

Humidity Generation and Calibration Equipment

THUNDER SCIENTIFIC

CORPORATION THE HUMIDITY SOURCE

Model ACS-517B

60Hz Air Compressor Replacement Procedure



Tech Support Document TSD-0233
Revision Date: November 19, 2010
Rev -B

623 WYOMING BLVD. SE



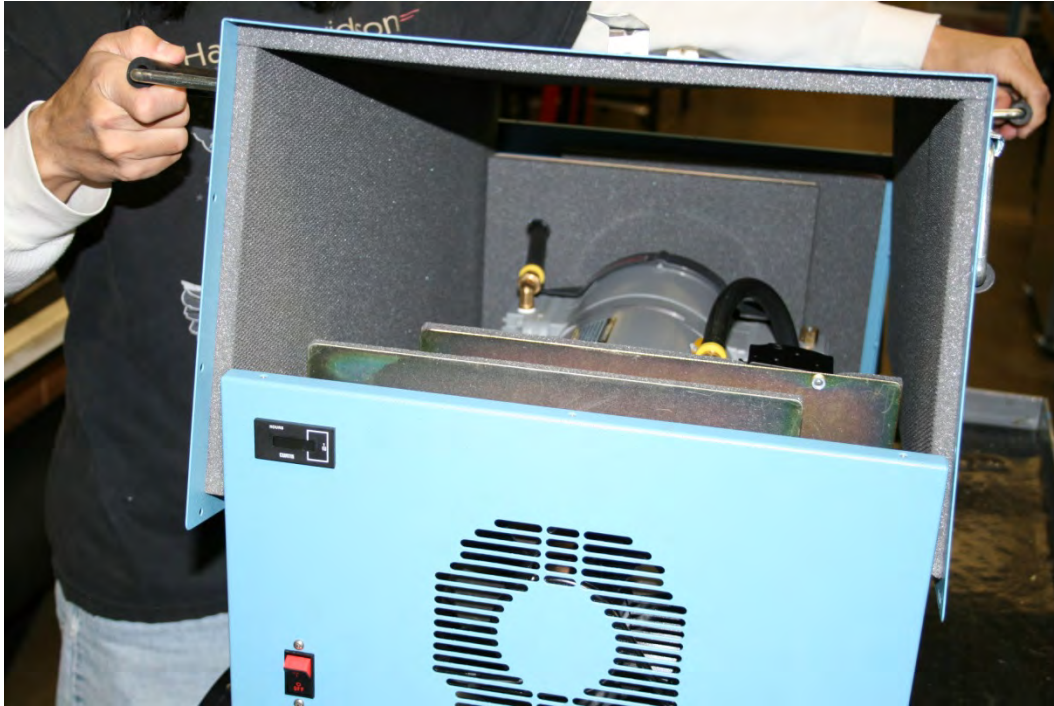
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ACS-517B 60Hz Air Compressor Replacement Procedure

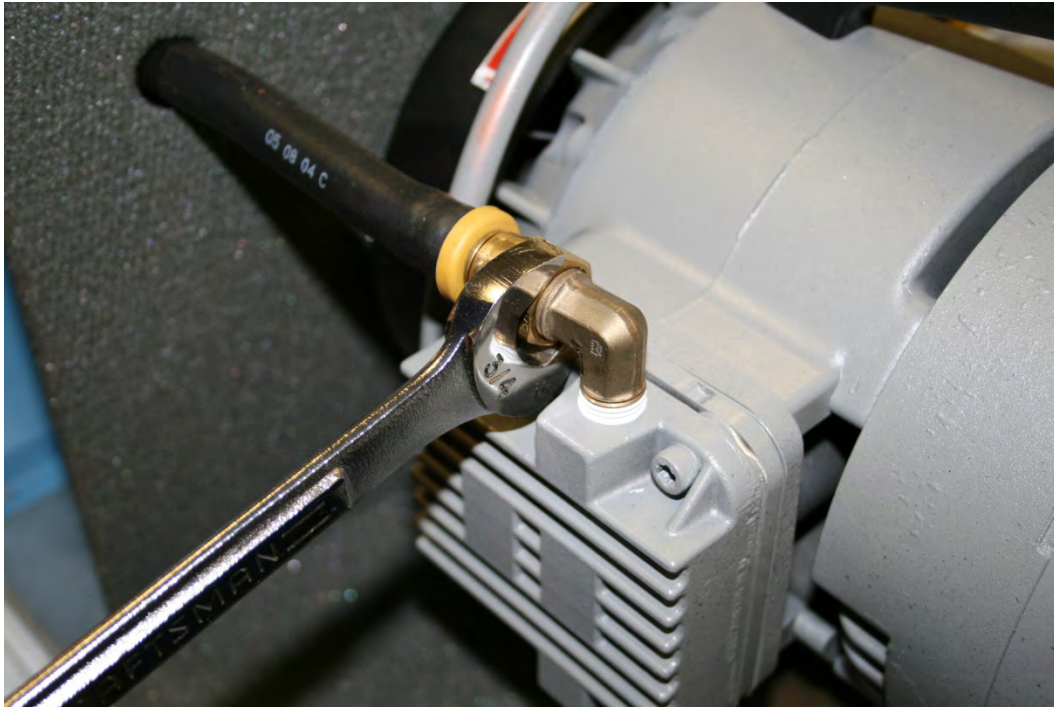
1. Disconnect the power cord and any air hose connection, and then remove the box cover.



