



# **GESERCO**

EQUIPMENT FOR TESTING LUBRICANTS

**NUMBER 1  
IN LUBRICANT CONDITION  
MONITORING TECHNOLOGY**

2017 **PRODUCT CATALOGUE**

# CONTENT

---

GESERCO IN FIGURES ..... **P. 2-3**

TECHNOLOGY ..... **P. 4-5**

CUSTOMER SATISFACTION ..... **P. 6**

REFERENCE LIST ..... **P. 7**

PRODUCTS INDEX ..... **P. 10**

## **PRODUCTS :**

SINGLE TEST KITS ..... **P. 11-32**

MULTIPLE TESTS KITS ..... **P. 33-51**

SAMPLING ..... **P. 53-57**

---



“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

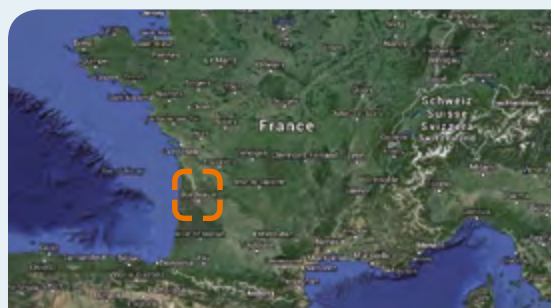


## GESERCO: WHERE?

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

The Geserco analysis kits are used worldwide; Geserco delivers them directly from the Mérignac 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  
CHINA  
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  
SUN CHEMICAL SAS

### FRENCH POLYNESIA

PARFUMERIE TIKI

### GERMANY

SARMAXX GMBH

## DEFENCE

### FRANCE

DCNS BREST  
FRENCH ARMY  
FRENCH NAVY  
INEO DEFENSE  
SERMACOM BREST  
DCNS LORIENT

### MOROCCO

NAVY

### UNITED KINGDOM

ROYAL NAVY

## EDUCATION

### FRANCE

A.F.A.I.  
BEMA  
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  
MFR DE MONTAUBAN DE BRETAGNE  
UNIVERSITE DE BORDEAUX  
UNIVERSITE DE LORRAINE  
UNIVERSITE DE NANTES  
UNIVERSITE DE PERPIGNAN VIA DOMITIA  
UNIVERSITE DE STRASBOURG  
UNIVERSITÉ JEAN MONNET

### PEOPLE'S REPUBLIC OF CHINA

CISM SHANGHAI

## MARINE

### ARGENTINA

COMPANIA SUD AMERICANA DE DRAGADOS

### BELGIUM

BUGGE SHIPPING BVBA  
JAN DE NUL N.V.  
VLAAMSE BAGGERMAATSCHAPPIJ N.V.

### CANADA

EXPEDO SHIP MANAGEMENT (Canada) Ltd

### CHILE

ADMINISTRADORA DE NAVES HUMBOLDT LT  
NAVIERA CHILENA DEL PACIFICO S.A.

### CYPRUS

FML SHIP MANAGEMENT Ltd

### DEMOCRATIC REPUBLIC OF CONGO

AFRIMEL-ITALGRU

### DENMARK

A/S DAN-BUNKERING LTD.  
SAFMARINE / MAERSK

# REFERENCE LIST

## FRANCE

B.A.I. SA  
BOLUDA LA ROCHELLE  
BOLUDA NANTES-SAINT NAZAIRE  
BOURBON OFFSHORE  
BOURBON OFFSHORE SURF  
CAP BOURBON  
CHAMBON MARINE OFFSHORE  
CHANTIERS PIRIOU  
CLARENCE SHIPPING INC. Panama  
CMA CGM  
CNN MCO  
COMPAGNIE DU PONANT  
COMPAGNIE MARITIME NANTAISE - MN  
COMPAGNIE MERIDIONALE DE NAVIGATION  
CONSEIL GENERAL DE SEINE-MARITIME  
DIAMOND S. MANAGEMENT, LLC  
DRAGAGES - PORTS  
EMS SHIP SUPPLY France  
EPIC SHIP MANAGEMENT  
ERASME BASTIA  
GAZ DE FRANCE ARMATEUR 2  
GENAVIR  
GRAND PORT MARITIME DE BORDEAUX  
GRAND PORT MARITIME DE ROUEN  
H&O-EXPERTISES PLAISANCE  
INSTITUT POLAIRE FRANCAIS  
LD TRANSMANCHE FERRIES  
MSF LOGISTIQUE  
MW AFRITEC SA Trust Company  
MW BRANDS  
NOORDZEE S.A.R.L.  
S.N.S.M. Penmarc'h  
SARL POLARIS EXPEDITIONS  
SAVPT  
SERVAUX SAFETY & SHIP SERVICE S4  
SMTDR  
SOCATRA  
ST MANAGEMENT SAS  
STFMO  
STX FRANCE SA  
V SHIPS ASIA  
V Ships France  
BATEAUX PARISIENS  
YACHTING CONCEPT

## GERMANY

TRITON SCHIFFFAHRTSGmbH & Co KG  
MEDALLION REEDEREI GmbH  
SBS SCHIFFSTECHNIK

## GREECE

ARION SHIPPING Ltd  
CHRONOS SHIPPING CO., LTD  
COSTAMARE SHIPPING COMPANY S.A.  
EURONAV  
MARYVILLE MARITIME INC.  
SUN ENTERPRISE  
TMS BULKERS  
MARINE TRUST

## HONGKONG

FLEET SHIP MANAGEMENT  
IMPERIAL EAGLE SHIPPING LLC  
PACIFIC BASIN SHIPPING (HK) Limited  
WALLEM SHIPMANAGEMENT HK Limited  
JOHNASIA

## ITALY

GESTIONI ARMATORIALI SPA  
SOCATRAM S.R.L.  
VROON  
CARMED ITALIA

## IVORY COAST

IVOIRIENNE DE REMORQUAGE & SAUVETAGE

## JAPAN

JX NIPPON OIL & ENERGY CORPORATION  
K LINE

## LETTONIA

RIGA SHIPPING LTD

## LUXEMBOURG

CODRALUX S.A.

DREDGING & MARITIME MANAGEMENT S.A.  
EUROPEAN DREDGING COMPANY S.A.  
VASCO S.A.

