

Oil Analysis

Basic & Advanced Testing

We offer a more exhaustive analysis than what is commonly available, ranging from basic oil analysis to the most advanced analytical tests. We've built our business on timely notification of results that are based on expert advice and a solid understanding of your equipment.



Every set of sample results is reviewed by a highly trained senior lab technician before the results are released to ensure strict quality assurance on every test. Contact your Regional Account Manager for a complete list of services.

Basic Testing

Spectrometry

Spectrometry detects and measures concentrations of wear metals, additive elements and contaminants. Fluid Life uses the Inductively – Coupled Plasma method which is configured to measure 23 elements in a single burn, each element displayed in ppm on a color coded report.

Water Contamination

The presence of water in an industrial system is detrimental to its lubricant's properties, not to mention the chemical corrosion it can cause on metallic parts. Fluid Life's Series 1 in-house screening test, describes water levels as negative, reportable, unacceptable or severe.

Glycol and Fuel Contamination

Both glycol and fuel can have severe detrimental effects on the performance of the engine oil and operating components. Fluid Life tracks glycol and fuel contamination by monitoring common key indicators and verifies them with the most advanced methods available.

Viscosity

Viscosity is defined as a measurement of a fluid's resistance to flow and is arguably the most important lubricant property. Fluid Life reports viscosity at both 40 and 100°C for all samples using our own multiple pass patented technology. This state of the art Fluid Life designed and built viscometer is marketed worldwide.

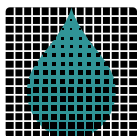
Soot

Today's diesel engines, meeting the latest environmental emission regulations, require the engine oils to hold and control significantly higher levels of soot. Therefore, the soot content in diesel engine oils is a key indicator in monitoring the combustion condition of the engine. Fluid Life monitors and reports the percent soot content.

Oxidation/Nitration

Analysis of clean burning engines such as natural gas engines use oxidation and nitration values to indicate chemical degradation, which can lead to troublesome deposits on valves and pistons.

...because what happens on the inside really counts



The
Fluid Life
Corporation

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Advanced Testing Options

Sediment

The sediment test measures suspended particulate contamination in industrial or hydraulic lubricants in order to determine whether contaminants are entering from an outside source or being generated internally. Fluid Life provides a photo of the sediment present on the filter patch and flags the results based on the type and amount of particulates.

ISO Particle Counts

Fluid cleanliness is critical to a lubricating system's success. When setting goals for keeping your industrial fluids clean, routine particle counting is a crucial step in achieving the cleanest fluid possible. The ISO particle count determines size ranges and concentrations of solid particulate found in industrial fluids. Fluid Life reports the ISO Code cleanliness in the latest >4/6/14 micron format.

Total Magnetic Iron

This test is a quantitative analysis of magnetic iron particle concentrations in a lubricant. The test focuses on ferrous particles and ignores alloys, rust and contaminants that would be detected by other testing. Fluid Life reports results in ppm(parts per million) down to a concentration of <4 ppm.

Analytical Ferrography

An analytical ferrography provides a detailed "forensic science" analysis of the particles generated by wear by describing the debris contents on a special microscope slide (aka Ferrogram). A Fluid Life senior analyst provides a detailed report identifying the type, nature and probable source of the wear particles along with relevant photographs of the ferrogram.

Acid Number

An acid number in a lubricant context provides a measurement of oil degradation. This degradation is expressed by the change in acidity of a used sample as compared to its new, original state. Typically acid number is a good barometer of when industrial oils (hydraulics, compressors, gear oils, etc.) need to be changed.

Base Number

The base number describes the reserve alkalinity remaining in the lubricant, which is indicative of the oil's ability to counteract acid formation. This test is well suited for monitoring diesel engine oils.

Karl Fischer Water Titration

Often triggered by the Series 1 screening test the Karl Fischer Water Titration method provides a quantitative determination of the actual water content down to <10 ppm.

RPVOT

The Rotating Pressure Vessel Oxidation Test (RPVOT) measures a fluid's long term oxidation stability. This test is appropriate for evaluating the useful life of a lubricant in large reservoir applications such as turbines, press lube systems, paper machine oils among others. As RPVOT requires a larger than normal sample volume, Fluid Life provides special test kits for sample preparation.

Full Filter Analysis

A full filter analysis provides comprehensive information on large particles (over 5 microns) within a system. As these particles are large enough to be trapped by a filter, this wear or debris may not be detected by the spectrometry performed during routine oil analysis. Fluid Life looks at what type of debris is plugging the filter, as well as what may be causing the debris generation.

Cont. on next page.

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Advanced Testing Options (Cont.)

Varnish Potential

This test looks at particles in an oil sample larger than 0.45 microns. The amount and colour of these fine particles identifies "potential" of the oil to form varnish. Compressors, turbines and hydraulic systems are common unit types that may experience the detrimental effects of varnish. Varnish potential is reported on a scale from 0 to 100 where 100 indicates that severe varnishing will occur.

Optical Particle Classification

OPC is one of the most current and effective analysis methods available and can determine the presence of wear metals and contaminants in a lubricating system. A maintenance professional can then ascertain if the equipment is operating properly or if preventive maintenance is required. Optical Particle Classification combines the standard oil analysis techniques of particle counting and advanced shape classification.

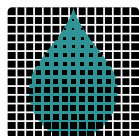
X-Ray Fluorescence Spectrometry

Provides quantitative and qualitative elemental composition. X-Ray Fluorescence (XRF) does not have a particle size cutoff and can be used to measure particles of any size. This provides our customers with critical large particle detection and identification that could predict failures in advance of other methods.

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