THOMAS

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MODEL SK2770

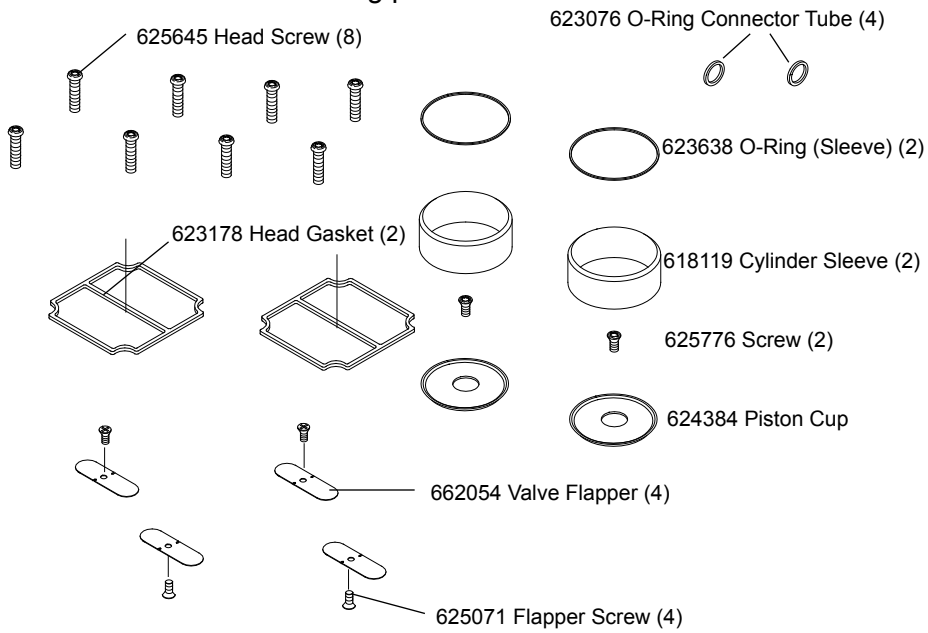
COMPRESSOR SERVICE KIT

For use on 2770 Series Compressors

WARNING: Unplug the compressor before beginning disassembly.

CAUTION: Improper assembly or use of damaged parts may lead to premature failure. To avoid frequent repairs follow the recommended assembly procedures.

This kit includes the following parts:



NOTE: Before you begin, read these instructions thoroughly and assemble the necessary tools. You will need:

- **1/4" Hex socket attachment for torque wrench**
- **Flat blade screwdriver attachment for torque wrench**
- **Torx T-27 attachment for torque wrench**
- **Torx T-25 attachment for torque wrench (for head screws).**
- **5/32" Allen wrench for eccentric set screw**
- **Clean cloths**

Part No.642758 02/07

DISASSEMBLY

NOTE: To avoid confusion, service one side of the compressor at a time.

1st Stage Repair (lead end of compressor)

STEP 1. Clean loose dirt from the outside of the compressor.

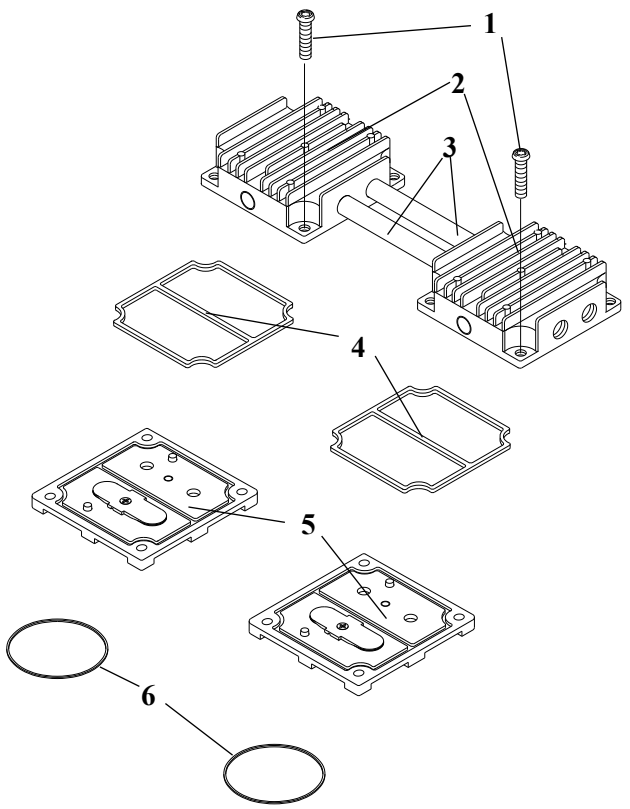
STEP 2. Loosen the 8 head screws (1) and remove the compressor heads (2) and connector tubes (3) as one piece. Pull the 2 heads apart and remove the 2 connector tubes. Carefully remove the valve plates (5) from the bottom of the head.

Caution: Place capacitor off to side leaving it connected to lead wires.

STEP 3. Remove the head gasket O-rings (4) and discard them.