## MALAYSIA

WILHELMSEN

## MALTA

EAGLE SHIPPING AND TRADING LTD  
HIGHWAY SERVICES LTD

## MARSHAL ISLANDS

BRK SHIPPING LTD  
NORTH SHIPPING INC.  
TRK SHIPPING LTD

## MAURITIUS

CHANTIER NAVAL DE L'OCEAN INDIEN

## MONACO

SCORPIO

## NETHERLANDS

SEATRADE  
SBI GROUP  
FUJI TRADING  
HARDING MARINE SERVICES  
I.S.T. MARINE SERVICE GROUP  
MAAS SHIPSTORES BV  
NATIONAL MARINE SUPPLIERS B.V.  
SEA TRUCKS NETHERLANDS COOP UA  
VROON OFFSHORE SERVICES BV  
JAN DE NUL

## NEW CALEDONIA

COMPAGNIE MARITIME DES ILES

## NIGERIA

UNITED SUPREME INDUSTRIAL MERCHANTS

## NORWAY

GEARBULK NORVEGE AS  
K.G. JEBSEN SKIPSREDERI A/S  
NORSPAN LNG VII AS  
O.H. MELTING TANKERS KS  
V SHIPS NORVEGE  
WILHELMSEN SHIP MANAGEMENT AS  
KNUTSEN OAS SHIPPING

## PANAMA

SOUTHERN SHIPMANAGEMENT

## PEOPLE'S REPUBLIC OF CHINA

MAPLE LEAF SHIPPING  
COSCO  
PEOPLE'S REPUBLIC OF CHINA INTERNATIONAL  
SHIP MANAGEMENT

## PHILIPPINES

JP ALLIANCE SHIP MANAGEMENT CO.,INC

## ROMANIA

KENWARD MARINE LTD.

## RUSSIA

NORDWEG  
SOVCOMFLOT  
NOVOSHIP

## SENEGAL

SOPASEN

## SINGAPOUR

MSI SHIP MANAGEMENT PTE Ltd  
OCEAN TANKERS  
NAVIG8 SHIPMANAGEMENT  
RUBY MARITIME  
WINDSOR MARINE  
PACIFIC INTERNATIONAL LINES  
PEOPLE'S REPUBLIC OF CHINA NAVIGATION

## SWEDEN

SKF

## SWITZERLAND

ABC MARITIME  
ORYX ENERGIES  
WENROLD OVERSEAS LTD

## TURKEY

ARKAS KONTEYNER  
ARKAS SHIPPING S.A.  
ENJOY SHIPPING LTD  
FINNER SHIP MANAGEMENT  
FLASH SHIPPING LTD.  
KANLICA DENIZCILIK VE TIC A.S.  
KASIF DENIZCILIK A.S.  
LIMAR LIMAN VE GEMI ISLETMELERI A.S  
NEMTAS NEMRUT LIMAN ISLETMELERI  
PUMA MARINE AND TRADING LTD.  
REEF SHIPPING LTD.  
TURKON KONTEYNER TAS. VE DEN A.S.  
WAYFARER NAVIGATION LTD.  
YASA DENIZCILIK  
YASA TANKER ISLETMECILIGI A.S.  
GEDEN LINES  
DENSA  
MARMARAS

## U.S.A

DIAMOND S MANAGEMENT LLC  
NOUVELLE SHIPMANAGEMENT CO  
PACIFIC RUNNER S/A  
ROYMAR SHIP MANAGEMENT INC.  
SILVERSEA CRUISES LTD  
TRISTAR SHIPPING COMPANY S/A  
YASA

## UNITED ARAB EMIRATES

ADNATCO  
PIONEER SHIP MANAGEMENT  
EMARAT MARITIME  
UASAC

## UNITED KINGDOM

BERNHARD SCHULTE SHIPMANAGEMENT(UK)  
BLUE VISION LTD  
CMA SHIPS  
HELIKON SHIPPING ENTERPRISES Ltd  
MARINE LOGISTICS LIMITED  
SHIPSAN (BAYER-WOOD TECHNOLOGIES Lt  
VROON OFFSHORE SERVICES Ltd.

## VIETNAM

JAN DE NUL N.V. PE VIETNAM

## KOREA

SAMSUNG HEAVY INDUSTRIES  
HANJIN LINES

## ETHIOPIA

ETHIOPIAN SHIP LINE

## INDIA

SCI FORBES

## METAL MACHINING

### FRANCE

ASCOTEC  
AUBERT & DUVAL  
ARCELOR MITTAL  
COMPTOIR METTALURGIQUE DE BRETAGNE  
DANIEL SA  
ERASTEEL  
GB METALLURGIE  
HYDROCHEM  
INDUSTEEL FRANCE  
LE CREUSET SAS  
MANOIR INDUSTRIES  
OUTILACIER SAS  
UGITECH

## OIL & GAS

### ANGOLA

SONANGALP

### BOLIVIA

PRODIMS

### 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.

## PERU

REPSOL LUBES PERU

## PHILIPPINES

NEXTRONTEC CO LTD

## PORTUGAL

ECOSLOPS PORTUGAL

## REUNION ISLAND

ELLER Lubrifiants

## ROMANIA

TOTAL ROMANIA S.A.

## SENEGAL

TOTAL SENEGAL S.A.

## SPAIN

TOTAL ESPAÑA, S.A.U.  
REPSOL

## SWITZERLAND

ENI SWITZERLAND S.A.

## THAILAND

TOTAL OIL (THAILAND) CO., LTD

## TUNISIA

PERENCO TUNISIE

## UNITED KINGDOM

LUBRIZOL Ltd  
TOTAL UK Ltd

## VIETNAM

PETROLIMEX

## CUBA

TOTAL

## GUINEA

TOTAL

## ETHIOPIA

TOTAL

## SUDAN

TOTAL

## PAPER PRODUCTION

### FRANCE

EMIN LEYDIER  
PAPETERIES DE CLAIREFONTAINE  
SEYFERT PAPER  
INTERNATIONAL PAPER

### IRELAND

AVERY DENNISON

## POWER PRODUCTION

### BRASIL

DRESSER RAND GUASCOR

### CANADA

VEOLIA QUEBEC

### DJIBOUTI

ELECTRICITE 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

## MAYOTTE

ELECTRICITE DE MAYOTTE

## NEW CALEDONIA

EEC  
ENERCAL

## NIGER

NIGELEC

## SENEGAL

SENELEC

## SOUTH AFRICA

SELECTECH (Pty) Ltd

## SWITZERLAND

AOG Ltd

## TUNISIA

NPE - CBG GROUP

## UNITED ARAB EMIRATES

AGGREKO INTERNATIONAL PROJECT LTD

## UNITED KINGDOM

BROADCAST CROWN LTD

## WALLIS & FUTUNA

EEWF

## RAIL

### BELGIUM

SNCB

### FRANCE

SNCF

## MINES & CONSTRUCTION

### BELGIUM

ALPHA-PRIME S.A.  
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



# INDEX

## PRODUCTS

### SINGLE TEST KITS

Water content: digital WaterTest™	p.12
Water content: analogue WaterTest™	p.14
Water content: PreciWaterTest™	p.15
Viscosity, Dilution: ViscoBille™ V2T & V3T	p.16
Viscosity, Dilution: ViscoBille™ VCD, ViscoTest™	p.17
TBN: BNTest™	p.18
TAN: TANTest™	p.20
Particle content: Polluvision™	p.21
Contamination: PO9004™	p.22
Soot content: SootTest™	p.23
Blotter spot test	p.25
Sea water detection	p.26
Density of petroleum products	p.27
Bacteria tests	p.28
TotalFuelWash biocide	p.29
Sulphure content	p.30
Color monitor for petroleum products	p.31
Fuel compatibility	p.32

