

# DISASSEMBLY & REPAIR PROCEDURES

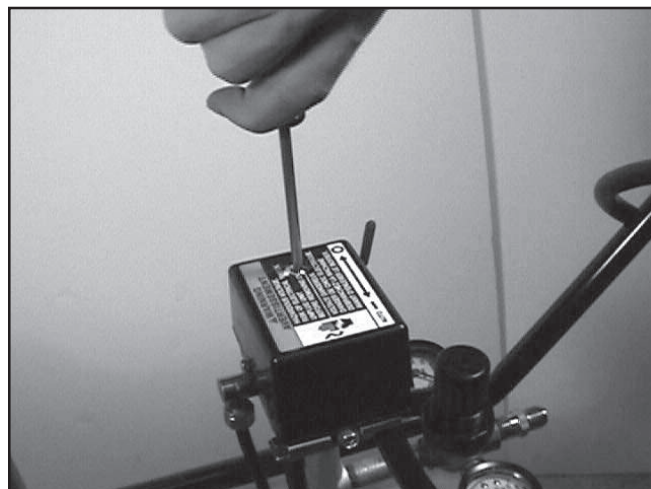
## SINGLE CYLINDER OIL-FREE PORTABLE

**Tools needed:** Tools Needed: Phillips Screwdriver • Needle Nose Pliers • 5/16" Nut Driver • Adjustable Crescent Wrench • 7/16" Crescent Wrench • 3/8" Nut Driver and Socket Wrench • T20-Torx Wrench • Flat-head Screwdriver • Large Screw Driver, • Rubber Mallet • Air Impact Wrench, with a Bar Extension and 7/8" Socket

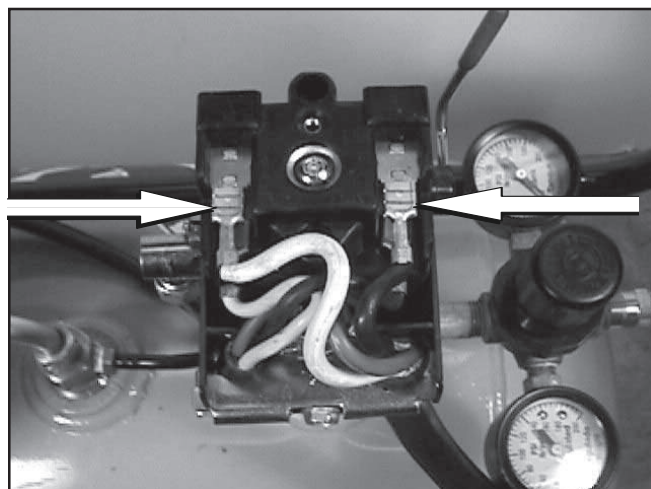
---

**WARNING!** Before making any repairs, be sure the unit is unplugged and tank has no air.

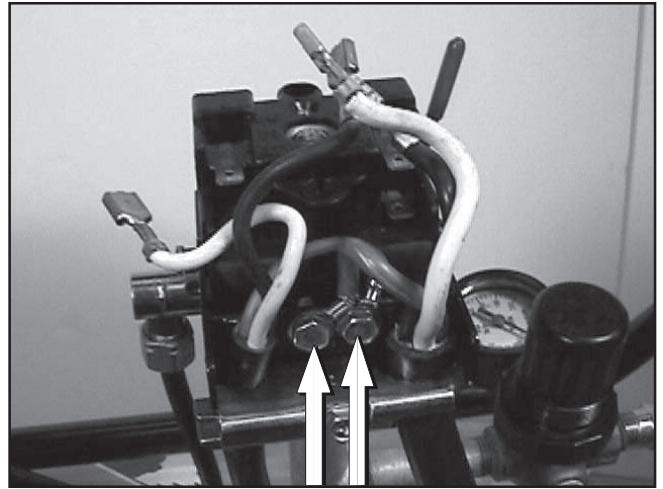
1. To remove the line and load cords from the pressure switch, the pressure switch cover will need to be removed.
  - a. Use your Phillips head screwdriver to loosen the screw located either on the top or on the side of the cover.



