
29. Push the fan on far enough to reveal enough shaft for the set screw collar to be installed. The collar face should be flush with the end of the shaft. Install the collar using 1/16" Allen wrench. Do not overtighten.



30. Reinstall the Fan Shroud Panel using the same screws as removed before but first make sure the four standoffs are tight.



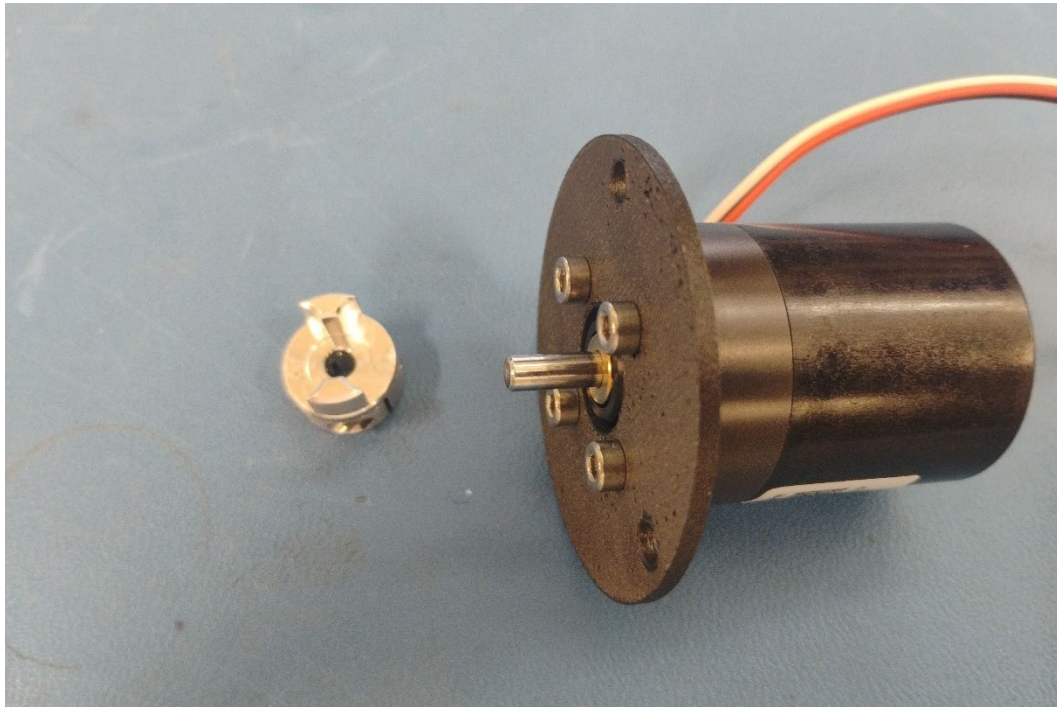
31. Reinstall the chamber temp probe.



32. Remove the tape that covers the air vent outlet.



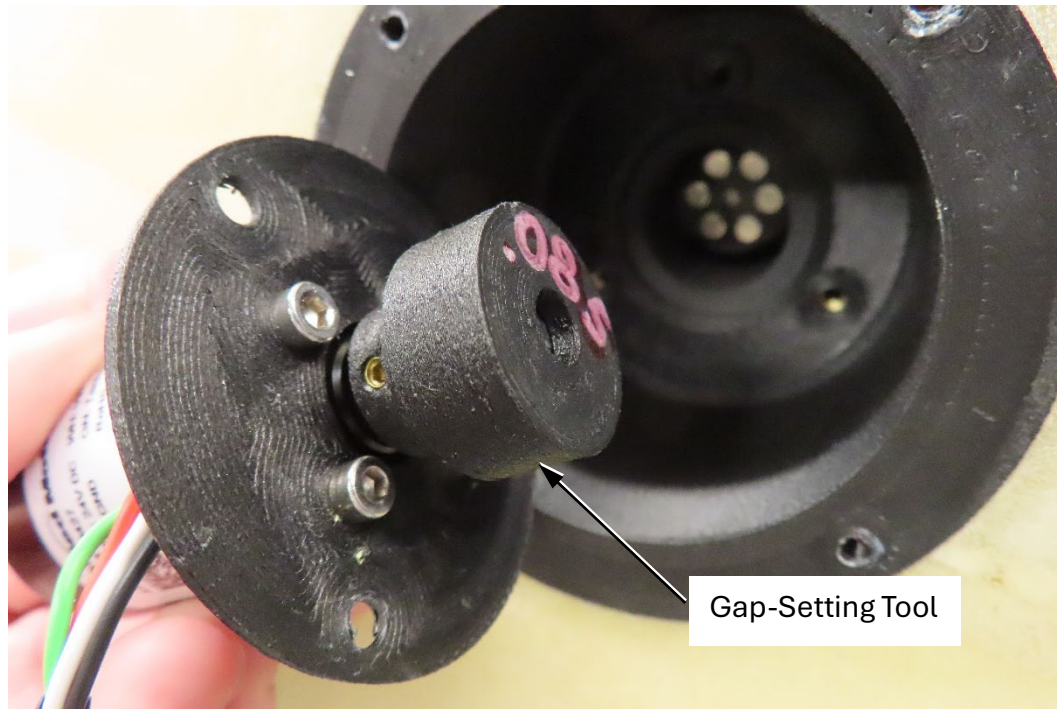
33. Remove the old jaw coupling hub from the motor using a 1.5mm Allen wrench.



