

## Methods for Trending Wear Levels in Grease Lubricated Equipment

Richard N. Wurzbach  
Lisa A. Williams  
William Doherty  
MRG Labs  
2101 Pennsylvania Ave  
York, PA 17404

### ABSTRACT

Oil analysis is well established as a routine tool to optimize maintenance activities, improve reliability and equipment life and prevent component failures. As part of a comprehensive Predictive or Condition Based Maintenance program, lubricant analysis is an effective complement to other diagnostic technologies such as vibration analysis, infrared thermography, ultrasonic detection and motor circuit evaluation. However, when the equipment is grease lubricated rather than oil lubricated, the important lubricant analysis piece is usually left out of the mix. However, new tools have been developed for improved sampling techniques and grease analysis tests to allow the inclusion of lubricant analysis for grease lubricated equipment. This paper will discuss the challenges and options to obtain representative and consistent grease samples from motors, motor operated valves, and other critical equipment, and the use of a hall-effect sensor device for reliably and repeatably determining changes in wear levels for samples of grease as small as 1 gram.

**KEYWORDS:** Lubricants:Greases, Wear:Equipment Wear Tests, Wear:Wear/Failure Testing Devices

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