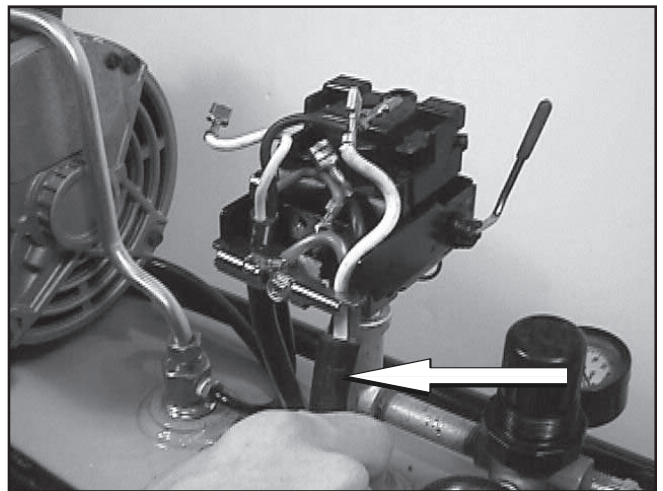
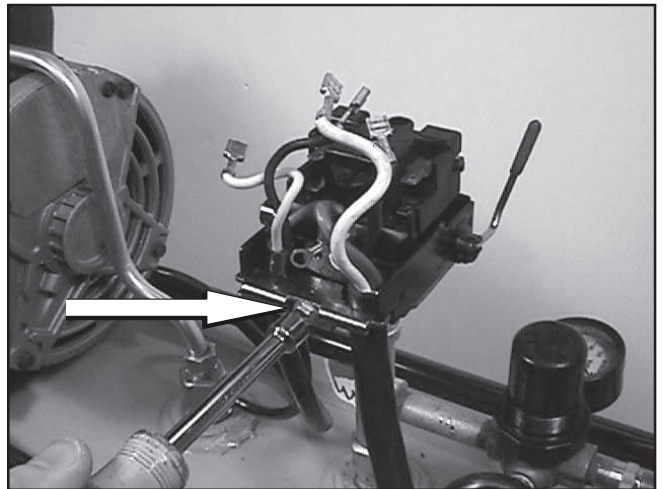
- b. Unhook all of the black and white wires from the pressure switch using the needle nose pliers.



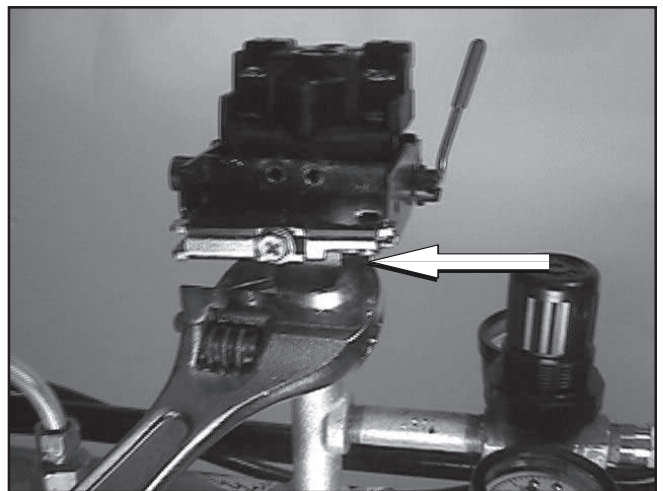
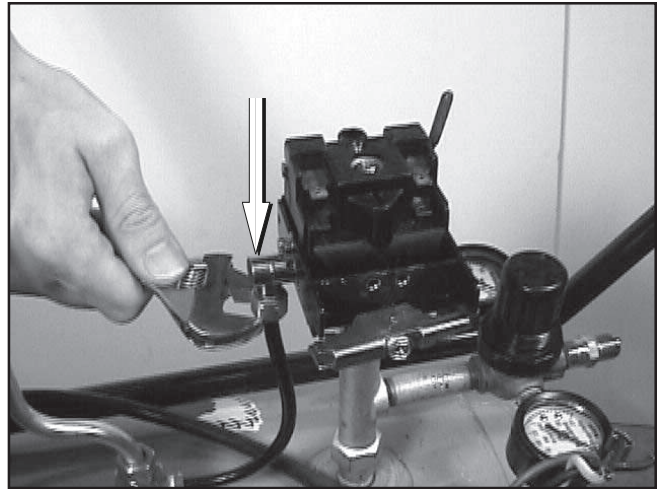
- c. Take a 5/16" nut driver and remove the ground screws, holding down the ground wires.



- d. To take out the cord assemblies, loosen the bracket bar with a 5/16" nut driver. Slide out the cords from the bottom.