2. Remove the air inlet filter.



3. Loosen the flare fitting at the compressor head location using a 3/4" wench and remove it.



4. Pull the hose through the baffle wall.



5. Remove the safety collar on the air out tube elbow of the compressor.



6. Take a 3/8" open end wrench and slide it over the tube at the elbow and push firmly then pull on the tube to remove it.



7. Do the same procedure as before, on the filter side of the tube.



8. Using a 7/16" open end wrench, remove the four nuts, lock washers and flat washers that secure the compressor to the mounting plate.



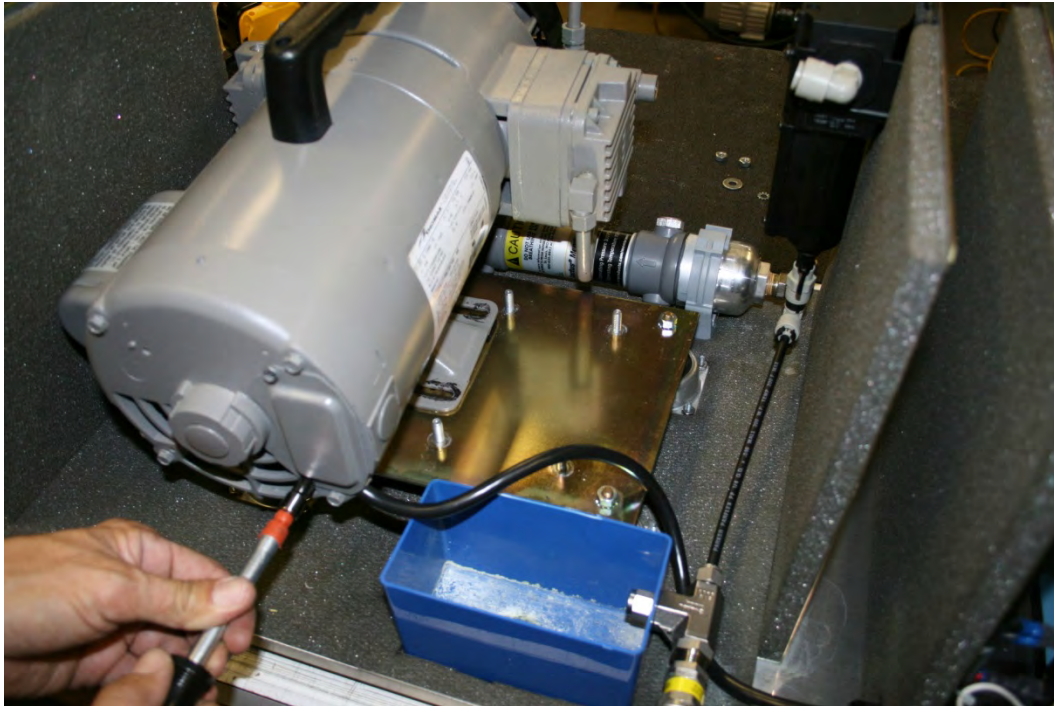
9. Remove the air inlet elbow on the compressor head using a 1/2" open end wrench and save it.



10. Lift and rotate the compressor clockwise and rest it on the mounting plate.



11. Loosen the two screws on the wire management plate at the rear of the compressor.



12. Remove the wire management plate.



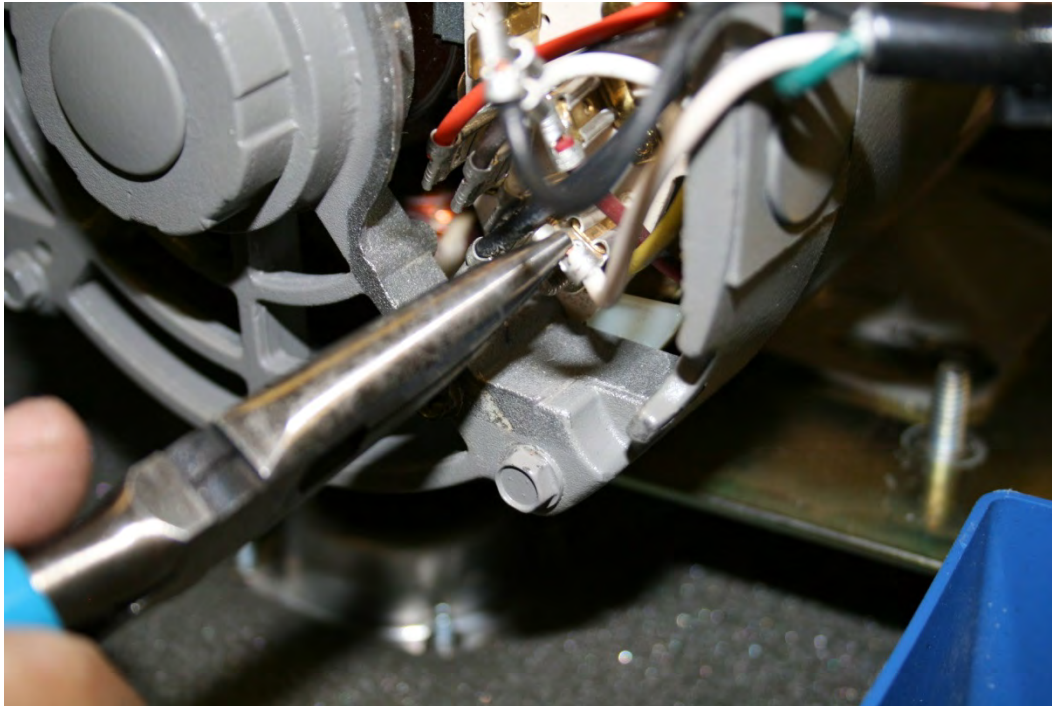
13. Remove the grounding wire screw in the upper right corner.



