# INDUSTRIAL LUBRICATION

**Fundamentals** 

# A 3-day course for maintenance, lubrication techs, and operators

- Receiving and Inspecting New Lubricants
- Protecting Lubricant Integrity
- Transporting and Applying Lubricants
- Conducting Field Inspections
- Excluding and Removing Contaminants
- Sampling Lubricants







### Who Should Attend?

This course is designed for students with little to no technical background and are responsible for lubrication tasks. Job titles may include Lubrication Technicians, Maintenance Technicians, Millwrights, Mechanics, Oilers, Machine Operators, Multicraft Technicians, etc.

### If You Use Any Of These Machines, This Training Is A Must:

- Electric Motors
- Compressors
- Diesel Engines
- Final Drives
- Gas Turbines
- Gearboxes
- Hydraulic Systems
- Hydrostatic Transmissions
- Paper Machines
- Process Pumps
- Rolling Mills
- Steam Turbines
- Blowers/Fans



# What's Different about This Course?

Unlike Noria's Certification Series training courses, this training is designed for those with little technical background and need training on lubrication and filtration tasks. Students will learn why proper lubrication is important and how to protect machinery through contamination control. The training is very interactive and includes student participation.



# **Task-Based Lubrication Training**

While students will learn some of the basics of lubricants in this course, the main purpose of the training is focused on the best practices of lubrication-related tasks. The learning objectives of this training relate to:

- Lubricating Machinery
- Receiving and Inspecting New Lubricants
- Maintaining Lube Rooms
- Filtration and Contamination Control
- Inspecting Lubricants and Machines
- Sampling Lubricants
- Lubricant Safety and Disposal



# Training that comes back to the plant with you:

Training is a process not just an event. We make it easy to take your training with you. Every student receives a 90 day access to Noria's video based procedures, used in the course. Online access gives you access to world class procedures to help you refresh and review the content learned in the course. Topics include:

- Conducting inspections
- Oil changes
- Electric motor bearing regreasing
- Installation of external oil level indicator, valve and quick connector and more
- Oil sampling
- Using top up containers
- Oil filtration using a dedicated filter cart

Each video procedure comes with a printable job aid to ensure you can take your training with you as you head out to the plant floor.



# Designed to impact performance

This course has been developed following a systematic approach which identified the learning needs for lubrication professionals. We met with industry experts and plant reliability professionals to determine the specific skills needed to perform lubrication tasks. These needs were analyzed to guide the development of the instructional materials and methodologies used during this course.

This course has been designed to create a learning environment which supports adult learning principles to maximize the transfer of the course knowledge to the student. Specific features include interactive exercises, case studies, and hands on examples as well as class discussions conducted through a facilitative approach.

### What Industries Will Benefit?

- Aerospace
- Automotive Manufacturing
- Earthmoving
- Food and Beverage
- General Manufacturing
- Lumber and Wood
- Municipal Utilities
- Petrochemical
- Pharmaceuticals
- Primary Metals
- Power Generation
- Process Manufacturing
- Pulp and Paper
- Rubber and Plastic
- Textile
- Transportation



# **Industrial Lubrication Fundamentals**

## Course Overview



### Receiving and Inspecting **New Lubricants**

- Best practices for receiving a new lubricant
- Steps to transporting and storing lubricants in the warehouse

### Maintaining Lubricant Containers, Machines and Lubricant Storage Areas

- The importance of identification labeling for lubricants, machines, tools and locations
- The difference between the three types of labels and when to apply

### **Maintaining Lube Room Inventory**

- The FIFO inventory principle and why it is important
- Best practices for transporting and storing lubricants in the lube room

### Removing Contaminants from New Oils with Filter Carts or Installed

- Why controlling contamination in lubricants is important
- How contamination levels are measured with field testing equipment

- How to compare field test results with established oil cleanliness targets
- · How to determine flow rate and filter run times
- · Understanding the sources of contaminants
- Procedures for removing contaminants from lubricants
- Tools and processes for filtering **lubricants**

# Protecting Lubricant Integrity through Contamination Control

- Why contamination exclusion is important and what tools are necessary
- How filters and breathers remove and exclude contaminants from oil
- How to keep contaminants out of lubricants when storing, handling and transferring
- The important role of sight glasses, quick connects and other dedicated hardware
- Why maintaining lubrication and contamination tools is important



### Transporting and Applying Lubricants

- What is work planning and why it is important in your role
- · Lubrication application methods and how they function
- The very best practices for applying **lubricants**
- How to transport lubricants

### **Conducting Field Inspections** on Machines

- · Why field inspections are important
- The different types of field inspections

### **Excluding and Removing** Contaminants from **Lubricated Machines**

- The most typical contaminants and their impact on machines
- Common sources of contaminants in machines
- Inspections and equipment for identifying and measuring contaminants in the field
- How to compare field testing equipment results with established oil cleanliness targets

- The best procedures for removing contaminants
- · How to determine filter cart run times
- Tools and processes for filtering inservice lubricants
- Why keeping your tools clean and in proper working order is important