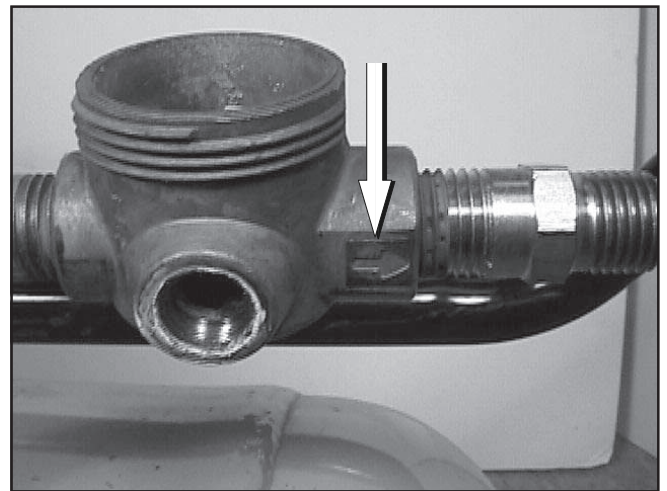
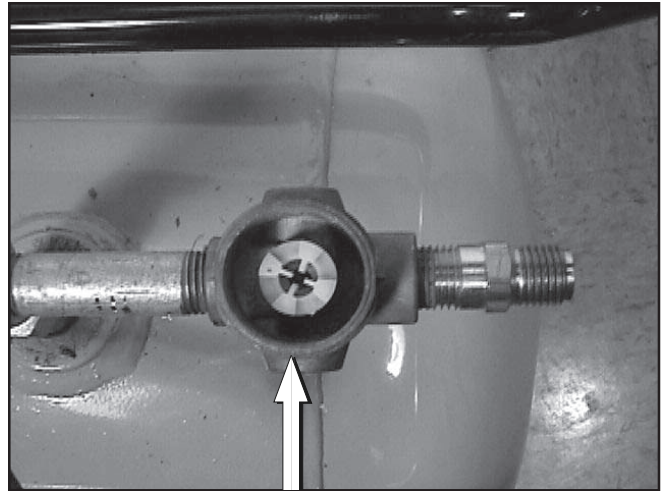
2. To change out pressure switch, first remove the pressure relief tube using an adjustable crescent wrench. With the same wrench, remove the pressure switch from the manifold. To re-assemble, repeat these steps in a reverse order.



3. If the gauges are faulty, use the 7/16" crescent wrench to remove them from the regulator. When screwing the new ones on, be sure to put the tank gauge on the right and the regulator gauge on the left.

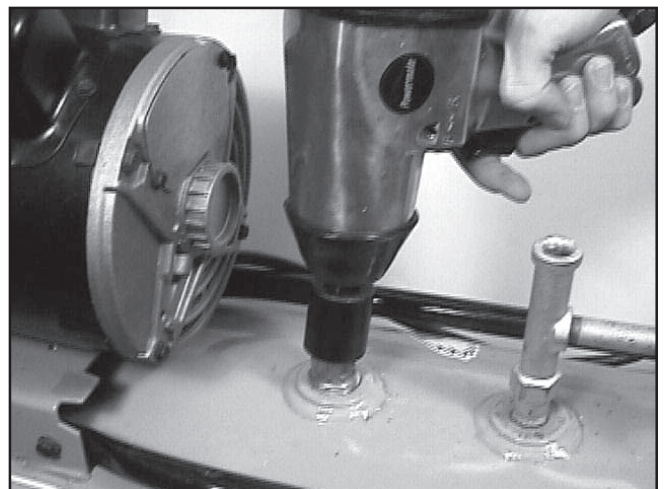
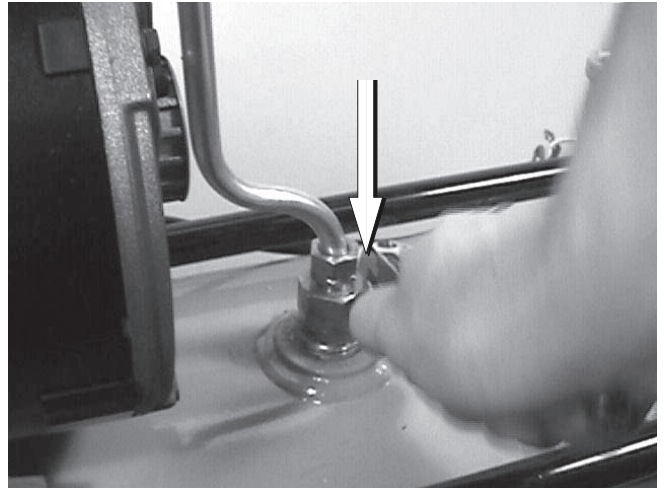
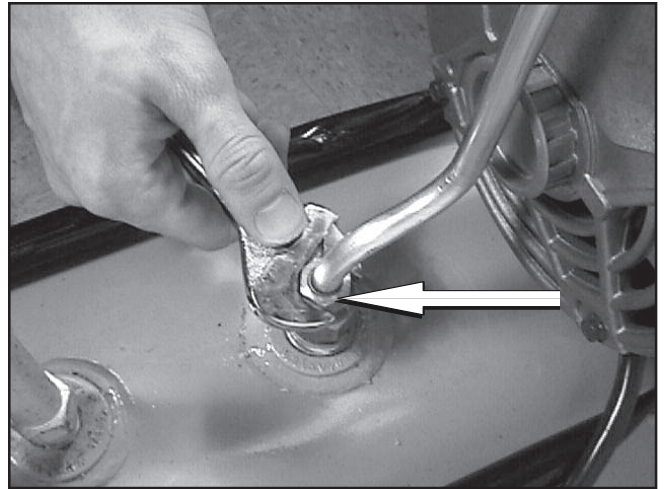