STEP 4. Turn the valve plates over. Remove the valve plate O-rings (6) and discard. Remove the 2 o-rings from the end of the connector tube (3) and replace. Use a blunt object to aid this replacement. Any scratch or dent in this area can cause an air leak.

Figure 1



Notes

REASSEMBLY

STEP 1. With the sleeves firmly seated on the housing, replace the valve plates in same manner as they were. (See Fig. #8). Make sure the top edge of the sleeve locates in the O-ring groove in the bottom of the valve plate.

CAUTION: Make sure gasket is not twisted when seated in groove.

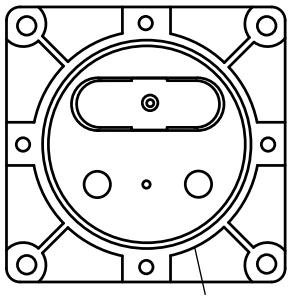
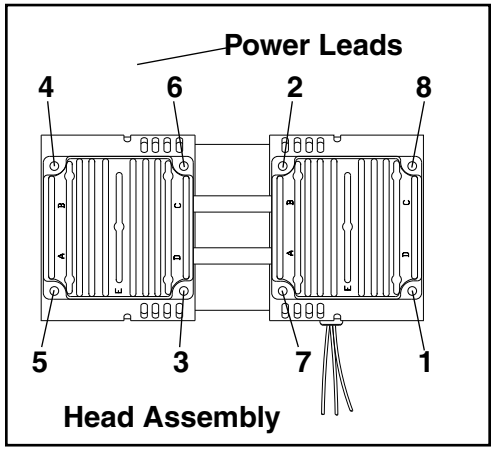


Figure 8

STEP 2. Place heads on the valve plates. Torque the head screws to 40 inch lbs. in a criss-cross pattern.

Numbers indicate tightening sequence



Caution

To avoid property damage or personal injury, always try rotating the fan by HAND prior to connecting the unit to the power source. Check for suction at the air inlet port by placing your finger over the port as you turn the fan. You should feel a slight suction with each rotation of the fan. If you don't feel suction, or if you feel or hear a thump as you turn the fan, DO NOT CONNECT THE UNIT TO A POWER SOURCE; review the assembly procedure for possible error.

STEP 3. Reassemble the fan guards to the compressor. Tighten screws to 10 inch lbs.

STEP 5. Remove the exhaust valve flapper and valve keeper from the bottom of the valve plate (discard flapper and screw). Clean the bottom of the plate with a clean, soft cloth. Install the new exhaust valve flapper and restraint.

NOTE: Torque flapper screw to 12 inch-pounds.

STEP 6. Install the new O-ring, seating it firmly into the groove with your finger or blunt object. (See Fig. #2).

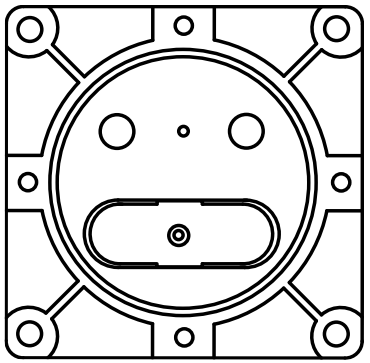


Figure 2

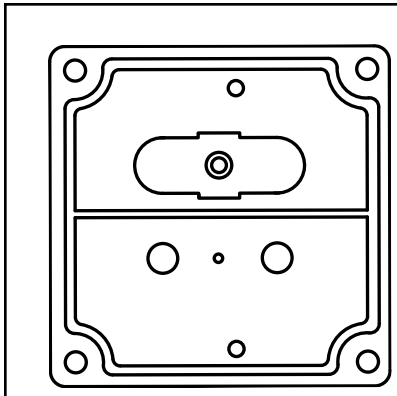


Figure 3

STEP 7. Remove the intake valve flapper and valve keeper from the top of the valve plate (discard flapper and screw). Clean the top of the plate with a clean, soft cloth. Install the new intake valve flapper and restraint.

NOTE: Torque flapper screw to 12 inch-pounds.

STEP 8. Install the new head gasket, seating it firmly into the groove with your finger or blunt object. (See Fig. #3). Set aside.

STEP 9. Remove the fan guard by unscrewing the 2 screws holding it to the housing. See figure 4.

STEP 10. Remove the fan by releasing the pressure from the clip holding it to the shaft. Note position of fan for reassembly. (Hub facing in? Hub facing out?)