14. Pull the black wire from L1, Line.



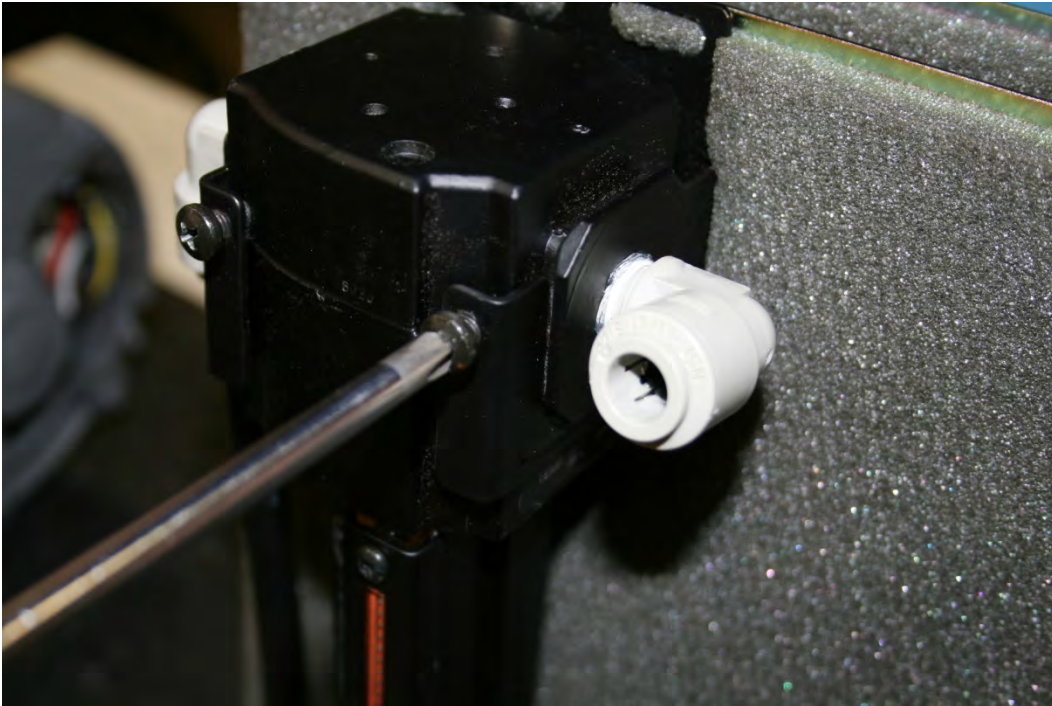
15. Pull the white wire from L2, Line and move aside the power harness.



16. Loosen the air dryer by prying the clamps back.



17. Loosen the two screws that secure the air filter using a Phillips head screwdriver.



18. Remove the safety collar first, then the tube from the air filter elbow, using a 3/8" open end wrench to push on the fitting.



19. Using a 9/16" wrench, remove the plastic elbow from the air filter inlet side.



20. Remove the safety collar from the air filter outlet elbow as well as the tube.



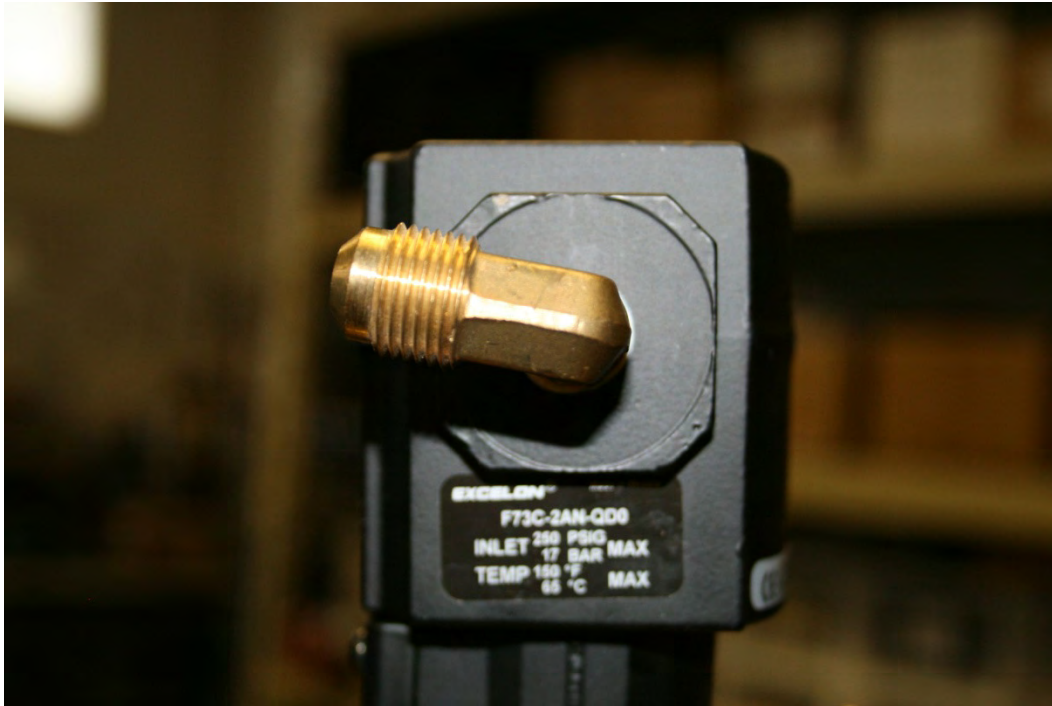
21. Remove the safety collar from the air filter outlet elbow as well as the tube.



