The March 2011 Tech Talk column described how automotive industry trends and governmental regulations to reduce exhaust emissions are forcing sulfated ash, phosphorus and sulfur (SAPS) levels in engine oil downward. SAPS are common oil additives that provide desirable performance properties, including detergency and protection against wear and oxidation. But they can also reduce the performance or longevity of exhaust treatment devices such as diesel particulate filters (DPFs) and the three-way catalysts used in the catalytic converters of newer gasoline-powered vehicles. High levels of sulfated ash can clog DPFs and reduce fuel economy and engine performance, while phosphorus and sulfur can deactivate catalyst sites, decreasing the effectiveness of catalytic converters and allowing unwanted emissions into the atmosphere.

Reducing emissions in today’s smaller, high-horsepower gasoline-and diesel-powered engines, while still protecting their vital operating components, is a continuing challenge for OEMs and lubricant manufacturers. This is particularly true because there is no one-size-fits-all motor oil when it comes to SAPS levels. The European Automobile Manufacturers’ Association (ACEA) establishes lubricant standards for Europe, similar to the American Petroleum Institute (API) here in the States. Previously it was possible for the same motor oils to be used in applications calling for different SAPS levels because there was no lower limit. Until recently, a low-SAPS oil could be used in a mid-SAPS application, and a mid-SAPS oil could be used in a full-SAPS application. Current ACEA specifications create three clearly defined categories for SAPS levels and eliminate backward compatibility. This required a third AMSOIL European motor oil formulation to cover all three SAPS levels outlined by ACEA and vehicle manufacturers.

The best SAPS level for a vehicle depends on several factors. Gasoline and diesel engines with emissions systems that are sensitive to the SAPS content of oil require lower SAPS formulations to properly function for a long period of time. These oils are engineered to the exacting engine oil specifications of ACEA and European OEMs to ensure they are compatible with current emissions systems while still providing engine protection. This is very difficult to accomplish because although lower SAPS levels provide the best emissions systems protection, it costs much more to achieve equal engine protection with low SAPS content. Lower SAPS oils rely on different properties to provide proper engine protection, while still promoting long emissions system life. As a result, as SAPS levels go down, finished-product pricing goes up.

Not all engines are best served by low- or mid-SAPS oils. Older vehicle designs rely on oils with full SAPS content to protect components properly and usually do not have advanced emissions systems that are sensitive to the extra additives. Additionally, fuel quality has a major influence on the recommended SAPS level. Fuel quality varies regionally and is often related to the ethanol or sulfur content in gasoline or diesel. Many new vehicles also require full-SAPS engine oils because they are better suited to address those issues.

Because of these changes in specifications, AMSOIL revamped its European Car Formula lineup. The two existing products, European Car Formula 5W-30 Low-SAPS Synthetic Motor Oil (AEL) and European Car Formula 5W-40 Mid-SAPS Synthetic Motor Oil (AFL), now have updated labels with clearly defined SAPS levels and some specification realignment per the new European specs; however, the formulations remain unchanged. The new European Car Formula 5W-40 Full-SAPS Synthetic Motor Oil (EFM) is also a 5W-40 because that viscosity category continues to be the most recommended by European OEMs.

SAPS levels are not an indicator of quality. All three European Car Formula Synthetic Motor Oil formulations are premium and deliver premium-grade performance in their respective applications. So, how do you know which one to use? As always, select the oil that lists the specification recommended by the vehicle manufacturer and be confident that the vehicle’s engine and emissions system are protected.
Prior to the development of our XL line of motor oils in 1997 there was considerable in-house discussion and debate. Introducing a family of motor oils with a 7,500-mile oil drain recommendation deviated significantly from our long-standing 25,000-mile oil drain position. Our primary concern centered on the perception among our Dealers. Would this move be viewed as a downgrade in quality and would it signify an entirely new approach by AMSOIL in formulating motor oils? The answer, of course, was no. Although our XL oils were not formulated with the same uncompromised extended-drain capabilities of our 25,000-mile oils, they were still formidable oils and offered performance well beyond the performance offered by conventional oils.

As it turned out, our Dealers embraced our XL oils. They recognized them for what they were. That is, an opportunity to increase sales. The XL oils penetrated markets that our 25,000-mile oils could not penetrate. They opened doors in the installer market, and they appealed to people who were not yet ready to invest in our top-tier oils.

The introduction of our OE oils followed that same philosophy. Give consumers what they want, and give our Dealers more sales opportunities. Enable AMSOIL Dealers to make more money. That’s what it’s all about. Both our XL and OE lines help fight the battles that our Dealers have fought for years. With these oils there is no more push-back on API certification, extended drain intervals or upfront cost. Consumers gain satisfaction from using the AMSOIL brand, and Dealers gain satisfaction from larger commission checks.

The European Car Formula oils featured in this issue extend the sales opportunities even further. These oils address the complicated requirements established by the European Automobile Manufacturers’ Association. The demands of virtually every European application are satisfied. These products are ideal for the installer market. They are clearly labeled with the appropriate specifications and remove all guesswork in the recommendation process. Installers can be confident they are providing their customers with the correct products.

And while the goal is to create as many opportunities for sales as possible, don’t be mistaken. Our sights are always fixed firmly on quality. AMSOIL has established itself as the leader in synthetic lubrication, and that will always set us apart. Those closest to the industry can attest to that. Every supplier that works with AMSOIL knows firsthand that AMSOIL will never compromise on performance. We don’t settle for the run-of-the-mill chemistries that fill the marketplace. AMSOIL means quality.

Opportunity doesn’t stop with products. As you will read in this issue, we back up our products with technical support. We make every attempt to arm our Dealers with tools that validate our product performance. The extensive testing we conducted on AMSOIL INTERCEPTOR® 2-Stroke Oil is documented in our technical paper, A Study of INTERCEPTOR Synthetic 2-Stroke Oil for Ski-Doo® Rotax® E-TEC® Engines. This piece is the most comprehensive study I have seen on two-stroke oil. I can’t envision the snowmobile owner who won’t consider using AMSOIL INTERCEPTOR after reading this detailed document.

Extensive testing was also documented in the diesel market, where fuel economy is critical. On the heels of a study released recently which demonstrated that AMSOIL lubes provided a 6.54 percent increase in fuel economy in on-highway service (Diesel Fleet Fuel Economy Study), we have now released a study revealing that our products provided a 3.15 percent fuel economy increase in stop-and-go city driving. That represents significant savings. You can see the details on page 10 of this issue.

These studies, along with all of the others we have done, deliver conclusive proof that AMSOIL lubricants provide real, meaningful value to consumers. At AMSOIL, we don’t just talk the talk. We remain committed to arming Dealers with both outstanding products and concrete proof of performance. No company does it better.

A.J. “Al” Amatuzio
President and CEO, AMSOIL INC.

Dean Alexander
Executive V.P. / Chief Financial Officer

Alan Amatuzio
Executive V.P. / Chief Operating Officer

A.J. “Al” Amatuzio
President & Chief Executive Officer