eralytics performance you can rely on

eraspec oil

THE LATEST TREND IN OIL CONDITION MONITORING

Standards
ASTM E2412, D7412, D7414, D7415, D7418, D7624, DIN 51452, 51453, JOAP

Excellent correlation to
ASTM D445, D664, D2270, D2896, D4739

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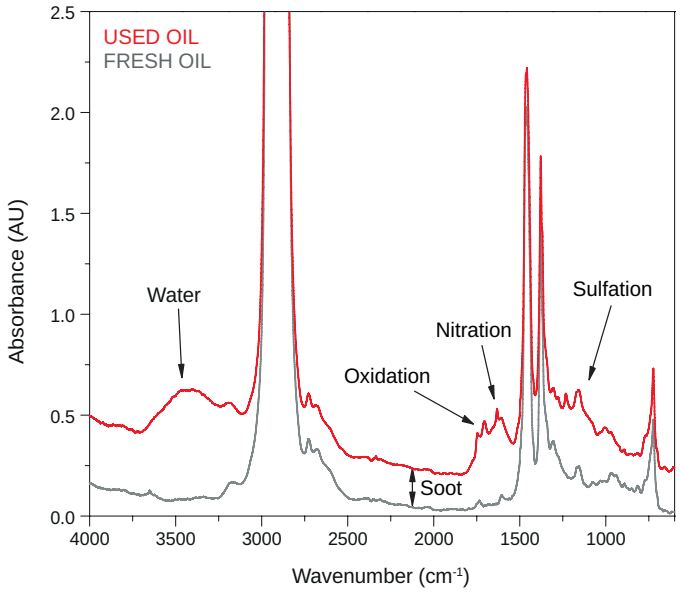
eraspec oil – high speed lube oil testing with lab-grade precision

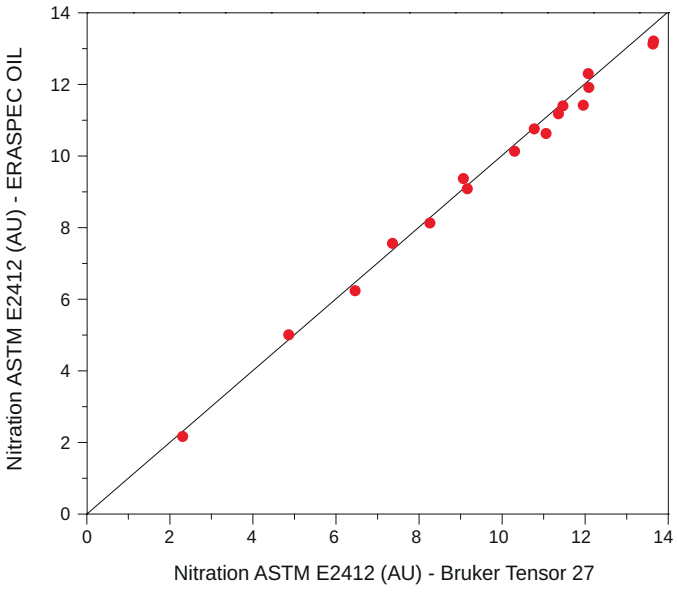
Oil Condition Monitoring

ERASPEC OIL can determine parameters relevant in lubricant analysis according to latest infrared standards such as ASTM E2412. It monitors degradation products (oxidation, sulfation, nitration), additive depletion (aminic and phenolic antioxidants, antiwear) and contaminants (water, soot, fuel, FAME, coolant liquid). Complex oil parameters such as TAN and TBN or viscosity are calculated by chemometrical models using a customer-expandable database.

Portable FTIR Analyzer

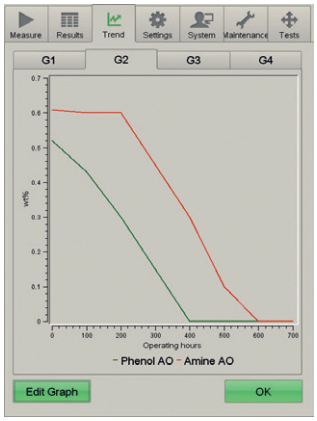
ERASPEC OIL is a compact, rugged and lightweight FTIR spectrometer that delivers laboratory-grade results in monitoring lubricant conditions. It is the first truly standalone analyzer combining advantages of infrared oil condition monitoring, like fast and reliable results, with high portability. Measurements can be performed directly on-site and the results are available within a few seconds following ASTM, DIN and JOAP methods. With **ERASPEC OIL** there is no need for sending in samples for analysis.

