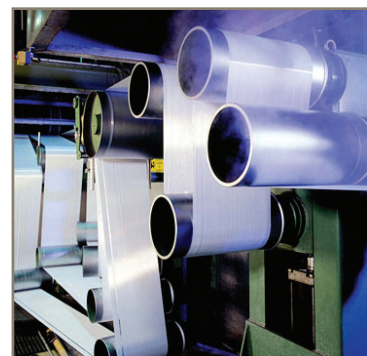




aerospace
climate control
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Parker Kittiwake Product Overview



ENGINEERING YOUR SUCCESS.

MHC Bearing Checker

The 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 analysing 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 gives you 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 minuscule 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 parameters 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 high-end MHC-Memo products and are trusted by thousands of maintenance engineers and technicians worldwide. These are now available in a low cost, easy to interpret pocket size instrument.

The unit is powered by an internal rechargeable battery, offering up to 1000 measurements between charges. Recharging is accomplished through a micro USB port and the unit can be connected to any standard PC USB port for ease of recharging. Can you afford not to equip all of your maintenance staff with a unit?

Specifications

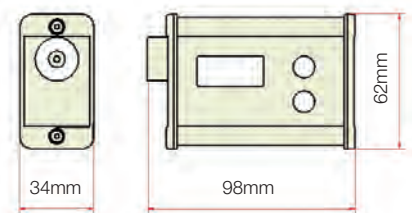
Sensor			
Product Code	FGH11510PA		
Sensing element	Resonant piezoelectric at ~ 100 kHz		
Calibration	Factory set		
Signal Measurement	Description	Range	Resolution
Distress® (dst)	Fault indicating parameter	0 to 40	1 unit
dB Level (dB)	Logarithmically scaled mean signal level	10 to 80 dB	1 dB
Features			
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	98 mm x 62 mm x 34 mm (including magnetic sensing head)		
Weight	225 g		

Features and Benefits:

- Last measurement recall
- Simple one-handed operation
- Rechargeable through USB port
- Ease of operation

Target Applications:

- Bearings
- Gearboxes
- Motors
- Pumps



ANALEXfdMplus

The ANALEXfdMplus is a highly accurate instrument designed to measure the contamination of an oil sample with ferrous wear metal particles.

What's new

The ANALEXfdMplus utilises a novel sample adaptor system to measure from any of the following sample media;

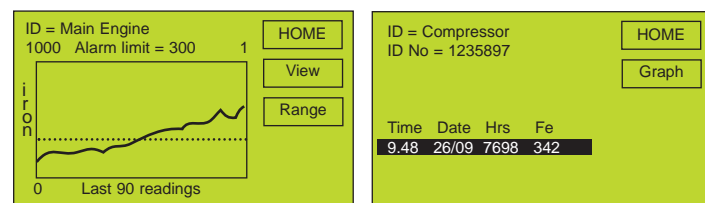
- 50ml Bottle
- 10ml Syringe
- 5ml Syringe
- 5ml Test Tube
- 4ml Grease Pots

The ANALEXfdMplus measures un-combined 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 you with the ability to successfully monitor your equipment, preventing costly machinery downtime.

Contained in a fully portable case, it's rugged design is ideal for testing and analysing oil samples both in the laboratory or in the field. Supplied with an optional 12 V convertor, it is ideal for use in remote locations where full laboratory analysis is not possible. Samples may be presented for measurement in a variety of media, offering you full flexibility of use. Ferrous debris is measured directly from the oil or grease in the sample container, providing you with 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 an RS232 interface. Data can then be fully analysed and trends easily monitored by importing into a database.

Features



Supplied with:

Calibration and Check Standards, Power Adaptor, RS232 Connector, Sample Adaptors, Range of Sample Media.

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

Product Code:	FGK17144PA
Measurement Range (approx PPM):	50ml Bottle 0 - 2500ppm 10ml Syringe 0-19000ppm 5ml Syringe 0-34000ppm 5ml Tube 0-28000ppm 4ml Grease Pot 0-8000ppm
Display Resolution:	1 ppm
Sample Media:	50ml Sample Bottles, 10ml Syringes, 5ml Syringes & Test Tubes, 4ml Grease Pots
Test Time:	< 1 minute to stabilise 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:	15 - 40 °C (60 - 104 °F)
Weight:	4.22 kg

Accessories and Consumables

FGK14946PA	x 360 off 50ml Sample Bottles
FGK15005PA	x 3000 off Grease Pots
FGK17074PA	x 1000 off 5ml Test Tubes
FGK17076PA	x 500 off 10ml Syringes
FGK17076PA	x 500 off 5ml Syringes

Heated Viscometer

Make fast on-site maintenance decisions with Parker Kittiwake's Heated Viscometer, providing laboratory grade oil viscosity results in minutes.

