

*Interesting new products inside!*



# Condition Monitoring

Products for the marine industry



ENGINEERING YOUR SUCCESS.

# Maintaining the fleet with condition monitoring

As a Parker company, you can trust us to develop the best condition monitoring products and solutions

Parker Kittiwake condition monitoring products have been used by the marine industry for over 25 years. Fleet-wide condition monitoring helps reduce maintenance cost, increase machinery life, reduce wear and ultimately improve our clients' profits by reducing operational costs.

Parker Kittiwake is a Parker Hannifin company. Parker Hannifin is a Fortune 250 global leader in motion and control technologies. For 100 years the company has engineered the success of its customers in a wide range of diversified industrial and aerospace markets. Learn more at [www.parker.com](http://www.parker.com) or [@parkerhannifin](https://twitter.com/parkerhannifin).

## Master Marine Distribution Network

Parker Kittiwake makes wide use of a Master Marine Distribution Network to provide its clients with 24/7 stock, knowledge, contact and support. Parker Kittiwake are very pleased to be working with such professionals across the globe.



## System Monitoring Solutions

### Metallic Wear Debris Sensor



MWDS shown in picture is ATEX zone 1 version

**Parker's Kittiwake latest generation of metal wear debris sensors provides unbeatable detection performance for both ferrous and non-ferrous metals. It is known in the market that particles result from wear processes in hydraulic and lubrication systems.**

It is imperative to know, not just the number of particles which pass through your system, but also the size and metallic composition. The latest generation of our metal wear debris sensors goes beyond normal protection systems, offering real-time monitoring of the contamination in the system. This allows system users or service organizations to take immediate action on the first indication of change, thereby preventing all types of failures to system components.

**Part Number: FG-K19567-KW**

### icountPD - Particle Detector



**Online particle detector, independent monitoring of system contamination trends for mineral oil, aggressive fluids or fuels.**

The icount IPD Particle Detector represents the latest cutting edge design in this field. This compact permanently mounted on line module combined with built in laser based technology brings to multiple applications a truly revolutionary particle detector that has many applications on-board from Crane, to Hatch to Engine Hydraulics, in fact any mineral based oil where contamination is a ship stopper.

**Part Number: IPD12322230**

### Fluid Condition Sensor - Fuel Dilution & Insolubles



**The Fluid Condition Sensor (FCS) is a diagnostic tool for monitoring fuel dilution, soot ingress & oil contamination issues that can lead to engine damage.**

The FCS (Fluid Condition Sensor) from Parker Kittiwake is a new, multi-parameter sensor and alert system for monitoring oil quality, moisture, temperature and pressure. By tracking changes in oil electrical conductivity, FCS can detect fuel dilution - a common problem in 4-stroke diesel engines. FCS also closely correlates to soot (insolubles) ingress by tracking changes in relative permittivity. When combined with the Parker Kittiwake FCS Alert, engine operators have a continuous monitoring tool to help guard against engine failure. **Part Number: FCS3111**

**NEW!**



### Cold Corrosion Test Kit - Corrosive Iron Testing



**The Cold Corrosion Test Kit (CCTK) provides an accurate measurement of corrosive iron content in cylinder liner oil.**

Cylinder lubrication oil in large, 2-stroke marine diesel engines has to contend with high temperatures and acidic products formed during the combustion of sulphur-rich bunker oils. Parker Kittiwake's Cold Corrosion Test Kit is a quick, easy to use chemical test that provides an accurate measure of the parts per million (PPM) value of Fe<sup>2+</sup> and Fe<sup>3+</sup> compounds in used scrape down oil. Knowing the specific PPM of corroded iron allows informed decisions to be made in adjustments to feed rates and the Base Number (BN) of the oil used. **Part Number: FG-K19763-KW**

### Ferrous Wear Meter +



**The Ferrous Wear Meter (FWM) is an advanced instrument for measuring the abrasive iron content in oil samples, the FWM+ now includes std Grease Fe measurement.**

Parker Kittiwake's Ferrous Wear Meter is an easy-to-use instrument for accurately testing and analysing oil and grease samples on-board or in remote locations where full laboratory analysis is not possible. In scrape-down cylinder oil, the FWM can isolate the abrasive iron content from the corrosive iron, thereby providing an indication of mechanical wear - a early indicator of possible mechanical failure. When combined with the Cold Corrosion Test Kit, engineers can separate the causes of damage and gain vital insight into engine health and avoid possible catastrophic damage.

