

Humidity Generation and Calibration Equipment

THUNDER SCIENTIFIC®
CORPORATION THE HUMIDITY SOURCE

Model ACS2520

Air Dryer Retrofit Replacement Procedure



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623 WYOMING BLVD. SE



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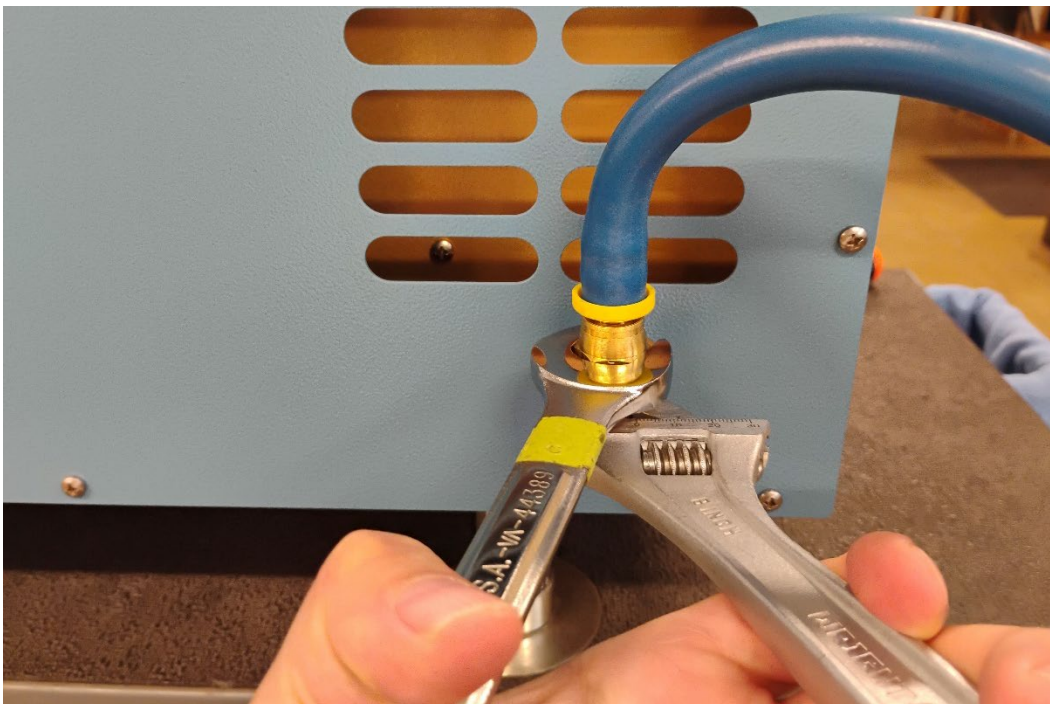
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Air Dryer Retrofit Replacement Procedure

1. Turn off the power switch to the air compressor system and remove the power cable.



2. Remove the Air Outlet Hose using a 9/16" wrench on the hose and an adjustable wrench on the Air Outlet Elbow.



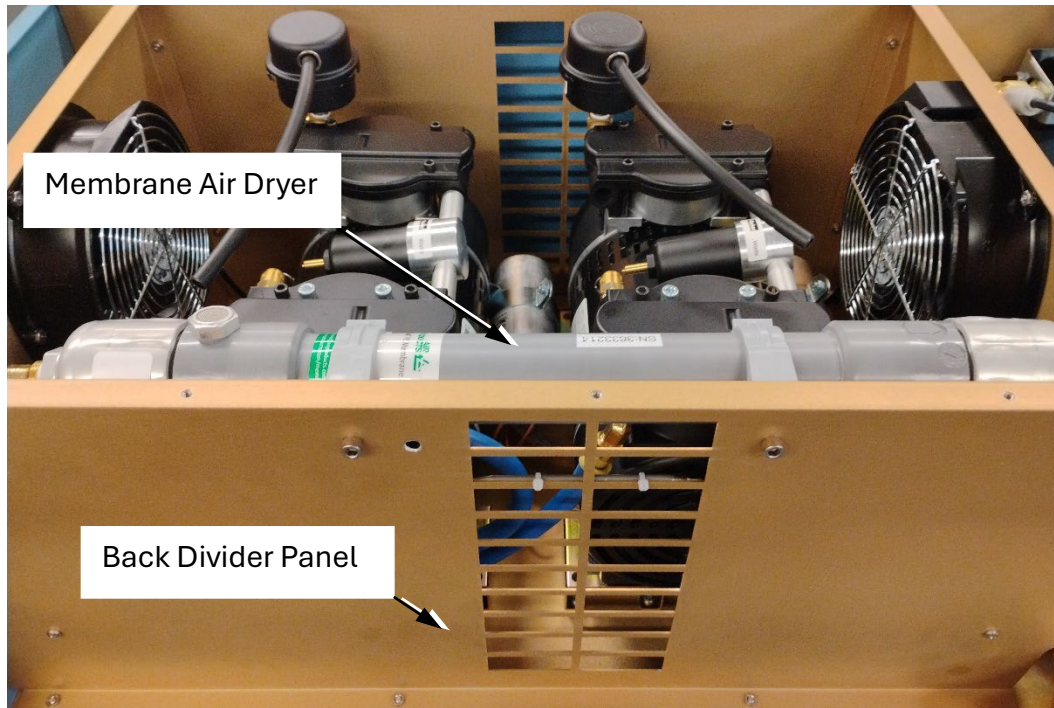
3. Remove the Top Cover by releasing the four cover clamps.



4. Remove the Back Outer Panel using a #2 Phillips head screwdriver to remove the five #6-32 x 1/4" flat head screws along the top and the eight #6-32 x 1/4" pan head screws along the side.



