On the Line

Lube Service Challenges

New Technology Requires New Level of Service

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In the past, most powertrains were forgiving when it came to lubricants, oil viscosities, and engine deposits. Many lube shops consolidated and took the approach that one oil viscosity was suitable for all applications. Taking this approach on one of the newer engine designs, such as those equipped with Active Fuel Management (AFM), can result in some major and costly engine repairs.

Often, we encounter factory induced problems that we inherit from the vehicle manufacturer. Imagine performing a lube service and having the customer return complaining of poor engine performance and driveability issues, plus an illuminated Check Engine lamp with multiple trouble codes stored in memory. It can happen, and if you are not familiar with the application and symptoms, it could result in your shop being held liable for some expensive repairs that were not of your making. The dealer may blame the non OE parts and the independent repair facility for the condition and convince the customer that you are liable for the repairs.

Many of the vehicle manufacturers are recommending extended service intervals. In some cases, the extended service intervals are having unintended consequences, resulting in some major expensive repairs. Read on to determine how one vehicle manufacturer has addressed this concern and other issues that could cause any lube shop much grief, if not informed.

AFTER THE NEAR-DESTRUCTION OF THE VEHICLE, LYLE HAS A SUDDEN INTEREST IN OIL VISCOSITY AND FACTORY BULLETINS.

OIL CHANGE ILLUMINATES CHECK ENGINE LIGHT

Imagine performing a lube service on a 2009–2012 Nissan Maxima and the customer returning with an illuminated Check Engine Light, plus a hesitation on acceleration at speeds below 15 MPH. The diagnostic memory reflects codes P0014 and P0024, which is an indication of a problem with the Exhaust Valve Timing (EVT) control with Banks 1 and 2.

The condition occurs after the oil has been drained and the absence of oil pressure on start-up following the oil change. Nissan recommends replacing the Exhaust Valve Control Magnet Retarder on both the left and right cylinder banks. This is a major repair requiring an Exhaust Valve Timing Control Learning Procedure to be performed following the repair. Nissan recommends 5W-30 Ester (Synthetic) oil for the mentioned applications, and the oil life monitor is based on synthetic oil. Many lube shops have paid claims for the described symptoms, unaware that Nissan has a factory service bulletin for this condition. It can happen with any oil change, even at the dealership.

OIL LIFE MONITOR UPDATE

While it is common knowledge that many vehicle manufacturers have extended their recommended lube and filter service intervals, were you aware that some have had to modify those service recommendations? GM recently introduced a software update for the oil life monitor system on 2010–2011 Buick LaCrosse, 2011–2012 Buick Regal, 2010–2011 Chevrolet Equinox, and 2010–2012 GMC Terrain equipped with the 2.4L engine (LAF, LEA). The software update will enhance the way the engine oil is monitored, and in most cases result in more frequent oil change recommendations. The purpose of this service update is to address premature wear on the timing chain/balance shaft chain and other internal engine components that have encountered high warranty claims.

VARIABLE VALVE TIMING

Variable Valve Timing (VVT) technology provides a wide range of camshaft profiles engineered into one camshaft design, and is controlled by the Powertrain Control Module (PCM). The valve timing is modified via electronic solenoids, magnetic and hydraulic controlled systems.

Contamination has been a major problem, creating failures with the VVT system. Deposit formations and engine sludge restrict the flow of lubricant through the oil galleries and solenoids, which affects proper camshaft timing. Failure to adhere to proper lube service intervals and the recommended oil viscosity has been the major cause of system failures. This comes at a time when many vehicle manufacturers are promoting extended service intervals.

For a more complete description of the concerns illustrated here, view Tech Tip #167 “FAST LUBE SERVICE… New Technology Poses New Challenges…Are You Prepared?” Remember—a $29.95 oil change is cheap insurance when compared to a $6,000 engine replacement.