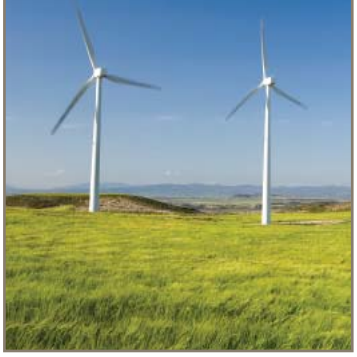

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Kittiwake

Condition Monitoring Products

ENGINEERING YOUR SUCCESS.

Parker Kittiwake specializes in On-Line and On-Site solutions for condition monitoring of production critical plant and machinery. Our sensors and equipment facilitate rapid, informed decision making, helping you keep your machinery running. At Parker Kittiwake, we pride ourselves on providing our customers with the right blend of technology, expertize and information, enabling you to manage risk, reduce downtime, optimize efficiencies and maximize profit.

ANALEXfdMplus

The ANALEXfdMplus is a highly accurate ferrous debris monitor designed to measure ferrous wear metal particle contamination in an oil sample.

The ANALEXfdMplus is a highly accurate instrument designed to measure ferrous wear metal particle contamination in an oil sample. The ANALEXfdMplus utilizes a unique sample adaptor system to measure from any of the following sample sources:

- 50ml Bottle
- 10ml Syringe
- 5ml Syringe
- 5ml Test Tube
- 4ml Grease Pots

The ANALEXfdMplus measures ferrous wear debris in oil or grease samples taken from a variety of types of machinery. Suitable for field and laboratory use, the ANALEXfdMplus provides the ability to successfully monitor equipment, preventing costly machinery downtime.

Contained in a fully portable case, it's rugged design is ideal for testing and analyzing oil samples both in the laboratory, or in the field. Supplied with an optical 12 V convertor, it is ideal for use in remote locations where full laboratory analysis is not possible. Samples may be presented for measurement using a variety of sample apertures, offering you full fiexibility of use. Ferrous debris is measured directly from the oil or grease in the sample container, providing a quick, simple, and clean method of analysis.

Data from each test is stored in the internal memory, which may then be transferred to a host PC via a RS232 interface. Data can then be fully analyzed and trends easily monitored by importing into a database.

Data Entry

Data entry is via a simple and intuitive touch pad screen, with full alphanumeric keypad and backlit graphics display, for clear user prompts and easy viewing of results. The following parameters can be recorded:

- Automatic date and time linked to each equipment or sample number.
- Equipment number or identification.
- Sample number or identification.
- Lubricant hours (0 - 999999 hrs).

The results are shown in a tabular display and in graphical format to enable trending by machine or equipment number.

Specifications

Measurement Range (approx. PPM)	50ml Bottle: 0 - 2500ppm 10ml Syringe: 0 - 19000ppm 5ml Syrings: 0 - 34000ppm 5ml Tube: 0 - 28000ppm 4ml Grease Pot: 0 - 8000ppm
Display Resolution	1 ppm
Sample Sources	50ml Sample Bottles, 10ml Syringes, 5ml Syringes & Test Tubes, 4ml Grease Pots
Test Time	< 1 minute to stabilize from power on < 15 seconds per sample
Power	110 - 250 VAC autoselected 50/60 Hz
Fuse Rating	2.5 A 250 VAC HRC A/S T ceramic
Operating Temp. Range	60°F - 104°F (15°C - 40°C)
Weight	9.30 lb (4.22 kg)

Ordering Information

Part Number	Quantity	Description
FGK17144PA	1	Includes calibration and check standards, power adaptor, RS232 connector, sample adaptors, and a range of sample sources.
FGK14946PA	360	50ml Sample Bottles
FGK15005PA	3000	Grease Pots
FGK17074PA	1000	5ml Test Tubes
FGK17075PA	500	10ml Syringes
FGK17076PA	500	5ml Syringes
FGK17725PA	360	50ml Sample Bottles with Grease Thief Starter Pack & Calibration Standards

DIGI Field Kit

The DIGI Field Test Kit gives fast, accurate results for water in oil, total base number, total acid number, insolubles (soot), and comparitive viscosity.

Total Acid Number (TAN)
Testing for TAN is essential to maintain and protect your equipment, preventing damage in advance.

Both the weak organic and strong inorganic acids present within an oil can be measured with the TAN test. A rise in TAN is indicative of oil oxidation due to time or operating temperature.

- Test kit is supplied with up to fifty tests, enabling monitoring of TAN level trends.
- Simple to use drop test - the result is shown by a color change, providing easy to interpret results, suitable for use by non-technical personnel.

Viscosity
The Viscostick gives a simple "go/no-go" result. Typically it will detect 5-10% distillate fuel dilution of an SAE 30 to 40 engine oil as well as increases in viscosity due to oil contamination.

Insolubles (soot)
Monitor combustion related debris and oxidation products.

High insolubles will cause varnish formation on hot surfaces, sticking of piston rings, and wear of cylinder liner and bearing surfaces. The detergent property of the oil will also decrease, speeding further deterioration.