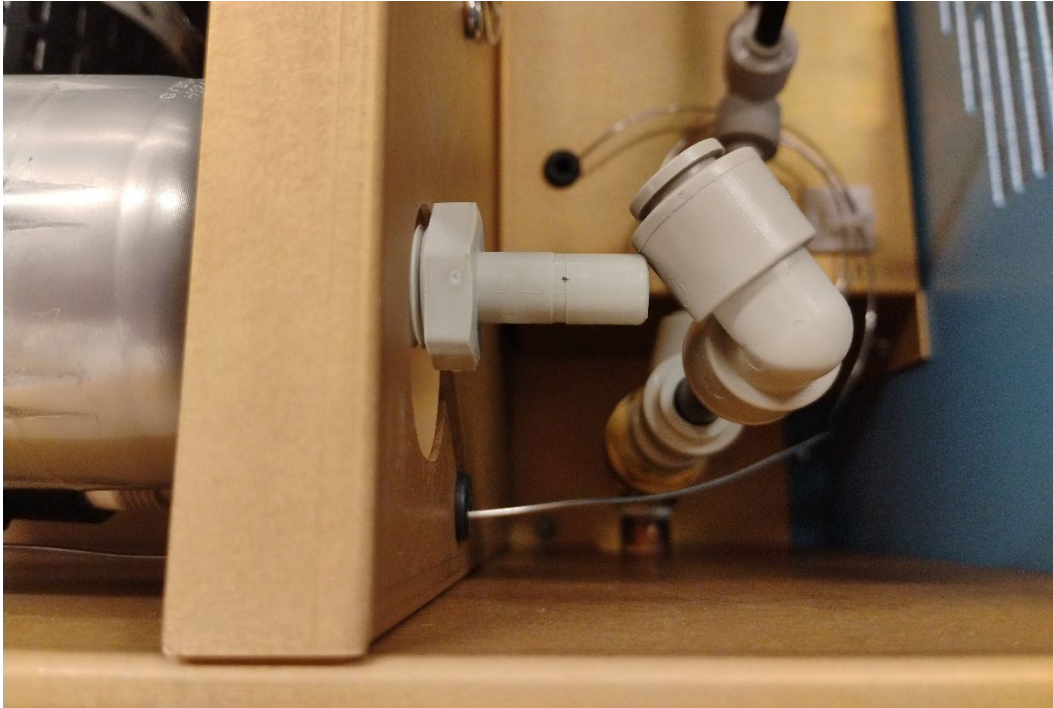
5. Locate the Membrane Air Dryer mounted on the Back Divider Panel.



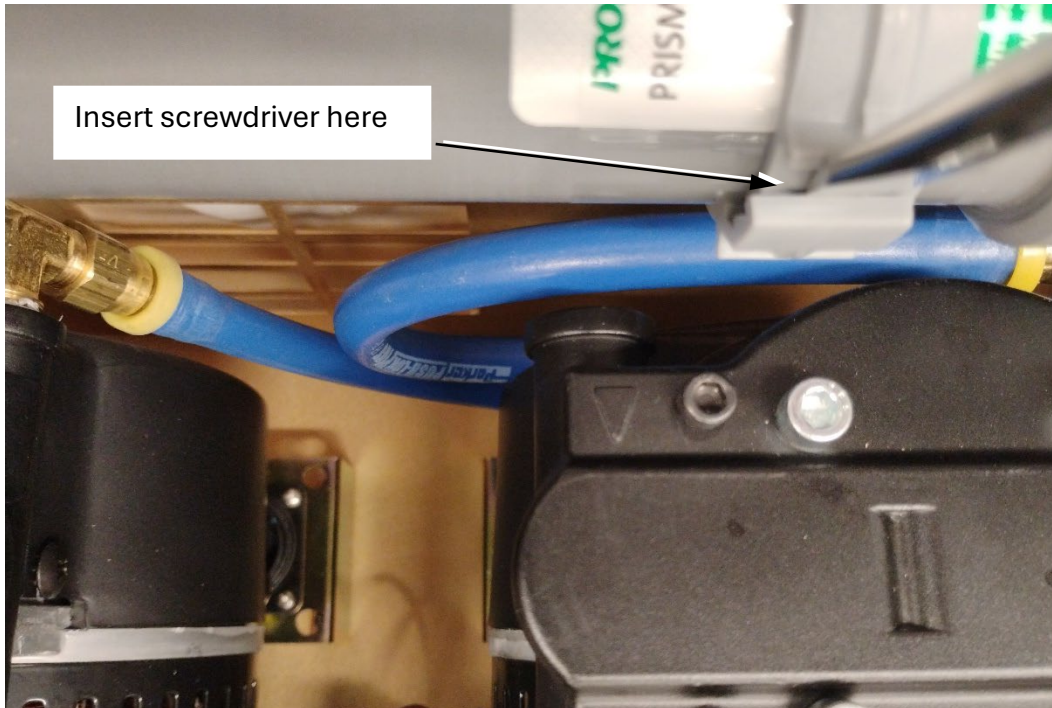
6. Using a flat head screwdriver, push in the quick disconnect fitting on the elbow.



