



KEY #2 TO OIL ANALYSIS SUCCESS

ISO Particle Counting, breaking down the number and size of these particles based on ISO 4406 standard.

ISO Particle Count is a health check for your oil and equipment.

What is ISO Particle Counting?

ISO Particle counting is the process of measuring the number of particles of specific sizes within an oil sample. It is used to determine how clean an oil or hydraulic fluid is by quantifying solid contaminants in the fluid.

Why It Matters!

Particle counting matters because solid contaminants interfere with the oil's lubricating film and accelerate wear on critical components such as pumps, valves, bearings, and gears. High particle counts often indicate poor filtration performance or underlying system issues, making particle counting a key tool for evaluating whether a filtration system is effectively protecting equipment. Contaminants such as dirt, grit, and wear debris reduce lubrication efficiency and can ultimately lead to accelerated wear, component damage, or failure.

How It Works

Like how a home gets dirtier faster with more kids, oil cleanliness is determined by multiplying the number of particles in the fluid using the ISO cleanliness code.

An ISO particle count is used to measure both the quantity and size of solid contaminants in an oil sample. Rather than reporting a single value, it provides a three-number cleanliness code based on the ISO 4406 standard, such as ISO 18/16/13.

Each number represents the number of particles per milliliter of oil above a specific size threshold. The first number reflects particles larger than 4 microns, which are small but numerous and critical to tight system clearances.

The second number represents particles larger than 6 microns and is a strong indicator of abrasive wear and filtration performance.

The third number measures particles larger than 14 microns, which are fewer in number but more damaging and often associated with increased wear and component failure risk.

