



TEST YOUR KNOWLEDGE

This month, *Machinery Lubrication* continues its “Test Your Knowledge” section in which we focus on a group of questions from Noria’s Practice Exam for Level I Machine Lubrication Technician and Machine Lubricant Analyst. The answers are located at the bottom of this page. The complete 126-question practice test with expanded answers is available at store.noria.com.

1. What percentage by volume of SAE 10W-30 is SAE 30?

- A) 0%
- B) 25%
- C) 50%
- D) 75%
- E) 100%

2. Magnetic plug inspections:

- A) Crudely indicate presence of iron wear
- B) Indicate water contamination
- C) Indicate copper wear rates
- D) Indicate oil circulation rates
- E) Indicate corrosion is occurring

3. A filter’s differential pressure slowly increases over time. What’s wrong?

- A) The filter has burst
- B) The filter bypass valve is open
- C) ISO particle counts should be taken
- D) Filter differential pressure does not increase
- E) Nothing, it’s removing dirt



ANSWERS

1. A

SAE 10W-30 and SAE 30 are totally different oils. SAE 10W-30 is a multigrade oil in which a viscosity-index improver has been added so the oil can be utilized over a wide range of temperatures. SAE 10W-30 oil works as SAE 10 at cold temperatures and as SAE 30 at high temperatures.

2. A

Magnetic plug inspections can indicate the presence of ferrous wear (iron and steel). The magnetic plug will hold ferrous wear particles but not other particles.

3. E

This is an indication that the filter is functioning properly. On the other hand, if the oil is contaminated and the differential pressure is continuously low, this indicates the filter is not functioning (perhaps in bypass).



The "Lube-Tips" section of *Machinery Lubrication* magazine features innovative ideas submitted by our readers.



Paper Thermometer Can Reveal Temperature Spikes

In time-critical situations where real-time infrared thermography is impractical and thermocouple/recording equipment cannot be installed, consider temperature-sensitive tapes. These tapes are manufactured in a variety of sensing ranges and will clearly record the peak temperature that a machine area reached since the tape was first applied. A quick visual check is all it takes to read the "paper thermometer."

Quit Replacing Oil Seals

If you are constantly changing gearbox oil seals, check the gearbox breather for plugging. When breathers become clogged, internal gearbox pressure can build and find its way out through oil seals, creating a false impression that the seal has failed. This can become more problematic during summer months.



Try Oil Mist for Better Contamination Control

In bearing applications where high contamination levels are a concern, consider converting grease lubrication systems to oil mist lubrication. Oil mist systems are slightly pressurized, helping to exclude contaminants. Use a pure mist system for rolling-element bearings and purge mist for gearboxes and journal bearings.



Did You Know?

Additional tips can be found in our Lube-Tips email newsletter. To receive the Lube-Tips newsletter, subscribe now at MachineryLubrication.com.

Have Some Tips?

If you have a tip to share, email it to editor@noria.com.

Why Dispersancy Is Crucial for Engine Oils

Coolant contamination, overextended oil drains, water contamination, high blow-by, long idling, high elevation and exhaust gas recirculation can all result in the loss of dispersancy in motor oils. This loss can cause engine deposits, sludge, impaired lubrication and oil flow. **ML**

