



Oil Advantage - GP



Oil contamination and oil wear are two of the greatest threats to your equipment. Wouldn't it be great to know exactly when you need to change your oil to avoid the expense and waste of replacing it too soon and the costly damage resulting from changing it too late? Voelker Sensors' Oil Advantage continuously monitors oil wear, additive depletion, temperature, and fuel and water contamination, and makes this information available via the cloud to any internet enabled device.

Oil Advantage affordably optimizes oil performance and protects your valuable equipment

Benefits

- Reduces equipment down time
- Reduces maintenance costs
- Saves time – analyze oil at a glance
- Saves money – change oil only when needed
- Minimize waste oil

Features

- Accurately measures oil degradation
- Detects water and fuel contamination
- No calibration required
- Compatible with all oil types
- Easy to install; complete retrofit kit

Monitored Parameters

Oxidation: 15 OD/cm – 50 OD/cm +/- 20%

Fuel: 0.2% - 10%, Pass/Fail (select from sensors with preset trip points from 0.2% - 10%)

Water: 1% - 10%

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System Specifications

Control Unit

Input Power: 9 – 28 VDC, 100mA

Dimensions: 5" x 3" x 2"

Operating Temperature: -40°C - +70°C

Humidity: 0% - 95% RH, noncondensing

Sensing Unit

Operating Temperature: -40°C - +150°C

Pressure: 200 psi maximum

Mechanical Interface: ½" NPT, 4" long (2.5" depth in oil)

Output

Local LED for Power and System Error

Remote monitoring via:

- Analog voltage
- 4-20 current loop
- RS232
- RS485
- Ethernet (optional)
- 802.11g/n (optional)
- Cellular/AWS (optional)

Principles of Operation

As oil molecules break down, they become increasingly polar. Additives in oil tend to be both polar and conductive. As fresh oil ages, additives are consumed, resulting in both polarity and conductivity dropping. The combination of oil breaking down and additives being depleted results in a clear signature on a plot of polarity and conductivity over time. Using its unique, patented technology to precisely measure these parameters, VSI converts that signature into oxidation and additive depletion information. Water and fuel contamination affect oil's ability to lubricate, prematurely age oil, and contribute to corrosion. Oil Advantage uses capacitive changes in a polymeric substrate to precisely measure water content in oil. Fuel contamination is sensed by changes it causes in a VSI proprietary composite which alter its conductivity. Oil Advantage incorporates seven of Voelker Sensor's US patents.

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