### MULTIPLE TESTS KITS

LubTest Premium™ Kit	p.34
CEB/NH™ Kit	p.36
STM1 Kit	p.38
LubTest Professional™ Kit	p.39
CM1 Kit	p.41
CLM Kit	p.43
Water content + BN Kit	p.45
EVI combo Kit	p.47
GOTest Kit	p.49
CoolTest™ Kit	p.50
MFTest Kit	p.51

### SAMPLING

Sampling Kits	p.54
Sampling Syringes	p.55
Mini Sampling Kits	p.56

# SINGLE TEST KITS

# WaterTest™ Test Kit with ROTG

## 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 free water in lubricating oils, fuel oils, Diesel oils... is a major cause of machinery failure.

Free 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 test is derived from the ISO9114:1997 standard: a reagent is added to the fluid under test; any trace of water present in the fluid will combine with the reagent and produce a volume of gas proportional to the water content.

The pressure of the generated gas is measured by the digital Rapid Oil Test Gauge and the corresponding water content is displayed.

### Digital Rapid Oil Test Gauge

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

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

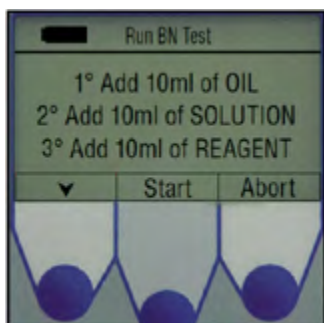
Local features include:

- Local display of test instructions
- Memory for 90 tests
- Instant test result evaluation
- Excess water content alarm
- Time stamping of test results
- USB port for downloading results to a computer

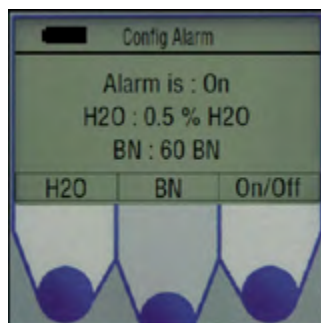




## Easy Oil Condition Monitoring



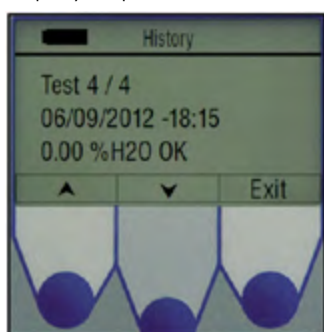
Step by step test instructions



User defined test alarms



Instant test result evaluation



Built-in memory for up to 90 tests



USB port for downloading test results to a computer

## Ordering Information

In order to better fulfill the specificities of any user application, the GESERCO WaterTest test kit is either available with the digital Rapid Oil Test Gauge or with an analogue test gauge:

P/N	Test Gauge	Reagent	Range	Extended Range	Accuracy
WT9015	Rapid Oil Test Gauge	WT/NH non hazardous	0 – 1.5 %H <sub>2</sub> O	15%H <sub>2</sub> O	± 10 ppm
WT9016	Rapid Oil Test Gauge	WT traditional	0 – 1.5 %H <sub>2</sub> O	15%H <sub>2</sub> O	± 10 ppm
WT9001	Analogue WT06	WT traditional	0 – 0.3 %H <sub>2</sub> O	6 %H <sub>2</sub> O	± 50 ppm
WT9010	Analogue WT06	WT/NH non hazardous	0 – 0.3 %H <sub>2</sub> O	6 %H <sub>2</sub> O	± 50 ppm
WT9002	Analogue WT15	WT traditional	0 – 1.5 %H <sub>2</sub> O	15 %H <sub>2</sub> O	± 125 ppm
WT9012	Analogue WT15	WT/NH non hazardous	0 – 1.5 %H <sub>2</sub> O	15 %H <sub>2</sub> O	± 125 ppm

### How to select the suitable WaterTest test kit?

- If you want to combine accuracy and documenting functions : choose a kit with Rapid Oil Test Gauge
- If you need a very simple kit which has no electronics: choose a kit with WT06 or WT15 analogue gauge
- If you want to simplify transportation and operation : choose a kit using non hazardous WT/NH reagent
- If you want quicker test results : choose a kit which uses traditional WT reagent

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified. Other kits are available. Please contact GESERCO for details.

The kit is housed in a strong and light aluminum case.  
Dimensions: 534 x 427 x 157 cm // 6,5 kg

Available options: viscosity, sea water, BN, detergent, dispersants, carbon matters...

## About GESERCO

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™ Test 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.



### Test Principle

Chemical test derived from the ISO9114:1997 standard which uses a reagent (WT or WT/NH) which will produce gas when the tested sample contains water.

The pressure of the delivered gas is measured with a high accuracy test gauge with %H<sub>2</sub>O graduations.

The test detects the presence of free water and is particularly well suited for monitoring strongly additived engine oils.

### Product Code

The test is housed in an aluminium case which contains any accessories and reagents for 50 tests.

WT06 with Reagent WT : WT9001  
WT06 with Reagent WT/NH\*: WT9010

WT15 with Reagent WT : WT9002  
WT15 with Reagent WT/NH\*: WT9012

(\* Reagent WT/NH is a non hazardous for transportation version of Reagent WT)

### Specifications

Type	Range	Extension*	Accuracy
WT06	0 – 0.3 %H <sub>2</sub> O	6 %H <sub>2</sub> O	± 50 ppm
WT15	0 – 1.5 %H <sub>2</sub> O	15 %H <sub>2</sub> O	± 125 ppm

(\* The range is extended by varying the volume of the sample under test).

### Options

Sea water detection:	RC9300
ViscoTest viscosity test:	VT9300
Viscobille V3T viscometer:	VT9309
Viscobille V2T VI100 viscometer:	VT9311
Viscobille V2T VIE150 viscometer:	VT9313

### About GESERCO

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 Content Measurement

## PreciWaterTest® - UltraPreciWaterTest®

Water Content measurement into Oils, Fuels & any non-volatile Liquids

Conforms to the ISO9114:1997\* standard

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

They are applicable to measuring water in:

- Mineral Oils and Petroleum Products (Motor Oils, Fuels, Brake Fluids, Gearbox Oils, Solvents...)
- Synthetic Oils and Synthetic Lubricants
- Bio Diesels, Bio Oils and Bio Lubricants
- Vegetable Oils
- Aromatic liquids
- Alcohols
- Soluble Solid Products (Greases...)

