

## **Adjusting Hydraulic Limited Travel (HLT) Lifters (REVISED)**

### **FOR RACE USE ONLY**

*These parts may require instructions and information not provided in this document. If you do not understand something, find a skilled automotive technician or engine machinist to assist you. We make a large variety of hydraulic lifters, please visit our website to be sure the correct lifters have been selected for your build. Instructions for these limited travel set numbers: 4789, 4795, 5327, 5329, 5850, 6402, 7530, 7790, 7797, 7803, 7805, 7807, 7809, 7811, 7813.*

1. Do not wash in any solvent. Wipe parts with a lint free cloth.
2. Use 10W30 engine oil to lube O.D. of body and wheel. You can submerge them in a container of clean new engine oil.
3. Check O.D. of lifter-to-I.D. of lifter bore clearance. There is an Excel spreadsheet available for download on the John Callies, Inc. website that you can use to make your recording easier. Clearance on cast iron blocks is .0015" - .0017". Clearance on aluminum blocks is .0014" - .0016".  
Carefully note the decimal place, not thousandths, these are ten-thousandths.  
This clearance is measured at 70°F.  
Aluminum blocks, having a higher rate of expansion, is the reason for less clearance.

Hydraulic Limited Travel Lifters are recommended only for race engines for classes limited to "hydraulic" lifters.

The amount of plunger travel is approximately .030".

We recommend setting be made while the lifter is all the way down (on the base circle of camshaft), adjust the rocker arm until the plunger in the lifter has "bottomed out" with a "feeler" gauge between the rocker arm and the valve. These are cold (70°F) setting instructions, so if you are using aluminum block and aluminum heads this minimum feeler gauge is .004", and the maximum gauge is .008". If you have iron block and aluminum heads the minimum gauge is .006", and the maximum gauge is .010". If you have iron block and iron heads, minimum gauge is .008", and the maximum is .012".

Make sure to note, this is how far the plunger comes up from being at the lowest point of its travel, NOT clearance at the top of its travel.

This will be a challenge with non-adjustable valve trains, especially if there are any machining inconsistencies in the block or heads. With the selected pushrod length and rocker arms torqued to the correct spec and with the lifter on the base circle, make sure you attain the same values as above.