

Lubrigard Oil Condition Sensor

On-board oil condition monitoring

On-line Sensor

DEVELOPED TO MEET THE REQUIREMENT ESTABLISHED BY ENVIRONMENTAL AND ECONOMIC PRESSURES TO SAFELY EXTEND OIL DRAIN INTERVALS.



BENEFITS

On-board Monitoring

The Lubrigard sensor unit warns the operator of any abnormal conditions developing in the machinery. In addition it indicates when an equipment oil or filter change is necessary or when an oil sample should be dispatched to an approved laboratory for analysis investigation.

Detect oil Contamination

Triggered by excessive soot, water, coolant, oxidation and/or wear metals, the invention primarily uses the well known dielectric properties of oils and lubricants to detect abnormal conditions on a continuously monitoring basis.

Dependable Operation

A feature of the sensor is the use of a state-of-the-art microprocessor, which allows it to work accurately over a wide range of operating temperatures and compensates for the many varying synthetic lubricant formulations on the market.

Reliability and Flexibility

Central to the design was the need to ensure that the circuitry and construction remained simple, reliable, small and immune to machine vibration. It also had to be readily mountable on any engine, gearbox or hydraulic system, to be easily retro-fitted during service and to be capable of being custom constructed to meet the individual requirements of Original Equipment Manufacturers.

Simple Operation

The Lubrigard sensor and microprocessor detects changes in the lubricant and relays this information to either an analog or digital output which can be tailored to suit the requirements of the OEM, fleet operator or customer. The information from the sensor can be encoded, if required, into a form suitable for transmitting to company headquarters by mobile phone or satellite link.

OVERVIEW

- The Lubrigard Sensor provides continuous, online monitoring of engine oils, hydraulic oils, gearbox oils, transmission oils, compressor oils.
- The Sensor has been designed for use with diesel engines in fleet, off-road, marine, railway applications, industrial systems including hydraulics, compressors, turbines, and gearboxes.
- The Lubrigard Sensor will detect soot, oxidation products, water, glycol, metallic wear particles, changes in TBN
- Safely extended service intervals
- Reduced downtime
- Early identification of problems



PROACTIVE LUBRICATION MANAGEMENT

Lubrigard Oil Condition Sensor

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[OS001] TEST/PROTO-TYPE APPLICATIONS - KEY SPECIFICATIONS

Material	CZ121M Brass or 316 Stainless Steel
Overall length	42mm (excl. protective cover)
Maximum diameter	37mm
Width across flats	32mm
Length of active head	9mm
Length of thread	11mm
Thread size	M14 x 1.5 (standard)
Weight (sensor only)	0.095kg
Power consumption	10mA
Temperature range	-40°C to 150°C
Operating temperature range	65°C to 130°C (engines)
Operating temperature range	20°C to 80°C (hydraulics)



Features: 8 bit Microcontroller with optional alphanumeric display. Calibration Facility in Software. Temperature Compensation in Software. Green, Amber and Red warning lights. Input Voltage 10.5V to 35V with regulated output to sensor. Supply Line Spike Protection.

[OS006] PRODUCTION APPLICATIONS - KEY SPECIFICATIONS

Material	316 Stainless Steel
Overall length	76mm
Maximum diameter	31mm
Width across flats	31mm
Length of active head	23mm
Length of thread	13mm
Thread size	½" BSP
Weight (sensor only)	0.16kg (160 grams)
Power supply voltage	9-30 VDC
Power Consumption	10mA
Maximum oil pressure	10 bar (150 PSI)
Operating temperature range	-10°C to 110°C (engines)
Operating temperature range	-10°C to 110°C (hydraulics)



Features: CAN Interface compatible with ISO/DIS 11898. RS232 & RS485 compatible. MachineGuard system integration option (remote telemetry). Standards and approvals sheet available upon request.

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PROACTIVE LUBRICATION MANAGEMENT



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