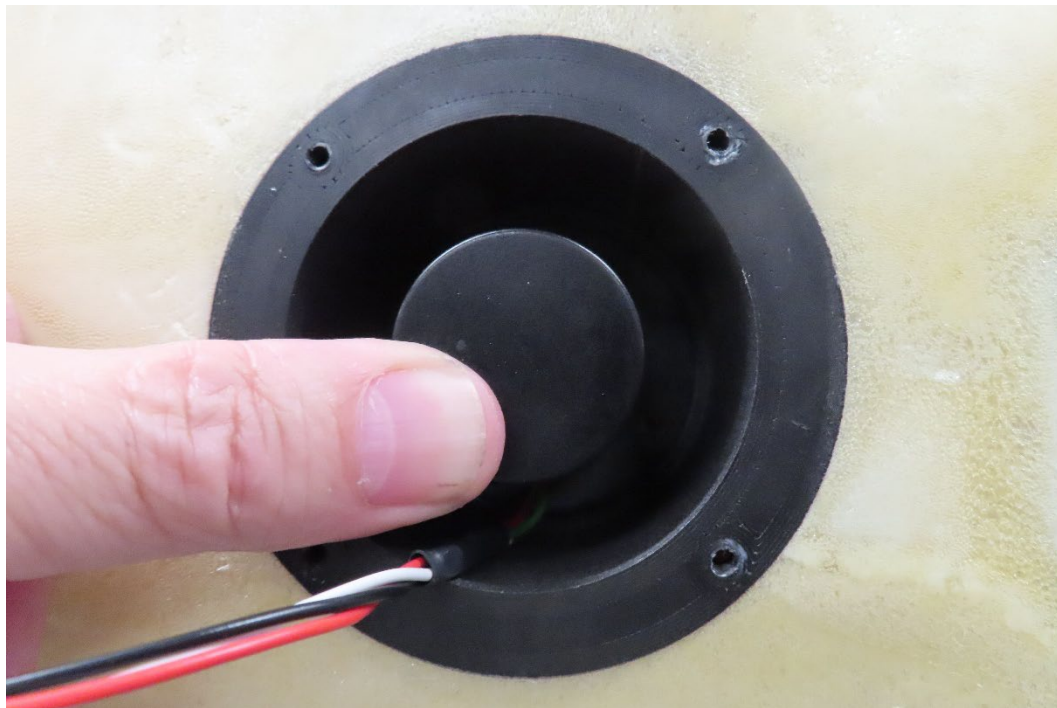
34. Slide on the motor magnetic coupling hub on the motor shaft, but do not tighten yet.



