

**GESERCO**

EQUIPMENT FOR TESTING LUBRICANTS

**NUMBER 1**

**IN LUBRICANT  
CONDITION MONITORING**



PARTICLES CONTENT  
DILUTION SOOT  
VISCOSITY

CARBON MATTERS  
BACTERIA TAN

SOOT  
S CONTENT  
ERSA  
BN

DETERGENT  
SAMPLING VISCOSITY

CONTENT WATER  
CAPACITY

DISPERSANT  
CTERIA  
BN

SAMPLING  
DILUTION

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**CATALOG  
SOLUTIONS**

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“When customers choose Geserco they should feel reassured that they are in partnership with a market leader.

Indeed, as early as in 1973, Geserco invented the concept of “Portable Lubricant Testing Kit” which allows any user to instantly monitor the lubricating oil condition in the field, without the need for sending a sample to a laboratory.

We’ve made a lot of progress since then and converted many customers to Geserco. Please read on to discover how and why so many people in the industry are convinced by the Geserco technology.

**Luc Dargent**  
CEO of Geserco

”



## GESERCO: WHAT DO WE DO?

**Geserco offers a complete and innovative range of rapid tests for lubricants, fuels and solvents.**

These tests apply to petroleum based products as well as synthetics and bio products whether they be engine oils, hydraulic oils, power oils, turbine oils, crankcase oils, machining fluids, bio lubricants, biodiesels...

»» For more information visit [www.geserco.fr](http://www.geserco.fr)

### **The 7 current parameters we monitor in lubricants are:**

- viscosity,
- dilution,
- dispersant and detergent capability,
- additive depletion,
- water presence,
- acidity (BN, AN)
- pollution from soot, dusts or particles.

**Easy to use, portable laboratories, the Geserco tests allow a rapid and reliable diagnostic.**



## GESERCO: IN NUMBERS/ HOW MUCH ?

Established in

**1973**

More than

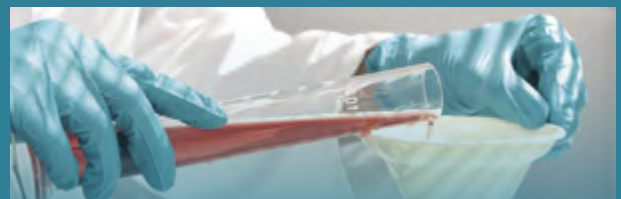
**20 000 sites** equipped

Export turnover

**over 85%**

Growth rate

**25%** per annum



## GESERCO: WHERE?

**The Headquarters of Geserco are located in Le Haillan near Bordeaux, France.**

The Geserco analysis kits are used worldwide; Geserco delivers them directly from the Le Haillan and Singapore sites, or through expert distributors in Asia, Africa, the Americas and throughout Europe.

»» For more information visit [www.geserco.fr](http://www.geserco.fr)



## GESERCO: HOW DOES IT WORK?

Being truly « the blood within the machinery » (turbine, engine, gears...), the oil may reveal the machine condition through the monitoring of simple parameters such as its viscosity, its acidity or its pollution content (water, metal particles, dusts...).

**Oil analysis makes it possible to get advance warning of potential machine failure and establish preventative maintenance programs, thus avoiding costly breakdowns.**

**The Geserco test kits offer major benefits when establishing a preventative maintenance program:**

- They provide oil testing means to isolated or remote users, for example marine vessels or remote industrial sites, which do not have analysis laboratories available nearby;
- They are an efficient oil analysis solution which reduces operational costs for routine machinery surveillance;
- They provide instant test results, buying time for reducing the risk of expensive machinery breakdown.

## Michel Gagaille

Michel Gagaille founded Geserco in 1973. A graduate petroleum engineer, Michel was working at IFP (the French Petroleum Institute) on the problem of lubricant testing and analysis when he decided to establish GESERCO.



“A first for the industry  
- a visionary analysis kit.”

The Geserco PreciWaterTest apparatus was designed by Michel Gagaille in the 1970's. It is the reference instrument for the determination of water content in petroleum products as standardized by ISO under number 9114:1997.



## LUBRICANT INSPECTION IS VITAL:

“Our customers’ machines are rarely turned off. If the lubricant is faulty, the mechanical lubricated system will operate poorly and will ultimately fail. On the other hand, when the mechanical system works poorly, the lubricant degrades faster.

This simple observation is the very foundation of Geserco.

Indeed, in 1973, there was no simple solution for monitoring the basic characteristics of used lubricants. Although techniques to analyze lubricants already existed, they could only be used within laboratories. The techniques were not light and simple enough to be used in the field, right where the machinery is operated. And it was an expensive process.

Geserco’s breakthrough consisted in offering to maintenance technicians a **simple and rugged portable kit that they could use to test their lubricants in the field.** The kit included all tools and means required to undertake the 7 essential tests that can ascertain the lubricant condition and thus anticipate potential malfunction of the machinery.

## Christian Baron

Christian Baron is an industrial aesthetics specialist. Since the 1980s he has collaborated with Geserco in conceiving and designing ergonomic devices produced by the company.



*“Apart from their reliability, the added value of the Geserco products lies in anticipating customers’ needs.”*

“Providing today the technological advance of tomorrow.”

Although the first kits designed for Geserco were basic, the technology was advanced. At the time we were purely looking for technical performance.

The arrival of Luc Dargent at the head of the company changed the style of production and kick-started innovative thinking.

**From now on, the company aims to offer products which are even more easy to use.**

The recent « Rapid Oil Test Gauge » illustrates this groundbreaking and pragmatic spirit. For example, the analysis flask of the Test Gauge is not rounded but triangular at its base, ensuring that it will not slip from the hand of the user and allowing him to tighten it more firmly. The Tester can also be hooked to a computer enabling the transfer of measurements in real time. These small details produce big benefits.



## Frédéric Trémulot

Frédéric Trémulot, technical manager of Geserco, is a mechanical engineer specialized in product innovation and development. His work experience gave him an in-depth knowledge of the condition monitoring of lubricated machinery in the field. He recently joined the team to strengthen the research and development of new products.

“A major breakthrough in the latest Geserco products: their test documenting capabilities.”

Our success can be explained by our will to provide our customers with adaptable tools and solutions. Specifically, the technical needs of a customer like SNCF (the French Railways) are not totally similar to the ones of Airbus. Therefore, our products are designed so that each specific need (whatever the client’s trade) result in a fast, simple and efficient lubricant monitoring process.

Consequently, we keep on adapting our products so that they keep pace with technological advances, new legal regulations and individual requirements.

**Adding test documenting capabilities and a computer interface to our Rapid Tester range provide the users with better and easier lubricant monitoring and result improvements over time.**



The new GESERCO Digital Rapid Oil Test Gauge for BN depletion and water in oil monitoring which features test documenting functions.

## Jean-Philippe Roman

Jean Philippe Roman is Technical Director of TOTAL Lubmarine. This branch of the TOTAL group specializes in developing and supplying lubricants and greases to marine vessels.

“For more than 40 years, a relationship built on trust...”

### **CUSTOMERS' SATISFACTION IS THE PRIORITY:**

**The biggest companies, all over the world and in a variety of industries use the Geserco tests. Jean Philippe Roman explains why his company works with Geserco.**

Since the seventies, Total Lubmarine has established a very particular and privileged relationship with Geserco. The company's adaptability and ability to respond to our demands and needs has laid the foundations of a trustful partnership.

Our customers have challenging technical needs and it is important to provide them with reliable and effective tools. **Geserco has always fulfilled our expectations, creating oil analysis tools which are simple to use and give faithful results.**

We appreciate Geserco's adaptability, punctuality and availability. The technical standards and regulations which need to be met are more and more rigorous and it is important to be able to permanently adapt to them as well as to our customers' demands.

We always have new needs for new tools and Geserco assists us in this regard. For example, at the moment, we are jointly developing a new kit which will, for sure, be the best of the market.



“Give the ships' crews the possibility of a simple and reliable diagnostic tool anytime and anywhere.”



# REFERENCE LIST

## AEROSPACE

### FRANCE

AIRBUS SAS  
ATELIER INDUSTRIEL DE L'AERONAUTIQUE  
AVNIR ENGINEERING  
EMBRAER AVIATION INTERNATIONAL  
GOODRICH AEROSPACE EUROPE S.A.S.  
LIEBHERR-COMPONENTS COLMAR SAS

### GERMANY

AIRBUS SAS  
HYDRO-Systems KG

### UNITED KINGDOM

FIELD INTERNATIONAL LIMITED

## AGRI-INDUSTRY

### ANGOLA

NOCAL

### FRANCE

CHAUCER FOODS LYOPHILISATION

## INDEPENDANT PETROCHEMICAL ANALYSIS LABORATORIES

### CANADA

SGS Geochem CANADA Inc.

### FRANCE

DYNAE CLEMESSY  
FIVES MAINTENANCE  
FLUIDAP  
FLUIDAP NIMES  
FLUIDEXPERT CHAMPFORGUEIL  
FLUIDEXPERT VAULX EN VELIN  
I.E.S.P.M.  
INTERTEK OCA FRANCE  
NATIONAL STANDARD  
SGS OGC  
SGS OIL, GAS & CHEMICALS  
SGS TESTING & CONTROL SERVICES  
SGS VERNOLAB

### GERMANY

ISP SALZBERGEN GmbH & Co. KG

### GHANA

SGS LAB SERVICES GHANA LTD

### IVORY COAST

MAINTINDUS

### MALAYSIA

PETROTECHNICAL INSPECTION (M) Sdn B

### SENEGAL

FERMON LABO SENEGAL S.A.

### SPAIN

ASOCIACION BTC PARA LA INVESTIGACIÓ  
BILBAO TECHNOLOGY CENTRE  
INTERTEK  
NEURTEK Instruments  
SGS España

### TURKEY

SGS-Supervise Gozetme Etud Kontrol

## AUTOMOTIVE

### ALGERIA

RENAULT ALGERIE PRODUCTION

### ARGENTINA

RENAULT ARGENTINA - FSI / 36897

### BRASIL

RENAULT DO BRESIL S.A.

### CHILE

RENAULT CORMECANICA

### COLOMBIA

SOFASA S.A. / 36897

### FRANCE

ARM-VI  
CUMMINS FILTRATION S.A.R.L.  
CUMMINS FRANCE S.A.  
EDHD SAS Hydro Maintenance  
ESP-VI  
EXOES  
FRANCAISE DE MECANIQUE DOUVRI  
GARANTIES FRANCE  
J. LE CORVAISIER SAS  
MAN Diesel & Turbo France SAS  
MECATLANTIC  
PSA PEUGEOT CITROEN  
REEL S.A.S.  
RENAULT CLEON  
RENAULT s.a.s. / 36897  
SOCIETE DES AUTOMOBILES ALPINE  
TECHMAN INDUSTRIE  
VOLVO POWERTRAIN FRANCE

### IRAN

IRAN KHODRO CO. (Ikco)

### MADAGASCAR

DESIGN AUTO

### MEXICO

LINAMAR POWERTRAIN MEXICO

### PEOPLE'S REPUBLIC OF CHINA

CHANGAN PSA AUTOMOBILES CO LTD  
SHENZHEN SAILING MECHANICAL EQUIP.  
HUDONG HEAVY MAPEOPLE'S REPUBLIC OF  
CHINARY  
SINOPACIFIC

### RUSSIA

RENAULT RUSSIA/36897

### SPAIN

RENAULT ESPANA S.A./36897

### ROMANIA

DACIA

## CEMENT PRODUCTION

### BENIN

SCB-LAFARGE

### CAMEROON

LES CIMENTERIES DU CAMEROON

## CHEMICAL PRODUCTION

### BELGIUM

INSTITUT DES RADIOELEMENTS

### FRANCE

BOREALIS CHIMIE  
CENTRE TECHNIQUE DE LA TEINTURE ET  
GEF INDUSTRIE  
LABORATOIRES CEETAL  
LAMBERTY ET FILS  
MEXEL INDUSTRIES  
NCH France SAS  
NITRATES ET INNOVATION  
PROMATEC SAS  
SRI FRANCE  
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### FRENCH POLYNESIA

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INEO DEFENSE  
SERMACOM BREST  
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### MOROCCO

NAVY

### UNITED KINGDOM

ROYAL NAVY

## EDUCATION

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CFA DE L'EDUCATION NATIONALE DU GAR  
CFAI  
DELTALAB / SMT  
ENSM  
GARAC  
IUT DE ROANNE  
IUT de TOULON  
IUT de TREMBLAY-EN-FRANCE  
IUT TOULOUSE LE MIRAIL  
L.E.G.T.P. RENE CASSIN  
LYCEE ALBERT EINSTEIN  
LYCEE AUGUSTIN THIERRY  
LYCEE CHARLES A. COULOMB  
LYCEE COLBERT  
LYCEE CONDORCET  
LYCEE D'ENSEIGNEMENT GENERAL ET  
LYCEE FULGENCE BIENVENUE  
LYCEE JEAN GUEHENNO  
LYCEE POLYVALENT CARNOT BERTIN  
LYCEE RAOUL FOLLEREAU  
LYCEE SAINT ELOI  
LYCEE TECH. ALEXIS DE TOCQUEVILLE  
LYCEE TECHNOLOGIQUE REGIONAL DHUODA  
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# REFERENCE LIST

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B.A.I. SA  
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BOLUDA NANTES-SAINT NAZAIRE  
BOURBON OFFSHORE  
BOURBON OFFSHORE SURF  
CAP BOURBON  
CHAMBON MARINE OFFSHORE  
CHANTIERS PIRIOU  
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## PEOPLE'S REPUBLIC OF CHINA

MAPLE LEAF SHIPPING  
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## ETHIOPIA

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## OIL & GAS

### ANGOLA

SONANGALP

### BOLIVIA

PRODIMS A

### CAMEROON

TOTAL CAMEROON S.A.

# REFERENCE LIST

## CHILE

TOTAL CHILE S.A.

## ECUADOR

LUBRICANTES INTERNACIONALES S.A.  
PDV ECUADOR S.A.

## FRANCE

AEMEA  
AXEL GREASE FRANCE  
BP FRANCE  
COGELUB  
COMPTOIR ROANNAIS DES LUBRIFIANTS  
CONDAT LUBRIFIANTS  
DIETSMANN TECHNOLOGIES SA  
DLBC  
E2SE  
ECO-RS  
ETE-FLOEX  
EXXON  
FUCHS OIL  
HOUGHTON SAS  
HYDEX - TRIPLE R FRANCE  
IGOL FRANCE  
MINERVA OIL  
MOTUL  
PEMM OIL  
SCHLUMBERGER  
SHELL FRANCE  
TOTAL LUBRIFIANTS  
TRADEBE  
TTA LUBRIFIANTS  
WOLF OIL CORPORATION FRANCE SA

## FRENCH POLYNESIA

TOTAL POLYNESIE

## GABON

OILTECH GABON

## GERMANY

TOTAL MINERALOL GmbH

## INDONESIA

PT. ARTHAMAS SEJAHTERA MULIA

## ITALY

DEPURROLL - ING. ZAMARA

## IVORY COAST

PETROCI

## KENYA

TOTAL KENYA

## MADAGASCAR

TOTAL MADAGASIKARA SA  
MALI  
BEN&CO  
TOTAL

## MOROCCO

A.L.M.E.(AL KHOUARIZMI LUBES MAINTENANCE)  
FORAMAG S.A.  
OILYBIA

## PAKISTAN

MAL Pakistan Limited

## PANAMA

DILUPA PANAMA, S.A.