- Detect insolubles from diesel engine combustion products such as fuel ash, carbon, partially oxidized fuel, oil oxidation products and spent lubricant additive.
- Simple and quick to use, the insolubles tests provide accurate results, helping prevent engine damage.

Reagents, Spares and Consumables
Test kits for individual parameters contain reagents, consumables and full instructions for multiple tests.

- Replacement reagents can be ordered at short notice.
- Kits contain all necessary equipment for instant test results in the field.

Reagents are packed in accordance with IATA/IMDG/IRD Air/Marine/Road Transportation codes and can be delivered to major ports world-wide.

Water in Oil
Maintain and protect your equipment, while eliminating damage caused by water in oil.

- Prevent corrosion, cavitation or failure of your machinery by detecting water in oil, before any damage occurs.
- Minimize instability of additive packages and damaging microbe growth by monitoring your oil.
- Fully portable for use on-board or in the field, test cells are extremely robust, durable and easy to use.

Total Base Number (TBN)
The DIGI TBN Test Kit provides state of the art, digital analysis and gives fast, accurate results for in-depth monitoring of trends.

The TBN Test Kit gives a rapid indication of TBN depletion in lubricants.

- Avoid fouling within the engine and corrosion of engine components by monitoring the Total Base Number (TBN) of lubricating oils.
- Simple, economical monitoring of lubricants.

Specifications

Test	Description
Combined Water in Oil/TBN Cell	0.02-1%, 200-10000 ppm, 0-10%, 0-20%/0-80 TBN
Insolubles	Qualitative
Viscostick	Go/no-go
TAN	0-3 range +/- 0.3

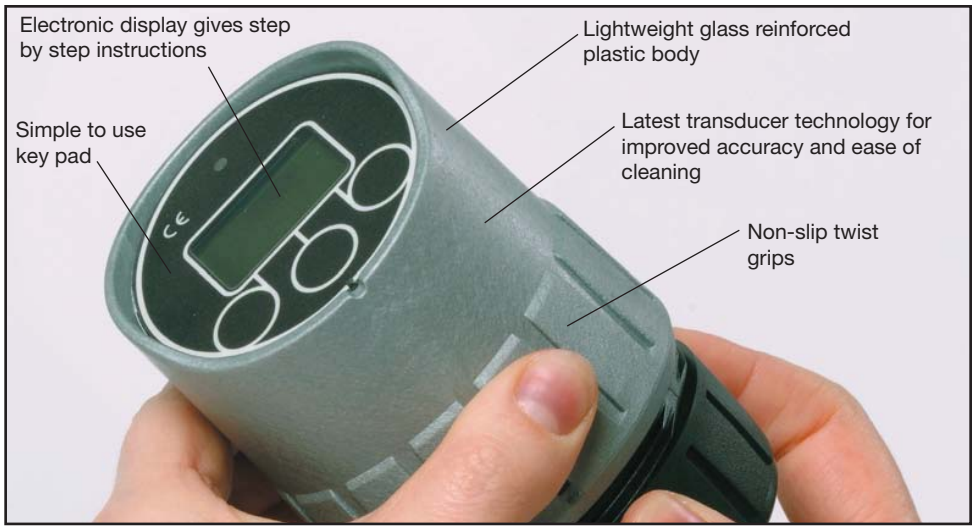
Ordering Information

Part Number	Description
FGK1108PA	DIGI Field Kit
FG24743PA	TAN Drop Test Kit
FGK2002PA	TBN Reagent Pack (50)
FGK1006PA	Insolubles Kit

Low Range DIGI Water Kit

The DIGI Test Cell provides simple, accurate results for water in oil.

With an easy to read digital display providing instructions and results, a five year (10,000 tests) battery life and built in memory for recording previous test results, the DIGI Cell has become a favored test method world-wide for on-site and on-board testing.



Water in Oil

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Test kits for individual parameters contain reagents, consumables and full instructions for multiple tests.

- Replacement reagents can be ordered at short notice.
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- Reagents are packed in accordance with IATA/ IMDG/IRD Air/Marine/Road Transportation codes and can be delivered to major ports world-wide.

Specifications

Ranges	200-3000 ppm .02 - 1% 0 - 10%
Test Time	3 Minutes
Battery Life	Five years (10,000 tests)

Ordering Information

Part Number	Description
FGK17032PA	Low Range DIGI Water Kit
FGK2101PA	Water in Oil Reagent Pack (50)

Heated Viscometer

Make fast on-site maintenance decisions with Parker's Heated Viscometer. Accurate oil viscosity results in minutes.

The Parker Heated Viscometer provides a condition monitoring tool that enables you to make informed operational and maintenance decisions about your critical plant and equipment. Fuel and lubricating oils form a major cost element in the operation of almost all industrial machinery and engines; the quality must be closely monitored to protect the investment. The ability to test on-site, at the point of use, enables engineers and facilities managers to conduct oil analysis quickly and easily. Detecting out-of-spec fuels or lubricants can identify potential problems before equipment damage occurs.