The water content measurement is simple and easy to perform within minutes.

The GESERCO PreciWaterTest is the Reference Apparatus for water content measurement to ISO9114:1997 standard



### Measuring principle

Chemical measurement principle whereby reagent is added to the tested sample which will convert any trace of water in the sample into gas.

The volume of generated gas is measured by means of a liquid column which is directly graduated in %H<sub>2</sub>O or in ppm H<sub>2</sub>O.

### Construction

The test is housed in a portable wooden varnished cabinet or mounted on a test stand for laboratory use. It is delivered with all accessories, solutions and reagents suitable for performing 50 tests.

### Specifications

#### UltraPreciWaterTest®

Range: 0 to 0.09% H<sub>2</sub>O  
Extended range\*: 10% H<sub>2</sub>O  
Accuracy: ± 5ppm from 0 to 0.02% H<sub>2</sub>O  
± 10ppm from 0.02 to 0.09% H<sub>2</sub>O

#### PreciWaterTest®

Range: 0 to 0.7% H<sub>2</sub>O  
Extended range\*: 14% H<sub>2</sub>O  
Accuracy: ± 12ppm from 0 to 0.05% H<sub>2</sub>O  
± 50ppm from 0.05 to 0.35% H<sub>2</sub>O  
± 100ppm from 0.35 to 0.7% H<sub>2</sub>O

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

### Product Codes

UltraPreciWaterTest®: WT9004	PreciWaterTest® EA1 (field version): WT9005
	PreciWaterTest® EA3 (laboratory version): WT9006

### About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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.



## ViscoBille™ V3T – ViscoBille™ V2T

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

The new and improved ViscoBille™ V3T and ViscoBille™ V2T patented viscometers by GESERCO allow for the simple, rapid, accurate and cost effective measurement of the viscosity of lubricating and hydraulic oils.

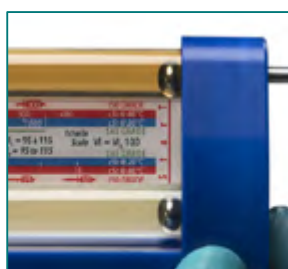
The viscosity measurement is direct and does not require using any stop watch nor thermometer, nor thermostatic bath nor complex calculations.

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



### Instant Viscosity Reading

The ViscoBille™ V3T and ViscoBille™ V2T measuring scales provide direct and instant reading of four results:



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

without using any thermometer, stop watch, or complex calculation.

### Testing Black Oils made Easy

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

(\* Option)



### Dilution Measurement

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

### Other Functions

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

### Versions & Product Codes

Code	Type	Oil	LED	cSt @ 20°C	cSt @ 40°C
VT9011	V2T	VI100	<input type="checkbox"/>	30 – 1000	10 – 400
VT9013	V2T	VIE150	<input type="checkbox"/>	20 – 500	10 – 200
VT9009	V3T	VI100 + VIE150	<input type="checkbox"/>	above scales	
VT9012	V2T	VI100		30 – 1000	10 – 400
VT9014	V2T	VIE150		20 – 500	10 – 200
VT9010	V3T	VI100 + VIE150		above scales	
VT9211	Storage				cabinet

### About GESERCO

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.

## ViscoBille™ VCD – ViscoTest™

### Viscosity Comparison Monitoring Lubricating Oil by Fuel Oil Dilution

The new and improved GESERCO ViscoTest™ and ViscoBille™ VCD falling ball viscometer make the comparison of 2 (ViscoTest™) or 3 (ViscoBille™ VCD) viscosities simpler, faster and cost effective.

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

A common application of the GESERCO ViscoBille™ VCD and ViscoTest™ is the monitoring of the dilution level of motor lubricating oils with fuel oil.

The GESERCO ViscoBille™ VCD 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 fluid 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 those of 2 reference liquids which may set, for instance, the minimum and maximum acceptable viscosities for the tested liquid.

#### Testing black oils made easy

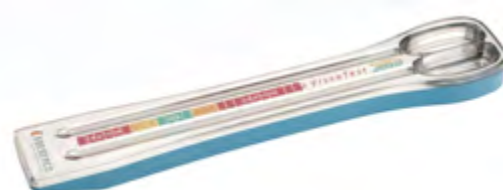
The built-in\* LED illuminator of ViscoBille™ VCD lights up the test tubes and makes the measuring balls easy to view when testing black oils, even when they are heavily polluted, and the color scale makes comparing balls position easy.



The instrument has a strong construction and its syringe tip makes the collection of the test sample easy.

(\* Option)

#### ViscoTest™



The GESERCO ViscoTest™ allows for the simple and rapid comparison of the viscosity the tested liquid with this of 1 reference liquid. The color scale makes the comparison easy.

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.



#### Product Codes

Code	Modèle
<b>VT9015</b>	ViscoBille™ VCD <b>with</b> LED illuminator
<b>VT9016</b>	ViscoBille™ VCD <b>without</b> LED illuminator
<b>VT9004</b>	ViscoTest™
<b>VT9211</b>	Storage cabinet

#### About GESERCO

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.

# BNTest™ Test Kit with ROTG

Determination of the Base Number of Motor Oils

The GESERCO BNTest™ test kit allows for simple, fast and cost effective determination of the alkaline reserve (BN) of motor oils and for monitoring the BN depletion rate over time.

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



## BN

The alkaline reserve formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulphur. In service, the BN of lubricating oils will fall from its original value.

GESERCO's state of the art Rapid Oil Test Gauge 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

## 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 method shows excellent repeatability and correlation with ASTM D2896:

SAMPLE	BN (mg KOH/g)				ROTG Std Deviation
	ASTMD2896	ROTG #1	ROTG #2	ROTG #3	
1	105,0	101,2	101,7	102,0	0,40
2	69,8	68,3	68,2	68,4	0,09
3	57,2	55,3	55,9	56,7	0,73
4	40,0	42,2	43,2	43,4	0,64
5	29,6	29,7	29,8	30,2	0,23
6	15,1	13,0	13,2	13,2	0,13

## 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.

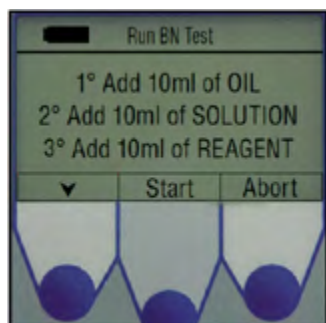
Local features include:

- Local display of test instructions
- Memory for 90 tests
- Instant test result evaluation
- Low BN alarm
- Time stamping of test results
- USB port for downloading results to a computer