22. Insert the elbow into the air filter inlet side using a 1/2" open end wrench.



23. Make sure that this approximate angle is achieved.



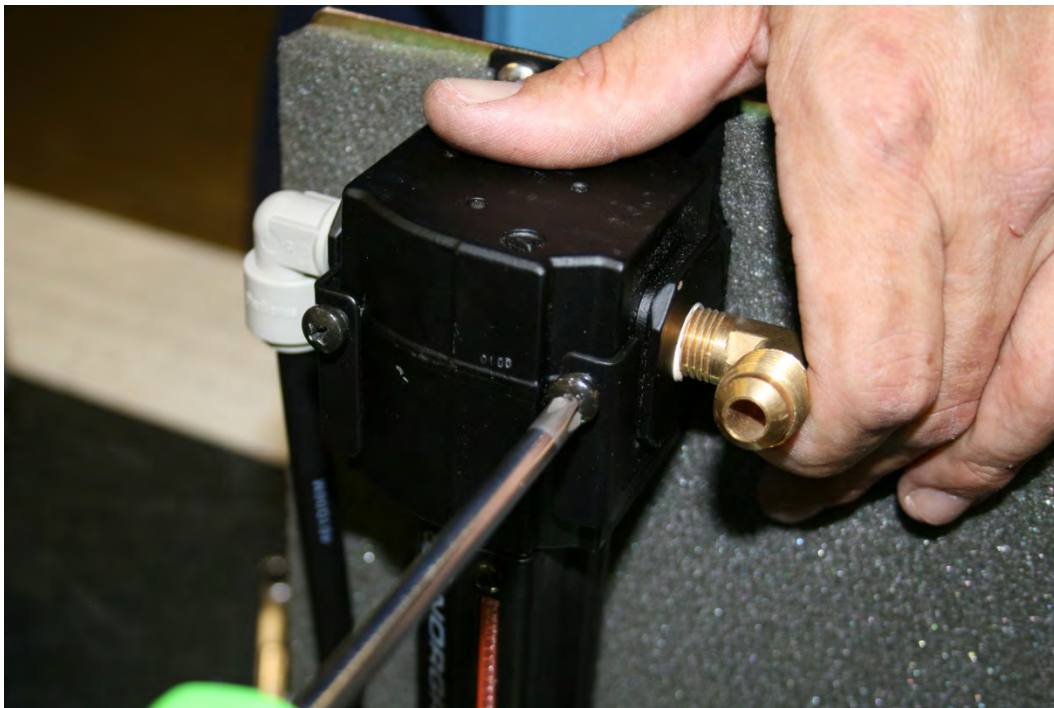
24. Push the tube back into the air filter drain elbow.



