Oil Analysis Special Test

RULER by LSV
Remaining Useful Life Evaluation Routine by Linear Sweep Voltammetry

Part # FP-71RU

Measuring the amount of remaining anti-oxidants

With Linear Sweep Voltammetry, oil analysis has a tool to accurately determine the level of anti-oxidants in used oils. The Ruler uses LSV to provide the exact amounts of aminic and phenolic anti-oxidants present in the oil. Testing and monitoring antioxidant additives (oxidation inhibitors) level is important for controlling the degradation of turbine oils and industrial oils and their remaining useful life (RUL). This provides you with the ability to extract the full potential from your lubricants without risking equipment damage.

Sample size: 2ml (minimum), 10ml (recommended)

Unit: % RUL
RUL = Remaining Useful Lifetime (comparing concentration of antioxidants in the in-service/used oil to the fresh oil).

Test methodology: A solvent and sand substrate is first added to separate the anti-oxidant from the oil. Using the LSV principle a current-time-curve is measured. Position and area of the peaks characterize type and amount of the anti-oxidants additives.

Suitable for systems: compressors, hydraulic systems, bearing lube systems, gas and steam turbines, circulating systems.

During their life time the antioxidants are continually reduced, the remaining life time of oil can be estimated. Accelerated rate of oxidation and degradation of oil occurs if all antioxidants are used. The performance and functionality of the oil will be affected. Eventually also leading to varnishing on certain systems.
Summary

1) Easy to understand RUL measurement makes maintenance decisions easy.
2) Testing can be conducted:
   - by exception
   - routinely
   - yearly adjunct to regular testing
3) Suitable for use with hydraulic oils, aircraft engine oils, ester-based hydraulic fluids, gas and steam turbine oils, compressor oils
4) Allowing extension of oil drains without risking equipment damage