

“Lubrication” Training Program (English Material)

Course Length: 25 Hours @ 5 days

Course Contents

Day 1

The Properties of Lubricants

- Reducing Sliding and Rolling Friction
- The Nature of Wear and How it is Minimized
- Solid vs. Liquid Lubricants

Liquid Lubricants

- Common Oil and Grease Bases
 - Fatty, Petroleum Based, and Synthetic Oils
- Mineral Oil Additives

Day 2

Oil Properties and Terms

- Viscosity
 - Interactive Interchange Chart
- ISO, AGMA, and SAE Cross Reference Guide
- Viscosity Index and Multi-Viscosity Oils
- Flash Point and Pour Point
- API and ASTM Identifiers

Day 3

Hydraulic Fluid

- Hydraulic Fluids vs. Lubricating Oil
- Testing and Analysis of Hydraulic Oils

Grease

- The Properties of Grease

- Grease Additives and Thickeners

Day 4

Oil Analysis

- Sampling Methods and Record Keeping
- Physical Tests
 - Viscosity Tests
 - Total Acid Number
- Spectrographic Analysis
 - Wear Metals
 - Additives
- Ferrographic (Wear Particle) Analysis
- Lubrication Sampling Frequency

Day 5

Lubrication Delivery and Maintenance

- Common Equipment Lubrication Systems
 - Re-lube Frequency Calculator (Interactive)
- Bearing, Compressor, and Industrial Gear Lubrication
- Chain Drive Lubrication
- Spindle Machinery Lubrication