Viscosity is regarded as an oil's most important characteristic. It is the viscosity that gives the oil's resistance to flow and the strength of the oil film between surfaces. Viscosity can increase or decrease as a result of problems such as contamination, fuel dilution, and shear thinning. Measurement of viscosity is extremely important for hydraulic oils, diesel engine oils, gear, and fuel oils.

The heated viscometer measures a specific temperature point and is designed to 'tilt' from side to side in both directions, allowing the internal rolling ball to fall under gravity, enabling the viscosity of the oil to be calculated automatically.

- Monitoring viscosity gives an early warning for potential fluid issues.
- Highly accurate results with two readings are available at 40°C, 50°C or 100°C.
- Test an even greater range of oils, by changing the viscosity index or density.
- Estimate the combustion performance (CCAI) of fuel oil.
- Heavy duty, robust equipment - ideal for long term use with fast and accurate results.

Specifications

Range	Calculated viscosity in cSt at 40°C, 50°C or 100°C, Calculated Carbon Aromaticity Index (CCAI)
Display	8 Digit LED
Keypad	Membrane type with tactile buttons
Power	110 to 240 AC 50/60 Hz

Ordering Information

Part Number	Description
FGK1200PA	Test kit contains Heated Viscometer, power supply and all consumables in a portable robust metal case.
ASK11097	Viscometer End Plug
ASK11098	Viscometer End Cap
BIK10004	Viscometer Ball Strainer
BIK10307	Viscometer Balls

MHC Bearing Checker

Parker's MHC* Bearing Checker is a new, unique hand-held instrument, providing maintenance engineers with an easy-to-operate, simple to use, and quick method of analyzing bearing condition and lubrication state.

The MHC Bearing Checker monitors high frequency Acoustic Emissions (AE) signals naturally generated by deterioration in rotating machinery. The unique way of detecting and processing these signals provides condition-related information in the easiest possible form. It is a state-of-the-art condition monitoring instrument with extreme sensitivity to developing faults.

How Does it Work?

As the mechanical condition of machinery deteriorates, energy loss processes such as impacts, friction, and crushing generate sound wave activity that spans a broad range of frequencies. By detecting only the high frequency part of this signal with special AE sensors, it is possible to detect miniscule amounts of activity (e.g. a slight rub, a brief impact, or the crushing of a single particle in the lubricant). The patented MHC sensor gives improved repeatability and is remarkably rugged. A magnetic front face allows easy attachment to multiple machines.

Easy to Use and Interpret for Quick Analysis

Simply attach the unit via the magnetic sensor head and within 10 seconds both dB Level and Distress® values will be displayed. dB Level is an indication of the overall noise of the bearing and is dependent on speed. It increases with speed of rotation, but also with degradation of the bearing or inadequate lubrication. Distress® gives an instant indication of the state of the bearing's health. A reading below 10 generally indicates normal operation, higher than 10 is usually indicative of bearing damage or the need for attention. Distress® and dB Level are the fundamental parameters of the pocket-sized MHC Bearing Checker.

The unit is powered by an internal rechargeable battery, offering up to 1000 measurements between charges. Recharging is accomplished through a micro USB port.

Ordering Information

Part Number	Description
FGH11510PA	MHC Bearing Checker

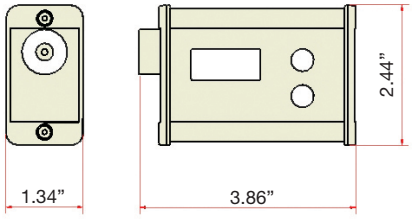
Specifications

Sensor	
Sensing Element	Resonant piezoelectric at 100 kHz
Calibration	Factory set

Signal Measurement	Description	Range	Resolution
Distress® (dst)	Fault indicating parameter	0 to 40	1 unit
dB Level (dB)	Logarithmically scaled mean signal level	10 to 80 dB	1 dB

Features	
Display	LCD, 2 lines by 8 characters
Distress® Display	Numeric or Text ("OK" if <10, "Suspect" if between 10 & 15, "Poor" if > 15)
Reading in progress	Flashing LED indicator (in addition to LCD display message)
Non-Volatile Memory	Shows last taken readings when unit is switched on
Auto Shut-Off	Instrument auto switches off 30 seconds after last button press
Internal Batteries	NiMH rechargeable battery via micro USB port - Typically over 1000 measurements between charges
Operating Temperature	0°C to 65°C
Overall Dimensions	3.86 in (98 mm) x 2.44 in (62 mm) x 1.34 in (34 mm)
Weight	7.94 ounce (225 g)

*MHC - Machinery Health Check



Features and Benefits

- Last Measurement Recall
- Simple One-Handed Operation
- Rechargeable through USB Port
- Ease of Operation

Worldwide Filtration Manufacturing Locations

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www.parker.com/hydraulicfilter

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450 629 9594
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Madison, WI
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www.scilog.com

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Etten-Leur, Netherlands
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www.kittiwake.com

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www.twinfilter.com

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