4. For regulator replacement, first remove the gauges with the 7/16" crescent wrench. Next, slowly remove the plastic knob assembly from the main body. Be sure not to lose the internal components of the regulator. Then, unscrew the regulator body from the 1/4" x 2" nipple using the adjustable crescent wrench.
5. For putting the new regulator on, unscrew the plastic cap assembly and screw the main body on to the adapter. Have the arrow, which is stamped on the side of the regulator body facing out toward the air hose line. When re-attaching the cap assembly, the parts go as followed: piston/gasket assembly – plastic washer – regulator spring – cap nut (threaded side down) – regulator knob.

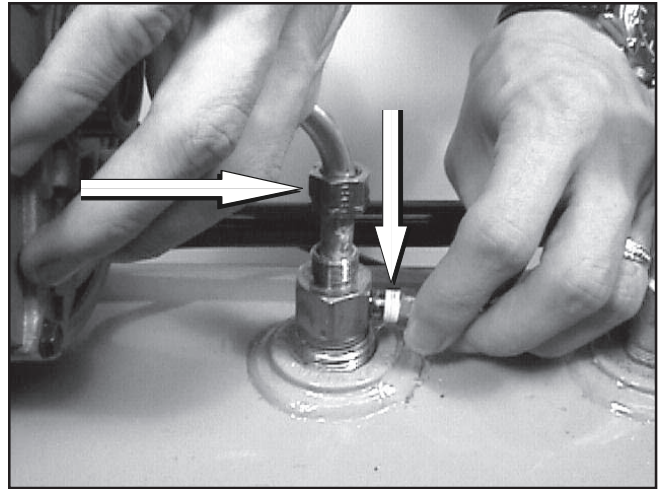




6. The check valve will need to be replaced if:
  - a. The compressor will only build up to 20 PSI and continues to run.
  - b. Motor hums or throws a breaker at cut-in pressure
  - c. Constant leak from pressure relief tube
7. To replace the check valve, use an adjustable crescent wrench to remove the outlet tube, at the nut sleeve assembly, and the pressure relief tube, at the connector. From there, use the air impact wrench to remove the check valve from the bushing or tank.



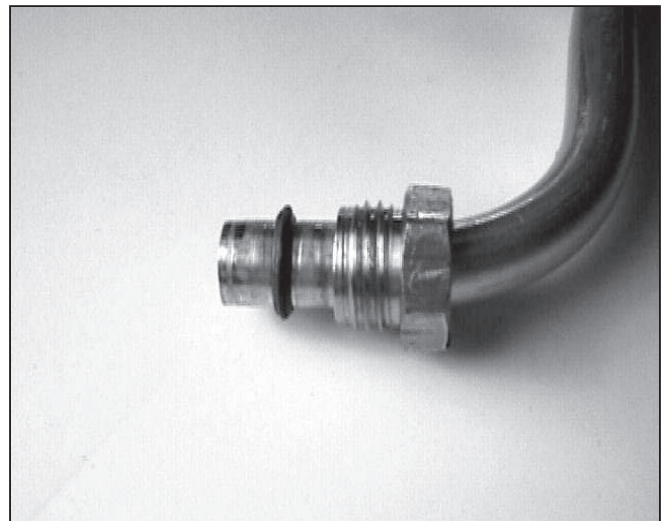
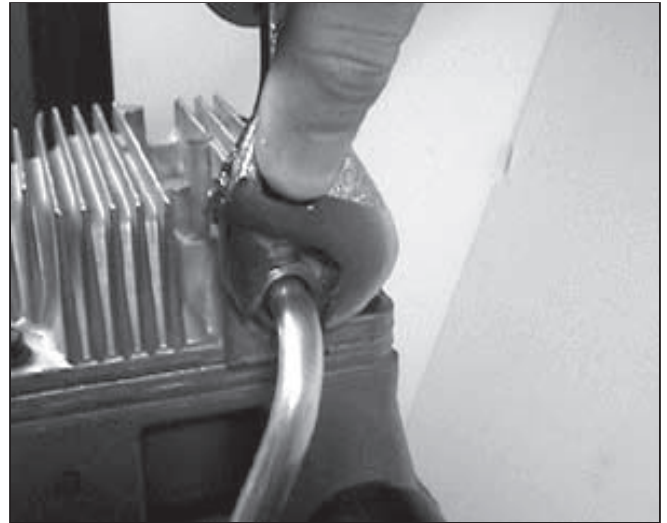
8. If your having to replace the check valve bushing, cote the outer threads with pipe dope or edc locktite screw it on to the check valve first and then use the air impact wrench to screw it into the tank.
9. When the new check valve is secure into the tank, reconnect the pressure relief tube to the check valve and the pressure switch.



