Valve Recession Tool for Mack 13.0L MP8 Diesel Engines

The AERA Technical Committee offers the following information regarding a valve recession indicator tool for Mack 13.0L MP8 diesel engines. On engines exhibiting poor performance, smoke (at times) and a noticeable engine miss (with the symptoms getting worse as the engine gets hotter), may be an indication of valve seat recession. This tool is very valuable in helping to determine possible engine failure during regular maintenance.

A decrease in clearance (valve lash) between the valve rocker and valve yoke (bridge) can be measured at the valves to determine if seat recession is occurring. If valve seat recession is suspected, the following procedure can be used to measure valve stem height. To perform this measurement, a valve stem height measurement gauge, Mack Tool # 85112461, and a depth micrometer are required.

Removal of the valve bridges (yokes) must be done very carefully, it is suggested to do one bridge at a time to prevent possible miss-orientation. The valve yokes must be installed on the same set of valves that they were removed from. Before removing the valve yokes, mark them to identify their location and orientation. An incorrectly installed valve yoke causes severe engine damage due to a dropped valve.

The measurements can be made by placing the tool (Figure 1.) around a valve spring and measuring down with the depth gauge to the valve tip as shown in Figure 2. If the measured valve stem height is less than .319“(8.100 MM), the valve seat is excessively recessed. Removal of the cylinder head is necessary to repair the recession.

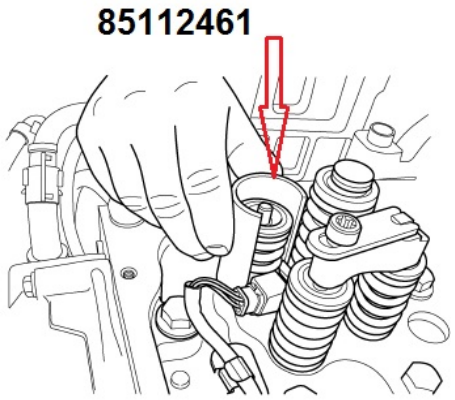

Figure 1. Valve Stem Tool 85112461

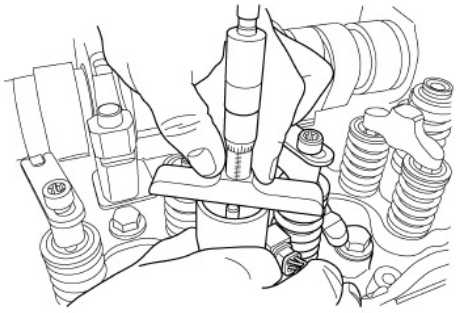

Figure 2. Measuring Valve Stem Height