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## PORTUGAL

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TOTAL ROMANIA S.A.

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ELECTRICITE DE MAYOTTE

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BROADCROWN LTD

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SNCF

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CTA

### CHAD

COTON TCHAD - SN

### DEMOCRATIC REPUBLIC OF CONGO

ANVIL MINING Limited  
SOCIETE MINIERE DE BAKWANGA

### FRANCE

ATH  
TERAMAT SAVOIE  
TRIALP

### MAURITANY

SNIM

### NEW CALEDONIA

ERAMET / SLN

### NIGER

AREVA - IMOURAREN SA  
COMINAK

### TANZANIA

GEITA GOLD MINE

### U.S.A

COMPAGNIE DES BAUXITES DE GUINEE

## PAPER PRODUCTION

### FRANCE

EMIN LEYDIER  
PAPETERIES DE CLAIREFONTAINE  
SEYFERT PAPER  
INTERNATIONAL PAPER

### IRELAND

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DRESSER RAND GUASCOR

### CANADA

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### DJIBOUTI

ELECTICITE DE DJIBOUTI

### FRANCE

ABB FRANCE  
AGGREKO  
BE ENERGY  
CEA  
CLEMESSY MOTORS  
EDF ARCHIPEL GUADELOUPE  
ELECTRICITE D'EMOSSON SA  
FACEO  
INTERNATIONAL ELECTRIC EXPORT  
MAINCO S.A.  
EDF

### FRENCH POLYNESIA

ELECTRICITE DE TAHITI - GDF SUEZ

### GUADELOUPE

CENTRALES DIESEL EXPORT SA

### GUYANE

EDF GUYANE

### HONDURAS

ENERSA

### MADAGASCAR

ENELEC MADAGASCAR  
JIRAMA  
ILE MAURICE  
CENTRAL ELECTRICITY BOARD

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# **SINGLE TEST KITS**

## Digital Precision Oil Tester – DPOT™

Water in Oil Analyzer for Oils, Fuels and Solvents

The new DPOT™ from GESERCO is the most advanced and innovative water in oil analyzer to be developed by the Number 1 Expert in rapid condition monitoring of oils in service.

DPOT™ is based on the "Aquatest" water in oil analysis method which is standardized by ISO<sup>(1)</sup>, AFNOR<sup>(2)</sup> and GFC<sup>(3)</sup> and which was continuously refined by GESERCO over the past 40 years.

DPOT™ from GESERCO offers a variety of technical breakthroughs for water in oil analysis:

- It can be used for any type of **oils, lubricating oils** and **fuel oils** (mineral, synthetic or bio-generated), solvents, alcohols, aromatic liquids, greases...
- The water in oil analysis result is **not sensitive to the additives** which can be present in the oils, even when the proportion is massive
- The digital analysis result is delivered in water volume or water mass within **90 seconds**<sup>(4)</sup>
- It offers 8 measuring ranges from **0 – 2000 ppm H<sub>2</sub>O** to **0 – 15 % H<sub>2</sub>O**
- It offers a very high measurement sensitivity down to **1 ppm H<sub>2</sub>O**
- It works with very small test samples down to **0.5 cc**
- It does **not require any hazardous chemicals** for transportation, nor flammable, nor corrosive, nor CMR
- Its memory can store up to **500 test results**, each being individually stamped and labeled
- Its **USB port** allows for downloading test results to the IT system and for upgrading the embedded firmware to the latest available version



DPOT™ is a very small (A4 footprint) and rugged instrument. It is extremely simple and quick to use, even when in the hands of an operator with **no specific chemistry expertise**. The multi lingual user interface gives step by step operating instructions, and the numerous embedded functions make it very easy to use.

(1) ISO 9114 :1997 standard

(2) NF T60-640 standard, June 2018

(3) GFC TR-40-A-14 method, December 2014

(4) Typical analysis time in Predictive Measuring Mode

## Metrological Specifications

MEASURING RANGES		SENSITIVITY	ACCURACY <sup>(1)</sup>	SAMPLE VOLUME
0-2000 PPM H <sub>2</sub> O	0 – 0.2 %H <sub>2</sub> O	< 1 PPM H <sub>2</sub> O	± 6 PPM H <sub>2</sub> O	30 CC
0 – 3 000 PPM H <sub>2</sub> O	0 – 0.3 %H <sub>2</sub> O	< 1 PPM H <sub>2</sub> O	± 9 PPM H <sub>2</sub> O	20 CC
0 – 7 000 PPM H <sub>2</sub> O	0 – 0.7 %H <sub>2</sub> O	< 1 PPM H <sub>2</sub> O	± 20 PPM H <sub>2</sub> O	10 CC
0 – 15 000 PPM H <sub>2</sub> O	0 – 1.5 %H <sub>2</sub> O	< 1 PPM H <sub>2</sub> O	± 42 PPM H <sub>2</sub> O	5 CC
0 – 25 000 PPM H <sub>2</sub> O	0 – 2.5 %H <sub>2</sub> O	< 1 PPM H <sub>2</sub> O	± 70 PPM H <sub>2</sub> O	3 CC
0 – 37 000 PPM H <sub>2</sub> O	0 – 3.7 %H <sub>2</sub> O	1 PPM H <sub>2</sub> O	± 0.01 %H <sub>2</sub> O	2 CC
0 – 75 000 PPM H <sub>2</sub> O	0 – 7.5 %H <sub>2</sub> O	2 PPM H <sub>2</sub> O	± 0.02 %H <sub>2</sub> O	1 CC
0 – 150 000 PPM H <sub>2</sub> O	0 – 15 %H <sub>2</sub> O	4 PPM H <sub>2</sub> O	± 0.04 %H <sub>2</sub> O	0.5 CC

- **Resolution:** 5 resolution levels from 1 ppm H<sub>2</sub>O to 1 %H<sub>2</sub>O
- **Engineering units:** %H<sub>2</sub>O volume, %H<sub>2</sub>O mass, ppmH<sub>2</sub>O volume, ppmH<sub>2</sub>O mass
  - **Test principle:** Aquatest
  - **Test reagents:** Reagent WT or Reagent WT/NH (2), solvent WT2 (2).
- **2 measuring modes:** (1) Direct mode for high accuracy test results  
(2) Predictive mode for fastest test results
- **Time to test result:** Down to 90 seconds in predictive mode
- **4 end of test modes:** (1) automatic end of test detection with user defined criterion  
(2) standardized test duration (15 minutes)  
(3) User defined test duration (up to 3 hours)  
(4) On operator command

## Metrological Specifications

- Large capacitive high resolution color touch screen
- User interface in French and English
- Step by step user instructions for test preparation and execution
- Built-in magnetic stirrer
- Automatic correction of solvent blank
- 12 test patterns (1 factory pattern and 11 user programmable patterns)
- Time/date stamping and user defined identification label for each test
- Graphics display of test evolution (curve)
- Memory for 500 test results
- USB interface to download test results to a computer and upgrade embedded firmware
- "Diagnostic" mode for leak detection and/or calibration of the sensor

## Product Code & Specification

CODE	DESCRIPTION
WT9026	DPO™ Water in oil analyzer including: 1 DPO™ water in oil analyzer, 1 power supply unit, 2 magnetic bars, 1 measuring block, 2 reaction flasks, 1 tweezers, 1 stylus, 1 tube of silicon and water free grease, 1 user manual.
PP9109	NON-HAZARDOUS REAGENTS PACK – 50 TESTS
PP9110	TRADITIONAL REAGENTS PACK – 50 TESTS

- Dimensions: 18 x 16 x 20 cm
- Weight: 5.2 kg
- Power supply: 100 – 240 Vac  
50/60 Hz

(1) 0.3% FS typical ; 0.5% FS maximum (includes zero drift, FS drift, linearity, hysteresis and reproducibility)

(2) Reagent WT/NH and reagent WT2 are not hazardous for transportation, nor flammable, nor corrosive, nor CMR.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## WaterTest™ Kit

### Determination of Water Content into Oils, Fuels and Solvents

*Method derived from the ISO9114:1997 standard*

The GESERCO WaterTest™ test kit allows for simple, fast and cost effective determination of the water content into:

- Mineral oils and petroleum distillates (engine oils, fuel oils, brake fluids, gearbox oils...)
- Synthetic oils and lubes
- Bio lubricants and bio fuels
- Vegetable oils
- Aromatic fluids
- Alcohols
- Solid solvent soluble products (greases...)

The GESERCO WaterTest™ test kit comes as a light and strong kit which can be used on site by any non-specialized operator.



#### Water Presence

The presence of water in lubricating oils, fuels oils, Diesel oils is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components and allows for microbial development...

#### Test Principle

Chemical test derived from the ISO9114:1997 standard: a reagent is added into the tested fluid. Traces of water present in the fluid will combine with the reagent and produce a volume of gas proportional to the water.

The pressure of the delivered gas is measured by the digital Rapid Oil Test Gauge which will display the result in %H<sub>2</sub>O or ppmH<sub>2</sub>O.

#### Testeur Numérique Rapide

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of water in oil within minutes, even when the oil is massively additived.

Its embedded memory capability allows fast and simple monitoring and documenting of the water content over time.

Local features include:

- Local display of test instructions
- Memory for 1000 tests
- Instant test result evaluation
- Excess water content alarm
- Time stamping of test results
- USB port for downloading results and upgrading firmware

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.

Simple to use soft keys.

Audible alarm for excess water in oil.

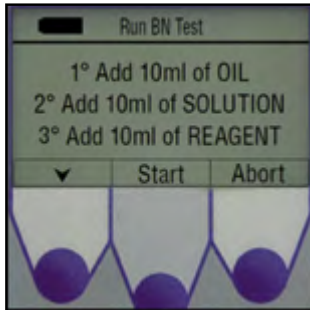
Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

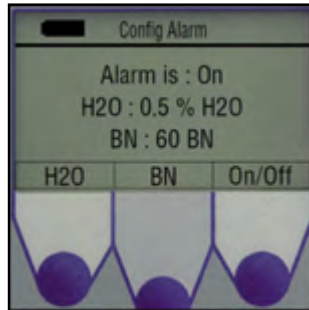




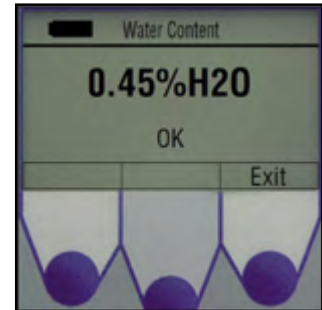
## Easy Oil Condition Monitoring



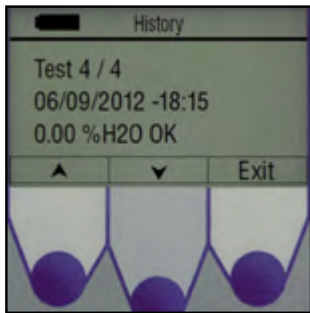
Step by step test instructions



User defined test alarms



Instant test result evaluation



Built-in memory for 1000 tests



USB port for downloading test results to a computer

## Product Code & Specifications

The GESERCO WaterTest™ kit is available in 2 versions to better cover any user application:

PRODUCT CODE	WT9028	WT9027
<b>RAPID OIL TEST GAUGE TYPE</b>	MPB	NTH
<b>PREFERRED APPLICATION*</b>	MOTOR & GEAR OIL	NEW, TURBINE, HYDRAULIC & INDUSTRIAL OIL
<b>RANGES</b>	0 – 1,5 %H2O 0 – 15 %H2O 0 – 15 000 PPMH2O	0 – 0,5 %H2O / 0 – 5 000 PPMH2O 0 – 2 %H2O / 0 – 20 000 PPMH2O 0 – 20 %H2O / 0 – 200 000 PPMH2O
<b>ACCURACY</b>	± 3% FS TYPICAL	± 0.6% FS TYPICAL
<b>RESOLUTION</b>	0.01%	0.001% / 10 PPMH2O
<b>TEST DURATION</b>	3 MINUTES	CUSTOM

(\* Non-exhaustive application list)

## Consumables

PRODUCT CODE	CONSUMABLES
PP9100*	SPARE PACK - 50 TESTS - WATER IN OIL
PP9102*	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE

\*Not regulated for transportation

The kit is housed in a strong and light aluminum case.  
Dimensions: 47cm x 42 cm x 13 cm  
Weight: 5 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## PreciWaterTest™ - UltraPreciWaterTest™

Water Content measurement – in Oils, Fuels & any non-volatile liquids

Conforming to ISO9114:1997, AFNOR NF-T60-640 and GFC TR-40-A-14 standards

The GESERCO UltraPreciWaterTest™ and PreciWaterTest™ apparatus allow for accurate and cost-effective measurement of the water content in any non-volatile liquids.

They are applicable to measuring water in:

- Mineral oils and petroleum distillates (engine oils, fuel oils, brake fluids, gearbox oils...), even when massively additived
- Synthetic oils and lubricants
- Bio lubricants and bio fuels
- Vegetable oils
- Aromatic fluids
- Alcohols
- Soluble solid products (greases...)

The water content measurement is simple and easy to perform within minutes. Test results are not biased by the presence of additives in the tested oils.



The GESERCO PreciWaterTest™ is the Reference Apparatus for water content measurement to ISO 9114:1997, GFC TR-40-A-14 and AFNOR NF-T60-640 standards.

### Water Presence

The presence of water in oils is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components and allows for microbial development...

### Test Principle

The apparatus uses the 'Aquatest' measurement principle whereby a chemical reagent is added to the tested sample and will convert any trace of water in the sample into gas.

The volume of gas generated by the reaction is precisely proportional to the water contained in the sample and is measured by means of a burette which is directly graduated in %H<sub>2</sub>O or in ppm H<sub>2</sub>O.

### Product Codes & Specifications

P/N	MODEL	DESIGN	REAGENT(1)	MAIN RANGE	EXTEND. RANGE(2)	ACCURACY
WT9004	ULTRAPRECI WATERTEST	FIELD CABINET	WT	0 – 0,09 %H <sub>2</sub> O	0 – 10 %H <sub>2</sub> O	± 5 PPM DE 0 À 0,02 %H <sub>2</sub> O ± 10 PPM DE 0,02 À 0,09 %H <sub>2</sub> O
WT9019			WT/NH			
WT9006	PRECI WATERTEST	FIELD CABINET	WT	0 – 0,7 %H <sub>2</sub> O	0 – 14 %H <sub>2</sub> O	± 12 PPM DE 0 À 0,05 %H <sub>2</sub> O ± 50 PPM DE 0,05 À 0,35 %H <sub>2</sub> O ± 100 PPM DE 0,35 À 0,7 %H <sub>2</sub> O
WT9017			WT/NH			
WT9005		LAB STAND	WT			

(1) **Reagent:** WT/NH = Non-hazardous for transportation. WT = traditional.