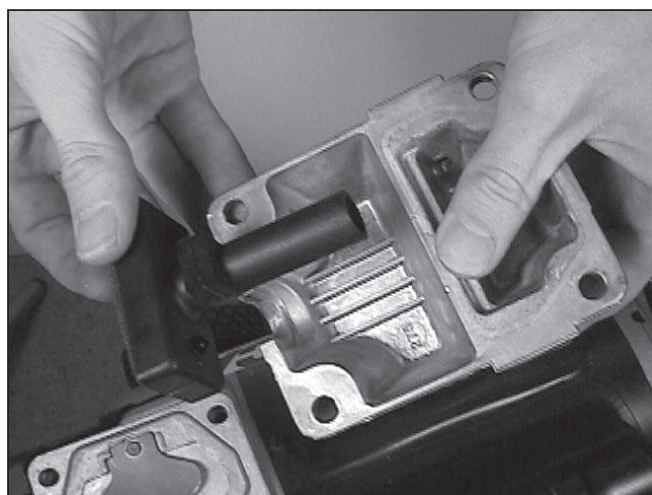
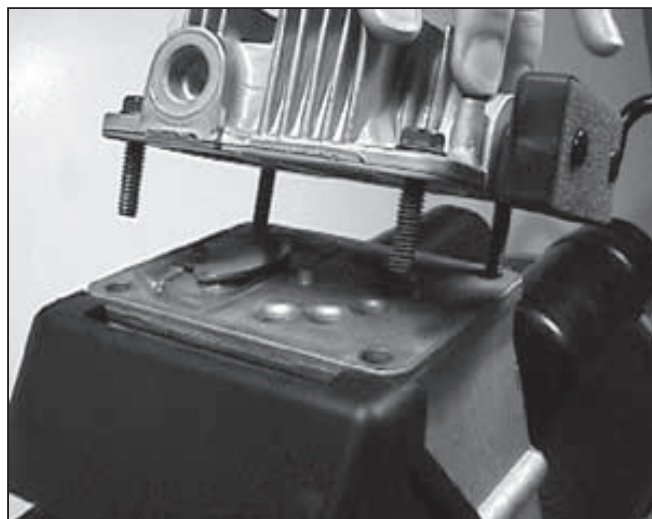
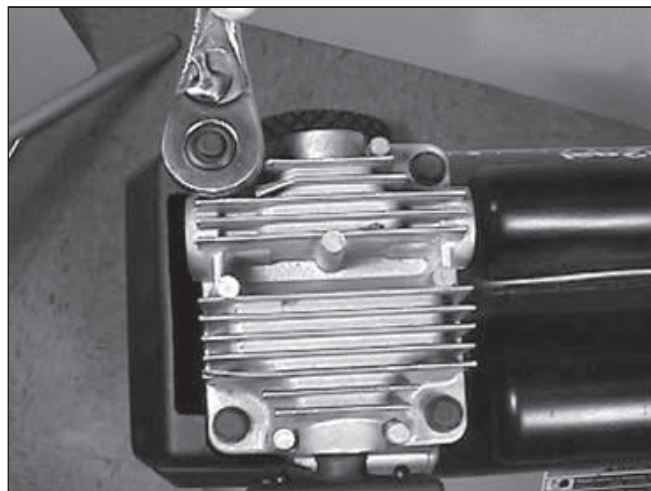
10. Before making any repairs to the pump, the shroud must be removed. For this step, you will need a T20-Torx. Use this wrench to remove the 2 shroud screws. For units with the full shroud, the screws are located on the sides. If the unit has the half shroud with the motor exposed, the screws are located half way down the pump side of the assembly.



11. When replacing the outlet tube, the only tool needed is an adjustable crescent wrench. The wrench will be used to loosen the nut sleeve assemblies from the check valve and the pump head. When loose, the tube will slide out at both ends. Be careful not to bend the tube excessively. If the tube is being replaced, it will be necessary to replace the tube seal and the nut sleeve assemblies.