## Easy Oil Condition Monitoring



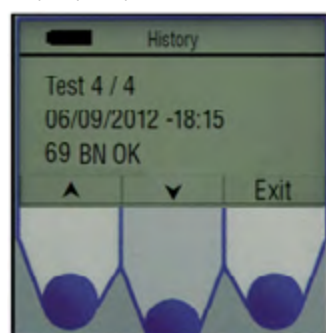
Step by step test instructions



User defined test alarms



Instant test result evaluation



Built-in memory for up to 90 tests



USB port for downloading test results to a computer

## Ordering Information

In order to better fulfill the specificities of any user application, the GESERCO BNTest test kit is either available with the digital Rapid Oil Test Gauge or with an analogue test gauge:

P/N	Test Gauge	Reagent	Range 1	Range 2	Accuracy
BN9003	Rapid Oil Test Gauge	BAS1	0 – 30 BN	30 – 100 BN	± 8% typical
BN9002	Analogue Gauge	BAS1	0 – 70 BN	-	± 8% typical

### How to select the suitable BNTest test kit?

- If you want to combine accuracy and documenting functions : choose a kit with Rapid Oil Test Gauge
- If you need a very simple kit which has no electronics: choose a kit with analogue gauge

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests unless otherwise specified. Other kits are available. Please contact GESERCO for details.

The kit is housed in a strong and light aluminum case.  
Dimensions: 534 x 427 x 157 cm // 6,5 kg

Available options: viscosity, sea water, water, detergent, dispersants, carbon matters...

## About GESERCO

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 Lubricants Acidity

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

The GESERCO TAN TEST KIT is designed for determining the oil acidity index (AN) on the operation site of the lubricated equipment.

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

The volume of reagent required for changing the colour is precisely monitored and allows calculating the AN (Acid Number) value in mg KOH/g.

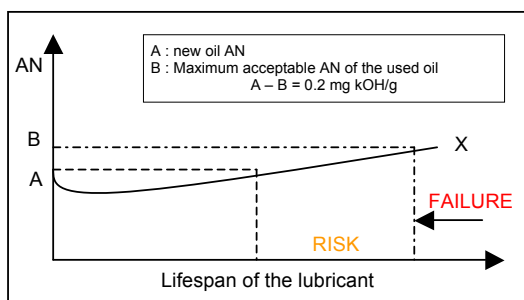
The test is simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make immediate decisions for maintaining the lubricated equipment and increasing its lifespan.



#### Benefits

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



#### Specifications

Application: Clear oils & Black oils  
 Sensitivity: 0.005 mg KOH/g typical  
 Test time: 15 minutes typical

Contents: The kit includes all tools, accessories and reagents for **50 tests**.

Housing: Aluminium case  
 Dimensions: 44 x 35 x 11  
 Weight: 5 kg

Product code: TA9001

#### About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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.

# Oil Contamination Analysis

## POLLUVISION™ Test Kit

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 NFE48655
- Particle classification to ISO4406

The test is simple and rapid, and the kit includes all accessories and consumables for testing up to 65 oil samples.

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 off POLLUVISION™ filtering apparatus including a 100 cm<sup>3</sup> oil reservoir
- 15 filtering cartridges fitted with a 37mm diameter membrane with 0.8 µm porosity, not gridded
- 50 replacement filtering membranes, 37mm diameter, 0.8 µm porosity, gridded, including filter
- 1 off electrical vacuum pump
- 1 off manual pumping assembly

#### Contamination analysis

- Set of accessories for incident lighting
- Set of accessories for transmitted lighting
- 8.0x / 28.0D magnifying glass
- 20x – 40x wide area binoculars, with incident and transmitted lighting

#### Other accessories

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

### Options

- Set of accessories for direct sample filtering from the circuitry
- Set of accessories for direct sample filtering from pressurized circuitry
- Heating oil reservoir for filtering viscous oils
- 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
- Digital Microscope



### About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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.

# Particle Pollution Monitoring

## PO2004 Kit

Sampling and Contamination Monitoring into Fuels, Lubricants and Other Liquids

Conforms to SECLF/MILLI French Navy standard

The PO2004 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 valved syringe serves as a pump to remove residual liquid from the cartridge.

For gravimetric analysis, accessory matched-weighted cartridges eliminate filter pre-weighing before sampling.

The test is simple and rapid, and the kit includes any accessories and consumables for 12 analysis. A test interpretation guide to ASTM D2276 is available as an option.



### Kit Contents

37 x 13 x 23 cm case, weight 4.5 kg, containing:

- 12 x Ø 37mm filtering cartridges with 0.8 µm porosity membranes, non-gridded, and pre-filter
- 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 pre-filter
- Pack of 50 Ø 37mm membranes, 0.8 µm\* porosity, non-gridded\* with pre-filter
- Pack of 50 Ø 37mm pre-filters

(\* other porosity and gridded membranes available as an option)

### Product Code

Complete Kit:

PO9004

### About GESERCO

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 of Soot Content in Used Engine Oils

The GESERCO Soot Test Kit provides 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 content 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 gasoline 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.

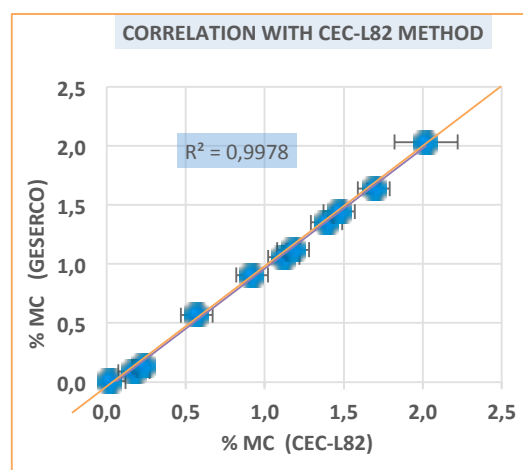


#### Soot in Oil

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 reference method.



#### Rapid 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 90 tests
- Instant test result evaluation
- Excessive Carbon Matters (soot) in oil alarm
- Automatic time-stamping of results
- USB port for downloading test results to a computer



## Oil Condition Monitoring made easy



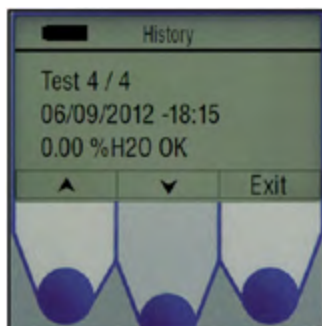
Step by step test instructions



User defined test alarms



Instant test result evaluation



Built-in memory for up to 90 tests



USB port for downloading test results to a computer

## Ordering Information

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

Code	Description	Range #1	Range #2	Range #3
PH9002	Professional Soot Test kit	0 – 15 %Soot	0 – 4.5 %Soot	0 – 2.5 %Soot
PH9003	Standard Soot Test kit	0 – 4.5 %Soot		

The kits include all accessories, reagents and operating manuals for performing and understanding 50 tests. They are contained in a strong aluminum case. Dimensions: 534 x 427 x 157 cm // 6,5 kg

## A usefull complement to the Soot Test kit: the Blotter Spot Test

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 fuel



## A propos de GESERCO

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

Available worldwide, the GESERCO products are applicable to the condition monitoring of mineral, synthetic and bio lubricants and fuels, 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 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 if he is not a lubrication specialist.