**Part Number: FG-K30258-KW**

**NEW!**  
GREASE  
TESTING

### DIGI Cell Water & BN150 Test Kits



**The DIGICell is the essential device for Water in Oil and BN (Base Number) testing - now tests up to BN150!**

Parker Kittiwake's DIGICell oil test kit range provides a complete set of economically-priced equipment with a level of accuracy suited to routine analysis. 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 DIGICell has become a favoured test method worldwide for on-site and on-board testing. Test cells are available for either Water in Oil or Base Number (BN). Alternatively, a DIGI Combined Test Cell is available that performs both test parameters in a single cell.

**Part Number: FG-K1-108-KW**

## Cylinder Oil Monitoring

### ATR Analyser

**NEW!**



**The Attenuated Total Reflectance (ATR) truly revolutionises on board testing as no reagents, chemical mixing or accurate sample sizes are needed. This is truly REAGENTLESS TESTING.**

The ATR uses the science of Attenuated Total Reflectance (IR Spectroscopy) in a bench top device and removes the anomaly of crew inaccuracies during re-agent mixing, or sample size as it uses an approximate measure (5-10ml) of lube oil placed in a postage stamp size well and requires a single button push to achieve simultaneous results for Base Number, Total Acid Number Insolubles, Soot loading, Viscosity, FAME and Water Content all within one minute. The time taken to achieve all of those tests on a multi-cylinder engine will mean that this new device can amortise it's cost within a very short period of time and the fact that results can be compared without the risk of inevitable human interface differences skewing results will allow accurate vessel to vessel performance and cost comparisons to be made.

**Part Number: ATR1100**

### LinerSCAN - Alarm System for Liner Wear



**LinerSCAN is the world's first real-time alarm system for cylinder liner wear, providing early warning against engine damage.**

Parker Kittiwake's LinerSCAN is designed to remove the uncertainty of cylinder liner damage resulting from low fuel quality, slow steaming, low sulphur levels, lower oil feed rates and cylinder oil formulation changes. Trials have shown that LinerSCAN highlights the first signs of damage earlier than other systems and enables safe reduction of the lubricant feed rate. LinerSCAN is a fully automated system and will help save money by optimising the lubricant feed rate, reducing your maintenance loads and by helping you prevent engine damage. **Advances in electronic manufacturing technology have reduced the cost of this product - please contact us for more information.**

**Part Numbers: FG-K17400-KW**

**FG-K17401-KW**

### LinerSCAN - Common Drain

**NEW!**



**The LinerSCAN CD concept has been designed to offer the benefits of LinerSCAN but at a reduced initial investment.**

LinerScan CD (Common Drain) combines components from the popular (all cylinder) LinerScan with the Parker Kittiwake Ferrous Wear Meter (FWM) to provide early warning of accelerated liner wear and to provide reliable data to optimise the cylinder oil feed rate. Designed to be installed on the Scrape down Common Drain. LinerScan will identify on-line without crew interference an increase in iron content thereby providing a reliable alarm before irreparable damage occurs. By utilisation of the FWM the cylinder or cylinders with accelerated wear can then be isolated and this can be done within minutes. All this at approximately 30% of the cost of the all cylinder version. **Part Number: FG-K31318-KW**

## Fuel Condition Monitoring Solutions

### Cat fines Test Kit - With Patented\* OEM Technology



**The Cat Fines Test Kit detects catalytic fines to help prevent irreparable damage of fuel pumps, injectors, piston rings and liners.**

The Cat Fines Test Kit from Parker Kittiwake is a chemical bottle test which determines the level of cat fines present in a representative sample of fuel oil, allowing the user to identify potentially damaging components before they enter the system. In minutes, this easy-to-use onboard test identifies the presence of abrasive silicon and aluminium catalytic fines, which can become embedded into engine components and cause irreversible damage if left untreated. The test kit can be used in conjunction with both laboratory testing and a range of other on-board condition monitoring tools, ensuring that operators have accurate data to safeguard against potentially catastrophic damage. (\*Patent application pending - beware of non-authorised copies.) **Part Number: FG-K30566-KW**

### Density Meter



**The Density Meter provides an on-site fuel analysis lab to help protect assets, improve productivity and increase up-time.**

The Density Meter from Parker Kittiwake is suitable for both distillate and residual fuel oils. Measuring the density of fuel using hydrometers, the Density Meter can be used to confirm the quantity and grade of fuel delivered. Density is calculated electronically, providing fast, accurate results and estimating the combustion performance (CCAI) and correct viscosity in cP to cSt calculations. **Part Number: FG-K1-300-KW**

