

Features

- ▶ Small, handheld rugged mid-infrared spectrometer, with sensitivity comparable to laboratory FTIR spectrometers
- ▶ On-site analysis
- ▶ Patented optical waveguide technology
- ▶ Reliable performance – self-calibrating reference
- ▶ Under 1 minute analysis time
- ▶ Unique flip-top cell
- ▶ Spectra matching software for correlation to unknown samples
- ▶ Measures key oil condition parameters including:
 - ★ Total Base Number (TBN)
 - ★ Total Acid Number (TAN)
 - ★ Oxidation
 - ★ Nitration
 - ★ Sulfation
 - ★ Incorrect lubricant
 - ★ Additive depletion
 - ★ Soot
 - ★ Glycol/Antifreeze
 - ★ Water
 - ★ FAME
 - ★ Glycerin
 - ★ Fuel Dilution in Hydraulic Fluids
- ▶ Stores over 5,000 records
- ▶ Available in Yellow or Olive Drab



FluidScan's Flip-Top Sampling Cell
Eliminating the Need for Solvents

FluidScan®

Handheld Lubricant Condition Monitor



"A portable, fast, accurate and cost effective instrument for the on-site determination of lubricant degradation & contamination."

FluidScan® is a handheld condition based maintenance monitor that protects machinery by determining when a lubricant needs to be changed due to excessive contamination or degradation. Its detection capabilities can determine lubrication contamination, degradation and cross-contamination at the point of use by measuring key oil condition parameters in both synthetic and petroleum-based lubricants and fluids. FluidScan® uses an innovative patent pending flip-top cell to introduce and analyze the sample.

FluidScan® analyzes fluids using infrared spectroscopy, a technique that has found wide acceptance as a primary test for lubricant degradation and contamination. It performs the analyses on-site with a handheld device, the operator can perform analyses with accuracy that rivals what a laboratory technician can achieve using delicate stationary laboratory instruments. FluidScan® provides immediate on-site analysis of critical properties that allows the user to extend oil change intervals, reduce operational and maintenance cost, reduce unscheduled maintenance outages. In so doing, FluidScan® helps to prevent catastrophic equipment failures.

Applications

FluidScan® Lubricant Condition Monitor is applicable to any large mechanical system where unexpected down time is unacceptable. Ideal applications include:

- Engines
- Gas Turbines
- Wind Turbines
- Transmissions
- Biodiesel Quality Control
- Hydraulics
- Steam Turbines
- Gears
- Compressors

FluidScan[®] Theory of Operation

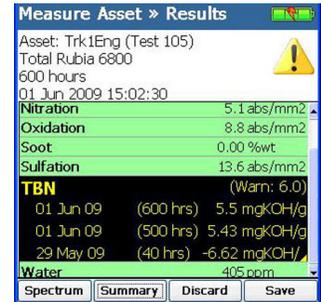
Benefits

The FluidScan[®] provides immediate on-site analysis of lubricant properties, accurately warning when it is time to change the lubricant due to contamination or degradation. The primary benefits of real-time, on-site analysis include:

- Extended oil change intervals.
- No delay in waiting for laboratory analysis.
- Reduced operational and maintenance costs.
- Reduction of unscheduled maintenance outages.
- Prevention of catastrophic failures.
- Uses no hazardous or flammable fluids.

The FluidScan[®] Lubricant Condition Monitor is a self-contained handheld analyzer that delivers instant fluid condition assessment to the user. It reports both ASTM Standard Practice E 2412 condition parameters in addition to key indicators such as TAN, TBN, and incorrect lubricant. It has no moving parts and eliminates the need for sample preparation and time-consuming cleanup by using a flip-top fluid cell for easy and rapid on-site analysis. At the core of the FluidScan[®] is a patented mid-infrared spectrometer. The spectrometer collects the infrared light transmitted through the fluid in the flip-top cell, into a waveguide. The waveguide then carries the light to and from a prism-like diffraction grating and into a high-performance array detector which registers the infrared spectrum of the fluid. The waveguide allows the infrared signal to be completely confined, minimizing any atmospheric interference and maximizing the efficiency of the spectrometer. This unique technology enables a rugged, highly accurate miniature device to operate on a Li-Ion battery pack for up to 8 hours.

Key infrared signatures of fluid condition, using Joint Oil Analysis Program Technical Support Center (JOAP-TSC) and proprietary methods, are used to obtain fluid status in real-time. The user loads a sample into the flip-top cell, enters sample information, and initiates an analysis using the FluidScan[®]'s intuitive, color user interface and navigation pad. Status and supporting fluid condition parameters are then determined and displayed to the user, and can be stored for trending or exported to a central database. FluidScan Manager database software is provided so a personal computer may store, trend, set alarms, and report all collected data.



Analysis Screen with TBN Trend and Limits

Specifications:



Power:	Replaceable Li-Ion Battery Pack
Size:	17 x 14 x 9 cm (6.5 x 5.5x 3.5 in.)
Weight:	1.4 Kg (3 lbs)
Operating System:	Windows CE
Display:	320 x 320 Transflective Color Display
Connectivity:	USB Host (accepts keyboard and mouse) USB Client (for data transfer)
Memory:	64 MB RAM 64 MB Flash
Controls	4 Soft Buttons and a Directional Pad
Storage:	5,000 Assets and Analyses
Operating Temperature:	-10°C to 50°C (14°F to 122°F)
Operating Humidity:	0 to 100%, Non-condensing
Ambient Altitude:	5,000 meters (16,400 feet)
Battery Life:	6 - 8 Hours

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Spectro Incorporated is an ISO 9001 certified company.