GM L/S AFM Lifter Problems

Information Regarding Melling Part # JB-7011

Melling has had many L/S Aftermarket Fuel Management (AFM) lifters returned that have been proven good parts after testing. We have found that most lifter faults are caused by oil pressure issues, or control issues.

The AFM system has an operating range from 27 PSI to 66 PSI of oil pressure. The high side of this range is controlled by the AFM bypass located in the oil pan. The low side of this range is going to be dependent on the engines ability to produce oil pressure.

The AFM lifter bores in these engines have a specification of .843-.844, and the lifters require 22 PSI of pressure to release the locking pins. Taking these two things into consideration a lifter bore that is even slightly worn could bleed off enough oil pressure to prevent the lifter from unlocking.

The AFM activation and deactivation is controlled by the valve lifter oil manifold (VLOM).

The VLOM applies pressurized oil to the AFM lifters when cylinder deactivation is requested and shuts off that supply of oil to reactivate those cylinders. Cylinder activation and deactivation are both supposed to happen on the base circle of the cam lobe, making the transition from four to eight-cylinder mode unnoticeable to the driver.

Melling has received AFM lifters back for warranty claims where the lifter has been stuck compressed, we feel that this condition is caused by the VLOM commanding activation or deactivation at the wrong point in the cams rotation, either in the ramp, or at the lobe peak.

Any time an engine has failed AFM lifters, the lifter guides must be replaced, the lifter bores must be measured, the VLOM filter under the oil pressure sender must be replaced, and the VLOM must also be tested for proper operation or replaced.

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