



# KEY #4 TO OIL ANALYSIS SUCCESS

Acid Number Testing, measuring oil degradation by identifying acidic compounds formed during oxidation.



## Acid Number Testing

### What is Acid Number Testing?

Acid Number (AN) testing is used to measure the level of acidic compounds present in an oil sample. It indicates the degree of oil degradation by quantifying the amount of acid formed as the oil oxidizes over time.

### Why It Matters!

As oil ages, exposure to heat, air, and contaminants causes it to oxidize and form acids. Elevated acid levels can lead to corrosion of metal surfaces, accelerated wear, additive depletion, and sludge or varnish formation.

Acid Number testing matters because it provides an early warning that oil is breaking down, allowing corrective action before equipment performance is affected or damage occurs.

### How It Works

Similar to how food spoils faster when exposed to heat and air, oil degrades as oxidation progresses.

Acid Number testing measures the amount of potassium hydroxide (KOH) required to neutralize the acidic components in an oil sample. The result is reported as mg KOH per gram of oil, providing a clear and repeatable indicator of oil condition.

By trending Acid Number results over time, changes in oil chemistry can be monitored and compared against baseline values or OEM limits. A rising Acid Number signals increasing oxidation and degradation, helping determine when oil maintenance, filtration improvements, or oil replacement may be required.