25. Push the tube into the air outlet elbow and put the safety collar back on.



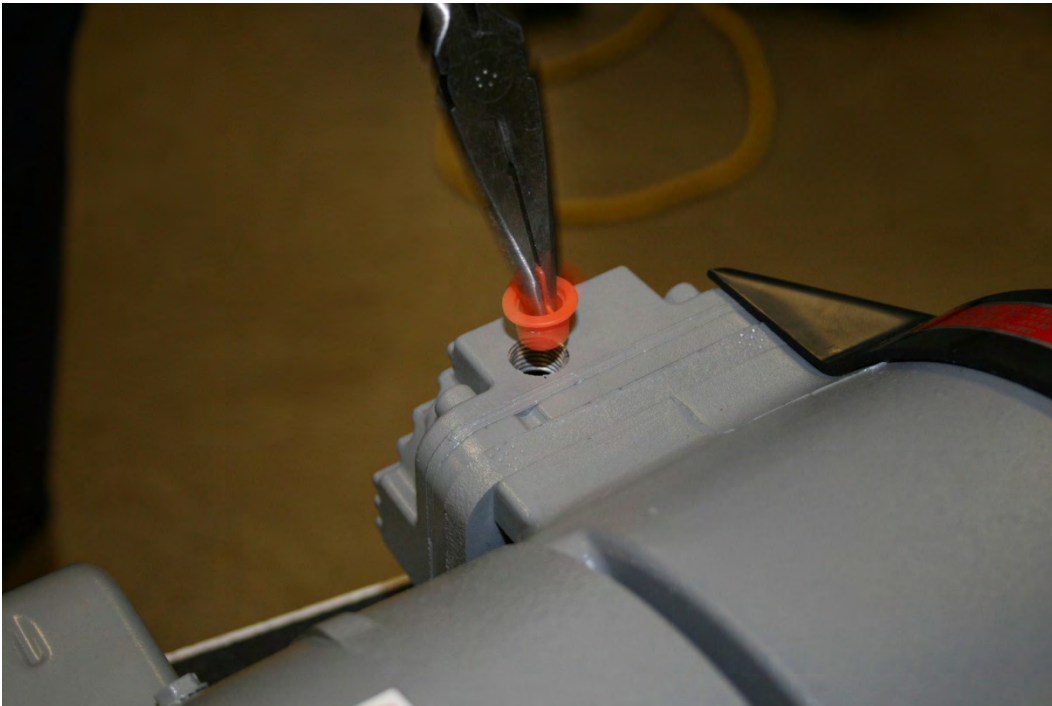
26. Tighten the two screws that secure the air filter.



27. Put the safety collar back on the air filter drain elbow.



28. Remove both head plug caps from the new compressor.



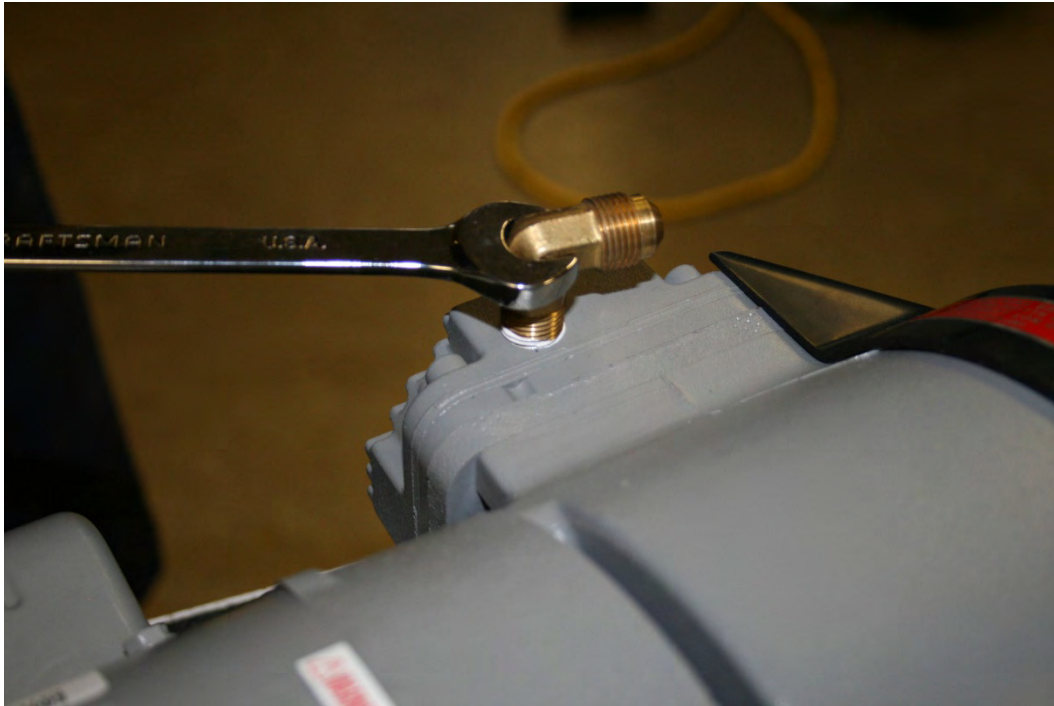
29. Apply pipe sealant to the second brass elbow provided, pipe thread side only.



30. Insert the elbow into the new air compressor head, air outlet side and make sure it faces up.



31. Apply pipe sealant to the pipe thread side only of the brass elbow that was removed from the old compressor and put it in the air inlet side of the new compressor head.



32. This is a top view to show the approximate angle the elbow should be at.



33. Loosen the two hex head retaining screws on the wire management plate of the compressor.



34. Remove the wire management plate. Note, if you purchased a compressor from another distributor other than Thunder, the compressor will be wired for 220 VAC, change to match Diagram "A" or "B" as seen below, depending on the voltage required.