### Sampling Lubricants

- The importance of proper sampling and oil analysis to reliability goals
- The best procedures for taking a sample of new and in-service lubricants

### Importance of Safety, Leak and Spill Response and Disposal of Hazardous Materials

- The importance of safety procedures when working with lubricants
- Actions to prevent and control spills
- How to control leaks
- The risks of handling hazardous materials (lubricants and consumables) and proper ways of disposal

### **Modifying Machinery for** Contamination Control, Safety, and **Reliability Improvement**

- Why equipment modifications are necessary
- Types of hardware and their purpose
- · Basic steps and best practices of hardware installation

### **Understanding the Communication** and Administrative Tasks Necessary for Your Role

- Administrative tasks necessary to support corporate reliability goals
- Key Performance Indicator(s) (KPIs) and their connection to your activities
- The qualities of a high performing lube technician
- How to write detailed and effective observation statements



# Join This List Of World-Class Companies That Have Benefited From Noria Training

3M

Alabama Power

Alcoa **Alumax** Ameren

American Electric Power

ArcelorMittal

Archer Daniels Midland

Barrick Goldstrike

**BHP** Boeing

Boise Cascade

BP Caraill Castrol Caterpillar

Centralia Mining Chevron

Citgo Clopay

ConAgra Foods ConocoPhillips Constellation Energy **Dow Chemical** 

**Dow Corning** DTE Energy DuPont

Dynegy Eli Lilly Entergy

ExxonMobil First Energy

Florida Power Ford Motor Co. Formosa Plastics General Electric

General Motors Geneva Steel Georgia Pacific Georgia Power

Goodyear Great Lakes Chemical Harley-Davidson

Holcim Honeywell Intel Heinz

Houston Metro Transit International Paper

Invista John Deere Kinder Morgan Koch Industries Lockheed Martin Lukens Steel M&M Mars MillerCoors Michelin Mosaic

Noranda Aluminum Nova Chemicals Owens Corning

OxyChem

Pacific Gas & Electric

Peabody Energy

Pfizer

Powder River Coal **PPG** Industries Procter & Gamble **Progress Energy** Reliant Energy Rio Tinto

Seattle Times Seminole Electric

Shell Oil

Southern Company Temple-Inland

Texaco

Texas Instruments

Toyota TXU Energy Unilever U.S. Army U.S. Navy U.S. Postal Service **USG** Corporation

Verso Paper Via Rail Canada Westinghouse Weyerhaeuser Whirlpool





























# **Onsite Training**

Need to train your team, but it has always been too expensive? More and more companies are realizing the value of bringing training onsite. This flexible and cost-effective option allows you to train as many employees as desired.

The benefits of onsite training are obvious and rewarding:

- > Tailored curriculum to address your company's needs in a more personable, intimate setting
- > Cost-effective return on investment with significant savings onsite versus travel expenses and time away from the plant, downtime and schedule disruptions are minimized
- > Confidential company issues and solutions may be discussed freely onsite
- > Strong team-building opportunities



Lubrication is the foundation of reliability, lubrication training is the catalyst for change, and Noria is the world leader in lubrication and oil analysis education and consulting. Bring us onsite for tailored, private team training. Call us today at 800-597-5460.

# **Industrial Lubrication Fundamentals** Registration Form

# **4 Ways To Register**



Online www.noria.com



Call toll-free! 800-597-5460 or 918-749-1400



Mail the registration form!



Fax your registration! 918-746-0925

### Course Fee: \$1,195

### 1. TRAINING COURSE

Course Date: \_\_\_\_\_

### 2. WHO WILL BE ATTENDING

Mr./Ms.: \_\_\_\_\_\_

Job Title: \_\_\_\_\_

E-mail: \_\_\_\_\_

(Please list additional registrations on a separate sheet and attach)

### 3. COMPANY INFORMATION

### 4. METHOD OF PAYMENT

Payment is due before the course

Check enclosed payable to:
Noria Corporation

Mail to: Noria Corporation

ATTN: Training 1328 East 43rd Court Tulsa, OK 74105

Cł	narge	to
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MasterCard	VISA	Card Card
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Card Number:

Expiration Date:

Name on Card:

Signature:

Our Purchase Order is attached. P.O.#



### Find a location near you.

# Check Noria.com for dates and locations.

# Agenda

7:30 am	Check-In
8:00 am	Class Begins
12:00 – 1:00 pm	Lunch (on your own)
4:00 pm	Class Ends

# Cancellations And Substitutions

If your plans change and you cannot attend the course, a colleague can attend in your place. Registrations canceled at any time prior to 10 days before the course are not subject to any fee. Cancellations after that time are subject to a \$75 service charge. Or, your registration fee can be transferred to another program of your choice to be taken within 12 months. Visit www.noria.com/train/registration for the complete cancellation and transfer policy.

# Receiving and Inspecting New Lubricants

# **Protecting Lubricant Integrity**

# Safety, Leak and Spill Response