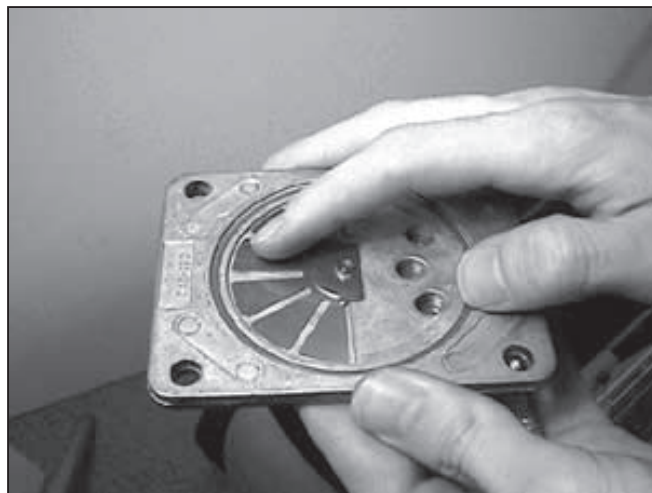


12. In order to replace the filter assembly you must first remove the pump head. Use a 3/8" socket or nut driver to remove the 4 head bolts. Carefully lift the head from the valve plate to keep from tearing the valve plate gasket. The filter body will slide, **NOT UNSCREW**, from the pump head. When sliding in the new filter assembly, be sure the flat end of the filter tube matches up with the base of the pump head.

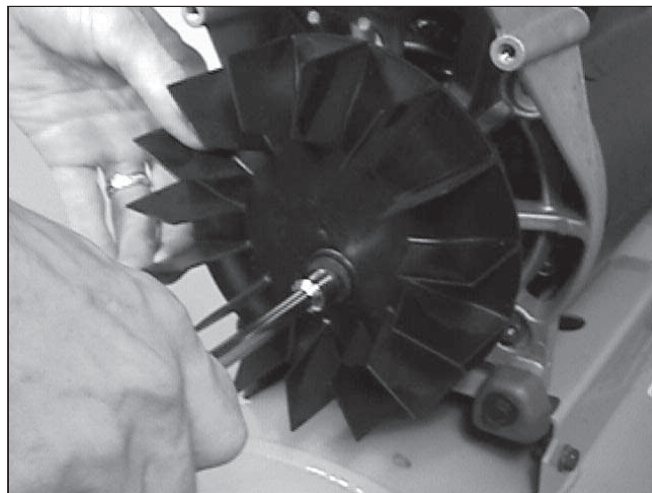




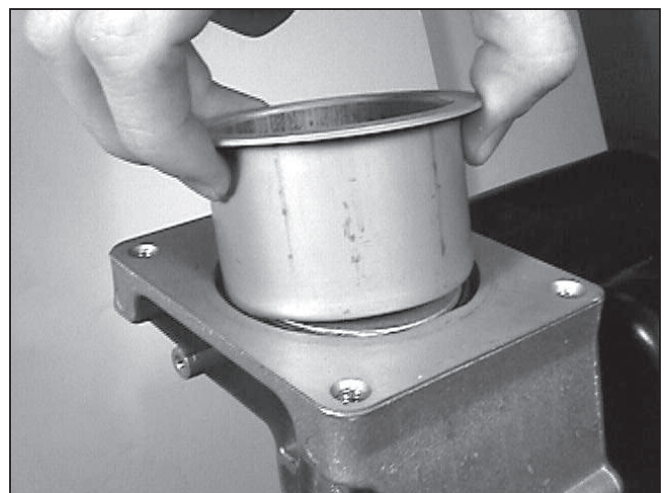
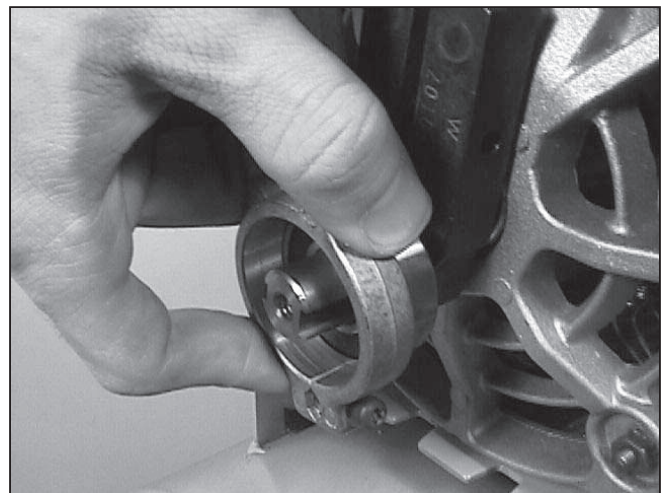
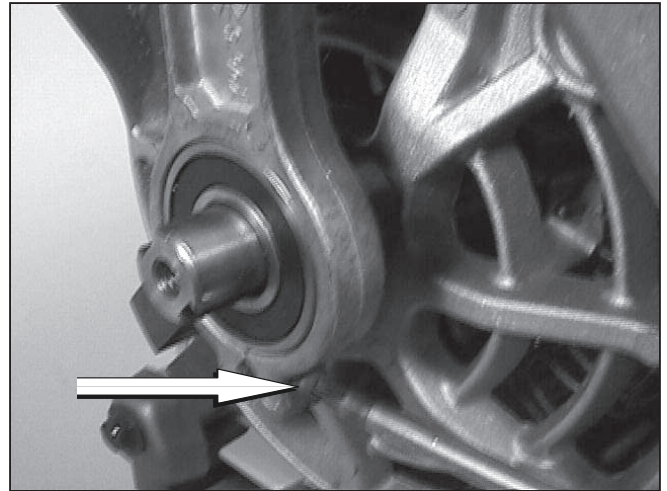
13. To find out if the compressor needs a new valve plate, look for signs of worn-out or damaged flapper valves. The flapper valves should be flat and parallel with each other, and should almost be flush with the valve plate. Warped or a gray or bluish discoloration due to excessive heat damage indicates bad flapper valves.
14. When replacements in the head and valve plate assembly become necessary, it is suggested to replace all gaskets and o-rings to insure a proper seal.