35. Remove the grounding screw using a flathead screwdriver.



36. Verify configuration of terminals for proper voltage range referring to diagrams “A” and “B”

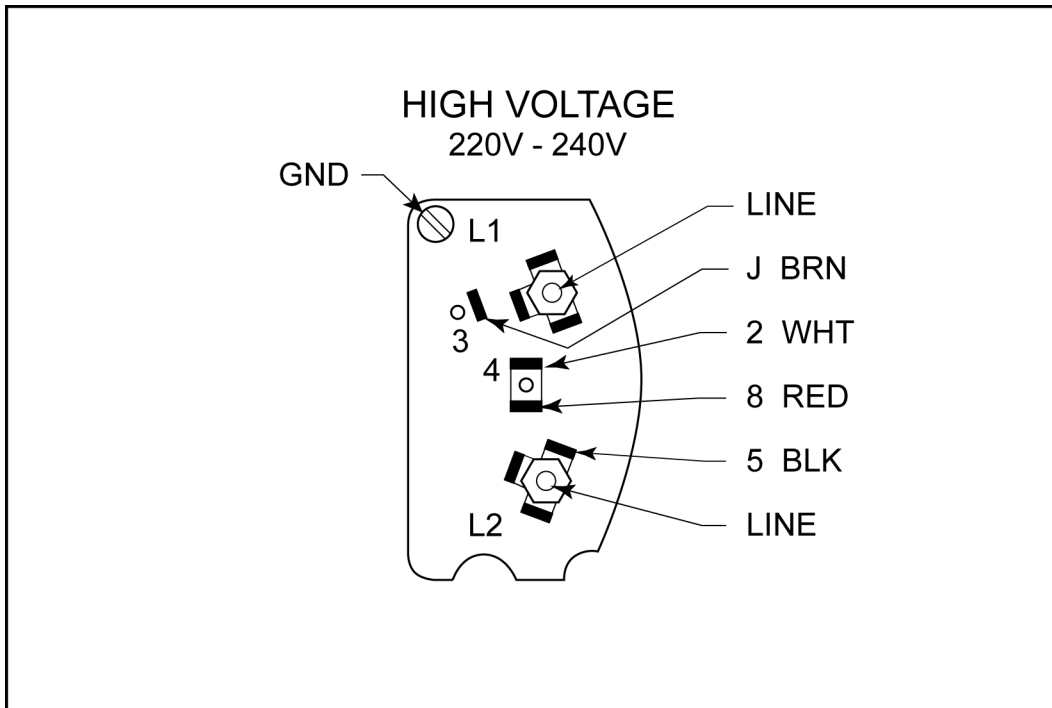


Diagram “A”

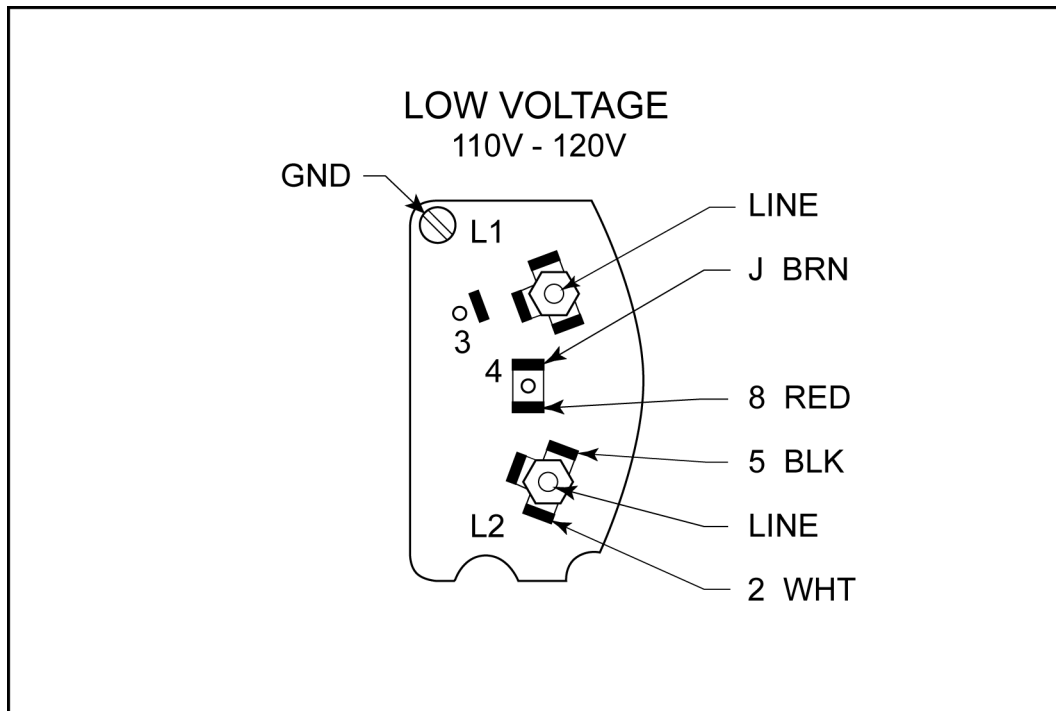
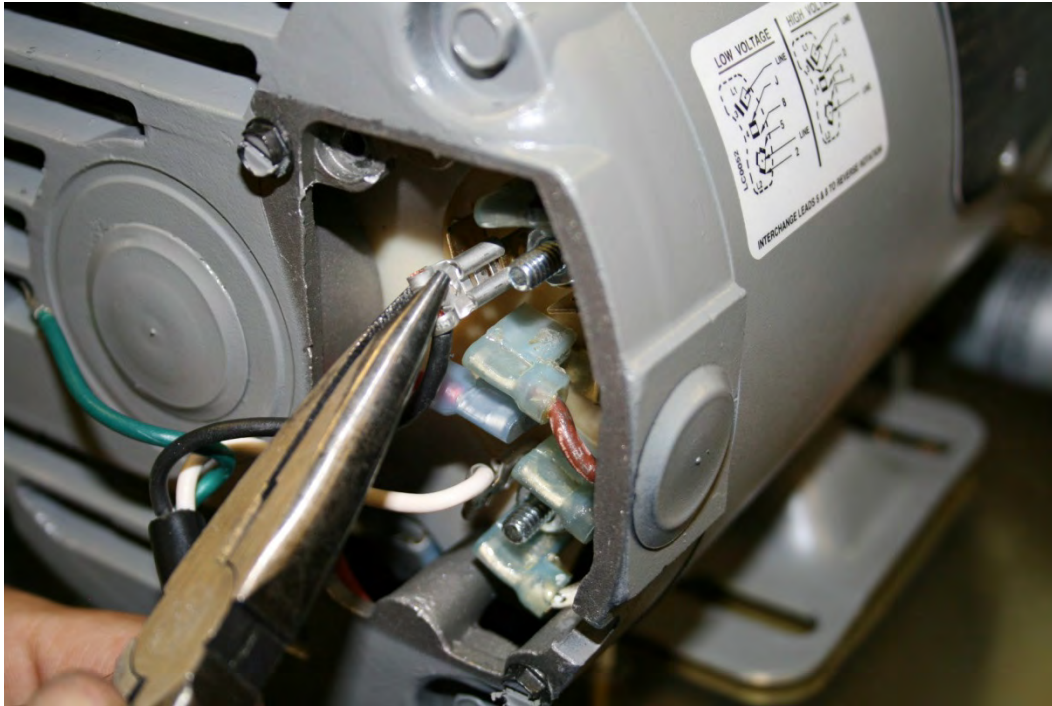


