MTS Fluid Care Program

Managed sampling and analysis of hydraulic fluid

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

The MTS Fluid Care Program protects your investment in servohydraulic test equipment by identifying the fluid contamination and deterioration that can lead to unexpected downtime and repair costs. The program combines precise fluid assessment with the added benefits of field service engineering support.

At the outset, MTS will work with you to assess your lab and business situation. We will then design a sampling interval schedule that aligns with your equipment usage and performance goals. Your MTS field service engineer (FSE) will take the samples with a patent-pending sampling tool, review report results with you, and help you determine if and when a maintenance intervention is required.

With the MTS Fluid Care Program, you'll receive an assessment of your hydraulic fluid that is based upon stringent standards designed to detect issues at an early stage. Your MTS field service engineer will discuss results that are out of normal range, and monitor trends over the course of time. You will also receive an annual summary of results, including fluid condition trend information and recommendations for future actions.

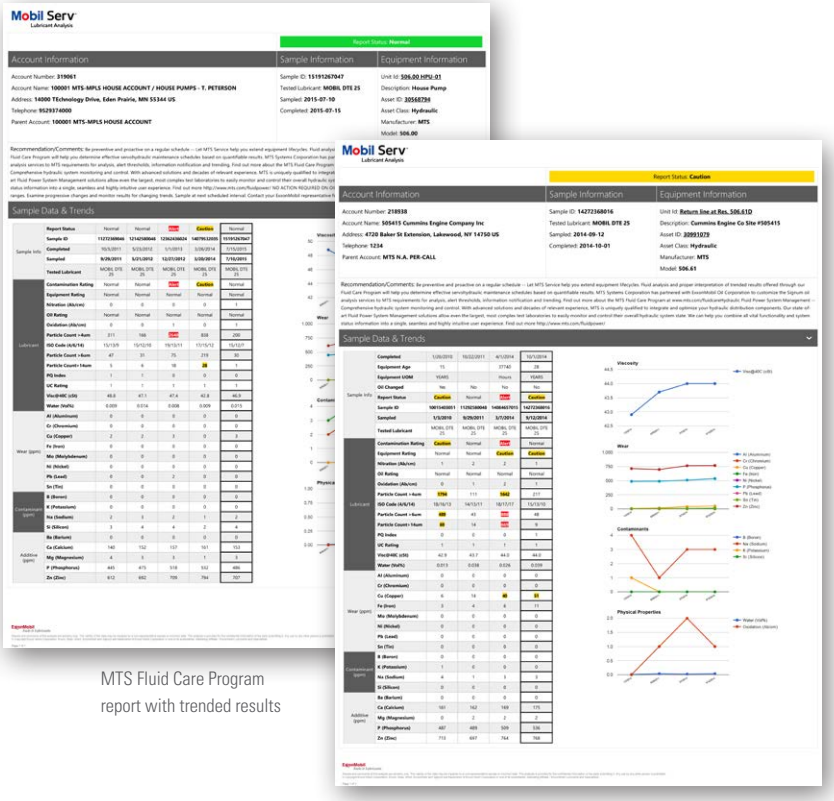
The goals of a consistent monitoring program are to mitigate downtime risk and improve equipment performance. The MTS Fluid Care Program is an economically sound investment that will reduce your total cost of test equipment ownership by maintaining fluid integrity.

Superior sampling, analysis and review

The MTS Fluid Care Program provides the professional sampling services, comprehensive analysis and results monitoring necessary to acquire accurate data from fluid assessment.

Professional Sampling

There are many ways to contaminate a sample and very few ways to get a clean hydraulic fluid sample. With the Fluid Care Program, you can be confident that the sample will be collected correctly and consistently so you can trust the analysis data. MTS field service engineers are trained in proper sampling technique; including the best method for flushing a sample bottle, the best place to obtain the sample, and how to handle the sample once it is taken to reduce the chance of contamination. They will use the MTS patent-pending sampling tool that is available for use exclusively through the MTS Fluid Care Programs.



MTS Fluid Care Program report with trended results

Comprehensive Analysis

You will receive analysis of fluid condition based upon standards set specifically 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.