(2) **Extended range:** The measuring range is extended by varying the volume of the sample under test.

The apparatus is housed in a portable wooden varnished cabinet for field use or mounted on a test stand for laboratory use (PreciWaterTest™ only).

The kits include all accessories and reagents for performing and understanding 50 tests unless otherwise specified.

Please consult with GESERCO for ppm H<sub>2</sub>O versions.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## Chlorides / Salt Water Detection Kit

In Lubricating Oils and Fuels Oils

The GESERCO chlorides / salt water test kit allows for simple, quick and cost effective detection of the presence of salt water in lubricating and fuel oils.

When combined with the GESERCO WaterTest™ or PreciWaterTest™ test kits for water in oil, the chlorides / salt water test kit allows for determining the source of water contamination (condensation of ambient moisture or ingress from the cooling circuitry) and fixing the problem.

The test is simple and rapid, and the kit a detailed testing and interpretation guide. The kit is readily usable by any personnel, even non-specialized.



### Test Principle

The test uses a reacting method: a solution is added to the oil to be tested which will capture any possible chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence determining salt water presence.

A reference chart allows interpreting the reaction of the pad and determining the chloride content in g NaCl per litre.

### Specifications

- **Test Time:** ..... 10 minutes
- **Range:** ..... 0 to 5 g NaCl / litre
- **Accuracy:** ..... 0.25 g NaCl / litre
- **Oil sample required:** ..... 10ml

### Product Code

PRODUCT CODE	DESCRIPTION
RC9300	CHLORIDES / SALT WATER TEST KIT
RC9200	30 ADDITIONAL TEST PAPERS
RC9201	TEST SOLVENT, SOLUTION E, 500 ML

The kit includes all accessories and consumables for testing up to 30 samples.

Feel free to contact GESERCO for details

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## Bacteria Test Kit

### Bacteria, Fungi, Yeast and Moulds in Petroleum Products

The GESERCO bacteria test kit is designed to detect and measure the presence of aerobic bacteria, sulfate reducing anaerobic bacteria, molds, yeast and fungi into petroleum products at the place of storage or use of petroleum products.

The test is simple and rapid, and the kit includes detailed instructions for the person in charge of the petroleum product to take immediate curative action.

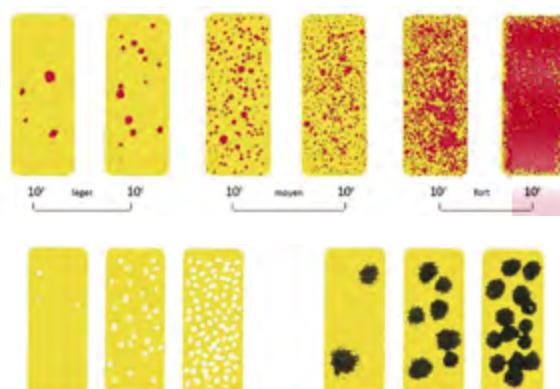


### Test Principle

The test is based on the dip slide principle: a dedicated sterile culture medium on a plastic carrier is dipped into the liquid to be tested. The culture is then incubated, allowing for microbial growth.

When the tested sample contains bacteria, yeast, moulds or fungi, they develop within a few hours on the culture medium.

The slides are gridded to make the evaluation of the contamination level easier.



### Product Codes and specifications

PRODUCT CODE	APPLICATION	SENSITIVITY	CONTENT	TIME TO TEST RESULT <sup>(1)</sup>
BA9001	WATER BASED FLUIDS INCLUDING METAL MACHINING FLUIDS	AEROBIC BACTERIA FUNGI, YEASTS, MOLDS	20 TESTS	16 HOURS
BA9002	WATER BASED FLUIDS INCLUDING METAL MACHINING FLUIDS	ANAEROBIC SULFATE REDUCING BACTERIA	18 TESTS	16 HOURS
BA9003	PETROLEUM DISTILLATES INCLUDING DIESEL OIL, KEROSENE, FUEL OIL	AEROBIC BACTERIA FUNGI, YEASTS, MOLDS	10 TESTS	16 HOURS
BA9100	INCUBATOR			

(1) (\*Test results within 16 hours when using the incubator)

All kits are delivered complete with user guide.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## Biocide TotalFuelWash

### Biocide for contaminated fuel oils

Petroleum products containing traces of water may become proper environment for the development of bacteria, yeasts and fungi.

The growth of such contaminants may cause numerous troubles, particularly in the case of Diesel oil:

- Development of insoluble products at the water / petroleum contact surface which may cause blockage of the fuel feeding line (filters, injectors, gauze);
- Appearance of metabolites which will generate emulsified water at the bottom of the fuel tank, making it unusable.

- Development of bacterial ulcers causing corrosion of the tank.

GESERCO's TotalFuelWash is an efficient biocide that dissolves in water, polar solvents and aliphatic solvents and will destroy quickly bacteria, fungi and yeasts that develop in petroleum products.

It has a large spectrum of application and does not impact the properties of the fuel oil or its additives, and it is safe for the fuel tank.

### Efficiency

PPM ACTIVE MATERIAL		
GRAM-POSITIVE BACTERIA	BACILLUS DUBTILIS	2
	STAPHYLOCOCCUS AUREUS	2
	STAPHYLOCOCCUS EPIDERMIS	2
	STREPTOCOCCUS PYOGENES	9
	STREPTOMYCES ALBUS	1

PPM ACTIVE MATERIAL		
FUNGI	ALTERNARIA DIANTHIOLA	3
	ASPERGILLUS NIGER	6
	CHAETOMIUM GLOBUSUM	9
	CLADOSPORIUM (HORMONOCONIS) RESINAE	5
	SALMONELLA TYPHOSA	5
	PENICILLIUM FUNICULOSUM	5

PPM ACTIVE MATERIAL		
GRAM-NEGATIVE BACTERIA	ALCALIGENES FAECALIS	2
	AZOTOBACTER VINELANDII	5
	ENTEROBACTER AEROGENES	5
	ESCHERICHIA COLI	5
	DESULFOVIBRIO DESULFURICANS	2,5
	PROTEUS VULGARIS	5
	PSEUDOMONAS AERUGINOSA	5
	PSEUDOMONAS FLUORESCENS	2
	PSEUDOMONAS OLEOVORANS	5
	SALMONELLA TYPHOSA	5
PPM ACTIVE MATERIAL		
YEASTS	RHODOTORULA RUBRA	2
	SACCHAROMYCES CEREVISIAE	2
	CANDIDA ALBICANS	5

### Product Codes

PRODUCT CODE	DESCRIPTION
BA9200	TOTALFUELWASH, 30 KG CAN
BA9201	TOTALFUELWASH, 200 KG DRUM
BA9001	AEROBIC BACTERIA TEST KIT
BA9002	SULFATE REDUCING BACTERIA TEST KIT
BA9003	AEROBIC BACTERIA IN PETROLEUM PRODUCT TEST KIT

### Specifications

Mixture containing 1.15% 5-chloro-2-methyl-4-isothiazolin-3-one and 0.35% 2-methyl-4-isothiazolin-3-one stabilized with magnesium salts and a solvent.

- **Appearance :** . . . . . Pale yellow liquid
- **pH of 1% dilution in water:** . . 4.7
- **Density:** . . . . . 1055 kg/m<sup>3</sup> @ 20°C
- **Cure time:** . . . . . 12 to 24 hours

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## BN Test Kit

### Portable Mini-Lab for testing the Base Number of Engine Oils

*Excellent correlation with ASTM-D2896 standard*

The GESERCO BN Test Kit is a true portable lubricant analysis mini laboratory.

The GESERCO BN Test Kit is designed for determining the alkaline reserve (BN) of engine oils and for monitoring the BN depletion rate over time at the operation site of the lubricated equipment.

The test is simple and rapid. The kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the engine and increasing its lifespan.

#### BN

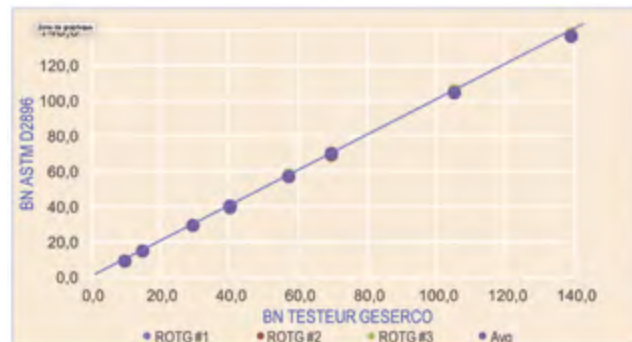
The alkaline reserve (Base Number – BN) formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulfur that could damage the engine.

In service, the BN of lubricating oils will fall from its original value until it reaches a minimum acceptable level (typically 50% of original value).

#### Test Principle

The test uses a reagent which produces a pressure proportional to the alkaline reserve (BN) of the oil. The pressure is measured by the digital Rapid Oil Test Gauge and the corresponding alkaline reserve (BN value) is displayed.

The GESERCO method shows excellent repeatability and correlation with the ASTM D2896 reference method:



#### Digital Rapid Oil Test Gauge

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of the Base Number (BN) within minutes.

Its embedded memory capability allows for fast and simple monitoring and documenting of the BN depletion rate over time.

Local features include:

- Measure jusque BN 140
- Measure up to BN140
- Local display of test instructions
- Memory for 1000 tests
- Instant test result evaluation
- Low BN alarm
- Time stamping of test results
- USB port for downloading test results and updating firmware

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.

Simple to use soft keys.

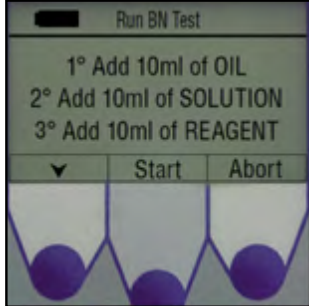
Audible alarm for low BN.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.



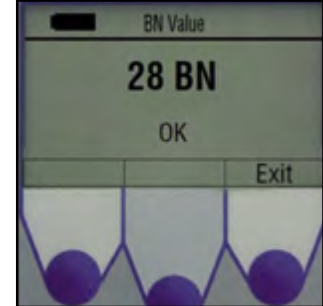
## Easy Oil Condition Monitoring



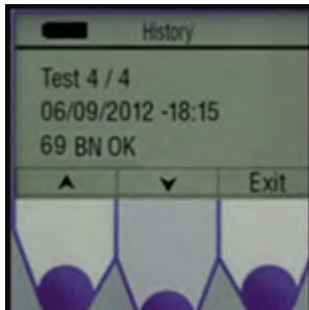
Step by step test instructions



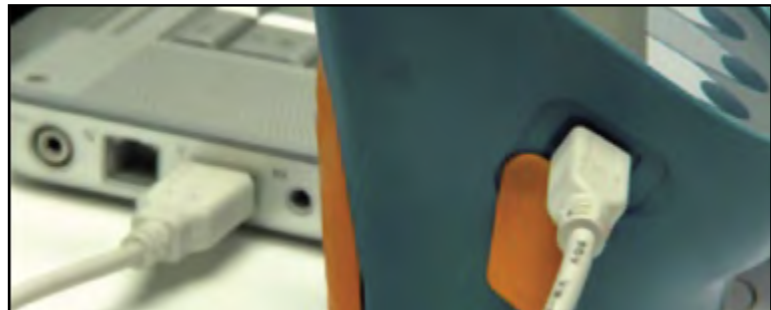
User defined test alarms



Instant test result evaluation



Built-in memory for 1000 tests



USB port for downloading test results and updating firmware

## Product Code & Specification

The GESERCO BN Test kit is available in 2 versions to better cover any user application:

	TEST KIT WITH PRESET ROTG	TEST KIT WITH CUSTOM ROTG
<b>PRODUCT CODE</b>	BN9005	BN9006
<b>RANGES</b>	BN 0 TO BN 30 BN 0 TO BN 100 BN 0 TO BN 140	5 CUSTOM RANGES BETWEEN BN 0 AND BN 100 TO BE CALIBRATED BY THE USER
<b>ACCURACY</b>	± 4%	± 1 BN
<b>RESOLUTION</b>	0,1 BN	0,1 BN
<b>TIME TO TEST RESULT</b>	3 MINUTES	3 MINUTES

## Consumables & Spare parts

PRODUCT CODE	DESCRIPTION
PP9101*	SPARE PACK - 50 BN TESTS
PP9102*	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE

\*Not regulated for transportation

The kit is housed in a strong and light aluminum case.  
Dimensions: 47cm x 42 cm x 13 cm  
Weight: 5 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## TAN Test Kit

Portable Mini-Lab for testing the Acid Number of Oils

Derived from ASTM D974 standard

The GESERCO TAN Test Kit is a true portable lubricant analysis mini laboratory.

The GESERCO TAN Test Kit is designed for determining the oil acid number (AN) at the operation site of the lubricated equipment.

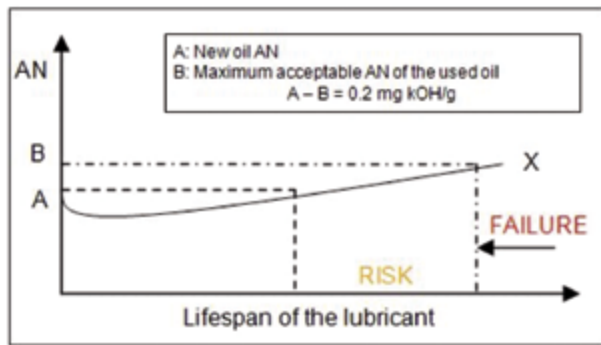
The test is simple and rapid and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the lubricated equipment and increasing its lifespan.



### TAN - Acidity

The GESERCO TAN Test Kit allows avoiding the effects of acid lubricants:

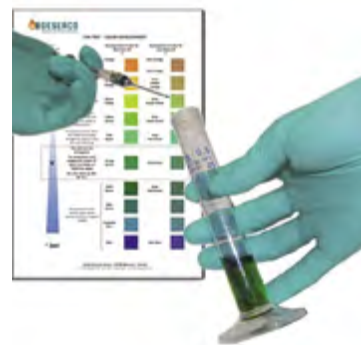
- Corroding of metallic components
- Gumming and clamping of lubricated parts
- Production of glaze and sludge in the circuitry



### Test Principle

The measurement method consists in adding various reagents to the oil in order to induce a change of color.

The volume of reagent required for changing the color allows calculating the AN (Acid Number) value in mg KOH/g.



### Product Code & Specifications

PRODUCT CODE	APPLICATION	SENSITIVITY	TEST TIME
TA9001	CLEAR & BLACK OILS	0.05 mg KOH/g	15 MINUTES
PP9104	SPARE PACK – 50 TAN TESTS		

The kit is housed in a strong and light aluminum case.  
Dimensions: 47cm x 42 cm x 13 cm  
Weight: 7 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.