Diagram "B"

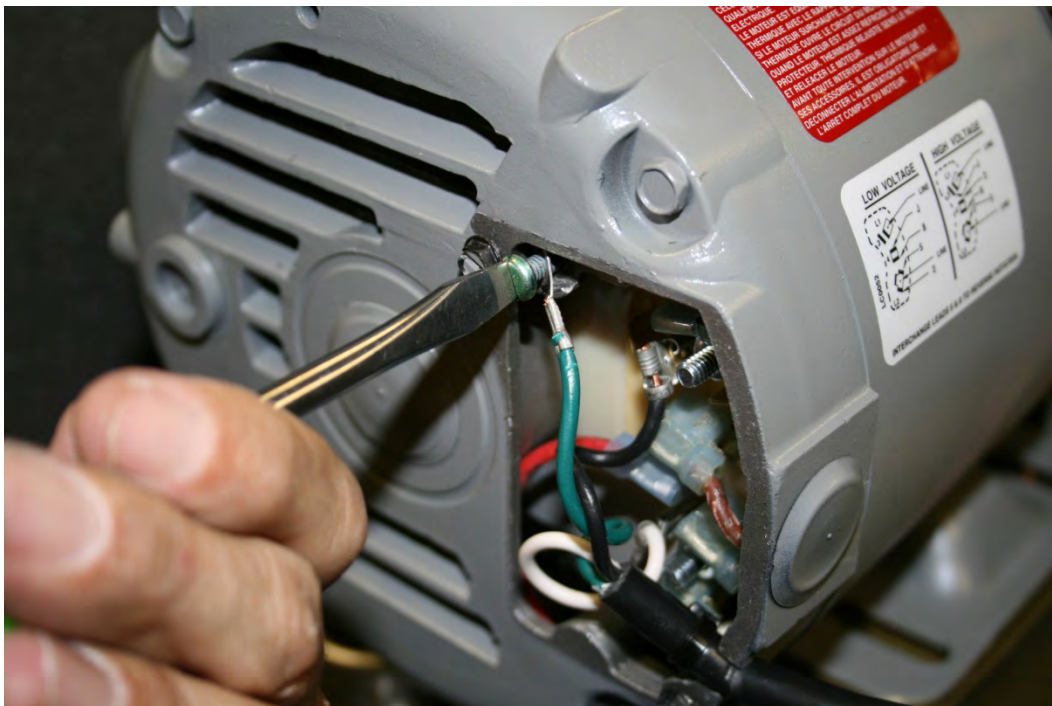
37. Using the existing power harness, push the white wire on the L2 Line connection. Refer to Diagram "B" above for wiring configuration. Note: the two wire leads may be reversed, this does not matter, and either will do.



