

CROWER

SHAFT MOUNTED ROCKER INSTALLATION INSTRUCTIONS

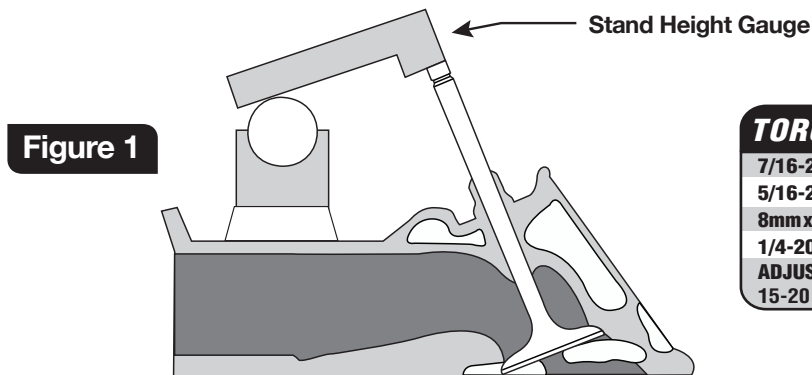
PLEASE FOLLOW THESE INSTRUCTIONS TO ENSURE PROPER OPERATION OF YOUR CROWER SHAFT MOUNTED ROCKERS

Crower manufactures its shaft rockers to head manufacturers standard configuration for max lift. If your application has modification, such as longer valves so you can achieve more lift. Then it may require customization to maintain correct geometry.

1 Determining correct stand height.

First you need to check that all valves are the same length with a straight edge. You may be able to correct short intake or exhaust valves with lash caps. Now place rocker stand on the head. Only use two bolts one on each end. To secure stand to head. Place the 5/8" aluminum shaft supplied with the kit to the cradle on the stand. Our checking height gauge is set for .750" lift. If you have .750" lift it should look like **Figure 1**.

**SMALL
BLOCK**

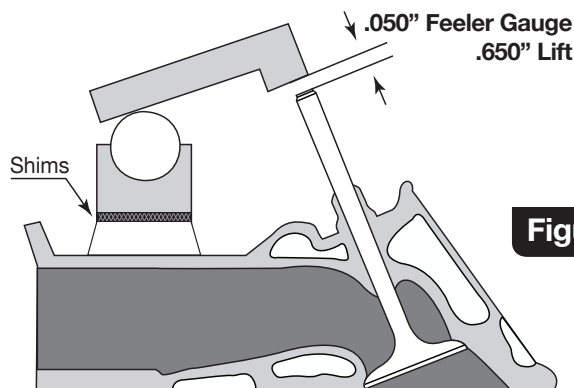


| TORQUE SPECS. | |
|------------------|----------------|
| 7/16-20 | 40-45 ft. lbs. |
| 5/16-24 | 25-28 ft. lbs. |
| 8mm x 1.25 | 25-28 ft. lbs. |
| 1/4-20 | 5-10 ft. lbs. |
| ADJUSTER JAM NUT | |
| 15-20 FT. LBS. | |

The Gauge should contact the top of the valve and rocker shaft as shown in Figure 1, for .750" lift.

2 For lift less than .750

the shaft height should be raised by half the difference. Let's say you have .650" lift $.100" \text{ difference} \div 2 = .050"$ This needs to be added to valve side and shim stand up, till shaft touches bottom of gauge, like **Figure 2**.



For .850" lift shaft needs to be lowered by .050" like **Figure 3**.

Figure 3 Continued other side →

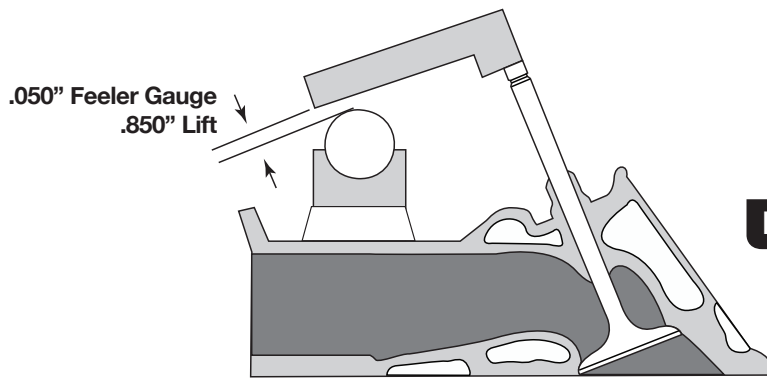
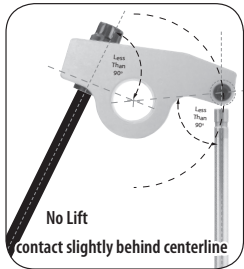


