

Tuthill Oil Sample Analysis Instruction Guide



Oil Sample Analysis Form

1. Place oil sample into an oil sample bottle.
2. Place one ID sticker on oil sample bottle and one on the Oil Sample Analysis form.
3. Place oil sample bottle into small plastic bag and seal.
4. Complete Oil Sample Analysis Form in full to ensure timely return of oil analysis results.
5. Place Oil Sample Analysis form and bagged oil sample into the pre-addressed box and seal box with adhesive tape.
6. Ship sample to laboratory and await your results.

Oil Sample Analysis Guide

Tuthill's Oil Sampling Program provides a comprehensive analysis of the physical and chemical characteristics of the lubricant over a select time period. The analysis is designed to determine lubricant deterioration, suggest a frequency for lubricant renewal, and detect any mechanical complications prior to disrepair. These benefits can be realized through creation of your own trend analysis over a series of 3-4 samples.

Below is a brief description regarding components that are evaluated in the analysis. There is not a specific acceptable range for each component but rather the range will vary by equipment and operating conditions. For questions, contact us through email at springfield@tuthill.com.

Physical Properties

- **Viscosity Measurements (at 40°C and 100°C)**
Increases can indicate oxidation.
Decreases can indicate contamination or thermal degradation.
- **Water Content**
Elevated levels can identify cooler leaks, external contamination, or thermostat problems.
- **TAN (Total Acid Number)**
Increases in conjunction with increase viscosity usually indicate oxidation and the need to change oil.

Additive Metals

Variances are the result of the addition of a different lubricant or additive, or the possibility of contamination.

Wear Metals

Increases could mean progressing wear or impending unit failure. Upward trends indicate possible maintenance requirements.

Multi-Source Metals

Increases could be from a seal material, silicone lubricant, or dirt which may be accompanied by abrasive wear.