



## Xpert™ Services

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## Xpert™ Lubrication Reliability Fundamentals

*Training Provides Solid Foundation for Reliability Programs*

- Onsite
- Full or half day
- Customizable

### Overview & Benefits

When it comes to proper lubrication fundamentals, maintenance personnel often “don’t know what they don’t know.” Myths and misconceptions about lubrication best practices can cause more harm than good to the asset and to the lubricant.

That’s where Lubrication Engineers comes in. We can help maintenance and reliability personnel understand lubrication best practices and incorporate them in their daily routine, thereby protecting expensive assets and lubricants, and ensuring they both perform to their peak life expectancy.

LE’s Xpert™ Lubrication Reliability Fundamentals (LRF) provides a convenient onsite training option – full or half-day – eliminating the travel time and costs of sending employees to offsite training. A good preparation class for those who later want to earn MLT I certification, Xpert LRF is designed primarily for maintenance and lube technicians to understand the core fundamentals of lubrication and contamination control.

Beyond that, we offer a full menu of additional training modules to choose from, so customers can construct a full or half day of training to best meet their specific needs.

Take advantage of this opportunity to get your personnel trained in lubrication best practices and watch your lubrication program soar to a higher level.





Explore the available modules in LE's Xpert LRF Training. From these options, you can construct a full or half day of training, consisting of six or four hours, respectively. Each module – other than two-hour Lubrication Fundamentals 101 – is one hour. We highly recommend Lubrication Fundamentals 101 as the starting point for any training.

## Lubrication Fundamentals

**Lubrication Fundamentals 101** | Learn about friction, wear and lubrication. Learn how lubricants are formulated and what performance characteristics the additives and base stock impart on the finished lubricant. Understand how the proper selection of the lubricant plays a vital role in separating two opposing moving pieces of metal. [strongly recommended]

## Reliability Best Practices

**Reliability Best Practices 101** | We can't stop failures entirely, but we can mitigate the consequences of failure by knowing what causes them. Learn about best practices from start to finish. Understand the detrimental effects of contamination on the asset and lubricant. Learn how to recognize the presence of contamination, how to remove it, and how to keep it out in the first place.

**Oil Analysis** | Oil sampling is a best practice to transform your oil change program from traditional time-based to condition-based changes. You will be able to keep an eye on the health of the oil and the asset and make confident decisions about whether to change, filter or leave the oil as is for continued use.

**Lubricant Storage and Identification** | In the process of purchasing oil, storing oil, transporting oil to the asset, and filling the asset with oil, the lubricant could be contaminated more than 32 times its original level of cleanliness. Adoption of best practices for oil storage and transport can increase the life of assets 20-60% or more.

**Lubricant Application** | Learn the difference between manual and automatic lubrication and how to achieve optimal lubrication quantity and application interval based on temperature, speed, environment and asset configuration.

**Contamination Exclusion** | Discover where contaminants originate and how to prevent them from entering stored oil or the asset. Recognizing the problem and taking the steps to prevent it will extend oil and asset life.





**Contamination Removal** | Learn how secondary filtration works and how important it is. Find out why filtering new oil prior to filling or topping off a reservoir is best practice. Learn also to recognize the presence of moisture and how to remove it from the system.

## Asset-Based Fundamentals

**Bearings** | One of the most widely used mechanical parts in industry, the bearing fails more than 60% of the time due to contamination or improper lubrication. Learn that not all bearings are the same, and one grease does not fit all bearings. Get a better idea of grease selection, proper amount and reapplication intervals.

**Gearboxes** | Learn about the many different types of gear sets – both enclosed and open – and how to properly lubricate them. Understand how to eliminate contamination so the oil and the asset last longer in service.

**Electric Motors** | Electric motors are the most used piece of equipment in industry today and consume mass amounts of energy. Learn about proper lubrication of electric motors so over-greasing does not cause issues with the windings. Understand how grease incompatibility can quickly destroy electric motor bearings.

**Hydraulics** | Hydraulic oil takes tremendous abuse by providing a dual function – lubricating internal pump parts and transmitting power. Couple this with the amount of contamination and moisture that enter the system through breathers and bad wiper seals, and you can see how oil reaches a failed state in a short time. Learn how to keep hydraulics running longer with lubrication best practices.

**Chains and Wire Rope** | Although chains and wire ropes are expensive and time consuming to replace, they often are not properly lubricated. Learn how they fail from the inside out and how to make them perform better and last longer by lubricating them with a penetrating type oil.

## Plant Assessment

**Asset Reliability Assessment** | Walk the facility floor to identify areas for lubrication reliability improvements relating to asset retrofits that mitigate the entry of contamination. Discuss oil sampling procedures, breather and sight glass additions, color-coding and tagging, proper top-off techniques and kidney loop filtration options, to name a few.





**Get started today!**

The first step is to fill out the *Private Training Request Form*, which can be found at [www.lelubricants.com/education-training-LRF.html](http://www.lelubricants.com/education-training-LRF.html). There, you will provide your contact information and date preferences. Be sure to select "LRF" on class type.

Once we receive your submission and have a date confirmed, we will be in touch with you to construct a customized course based on your preferred content. You will be able to select four hours of modules for a half day of training or six hours for a full day of training. (All modules listed below are one hour unless otherwise marked.)

## Lubrication Fundamentals

- Lubrication Fundamentals 101 (2 hours)

## Reliability Best Practices

- Reliability Best Practices 101
- Oil Analysis
- Lubricant Storage and Identification
- Lubricant Application
- Contamination Exclusion
- Contamination Removal

Take advantage of this convenient opportunity to get your personnel trained in lubrication reliability best practices and help your program reach a higher level.

## Asset-Based Fundamentals

- Bearings
- Gearboxes
- Electric Motors
- Hydraulics
- Chains and Wire Rope

## Plant Assessment

- Asset Reliability Assessment