Figure 3

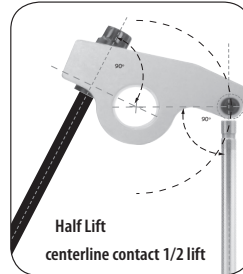
Now If you have two different lifts, on intake & exhaust you need to average out the two lifts. Let's say you have .680" lift on intake and .640" exhaust, the average would be $.660" - .750" = .090" \div 2$ equals $.045"$. So you need to raise the shaft by $.045"$ like **figure 2**. **THESE HEIGHTS ARE CRITICAL TO MINIMIZE TIP TRAVEL ACROSS THE VALVE STEM.**

Tip Travel

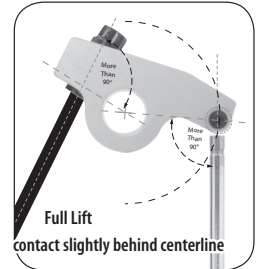


When the valve is closed tip contact is slightly behind the centerline of the valve.

At highest unit loading (approx. 1/2 lift) tip contact ideally is on the centerline of the valve. The valve train is overcoming spring pressure and, more importantly, rapidly accelerating its mass. To minimize deflection, side loading and frictional loss, we want the valve train geometry in its strongest and straightest configuration at this point.



When the valve is fully open, tip contact is slightly behind the centerline of the valve. The valve train in this position (at high RPM) feels the least amount of unit loading as float approaches...everything gets momentarily weightless.



Big Block is the same procedure except exhaust stand can be raised or lowered independently for different lifts.

Note: The shaft height gauge supplied with this assembly is manufactured for 0.750" of valve lift. For lifts less than 0.750", the shaft height should be raised by half the difference. For lifts greater than .750" lift, the shaft height should be lowered by half the difference.

3 Determine Correct Pushrod Length

Place an adjustable pushrod checker into the lifter and install the rocker arm assemblies; one intake and one exhaust. Be sure the cam is rotated to the base circle. Seat the bottom of the adjuster screw up against the recess in the rocker arm and turn the adjuster screw clockwise 1 to 1 1/2 turns down. This is the initial adjuster position. Use adjustable pushrod to achieve proper pushrod length with valve lash. If your adjustment requires less than 1 full turn or more than 2 turns you will need a different pushrod length to achieve the correct adjustment. Adjusting outside of this range will cause incorrect geometry and may also damage your rockers.

Note: When tightening shaft hold down bolts, cam should be on base circle. **NEVER USE HOLD DOWN BOLTS TO COMPRESS VALVE SPRINGS.**

Note : Check pushrod clearance before final assembly.

Note: Big block has two different length stand bolts use the longer one on exhaust.

4 Final Assembly

After all of the stand heights have been set, use Loc-Tite™ "271" Sealant on all 7/16" stand attaching bolts and torque to 40-45 ft-lbs. Now torque 1/4 bolts used on big block to 5-10 ft. lbs. When the stands are in place and tightened down, place the rocker arm and shaft assemblies on the stands and tighten the shaft hold down bolts to 25-28 ft-lbs. After all of the rockers have been tightened down, set valve lash and torque the adjuster screw jam nuts to 15-20 ft-lbs. On LS cyl. heads with 8mm stand bolts torque to 25-28 ft. lbs.

Note: Check valve cover clearance.

WARNING TO INSTALLER

THE PRECISION ROLLER TIPS ON YOUR CROWER SHAFT ROCKERS HAVE BEEN PACKED WITH A MOLYBDENUM BASED HIGH PRESSURE GREASE IN ORDER TO PROMOTE TROUBLE FREE BREAK IN. EXCESSIVE SOAKING AND/OR CLEANING IN SOLVENTS WILL REMOVE OR BREAK DOWN THIS LUBRICANT AND INCREASE THE POSSIBILITY OF SEIZURE OF THE TIP UPON INITIAL STARTUP. AS YOUR CROWER SHAFT ROCKERS ARE ASSEMBLED WITH GREAT ATTENTION PAID TO DETAIL AND CLEANLINESS, A MINIMAL AMOUNT OF CLEANING SHOULD BE REQUIRED. UNDER NO CIRCUMSTANCES SHOULD ROCKERS BE PERMITTED TO SOAK IN SOLVENT FOR EXTENDED PERIODS.

PLEASE NOTE: CHECK PUSHROD CLEARANCE BEFORE FINAL ASSEMBLY.