## 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 moments, 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 Codes

The kit contains all accessories and consumables required for performing 50 tests.

Spot Test kit: ET9301

## 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, including the description and interpretation of 36 representative cases: ET9100

Pack of 25 additional test papers: ET9200

## About GESERCO

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

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

# Chlorides / Salt Water Detection Kit

## For Lubricating Oils and Fuel 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 leakage of the cooling circuitry) and fixing the problem.

The test is simple and rapid, and the kit includes all accessories and consumables for testing up to 30 oil samples.



### Test Method

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

Range: 0 to 5 g NaCl / litre  
Accuracy: 0.25 g NaCl / litre  
Test time: 10 minutes  
Oil sample required: 10ml

### Product Code

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

Chlorides / Salt Water test kit:	RC9300
Replenishment pack (30 tests):	RC9200
Test solvent (Solution E) replenishment:	RC9201

### About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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.



# 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.



### Measuring Ranges and Product Codes

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

The hydrometers conform to NF T60.101 standard.

Other models are available:

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

Please contact GESERCO for details.

### About GESERCO

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

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

# Bacteria Test Kit

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

The GESERCO bacteria test kit is a true mini laboratory for analyzing petroleum products.

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

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

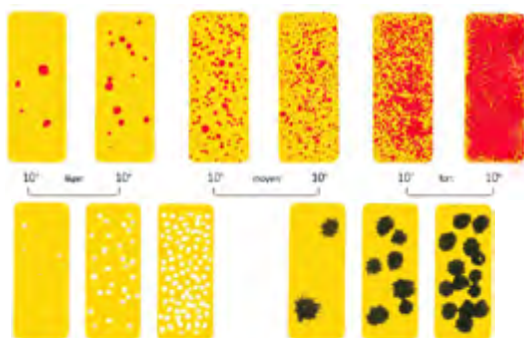


### Test Principle

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.



### Specifications

Application:	Diesel or heavy fuel – Kerosene Machining oil Turbine oil
Sensitivity:	Aerobic bacteria Anaerobic sulfate reducing bacteria Fungi, yeast, moulds
Time to result:	16 hours*

### Product Codes

BA9001:	Aerobic bacteria test kit Pack of 20 tests
BA9002:	Sulfate reducing bacteria test kit Pack of 18 tests
BA9003:	Aerobic bacteria in petroleum products test kit
BA9100:	Incubator
All kits are delivered complete with user guide.	

Option: Bactericide

\* Test result within 16 hours when using the incubator.

### About GESERCO

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

Available worldwide, the GESERCO products are applicable to the condition monitoring of mineral, synthetic and bio lubricants and fuels, 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

Gram-positive bacteria			Gram-negative bacteria			
ppm active material			ppm active material			
Gram-positive bacteria	Bacillus dubtilis	2	Gram-negative bacteria	Alcaligenes faecalis	2	
	Staphylococcus aureus	2		Azotobacter vinelandii	5	
	Staphylococcus epidermis	2		Enterobacter aerogenes	5	
	Streptococcus pyogenes	9		Escherichia coli	5	
	Streptomyces albus	1		Desulfovibrio desulfuricans	2,5	
Fungi	ppm active material			Proteus vulgaris	5	
	Alternaria dianthiola	3		Pseudomonas aeruginosa	5	
	Aspergillus niger	6		Pseudomonas fluorescens	2	
	Chaetomium globusum	9		Pseudomonas oleovorans	5	
	Cladosporium (hormonoconis) resinae	5		Salmonella typhosa	5	
	Salmonella typhosa	5				
	Penicillium funiculosum	5				
			ppm active material			
			Yeasts	Rhodotorula rubra	2	
				Saccharomyces cerevisiae	2	
				Candida albicans	5	

### 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  
 Volumic mass: 1055 kg/m<sup>3</sup> @ 20°C  
 Time to result: 12 to 24 hours

### Product Codes

Can (30 kg): BA9200  
 Drum (200 kg): BA9201  
Options:  
 Aerobic bacteria test kit: BA9001  
 Anaerobic Bacteria test kit: BA9002  
 Aerobic bacteria in petroleum products test kit: BA9003

### About GESERCO

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

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

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

**Rapid test kit to determine the presence of Sulphur in Petroleum Products**

The GESERCO H<sub>2</sub>S test kit allows for the rapid detection of Sulphur 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 the presence of traces of H<sub>2</sub>S.

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 the paper has reacted with.

- When no color change has developed, the test result is negative
- When some color change develops, the test result is positive and the magnitude of the reaction can be specified.

## Specifications

Application: Diesel – Kerosene – Heavy Fuel  
Petroleum Distillates

Sensitivity: H<sub>2</sub>S

Time to result: 10 minutes

Response: Negative  
Light Positive  
Strong Positive

Sample required: 1 liter

The kit allows for approximately 400 tests.

## Product Code

FI9000 : Complete kit

## About GESERCO

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

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



## Color Comparator

Trichromatic Comparator for Petroleum Products Color Grading  
To ASTM D1500

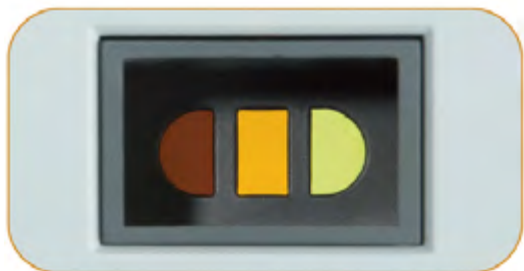
The trichromatic color comparator for petroleum products offers many benefits that facilitate its operation:

- 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



### Benefits of the Trichromatic System

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.

### Specifications

Reference standards:	ASTM D1500 ; ISO 2049 ; IP 196 ; DIN 51 578 ; BS 5859 ; JIS K2580 ; NF T 60-104 ; NBN T52-109 ; FTMS 791 102
Range:	0.5 à 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
Dimensions:	23 x 27 x 14 cm – 1.5 kg

### About GESERCO

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

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

## 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 mix helps eliminating the risks from sludge deposits, failures of the injection system, combustion problems and costly engine breakdowns.

The test is simple and rapid, and the kit includes a detailed testing and interpretation guide so that the engineer can make 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.



