

# Industrial Lubricants: Key To Long-Term PM Success

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The right industrial lubricant can help a manufacturer increase equipment reliability, reduce operating costs, and extend machine life. Choosing the correct lubricant is “the most fundamental component of a successful preventive maintenance program,” says Geoffrey R. Polanek, Americas Marketing, Industrial Advisor, ExxonMobil. “Today’s successful companies view preventive maintenance and high-performance lubricants as investments to help ensure long-term success.”

Over the last 10 to 15 years, manufacturers have developed equipment that’s more compact and efficient, and that delivers a higher load capacity with a smaller footprint than ever before. These newer units can provide better performance and increased productivity, but prove to be more difficult to maintain as they run faster and hotter than their predecessors, putting more stress on smaller volumes of lubricant. As a result, high-performance oils and greases have been developed that are capable of delivering extended protection.

Today’s lubricants are designed with a focus on long-lasting performance and energy efficiency, and have given manufacturers a variety of choices when looking to choose the best lubricant for their specific applications.

### **Taking Out The Guesswork**

With the lubrication options available today, both synthetic and traditional, it is important to choose the correct lubrication for optimal efficiency. “Using the correct lubricant extends machinery life and saves energy,” explains Jim Girard, VP and CMO with Lubriplate, stressing that only the proper lubricant will do what a lubricant is there to do—reduce friction. “You can measure the machinery prior to using the correct lube and while using the correct lube, and compare the differences. You can see that you will reduce your consumption by using the correct lube all the time.”

Lubrication maintenance software and machinery tags can help remove the guesswork. Machinery tags allow the machine operator to recognize exactly what lubricant to use; maintenance software helps to consolidate the amount of lubricants at the facility.

“What the customer needs to do is have a dependable and competent lubricant supplier visit the facility and conduct a lubrication survey of all the equipment in that facility,” says Girard. “The lubrication survey is an inventory of all the machinery and the types of lubrications necessary, as well as all of the points on the machine that need to be lubricated.” This information can be catalogued and

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compiled, then shared across the organization so that everyone in the facility has access to it. One of the most important points of a survey is that if used correctly and monitored correctly, it can cut down “significantly” on lubricant misapplication, explains Girard. “The machine operator who has access to the survey knows what lube to use on that piece of equipment.”

Machinery tags go one step further, and “really take the guessing game out of it,” he adds. Lubricant suppliers can supply multilingual, color coded tags identifying the specific lubricant required for a machine’s specific piece of equipment. The tag can even be color coded to match the lubricant container, which can also help bridge the language barrier, and help to simplify lubrication identification requirements across the plant.

### Eco-Friendly Lubricant Alternatives

With machine protection and energy efficiency being key issues in the industrial sector, many manufacturers are looking toward synthetic lubricants as the next step in industrial lubrication development, which combine eco-green products with efficient lubrication programs, says Girard. “They are state of the art and are very effective,” he says of new industrial lubricants such as polyolester and polyalkylene glycol synthetic lubricants.

“When it comes to maximizing the performance and durability of critical equipment, there are several significant advantages in selecting high-performance synthetics over conventional, mineral oil-based lubricants,” explains Polanek. These advantages include extended equipment life, increased energy efficiency, and extended drain intervals.

At high temperatures, synthetic lubricants are able to deliver a thicker oil film that helps reduce wear, whereas conventional, mineral-based lubricants can degrade rapidly when exposed to high temperatures—increasing the tendency for deposits and reducing oil life. When subjected to low temperatures, conventional oils may not flow as easily while synthetics are able to offer “excellent flow characteristics,” says Polanek, and reduce the risk of oil starvation. And compared to conventional mineral oils, high-performance synthetics can help reduce energy consumption because of their “lower traction properties and better lubricity,” which can help to minimize friction between moving components. The lower viscosity of synthetics compared to their mineral counterparts during low-temperature startups also typically result in lower churn energy loss. Polanek adds that, in most applications, synthetic lubricants generally last up to six times longer than their mineral oil counterparts, cutting maintenance costs, improving productivity, and reducing oil consumption and waste. “Synthetic lubricants are sometimes biodegradable,” adds Girard, “and if they are both, you get longer life and less disposal costs out of them. So if you can use synthetic fluids and greases that are also biodegradable, you are really reaching the optimum in eco-green and sustainability.”

Many high-performance synthetic oils and greases are also designed to be used for multiple applications, helping to streamline maintenance work.

### Contamination Control

“As more and more plants commit to ‘green’ manufacturing, there is a definite preference for equipment that can operate without consumables,” says Del Butler, regional sales manager, Magnetic Products. “The industry has also realized that clean lubricants and fluids perform better and play a significant role in part quality, tooling life, cycle times, and lower maintenance costs.” With lubricant contamination a major source of equipment failures and wear, manufacturers are interested in keeping these fluids clean and as long-lasting as long as possible.

While some contaminants, such as fuel, can be nearly impossible to filter out and require an oil change, problems such as water or wear metals can often be filtered unless the contaminant has caused lubricant degradation. “Any type of industrial fluid, including lubricants and oils, can be filtered magnetically,” explains Butler. In closed systems, a magnet can supplement the filter to help remove metal contaminants. “Magnetic technology is green and safe, and substantially reduces both the need to buy costly consumables and the associated downtime to change paper filters,” explains Butler, all while helping to keep fluids clean, green, and longer lasting.

### Performance Is Key

The latest in industrial lubricants “not only deliver exceptional, long-lasting performance and protection,” says Polanek, “They also feature valuable energy-efficiency benefits.

“And that is key—to have lubricants that deliver balanced performance.”

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