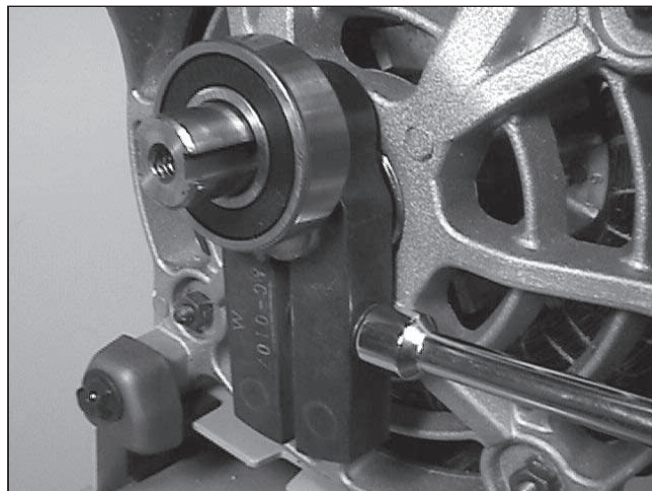
15. To replace the fan, you will need the 3/8" nut driver. Hold the fan while unscrewing the fan bolt and washers. The fan will then slide off the eccentric/bearing assembly.



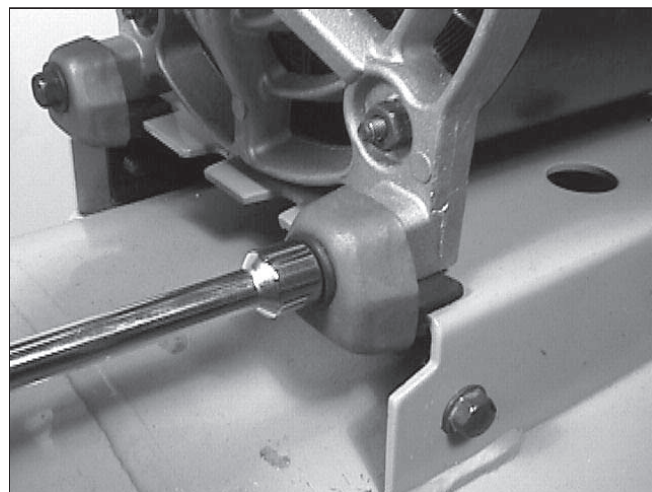
16. Remove the connecting rod using a T20-Torx wrench. The Torx screw is located at the bottom of the connecting rod. Slide the rod off the bearing and check for wear and tear on the piston ring. Slide the cylinder sleeve out from the top of the endbell housing. Check the inside of the sleeve for wear and any deep scoring.



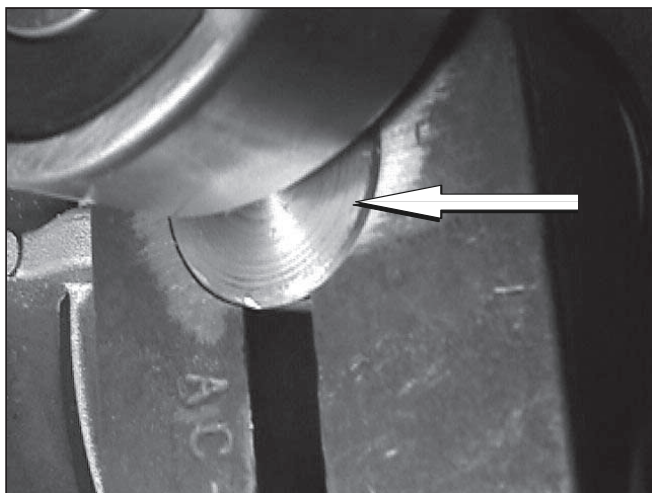
17. To change the eccentric/bearing assembly, simply loosen the counter balance screw with a 3/8" nut driver and slide it off the motor crank.