### Specifications

Time to result:	20 minutes typical
Kit contents:	The kit contains any consumables and accessories required for 50 tests.
Dimensions:	204 x 215 x 230 mm
Weight:	2 kg
Power:	170 W
Intensity:	0.8 A
Voltage:	220 – 240 V ~
Product code:	FI9001

### About GESERCO

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

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

# MULTIPLE TESTS KITS

# 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
- Sea water presence
- Viscosity

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.



### Rapid Oil Test Gauge



### Water Content

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

Free 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, allows for microbial development...

To overcome the effects of water in the oil, the LubTestPremium kit incorporates GESERCO's state of the art Rapid Oil Test Gauge which provides accurate digital measurement of free 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

#### Specifications

Range:	0 -1.5% H2O
Accuracy:	0.05 % H2O typical
Test time:	3 minutes typical
Battery life:	18 months or more (user replaceable battery)
Memory:	90 tests including measured data, test evaluation, date and time
Coms:	Mini USB port



## Viscosity

### Test Method

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.

### Specifications

Test philosophy: Go / No Go  
 3 visual detection levels:  
     Red: Alarm  
     Orange: Average  
     Green: Satisfying  
 Time to test result: 2 minutes  
 Oil sample required: 5ml

## Sea Water Detection

### Test method

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.

### Specifications

Range: 0 to 5 g NaCl / litre  
 Accuracy: 0.25 g NaCl / litre  
 Test time: 10 minutes  
             (+ 1 hour unattended)  
 Oil sample required: 10ml

## Other Specifications

The tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with compass.

The kit includes all accessories, reagents and operating manuals for performing and understanding 50 tests\*.

The kit does not include any reagents which are hazardous for road / sea / air transportation.

Dimensions: 534 x 427 x 157  
 Gross weight: 6.500 kg

Product code:  
 LubTest Premium™ kit: MT9023

(\* except sea water detection: 30 tests)

## About GESERCO

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

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

## CEB/NH™ Test Kit with ROTG

### Portable Mini-Lab for testing Lubricants

The GESERCO CEB/NH™ Test Kit with Rapid Oil Test Gauge is a true portable lubricant analysis mini laboratory.

The GESERCO CEB™ 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 lubricated equipment and increasing its lifespan.

(\* option)



### Rapid Oil Test Gauge



### Water Content

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

Free 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, allows for microbial development...

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

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

#### Specifications

Range:	0 -1.5% H <sub>2</sub> O
Accuracy:	0.05 % H <sub>2</sub> O typical
Test time:	3 minutes typical
Battery life:	18 months or more (user replaceable battery)
Memory:	90 tests including measured data, test evaluation, date and time
Coms:	Mini USB port

## Viscosity & Dilution

### Test method

This test uses a VISCOBILLE® V3T falling ball viscometer.

The VISCOBILLE® V3T is fitted with samples of Reference Oils to which is compared the oil to be tested. The VISCOBILLE® V3T may also be used for monitoring the level of dilution of the oil sample.

The VISCOBILLE® V3T may be used for testing monograde and multigrade oils, VI100 and VIE150, @ 20 °C and @ 40 °C.

### Specifications

VI100 @ 40°C scale:	10 to 400 cSt
VI100 @ 20°C scale:	30 to 1000 cSt
VIE150 @ 40°C scale:	10 to 200 cSt
VIE150 @ 20°C scale:	30 to 500 cSt
SAE multigrade:	10W30, 15W40, 20W50
SAE monograde:	20, 30, 40, 50
Dilution by Diesel oil:	0 to 14%

## Sea Water Detection\*

### Test method

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.

### Specifications

Range:	0 to 5 g NaCl / litre
Accuracy:	0.25 g NaCl / litre
Test time:	10 minutes (+ 1 hour unattended)
Oil sample required:	10ml

(\* option)

## Ordering Information

In order to better fulfill the specificities of any user application, the GESERCO CEB test kit is either available with the digital Rapid Oil Test Gauge or with an analogue test gauge:

The tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with compass.

The kit includes all accessories, reagents and operating manuals for performing and understanding 50 tests\*.

Dimensions:	534 x 427 x 157
Gross weight:	6.500 kg

### Product code:

CEB™ kit with ROTG /NH (non hazardous):	MT9019
CEB™ kit with ROTG (traditional):	MT9024
CEB™/06 kit, analogue, to 6% H2O:	MT9016
CEB™/15 kit, analogue, to 15% H2O:	MT9008

### **How to select the suitable CEB test kit?**

- If you want to combine accuracy and documenting functions : choose a kit with Rapid Oil Test Gauge
- If you need a very simple kit which has no electronics: choose a kit with WT06 or WT15 analogue gauge
- If you want to simplify transportation and operation : choose a kit using non hazardous WT/NH reagent
- If you want quicker test results : choose a kit which uses traditional WT reagent

(\* except sea water detection: 30 tests – Viscosity/Dilution: unlimited)

## About GESERCO

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

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

# Testing Kit for Engine Oils

## Dilution – Acidity – Pollution

*Conforms to the STM1 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

#### Test Method

The method consists in comparing the viscosity of the used oil with the viscosity of some reference oil of known dilution. Viscosity comparison is done instantly using a VCD3T falling ball viscometer.

#### Specifications

Maximum acceptable dilution: 5% typical  
Sample required: 10 ml  
Time to result: 3 minutes

#### Test Method

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.

#### Specifications

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

### Acidity of the Aqueous Extract

#### Test Method

The acid value is evaluated from the color evaluation of the aqueous extract from the lubricant using a pH color indicator.

#### Specifications

Reading:	Excellent / Good / Bad
Sample required:	5 ml
Time to result:	3 minutes

### Other Specifications

The tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with document holder and compass.

The kit includes all accessories, consumables and test guides for performing 100 acidity and pollution tests. The number of dilution tests is not limited.

Dimensions:	570 x 430 x 106
Gross weight:	4,500 kg

### Pollution

### About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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 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
- Sea water presence
- Alkaline reserve (BN)
- Viscosity
- Carbon Matters content
- Residual detergent capacity
- Residual dispersant capacity

The GESERCO LubTest Professional™ test kit incorporates the new Rapid Oil Test Gauge, a documenting tester which not only provides fast, simple, accurate results for Water in Oil and Base Number (BN) but also makes it easier to monitor the condition of used oils over time.

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 free water in oil is a major cause of machinery failure.

Free 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, allows for microbial development...

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

### Specifications

Ranges: 0 -1.5%, 0-15000 ppm, 0-15%  
Accuracy: 0.05 % H<sub>2</sub>O typical  
Test time: 3 minutes typical  
Battery life: 2 years typical (user replaceable battery)  
Memory: 90 tests including measured data, test evaluation, date and time  
Coms: Mini USB port

## Alkaline Reserve (BN)

The alkaline reserve formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulphur.

