INSTRUCTIONS

Short Travel Hydraulic Roller Lifters

Applicable Part #s: 875-16, 877-16, 15850-16, 15853-16, 15854-16, 15956-16

Thank you for choosing COMP Cams® products; we are proud to be your manufacturer of choice. Please read this instruction sheet carefully before beginning installation, and also take a moment to review the included limited warranty information.

The following instructions cover the correct guidelines for installing COMP Cams® Short Travel Hydraulic Roller Lifters. The **recommended** lifter pre-load should be set at zero to 1/4 of a turn of the wrench on the rocker arm adjusting nut for optimal performance.

Setting Hydraulic Lifter Pre-load

The correct amount of lifter pre-load is important to help efficiently control the valve train. Insufficient pre-load will cause valve train noise, while too much may damage the hydraulics of the lifter or cause low manifold vacuum. By following the four steps listed you will help ensure proper engine performance and reliability.

Instructions:

1. **Lifter Preparation**: Remove your new COMP Cams® lifters from the packaging, and clean the lifters thoroughly in mineral spirits or an equivalent solvent. It is not necessary to "pre-pump" hydraulic lifters full of engine oil prior to installation and valve adjustment. It is actually undesirable to do so as the "pumped up" lifters will cause the valves to open during the adjustment process, rather than positioning the lifter plunger in its operating position as it is supposed to do. "Pre-soaking" hydraulic lifters in a bath of engine oil is a good idea but not mandatory. Doing so ensures that the lifters are adequately lubricated on their outer surfaces prior to installation. It may also result in a quieter engine start up as the oil in the bath may displace some air from the lifter's plunger reservoir. When you install the lifters, make sure they fit well. Any excess clearance or tight lifters can cause damage to the camshaft, leading to engine failure. **Note: Contact your engine builder or block manufacturer for your specific clearances.**

2. **Setup:** With your cam installed, simply place the prepped lifters into the lifter bores. If you are using hydraulic rollers with a link bar, pay close attention to which direction the link bar faces. The link bars on retro-fit lifters should face towards the valley of the block. If the link bar has an arrow on it, make sure the arrow is pointing upwards (↑). If your engine block was originally equipped with hydraulic rollers make sure the lifter roller wheel is positioned to roll along the camshaft lobe. Failure to do so will result in camshaft damage and improper oiling. Now that the lifters are in place, you can begin to install the pushrods and rocker arms.

3. **Pushrod and rocker arms:** Clean all pushrods thoroughly because most engines oil through the center of them. If the original pushrods are being used, be especially sure they come clean inside and out. Apply a small amount of COMP Cams® Engine Assembly Lube (Part #102) or an equivalent lube on each end of the pushrods, and install them into the engine. Clean all rocker arms thoroughly. If the original rocker arms are used, examine each one for excessive wear and replace any that are questionable. Apply a small amount of lube on all contact areas of the rocker arm. With a clean rag or

towel, wipe the tips of the valves clean and apply lube to them where the rocker arms will come in contact with them. Also be sure to check the valve stem tips for excessive wear. Next, install the rocker arms. Do not tighten the adjusting nuts down before the proper sequence is performed. On engines with shaft mounted adjustable rocker arms, back off all adjusters completely before installing the assembly. Make sure the pushrod is in the lifter and the rocker arm seat when making valve adjustments.

4. **Adjusting pre-load:** Turn the engine in the normal direction of rotation. Start with cylinder number one (1). When the exhaust valve begins to open, adjust the intake valve to the correct pre-load. To reach zero, take the pushrod between your finger tips and move it up and down while you tighten down the rocker arm adjusting nut. Once you feel no more vertical slack, you are at zero pre-load. Make sure the pushrod is in the lifter and the rocker arm seat when making valve adjustments. Then tighten the adjuster nut zero to 1/4 of a turn of the wrench. Next, you can move on to the exhaust valve on the same cylinder. Now, rotate the engine over again until the intake valve reaches maximum lift and is almost all the way back down. Then set the exhaust valve using the same method as the intake (zero to 1/4 of a turn). Continue adjusting the valves on each cylinder in this manner until all valves are adjusted.