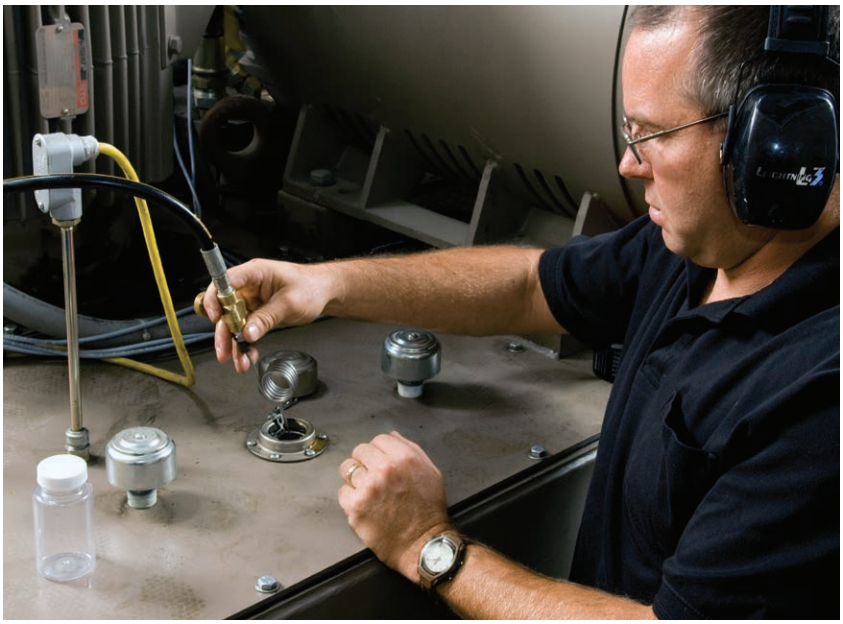
FLUID VISCOSITY & AGE TRENDING – Viscosity is the most important property of the lubricant itself. Changes in viscosity affect the ability to form the essential lubricating film for the test machine and indicate poor fluid condition due to aging. Fluid aging is accelerated by operating at higher temperatures,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

Results Review

One of the downfalls of most fluid sampling services is that they provide the results of the analysis without any interpretation. So, someone at the lab receives a report and files it away somewhere, never to be seen again. Not surprising, since most lab professionals have many other concerns to think about. With the MTS Fluid Care Program, your field service engineer will review all your reports and discuss any "caution" or "alert" results. You will receive information on possible causes, recommendations for corrective action and an indication of the urgency of any issues. Your field service engineer will also provide an annual summary with trend information to help you understand fluid condition over time.

Have MTS help manage your hydraulic fluid so that you can concentrate on managing your test schedule and budget. By investing in regular fluid monitoring, you minimize the risk of unpleasant budget surprises or unexpected downtime due to worn or damaged components or systems.



Enjoy the Benefits of Well-Maintained Hydraulic Fluid

TEST SCHEDULE PREDICTABILITY

When you have MTS manage the sampling procedure and interpret the results, you are able to proactively address potential problems before equipment damage occurs. And you are able to decide when to intervene in the most efficient and convenient manner.

SYSTEM LIFECYCLE EXTENSION

Proper maintenance and care of your hydraulic fluid through the MTS Fluid Care Program will reduce wear and tear and extend the overall operating life of your test equipment. Get the most out of your system investment by taking care of your hydraulic fluid.

DATA INTEGRITY

Keeping your lab's hydraulic health in peak condition creates better performing test equipment. Systems that are performing to specifications produce more accurate and repeatable data, and reduce the need for re-work.

BUDGET MANAGEMENT

By investing in an Assured Maintenance Plan (AMP) that includes regular fluid monitoring, you minimize the risk of emergency repairs that can wreak havoc on a tight budget.

Planned monitoring will help you maintain your test schedule and budget while increasing your equipment's operating life and improving your test data integrity. Enjoy the ease that the MTS Fluid Care Program brings to your overall lab management plan.

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

Toll Free: 1.800.328.2255
Fax: 1.952.937.4515

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

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