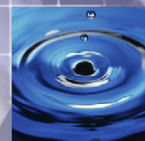
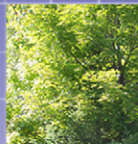


THERMAL LUBE INC.



BETTER
TOUGHER
GREENER



CERTIFIED ISO 9001:2008

QUALITY SOLUTIONS
www.thermal-lube.com

BETTER TOUGHER GREENER

Thermal-Lube's lubricant product line consists of more than 1,000 industry-tested and approved lubricant formulations, marketed under the **ENHEI** and **POLYON** brand names as well as under various industry-leading private brands. However, it is our custom-formulated products that have earned us the reputation of being an innovative, reliable supplier of Quality Solutions. We also offer a complete line of concentrated performance-enhancing, life-extension additives designed to maintain the optimal operating levels of most lubricating oils.

Many of these custom formulations are engineered for machinery and equipment that operate in abnormal working and ambient conditions. Our expertise in this field has led to numerous successes in developing superior, "application specific" lubricants that are resistant to the detrimental effects of harsh operating environments such as airborne contaminants, extreme temperature fluctuations, and chemical exposure. We developed our **COAT**® technology to monitor the condition and extend the life of in-service lubricating fluids, and to provide insight into the chemical and physical causes of fluid degradation. We are constantly gathering and analyzing data, and integrating the findings into our formulations to produce improved products that are **BETTER**, **TOUGHER** and **GREENER**, as they are designed to last longer and perform better than conventional lubricants in all environments.

Our lubricant products increase lubricity and reduce friction, which results in lower energy costs. Our **COAT**® technology, together with our synthetic lubricants, is proven to help extend fluid life by up to 1500%, greatly reducing the need to replace and dispose of used and contaminated oil which is not only better for the environment but also increases equipment "up-time", thereby increasing productivity and profitability of our customers.

More recently, Thermal-Lube developed a line of smoke and exhaust monitoring systems, designed to sample and analyse emissions produced by various types of combustion systems for stationary and mobile engines. Our systems are used at the developmental and testing stages in our own laboratory to help our customers design more efficient environmentally friendly combustion systems. Our expertise in this field is built on an understanding of lubricants from the molecular level. From our lubricant products to our oil analysis systems to our environmental monitoring systems, our customers' confidence has always been driven by our ability to realise significant savings by paying attention to the smallest details.

SPECIALTY LUBRICANTS

Thermal-Lube uses a variety of synthetic base oils such as Esters, PAOs, Poly-Glycols, Halocarbons, and Silicones, as well as Group II, II+ and III mineral oils to manufacture over 800 oils and more than 200 greases of various types and grades. Our sophisticated equipment allows for diversity in the manufacturing procedures, providing flexibility in size, temperature, and type of mixing action while minimising batch-to-batch contamination.

LUBRICATING OILS AND GREASES

- Agri-Food approved products
- Automotive and Industrial Gear oils
- Automotive lubricants
- Biodegradable lubricants
- Block greases
- Chain oils
- Compressor oils
- Dielectric greases
- Fire resistant oils
- General purpose greases
- High temperature lubricants
- Hydraulic and circulating oils
- Industrial lubricants
- Low temperature lubricants
- Motor oil
- Open gear greases
- Penetrating oils
- Pneumatic oils
- Private label oils and greases
- Soluble oils
- Synthetic Lubricants

DRY FILMS AND COATINGS

- Cable lubricants
- Dry films with graphite
- Dry films with molybdenum
- Oil based dry films
- Permanent coatings
- Solvent based dry films
- Temporary coatings
- Water based dry films

GLASS & METAL WORKING FLUIDS

- Fluids for working ferrous and non-ferrous metals
- Coolants for glass working
- Soluble lubricating coolants
- Synthetic emulsions

PERFORMANCE ENHANCING ADDITIVES

- Fuel treatments
- Gear oil additives
- Hydraulic oil additives
- Motor oil additives
- Re-additising additives



CONDITION MONITORING

Even the most advanced lubricating fluids will degrade over time depending on various external and internal influences, including type and age of equipment, ambient temperature, humidity, and degree of use and load on equipment. Monitoring the health of lubricating fluids is an important and necessary component for the overall maintenance of your machinery. Thermal-Lube developed a line of analytical and treatment systems, designed to make lubricant Condition Monitoring easy and affordable.

Our **COAT**® and **CFDA**® Condition Monitoring systems use Fourier Transform Infrared Spectroscopy (FTIR) – powered by our proprietary **U.M.P.I.R.E.PRO**™ software – to identify the base oil chemistry, depletion of additives, and contamination, while keeping track of changes to the composition of the fluid in equipment-specific databases.

