

# FluidScan® Q1000

## PORTABLE FLUID CONDITION MONITOR

Handheld, Solvent-free, Immediate Results



The FluidScan Q1000 provides quantitative measurement of a lubricant's condition and plays an important role in predictive maintenance. Using the device, you can eliminate unnecessary oil changes or service by testing not just servicing the oil.

### Applications include:

- Mineral and synthetic oils used in gear boxes, engines, transmissions.
- Hydraulic systems, turbines and other machinery components
- Biodiesel/Fuel
- Quality assurance

### Determine when in service oil is no longer fit for use due to liquid contamination or degradation

- Direct immediate measurement of water, TAN and oxidation for lubricants used in gearboxes, turbines and hydraulic systems
- Also measures TBN, water, glycol, soot, additive depletion and oxidation for engine oil

### Highly repeatable and reproducible results

- ASTM D7889 Compliant—"Standard Test Method for Field Determination of In-service Fluid Properties Using IR Spectroscopy"
- High correlation to KF water, TAN and TBN laboratory tests
- Reproducibility and repeatability comparable to benchtop FTIR method ASTM E2412
- Data analysis compliant to ASTM E1655

### Easy to use

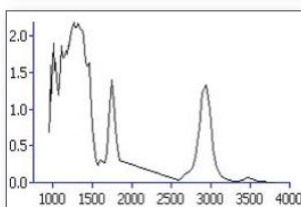
- Needs just one drop of oil and one minute to test
- No solvents required to clean
- Color-coded, user adjustable alarm limits

### Comprehensive Fluid Library

- 12 use type categories with over 450 fluids for immediate, out-of-the-box operation
- Results for critical properties such as TAN and water contamination for industrial lubricants or TBN, water, glycol and soot for engine oils

### Fluid Manager desktop application

- Generates sample and trend reports
- Supports and synchronizes multiple instruments
- Provides additional data storage and backup
- Structured asset management capability



Measure Asset » Results	
Asset: 023434 (0531-200)	
Castrol Optigear Synthetic A 320	
313 hours	
31 May 2009 13:31:07	
Oxidation	-2 abs/mm <sup>2</sup>
<b>TAN</b>	<b>2.61 mgKOH/g</b>
Water	954 ppm

Measure Asset » Results	
Asset: CAT 2 (445566)	
Cat DEO 15W40	
5 hours	
04 Jan 2013 10:36:43	
AW Additive	128 %
Glycol	0.0 %
Nitration	2.0 abs/mm <sup>2</sup>
Oxidation	20.8 abs/mm <sup>2</sup>
Soot	0.00 %wt
Sulfation	50.2 abs/mm <sup>2</sup>
TBN	0.0 mgKOH/L
Visc-40	9 cSt
Water	0 ppm

Validate Fluid	
Sample Compared to:	
Mobil 1 High Mileage 10W-30	
Family: Reciprocating Engine	
Score: 8.5	
It is highly probable your sample is the selected fluid or equivalent.	

## FluidScan Q1000 Ordering Information

The FluidScan® Q1000 includes the FluidScan device, battery charger, USB cable, USB flash drive, CD manual and FluidScan software CD. One library license is included; specify at time of order if purchasing the full library license. The FluidScan standard accessories kit includes cleaning pads and pipettes for 100 samples and the IR check fluid.

FluidScan can also be ordered in a combination kit with the SpectroVisc Q3050 portable viscometer. The battery-operated SpectroVisc Q3050 is a 40°C kinematic viscometer, uses only a few drops of oil to test viscosity and does not require solvents to clean.

PRODUCT INFORMATION		
Part Number	FluidScan-Q1000	FluidScan Q1000 (requires #SA1001 and Library license to operate)
	SA1001	FluidScan standard accessories
	Spectro Q1000/Q3050	FluidScan Q1000 & Q3050 Viscometer Combination Kit (requires #SA1004 and Library license to operate)
	SA1004	Spectro Combination Kit standard accessories
FluidScan Oil Libraries	P/N	LIBRARY
(One library license is included. Specify part number at time of order or purchase full library license.)	FL364	Automotive
	FL365	Aviation
	FL366	Fuel OC
	FL367	Industrial
	FL368	Lab Trend
	FL369	Maritime
	FL370	Military
	FL371	Railroad
	FL360	All Libraries
ACCESSORIES & CONSUMABLES		
FL310	IR Check Fluid 5mL	
PV1011	Disposable Non-Abrasive Cleaning Pads; package of 500	
P-11052	60 µL Disposable Pipettes, package of 500	
PV1012	60 µL Disposable Pipettes & Non-Abrasive Cleaning Pad kit; pkg. of 100 each	
PRODUCT SPECIFICATIONS		
Output (varies by fluid type and application)	TAN (mgKOH/g), TBN (mgKOH/g; Oxidation (abs/0.1mm); Nitration (abs/cm); Sulfation (abs/0.1mm); Water (PPM); Glycol (%); Soot (%); Incorrect Fluid (%); Antioxidant Depletion (%); Antiwear Depletion (%) (varies by fluid type and application)	
Standard Analytical Range	Mid infrared range 900 cm <sup>-1</sup> to 3700 cm <sup>-1</sup>	
Accuracy	≤ ± 3% of measured value, typical	
Repeatability	≤ ± 6% of measured value, typical	
Calibration	Factory calibrated; check fluid as needed	

OPERATIONAL SPECIFICATIONS	
Sample Volume	0.03µL (about 1-2 drops)
Solvents/Reagents	None
Ambient Operating Temperature	10°C to 50°C (14°F to 122°F)
Relative Humidity	0 to 100%, non-condensing
Ambient Altitude	up to 5,000 meters (16,404 feet)
USER INTERFACE SPECIFICATIONS	
Software/Operating System	Microsoft Windows® CE
Display	320 x 320 transfective color screen
Data Storage	Up to 5,000 analyses
Data Transfer	USB for data updates and synchronization
Data Entry	Directional pad and soft buttons
POWER REQUIREMENTS	
Battery Power Source	Built in Rechargeable Lithium Ion Battery
Power	AC 110/240 V, 50/60 Hz, 10 Watts
Typical Runtime	6-8 hours
Recharge Time	6.5 hrs
MECHANICAL SPECIFICATIONS	
Dimensions	240 mm (H) x 140 mm (W) x 70 mm (D) (9.5 in x 5.5 in x 2.75 in)
Weight	1.4 kg (3 lbs)
Shipping package dimensions	17.1 cm (H) x 6.3 cm (W) x 5.5 cm (L); (18 in x 16 in x 14 in)
Shipping package weight	8.1 kg, (18 lbs)
COMPLIANCE	
CE Mark: EMC Directive (2004/108/EC); RoHS	



FluidScan Q1000  
& Q3050 Viscometer  
Combination Kit