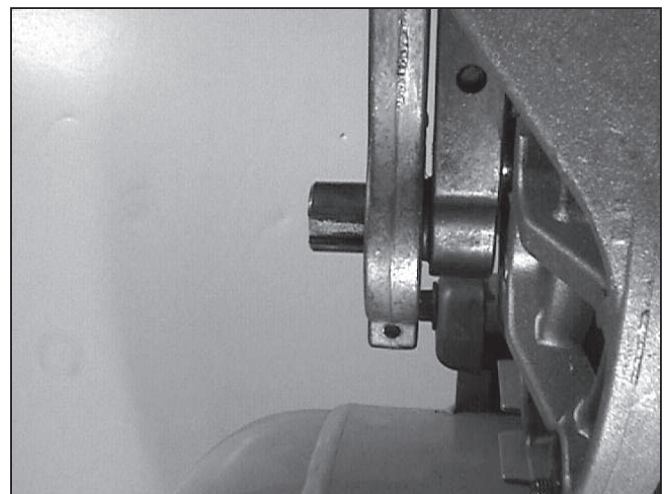
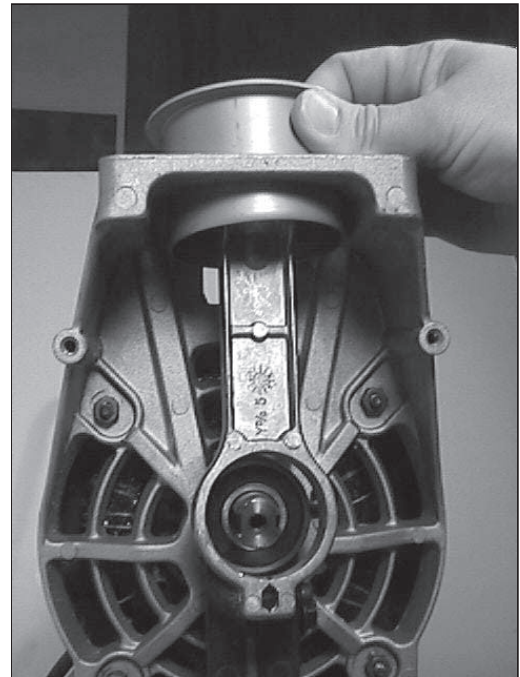
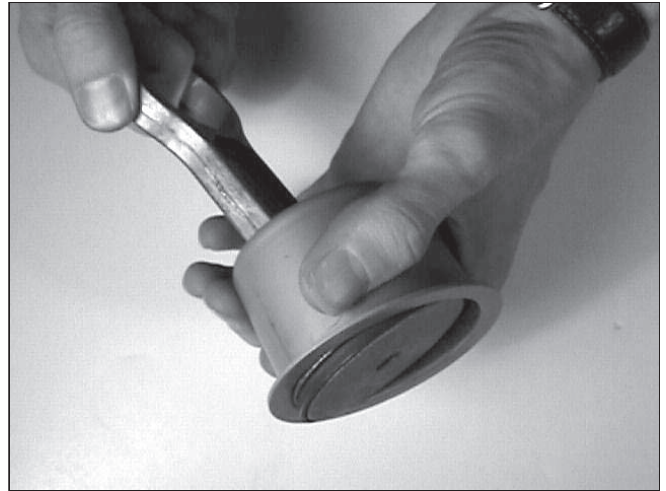
18. With all of the compressor components removed from the motor assembly, the motor can easily be removed by unscrewing the foot bolts with a 3/8" nut driver and sliding the motor, in the proper direction, off the frame clip.



19. When reapplying the eccentric/bearing assembly, only push it far enough on the motor crank to get it even with the tip of the crank. Torque the eccentric bolt to 100 to 120 in.-lbs.



20. Before placing the connecting rod back on to the bearing, slide it in through the top of the cylinder sleeve. Then place the rod and sleeve down through the top of the endbell housing. Now slide the rod on to the bearing, making sure that the counter balance can not touch the rod. Tighten the rod to the bearing with the T20-Torx and torque to 42 to 48 in.-lbs.
21. Reassembling the fan will consist of doing the disassembly procedure in reverse with torquing the bolt to 80 to 100 in.-lbs.





22. To re-assemble the pump head and valve plate, first make sure the gaskets are snug into their proper grooves. Second, have the filter set properly into the head. Line up the valve plate with the pump head to where the side, of the valve plate, with the D-shaped o-ring is opposite the filter assembly on the head. When placing the two on the endbell housing, be sure the outlet tube port is facing in the direction of the check valve. Torque the head bolts back down in a diagonal sequence to 7 to 10 ft.-lbs.
23. Replace the outlet tube and tighten the nut sleeves.
24. Reassemble shroud and torque to hand tight.

