

## 1. Setting the PISTON TOP DEAD CENTER CLEARANCE (TDCC) Instructions

Once the installation of a new connecting rod assembly (BVV-1 or TR21X3) is complete it will be necessary to check the Top Dead Center Clearance (TDCC) between the piston and compressor head.

The following items will be needed:

- Top Dead Center Plate w/Bolts
- Depth Gauge
- 3/8" Wrench
- Cylinder Shims



BVV-TL2



SOLD SEP.



Comes with  
BVV-6

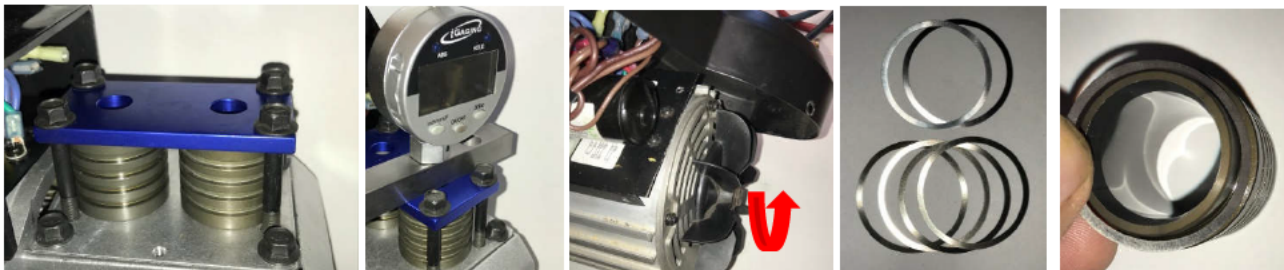
The Depth Gauge needs to be zeroed to the thickness of the TDCC Plate. A good flat surface such as a marble or stone countertop is needed to do this. See pictures below.



Push Zero

Remove the O-ring in the top groove of each cylinder. The TDCC plate should sit directly on top of the metal cylinders.

Using the provided four 3/8 Hex Head bolts, secure the BVV-TL2 TDCC plate onto the compressor cylinders as shown below. Snug each bolt until finger tight. Then use a 3/8" wrench for final tightening. Do not over tighten.



Place the Depth Gauge over the open hole in the plate. The pin of the Depth Gauge should be riding on top of the piston. Rotate the fan through top dead center for both cylinders. Measure the minimum TDCC of both pistons. The optimal TDCC spacing is between .008 and .012". If too low, remove the TDCC Plate and add additional shims to the bottom of the piston.

**CAUTION: IF THE PISTON HITS THE COMPRESSOR HEAD DAMAGE WILL OCCUR TO THE BEARINGS IN THE CONNECTING ROD ASSEMBLY.**

The BVV-6 cylinder kit comes with two .002" and four .004" circular shims. To add shims, remove the TDCC Plate and cylinder(s) to be adjusted. Add the shims to the bottom of cylinder(s) as shown in the picture above.

Repeat procedure to ensure the added shims made the correct adjustment of each cylinder.

Once adjustment has been confirmed, continue to reassemble the compressor.

## 2. Re-install cylinder O-rings.

3. Re-install the compressor head onto the top of the cylinders. Hand Tighten the four 3/16" Socket Head bolts. Once snug then use a final diagonal tightening pattern with the torque wrench set at 10 ft.-lbs.
4. Re-attach electrical leads to HP switch.
5. Re-install Electrical box cover.
6. Re-install handle/Top Plate Assembly back onto head.

Test the compressor assembly for operation and performance. With a manifold gauge set up can quickly check the pressure differential or compression ratio of the compressor. Build up a 300 PSIG head pressure then close off the suction port. The suction pressure should drop to at least 15" hg vacuum.