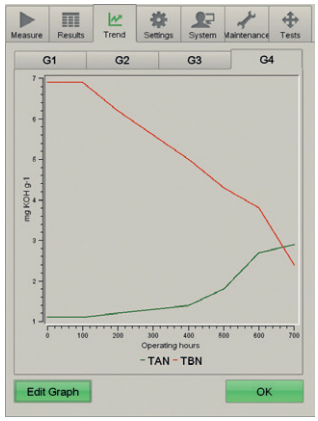




On-screen Trending Graphs

ERASPEC OIL offers the possibility to monitor temporal changes of lubricant parameters directly on-screen. You can either monitor driven distance for engines or operating hours of gas turbines, for example. Simply select the machinery up for testing and run the measurement. Afterwards the system will take you right to the trending chart. That way, for example, a sudden rise in oxidation or a major drop in base reserve will be noted at first glance directly on-site.





DEGRADATION	STANDARD	UNIT
Oxidation	ASTM E2412, D7414, DIN 51453	A/cm
Nitration	ASTM E2412, D7624, DIN 51453	A/cm
Sulfation	ASTM E2412, D7415	A/cm

PROPERTIES[1]	CORRELATION TO	UNIT
TAN	ASTM D664	mg KOH g^{-1}
TBN	ASTM D2896, D4739	mg KOH g^{-1}
VI, Viscosity at 40 °C / 100 °C	ASTM D445, D2270	VI, cSt

ADDITIVES[2]	STANDARD	UNIT[3]
ZDDP Antiwear	ASTM E2414, D7412	A/cm, %, wt%
Phenolic Antioxidants	ASTM D2668	%, wt%
Aminic Antioxidants		%, wt%

CONTAMINANTS	STANDARD	UNIT[3]
Soot	ASTM E2412, DIN 51452	A/cm, wt%
Water	ASTM E2412	A/cm, wt%
Ethylene Glycol	ASTM E2412	A/cm, wt%
Diesel Fuel	ASTM E2412	A/cm, wt%
Gasoline	ASTM E2412	A/cm, wt%
FAME		wt%
Polyolester		wt%
Phosphate Ester		wt%

1 ... The range and repeatability for all determined properties depend on the used database.

2 ... Additive depletion results in % remaining additive are available only for spectral subtraction measurements.

3 ... wt% values are determined by an eralytics calibration.

Standard Model

EO10 ERASPEC OIL

Diesel Fuel Module

EO01-DIE optionally extends the measurement capabilities of ERASPEC OIL to diesel fuel.

- Cetane number & index, evaporation and distillation points
- Aromatics, cetane improver, FAME

Autosampler

Directly attached optional 10-position autosampler

Technical Specifications of era**spec oil**

Available Test Methods	ASTM D2668, D7412, D7414, D7415, D7418, D7624, E2412; JOAP; DIN 51452, DIN 51453
Correlation to	ASTM D445, D664, D2270, D2896, D4739
Spectrometer Type	Patented mid-FTIR interferometer Laser and temperature controlled design
Measurement Cell	100 µm path length sample cell, reference cell Optimized dual position cell design for automated reference measurement without solvent
Calibration	Factory calibrated with a matrix of international lubricants Eralytics' calibrations for soot, water, glycol, …
Spectral Libraries	Easily expandable libraries to adjust measurements to target applications and user-defined parameters
Measurement Principle	Direct trending: calculation of results without the need to record the fresh oil spectrum Spectral subtraction: fresh oil spectrum used as reference for highest performance and lowest LODs
Measuring Time	60 – 120 seconds depending on the viscosity of the sample; Warm-up time: 30 seconds
Sample Introduction	Directly from sample container via integrated pump
Sample Viscosity	0 – 2 000 cSt at 20 °C
Sample Volume	10 mL
Cleaning	Automatic rinsing with next sample or solvent Integrated filter to prevent blocking of measurement cell
Display	Industry proven 8" color touchscreen
Interfaces	Built-in PC with Ethernet, USB and RS232 interfaces Direct LIMS connectivity and output to printer or PC Optional input by external keyboard, mouse and barcode reader
Remote Control	Remote service capability via Ethernet interface
PC Software	ERASOFT RCS – remote control Windows® software for multi-instrument remote control, convenient data transfer, viewing spectra and result analysis
Result Database	Approx. 3 000 detailed test reports and spectra stored in the internal memory
Alarm Tracking	All alarm messages stored in the result database together with the results
Power Requirements	Auto-switching 85 – 264 V AC, 47 – 63 Hz, max. 150 W (multi-voltage power supply) Field application: 12 V DC (vehicle battery) adapter available
Dimensions / Weight	29 x 35 x 34 cm (11.4 x 13.8 x 13.4 in) / 9.7 kg (21.4 lb)

Due to continuing product development, specifications are subject to change.
All eralytics products are manufactured under ISO 9001 regulations and are CE, ROHS and UL/CSA compliant.

CANNON INSTRUMENT COMPANY