7. Then pull the elbow away from the Membrane Air Dryer.



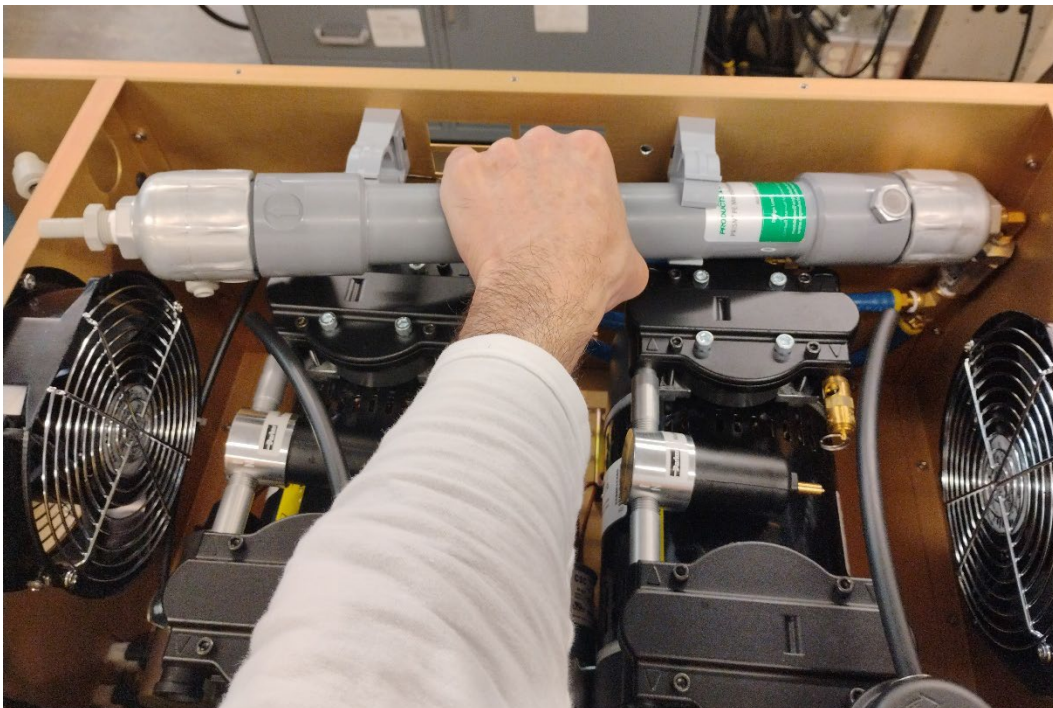
8. Using a flat head screwdriver, push to release the two gray clamps.



9. Remove the black tubing located on the underside of the Air Dryer. Use a flat head screwdriver to push in the quick disconnect fitting, then pull the tube out.



10. Remove the Air Dryer by pushing it as far to the right as possible while simultaneously pushing the compressor to the right, providing room for the fitting underneath to clear. See the next photo for compressor clearance.



11. Compressor clearance.



12. Remove the Compressor Outlet Hoses from the compressors, using a 9/16" wrench.



13. Remove the elbow located on the back side of the regulator. Using a flat head screwdriver, push in the quick disconnect fitting, then pull the tube elbow out.



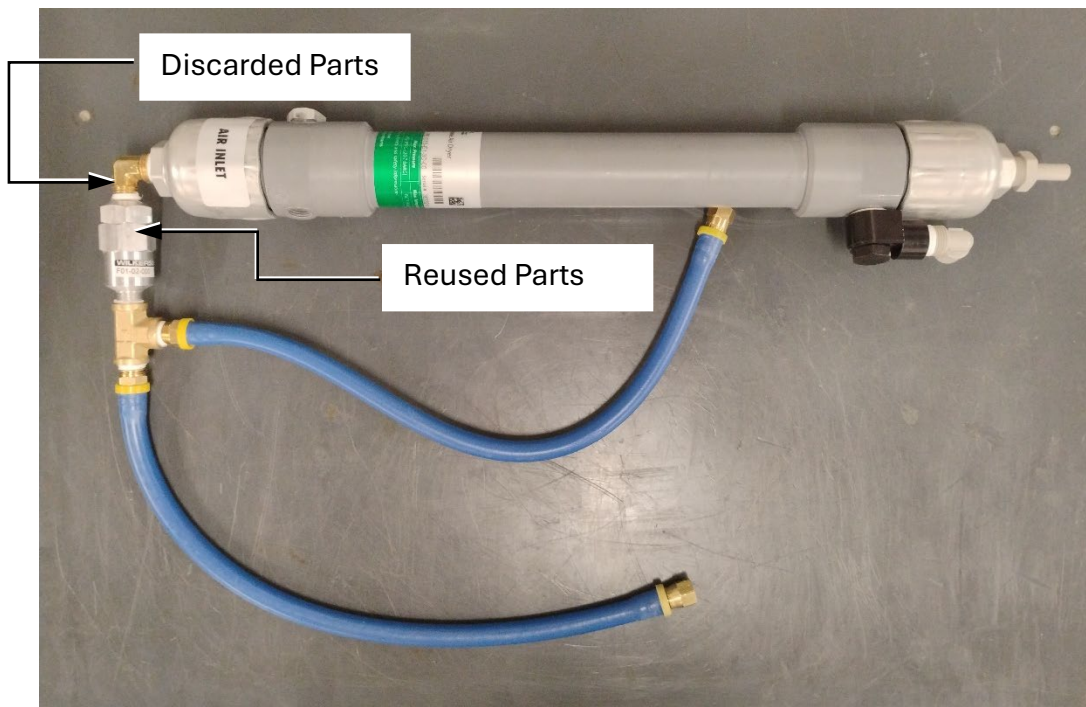
14. Remove the elbow and tube from the ACS2520 and discard these parts.



