Total Magnetic Iron

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Fluid Life

The Total Magnetic Iron (TMI) is a highly accurate test option designed to measure the degree of ferrous wear metal contamination in an oil sample.

The TMI is not sensitive to particle size. When used along with traditional spectrometry several evaluations can be made. If both the TMI and spectrometric values increase, it is likely that many small particles are being generated. However, if TMI increases and there is no change or a decrease in the spectrometric ferrous values (i.e. iron, nickel), this suggests large particles are being generated which indicates an abnormal level of wear.

When implemented correctly Total Magnetic Iron can:

- be an accurate triggering test for Analytical Ferrography.
- be a valuable addition to your conventional sampling program.
- provide excellent return on your oil analysis investment.

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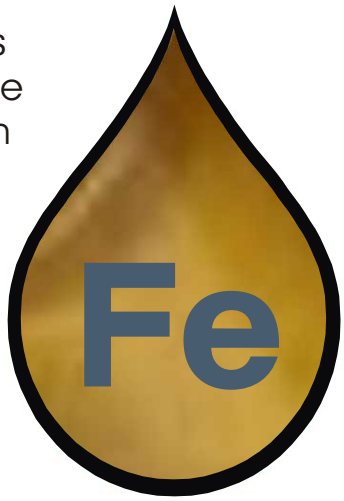
The TMI is a ferrous density test that uses the Hall Effect to determine the ferromagnetic particle concentration in an oil sample. The Hall Effect is a measurable induced voltage across a sample under an applied magnetic field and current. In general, the higher the concentration of ferromagnetic wear debris present, the higher the observed Hall voltage.



A significant advantage of the TMI instrument is that it reports the actual concentration of the ferrous particles in parts per million (ppm) compared to the commonly used Particle Quantifier which only reports an Index value.

Total Magnetic Iron is an easy addition to any existing oil analysis program. It has widespread applications such as:

- engines
- gearboxes
- final drives
- transmissions
- industrial gear systems

or any other system that has the potential to generate large ferrous particles.

Maintenance Solutions

With routine sampling the TMI provides early detection of abnormal wear conditions and imminent equipment failure. The TMI is an excellent screening tool that can be used as a trigger to the more advanced Analytical Ferrography.

...because what happens on the inside really counts

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