IN-SERVICE OIL ANALYSIS AND TREATMENT

- Complete analysis using **COAT**® technology
- Complete oil analysis using JOAP, ASTM E2412, and ASTM D-7418 protocols
- FTIR oil analysis
- Automatic additive replenishing
- Determine AC, BN, and moisture
- ASTM D-7412; ASTM D-7414; ASTM D-7415
- Monitor additives including antioxidants, anti-wear, R&O, EP, and pour-point depressants
- Monitor contamination from moisture, glycol, soot, and fuel

FUEL DILUTION ANALYSIS

- Continuous analysis of fuel dilution using **CFDA**® technology
- Designed for all fuel types, including diesel, biodiesel, gasoline, and ethanol
- Automatically monitor and analyze oil condition in a test cell environment



COAT System - Continuous Oil Analysis and Treatment

EMISSIONS MONITORING

With today's significant environmental issues, there is more and more emphasis on keeping our planet clean. Government and Industry are now starting to find and improve ways to reduce pollution. Excessive malfunctioning of diesel engines is a major contributor to air pollution and climate change. We developed our line of Emissions Monitoring systems in collaboration with provincial and federal governments in response to the growing need for efficient and reliable analysis of engine performance that must comply with new tougher environmental regulations.

Thermal-Lube's Emissions Monitoring systems are not only an efficient and cost-effective way to help maintain compliance with any applicable environmental laws but are also used as real time diagnostic tools to tune engines and maximize combustion efficiency. It can only be described as win-win when you have the tools that can reduce pollution and energy costs.

OPTICAL OPACIMETER

- Designed for use with Diesel engines
- Meets and exceeds specifications for **SAE J1667 Snap Acceleration Test**
- Meets and exceeds specifications for **DR-PIEVAL 01** and **DR-PIEVAL 02**
- Approved and certified by Environment Canada

5 GAS ANALYZER

- Conforms to and exceeds ASM/BAR 97 specifications
- Conforms to and exceeds OIML BAR 90 specifications
- Measures levels of five exhaust gases (HC, CO, CO₂, O₂, NO_x)

COMBINED OPACIMETER / GAS ANALYZER SYSTEMS

- **EXL comBo**®: Portable system for use with large mobile fleets
- **I.M.O.D.E**®: Stationary models can be connected with up to five smokestacks, with sampling controlled and programmed remotely through the **U.M.P.I.R.E.EXL**™ software.
- **I.M.O.D.E**® conforms to ISO Standard 8178-2:1996, as verified by the Canadian Naval Engineering Test Establishment (NETE)



EXL comBo® Combination Opacimeter / Gas Analyzer

QUALITY SOLUTIONS

RESEARCH • INNOVATION • PRODUCTION

Thermal-Lube Inc. is a family-owned company, located in Pointe-Claire, Quebec, Canada. Founded in 1983 as a manufacturer of specialty synthetic lubricants, the company quickly expanded into other sectors. We are now a leading innovator in the field of oil and fluid analysis, and environmental emissions monitoring. Our products are sold throughout North America, and exported to Europe, Asia, South America, and the Far East. They are used in a variety of industries such as mining, forestry, automotive, metal transformation, agri-food, government, defence, and many more. In addition to our Thermal-Lube branded products, we custom-blend products sold under the private brands of our OEM customers.

Thermal-Lube's motto is "*Quality Solutions*" and our success is based on our ability to look at any new challenge as an opportunity to excel. Our commitment to high standards for more than 25 years has earned us an international reputation for reliability, personalized service, and delivering the highest quality value-added products to our customers. It has also allowed us to enjoy an extraordinarily high level of customer loyalty and company growth.

Thermal-Lube's tradition of reacting quickly to our customers' needs and keeping up to date with the latest international environmental demands has enabled us to formulate, manufacture, and sell a complete product line of high quality, environmentally friendly, lubricants. Our continued dedication to research has kept us on the forefront of our industry's analytical needs and led us to develop a line of innovative and efficient instruments used to optimize fluid life and minimise harmful emissions. Perhaps the most important factor that makes our company unique is the collaborative relationship we enjoy with our customers – our ability to work with them to understand the problem and together develop "Quality Solutions" that meet their many different needs.



*The entire Thermal-Lube product line is available in
your region through one of our authorized distributors:*

THERMAL LUBE INC.

255 AVENUE LABROSSE, POINTE-CLAIRE, QUÉBEC, CANADA H9R 1A3
Tel: 514-694-5823 | Fax: 514-694-8628 | Toll Free: 1-800-567-5823 | www.thermal-lube.com