



4 critical technologies for your lubrication program

Bearings are essential to any facility's continued operation. That's why lubrication is so critical for reliability maintenance engineering and physical asset management.

Many times overlooked, lubrication is far more complex than just buying oil or grease and throwing it into your equipment. Selecting the right type or types of lubricant, storing and filtering them correctly, monitoring bearing noise, and ensuring that over-lubrication and under-lubrication don't occur all play an important role. Fortunately, there are more technologies than ever in the marketplace that allow you to manage your lubrication program effectively.

Oil Analysis

The most precise lubrication in the world won't help if the lubricants in question are poor quality, contaminated or breaking down under heat and pressure. Contracting with an oil analysis laboratory or investing in your own analytics kit will allow you to detect these kinds of issues before they result in machine failure.

Many different factors can impact the quality of your lubricant. Improper storage or a blown seal on a component could allow dirt, water, or metal fragments

to corrupt your supplies. Even new oil should be tested – while your lubrication program might be top-notch, you've got little control over its handling before it's delivered to your facility.

Proper Storage Facilities

Industrial lubricants, despite their demanding conditions, can actually be some pretty sensitive materials. With the right combination of products and

techniques, you can ensure that your investment isn't eroded by neglect.

There are many factors that can affect the storage of industrial lubricant, including using containers that already contain contaminants, storing them outside in harsh conditions, and not using color-coded containers to prevent accidentally mixing two different oils.

Any auxiliary equipment, lines, and



vessels should also be thoroughly cleaned and certified before being used with fresh lubricants.

High-quality Industrial Lubricants

All the maintenance, storage and analysis technology in the world won't serve you well if you're not using both high-quality and properly selected lubricants. Most, if not all technicians are comfortable with selecting the right grade of oil for a given application, but there are more complex factors than that to weigh. Considerations such as additives, duration of use and ambient conditions can all make for a significantly more complicated decision process.

Often, a multipurpose lubricant won't actually be the right selection for your applications. Multipurpose lubricants cannot provide satisfactory service in current demanding environments. Lubricant performance must be optimized to meet the increasing demands of modern industry.

The first step in selecting the best lubricant for a given application is to define the tribological system. With a fully defined tribological system in place, the next step is theoretical analysis.

Ultrasonic Inspection Instruments

An ultrasonic instrument designed specifically for lubrication, such as the UE Systems Ultraprobe 401 Grease Caddy can bring your facilities management game to the next level. The Ultraprobe 401 uses ultrasound technology to provide critical data about baseline dB levels, dB levels before and after applying grease, cost analysis of lubricants and other vital information.

Over-lubrication is often a problem as big as or bigger than under-lubrication – in fact, 70 percent of lubrication professionals believe it's a problem at their plant. When excess grease gets into a bearing, it begins to churn and heat up. This churning causes the lubricant to solidify, blocking the entry of more, fresh grease and



ultimately causing a bearing to fail.

Another possible failure mode that can arise from over greasing is seal damage. Adding more than the necessary amount of lubricant to a bearing under the high psi of a grease gun can crack the seal, allowing outside pollutants to infiltrate.

This instrument uses ultrasonic technology so that lube technicians know when to stop adding grease which can prolong the life of your equipment. Its digital display allows the user to gauge friction levels through the dB levels. Even in high-noise environments, it can isolate the necessary ultrasonic

waves and transmit them to the user.

Conclusion

In all, the field of precision lubrication and maintenance has grown more complex and diverse than ever before. It's easy to get lost in the minutiae of these processes and products, and sometimes the measures you think are helping may actually lead to failures down the line.

With the right techniques and technologies, however, it's possible to see real return on investment from your maintenance efforts.

