

# **Brookwood Piston Service Kit Instructions**

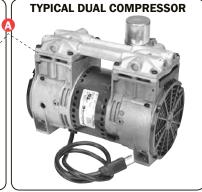
Instructions for both single and dual piston Brookwood compressors.

### SERVICE KIT PARTS LIST

Single	Dual	Diagram	Description
4	8	Α	Head Screw
1	2	В	Cylinder Sleeve
1	2	C	Retainer Screw
1	2	D	Piston Cup
1	2	E	O-Ring Gasket
1	2	F	Valve Restraint*
2	4	Н	Valve Flapper
2	4	T.	Screw 6-32
1	2	J	O-Ring

Valve restraints vary by model #. Take a good look at the compressor before starting to ensure you have the parts and replace them correctly.

# TYPICAL SINGLE COMPRESSOR



### **RECOMMENDED TOOLS**

- ♦ Phillips head screwdriver
- ◆ Torque wrench: T-20 (COM107 only) or T-25, 1/4" HEX, 5/32" allen T-handle
- ♦ 1/4" hex socket and nut driver
- T-20 (COM107 only) or T-25 torx star drivers, or Phillips Torx bit
- ♦ 5/32" "T" handle allen wrench
- ♦ Permanent marker
- ♦ Impact wrench
- ♦ Hammer
- ♦ Butane tech-torch
- ♦ 1 flat head screwdrivers
- ◆ Cordless drill with flathead drill bits
- ♦ Clean rags
- ♦ Shop vac or compressed air



HEX SOCKET ALLEN HEAD - INTERNAL

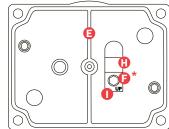




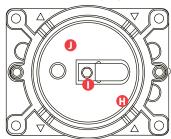
TORX W/FLAT HEAD



# PISTON ASSEMBLY VALVE PLATE TOP



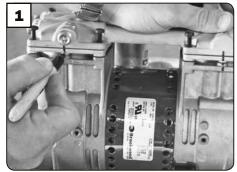
**VALVE PLATE BOTTOM** 



# **BEGIN HERE: Read and follow all assembly procedures.**

**CAUTION:** Improper assembly or use of damaged parts may lead to premature failure. To avoid frequent repairs, read and follow all recommended assembly procedures.

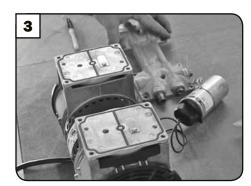
**WARNING**: Unplug the compressor before beginning disassembly. Disconnect unions and remove the compressor from the cabinet. Assemble all tools and check the service kit parts



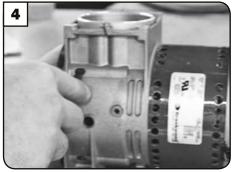
Clean loose dirt from the compressor exterior. Using permanent marke, make line from head plate down to compressor frame (both sides for dual) to help reassemble the heads properly - if not done exactly, you may reverse the airflow.



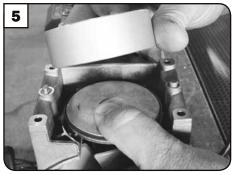
Use screwdriver or cordless drill with a T-25 or flathead bit to remove screws [A] from head plate (single=4, dual=8)



Remove head plate and valve plates



Use flathead screwdriver to push in tabs and remove fan guard.



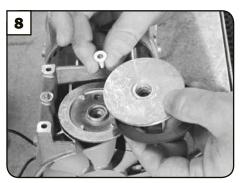
Push piston down to lowest point and remove cylinder sleeve [B].



Remove retainer screw [C] using impact wrench with Philips Screw head or T-27 Torx star key. If it won't budge, heat screw center for 60 sec with torch.



Immediately hit impact wrench with impact hammer until screw breaks loose. If it does not loosen, repeat heat, then hammer.



Remove retainer screw [C] and piston cup [D]. Save piston retainer, you will reuse it!

Make sure all old parts are out of the way so you don't contaminate the new parts.

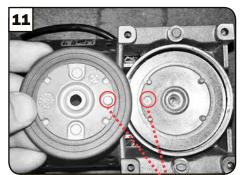


Gently pry off the fan guard. Blowout both open ends of compressor in a circular motion with shop vac or air nozzle.

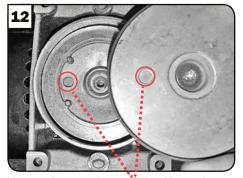


Raise piston rod to its highest point by rotating compressor fan on either side and now add new piston sleeve.