The Parker Kittiwake 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 shows 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, gears and fuel oils.

The heated viscometer measures at the actual temperature and is designed to 'Tilt' from side to side in both directions, allowing the ball to fall under gravity and the viscosity of the oil calculated automatically.

- Monitoring viscosity gives an early warning for a range of common problems.
- Highly accurate results with three 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 rapid results.



Ordering Information

FGK1200PA: Heated Viscometer

Range:	Calculated Viscosity at 40 °C, 50°C and 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

Test Kit contains Heated Viscometer, power supply and all consumables in a portable robust metal case.

Low Range DIGI Water Kit

At the heart of Parker Kittiwake's on-site oil test solution range is the DIGI Test Cell, providing 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 Parker Kittiwake DIGI Cell has become a favoured test method worldwide for on-site and on-board testing.



Water in Oil

Maintain and protect your equipment, whilst eliminating damage caused by water in your oil.

The DIGI Water in Oil Test Kit provides state of the art, digital analysis and gives fast, accurate results for easy monitoring of trends.

- Prevent corrosion, cavitation or failure of your machinery by detecting water in oil, before any damage occurs.
- Minimise 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.




Reagents, Spares and Consumables

Parker Kittiwake 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.

Ordering Information

FGK17032PA: Low Range DIGI Water Kit
FGK2101PA:  Water in Oil Reagent Pack (50)

Range (LR): 0.02-1%, 100-3000ppm, 0-10%
Test Time: 3 minutes
Battery Life: Five years (10,000 tests)

DIGI Field Kit

A low cost kit allowing multiple oil parameters to be measured in the field including:

Viscosity

The ECON 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.

Total Acid Number (TAN)

Testing for TAN is essential to maintain and protect your equipment, preventing damage in advance.

Measure both the weak organic and strong inorganic acids present within an oil with the Parker Kittiwake 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 you monitor TAN level trends.
- Simple to use drop test - the result is shown by a colour change, providing you with easy to interpret results, suitable for use by non-technical personnel.

Insolubles

Monitor combustion related debris and oxidation products.

High insolubles will cause lacquer 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 oxidised fuel, oil oxidation products and spent lubricant additive.
- Simple and quick to use, the Insolubles tests available give you actionable results, helping prevent engine damage.



Water in Oil

Maintain and protect your equipment, whilst eliminating damage caused by water in your oil.

The DIGI Water in Oil Test Kit provides state of the art, digital analysis and gives fast, accurate results for easy monitoring of trends.

- Prevent corrosion, cavitation or failure of your machinery by detecting water in oil, before any damage occurs.
- Minimise 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 ECON 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 your lubricating oils
- Simple, economical monitoring of lubricants

Reagents, Spares and Consumables


Parker Kittiwake 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.

Ordering Information - Kit

Part Number	Description	Tests Included	Range
FGK1108PA	DIGI Field Kit	DIGI Combined Water in Oil / TBN Cell ECON Insolubles Test ECON Viscostick ECON TAN Test	0.02-1%, 200-10000 ppm, 0-10%, 0-20% /0-80 TBN qualitative go/no go TAN: 0-6

Ordering Information - Consumables

Part Number	Description	Number of Packs
FGK24743PA	ECON TAN Drop Test Kit	25 Packs
FGK2003PA	Insolubles Reagent Pack	50 Packs
FGK2101PA	 Water in Oil Reagent Pack	50 Packs
FGK2002PA	Total Base Number Reagent Pack	50 Packs

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 00800 27 27 5374

Parker's Motion & Control Technologies



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 Engines
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 Helicopters
 Launch vehicles
 Military aircraft
 Missiles
 Power generation
 Regional transports
 Unmanned aerial vehicles

Key Products
 Control systems & actuation products
 Engine systems & components
 Fluid conveyance systems & components
 Fluid metering, delivery & atomization devices
 Fuel systems & components
 Fuel tank inerting systems
 Hydraulic systems & components
 Thermal management
 Wheels & brake



Climate Control
Key Markets
 Agriculture
 Air conditioning
 Construction Machinery
 Food & beverage
 Industrial machinery
 Life sciences
 Oil & gas
 Precision cooling
 Process
 Refrigeration
 Transportation

Key Products
 Accumulators
 Advanced actuators
 CO₂ controls
 Electronic controllers
 Filter driers
 Hand shut-off valves
 Heat exchangers
 Hose & fittings
 Pressure regulating valves
 Refrigerant distributors
 Safety relief valves
 Smart pumps
 Solenoid valves
 Thermostatic expansion valves



