How Lubrication Affects Machine Reliability
- Financial benefits from achieving lubrication excellence
- Four equipment maintenance strategies and when each applies
- Important implementation steps to lubrication excellence

Lubrication Fundamentals
- Six important functions of lubricating oils
- How oils and greases are formulated and why it is important
- How friction is generated in lubricated machinery
- The importance of oil film thickness and critical clearances

Understanding Additives, Base Oils and Grease Thickeners
- How lubricant properties irreparably change
- Seven important physical properties of a base oil
- The importance of API’s five base oil categories
- What causes grease to dry out and 18 ways to prevent it
- How to detect the root causes of lubricant oxidation
- When to select one of the six most commonly used synthetic base oils
- How to use temperature to determine the right base oil for your machine
- How to select grease thickeners for your application

Food-grade and Environment-friendly Lubricants
- Important USDA requirements and government regulations for food-grade lubricants
- What you need to know about food-grade additives, base oils and grease thickeners
- Guidelines for food-grade lubricants

Lubricating Grease Application Methods
- How to protect against incompatible grease mixtures
- Advantages and disadvantages of centralized lubrication systems
- Best practices for greasing motor bearings
- How to control pressure when greasing bearings
- The unique problems caused by over-greasing - specific steps to eliminate
- 3 critical instructions to give your electric motor rebuild shop
- Comparing single- and multi-point lubrication options
- How to calculate greasing intervals and quantity
- Best practices for ultrasonic/sonic-based greasing

Lubricating Oil Application Methods
- Overview of oil lubrication methods and devices
- How to use oil mist and other automatic lubrication methods
- Using pressure spray methods for gearboxes
- Best practices for the maintenance of grease guns and fittings

“ABSOLUTELY AWESOME!
Should reduce downtime 25 to 50 percent.”
Scott Gilreath, Lube Tech, UNICCO

Lubricant Performance Properties
- Key additives that enhance lubricant performance
- Viscosity grades, measurement and reporting

> Why Viscosity Index is important
> What causes oil viscosity to change and how to set monitoring limits
> Lubricant performance tests and reporting - what you need to know
> How water contamination generates other contaminants
> How to control and eliminate aeration problems
How to protect against problems caused by constant-level oilers
Overview of single-point direct lubrication systems

Journal Bearing Lubricants
The 8 most common journal bearing lubrication problems
How to select journal bearing viscosity based on speed

Rolling-element Bearing Lubricants
The nine critical factors affecting rolling-element bearing lubricant selection
How to convert required operating temperature viscosity to ISO viscosity grades

Gear Lubricants
5 key requirements for gear oil
How to select the best viscosity for a gear lubricant
Best practice guidelines for storing spare gear boxes – lubrication matters!
10 conditions that may require synthetic gear lubricants
Lubrication best practices for enclosed gears – a 12-point checklist
Mastering the challenges of open gear lubrication

Automotive and Mobile Equipment
Drive-line Lubricants
How to read a motor oil label – what really matters
The six critical objectives a motor oil must accomplish
Understanding API service classifications for engine and gear oils
The No. 1 reason automatic transmission fluids fail and how to protect against it
Service classifications for automotive greases – how to select
Extending engine life – surprising engine oil filter study results

Compressor Lubricants
Steps you can take right now to combat compressor lubricant failure
The most common compressor lubricant stressors
When to use synthetic compressor lubricants and why

“Packed with powerful information that can be applied with measurable results, this course provides the right training to influence a cultural change in maintenance and operation organizations.”

Brian Baldwin, Reliability Engineering Manager, Dynergy

TAKE THIS COURSE ONLINE
Create your own flexible schedule to learn machinery lubrication and oil analysis best practices with Noria’s online Web-based training. This self-paced instruction is presented over the Internet to browser-equipped learners.

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For more information on online courses and to register contact Sarah Evans, Director of Events for Nexus Global, at training@nexusglobal.com or +1 855.488.0068!
Steam and Gas Turbine Lubricants
› Why turbine/generator lubricants are the No. 1 contributor to forced outages
› Comparing steam and gas turbine oils – how they differ
› Checklist for best practice steam turbine lubrication

Hydraulic Fluids
› How to select the ideal hydraulic fluid viscosity for gear, vane and piston pumps
› Nine key hydraulic fluid requirements and why they matter
› Specific conditions that may require a synthetic hydraulic fluid
› Fire-resistant hydraulic fluids – what you need to know
› Hydraulic system maintenance best practices – 21-point checklist

Contamination Control
› Strategies for building reliability through contamination control
› The seven most destructive contaminants and how to control them
› Specific steps for managing a proactive lubricant management program
› The ISO Solid Contaminant Code – understand it, track it
› 10 ways to get more mileage out of portable filter carts
› How dirt, metal particles and soot mechanically destroy machine surfaces
› Guidelines for controlling machine surface fatigue and extending machine life
› The No. 1 cause of machine wear and how to manage it
› How to set realistic cleanliness levels for lubricants

“Implementing the basic principles taught during this training would prevent premature failure of most all of our rotating machinery!”
Brittany Russo, Reliability Engineer, Braskem

Oil Drains, Flushing and Reservoir Management
› How to optimize and extend oil change intervals
› Interval vs. condition-based oil changes – pros and cons
› Metrics for monitoring lubricant consumption
› Best practices for oil changes
› Know how and when to perform a flush
› The best procedures for oil draining and refilling
› How and when to use the bleed-and-feed strategy for extending oil drains
› Selecting the right cleaning and flushing procedures

Storing, Handling and Managing Lubricants
› How to set up a world-class lube room
› How to know when to reject a new oil delivery
› How to optimize your lubricant selection and procurement process
› How to implement a lubricant consolidation program and select suppliers
› Used lubricant storage, handling and disposal best practices
› Bulk lubricant storage do’s and don’ts
› Guidelines for storing and handling drums
Lubricant dispensing options and what you must avoid
Lubricant coding and identification systems – what works and what doesn’t
Portable oil transfer and filter cart selection advice
How and where to store oil transfer and filter carts
Understanding and managing lubricant storage life
Keeping grease fresh – best practices for storage

Design and Inspect for Lube Excellence
World-class strategies for accessorizing equipment for lubrication excellence
Seven critical accessories for lubricant inspection and sampling
The right machine accessories for effective contamination control

Used Oil Sampling and Analysis Fundamentals
What oil analysis can tell you
Types and categories of oil analysis
Applications for oil analysis
Overview of oil analysis tests
Elements of a successful oil analysis program
How clean should oil sample bottles be?
How to find the best sampling locations

Essential Field Inspections
12 questions your oil filter will answer about your machine
Visual inspections you can get big results from right now
Quick tips for using scent, sound and touch to inspect lubricants

“Until I attended this training, I had no idea how poor our best practices were. Improvements will be easy. Justifications will be easy. Recouping the cost of this class will take about a week!”
Tim Pendley, Mechanical Engineer, Westlake Chemical

“Vendor Neutral Makes a Difference!”
Alfredo Romaro
Maintenance Technician, Kawneer Company

The presentation is full color and high quality, making the information easy to comprehend and remember.