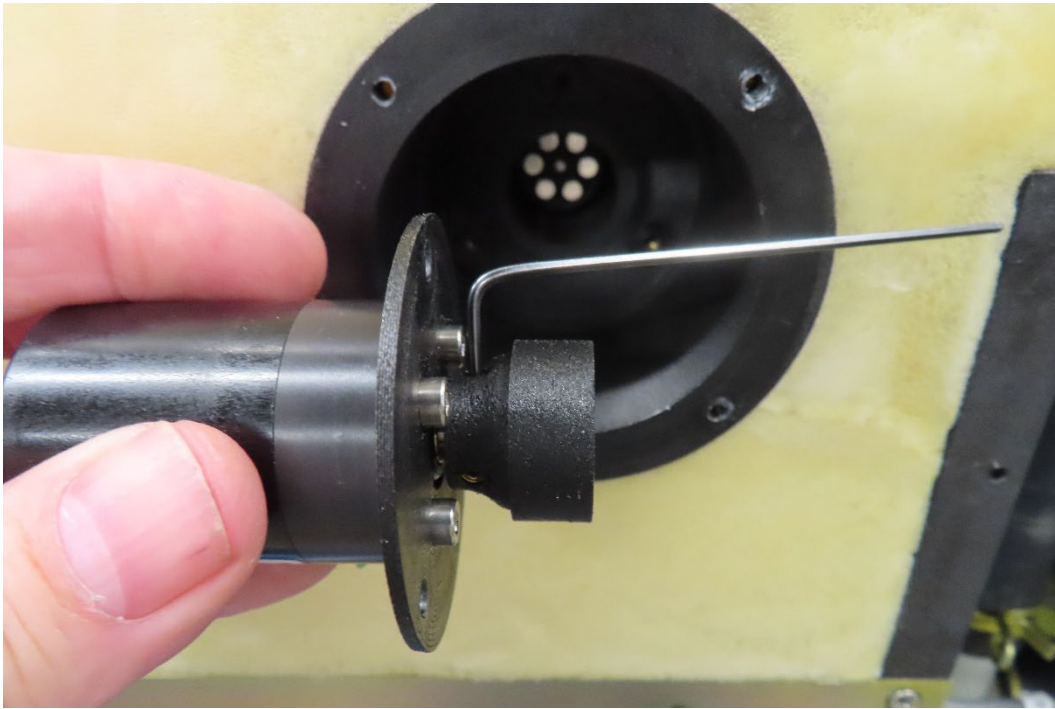
35. Install the gap-setting tool.



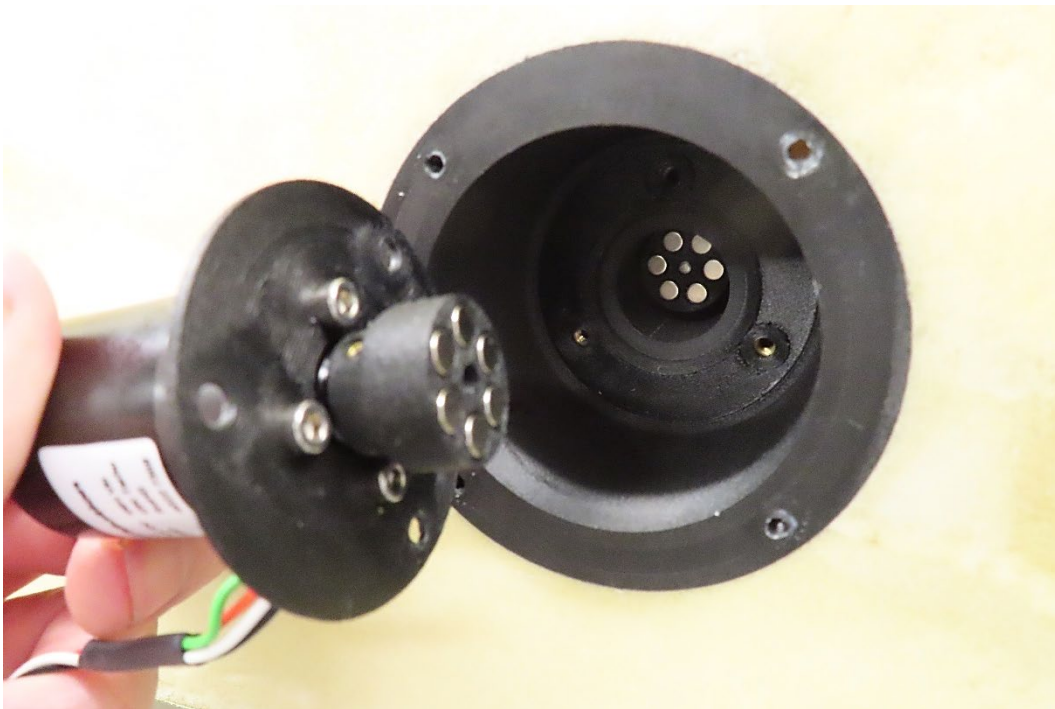
36. Install the fan motor into the motor housing until it is fully seated, then remove the motor by first tilting it at an angle to break the magnetic bond.



