

GREASE TESTING + ANALYSIS

IMPROVE RELIABILITY | MONITOR CONDITIONS | INCREASE UPTIME

BRIDGE THE GAP

Utilizing grease testing and analysis as an additional condition monitoring technology can help improve the reliability of equipment that cannot easily be monitored through standard fluid analysis.

IDENTIFY PROBLEMS

Testing your grease and acting on the maintenance recommendations can identify and correct the causes of problems in your equipment that could lead to failure.

VALUABLE INSIGHTS

Grease testing and analysis provides valuable insight into grease performance and integrity, including:

- Wear
- Consistency
- Contamination
- Oxidation properties

WHY SHOULD I DO GREASE TESTING?

Stay on top of mission-critical grease conditions, degradation trends and wear rates to:



Minimize Unplanned Repairs



Decrease Downtime



Extend Machine Life

WHEN SHOULD I TEST MY GREASE?

Grease sampling intervals vary greatly based on equipment type. Including grease testing with your normal lubrication testing can help you achieve an effective condition monitoring program. Don't wait until you suspect contamination or a component fails to test your grease. It's important to add grease testing to your program so you can see the whole picture at one time, allowing you to monitor your equipment condition and identify issues before catastrophic failure occurs.

HOW DO I TAKE A GREASE SAMPLE?

Each grease analysis kit comes with a grease sampler, syringe and other items necessary to collect your grease sample from your equipment. The type of sample kit used will depend on the application and component. Available kit options include:

- Basic Grease Analysis
- Pillow Block Bearing
- Wind Turbine

Baseline Reference Sample

For proper analysis, one baseline reference sample of new grease is required for every type of grease sent to the laboratory for analysis. This will allow us to compare the results of the new grease to the used grease, to provide a more accurate analysis and an improved reliability and maintenance recommendation.

HOW DOES IT WORK WITH MY OTHER TESTING?

The best way to oversee all components of your equipment and to achieve optimal condition monitoring is to couple your standard fluid analysis testing with grease testing to watch for abnormal conditions that can affect greased components.



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WHAT DOES THE TEST IDENTIFY?

We conduct a few different laboratory tests to analyze properties within grease. Each test identifies properties to help target potential problems that could cause equipment failure.

Consistency | Die extrusion

To measure the grease's consistency, we compare the resistance pressure to a load cell as the grease is extruded through a die, then compared to an overlay of the new grease baseline sample.

Oxidation and Contamination | FTIR

To find contaminants and oxidation levels, the used grease is compared to an overlay of the new grease baseline sample.

Appearance | Colorimetry testing

Changes in appearance can result from overheating, aging and contamination.

Contamination | Inductively Coupled Plasma - Optical Emission Spectroscopy (ICP-OES)

The ICP test is used to evaluate the grease for wear metals, additive elements and possible contaminants.

Life expectancy | Linear sweep voltammetry

This test measures antioxidant content which can give an indication of the remaining useful life left on the grease as well as assist in determining proper relubrication cycles.

Wear concentration | FdM+

Determines the amount of hazardous, wear-causing ferromagnetic material that is present in the sample.

I'M CURRENTLY DOING GREASE TESTING. HOW IS THIS NEW METHOD DIFFERENT?

Historically, grease testing has existed in one of two realms – specification tests and limited “in-service” testing. These versions of standard used oil analysis methods have been modified to accommodate grease. These test regimes aren't designed for in-service grease and they don't give you a complete picture of the condition of the grease or equipment.

Specification tests like cone penetration and dropping point tests are often recommended for individuals who are interested in testing their grease. These tests appear on product specification sheets so they are well known in the industry. However, while these tests can tell you if the grease has changed from its blend specifications, they don't give any indication of how the grease is performing in the system. They also require a large sample volume difficult to extract from most equipment and the testing can be quite expensive.

Traditional oil analysis tests, such as ICP, water or analytical ferrography can be performed on grease samples. These are excellent tests for monitoring wear in the equipment and can give information on contamination, but they don't provide information on the condition of the grease.

In order to get a clear picture of your entire system's health that can drive maintenance decisions, we recommend using the grease sampler and tests designed specifically for in-service grease.

GREASE TEST PACKAGES

BASIC

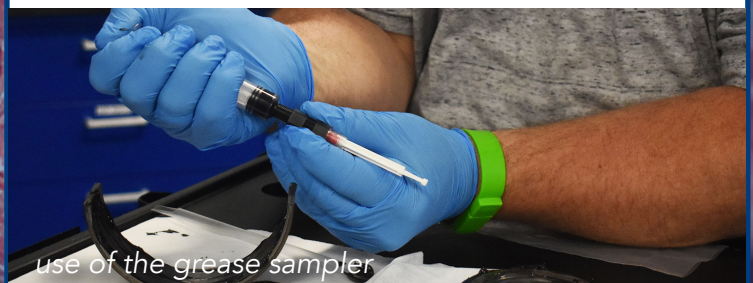
- FTIR
- FdM
- Water by Crackle
- Color

ADVANCED*

All basic testing plus:

- Grease consistency
- Water by Karl Fischer
- ICP-OES Wear Metals
- Microbiological Contamination
- Ruler

**Advanced testing can be added on a case-by-case basis, without the need of additional sampling*



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