## Soot Test kit

### Monitoring Soot Content in Used Engine Oils

*Excellent correlation with CEC-L82-97 standard*

The GESERCO Soot Test Kit allows for fast, simple and accurate measurement of soot content (combustion residues or carbon matters) in used engine lubricating oils.

The high level of sensitivity and accuracy of the test kit makes it applicable to monitoring either the high soot contents which can be found in Diesel engine oils up to 15% soot, but also in the very low soot levels which can be found in gas powered engines.

The GESERCO Soot Test Kit is a strong and rugged tool which can be operated in the field by any personnel, expert or not.



#### Soot in Oil

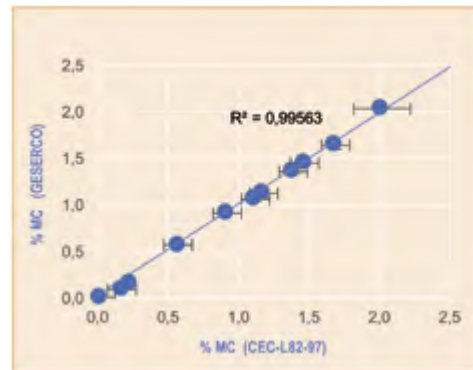
Engine combustion residues (soot) accumulate in the lubricating oil making it thicker and gradually degrading its lubricating properties.

Measuring the content level of carbon matters (soot) in the oil provides then a key indication of both the engine combustion quality and the oil condition, including its remaining ability to efficiently lubricate the motor.

#### Test Principle

The GESERCO Optical Oil Tester contained in the kit provides accurate digital measurement of carbon matters (soot) in oil content in less than 5 seconds through infra-red measurement...

It provides test results which are extremely well correlated with the CEC-L82-97 reference method.



#### Digital Optical Oil Tester

The GESERCO Rapid Optical Oil Tester has a last generation infra-red sensor which combines measurement reliability with high sensitivity even in the most demanding environment.

Standard embedded functions include:

- **Measurement of Carbon Matters contents (soot) within 5 seconds.**
- **Easy to read large dot matrix display**
- **Local display of operating instructions**
- **Memory capability for up to 1000 tests**
- **Instant test result evaluation**
- **Excess Soot alarm**
- **Automatic time-stamping of results**
- **USB port for downloading test results and updating firmware**

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.

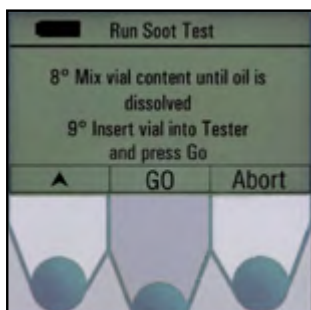
Simple to use soft keys.

Audible alarm for excess soot.

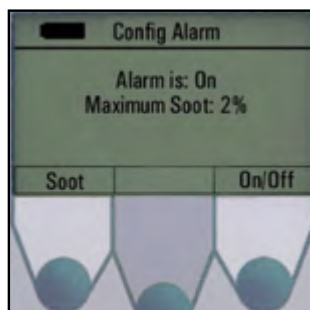
Last generation sensor gives fast & accurate test results.



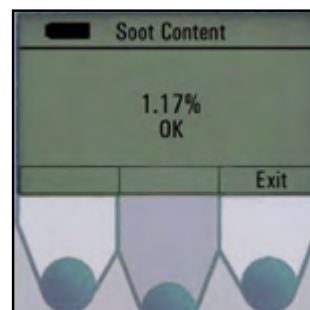
## Easy Oil Condition Monitoring



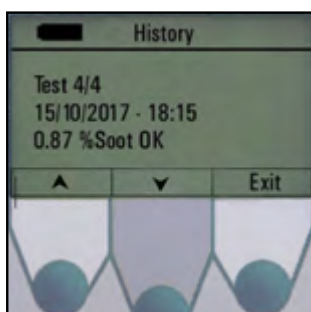
Step by step test instructions



User defined test alarms



Instant test result evaluation



Built-in memory for up to 1000 tests



USB port for downloading test results to a computer

## Product Code & Specification

The GESERCO Soot Test kit is available in two different versions in order to better comply with the application:

PRODUCT CODE	DESCRIPTION	RANGE #1	RANGE #2	RANGE #3
PH9005	SOOT TEST PROFESSIONAL KIT	0 – 15% SOOT	0 – 4.5% SOOT	0 – 2.5% SOOT
PH9006	SOOT TEST STANDARD KIT		0 – 4.5% SOOT	
PP9105	REPLENISHMENT PACK – 50 ADDITIONAL TESTS – SOOT CONTENT			

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

The kit is housed in a strong and light aluminum case. Dimensions: 47cm x 42 cm x 13 cm  
Weight: 7 kg

## A useful complement: the Blotter Spot Test Kit

The GESERCO Blotter Spot Test kit allows determining easily and quickly 4 important characteristics of engine oils in service:

- residual detergent capacity
- residual dispersion capacity
- presence of anti-freeze agent
- presence of fue



Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

# Spot Test kit for Used Engine Oils

Carbon Matters Contents  
Residual Detergent Capacity  
Residual Dispersant Capacity

The GESERCO Spot Test kit allows for determining easily and quickly 3 important characteristics of engine oils in service:

- the residual detergent capacity
- the residual dispersion capacity
- the carbon matters contents

The test is simple and quick and can be used in the field by any personnel, even non-specialized operator.



## Test Principle

The test uses a comparative method: a drop of oil to be tested is placed on a special filter paper.

Within a few minutes, the oil drop spreads and forms a spot which is representative of its carbon matters content, dispersion capacity and detergent capacity.

The spot is then compared to a reference chart for interpreting.

## Product Code

PRODUCT CODE	DESCRIPTION
ET9301	SPOT TEST KIT
ET4200	REPLENISHMENT PACK (25 TESTS)

The GESERCO spot test kits includes all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

## Specifications

- **Test Time:** 2 hours
- **Carbon matters content:** 6 grades from 0.2% to 2%
- **Detergent & Dispersant Capacity:** Good / Average / Poor

## Options

- **Spot test extended guide:** description and interpretation of 36 representative cases (Code ET9100)

Feel free to contact GESERCO for details

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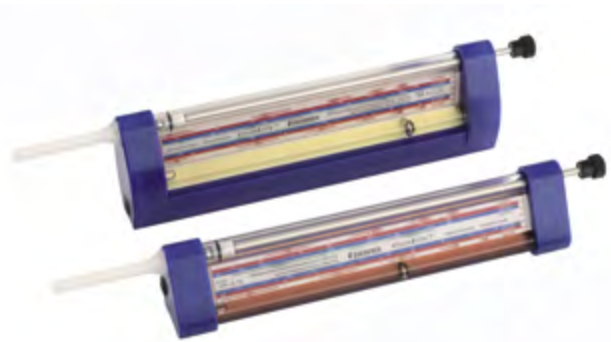
## Viscobile™ V3T – Viscobile™ V2T

Rapid Measurement of Lubricants Viscosity  
Measurement of the Dilution of Lubricating Oils by Fuel Oils

The new and improved Viscobile™ V3T and Viscobile™ V2T viscometers by GESERCO give simple, rapid, accurate and cost effective measurement of the viscosity of lubricating, industrial and hydraulic oils.

The viscosity measurement is direct and does not require using any stop watch nor thermometer, nor thermostatic bath nor complex calculations.

The GESERCO Viscobile™ V3T and Viscobile™ V2T viscometers are light and rugged instruments which can be operated in the field by any non-specialized personnel.



### Test Principle

Viscobile™ V3T and Viscobile™ V2T are falling ball viscometers whereby the viscosity of the tested sample is measured from the displacement of a calibrated ball in a calibrated tube.



Viscobile™ V3T and Viscobile™ V2T have 4 measuring scales which provide direct and instant reading of 4 test results:

- Viscosity in cSt @ 40°C
- Viscosity in cSt @ 20°C
- ISO grade
- SAE grade

### Testing Black Oils made Easy

The new and improved Viscobile™ have a built-in LED illuminator\* that lights up the test tubes making the measuring balls easy to view even when the tested sample is black and heavily loaded with pollutants.

(\* Option)



### Dilution Measurement

Viscobile™ V3T and Viscobile™ V2T allow for the measurement of the dilution level of the engine lubricating oils with fuel oils up to 14%.

### Other Functions

- Viscosity Index calculation
- Determination of the viscosity at 100 °C or any other reference temperature.

### Product Codes & Specifications

PRODUCT CODE	TYPE	APPLICATION	LED	CST @ 20°C	CST @ 40°C
VT9011	V2T	VI100 OILS	YES	30 – 100	10 – 400
VT9012			NO		
VT9013	V2T	VIE150 OILS	YES	20 – 500	10 – 200
VT9014			NO		
VT9009	V3T	VI100 & VIE150 OILS	YES	ALL SCALES ABOVE	
VT9010					
VT9211	STORAGE CABINET				

Feel free to contact GESERCO for details

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## Viscobille™ VCD – ViscoTest™

Comparing Viscosities  
Monitoring the Dilution of Lubricating Oil with Fuel Oil

The new and improved GESERCO ViscoTest™ and Viscobille™ VCD falling ball viscometer make the comparison of viscosities simpler, faster and cost effective.

Viscosity comparison is now direct and easy, without any requirement for using a temperature controlled bath, a thermometer, a stop watch or complex calculations.

A common application of the GESERCO Viscobille™ VCD falling ball viscometer and ViscoTest™ is to monitor the dilution level of motor lubricating oils with fuel oil.

GESERCO Viscobille™ VCD falling ball viscometer and ViscoTest™ are light and rugged, ready for field operation by any personnel, even if he is not a specialist, for monitoring the conformity of the tested liquid to specifications.

### Viscobille™ VCD



The GESERCO Viscobille™ VCD is a highly sensitive and accurate tool for cross comparing the viscosity of 1 tested liquid with the viscosities of 2 reference liquids which may set, for instance, the minimum and maximum acceptable viscosity for the tested liquid.

The instrument has a strong construction and its syringe tip makes it easy to collect the sample to be tested.

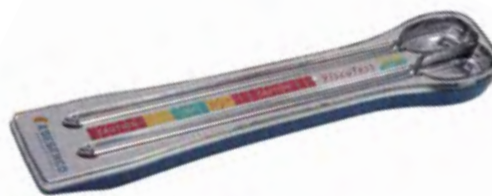
### Testing black oils made easy

The built-in\* LED illuminator of Viscobille™ VCD lights up the test tubes and makes the measuring balls easy to view even when testing black and heavily polluted oils.

The color scale facilitates balls position comparison.



### ViscoTest™



The GESERCO ViscoTest™ allows for the simple and rapid comparison of the viscosity of 2 liquids.

A typical application is to compare a sample of used oil against the same fresh oil and determine if the used oil viscosity is still within acceptable limits.

The color scale makes the comparison very easy.

The strong polyamide body of ViscoTest™ is very resistant to shocks and chemical etching. Its handy design makes it very easy to clean and maintain.



PRODUCT CODE	DESCRIPTION	LED
VT9015	VISCOBILLE™ VCD	YES
VT9016	VISCOBILLE™ VCD	NO
VT9004	VISCOTEST™	N/A
VT9211	STORAGE CABINET	

Feel free to contact GESERCO for details

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## Polluvision™ Test Kit

Portable Mini-Lab for analyzing Oil Contamination

Results to NAS1638, NF E48-655 and ISO4406 standards

The GESERCO POLLUVISION™ Test Kit allows for determination of the particles contamination of used oils.

It allows for:

- Particle counting
- Particle sizing
- Particle type determination (copper, iron, silica, organic particles, sludge, dust, fibers...)
- Particle classification to NAS1638 or NF E48-655
- Particle classification to ISO4406

The kit includes detailed testing and test interpretation guide so that the user can make immediate decisions for maintaining the lubricated equipment and increasing its lifespan.



### Polluvision™ Test Kit Content

#### FILTRATION:

- 1 ea. POLLUVISION™ oil filtering apparatus including a 100 cm<sup>3</sup> oil reservoir
- 15 filtering cartridges with Ø 37mm membrane, 0.8 µm porosity, not gridded & absorbent pad
- 50 filtering membranes, Ø 37mm, 0.8 µm porosity, gridded, including absorbent pad
- 1 off electric vacuum pump
- 1 off manual pumping assembly

#### CONTAMINATION ANALYSIS:

- Set of accessories for incident lighting
- Set of accessories for transmitted lighting
- Ø 37 / 8.0x magnifying glass
- 20x – 40x wide area binoculars, with incident and transmitted lighting
- Or
- 10x – 20x – 40x wide area binoculars with incident and transmitted light, 3.2 MP camera, USB port, image acquisition software

#### OTHER ACCESSORIES:

- Comprehensive operating and test interpretation guide
- Reference views to NAS 1638 & ISO 4406 for contamination grading
- Test result sheets and test filing sheets
- Dilution and cleaning solvent
- Cleaning and maintenance accessories

The kits include all accessories, consumables and operating manuals for testing up to 65 oil samples.

### Product Codes & Specifications

PRODUCT CODE	DESCRIPTION	FILTRATION KIT	OBSERVATION KIT
PO9009	Polluvision™ with binoculars	Housed in a rugged aluminum case for field operation 56x45x13 cm 9kg	Cardboard box 36x36x26 cm 5kg
PO9010			Aluminum case 42x38x18 cm 7kg
PO9011	Polluvision™ with digital camera	Aluminum case 56x45x13 cm 9kg	Cardboard box 6x36x26 cm 5kg
PP9106	Replenishment Pack – 100 tests		
PO9113	Set of accessories for direct sample filtering from pressurized circuitry		

### Options

#### • MEMBRANE / FILTER SETS

- 37mm dia. porosity 1.2 µm, gridded
- 37mm dia. porosity 1.2 µm, non gridded
- 37mm dia. porosity 3.0 µm, non gridded
- 37mm dia. porosity 5.0 µm, non gridded

#### • SAMPLING KITS & ACCESSORIES

Complete range of oil sampling kits, including pumps, flasks and tubes. As well as cleaning accessories.

Feel free to contact GESERCO for details

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## PO9004 – Particle Pollution Monitoring

Sampling and contamination Monitoring into Fuels, Lubricants and other Liquids

Conforms to SECLF / MILLI French Navy standard

The PO9004 kit allows for sampling turbine fuels, lubricants, water or any other liquid through filtering cartridges prior to gravimetric or colorimetric analysis of pollutant contents.

The stainless steel sampler assembly plugs into a quick release valve installed in the system line, which allows a measured quantity of liquid to pass through the cartridge filter. A syringe fitted with a valve serves as a pump to remove residual liquid from the cartridge.

For gravimetric analysis, optional match weighed cartridges eliminate filter pre-weighing before sampling.