Electromechanical
Key Markets
 Aerospace
 Factory automation
 Life science & medical
 Machine tools
 Packaging machinery
 Paper machinery
 Plastics machinery & converting
 Primary metals
 Semiconductor & electronics
 Textile
 Wire & cable

Key Products
 AC/DC drives & systems
 Electric actuators, gantry robots & slides
 Electrohydraulic actuation systems
 Electromechanical actuation systems
 Human machine interface
 Linear motors
 Stepper motors, servo motors, drives & controls
 Structural extrusions



Filtration
Key Markets
 Aerospace
 Food & beverage
 Industrial plant & equipment
 Life sciences
 Marine
 Mobile equipment
 Oil & gas
 Power generation & renewable energy
 Process
 Transportation
 Water Purification

Key Products
 Analytical gas generators
 Compressed air filters & dryers
 Engine air, coolant, fuel & oil filtration systems
 Fluid condition monitoring systems
 Hydraulic & lubrication filters
 Hydrogen, nitrogen & zero air generators
 Instrumentation filters
 Membrane & fiber filters
 Microfiltration
 Sterile air filtration
 Water desalination & purification filters & systems



Fluid & Gas Handling
Key Markets
 Aerial lift
 Agriculture
 Bulk chemical handling
 Construction machinery
 Food & beverage
 Fuel & gas delivery
 Industrial machinery
 Life sciences
 Marine
 Mining
 Mobile
 Oil & gas
 Renewable energy
 Transportation

Key Products
 Check valves
 Connectors for low pressure fluid conveyance
 Deep sea umbilicals
 Diagnostic equipment
 Hose couplings
 Industrial hose
 Mooring systems & power cables
 PTFE hose & tubing
 Quick couplings
 Rubber & thermoplastic hose
 Tube fittings & adapters
 Tubing & plastic fittings



Hydraulics
Key Markets
 Aerial lift
 Agriculture
 Alternative energy
 Construction machinery
 Forestry
 Industrial machinery
 Machine tools
 Marine
 Material handling
 Mining
 Oil & gas
 Power generation
 Refuse vehicles
 Renewable energy
 Truck hydraulics
 Turf equipment

Key Products
 Accumulators
 Cartridge valves
 Electrohydraulic actuators
 Human machine interfaces
 Hybrid drives
 Hydraulic cylinders
 Hydraulic motors & pumps
 Hydraulic systems
 Hydraulic valves & controls
 Hydrostatic steering
 Integrated hydraulic circuits
 Power take-offs
 Power units
 Rotary actuators
 Sensors



Pneumatics
Key Markets
 Aerospace
 Conveyor & material handling
 Factory automation
 Life science & medical
 Machine tools
 Packaging machinery
 Transportation & automotive

Key Products
 Air preparation
 Brass fittings & valves
 Manifolds
 Pneumatic accessories
 Pneumatic actuators & grippers
 Pneumatic valves & controls
 Quick disconnects
 Rotary actuators
 Rubber & thermoplastic hose & couplings
 Structural extrusions
 Thermoplastic tubing & fittings
 Vacuum generators, cups & sensors



Process Control
Key Markets
 Alternative fuels
 Biopharmaceuticals
 Chemical & refining
 Food & beverage
 Marine & shipbuilding
 Medical & dental
 Microelectronics
 Nuclear Power
 Offshore oil exploration
 Oil & gas
 Pharmaceuticals
 Power generation
 Pulp & paper
 Steel
 Water/wastewater

Key Products
 Analytical Instruments
 Analytical sample conditioning products & systems
 Chemical injection fittings & valves
 Fluoropolymer chemical delivery fittings, valves & pumps
 High purity gas delivery fittings, valves, regulators & digital flow controllers
 Industrial mass flow meters/controllers
 Permanent no-weld tube fittings
 Precision industrial regulators & flow controllers
 Process control double block & bleeds
 Process control fittings, valves, regulators & manifold valves



Sealing & Shielding
Key Markets
 Aerospace
 Chemical processing
 Consumer
 Fluid power
 General industrial
 Information technology
 Life sciences
 Microelectronics
 Military
 Oil & gas
 Power generation
 Renewable energy
 Telecommunications
 Transportation

Key Products
 Dynamic seals
 Elastomeric o-rings
 Electro-medical instrument design & assembly
 EMI shielding
 Extruded & precision-cut, fabricated elastomeric seals
 High temperature metal seals
 Homogeneous & inserted elastomeric shapes
 Medical device fabrication & assembly
 Metal & plastic retained composite seals
 Shielded optical windows
 Silicone tubing & extrusions
 Thermal management
 Vibration dampening





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