Cat® S·O·S℠ Services Approve CANTY Fuel / Lube Oil Particle & Water Analyser

In September 2019, the S·O·S℠ Services regional laboratory in Peoria evaluated the Canty Fuel / Lube Oil Particle and Water Analyser for its suitability as a particle counting solution in the S·O·S Services programme. The instrument provided ISO 4406 particle count results with similar repeatability to other particle counting instruments in the marketplace. This instrument was deemed an acceptable device for particle count analysis in the S·O·S Services programme.

Product Summary

The Canty Fuel / Lube Oil Particle & Water Analyser is a stand-alone particle counter using measuring principles as per ASTM D7596 and D8049. During the evaluation the instrument was not equipped with an autosampler, however this option is now available. Sample introduction is done using a simple peristaltic pump to flow the sample through the system. The sample passes between a microscopic camera and high intensity light source to provide real time particle count analysis (analysis video can be observed on the instrument screen). The data is analysed in the CantyVision™ software and particles are classified by their parameters as solids, gas, or water / additives. Counts for solids are reported per ISO 4406.

The following maintenance is recommended on a three monthly basis: the instrument should be cleaned, tubing should be replaced, and the calibration should be verified with a known standard. If the equipment is not within calibration it should be calibrated by a trained operator.

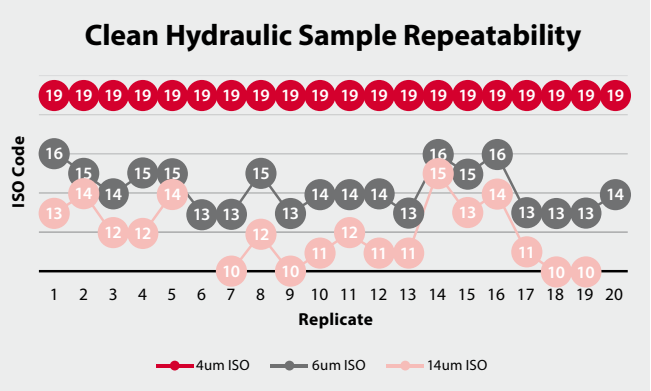
Analysis Procedure

Samples were run manually after mixing via a manual swirling motion for 20 seconds. Samples were introduced into the instrument with a peristaltic pump at 10 mL/min. Each sample was followed by rinsing the instrument with clean 10W hydraulic oil at 60 mL/min for 20-40 seconds depending on the ISO code result (ISO codes over 20 in 14 µm channel were followed with 40 second rinses). The instrument used approximately 35 mL of sample per run with an average total analysis time of 5.5 minutes per sample.

Evaluation Summary

Three repeatability studies were performed for the evaluation. Each of the studies showed similar repeatability to other particle counting instruments that have been evaluated.

The first study was a repeatability test of a clean (new) hydraulic sample. Below is a summary of the 20 replicates of this clean hydraulic sample.



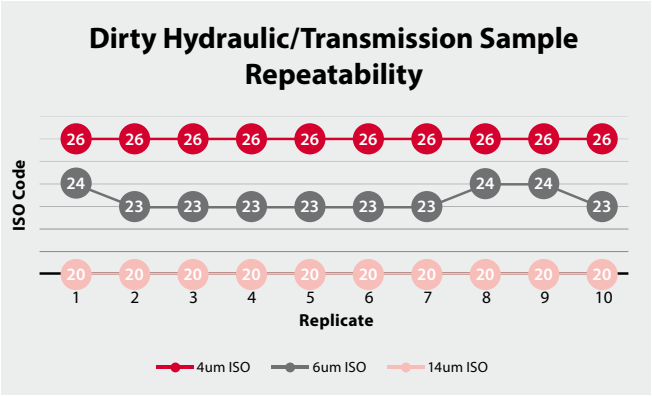
*Note: Two results of ISO Code 0 removed from 14um channel

Registered Address
ABLE Instruments & Controls Ltd
Cutbush Park, Danehill, Lower Earley,
Reading, Berkshire, RG6 4UT. UK.

Reading
Tel: +44 (0)118 9311188 | Email: info@able.co.uk
Aberdeen
Tel: +44 (0)1224 725999 | Email: ab@able.co.uk

Web
able.co.uk
E-commerce
247able.com

A repeatability study was also performed using a "dirty" sample (mixture of used hydraulic and transmission samples). Below is a summary of the 10 replicates of this dirty sample.



Additionally, a repeatability study was performed on 15 random samples (hydraulic, transmission, and gears). Each of the samples were run twice and their differences were calculated. The results are summarized in the chart below.

	Replicate 1 (ISO Codes)			Replicate 2 (ISO Codes)			Difference (ISO Codes)		
Sample	4um	6um	16um	4um	6um	16um	4um	6um	16um
1	19	16	14	19	16	14	0	0	0
2	22	19	15	22	19	15	0	0	0
3	24	20	17	23	20	17	-1	0	0
4	19	16	13	19	16	11	0	0	-2
5	17	14	11	17	14	10	0	0	-1
6	19	17	14	20	18	15	1	1	1
7	26	24	20	26	24	20	0	0	0
8	27	24	20	27	24	20	0	0	0
9	22	19	15	22	19	15	0	0	0
10	19	13	0	19	14	0	0	1	0
11	27	24	20	27	24	20	0	0	0
12	28	26	23	28	26	23	0	0	0
13	26	24	21	26	24	21	0	0	0
14	25	23	19	25	23	19	0	0	0
15	26	24	22	26	24	22	0	0	0

Contact Information

For information on pricing and distribution, please visit: https://www.https://able.co.uk/contact/
For further information on evaluation please contact:
ABLE Instruments on +44 (0)118 9311188 or by email: info@able.co.uk

Registered Address
ABLE Instruments & Controls Ltd
Cutbush Park, Danehill, Lower Earley,
Reading, Berkshire, RG6 4UT. UK.

Reading
Tel: +44 (0)118 9311188 | Email: info@able.co.uk
Aberdeen
Tel: +44 (0)1224 725999 | Email: ab@able.co.uk

Web
able.co.uk
E-commerce
247able.com