### Kit Contents

- 12 x Ø 37mm filtering cartridges with 0.8 µm porosity membranes, non-gridded, and absorbent pad
- 1 complete sampler with valve, connector, and hose
- 1 remote sampler
- 1 stainless steel manual vacuum pump
- 1 quick release valve
- 1 set of accessories (PTFE tape, clamp, wrench, flexible tube, grounding line)

### Accessories & Consumables

- Test interpretation guide to ASTM D2276.
- Pack of 50 Ø 37mm filtering cartridges with 0.8 µm non-gridded membranes and absorbent pad.
- Pack of 50 Ø 37mm membranes, 0.8 µm\* porosity, non-gridded\* with absorbent pad.
- Pack of 50 Ø 37mm absorbent pads.

(\*Other porosities, gridded membranes and match weighed membranes available as an option)

### Product Code & Specifications

PRODUCT CODE	DESCRIPTION
PO9004	COMPLETE KIT

The kit includes accessories and consumables for 12 tests.

**Option:** Interpretation guide to ASTM D2276.

The kit is housed in a strong and light aluminum case.

Dimensions: 37cm x 13 cm x 23 cm

Weight: 4.5 kg

Feel free to contact GESERCO for details

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## CompaTest™ Kit

Kit for testing Marine Fuels Compatibility

*Simplified ASTM D4740 Method*

The GESERCO CompaTest™ kit is intended for testing the ability of two fuels to mix and for the mixture to remain stable.

Monitoring the ability of fuels to blend together will help eliminating risks of sludge deposits, injection system failure, combustion problems and costly engine breakdowns.

Performing the test is simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can take immediate decisions.



### Test Principle

The test consists in mixing in equal proportions the new fuel with the fuel under use and then place a drop of the mixture on a special test paper heated to 100 °C.

Comparing the spot formed by the fuel on the paper with a reference chart allows for evaluating the compatibility of both fuels one with the other.



### Product Code

PRODUCT CODE	DESCRIPTION
FI9001	COMPATEST™ KIT

The kit includes all accessories and consumables to perform 50 tests.

### Specifications

- **Test Time:** . . . . . 20 minutes typical
- **Dimensions:** . . . . . 20 x 22 x 23 cm
- **Weight:** . . . . . 2 kg
- **Power:** . . . . . 220 – 240 V, 0,8 A, 170 W



Feel free to contact GESERCO for details

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# Density Measurement

## Standardized Hydrometers

To NF T60.101 – Petroleum Products

The GESERCO hydrometers allow for rapid, simple and accurate measurement of the density of any petroleum products in g/ml.

They conform to NF T60101 and are MRA traceable.

The scale of the hydrometer is marked with the Standard it conforms to, calibration temperature, surface tension, individual number of the instrument, and serial number.

They feature a benchmark engraved on the stem in order to highlight any possible displacement of the scale.

They are calibrated at 15°C and designed for the density determination of fluids having low surface tension (16 to 35 mN/m) such as lubricating oils and fuel oils.

The short length makes the GESERCO hydrometers easy and convenient to use.



## Product Code & Specifications

The hydrometers conform to NF T60.101 standard.

PRODUCT CODE	RANGE (G/ML)	DIVISION	ACCURACY	CAL. TEMP	LENGTH
DE9001	0.600 – 0.650	0.001	± 0.001	15° C	190 MM
DE9018	0.650 – 0.700	0.001	± 0.001	15° C	190 MM
DE9019	0.700 – 0.750	0.001	± 0.001	15° C	190 MM
DE9020	0.750 – 0.800	0.001	± 0.001	15° C	190 MM
DE9002	0.800 – 0.850	0.001	± 0.001	15° C	190 MM
DE9003	0.850 – 0.900	0.001	± 0.001	15° C	190 MM
DE9004	0.900 – 0.950	0.001	± 0.001	15° C	190 MM
DE9005	0.950 – 1.000	0.001	± 0.001	15° C	190 MM
DE9006	1.000 – 1.050	0.001	± 0.001	15° C	190 MM
DE9007	1.050 – 1.100	0.001	± 0.001	15° C	190 MM

### Options :

Other models are available:

- Length 270 mm or 335 mm
- ISO, DIN, AH or ASTM conformity
- Thermo-hydrometers

Feel free to contact GESERCO for details

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# Color Comparator

## Trichromatic Comparator for Petroleum Products Color Grading

Conforming to ASTM D1500 standard

The trichromatic color comparator for petroleum products offers many benefits that facilitate its operation:

- Handy design
- Strong chemicals proof ABS housing
- Easy automatic timing of the tested sample illumination
- 'Day light' illumination generated by halogen source with filters
- Low voltage power supply
- Direct reading on reference disks
- Interchangeable reference disks
- Supplied with a white light source for color balancing
- Removable and easy to clean measurement chamber



### Test Principle

The trichromatic design of the color comparator facilitates the direct comparison of the sample color with two reference colors:



Viewing simultaneously the sample and two reference standards facilitates greatly the color grading.

### Product Code

PRODUCT CODE	DESCRIPTION
FI9000	COLOR COMPARATOR

### Specifications

- **Reference Standards:** . . . ASTM D1500 – ISO 2049 – IP 196 – DIN 51 578 – BS 5859 – JIS K2580 – NFT 60-140 – NBN T52-109 – FTMS791 102.
- **Range:** . . . . . 0.5 to 8.0
- **Resolution:** . . . . . 0.5
- **Comparison Standard:** . 2 glass disks with permanent color.
- **Light:** . . . . . C transmitted, 33 mm
- **Source:** . . . . . Halogen bulb, 12 V, 20 W
- **Power:** . . . . . 12 Vac
- **Dimension:** . . . . . 23 x 27 x 14 cm – 2.5 kg

Feel free to contact **GESERCO** for details

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## FlashTest™ Apparatus

### Manual Cleveland type Flash Point Tester

The GESERCO FlashTest™ apparatus is a manual Cleveland type open cup flash point tester.

It is intended for determining simply, quickly and cost effectively the flash point of any petroleum products, excluding fuel oils, from 79 °C to 400 °C.

The flash point determination conforms to the ASTM D92, IP 36 and ISO 2592 standards.

The apparatus also allows for determining the fire point.

The test is simple and rapid, and the apparatus is delivered with detailed instructions.



#### Test Principle

The test cup is filled up with a defined volume of sample to be tested.

The temperature of the test sample is first rapidly increased, then slowly and at constant rate as the flash point is neared.

At specific temperature intervals a small test flame is passed across the cup.

The lowest temperature at which application of the test flame ignites the vapours above the surface of the liquid is taken as the flash point.

To determine the fire point, the test is continued until the application of the test flame causes the sample under test to ignite and burn for at least 5 seconds.

#### Main Characteristics

- Electric heater
- Manual heating slope regulation
- Manual temperature reading
- Manual pilot flame

#### Product Code & Specifications

PRODUCT CODE	DESCRIPTION
FP9001	FLASHTEST™ APPARATUS

Dimensions: 35 cm x 25 cm x 40 cm

Weight: 10 kg

- **Temperature:** ..... 79 to 400°C
- **Repeatability:** ..... 8°C
- **Reproducibility:** ..... 15°C
- **Supply Voltage:** ..... 230V 50/60Hz
- **Power:** ..... 1000W

Feel free to contact GESERCO for details

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## H<sub>2</sub>S Test Kit

Rapid test Kit to determine the presence of sulfur in Petroleum Products

The GESERCO H<sub>2</sub>S test kit allows for the rapid detection of sulfur presence in petroleum products (fuels, gasoline, distillates...)

The test is very simple and easy to perform and the kit includes all accessories required to run it.



### Test Principle

The test uses special reactive paper which is sensitive to H<sub>2</sub>S traces.

Any trace of H<sub>2</sub>S will induce a change in color of the paper from brown / grey to dark brown / black. The intensity and surface of the color change depends on the quantity of H<sub>2</sub>S.

- If there is no color change, the test result is negative.
- If some color change is noticed, the test result is positive and the magnitude of the reaction can be specified.

### Product Code

PRODUCT CODE	DESCRIPTION
FI9003	H <sub>2</sub> S COMPLETE KIT

The kit includes all accessories and consumables for approximately 400 tests.

### Specification

- **Application:** ..... Diesel – Kerosene  
– Heavy Fuel –  
Petroleum Distillates
- **Sensitivity:** ..... H<sub>2</sub>S
- **Test Time:** ..... 10 minutes
- **Result:** ..... Negative / Light  
Positive / Strong  
Positive.
- **Sample required :** ..... 1 liter

Feel free to contact GESERCO for details

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# MULTIPLE TESTS KITS

## LubTest Professional™ Test Kit

Portable Mini-Lab for testing Diesel Engines Lubricants

The GESERCO LubTest Professional™ Test Kit is a true portable lubricant analysis mini laboratory.

The LubTest Professional™ kit is a stand-alone solution designed for monitoring seven main characteristics of the lubricant on the Diesel Engine operation site:

- Water content
- Alkaline reserve (BN)
- Viscosity
- Sea water presence
- Carbon Matters content
- Residual detergent
- Dispersant capacity

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the Diesel engine and increasing its lifespan.



### Water Content

The presence of water in oil is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components, and allows for microbial development...

### Alkaline Reserve (BN)

The alkaline reserve (Base Number – BN) formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulfur that could damage the engine.

In service, the BN of lubricating oils will fall from its original value until it reaches a minimum acceptable level (typically 50% of original value)

### Rapid Oil Test Gauge – Water Presence & Alkaline Reserve (BN)

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water and low BN.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of water in oil within minutes, even when the oil is massively acidified.

It provides accurate digital measurement of the remaining oil alkaline reserve (BN) within minutes.

Its embedded memory capability allows for fast and simple monitoring of the BN depletion rate over time.

	WATER IN OIL	BN
GAMMES	0 – 1,5 %H <sub>2</sub> O	5 RANGES TO BE CUSTOMIZED
PRÉCISION	± 0,05% H <sub>2</sub> O	±4% OF NEW OIL BN
RÉSOLUTION	0,05% H <sub>2</sub> O	1 BN
DURÉE DU TEST	3 MINUTES	
BATTERIE	2 YEARS (USER REPLACEABLE BATTERY)	
MÉMOIRE	1000 TESTS (MEASURED DATA, TEST EVALUATION, DATE & TIME)	
PORT PC	MINI USB PORT	

## Viscosity



- **Test Principle:** Go / No Go
- **3 visual detection levels:** Red: Alarm / Orange: Average / Green: Satisfying.

This test uses a ViscoTest viscosity comparator which allows comparing the viscosity of a used oil sample with the viscosity of the same oil when fresh.

The strong polyamide body of ViscoTest™ is very resistant to shocks and chemical etching. Its handy design makes it very easy to clean and maintain

- **Test time:** ..... 2 minutes
- **Oil sample required:** ..... 5 ml

## Sea Water Detection



- **Range:** ..... 0 to 5 g NaCl / litre
- **Accuracy:** ..... 0,25 g NaCl / litre

This test uses a reacting method: a solution is added to the oil to be tested which will capture any possible chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

A reference chart allows interpreting the reaction of the pad and determining the chloride content in g NaCl per litre.

- **Test time:** ..... 10 min. (+1h unattended)
- **Oil sample required:** . 10 ml

## Carbon Matters Content – Dispersant and Detergent Capacity.



- **Reading:** ..... Excellent / Good / Bad
- **Concentration :** ..... 0,2% to 2%

This test uses a comparative method: a drop of oil to be tested is poured on a special filter paper on which it spreads and forms a spot. The spot is compared to a reference chart for interpreting.

- **Test time:** ..... 1 h
- **Oil sample required:** . 10 ml

## Product Code & Specification

In order to better fulfill the specificities of any user application, the GESERCO LubTest Professional™ test kit is either available for marine application or field application (LubTest Professional™ mini).

CODE	DESCRIPTION
MT9084	LUBTEST PROFESSIONAL™
MT9092	LUBTEST PROFESSIONAL™ MINI*
PP9102*	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE
PP9103*	SPARE PACK FOR WATER & BN TEST – 50 TESTS
ET9200*	PACKET OF 25 QUICK SPOT TEST PAPERS

The kit is housed in a strong and light aluminum case. Internal foam to secure, protect accessories. Dimensions: 54 x 43 x 16 cm Weight: 10 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

(\*Sea water Detection 30 tests / Viscosity: unlimited)

(\*LubTest Professional™ Mini: Sea water detection not included)

\*LubTest Professional™ does not include any hazardous chemical chemicals regulated for transportation, nor flammable, nor corrosive, nor CMR.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## CM1 TEST KIT

### Portable Mini-Lab for testing Lubricating Oils

The GESERCO CM1 TEST KIT is a true portable lubricating oil analysis mini laboratory.

The CM1 kit is designed for monitoring eight main characteristics of the lubricating oil on the machinery operation site:

- Water content
- Alkaline reserve (BN)
- Viscosity & Dilution
- Sea water presence\*
- Carbon Matters content
- Residual detergent capacity
- Residual dispersant capacity

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the Diesel engine and increasing its lifespan.

(\* option)



### Water Content

The presence of water in oil is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components, and allows for microbial development...

### Alkaline Reserve (BN)

The alkaline reserve (Base Number – BN) formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulfur that could damage the engine.

In service, the BN of lubricating oils will fall from its original value until it reaches a minimum acceptable level (typically 50% of original value).

### Rapid Oil Test Gauge for Water Presence & Alkaline Reserve (BN)

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water and low BN.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of water in oil within minutes, even when the oil is massively acidified.

It provides accurate digital measurement of the remaining oil alkaline reserve (BN) within minutes.

Its embedded memory capability allows for fast and simple monitoring of the BN depletion rate over time.

	WATER IN OIL	BN
<b>RANGES</b>	0 – 0,5 %H <sub>2</sub> O 0 – 2 %H <sub>2</sub> O 0 – 20 %H <sub>2</sub> O	5 CUSTOM RANGES FROM 0 TO 100 BN
<b>ACCURACY</b>	± 3% FS TYPICAL	±1 BN
<b>TEST DURATION</b>	3 MINUTES	
<b>BATTERY LIFE</b>	2 YEARS (USER REPLACEABLE BATTERY)	
<b>MEMORY</b>	1000 TESTS (MEASURED DATA, TEST EVALUATION, DATE & TIME)	
<b>COMS</b>	MINI USB PORT	

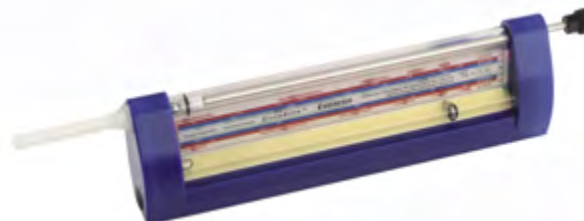


## Viscosity & Dilution

The CM1 kit includes a VISCOBILLE™ V3T falling ball viscometer with LED illumination which is applicable to monograde and multi-grade oils with a viscosity index (VI) of 100 or 150.

