

# SHELL LUBEANALYST K2

MONITOR, BENCHMARK, IMPROVE AND HELP SAVE MACHINE REPAIR COSTS

DESIGNED TO MEET CHALLENGES

Used lubricant analysis for the detection and trending of lubricant degradation, contamination, and wear.

## PERFORMANCE FEATURES

- n Analyse the condition of your lubricant, so that you can act before it stops protecting and begins causing damage.
- n Analyse the wear debris generated by your machinery to detect 'abnormal' wear.
- n Help you determine an optimal balance between maintenance costs and machine availability.
- n Identify when top-up with incorrect lubricants occurs.
- n Identify machine faults via the detection of 'tell tale' contaminants.
- n Detection of fatigue related wear of ferrous components.

## APPLICATIONS

- n For the delivery of key used lubricant characteristics relating to the equipment compartment and lubricant type. A more detailed analysis than LubeAnalyst K1.
- n For water based fluid, glycols and application specific testing, use the Advanced Test Suites.

## TEST GROUPS

- n Kinematic Viscosity measured to ASTM D 445 reported in mm<sup>2</sup>/s.
- n Metals both from additive and wear debris measured by spectral analysis ASTM D 5185 (ICP) and reported in ppm (parts per million).
- n Flash point (closed cup) measured in °C to ASTM D 3828.
- n Moisture content determined by Karl Fischer ASTM D 4982 or by FTIR and reported as % mass. Method dependant upon product type and application.
- n TAN (total acid number) determined by ASTM D 664 and reported in mg KOH/g. Test conducted dependant upon product type and application.
- n TBN (total base number) determined by ASTM D 2896 and reported in mg KOH/g. Test conducted dependant upon product type and application.
- n Particle Quantification (PQ Index) for determination of the total ferrous metal content of the sample.
- n Oxidation index as determined by FTIR (fourier transformed infrared red) and reported as an index of total oxidation.
- n Nitration index as determined by FTIR and reported as an index of total nitration.
- n Soot index as determined by FTIR and reported as an index of total soot content.

## SAMPLE REQUIREMENTS

- n All samples should be taken 'hot' to ensure that the tested lubricant is an accurate representation of the oil, contaminants and wear metals contained in the lubrication system. All relevant safety precautions should be taken when sampling 'hot' lubricants.
- n Sample containers should be sealed until the time just prior to filling in order to ensure that the effect of air borne contaminants is minimised.
- n Sample containers should be at least 80% full to ensure that all nominated tests can be completed.
- n Sample labels should be completed accurately to ensure that oil analysis data records are reliable and complete.

## SAMPLE TURN AROUND AND REPORTING

- n Shell endeavours to complete analysis and diagnosis within 48 hours of the sample being received by the Shell accredited laboratory.
- n Delivery of an easy to read report that includes comprehensive trending graphs is via email as a pdf file or facsimile.