

Oil Analysis

Protecting your equipment through oil analysis.



A visual inspection can only reveal so much about the operating health of your equipment. Ongoing oil analysis helps you spot small problems long before they become costly repairs. That means you get more productive hours and less downtime. Oil Analysis gives you detailed information about your equipment's oil condition, internal wear and contamination levels.

Carter provides comprehensive testing for oil samples, employing the latest technologies and equipment available:

Wear Metal Analysis

Monitors wear by identifying the type of wear elements and quantifying the amount of each type under 10 microns in size found in the oil sample. Oil is analyzed using a spectrometer checking 19 key wear elements: Aluminum, Calcium, Chrome, Copper, Potassium, Lead, Sodium, Molybdenum, Iron, Magnesium, Phosphorus, Silicon, Tin, Zinc, Silver and Nickel.

Condition Analysis

Compares the lubricant properties of your used oil to that of the same oil when new to ensure optimal performance during the change period. Using an infrared scanner, we can detect contaminants, including soot, oxidation, sulfation, nitration, fuel, water and antifreeze.

Physical Tests

We can confirm the presence of contamination by fluids, including fuel, water and antifreeze. If undetected, these contaminants can cause rapid failure.

- Water: Greater than 0.5% requires attention.
- Fuel: 6% or greater requires attention.
- Antifreeze: Any amount is unacceptable and requires immediate attention.

Particle Count

We determine oil cleanliness by quantifying all metallic and non-metallic particles found in the oil. A Hiac-Royco particle counter uses a laser to physically count all particles in the sample. However, this test isn't available for use with engine or black oils.

- Results are reported in greater than five micron and 15 micron ranges, as well as ISO Cleanliness Codes. Readings in five to 100 micron ranges are available upon request.

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Contact us today to learn more.

Fluid Analysis Team

855.776.4822

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Carter



LET'S GET TO WORK.®

Continued on reverse.

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Viscosity

This ensures that your oil matches the recommended weight for use in your system and can identify oil transfer and fuel dilution problems. Tests are performed at 100 degrees Celsius.

- Geared compartments are only tested upon request.

PQ Ferrous Debris Monitor

This test measures the mass of ferrous debris (iron) and gives a quantitative number that can be trended. It allows iron debris to be detected, regardless of size, even when regular wear metal analysis does not identify it.

- Performed on all samples.

Microscope Analysis

Used on samples, as needed, to determine what type of debris and contamination is present in the oil, regardless of size. Samples are filtered to allow all particles five microns and larger to be inspected.

- Pictures of debris can be taken and emailed as needed.

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