



Oil Test Solutions

Simple to Use & Economical
Fuel and Lube Oil Testing Made Easy

Non-Hazardous for shipping water in oil test
available where you see the EasySHIP logo



Make fast on-site maintenance decisions fast with Kittiwake's complete range of oil test kits. An economical range, providing reliable oil condition results in minutes.

Kittiwake's oil test kit range provides a complete set of economically priced equipment, with a level of accuracy suited to routine analysis. Oil test kits provide you with a condition monitoring tool enabling you to make informed operational and maintenance decisions about your critical plant and equipment. 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 and lubricants can identify potential problems, before they become critical. Choose from a range of equipment and parameters to use either individually, or combined as a single test kit.



Protect your assets, improve productivity & increase uptime with regular on-site oil analysis

Multi-Parameter Oil Test Kits



Supplied ready for use, in heavy duty aluminium or durable ABS cases, Kittiwake's multi-parameter test kits contain all of the necessary equipment and consumables for your oil condition monitoring needs.

- ✔ Fast, accurate results for multiple oil parameters in an easy to use, portable kit.
- ✔ Make informed on-site maintenance decisions.
- ✔ Act before the onset of critical failure.
- ✔ Robust and reliable for use in harsh or remote environments

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Part Number	Description	Tests Included	Range
FG-K1-002-KW	DIGI Water/Viscosity Kit	DIGI Water in Oil Cell	0.02-1%, 200-10000 ppm, 0-10%, 0-20%
FG-K1-102-KW	→ EasySHIP version	ECON Viscostick	go/no go
FG-K1-003-KW	DIGI Basic Kit	DIGI Water in Oil Cell	0.02-1%, 200-10000 ppm, 0-10%, 0-20%
FG-K1-103-KW	→ EasySHIP version	ECON Salt Test	go/no go
		ECON Insolubles Test	qualitative
		ECON Viscostick	go/no go
FG-K1-007-KW	DIGI Industrial Kit	DIGI Combined Water in Oil / TBN Cell	0.02-1%, 200-10000 ppm, 0-10%, 0-20% / 0-80 TBN
FG-K1-107-KW	→ EasySHIP version	ECON Insolubles Test	qualitative
		ECON Viscostick	Viscosity: go/no go
FG-K1-008-KW	DIGI Field Kit	DIGI Combined Water in Oil / TBN Cell	0.02-1%, 200-10000 ppm, 0-10%, 0-20% / 0-80 TBN
		ECON Insolubles Test	qualitative
		ECON Viscostick	go/no go
		ECON TAN Test	TAN: 0-3
FG-K1-010-KW	DIGI Combined Kit	DIGI Combined Water in Oil / TBN Cell	0.02-1%, 200-10000 ppm, 0-10%, 0-20% / 0-80 TBN
FG-K1-110-KW	→ EasySHIP version	ECON Salt Test	go/no go
		ECON Insolubles Test	qualitative
		ECON Viscostick	go/no go
FG-K14971-KW	DIGI Clean Oil Kit	DIGI Water in Oil Cell	0.02-1%, 200-10000 ppm, 0-10%, 0-20%
		DIGI Viscotube	20 - 600 cSt @ 40 °C
		ECON TAN Test	0-6 TAN
FG-K16897-KW	DIGI Biodiesel Test Kit	DIGI Low Range Water in Oil Cell	0.02-1%, 100-3000ppm, 0-10%
		Low Range Falling Ball Viscometer	1 - 10 cSt @ 40 °C
		Density Hydrometer	850-950 kg/m3
		Free Fatty Acid Test / TAN Test	Acid Content / 0-6 TAN
		Visual Test (Cleanliness)	qualitative

NB: Electronic laboratory grade analysis equipment is also available for Water in Oil, Total Base Number (TBN), Total Acid Number (TAN) and Insolubles. See the Oil Analysis Solutions Brochure for further details.

Kittiwake Test Cells

At the heart of Kittiwake on-site oil test solution range, is the DIGI Test Cell, providing simple, accurate results for Water in Oil and Total Base Number (TBN).

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 Kittiwake DIGI Cell has become a favoured test method worldwide for on-site and on-board testing. Alternatively, the Kittiwake ECON Test Cells offer simple, analogue results. Test cells are available individually for either Water in Oil or Total Base Number (TBN). Alternatively, a DIGI Combined Test Cell is available that performs both test parameters in a single cell.

Both types of test cells have recently been upgraded to offer increased functionality and usability. All reagents and test methods remain the same.




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. Alternatively, the ECON Water in Oil Test Kit contains a simple, analogue test cell together with all necessary reagents and equipment for an easy to use, economical test.