VISCOBILLE™ V3T does not require using any stop watch, thermometer or thermostatic bath for measuring instantly and directly:

- **Viscosity of VI100 oils:** from 10 to 400 cSt @ 40 °C  
from 30 to 1000 cSt @ 20 °C
- **Viscosity of VI150 oils:** from 10 to 200 cSt @ 40 °C  
from 30 to 500 cSt @ 20 °C



- **SAE grade**
- **ISO grade**
- **LDilution of the oil by fuel** from 0 to 14% dilution

## Sea Water Detection\*



- **Range:** ..... 0 to 5 g NaCl / litre
- **Accuracy:** ..... 0,25 g NaCl / litre

This test uses a reacting method: a solution is added to the oil to be tested which will capture any chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

A reference chart allows interpreting the reaction of the pad and determining the chloride content in g NaCl per litre.

- **Test time:** ..... 10 min. (+1h unattended)
- **Oil sample required:** . 10 ml

## Dispersant & Detergent Capacity



This test uses a comparative method: a drop of oil to be tested is poured on a special filter paper on which it spreads and forms a spot. The spot is compared to a reference chart for interpreting.

- **Reading:** ..... Excellent / Good / Bad
- **Carbon:** ..... 0.2% to 2%
- **Test time:** ..... 1 h
- **Oil sample required:** .... 10 ml

## Carbon Matters Content



This Test uses the new GESERCO Rapid Optical Tester which allows measuring the level of carbon matters and the other insoluble matters contained in the oil sample within less than 5 seconds.

- **Concentration:** .. 0 to 4.5%
- **Test time:** ..... 2 minutes
- **Sensitivity:** ..... < 0.1%
- **Memory:** ..... 1000 tests (measured data, test evaluation, date & time)

## Product Code & Specification

CODE	DESCRIPTION
MT9073	COMPLETE CM1 TEST KIT
RC9300*	SEA WATER TEST OPTION – 30 TESTS
PP9102	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE
PP9103*	SPARE PACK FOR WATER & BN TEST – 50 TESTS
PP9105*	SPARE PACK FOR SOOT TEST – 50 TESTS

(\*Non regulated for transportation)

The kit is housed in a strong and light aluminum case. Internal foam to secure, protect accessories.

Dimensions: 54 x 43 x 16 cm Weight: 10 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

(\*Sea water Detection 30 tests / Viscosity & Dilution: unlimited)

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## CLM TEST KIT

### Portable Mini-Lab for testing Lubricating Oils

The GESERCO CLM TEST KIT is a true portable lubricating oil analysis mini laboratory.

The CLM kit is designed for monitoring eight main characteristics of the lubricating oil on the machinery operation site:

- Water content
- Alkaline reserve (BN)
- Viscosity & Dilution
- Sea water presence\*
- Carbon Matters content
- Residual detergent capacity
- Residual dispersant capacity

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the machinery and increasing its lifespan.

(\* option)



### Water Content

The presence of water in oil is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components, and allows for microbial development...

### Alkaline Reserve (BN)

The alkaline reserve (Base Number – BN) formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulfur that could damage the engine.

In service, the BN of lubricating oils will fall from its original value until it reaches a minimum acceptable level (typically 50% of original value).

### Rapid Oil Test Gauge for Water Presence & Alkaline Reserve (BN)

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water and low BN.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of water in oil within minutes, even when the oil is massively acidified. It provides accurate digital measurement of the remaining oil alkaline reserve (BN) within minutes. Its embedded memory capability allows for fast and simple monitoring of the BN depletion rate over time.

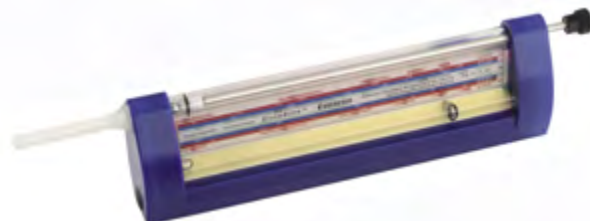
	WATER IN OIL	BN
<b>RANGES</b>	0 – 0,5 %H <sub>2</sub> O 0 – 2 %H <sub>2</sub> O 0 – 20 %H <sub>2</sub> O	5 GAMMES PERSONNALISABLES DE 0 À 100 BN
<b>ACCURACY</b>	± 0.6% FS TYP.	±1 BN
<b>TEST DURATION</b>	CUSTOM	3 MINUTES
<b>BATTERY LIFE</b>	2 YEARS (USER REPLACEABLE BATTERY)	
<b>MEMORY</b>	1000 TESTS (MEASURED DATA, TEST EVALUATION, DATE & TIME)	
<b>COMS</b>	MINI USB PORT	

## Viscosity & Dilution

The CLM kit includes a VISCOBILLE™ V3T falling ball viscometer with LED illumination which is applicable to monograde and multi-grade oils with a viscosity index (VI) of 100 or 150.

VISCOBILLE™ V3T does not require using any stop watch, thermometer or thermostatic bath for measuring instantly and directly:

- **Viscosity of VI100 oils:** from 10 to 400 cSt @ 40 °C  
from 30 to 1000 cSt @ 20 °C
- **Viscosity of VI150 oils:** from 10 to 200 cSt @ 40 °C  
from 30 to 500 cSt @ 20 °C



- **SAE grade**
- **ISO grade**
- **Dilution of the oil by fuel:** from 0 to 14% dilution

## Sea Water Detection\*



- **Range:** ..... 0 to 5 g NaCl / litre
- **Accuracy:** ..... 0.25 g NaCl / litre

This test uses a reacting method: a solution is added to the oil to be tested which will capture any chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

A reference chart allows interpreting the reaction of the pad and determining the chloride content in g NaCl per litre.

- **Test time:** ..... 10 min. (+1h unattended)
- **Oil sample required:** . 10 ml

## Dispersant & Detergent Capacity



This test uses a comparative method: a drop of oil to be tested is poured on a special filter paper on which it spreads and forms a spot. The spot is compared to a reference chart for interpreting.

- **Reading:** ..... Excellent / Good / Bad
- **Carbon:** ..... 0.2% to 2%
- **Test time:** ..... 1 h
- **Oil sample required:** .... 10 ml

## Carbon Matters Content



This Test uses the new GESERCO Rapid Optical Tester which allows measuring the level of carbon matters and the other insoluble matters contained in the oil sample within less than 5 seconds.

- **Concentration:** .. 0 to 4.5%
- **Test time:** ..... 2 minutes
- **Sensitivity:** ..... < 0.1%
- **Memory:** ..... 1000 tests (measured data, test evaluation, date & time)

## Product Code & Specification

CODE	DESCRIPTION
MT9079	COMPLETE CLM TEST KIT
RC9300*	SEA WATER TEST OPTION – 30 TESTS
PP9102	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE
PP9103*	SPARE PACK FOR WATER & BN TEST – 50 TESTS
PP9105*	SPARE PACK FOR SOOT TEST – 50 TESTS

(\*Non regulated for transportation)

The kit is housed in a strong and light aluminum case. Internal foam to secure, protect accessories.

Dimensions: 54 x 43 x 16 cm

Weight: 10 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

(\*Sea water Detection 30 tests / Viscosity & Dilution: unlimited)

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## CEVM TEST KIT

### Portable Mini-Lab for testing Motor Lubricants

The GESERCO CEVM TEST KIT is a true portable lubricant analysis mini laboratory.

The CEVM is designed for monitoring eight main characteristics of the lubricant on the Diesel engine operation site:

- Water content
- Viscosity
- Dilution
- Carbon Matters content
- Residual detergent capacity
- Residual dispersant capacity
- Sea water presence\*
- Alkaline reserve (BN)\*
- Density\*
- Temperature\*

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the engine and increasing its lifespan.

(\* option)



#### Water Content

The presence of water in oil is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components, and allows for microbial development...

#### Alkaline Reserve (BN)\*

The alkaline reserve (Base Number – BN) formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulfur that could damage the engine.

In service, the BN of lubricating oils will fall from its original value until it reaches a minimum acceptable level (typically 50% of original value).

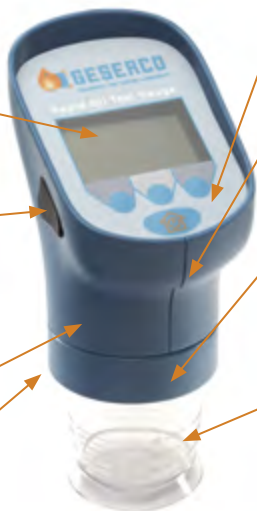
#### Rapid Oil Test Gauge for Water Presence & Alkaline Reserve (BN)\*

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water and low BN.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

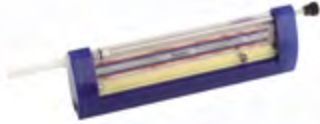
GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of water in oil within minutes, even when the oil is massively acidified.

It provides accurate digital measurement of the remaining oil alkaline reserve (BN) within minutes.

Its embedded memory capability allows for fast and simple monitoring of the BN depletion rate over time.

	WATER IN OIL	BN*
<b>RANGES</b>	0 – 1,5 %H <sub>2</sub> O 0 – 15 %H <sub>2</sub> O 0 – 15000 PPM	5 CUSTOM RANGES FROM 0 TO 100 BN
<b>ACCURACY</b>	± 3% FS TYPICAL	±1 BN
<b>TEST DURATION</b>	3 MINUTES	
<b>BATTERY LIFE</b>	2 YEARS (USER REPLACEABLE BATTERY)	
<b>MEMORY</b>	1000 TESTS (MEASURED DATA, TEST EVALUATION, DATE & TIME)	
<b>COMS</b>	MINI USB PORT	

## Viscosity & Dilution



The CEVM kit includes a VISCIBILLETM V3T falling ball viscometer with LED illumination which is applicable to monograde and multi-grade oils with a viscosity index (VI) of 100 or 150.

VISCIBILLETM V3T does not require using any stop watch, thermometer or thermostatic bath for measuring instantly and directly:

- **Viscosity of VI100 oils:**
  - From 10 to 400 cSt @ 40 °C
  - From 30 to 1000 cSt @ 20 °C
- **Viscosity of VI150 oils:**
  - From 10 to 200 cSt @ 40 °C
  - From 30 to 500 cSt @ 20 °C
- **SAE Grade**
- **ISO Grade**
- **Dilution to: 14%**

## Dispersant & Detergent Capacity



This test uses a comparative method: a drop of oil to be tested is poured on a special filter paper on which it spreads and forms a spot. The spot is compared to a reference chart for interpreting.

- **Reading:** . . . . . Excellent / Good / Bad
- **Carbon:** . . . . . 0.2% to 2%
- **Test time:** . . . . . 1 h
- **Oil sample required:** . . . . 10 ml

## Density\*

The measurement of density is performed with 4 precision hydrometers standardized for petroleum products:

- **0,850 to 0,900 kg/m<sup>3</sup>**
- **0,950 to 1,000 kg/m<sup>3</sup>**
- **0,900 to 0,950 kg/m<sup>3</sup>**
- **1,000 to 1,050 kg/m<sup>3</sup>**

## Carbon Matters Content



This Test uses the new GESERCO Rapid Optical Tester which allows measuring the level of carbon matters and the other insoluble matters contained in the oil sample within less than 5 seconds.

- **Concentration:** . . . 0 to 4.5%
- **Test time:** . . . . . 2 minutes
- **Sensitivity:** . . . . . < 0.1%
- **Memory:** . . . . . 1000 tests (measured data, test evaluation, date & time)

## Sea Water Detection\*



This test uses a reacting method: a solution is added to the oil to be tested which will capture any chloride in the oil. A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

- **Range / Accuracy:** . . . . . 0 to 5 g NaCl / litre ± 0.25
- **Accuracy:** . . . . . 0.25 g NaCl / litre
- **Test time:** . . . . . 10 min. (+ 1 h unattended)
- **Oil sample required:** . . . . 10 ml

## Temperature\*

The measurement is performed with a standardized total immersion thermometer.

- **-30 to +270 °C**

## Product Code & Specification

CODE	DESCRIPTION
MT9080	COMPLETE CEVM TEST KIT
RC9300*	SEA WATER TEST OPTION – 30 TESTS
PP9102	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE
PP9103	SPARE PACK FOR WATER & BN TEST – 50 TESTS
PP9105	SPARE PACK FOR SPOT TEST – 50 TESTS

The kit is housed in a strong and light aluminum case. Internal foam to secure, protect accessories.

Dimensions: 54 x 43 x 16 cm

Weight: 8 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

(\*Sea water Detection 30 tests /Viscosity, Dilution, temperature & density: unlimited)

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## STM 1 Test Kit

**Dilution – Acidity – Pollution**

*Conforms to the STM 1 specification of the French Navy*

The STM1 kit is designed for monitoring three main characteristics of the lubricant on the Diesel engine operation site:

- Dilution of lube oil with fuel oil
- Acidity of the aqueous phase
- Pollution with carbon matters

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the Diesel engine and increasing its lifespan.

The tests conform to the French Navy STM1 specification.



### Dilution



The method consists in comparing the viscosity of the used oil with the viscosity of two reference oils of known dilution. Viscosity comparison is done instantly using a VCD falling ball viscometer.

- **Maximum acceptable Dilution:** . . . 5% typical
- **Sample required:** . . . . . 10 ml
- **Time to result:** . . . . . 3 minutes

### Pollution



This test uses a comparative method: a drop of oil to be tested is poured on a special filter paper on which it spreads and forms a spot. The spot is compared to a reference chart for interpreting.

- **Reading:** . . . . . Excellent / Good / Bad
- **Concentration :** . . . . . 0.2% to 2%
- **Sample required:** . . . . . 10 ml
- **Time to result :** . . . . . 1 hour typical

### Product Code & Specifications

PRODUCT CODE	DESCRIPTION
MT9047	STM 1 TEST KIT

The kit is housed in a strong and light aluminum case.  
Dimensions: 57 x 43 x 10 cm– Weight: 4,5 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 100 acidity and pollution tests.

The number of dilution tests is unlimited.

**Feel free to contact GESERCO for details**

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## CE™ Test Kit

### Portable Mini-Lab for testing Oils

The GESERCO CE™ Test Kit is a true portable oil analysis mini laboratory.

The GESERCO CE™ kit is a stand-alone solution designed for monitoring four main characteristics of the lubricant on the operation site:

- Water content
- Viscosity
- Dilution
- Sea water presence\*

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the lubricated equipment and increasing its lifespan.

(\* option)



### Water Presence

The presence of water in oils is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components and allows for microbial development...

### Digital Rapid Oil Test Gauge – Water Presence

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water in oil.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

To overcome the effects of water in the oil, the CE™ kit incorporates GESERCO's state of the art Rapid Oil Test Gauge which provides accurate digital measurement of water in oil within minutes, even when the oil is massively added.

The GESERCO Rapid Oil Test Gauge is a documenting tester which not only provides fast, simple, accurate results for Water in Oil but also makes it easier to monitor the condition of used oils over time.

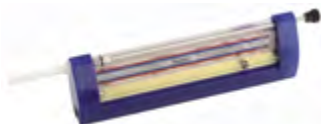
The measurement principle is based on the ISO9114:1997 standard.