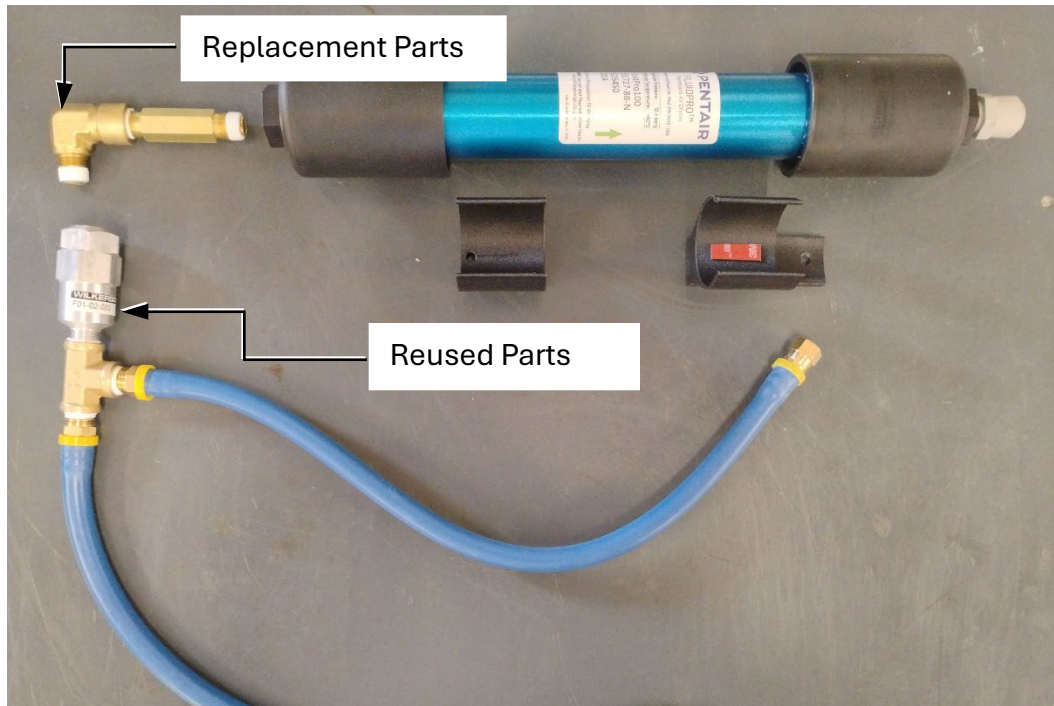
15. Replace the elbow with the push in muffler provided with the kit.



16. The Membrane Air Dryer will be removed from the Inline Particulate Filter. The next steps will provide further instructions for part removal/replacement.



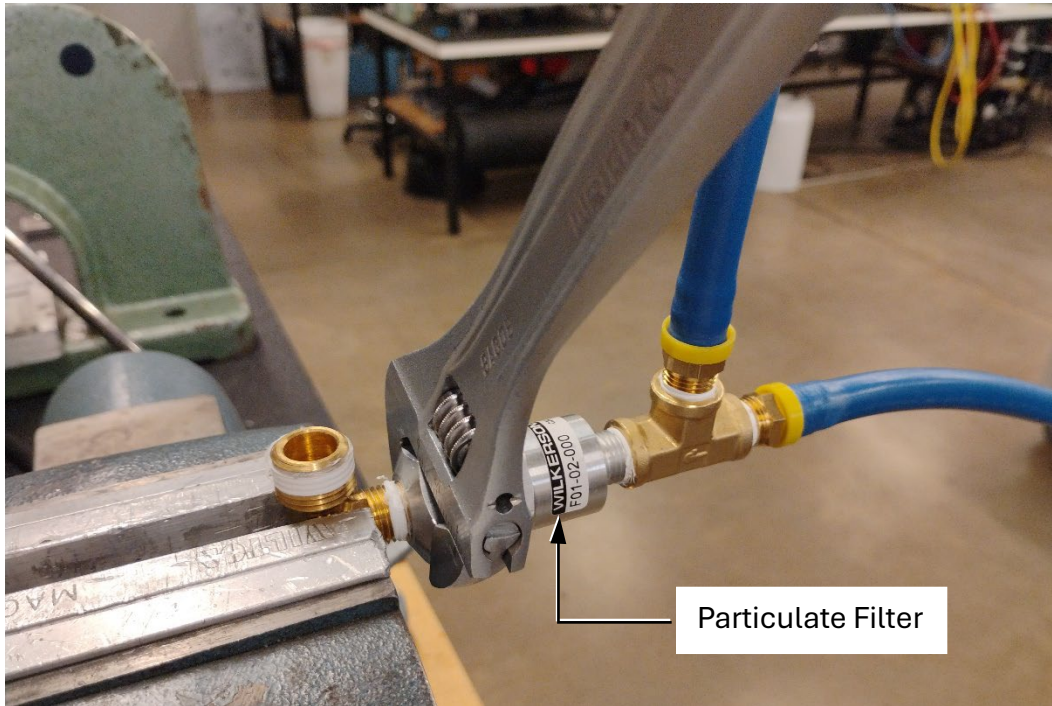
17. This photo shows the replacement parts and the reused parts.