Ordering Information

FG-K1-001-KW: DIGI Water in Oil Kit
 FG-K1-101-KW:  DIGI Water in Oil Kit
 FG-K17032-KW: DIGI Water in Oil Kit (Low Range)

Range: 0.02-1%, 200-10000 ppm, 0-10%, 0-20%

Range (LR): 0.02-1%, 100-3000ppm, 0-10%

Test Time: 2 minutes

Memory: Previous test, plus five oils

Battery Life: Five years (10,000 tests)

FG-K13958-KW: ECON Water in Oil Test Kit

Range: 0-1.2%

Accuracy: Typically 0.1 %

Test Time: 2 minutes

- ✔ 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)

DIGI TBN Test Kit



Measure your oil's alkaline reserve and ability to neutralise acids from combustion.

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.

Ordering Information

FG-K1-004-KW: DIGI TBN Test Kit

Range: 0-80 TBN

Accuracy: Typically +/- 10% of new oil TBN

Test Time: 2 minutes

Memory: Previous test, plus five oils

Battery Life: Five years (10,000 tests)

FG-K13959-KW - ECON TBN Test Kit

Range: 5 - 55 TBN

Accuracy: Typically +/- 10% of new oil TBN

Test Time: 2 minutes

<5 TBN + 1 TBN

- ✔ 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

Viscosity

DIGI Viscotube



Viscosity is widely 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.

The Kittiwake DIGI Viscometer (or Viscotube) uses the falling ball technique to measure the viscosity of an oil. The DIGI Viscotube is provided with viscosity calculation software and a Digital Thermometer for accurate results.

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.

- ✔ Make informed maintenance decisions and prevent costly machinery downtime.
- ✔ Measuring oil viscosity provides early detection of contamination, fuel ingress and shear thinning.
- ✔ Suitable for hydraulic oils, diesel engine oils, enclosed gears and fuel oils.
- ✔ Simple, cost effective equipment requiring no consumables.

Ordering Information

FG-K14828-KW: DIGI Viscotube

Range: **20-600 cSt @ 40 °C**
using three sizes of ball
 Application: **Lubricating oils, hydraulic oil, warm fuel oil**
 No. of Tests: **Unlimited**
 Test Time: **1 - 10 Minutes**

FG-K3-020-KW: ECON Viscostick

Range: Go / no go
 Application: Lubricating oils, viscous hydraulics
 No. of Tests: Unlimited
 Test Time: 1 Minute

ECON Viscostick



Total Acid Number (TAN)

ECON TAN Test Kit



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 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 to 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.

Ordering Information

FG-K24743-KW: ECON TAN Drop Test Kit

Range: 0-6 TAN
 Application: Turbine, gear and hydraulic oils
 Test Time: 2 Minutes
 Accuracy: +/- 0.3 TAN
 No. of Tests: 25

Salt Water Contamination

ECON Salt Test



Eliminate rapid corrosion in lube oil, fuel or hydraulic systems by checking for the presence of salt.

- ✔ Provides rapid indication of the presence of salt, even if all the water has been evaporated
- ✔ Fast and easy to use

Ordering Information

FG-K1-005-KW:

ECON Salt Water Contamination Test Kit

Range: Go / no go
 Application: Lubricating oil, fuel, water
 Test Time: 1 hour (unattended)
 No. of Tests: 25

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.

Ordering Information

FG-K17105-KW: DIGI Insolubles Meter

Range:	0-2.5%
Accuracy:	Typically +/-0.1%
Test Time:	< 2 Minutes
Battery Life:	> 3000 Tests
No of Tests:	50
Application:	Diesel Engine Lubricants, Gas Engine Lubricants, Compressor Oil
Sample (ml):	10ml

FG-K1-006-KW: ECON Insolubles Test Kit

Range:	Qualitative
Application:	Diesel engine lubricants
No. of Tests:	100
Test Time:	1 day (unattended)

Reagents, Spares and Consumables



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.

Particle Contamination

Hydraulic Particles (Patch Test)



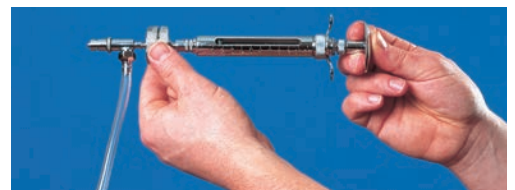
Monitoring your hydraulic and gearbox oils is a necessary part of any preventative maintenance programme.

One of the most valuable indicators of machinery condition is oil cleanliness. The presence of particulate contamination in hydraulic or gearbox oils can be catastrophic. Monitoring fluid cleanliness levels assists in identifying abnormal conditions and preventing potential machinery damage.

Ordering Information

FG-K14368-KW: Hydraulic Particles Test Kit

Range:	Qualitative
Application:	Hydraulic oil, gearbox lubricants
No. of Tests:	100
Test Time:	5 minutes



- ✔ Identify abnormal conditions as part of your preventative maintenance programme.
- ✔ Clear and easy examination of particle contamination.
- ✔ No interference from water droplets or pearlescent fluids.
- ✔ Comes complete with a full instruction manual, containing contamination charts for easy analysis of results.
- ✔ Test kit is supplied in a fully portable, robust case for quick and easy testing in the field.



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