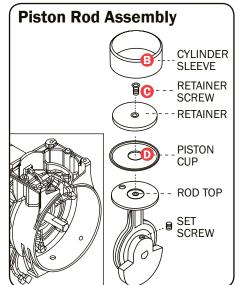
## PISTON HEAD AND RETAINER MUST LINE UP CORRECTLY!

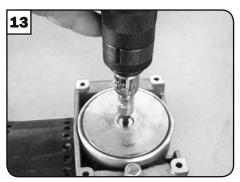


Bottom view of retainer nipple on left and top view of piston head nipple guide hole on right.

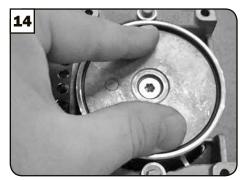


Line up piston retainer on right with top view nipple marked on left side by circle to nipple guide hole on piston top.





If using a torque wrench with Philips Screw head or T-27 Torx star key, use 100 inch-lbs. Be sure to align tab on the bottom of retainer with hole in rod



After tightening all the way down back screw off one turn and try rotating retainer by hand - *it should have very minimal movement.* Tighten back to torque spec.

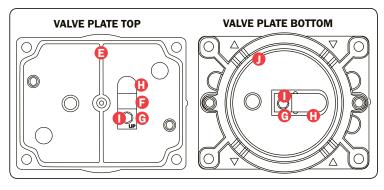
**Dual Compressor:** repeat Steps 3-23 for opposite piston before continuing

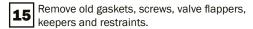
# Valve plate maintenance: Valve restraints vary by model #

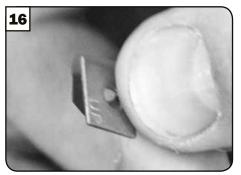
### **IMPORTANT:**

Some kits will have a change in parts where they will be no longer needed, Some parts, including the valve keeper [G] will need to be reused if instructed to in service kit instructions. Take a close look at your valve plate before starting to ensure you replace them correctly.

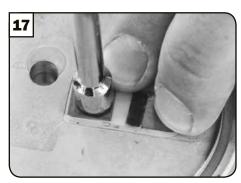
Ε	O-Ring Gasket		
F	Valve Restraint		
G	Valve Keeper		
Н	Valve Flapper		
ı	Screw 6-32		
J	0-Ring		



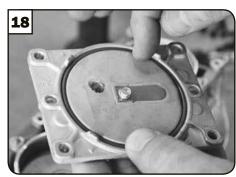




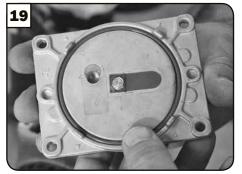
TOP: Assemble the new valve flapper [H], restraint [F\* if there is one] and keeper [G reuse] make sure the word "UP" is visible and all parts are square to each other.



Insert screw. Tighten down to 18 inch-lbs or just hand tighten. Do not over torque or screw will shear off causing damage to compressor internals. Repeat steps 25-26 for BOTTOM of plate.



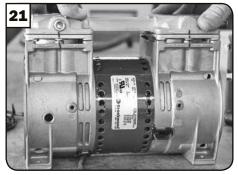
Add O-ring [J], seating it firmly into the groove with your finger. Repeat for Dual compressor.



Place valve plate onto the compressor rectangular shape facing up. Line up the valve plates and head plate correctly with the markings that you made in Step 1.



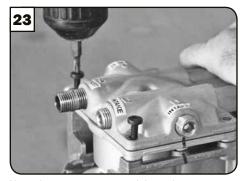
Add the O-ring gasket [**E**], seating it firmly into the groove with your finger. **For Dual compressor repeat steps 24-31 before moving to the next steps** 



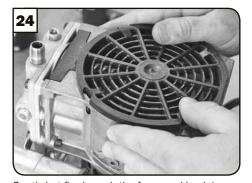
Put head plate on making sure to line up the markings



Insert all of the new screws



Use criss-cross pattern to tighten down compressor head to 40 inch-lbs. Set drill torque to avoid stripping screws.



Gently but firmly push the fan guard back in place

**CAUTION:** To avoid damage or injury, always try rotating fans by hand prior to connecting to power, slight suction should be felt at port. *If no suction is detected, or you feel or hear a thump, do not connect to power. Review assembly procedures and retry test.* After repairing both pistons, turn compressor on and check that everything is working properly. *We recommend that you test the capacitor and its wiring at this time.*