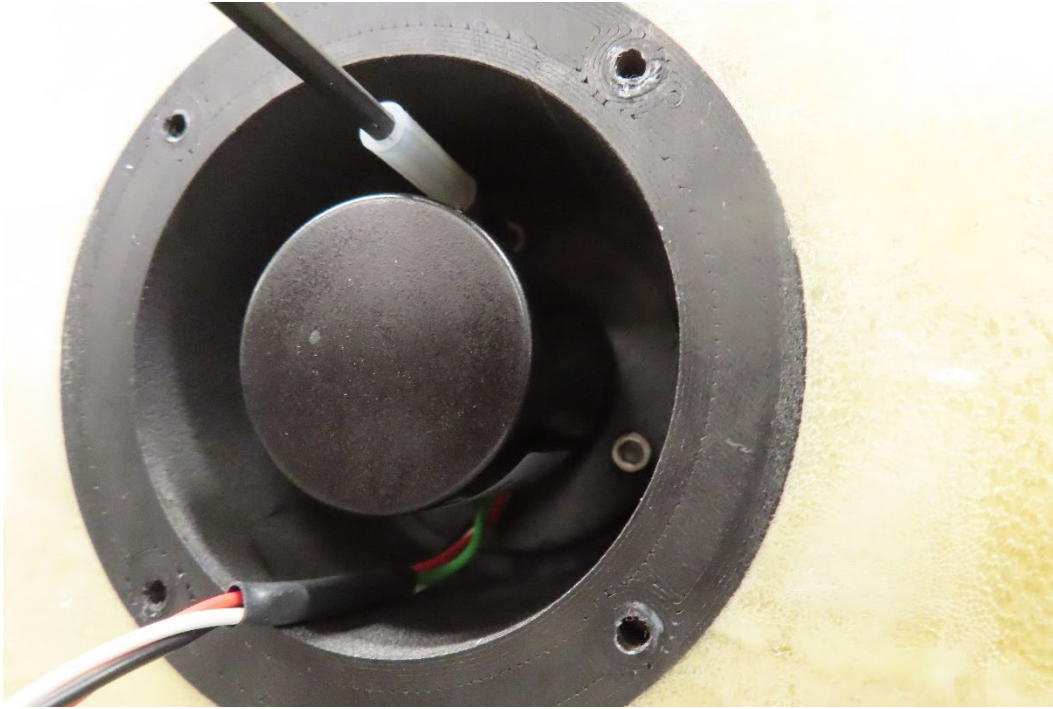
37. Tighten the three set screws using a 1/16" Allen wrench. Torque screws to 2 in-lb.



