

TRIBOLOGIK®

NEWSLETTER

ISO 17025:2005

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MARCH 2014

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Tribologik – Star of the Lakeshore

Following our investment in a brand new oil analysis laboratory in the City of Hammond IN (Greater Chicago area), Tribologik Corporation has been awarded a "Star of the Lakeshore" investment certificate at the February 15 Lakeshore Chamber of Commerce's (North West Indiana) awards dinner.

New U.S.A. Laboratory

Tribologik is in the process of opening a new state of the art laboratory including the latest equipment in Hammond, In. We will keep you informed of the official opening date including all contact information within the next few weeks.



Mr. Thomas M. McDermott Jr Mayor of Hammond IN, with Nicholas Reich (left) and Arezki Ould-Amer, Vice President, Tribologik Corporation (right).



Although we have been very active on the US market for a number of years, this investment now provides us with a direct access to the world's largest industrial and predictive maintenance market. As to the choice of Chicago, it has been motivated by the fact that this City, the third largest in the United States, is the economic capital of the Midwest as well as a key business center and hub for air, rail and road transport.

Our Star of the Lakeshore award is shared with a number of public personalities and prestigious businesses such as Arcelor Mittal, Linde Gas, BMO Harris Bank, Tri-State Industries and others.



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Basic Coolant Analyses

In the previous issue of this Newsletter we have seen how total water hardness in coolants may lead to corrosivity due to high calcium and magnesium content. Total hardness however, is just one test among many others for coolants.

Keeping in mind that over 40% of all maintenance problems on diesel engines can be attributed to poor maintenance of the cooling system, a regular coolant testing program will undoubtedly save you money on unscheduled downtime which include both parts and component replacement, while increasing your fleet's productivity and profitability.

Recommended Coolant Tests

- **Visual test** for color, odor, clarity, precipitate and foam: may serve as an indication of the degree of use of the coolant. Precipitate is a solid formed in the coolant by contamination. Foaming can result from excessive agitation, improper fluid levels, air leaks, contamination or cavitation.
- **Elemental Analysis by ICP** (inductively coupled plasma): detects up to 23 elements that can be present in used coolant due to mechanical wear, coolant contamination or additive depletion.
- **Conductivity** of coolant: examines the ability of the coolant to resist carrying an electrical current between two dissimilar metals. At high conductivity, harmful pitting and corrosion can occur. The level of conductivity is determined by the concentration of dissolved solids (salt) and additives in the coolant. The inhibitor chemicals, silicates, contaminants and water hardness compounds can lead to water pump failure.
- **The pH** measurement reveals the coolant's level of acidity or alkalinity. An acidic pH will cause corrosion of ferrous components, while a basic pH will cause corrosion of copper and aluminum components.
- Coolants being 50-50 mixtures of water and glycol, **Glycol Percentage** determines the percentage of antifreeze in coolant. When the glycol concentration is higher than 70%, the freezing point is not improved and heat transfer capacity is reduced. This may cause supplemental coolant additives (SCA) drop-out, water pump seal damage and overheating.
- **Boiling Point** is dependent upon the concentration of antifreeze in a coolant. The maximum operating temperature of the coolant system should be lower than the boiling point. This equilibrium boiling point indicates the temperature at which the sample will start to boil in a cooling system under equilibrium conditions at atmospheric pressure.

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- The **Freezing Point** measures the temperature at which a coolant solidifies and is dependent upon the concentration of antifreeze in coolant fluid.
- **Total Dissolved Solids** examines the combined content of all inorganic and organic substances contained in a liquid which are present in a molecular, ionized or micro-granular suspended form. It is affected by the concentration of glycol to water in coolant as well as the concentration of additives. Inhibitor chemicals, silicates, contaminants and water hardness compounds can all lead to water pump seal failure.

For more information and details on test frequency and prices, contact your technical representative.

WEBINAR – Manage your Oil Analysis Program using the Tribologik® web site

By **Nicholas Reich**

Date : Friday March 28, 2014

Time :

- **Ontario, Manitoba : 12:00 PM, Toronto time**
- **Saskatchewan, Alberta : 10:00 AM, Calgary time**

Duration : 30 minutes

Reserve now with Nicholas : nreich@tribologik.com

Global Meet

You're invited.

You've been invited to a web meeting starting lundi 9 juillet 2012 at 11:35 Canada, Québec.

Have the meeting call you.
Click the Connect Me link below. No need to dial-in.

[Connect Me](#)

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