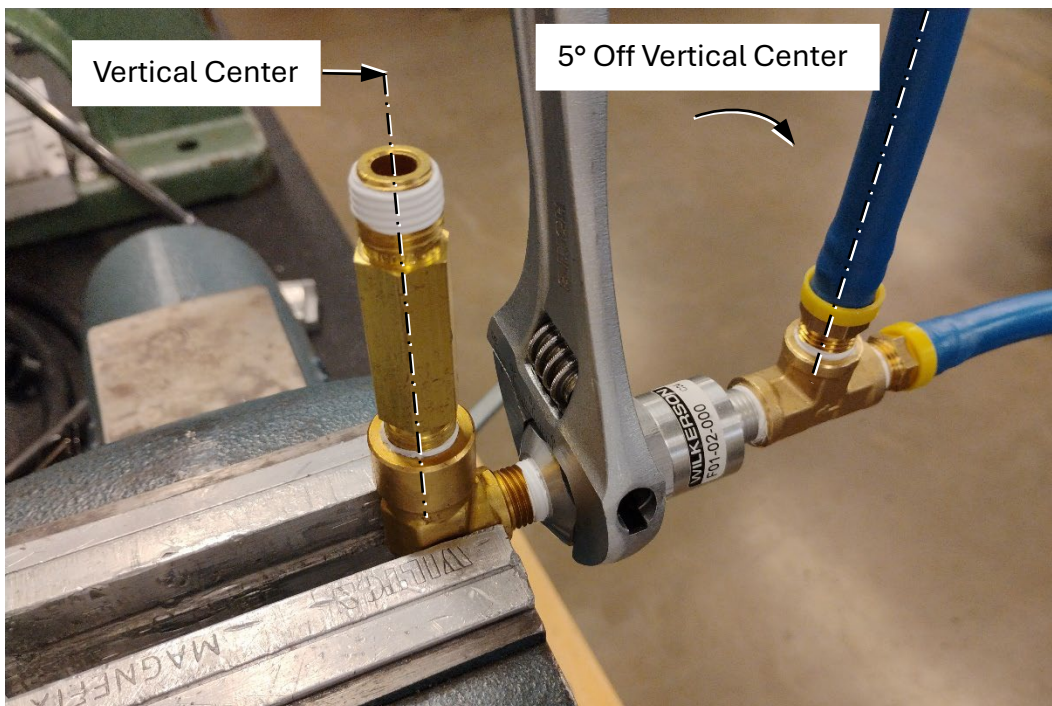
18. Place the air inlet elbow on the dryer in a vice as shown. Use a large adjustable wrench to remove the Membrane Air Dryer. Discard the dryer.



19. Remove the Inline Particulate Filter from the elbow and discard the elbow.



20. Position the replacement elbow in the vise as shown. Insert the 2.5" brass nipple into the elbow, add Teflon tape if it's not present. Ensure that Teflon tape is present on the elbow as well, then tighten the Particulate Filter and position the tube at 5° from vertical center.



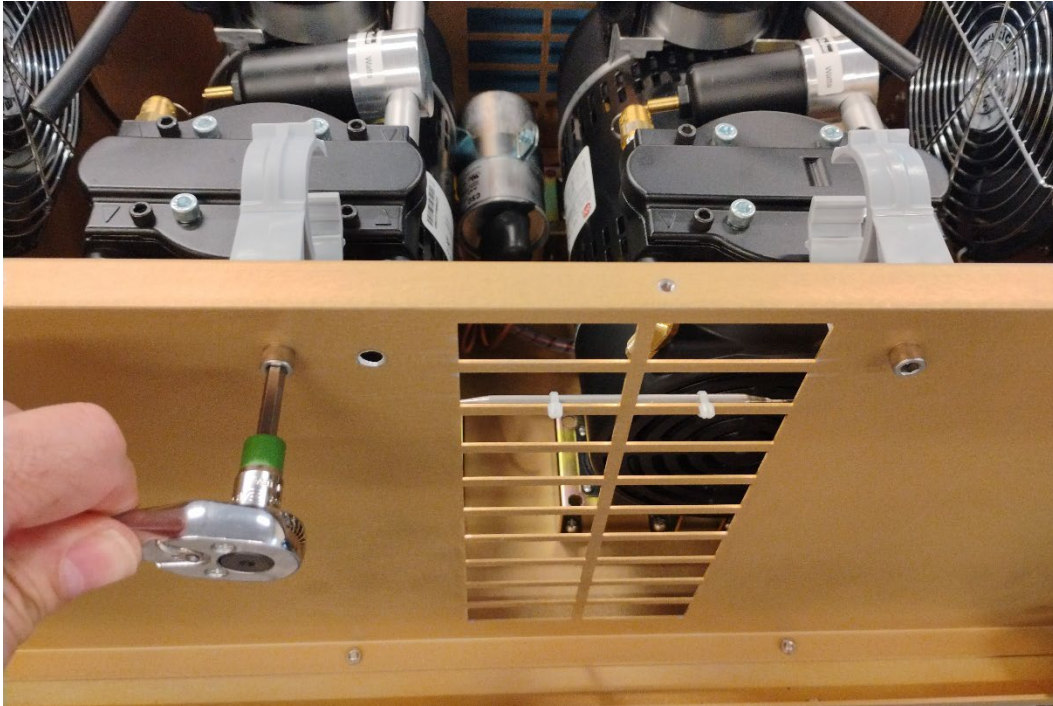
21. Tighten the Membrane Air Dryer do not overtighten. The air flow direction should be pointing up. Refer to green arrow on dryer.



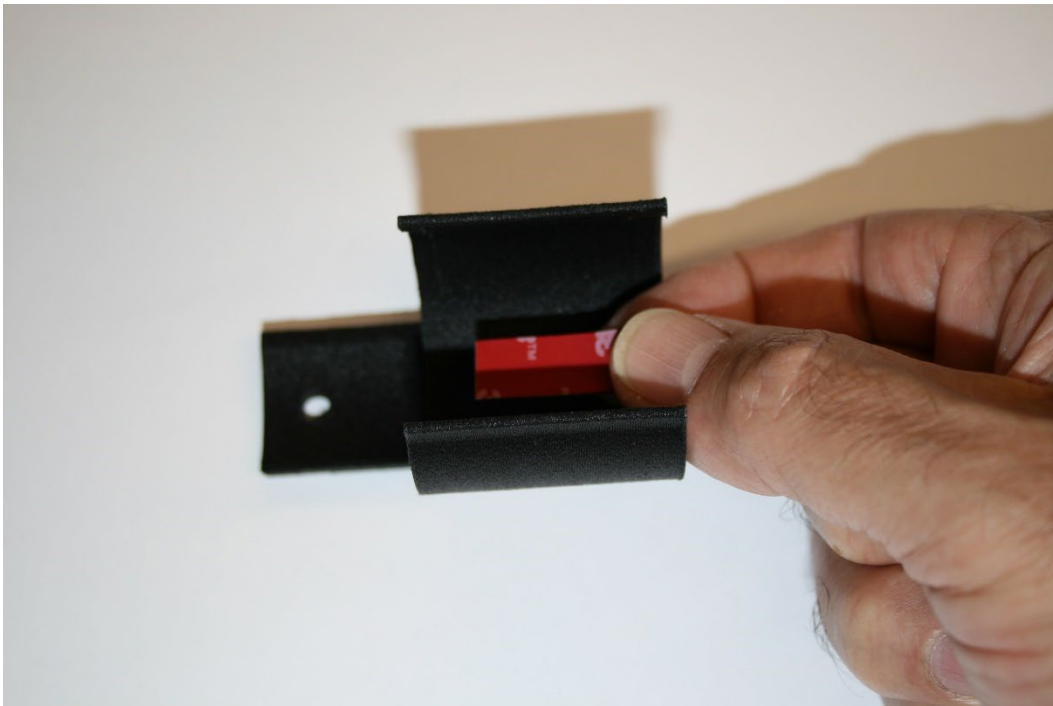
22. Install the plastic 3/8" tube connector provided with kit into the opposite end of the Membrane Air Dryer, make sure that Teflon tape is present before installing. Do not overtighten.



