

Lube-Tips - Invisible Dirt is Dangerous

Accessorizing Gearboxes

Many smaller gearboxes have a fill hole and a drain plug. The only way to tell if the gearbox has the proper amount of oil is to unscrew the fill plug and stick your finger in it. To improve this process, replace the drain plug with a sight glass. This makes it easy for anyone walking by the equipment to notice if there is a problem with insufficient oil.

At the same time, because you no longer need to open the fill cap regularly, replace it with an appropriate breather or quick connects (on both the fill port and drain) to add oil or deploy offline filtration. (Submitted by Bill Jacobyansky, Maintenance Manager, Guardian Industries. Thanks Bill!)

Join us in Chicago, Illinois for [Machinery Lubrication I & II training](#) on June 7-10 or in Branson, Missouri on September 13-16. After the training, sit for your [MLT certification](#) from the [ICML](#).

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Readers Challenge: Justifying an Oil Analysis Program

A maintenance manager at a large paper mill was approached by some of the mill personnel about starting an oil analysis program.

The mill had never had an oil analysis program. After listening to his staff explain the benefits of oil analysis, the manager asked:

"Why should we start an oil analysis program if we have never had a failure due to poor oil quality?"

What would you tell this manager to convince him that oil analysis is beneficial?

Submit your answer at

http://links.noria.com/rmgo.asp?tid=58377&eid=27996&sb_id=35938.35938

before Tuesday, May 11, 2004. Lube-Tips editors will choose the best answer and the \$100 recipient will be announced next week.

Lube-Trivia: Name Those Thickeners

Test your knowledge and prepare for [ICML](#) lubrication and oil analysis certification.

QUESTION: Name four common soap-based thickeners used in greases.

[Get the answer.](#)

Q & A: Invisible Dirt is Dangerous

"You usually can't see the dirt in a fluid, whether its cleanliness is as dirty as an ISO 23/21/18 or as clean as an ISO 14/12/9. Is there really that much difference between the two extremes?"

Yes! Because of the multipass nature of dirt in a fluid, at ISO 23/21/18, a 50-gpm oil pump will circulate almost 7,000 pounds of abrasive dirt to your components each year. Conversely, at ISO 14/12/9, the same pump will deliver just 14 pounds of dirt to the components per year. All else held equal, the pump in the clean system will last 15 times longer!

The dirt you can't see with the naked eye is even more dangerous than the dirt you can see. The small stuff is often clearance-sized, meaning that it is just the right size to impede the blood cell-sized machine surface clearances and cause abrasion and surface fatigue. Likewise, the small particles remain entrained in the oil for a long period of time, even with just minimal agitation.

[Submit a question](#)

Post of the Week: Options for Removing Water From Oil

To reward the lubrication and reliability community for its participation in the Noria [Message Boards](#), we've started the [Post of the Week award](#). Every week, we award one lucky member \$50.

This week's award goes to:

[BuckHntr \(Silver Member\)](#)

Here's an excerpt from the post:

"For persistent water ingress problems on larger systems, vacuum dehydration may make sense. But there are other less expensive options. A centrifuge is usually much less expensive to install and usually will take care of persistent water ingress." [See the entire post.](#)

Resources



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