

TRIBOLOGIK® NEWSLETTER

ISO 17025:2005

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Preventing Fuel Contamination Caused by Micro Organisms

Without proper monitoring, both bacteria and fungi will grow and spread rapidly throughout a fuel system, reduce performance and damage engines. They quickly plug fuel filters with a slime-like coating over the surface and dramatically reduce service life. How then is it possible to get rid of them?

*Best
Wishes and
Happy
Holidays to
all our clients
and partners!*

Draining the system will reduce microbial activity, but will not eliminate it. The only way to eliminate microbial growth once it has started is to clean and treat the system with a biocide.

Microscopic in size, usually (but not always) black, green or brown, microbes multiply quickly by simple cell division doubling their numbers every 20 minutes. A single cell, weighing one millionth of a gram can grow to a visible, thick layer of 10 kilograms and several centimeters in 12 hours.

Many varieties of bacteria are responsible for the majority of problems affecting the performance of diesel engines

SULPHATE REDUCING BACTERIA (SRB)

SRB's reduce sulphates and produce hydrogen sulphide (a lethal gas). They are directly involved with many microbial corrosion reactions and can cause sulphide souring of stored distillate products. Their action changes the pH creating an acidic environment, conducive to accelerated corrosion. They attach themselves as a film to the steel and go to work. They derive their nutrition from the surrounding environment and multiply accordingly. They are particularly difficult to deal with and produce a sludgy by-product with a strong sulphur odour similar to rotten eggs (hydrogen sulphide).

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IRON REDUCING BACTERIA

These also contribute to corrosion, eating steel and reducing ferrite to an oxide through a chemical reaction.

YEASTS

Yeasts prefer acidic environments, such as produced by SRB's. They bud on the parent cell, eventually separating and reproducing.

FUNGUS

Fungi grow in the form of branched hyphae, a few microns in diameter, forming thick, tough, intertwined mycelia mats at fuel/water interfaces.

PREVENTION

Clean fuel is essential for efficient, optimum engine performance. All of these micro organisms can and do cause damage to your fuel systems. In addition, plugged filters will develop as the filter works to remove unwanted contaminants from the fuel system.

To avoid the need to use biocides, it is of primary importance to maintain the fuel system by draining water very regularly, keep the tank as full as possible, (especially over-night) and try to ensure your supplier maintains his system well.

For more information, contact your technical representative.



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

By **Nicholas Reich**

Date : Friday December 20, 2013

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](#)

Not at your computer?
You can join by dialing one of the access numbers below.

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