

Fluid Life provides a variety of analysis packages designed to serve both the mobile and plant maintenance professional. These packages offer varying scope and detail. Series 6 Testing can be applied to a wide range of testing applications and components including diesel engines and natural gas engines.

## Series 6 Testing

- Spectrometry
- Viscosity
- Soot (Diesel Engines)
- Fuel Contamination (Diesel & Gasoline Engines)
- Glycol Contamination (Glycol Cooled Components)
- Water Contamination (Crackle Test)
- Oxidation/Nitration (Natural Gas Engines)
- Base Number

## Test Descriptions

### Spectrometry

Spectrometry measures the concentration of wear metals, additive elements and contaminants. Fluid Life uses the Inductively Coupled Plasma method which is configured to measure 23 elements with the concentration of each element reported in ppm.

### Viscosity

Viscosity is defined as a measurement of a resistance to flow. Arguably, it is the most important lubricant property. Viscosity is measured at both 40°C and 100°C for all samples using Fluid Life's patented state-of-the-art two temperature viscometer which has been marketed and sold worldwide.

### Soot

Today's diesel engines are designed to meet increasing environmental emission regulations that require 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 reports the soot content as a percentage.

### Glycol & 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 within the screening package. Abnormal measurements are confirmed by gas chromatography.

### Water Contamination (Crackle Test)

The presence of water in an industrial system oil reservoir is detrimental to its lubricating properties and is also likely to cause chemical corrosion on metallic parts. Fluid Life's Series 1 water screening test, reports water levels as negative, reportable, unacceptable or severe.

### 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.

### Base Number

The base number describes the reserve alkalinity remaining in a lubricant by measuring the 'buffer' additive(s). The buffer levels are indicative of the oil's ability to counteract acid formation. The base number test is well suited for monitoring diesel engine oils. Trending and comparison to the new oil value is the best way to monitor an abnormal decrease in the base number. A new oil reference can be used to establish a baseline, monitor fresh oil batches and help establish condemning limits.