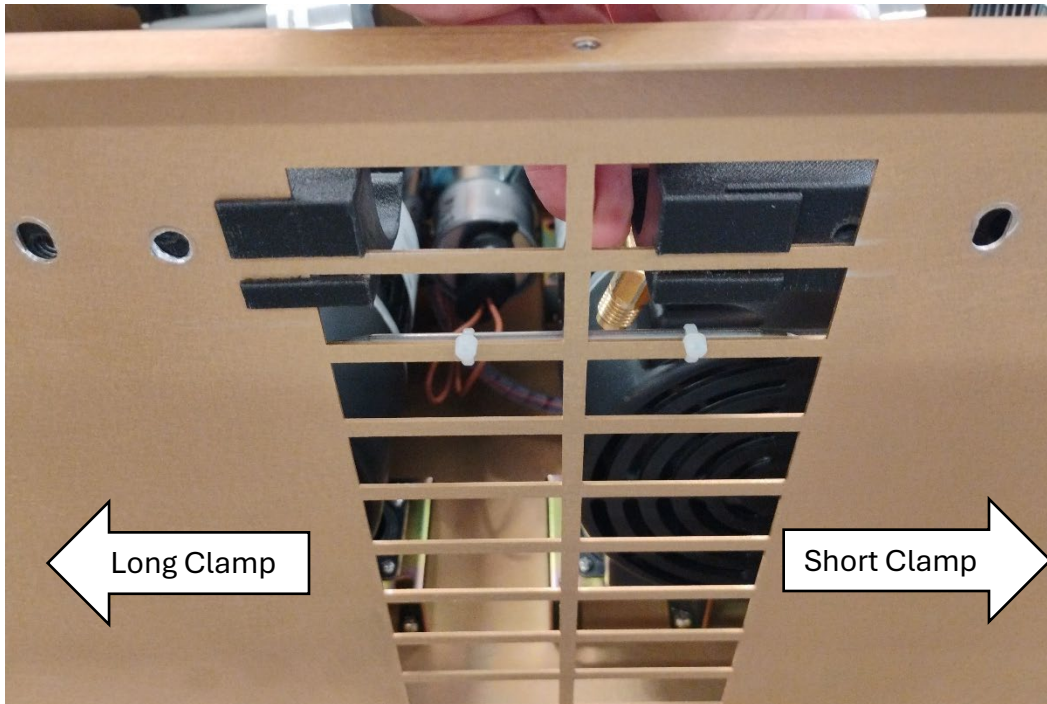
23. Remove both existing clamps using a 3/16" Allen wrench.



24. Place the 3M double sided tape on the inside of the replacement long clamp and remove the release liner to secure the air dryer when pushed in place.



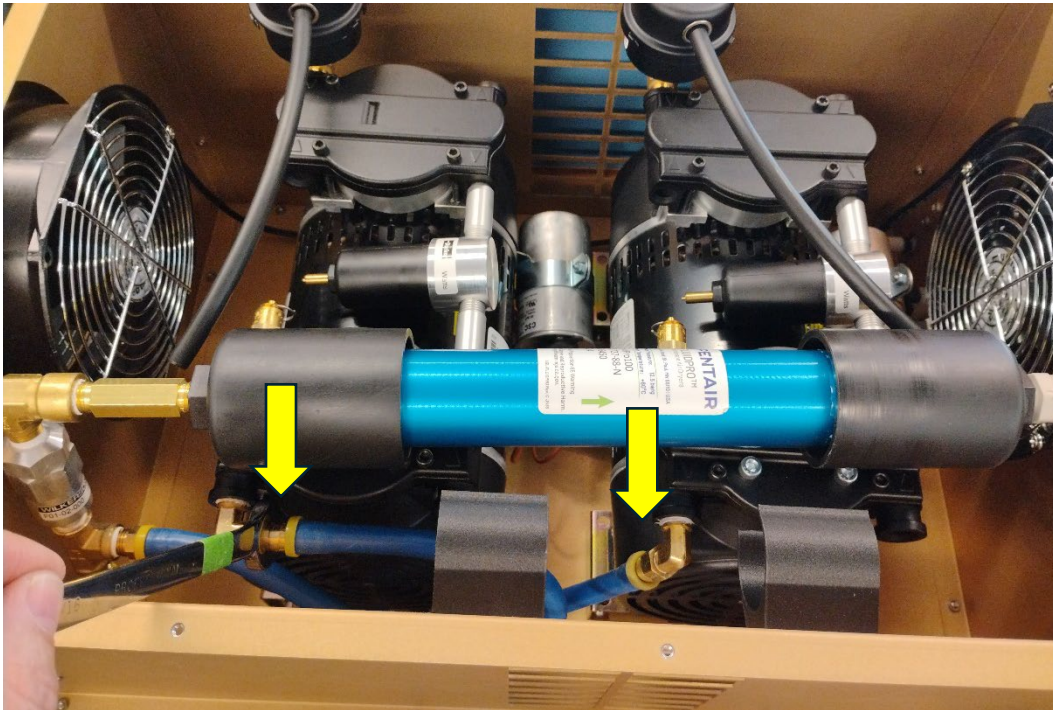
25. Position the replacement clamps as shown on the inside of the Back Divider Panel and slide the long clamp to the left and the short one to the right. The holes should line up.