### Compatibility Tester



**The Compatibility Tester identifies possible stability problems before blending two fuels, indicating the effectiveness of stability additives.**

The Parker Kittiwake Compatibility Tester is possibly the most useful tool available for testing fuel oil compatibility and blends. The kit provides a quick tool for engineers faced with the necessity to mix or blend residual fuel oil or wishing to establish the stability of a new bunker delivery. The Compatibility Tester can be purchased as a stand-alone kit supplied in its own case, or as part of a more extensive suite of testing equipment in the Fuel and Lubricant Cabinet. **Part Number: FG-K1-500-KW**

## Fuel Condition Monitoring Solutions

### Heated Viscometer



**Make fast on-site maintenance decisions with the Heated Viscometer, providing laboratory grade oil condition results in minutes.**

The Parker Kittiwake Heated Viscometer provides a condition monitoring tool that enables you to make rapid, on-site, 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. Detecting out-of-spec fuels or lubricants can identify potential problems before equipment damage occurs.

**Part Number: FG-K1-200-KW**

### Bunker Samples, Storage Systems & Accessories



**A completely self-contained unit providing everything needed to comply with the collection, retention and storage of bunker fuel oil samples in accordance with IMO MARPOL regulations.**

The Parker Kittiwake Bunker Sample Storage System is contained in a robust, metal case that is fully lockable for safe and secure sample storage. It comes complete with log book to record your sample details and full instructions on bunker sampling and the latest regulations. Replacement consumables and a full range of bunker samplers are easily available at short notice from Parker Kittiwake and can be shipped to the destination of your choice. **Part Number: FG-K16091-KW**

### XRF Analyser

**NEW!**

**Vital for 2020  
Fuel Sulphur Cap**



**The ability to spot check the Sulphur content of fuel on-board (to lab standards) within three minutes will help vessel operators, bunker suppliers, port authorities and regulatory surveyors ensure compliance with the latest IMO MARPOL fuel regulations.**

Even before the lower 2020 fuel Sulphur Cap comes into force this fully hand portable device is a valuable tool to ensure Sulphur compliance and to provide an assurance that fuel delivered is of the correct specification. Equally it is a useful tool to ensure that near spec fuel has not been contaminated by tank residue and is a vital tool for surveyors to ensure fuel under scrutiny is compliant. Requiring a very small (5-10ml) quantity of fuel to be placed in a sample pot the four decimal result is produced within three minutes in accordance with ISO 8754. This XRF has a dual utility on board too, as it can be used to analyse lubricants providing (also within three minutes) vital elemental analysis to identify wear and contamination. Truly an advance in engineering miniaturisation this device provides the utmost in fuel and lube oil quality confidence. **Part number: XRF6111**



## Machinery Health Check

### MHC - Bearing Checker



The MHC Bearing Checker is a 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.

**Part Number: FG-H11510-KH**

### MHC - Memo Pro



MHC Memo Pro monitors high frequency Acoustic Emissions (AE) signals naturally generated by deterioration in rotating machinery. The MHC-Memo Pro is able to monitor a near unlimited number of machines on a periodic basis.

The MHC-Memo Pro can store standard and Super Slo modes within its walk around route and store manually input values from any other device (e.g. a pressure gauge, kVA meter etc.). The MHC-Memo Pro can hold up to 6 routes at a time, each having up to 435 measurement points within a Site, Area, Machine & Point hierarchy. The addition of FFT Capture Spectrum and AutoLog functions make the MHC-Memo Pro the ultimate tool for Condition Monitoring specialists.

**Part Number: FG-H16111-KH**

### Complete Marine Water Test Kit



For optimum performance from the vessel or installation systems on-board and offshore, and to adhere to legislative requirements, the Complete Marine Water Test Kits offer the best solution.

The Complete Marine Water Test Kit (cabinet not included) offers an off-the-shelf solution. The Complete Marine Water Test Kit will prove a valuable tool for system monitoring and control, ensuring safe and correct operation, and will also provide a key platform for demonstration of inspectional requirements under the current and forthcoming legislation.

**Part Numbers:**

**For potable water:**      **FG-K28764-KW Marine Potable Bacteria Kit**  
   **FG-K29563-KW (Euro plug)**

**FG-K28763-KW Marine Potable Chlorine Kit**

**Covering both the above and chemistry test**

**FG-K27977-KW Complete Marine Water Test Kit**

**FG-K29345-KW (Euro plug)**

**For onboard water:**      **FG-K27973-KW Sewage Effluent Test Kit**