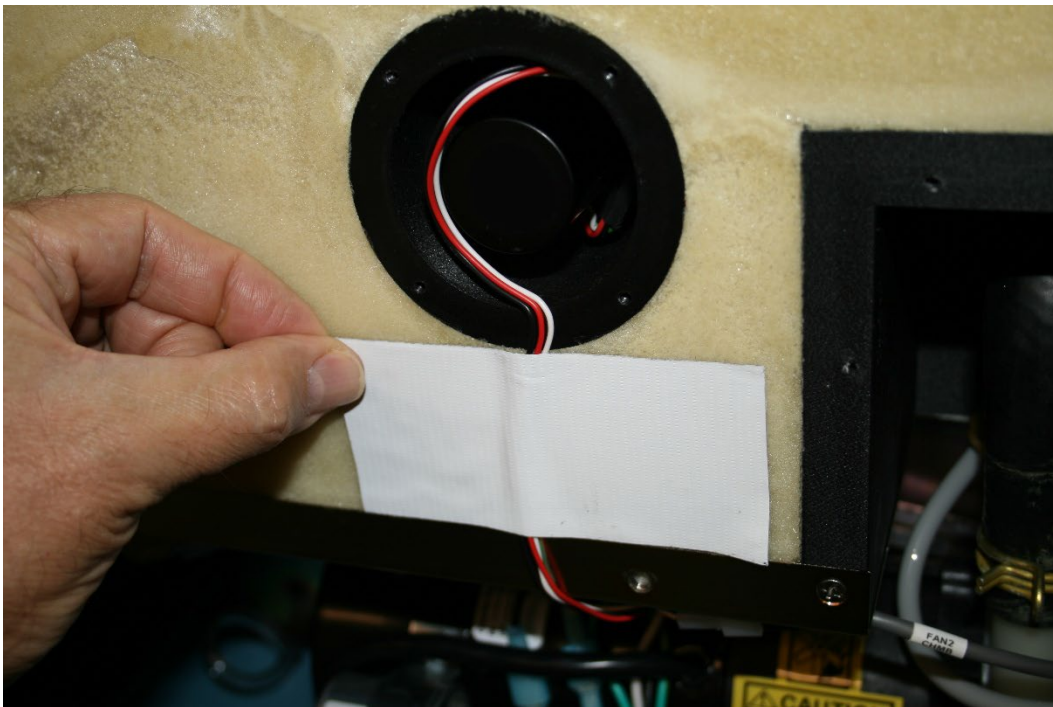
38. Then remove the gap-setting tool.



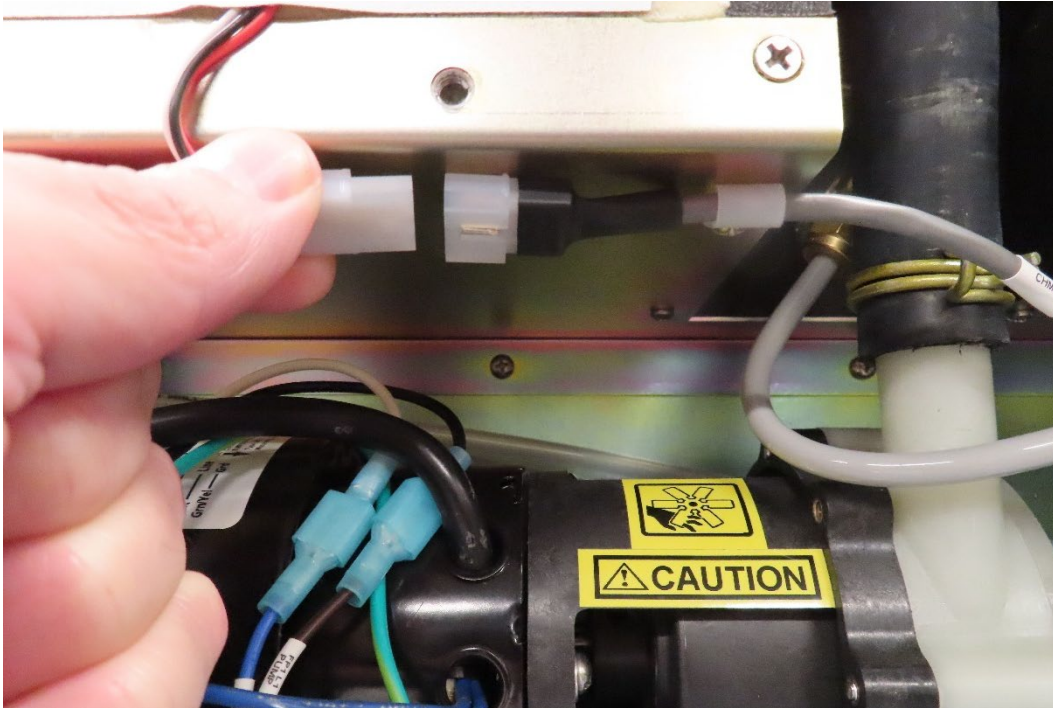
39. Install the fan motor with the wire harness at the bottom and the mounting plate hole at the top center. Install the same three 6-32 x 1/2" Socket Head Cap Screws from the previous steps using a 7/64" Allen wrench and tighten.



40. Route wires around the motor and down the center underneath the tape.



41. Plug in the fan motor wire harness back into the connector.



42. Reinstall rear panel, air-in elbow and power cord. Installation is complete.

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