- **Range:** . . . . . Up to 0 – 20 %H<sub>2</sub>O depending on version.
- **Accuracy:** . . . . . Up to 0.003% H<sub>2</sub>O depending on version.
- **Test time :** . . . . . 3 minutes or more depending on version
- **Battery life:** . . . . . 2 years (user replaceable battery).
- **Memory:** . . . . . 1000 tests including measured data, test evaluation, date and time
- **Coms:** . . . . . Mini USB port for downloading tests results and uploading firmware

## Viscosity & Dilution

This test is available in two version, depending on chosen kit:

- **Falling ball Viscometer VISCOBILLE™ V3T LED**



It allows instant and direct determination of the viscosity and dilution of mono-grade and multigrade oils, **VI100** (From 10 to 400 cSt @ 40°C / From 30 to 1000 cSt @ 20°C) et **VI150** (From 10 to 200 cSt @ 40°C / From 30 to 500 cSt @ 20 °C).

- **VISCOBILLE™ VCD LED**



The GESERCO Viscobile™ VCD is a highly sensitive and accurate tool for cross comparing the viscosity of 1 tested liquid with the viscosities of 2 reference liquids which may set, for instance, the minimum and maximum acceptable viscosity for the tested liquid.

## Sea Water Detection\*



This test uses a reacting method: a solution is added to the oil to be tested which will capture any chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

A reference chart allows for interpreting the reaction of the pad and determining the chloride content in g NaCl per litre.

- **Range:** . . . . . 0 to 5 g NaCl / liter
- **Sensitivity:** . . . . . 0.25 g NaCl / liter

- **Test time:** . . . . . 10 minutes (+ 1 hour unattended)
- **Oil sample required:** . . . 10 ml (\*Option)

## Product Code & Specifications

In order to better cover the requirements of any user application, the GESERCO CE test kit is available in 3 versions:

VERSION / CODE	CE-A KIT/MT9077	CE-B KIT /MT9085	CE-D KIT /MT9071
<b>RAPID OIL TEST GAUGE</b>	TYPE NTH	TYPE MBP	
<b>PREFERRED APPLICATION</b>	NEW OIL, INDUSTRIAL OIL, HYDRAULIC OIL, TURBINE OIL, DIESEL OIL, KEROSENE	ENGINE OIL, GEAR OIL	
<b>RANGE / ACCURACY</b>	0 TO 0,5% H2O / ± 0,003 % H2O 0 TO 2% H2O / ± 0,014 % H2O 0 TO 20% H2O / ± 0,12 % H2O	0 TO 1,5% H2O / ± 0,011 % H2O 0 TO 15% H2O / ± 0,12% 0 TO 15 000 PPM / ± 110 PPM	
<b>RESOLUTION</b>	0,001% H2O	0,01% H2O	
<b>TEST TIME</b>	UNDER OPERATOR CONTROL	3 MINUTES	
<b>VISCOSITY / DILUTION</b>	VISCOBILLE V3T LED	VISCOBILLE V3T LED	VISCOBILLE VCD LED

## Consumables

PRODUCT CODE	DESCRIPTION
<b>PP9100</b>	REPLENISHMENT PACK – 50 ADDITIONAL TESTS – WATER CONTENT
<b>PP9102</b>	RAPID OIL TEST GAUGE MAINTENANCE PACK
<b>RC9300</b>	REPLENISHMENT PACK – 30 ADDITIONAL TESTS – SEA WATER DETECTION

The kit is housed in a strong and light aluminum case.  
Internal foam to secure, protect accessories.  
Dimensions: 54 x 43 x 16 cm                      Weight: 6.5 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified. (\*Except sea water detection: 30 tests)

**Feel free to contact GESERCO for details**

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.



## LubTest Premium™ Test Kit

Portable Mini-Lab for testing Diesel Engines Lubricants

The GESERCO LubTest Premium™ Test Kit is a true portable lubricant analysis mini laboratory.

The LubTest Premium™ kit is a stand-alone solution designed for monitoring three main characteristics of the lubricant on the Diesel Engine operation site:

- Water content
- Viscosity
- Sea water detection

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the Diesel engine and increasing its lifespan.



### Water in oil

The presence of free water in lubricating oils, fuels oils, Diesel oils is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components and allows for microbial development...

### Digital Rapid Oil Test Gauge – Water Presence

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water in oil.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

To overcome the effects of water in the oil, the LubTest Premium™ kit incorporates GESERCO's state of the art Rapid Oil Test Gauge which provides accurate digital measurement of water in oil within minutes, even when the oil is massively added.

The GESERCO Rapid Oil Test Gauge is a documenting tester which not only provides fast, simple, accurate results for Water in Oil but also makes it easier to monitor the condition of used oils over time.

- **Range:** . . . . . 0 – 1.5% H<sub>2</sub>O
- **Accuracy:** . . . . . 0.05% H<sub>2</sub>O typical
- **Test time :** . . . . . 3 minutes
- **Battery life:** . . . . . 2 years (User replaceable battery)
- **Memory:** . . . . . 1000 tests including measured data, test evaluation, date and time
- **Coms:** . . . . . Mini USB port for downloading test results and updating firmware

## Viscosity



This test uses a ViscoTest™ viscosity comparator which allows comparing the viscosity of a used oil sample with the viscosity of the same oil when fresh.

The strong polyamide construction makes the ViscoTest™ very resistant to mechanical shocks and to chemical etching.

- **Test philosophy:** Go / No Go
- **3 visual detection levels:** Red: Alarm / Orange: Average / Green: Satisfying

- **Test time:** ..... 2 minutes
- **Oil sample required:** ..... 5 ml

## Sea Water Detection



This test uses a reacting method: a solution is added to the oil to be tested which will capture any possible chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

A reference chart allows interpreting the reaction of the pad and determining the chloride content in g NaCl per litre.

- **Range:** ..... 0 to 5 g NaCl / liter
- **Accuracy:** ..... 0.25 g NaCl / liter

- **Test time:** ..... 10 minutes (+ 1 hour unattended)
- **Oil sample required:** ... 10 ml

## Product Code & Specifications

PRODUCT CODE	DESCRIPTION
MT9087*	LUBTEST PREMIUM™
PP9100*	SPARE PACK – WATER CONTENT – 50 ADDITIONAL TESTS
RC9300*	SPARE PACK – SALT SEA WATER – 30 ADDITIONAL TESTS
PP9102	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE

The kit is housed in a strong and light aluminum case. Internal foam to secure, protect accessories.

Dimensions: 54 x 43 x 16 cm

Weight: 6.5 kg

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

(\*Except sea water detection: 30 tests)

\*LubTest Premium™ does not contain any hazardous chemicals regulated for transportation, nor flammable, nor corrosive, nor CMR.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## Water in Oil + BN Test Kit

Portable Mini-Lab for testing Motor Lubricants

The GESERCO Water in Oil + BN Test Kit is a true portable lubricant analysis mini laboratory.

The Water in Oil + BN kit is a stand-alone solution designed for monitoring up to five important characteristics of the lubricant on the Engine operation site:

- Water Content
- Alkaline reserve (BN)
- Sea water presence\*
- Viscosity\* & Dilution\*

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the Diesel engine and increasing its lifespan.

(\*Option)



### Water Content

The presence of water in oil is a major cause of machinery failure.

Water degrades the lubricating properties of the oil, narrows the lubricating film, builds up oxidation and acidity, minimizes the efficiency of additives, accelerates surface fatigue, corrodes components, and allows for microbial development...

### Alkaline Reserve (BN)

The alkaline reserve (Base Number – BN) formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulfur that could damage the engine.

In service, the BN of lubricating oils will fall from its original value until it reaches a minimum acceptable level (typically 50% of original value).

### Rapid Oil Test Gauge for Water Presence & Alkaline Reserve (BN)

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water and low BN.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of water in oil within minutes, even when the oil is massively added.

It provides accurate digital measurement of the remaining oil alkaline reserve (BN) within minutes.

Its embedded memory capability allows for fast and simple monitoring of the BN depletion rate over time.

	WATER IN OIL	BN
<b>RANGES</b>	0 – 1,5 %H <sub>2</sub> O 0 – 15 %H <sub>2</sub> O 0 – 15000 PPM	5 CUSTOM RANGES FROM 0 TO 100 BN
<b>ACCURACY</b>	± 3% FS TYPICAL	±1 BN
<b>TEST DURATION</b>	3 MINUTES	
<b>BATTERY LIFE</b>	2 YEARS (USER REPLACEABLE BATTERY)	
<b>MEMORY</b>	90 TESTS (MEASURED DATA, TEST EVALUATION, DATE & TIME)	
<b>COMS</b>	MINI USB PORT	

## Viscosity\*



- **Test philosophy:** Go / No Go
- **3 visual detection levels:** Red: Alarm / Orange: Average / Green: Satisfying.

This test uses a ViscoTest viscosity comparator which allows comparing the viscosity of a used oil sample with the viscosity of the same oil when fresh.

A typical application is to compare a sample of used oil against the same fresh oil and determine if the used oil viscosity is still within acceptable limits.

The Strong polyamide construction makes the ViscoTest™ very resistant to mechanical shocks and to chemical etching.

Its handy design makes it very easy to clean and maintain.

- **Test time:** ..... 2 minutes
- **Oil sample required:** ..... 5 ml

## Sea Water Detection\*



- **Range:** ..... 0 to 5 g NaCl / liter
- **Accuracy:** ..... 0.25 g NaCl / liter

This test uses a reacting method: a solution is added to the oil to be tested which will capture any possible chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

A reference chart allows interpreting the reaction of the pad and determining the chloride content in g NaCl per litre.

- **Test time:** ..... 10 minutes (+ 1 hour unattended)
- **Oil sample required:** ... 10 ml

(\*Option)

## Product Code & Specifications

PRODUCT CODE	DESCRIPTION
MT9081*	WATER IN OIL + BN KIT
RC9300*	SEA WATER TEST OPTION 30 TESTS
VT9004	VISCOTEST™
PP9103*	SPARE PACK FOR WATER & BN TEST 50 TESTS
PP9102*	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE

The kit is housed in a strong and light aluminum case.

Internal foam to secure and protect accessories.

Dimensions: 47 x 42 x 13 cm

Weight: 5 kg

The kit include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

(\*Except sea water detection: 30 tests / viscosity: unlimited)

\*Reagents are not regulated for transportation

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## TAN + BN Test Kit

Portable Mini-Lab for testing Motor Lubricants

Excellent correlation with ASTM-D2896 (BN) and ASTM D974 (AN) standards

The GESERCO TAN + BN Test Kit is a true portable lubricant analysis mini laboratory.

The TAN + BN Test Kit is a stand-alone solution designed for monitoring on the operation site two main characteristics of the lubricant:

- The lubricant acid index (TAN)
- The lubricant alkaline reserve (BN)

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the lubricated equipment and increasing its lifespan.



### Acid Index (TAN)

Acid lubricants are the source of numerous potential machinery failures through:

- Corroding of metallic components
- Gummy and clamping of lubricated parts
- Production of glaze and sludge in the circuitry

The GESERCO TAN test allows for precisely, simply and quickly monitoring and calculating the TAN value in mg KOH/g at the operation site of the lubricated equipment.



APPLICATION	CLEAR OILS BLACK OILS
RANGE	0 TO 6 TAN
SENSITIVITY	± 0.05 TAN
TIME TO TEST RESULT	15 MINUTES

### Alkaline Reserve (BN)

The alkaline reserve (Base Number – BN) formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulfur that could damage the engine. In service, the BN of the engine oil falls from its original value until it reaches a minimum acceptable level (typically 50% of original value).

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of the Base Number (BN) within minutes.



RANGES	5 CUSTOM RANGES BETWEEN BN 0 & BN 100
ACCURACY	± 1 BN
RESOLUTION	0.1 BN
TIME TO TEST RESULT	3 MINUTES

### Product Code & Specifications

PRODUCT CODE	DESCRIPTION
MT9082	TAN + BN KIT
PP9104	SPARE PACK FOR TAN TEST – 50 TESTS
PP9100	SPARE PACK FOR BN TEST – 50 TESTS
PP9102	MAINTENANCE PACK FOR RAPID OIL TEST GAUGE

The kit is housed in a strong and light aluminum case. Internal foam to secure and protect accessories.

Dimensions: 53 x 43 x 16 cm / Weight: 7.5 kg

The kit include all accessories, reagents and operating manuals for performing and understanding 50 tests.

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## EVI Test Combination

Mini-Laboratory for testing Hydraulic, Turbine and Industrial Oils

The GESERCO EVI Test Combination is a true portable lubricants analysis mini laboratory.

The EVI Test Combination is designed for monitoring five main characteristics of hydraulic fluids, turbine oils and industrial oils:

- Particles content, including gauging / sizing
- Water Content
- Acidity and oxidation (TAN)
- Viscosity
- Sea water presence\*

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide so that the technician can make immediate decisions for maintaining the lubricated equipment and hydraulic circuit and increasing their lifespan.

(\* option)

(\* option)



### Particles Contamination



The test is performed with a POLLUVISION™ apparatus which enables filtering the fluid and catching pollutants on a calibrated membrane.

The membrane is then compared with reference views using an optical or a digital microscope in order to determine the contamination. It allows for:

- Quantification of total contamination & classification to NAS 1638 & ISO 4406 standards
- Determination of size, shape and nature of contaminants (copper, iron, silica, organic, sludge, dust, fibers, etc.)

### Water Content with Rapid Oil Test Gauge

Large and easy to read display gives step by step instructions.

USB port downloads test results to your computer.

Built-in memory stores up to 1000 tests including pass / fail test evaluation.

User-friendly design makes the tester easy to handle.



Simple to use soft keys.

Audible alarm for excess water.

Last generation sensor gives fast & accurate test results.

Transparent graduated flask facilitates test monitoring.

GESERCO's state of the art Rapid Oil Test Gauge provides accurate digital measurement of water in oil within minutes, even when the oil is massively additived. It is a documenting tester which not only provides fast and simple results but also makes it easier to monitor the condition of used oils over time.

	WATER IN OIL
<b>RANGES</b>	0 – 0.5 %H <sub>2</sub> O / 0 – 5,000 PPMH <sub>2</sub> O 0 – 2 %H <sub>2</sub> O / 0 – 20,000 PPMH <sub>2</sub> O 0 – 20 %H <sub>2</sub> O / 0 – 200,000 PPM H <sub>2</sub> O
<b>ACCURACY</b>	± 0.6% FS TYPICAL
<b>TEST DURATION</b>	CUSTOM
<b>BATTERY LIFE</b>	2 YEARS (USER REPLACEABLE BATTERY)
<b>MEMORY</b>	10000 TESTS (MEASURED DATA, TEST EVALUATION, DATE & TIME)
<b>COMS</b>	MINI USB PORT

## Acidity & Oxydation (TAN)



The test uses a rapid colorimetric method which is well suited for clear and black oils.

Various reagents are added to the oil sample to be tested which will induce a color change. The quantity of reagents which was required to make the color change allows calculating the TAN of the oil.

