

3-DAY

Precision Lubrication Training Seminar

If you have any of the following equipment, you should attend this course.

- Blowers/Fans
- Compressors
- Gas turbines
- Gearboxes
- Hydraulic systems
- Motor bearings
- Paper machines
- Process pumps
- Rolling mills
- Steam turbines

Who should attend?

- Equipment Operators
- Lubrication Technicians
- Lubrication Engineers
- Machine Reliability Technicians
- Equipment Operators
- Maintenance Managers
- Maintenance Supervisors
- Reliability Engineers
- Operations Managers
- Oil Sampler

Customers who have benefited from seminar.

- Anheuser-Bush Inc
- Bowater Paper Inc.
- Citgo Corporation
- Coors Brewing Company
- General Physics
- Georgia Pacific
- Irving Tissue
- Kimberly-Clark
- McCain Foods
- Suncor
- Sunoco
- and more...

Do you arrive at your site each day and first check to see what failed during the night?

Do you arrive each day expecting that the work that is planned will be replaced by the tyranny of the moment?

Does the term 'Daily Grind' have real meaning for your lubricated machines?

In the modern hyper-competitive manufacturing environment even highly efficient organizations must figure out how to do more work in less time. With the current, and escalating, labor shortfall, the struggle to 'cover all of the bases' will intensify. One obvious option is to limit the size and scope of machine care, but accomplishing this without sacrificing reliability requires both **advanced knowledge** and **practical expertise**. A better option is to improve machine health by implementing *Precision Lubrication Practices*.

In this course maintenance personnel will consider the impact that high quality lubrication practices can have on machine health and reliability. Managers, Engineers and Technicians will see why machine lubrication activities should move from 'something that must be done' to 'The Leading Edge of Machine Reliability', and will begin to understand how to transform the existing lubrication program from modest and reactive to thorough, accurate and proactive.

Gain control over the lubrication process and you will begin to gain control over your daily routine.

Course Outline

Precision Lubrication and Machine Management Strategies

- Traditional Equipment Maintenance Strategies
- Modern, and Future, Maintenance Strategies
- Machine Lubrication Practices for each Strategy
- The Concept of Precision Lubrication
- The Role of Lubrication in Machine Reliability

Applied Tribology: The Science of Precision Lubrication

- Friction, Motion, Lubrication, and Wear
- Surface Interaction Modes – Sliding and Rolling
- Surface Damage: Abrasive, Adhesive, Cavitation, Corrosion
- Lubricants, Lubricant Films and Surface Protection
- Stribeck Curve – Phase Changes

Lubricant Construction

- Lubricant Categories
- Base Oils
- Additives
- Thickeners

Performance Properties

- Oil Performance Criteria
- Grease Performance Criteria
- Loss of Additive Performance

Lubricant Selection Practices

- Bearings
- Gearing and Couplings
- Hydraulics

- Compressors
- Turbines
- Wire Rope, Chain and Miscellaneous
- Combustion Motors

Lubricant Application – Grease

- Dispensing Tools
- Dispensing Metrics – Frequency and Volume
- Automation
- Practice for Maintaining Automatic Systems

Lubricant Application – Oil

- Dispensing Tools

Lubricant Condition and Contamination Control

- Sump Management: The Heart of Precision Lubrication
- Types of Contaminants
- Contaminant Exclusion
- Contaminant Removal

Lubricant Storage and Handling

- Lubricant Consolidation
- Bulk and Packaged Product Receipt and Storage
- In Plant Handling and Management
- Lubricant Handling Tools
- In Plant Handling Management

Introduction to Oil Analysis

- Lubricant Sampling Tools and Methods
- Properties Analysis
- Solid Contaminant Analysis
- Wear Debris Analysis
- Test Slate, Alarms and Limits Development



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\$1200

Registration Policy
REGISTER NOW! If your schedule changes, you may attend a different seminar or send a substitute at no charge. Cancellations received up to 14 calendar days before the seminar are refundable. After that, seminar fees will be credited to your account for use at another seminar.

Seminar Schedule
All sessions are scheduled from 8:00 am - 4:00 pm. A continental breakfast is provided as well as coffee and beverages. Lunch is from 12:00 pm - 12:45 pm and is included in the seminar fee.

Hotel Accommodations
Suggested hotels in the area will be forwarded to you after receipt of registration. Please make your reservations directly with the hotel. Hotel accommodations are not included in course fee.

Test Preparation
This course provides pre and post comprehensive preparation exams that are similar in length and structure to ICML's examination. Also, fill-in-the-blank quizzes will be distributed following each completed section to help students verify and improve material comprehension.

Ways to Register:

- Call Us** 800.558.7008
- Fax Us** Fill out this form and fax to: 262-691-2576
- Mail Us** this form with payment to:
Trico Corporation
1235 Hickory Street
Pewaukee, WI 53072
- Website** www.tricocorp.com

May 19-21 - Baltimore, MD

Group Rates

Group rates are available for three or more students from the same organization. Please call 800.558.7008 for more details.

Please Print

Name: _____
Title: _____
Company: _____
Address: _____
City: _____ State: _____ Zip: _____
Telephone: _____ Fax: _____
E-Mail: _____

Payment Information

Check Inclosed: Payable to: **Trico Corporation**
3-Day Seminar \$1200 (group rates are available please call for more details.)

Invoice My Company: Attn _____

Credit Card: MasterCard Visa
Card # _____ Exp Date _____
Name on Card _____
Signature _____

Certification Available



The International Council for Machinery Lubrication (ICML) will conduct Level I Machine Lubrication Technician (MLT I) certification testing the morning following the Precision Lubrication Training course from 8:00 am - 11:00 am. ICML requires a minimum of two years post secondary education or on-the-job training, plus at least 16 hours of formal training in machinery lubrication in order to test for MLT I. Qualified candidates interested in testing for certification should contact ICML directly at 918.259.2950 or visit their website at www.lubecouncil.org for more information or to register for testing and payment of examination fee. Cost to take exam is \$200.