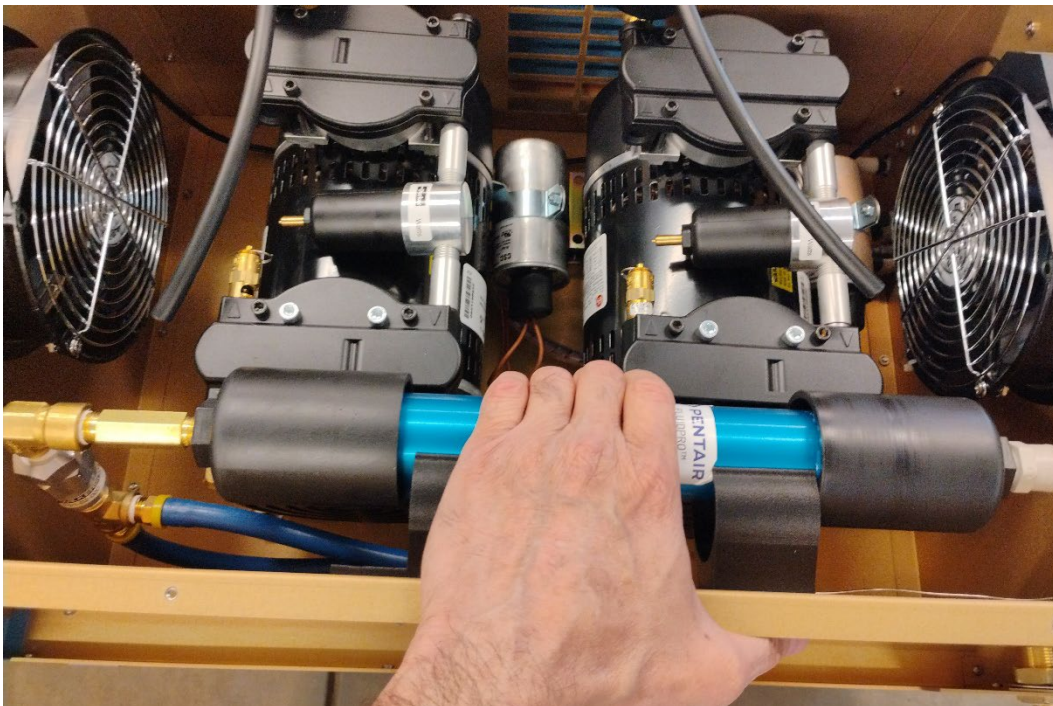
26. Using a 3/16" Allen wrench, fasten the clamps with the 1/4-20 x 3/8" and flat washers provided.



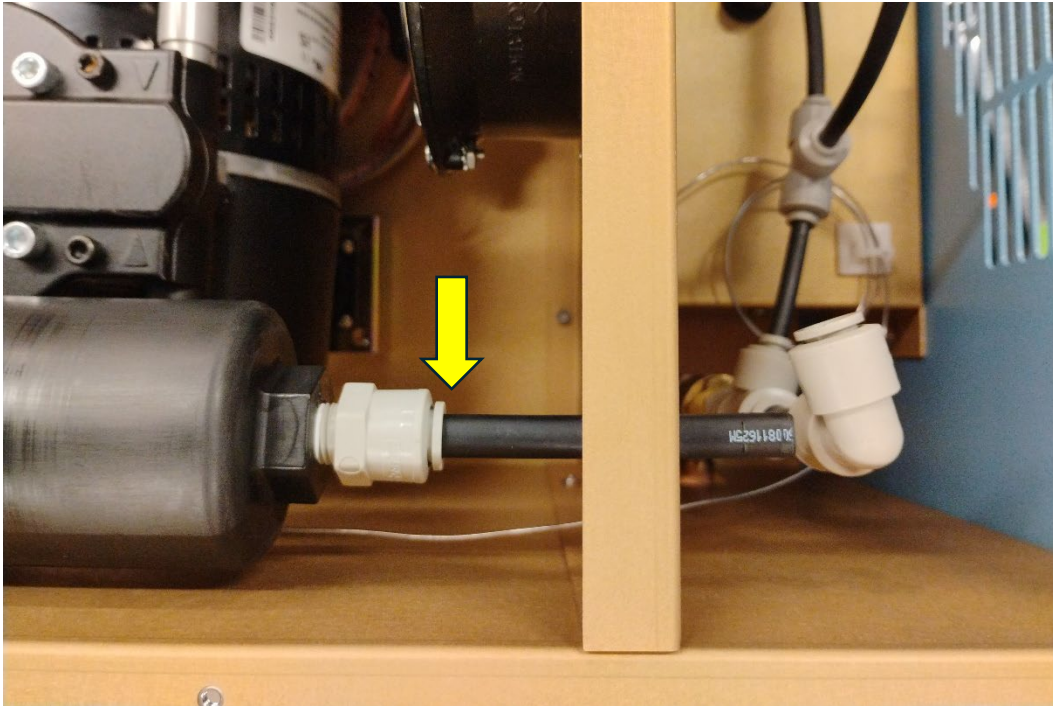
27. Reinstall both Compressor Hoses using a 9/16" open end wrench.