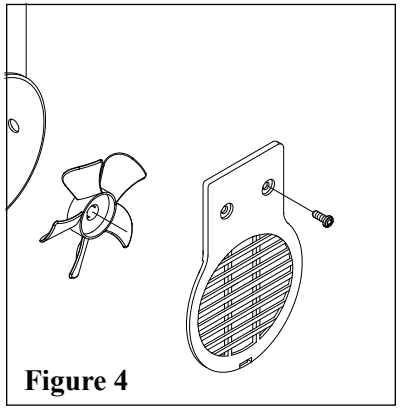


Figure 4

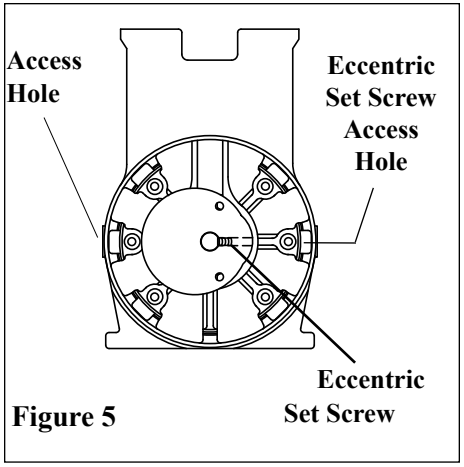


Figure 5

STEP 9. Insert the 5/32" allen wrench into the access hole on the side ot the compressor housing. Loosen the set screw 1/4 turn. Rotate connecting rod to top dead center (180°) and slide the connecting rod/eccentric assembly off the shaft and through the opening in the housing.

STEP 10. Secure the rod assembly in a fixture. Remove the sleeve (1 - discard) from the connecting rod. Remove the screw (2 - discard) from the cup retainer (3-retain for reassembly). Remove the piston cup (4 - discard) and wipe debris from the top of the connecting rod and retainer with a clean damp cloth.

STEP 11. Carefully place new sleeve (1) over connecting rod top. Place new cup (4) in center of connecting rod top. Do not damage the cup. Place retainer (3) on top of cup (counterbore up). Drive new retainer screw to 60" lbs. Carefully push sleeve up forming the cup. Stop pushing the cylinder sleeve up when the piston cup is positioned midway inside the sleeve.

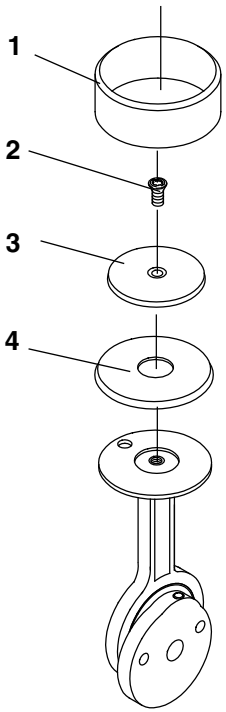


Figure 6

STEP 12. Rotate the rotor shaft so that flat faces up (12:00) Position piston cup at bottom dead center of cylinder sleeve.

STEP 13. Slide the connecting rod assembly onto the shaft until it meets .04" spacer. Align the eccentric setscrew with the flat of the shaft. Rotate the eccentric and shaft 90 degrees so the set screw is visable through the access hole in the housing. Seat the allen wrench into the set screw but DO NOT TIGHTEN.

STEP 14. Temporarily place the valve plate asembly on the compressor housing so the lip of the cylinder sleeve fits into the O-ring on the bottom of the valve plate assembly. Position the valve plate so the mounting holes line up with the threaded holes in the housing. Temporarily insert two head screws into the mounting holes to secure the valve plate assembly.

NOTE: The purpose of this procedure is to correctly position the connecting rod assembly on the the motor shaft before tighting the set screw.

STEP 15. Use a torque wrench to tighten the eccentric setscrew to 80 inch-pounds. Remove the valve assembly and head screws.

STEP 16. Align the flat on the fan with the flat on the motor shaft and slide the fan back onto the motor shaft, making sure you position the fan clip in the same orientation as it was before you removed it. Incorrect orientation of the fan will not provide adequate cooling of the compressor.

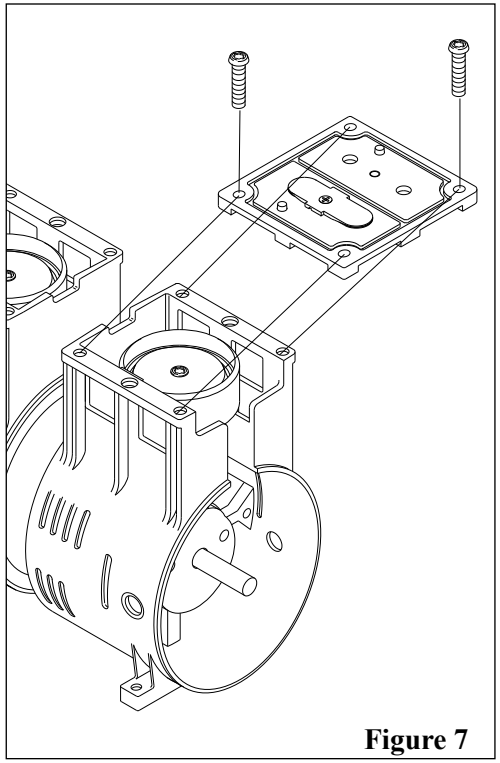


Figure 7

CHECK OPERATION

Hold the sleeve down against the housing with one hand, and slowly rotate the fan with the other hand to ensure all components are lined up properly. As the piston travels up and down it will also rock from side to side. This is a feature of the WOB-L Piston.

REPEAT FOR SIDE TWO