

Place Your Bets

Will you trust your engine to the new motor oil specs?

November 11th, 2011 - High performance engines are not cheap, so it is with great caution that racing, high performance and classic car owners approach the upcoming oil specifications.

Much has been written in the last 5 years regarding the reduction of Zinc and Phosphorus in passenger car motor oils. Only few years after the reduction in passenger car oils, diesel oils were changed – Zinc and Phosphorus also reduced.

For the 2011 model year cars, API SN, the newest oil spec, was released, and it featured new phosphorus retention tests that required new zinc based anti-wear additives. At least they did not reduce the phosphorus level for API SN, but they did limit the type of Zinc and Phosphorus anti-wear additives that can be used.

Feeling warm and fuzzy yet?

Already, new oil specs for both diesel engines and passenger cars are on the drawing board. All of which leads to the question, will you trust your high performance engine to these new oil specs?

As modern engines change to meet tighter fuel economy standards, modern motor oils will have to adapt to hybrid engines, direct injection, turbochargers and other new technologies. So what does that mean for “old school” pushrod and flat tappet engines? What effect will these “new” oils have on classic engines?

Just ask any cam grinder to get a feel for how modern off the shelf passenger car and diesel oils have affected high performance cams. Respected companies like Comp Cams, Crane Cams, Bullet Cams and Crower all have issued technical bulletins advising against the use of modern “off-the-shelf” motor oils.

It is not just flat-tappet cams that are having problems. Highly loaded roller cams and roller rocker arms are experiencing premature failure, and oil seems to be a common denominator.

Here’s the bottom line. “Stock” oils are designed for “stock” engines. The lower valve spring rates found in stock valve train systems allow for the use of lower Zinc oils. Lower loads don’t need as much anti-wear protection. High performance valve train designs feature much higher valve spring rates, so the valve train loads are much higher. This is where you need higher Zinc oils.

High performance enthusiasts around the world now have access to specially formulated oils that provide the Zinc their high performance engines need. The best of these products also have additional additives for storage of classic engines, and true racing formulations provide extra friction reduction for high revving racing engines.

While these specialty products carry a higher price tag, they provide greater levels of protection - specialty oils deliver greater value. Would you rather pay an extra \$30 per oil change or pay to have your engine rebuilt?