38. Push the black wire on the L1 Line connection.



39. Place the green wire ground connector on the grounding screw and screw it in the upper left hand corner.



40. Push the power harness cable in the lower right hand corner of the compressor housing.



41. Slide the wire management plate back in position and tighten the screws down.



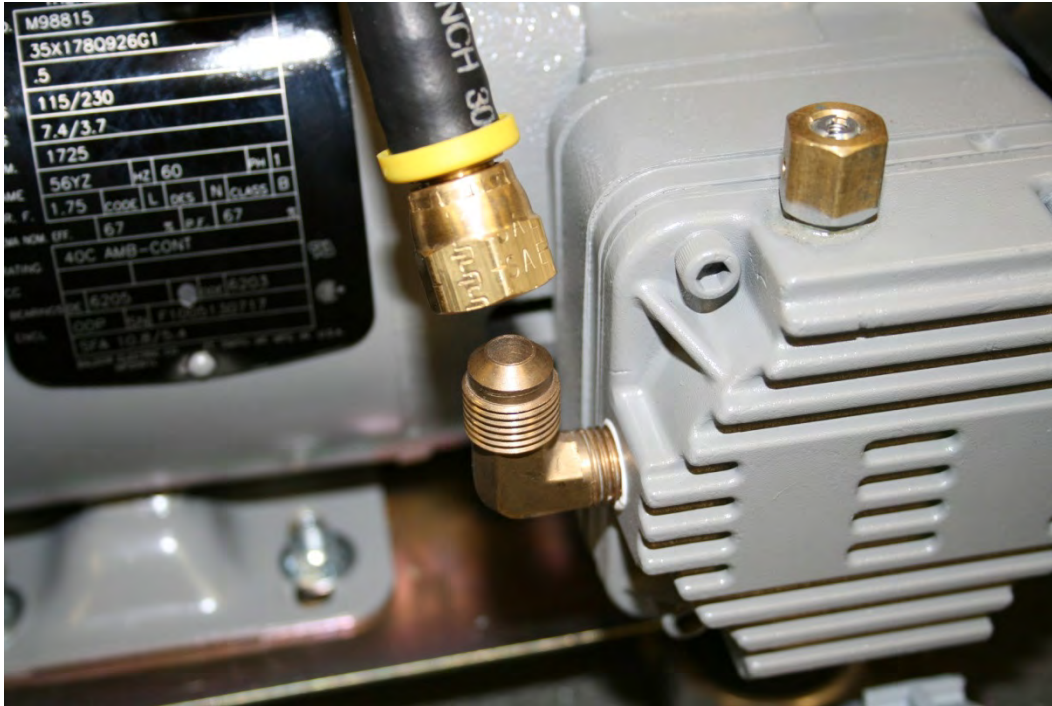
42. Position the compressor over the mounting studs and centered on the plate.



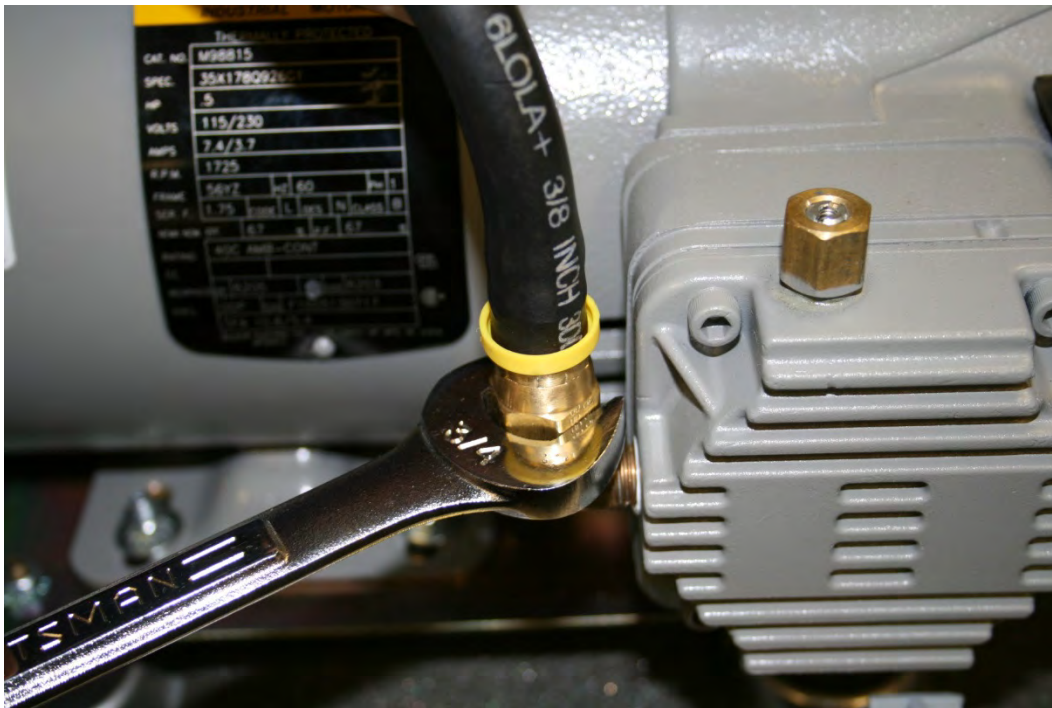
43. Using the existing hardware, tighten with a 7/16" open end wrench.



44. Place the high temp hose with the flare fittings at the compressor head end.



45. Tighten the hose connection using a 3/4" wrench.



46. Put the other end of the same hose on the brass flare elbow at the air filter inlet side and tighten with the same 3/4" wrench.



47. Slide the air hose through the baffle and attach it to the brass flare elbow at the compressor head inlet.



48. Tighten the air hose flare fitting using the 3/4" wrench.



49. Insert the new air inlet filter in the other end of the hose.



50. The filter should be about one to two inches above the base of the enclosure.



51. Put the cover back on the system.

52. Install the power cord and the air hose back on the system.

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