



MTS Fluid Analysis

Designed for servohydraulic test systems

MTS Analysis Parameters

- » ISO Cleanliness Trends
- » Contaminant & Wear Metal Measurement
- » Additive Depletion Levels
- » Water Content Percentage
- » Fluid Viscosity & Age Trending
- » Varnish/Silt/Sludge/Oxidation Measurement

Receive an extensive assessment of hydraulic fluid condition with MTS Fluid Analysis. We've partnered with ExxonMobil Oil Corporation to customize the Mobil Serv Lubricant Analysis services to MTS requirements. With parameters that are designed specifically for servohydraulic test equipment and measurements that are rarely found in other analysis offerings, you'll get the data you need to optimize equipment performance.

High-performance test systems are particularly sensitive to substandard fluid conditions. With their high duty cycles, the hydraulic fluid deteriorates quickly. System valves can "slice" base oil and additive molecules apart during operation. This fluid deterioration may be accelerated by high-temperature operation.

With MTS Fluid Analysis you get the right analysis for servohydraulic test systems and the freedom to conduct the sampling yourself. For the best sampling results, we recommend following the guidelines found in the sample packaging and using the MTS sampling tool. You can then submit your sample, and we'll register your site information, analyze the sample and e-mail a results report to you.

Protect your investment in high-performance servohydraulic test equipment by assessing the condition of your hydraulic fluid with MTS Fluid Analysis. And receive the critical information about fluid contamination and deterioration that will help you intervene to keep your hydraulic system operating in peak condition.

be certain.

MTS Fluid Analysis

You will receive analysis reports based on specifications set for servohydraulic test equipment.

MTS Analysis Parameters

ISO CLEANLINESS TRENDS – ISO cleanliness measurement provides a summation of contaminant by size, but not by composition or mass. The MTS control limits for ISO cleanliness are specific to servohydraulic test equipment that operates at much higher pressures, and in harsher environments than typical commercial-grade hydraulic systems.

CONTAMINANT & WEAR METAL MEASUREMENT

– This parameter identifies existence of contaminant by mass and composition, but not by size. The rate and stability of shedding metals is diagnostic and predictive to the health of system

subcomponents, such as servovalves. This measurement provides the data necessary to intervene in a purposeful and planned manner.

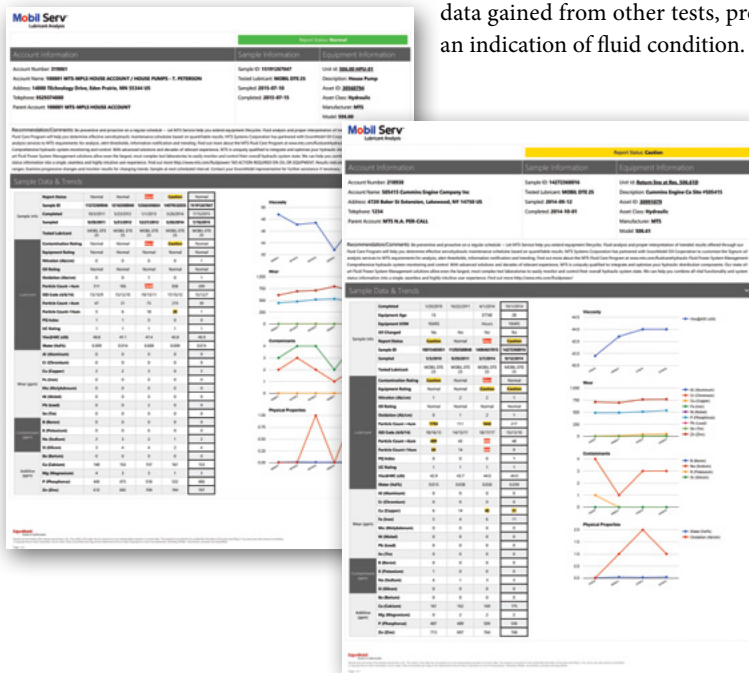
ADDITIVE DEPLETION LEVELS – Additives are protectors that inhibit undesirable changes in the precision hydraulic fluid and the test machine. High-pressure, close-tolerance servovalves operating at higher frequencies can “slice” base oil and additive molecules apart during operation. When additives are depleted, your system has less protection against fluid breakdown and abrupt system failure.

WATER CONTENT PERCENTAGE – Water can cause emulsions to form and it can lead to corrosion. More than a trace of water may indicate early warning of a failing heat exchanger or ingestion of water through air breathers. The water volume measurement, when combined with the data gained from other tests, provides an indication of fluid condition.

FLUID VISCOSITY & AGE TRENDRING – Viscosity is the most important property of the lubricant itself. Changes in viscosity affect the ability to form the essential lubricating film for the test machine and indicate poor fluid condition due to aging. Fluid aging is accelerated by operating at higher temperatures, presence of even trace water, fluid contaminants and additive depletions.

VARNISH/SILT/SLUDGE/OXIDATION

MEASUREMENT – Operating at persistent elevated temperatures and in the presence of trace water contributes to accelerated fluid breakdown reflected in high oxidation, nitration or suspended silt particulate. MTS Fluid Analysis measures all these elements. The nitration test, which predicts varnish deposit potential, is rarely found in other fluid analysis solutions. The UC (ultracentrifuge) test detects contaminants less than 0.5 microns that can cause premature filter plugging and erratic valve operation. These tests will alert you to the potential formation of sludge, silt, lacquers, and various other hard and soft gummy surface deposits.



Analysis report with fluid condition results and basic recommendations



MTS Systems Corporation
14000 Technology Drive
Eden Prairie, MN 55344-2290 USA

Telephone: 1-952-937-4000
Toll Free: 1.800.328.2255

E-mail: info@mts.com
www.mts.com

ISO 9001 Certified QMS

Other Fluid Assessment Options

If you are interested in more comprehensive monitoring and analysis of your hydraulic fluid, consider the MTS Fluid Care Program. These programs offer professional sampling with an exclusive, patent-pending sampling tool, and managed results review. The Hydraulix program includes sophisticated diagnosis of fluid condition by MTS engineers with in-depth knowledge of servohydraulic system operation and specialized training in fluid chemistry. It also includes options for 24/7 in-line fluid monitoring.

MTS is a registered trademark of MTS Systems Corporation within the United States. This trademark may be protected in other countries. All other trademarks are property of their respective owners. RTM No. 211177

© 2021 MTS Systems Corporation.
100-213-620b FluidAnalysis Printed in U.S.A. 6/21