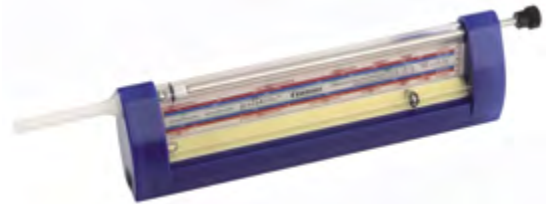
- **Sensitivity:** . . . . . 0.005 mg KOH/g
- **Test time:** . . . . . 15 minutes
- **Oil sample required:** . 100 to 1200 µl

## Viscosité

The EVI Combination includes a VISCOBILLE™ V3T falling ball viscometer with LED illumination which is applicable to monograde and multi-grade oils with a viscosity index (VI) of 100 or 150.

VISCOBILLE™ V3T does not require using any stop watch, thermometer or thermostatic bath for measuring instantly and directly:

- **Viscosity of VI100 oils:** From 10 to 400 cSt @ 40 °C  
From 30 to 1000 cSt @ 20 °C
- **Viscosity of VI150 oils:** From 10 to 200 cSt @ 40 °C  
From 30 to 500 cSt @ 20 °C



- **SAE grade**
- **ISO grade**
- **Dilution of the oil by fuel:** from 0 to 14% dilution

## Sea Water Detection\*



This test uses a reacting method: a solution is added to the oil to be tested which will capture any possible chloride in the oil.

A sample is then poured on a special reacting pad which will change colour according to the chloride content, hence sea water presence.

A reference chart allows interpreting the reaction of the pad and determining the chloride content in g NaCl per litre

- **Range:** . . . . . 0 to 5 g NaCl / liter
- **Accuracy:**. . . . . 0.25 g NaCl / liter

- **Test time:** . . . . . 10 minutes (+ 1 hour unattended)
- **Oil sample required:** . . . 10 ml

(\*Option)

## Product Code & Specification

CODE	DESCRIPTION
MT9075	EVI COMBO WITH RAPID OIL TEST GAUGE AND OPTICAL MICROSCOPE
RC9300	SEA WATER DETECTION OPTION – 30 TESTS
PP9100	SPARE PACK FOR WATER TEST – 50 TESTS
PP9106	SPARE PACK - POLLUVISION TEST - 100 TESTS
PP9104	SPARE PACK FOR TAN TEST – 50 TESTS

The EVI Combination is contained in 3 aluminum cases with internal foam to secure and protect accessories. Total weight: 40 kg

Other models are available. Please inquire with GESERCO for details.

The EVI Combination includes all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified.

(\*Except sea water detection: 30 tests / viscosity: unlimited)

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.





## CoolTest™ Kit

Portable mini-laboratory for monitoring engine cooling liquids

The GESERCO CoolTest™ kit is a field test kit to be used for monitoring engine cooling fluids at the place of operation of the engine.

The GESERCO CoolTest™ kit allows for monitoring five important characteristics of the engine cooling liquid:

- Anticorrosive agent concentration
- pH
- Chloride content\*
- Hardness
- Temperature

The tests are simple and rapid, and the kit includes a detailed testing and interpretation guide. The kit is readily usable by any personnel, even non-specialized.



### Application

The GESERCO CoolTest™ kit is particularly well suited for monitoring cooling liquids containing the following anticorrosive agents:

Arteco Freecor NBI, [Arteco Havoline Extended Life Corrosion Inhibitor XLI \[EU 032765\]](#), BASF Glyscorr G93-94, [BP Castrol Extended Life Corrosion Inhibitor](#), CCI Corporation A216, [CCI Manufacturing IL Corp. A216](#), Chevron Texaco Extended Life Corrosion Inhibitor Nitrite Free [US 236514], [Chevron Texcool A-200](#), Detroit Diesel Corp. Power Cool 2000, [Detroit Diesel Corp. Power Cool 3000](#), Detroit Diesel Corp. Power Cool Plus 6000, [Drew Marine Drewgard XTA](#), ExxonMobil Mobil Delvac Extended Life Corrosion Inhibitor, [Fleetguard DCA-4L](#), Ginouves York 719, [MTU Coolant CS100](#), Old World Industries A216, [Penray Pencool 2000](#), Penray Pencool 3000, [Nalco Alfloc 2000](#), Nalco Alfloc (Maxitreat)3477, [Nalco Nalco 2000](#), Nalco Nalcool 2000, [Tognum America Inc. Power Cool Plus 6000](#), Total WT Supra, [Valvoline ZEREX G-93](#).

### Test Principle

The tests contained in the GESERCO CoolTest™ kit are based on a variety of principles.

- Colorimetric reactive papers
- Colorimetric reactive solutions
- Refractometer



### Product Code & Specifications

PRODUCT CODE	DESCRIPTION
MT9029	COMPLETE COOLTEST™ KIT

The kit is housed in a strong and light aluminum case. Internal foam to secure & protect accessories.  
Dimensions: 47 x 42 x 13 cm      Weight: 5 kg

The kit includes all accessories, reagents and operating manuals for performing and understanding 100\* tests unless otherwise specified. (\*Chloride test: 30 tests)

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## MFTest™ Professional – MFTest™ Premium

Portable Mini-Laboratory for Testing Metal Machining Fluids

Jointly developed with CETIM – The French Technical Center for Mechanical Industries

The GESERCO MFTest™ Kits are standalone portable mini labs for testing metal machining and metal cutting fluids according to the methods and standards developed by CETIM, the French National Technical Center for Mechanical industries.

The kit allows for an accurate monitoring of the fluid essential properties in order to maximize quality, preserve operator safety and protect the environment.

- Color, Odor, Foaming
- Foreign oil presence
- Sludge, sediments and particle presence.
- Oil concentration
- PH & Alkaline Reserve (RA)
- Contamination – aerobic bacteria, fungi, yeast
- Contamination sulfate reducing bacteria
- Corrosion protection capability
- Water hardness
- Nitrites & Nitrates
- Temperature

The tests are simple and rapid. The kit includes detailed testing and interpretation guide for immediate use of the tests, result understanding, even by a non-specialized operator, and monitoring the fluids over time.



### Test Kits Content

	MT9011 PROFESSIONAL KIT	MT9012 PREMIUM KIT
Kit for sampling, labeling, visual & olfactory inspection	√	√
Additive concentration measurement	√	√
pH Test (100 tests)	√	√
Alkaline Reserve Test (100 tests)	√	√
Aerobic bacteria, fungi, yeast test (20 tests)	√	
Sulfate reducing bacteria test (18 tests)	√	
Corrosion protection capability (40 tests)	√	
Water hardness test (100 tests)	√	
Nitrate & Nitrite Test (100 tests)	√	
Digital thermometer -50+150°C ±0.2°C	√	

### Product Codes & Specifications

PRODUCT CODE	DESCRIPTION
MT9011	MFTEST™ PROFESSIONAL KIT
MT9012	MFTEST™ PREMIUM KIT
BA9100	BACTERIA INCUBATOR OPTION
TA9301	TAN TEST OPTION

The kit is housed in a strong and light aluminum case.

Internal foam to secure, protect accessories.

Dimensions: 57 x 43 x 10 cm - Weight: 7.5 kg



Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits.

Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

# SAMPLING

## Sampling Kits

### Oil Sampling Kits

Obtaining a representative and uncontaminated sample of the fluid to be analyzed (lube oil, fuel oil, solvent) is the first key step of a proper used oil monitoring and machinery predictive maintenance program.

When the oil sample is not truly representative of the oil state, the test result may be biased and the test interpretation compromised.

Housed in a rugged and lightweight case designed for field use, the GESERCO sampling kits and solutions include everything you need to easily draw, preserve and document a representative and uncontaminated sample.



### Product Code & Specifications

PRODUCT CODE	SAMPLER	FLASKS VOL X QTY	SAMPLING TUBE MATERIAL, QTY	CLEANING KIT	LABELS & SAMPLING GUIDE
PR9001	200CC PMMA VACUUM PUMP	125CC X 50	PA, 25 M ROLL	INCLUDED	INCLUDED
PR9002	200CC PMMA SYRINGE	125CC X 15	PA, 25 M ROLL	INCLUDED	INCLUDED
PR9003	ALUMINUM VACUUM PUMP	250CC X 24	PA, 26 X 1.5 M	INCLUDED	INCLUDED
PR9004	ALUMINUM VACUUM PUMP	250CC X 10	PA, 25 M ROLL	-	-
PR9005	ALUMINUM VACUUM PUMP	120CC X 20	PA, 25 M ROLL	INCLUDED	-
PR9006	ALUMINUM VACUUM PUMP	120CC X 4	PA, 21 M ROLL	-	-
PR9007	ALUMINUM VACUUM PUMP	250CC X 16	PA, 26 X 1.5 M	INCLUDED	INCLUDED
PR9008	ALUMINUM VACUUM PUMP	120CC X 50	PA, 2X25 M ROLL	INCLUDED	-
PR9009	ALUMINUM VACUUM PUMP	250CC X 24	PA, 25 M ROLL	INCLUDED	INCLUDED
PR9010	ALUMINUM VACUUM PUMP	-	PA, 25 M ROLL	INCLUDED	INCLUDED
PR9019	-	-	PA, 25 M ROLL	INCLUDED	INCLUDED
PR9020	-	120CC X 2	PA, 25 M ROLL	INCLUDED	INCLUDED
PR9021	MINIMESS HIGH PRESSURE SAMPLER	125CC X 50	-	INCLUDED	INCLUDED
PR9022	100CC PMMA SYRINGE	125CC X 50	PA, 25 M ROLL	INCLUDED	INCLUDED

### Other Sampling Accessories

- HDPE & PET flasks, 60, 100, 125, 250, 500 & 1000 cc
- PP/PE syringes, 1 to 300 cc
- PMMA pumps & syringes, 50, 100, 200 & 300 cc
- Vacuum sampling pumps
- PA flexible tube
- High pressure sampling kits for MINIMESS 16x150 and 16x200 ports, with flow restrictor



### Sampling Mini Kits

Each mini kit contains:

- 1 ea. HDPE flask with screw cap, 60 to 1000 ml
- 1 ea. PE/PP sampling syringe
- 1 ea. PA flexible tube, length 50cm
- 1 ea. label
- 1 ea. zip pouch



Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## Sampling Mini Kits

### Mini Oil Sampling Kits

Drawing a representative sample of the oil to be analyzed is the first key step to a successful Used Oil Analysis and to implementing an efficient Machine Condition Monitoring strategy.

The GESERCO mini sampling kits respond to this requirement.

They include a flexible tube and a sampling syringe, a flask and a sample identification label.



### Product Code & Specifications

PRODUCT CODE	DESCRIPTION
PR9013	60 ML MINI KIT
PR9011	100 ML MINI KIT
PR9014	125 ML MINI KIT
PR9012	250 ML MINI KIT
PR9015	500 ML MINI KIT
PR9016	1000 ML MINI KIT

Each mini kit comes with:

- 1 ea. HDPE flask with screw cap
- 1 ea. PE/PP sampling syringe
- 1 ea. PA flexible tube, length 50cm
- 1 ea. label
- 1 ea. zip pouch

### Other Sampling Accessories

GESERCO offers a large range of oil sampling accessories:

- HDPE & PET flasks, 60, 100, 125, 250, 500 & 1000 cc
- PP/PE syringes, 1 to 300 cc
- PMMA pumps & syringes, 50, 100, 200 & 300 cc
- Vacuum sampling pumps
- PA flexible tube
- High pressure sampling kits for MINIMESS 16x150 and 16x200 ports, with flow restrictor



### Autres kits de prélèvement

Fully comprehensive sampling kits housed in a rugged and light-weight plastic case.

They include any accessories required to undertake state of the art oil sampling and documenting:

- Flasks
- PA flexible tube
- Pump or syringe
- Labels
- Cleaning kit
- Sampling guide



Feel free to contact GESERCO for details

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## Sampling Pumps – Sampling Syringes

Oil Sampling Tools for Lubricants, Fuels, Solvents

Drawing a representative sample of the oil to be analyzed is the first key step to a successful Used Oil Analysis and to implementing an efficient Machine Condition Monitoring strategy.

The GESERCO sampling tools respond to this requirement.

### Sampling Syringes

Transparent syringe, machined from solid Methyl Methacrylate, unbreakable, with hot-engraved volume scale, treated to avoid deformation and cracking.

They are fitted with a 50 shore flat, beveled silicone washer, extra strong, water resistant, nonstick, providing a perfect washer and smoothly sliding piston.

Other features:

- Stainless steel piston, axis and handle
- Chromium plated molded Zamak cap
- G 1/8 or M10 end piece



Each syringe comes with:

- 1 ea. PA flexible tube, length 150 cm

PRODUCT CODE	DESCRIPTION
PR9100	SAMPLING SYRINGE, 50CC
PR9101	SAMPLING SYRINGE, 100CC
PR9014	SAMPLING SYRINGE, 200CC
PR9012	SAMPLING SYRINGE, 300CC

### Sampling Pumps

#### MODEL PR9117

Model PR9117 is a very large body (200cc) vacuum sampling pump which makes oil sampling easy with fewer sampling strokes even when the oil has to be drawn up from deep locations.

The full PMMA construction makes potential contamination easy to monitor.

#### MODEL PR9123

Model PR9123 is a rugged aluminum body vacuum sampling pump with PA head adapted to 38 mm neck sampling bottles.

A bottle adaptor is available as an option for thread less neck sampling bottles.



Both pumps are to be used with:

- 38 mm neck bottles
- 4 x 6 mm sampling tube

Feel free to contact GESERCO for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits.

Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

## Precision Micropipette

Precision sampling of Lubricating Oil and any Viscous Liquid

The GESERCO Precision Micropipette is a positive displacement micropipette designed for pipetting with high precision any difficult media:

- Oils and lubricants
- Other viscous media
- Highly mobile media
- Foaming media
- High density media
- High vapor pressure media

The GESERCO Precision Micropipette is applicable to pipetting any liquids which cannot be pipetted with traditional air displacement pipettes.



MICROPIPETTE  
TRADITIONNELLE  
À COUSSIN D'AIR



MICROPIPETTE  
DE PRÉCISION  
GESERCO  
À DÉPLACEMENT  
POSITIF  
(PISTON)



### Product Code & Specifications

PRODUCT CODE	SAMPLE VOLUME	TYPE	ACCURACY	COEFFICIENT OF VARIATION
IT9100	100 µL	FIXED VOLUME	0,6 µL	0,4 µL
PR9128	5 – 25 µL	ADJUSTABLE VOLUME	0,2 µL	0,125 µL
PR9129	10 – 50 µL	ADJUSTABLE VOLUME	0,3 µL	0,2 µL

Other models are available on request.  
Please consult with GESERCO for details.

Feel free to contact GESERCO  
for details

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant, fuels and solvent condition monitoring kits. Available worldwide, the Geserco products are applicable to the condition monitoring of mineral, synthetic and bio lubricants, whether they are motor oils, hydraulic oils or machining fluids.