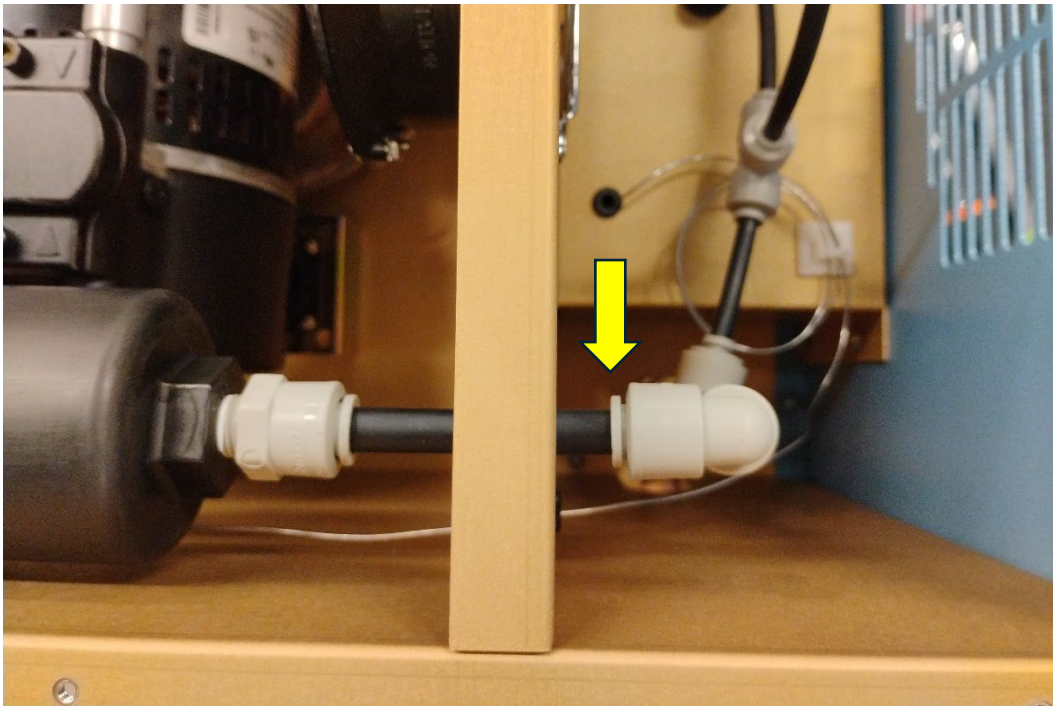
28. Install the replacement Membrane Air Dryer by positioning it on the clamps and then squeeze until it snaps in place.



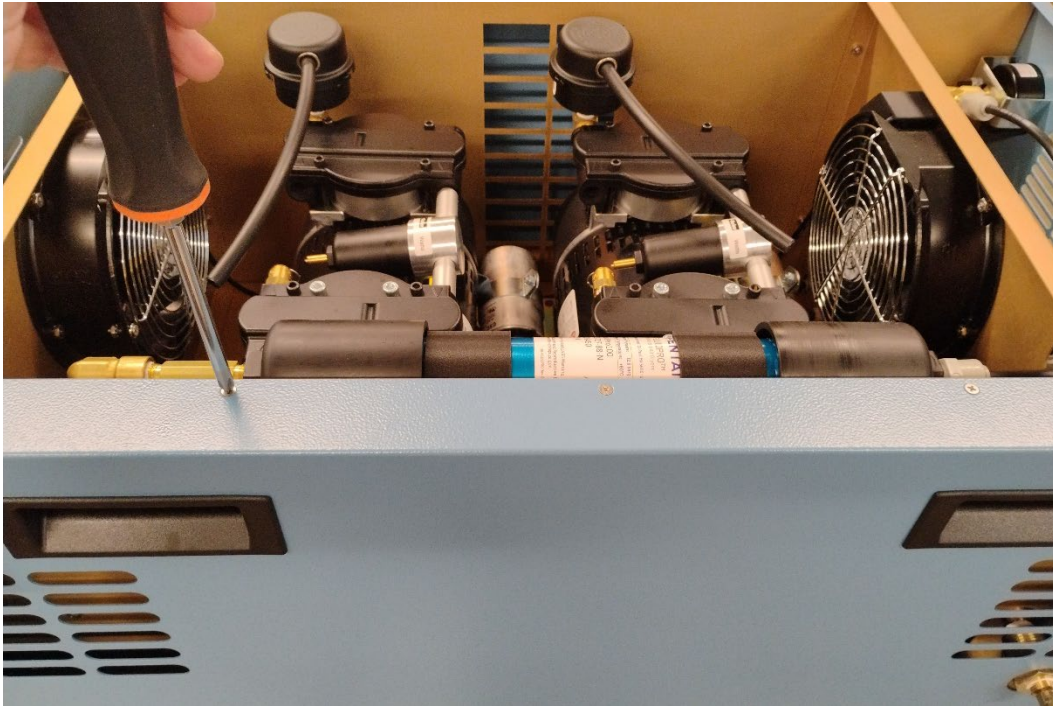
29. Push in the 3/8" x 4" long polypropylene tube provided with kit into the tube connector.



30. Push on the elbow tube connector onto the 3/8" polypropylene tube.



31. Reinstall the Back Outer Panel using a #2 Phillips head screwdriver to install the five #6-32 x 1/4" flat head screws along the top.



32. Reinstall the eight #6-32 x 1/4" pan head screws along the side.



33. Reinstall the top cover.



34. Reinstall the air in hose using a 9/16" wrench on the hose and an adjustable wrench on the Air Outlet Elbow.



35. Plug in the power cord and test the system.

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