In service, the BN of lubricating oils will fall from its original value.

GESERCO's state of the art Rapid Oil Test Gauge 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.

### Specifications

Range: 0 - 100 BN  
Accuracy: ±8 % of new oil BN typical  
Test time: 3 minutes typical  
Battery life: 2 years typical (user replaceable battery)  
Memory: 90 tests including measured data, test evaluation, date and time  
Coms: Mini USB port

## Viscosity

### Test Method

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.

### Specifications

Test philosophy: Go / No Go

3 visual detection levels:

Red: Alarm  
Orange: Average  
Green: Satisfying

Time to test result: 2 minutes

Oil sample required: 5ml

## Sea Water Detection

### Test method

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.

### Specifications

Range: 0 to 5 g NaCl / litre

Accuracy: 0.25 g NaCl / litre

Test time: 10 minutes  
(+ 1 hour unattended)

Oil sample required: 10ml

## Carbon Matters Content - Dispersant and Detergent Capacity

### Test Method

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.

### Specifications

Carbon Matters Content: 0.2% to 2%

Residual dispersant capacity: good / bad

Residual detergent capacity: good / bad

Detection of water, diesel oil and antifreeze agents

Test time: 5 minutes  
(+ 2 hours unattended)

Oil sample required: 10ml

## Other Specifications

The tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with compass.

The kit includes all accessories, reagents and operating manuals for performing and understanding 50 tests\*.

The kit does not include any reagents which are hazardous for road / sea / air transportation.

Dimensions: 534 x 427 x 157

Gross weight: 7.500 kg

(\* except sea water detection: 30 tests)

### Product code:

LubTest Professional™ kit: MT9022

### Option:

LubTest Professional™ kit with  
analogue WT/BN apparatus: MT9003  
*to replace the Rapid Oil Test Gauge*

## About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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 Diesel Engines Lubricants

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

The CM1 is designed for monitoring eight main characteristics of the lubricant on the Diesel engine operation site:

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

The GESERCO CM1 test kit includes the new Rapid Oil Test Gauge, a documenting tester which not only provides fast, simple, accurate results for Water in Oil and Base Number (BN) but also makes it easier to monitor the condition of used oils over time.

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.

(\* optional)



### Water Content

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

Free 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, allows for microbial development...

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

#### Specifications

Ranges: 0 -1.5%, 0-15000 ppm, 0-15%  
 Accuracy: 0.05 % H2O typical  
 Test time: 3 minutes typical  
 Battery life: 2 years typical (user replaceable battery)  
 Memory: 90 tests including measured data, test evaluation, date and time  
 Coms: Mini USB port

### Alkaline Reserve (BN)

The alkaline reserve formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulphur.

In service, the BN of lubricating oils will fall from its original value.

GESERCO's state of the art Rapid Oil Test Gauge 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.

#### Specifications

Range: 0 - 100 BN  
 Accuracy:  $\pm 8$  % of new oil BN typical  
 Test time: 3 minutes typical  
 Battery life: 2 years typical (user replaceable battery)  
 Memory: 90 tests including measured data, test evaluation, date and time  
 Coms: Mini USB port

## Viscosity

### Test method

This test uses the new GESERCO VISCOBILLE® V3T falling ball viscometer with LED illumination. The VISCOBILLE® V3T is fitted with samples of Reference Oils to which is compared the oil to be tested. The VISCOBILLE® V3T may also be used for monitoring the level of dilution of the oil sample.

The VISCOBILLE® V3T may be used for testing monograde and multigrade oils, VI100 and VI150, @ 20 °C and @ 40 °C.

### Specifications

VI100 @ 40°C scale:	10 to 400 cSt
VI100 @ 20°C scale:	30 to 1000 cSt
VI150 @ 40°C scale:	10 to 200 cSt
VI150 @ 20°C scale:	30 to 500 cSt
SAE multigrade:	10W30, 15W40, 20W50
SAE monograde:	20, 30, 40, 50
Dilution by Diesel oil:	0 to 14%

## Sea Water Detection\*

### Test method

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.

### Specifications

Range:	0 to 5 g NaCl / litre
Accuracy:	0.25 g NaCl / litre
Test time:	10 minutes (+ 1 hour unattended)
Oil sample required:	10ml

(\* optional)

## Carbon Matters Content

### Test Method

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

### Specifications

Concentration:	0 to 4.5%
Test time:	2 minutes
Sensitivity:	<0.1%
Battery life:	2 years typical (user replaceable battery)
Memory:	90 tests including measured data, test evaluation, date and time
Coms:	Mini USB port

### Test Method

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.

### Specifications

Residual dispersant capacity:	good / bad
Residual detergent capacity:	good / bad
Detection of water, diesel oil and antifreeze agents	
Test time:	5 minutes (+ 2 hours unattended)
Oil sample required:	10ml

## Dispersant and Detergent Capacity

## Other Specifications

Tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with document holder and compass.

The kit includes all accessories, reagents and operating manuals for performing and understanding 50 tests\*.

Dimensions:	534 x 427 x 157
Gross weight:	8,000 kg

(\*Except sea water detection: 30 tests)

### Product codes:

CM1 with ROTG - Traditional	MT9021
CM1 with ROTG - Non Hazardous	MT9020
Sea water detection option:	RC9100

## About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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 Lubricants

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

The CLM is designed for monitoring six main characteristics of the lubricant in the field:

- Water content
- Viscosity
- Dilution
- Carbon Matters content
- Residual detergent capacity
- Residual dispersant capacity

The GESERCO CLM test kit includes the new Rapid Oil Test Gauge, 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 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.

(\* optional)



### Rapid Oil Test Gauge



### Water Content

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

Free 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, allows for microbial development...

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

#### Specifications

Ranges:	0 -1.5%, 0-15000 ppm, 0-15%
Accuracy:	0.05 % H2O typical
Test time:	3 minutes typical
Battery life:	2 years typical (user replaceable battery)
Memory:	90 tests including measured data, test evaluation, date and time
Coms:	Mini USB port

## Viscosity

### Test method

This test uses the new GESERCO VISCOBILLE® V3T falling ball viscometer with LED illumination. The VISCOBILLE® V3T is fitted with samples of Reference Oils to which is compared the oil to be tested. The VISCOBILLE® V3T may also be used for monitoring the level of dilution of the oil sample.

The VISCOBILLE® V3T may be used for testing monograde and multigrade oils, VI100 and VI150, @ 20 °C and @ 40 °C.

### Specifications

VI100 @ 40°C scale:	10 to 400 cSt
VI100 @ 20°C scale:	30 to 1000 cSt
VI150 @ 40°C scale:	10 to 200 cSt
VI150 @ 20°C scale:	30 to 500 cSt
SAE multigrade:	10W30, 15W40, 20W50
SAE monograde:	20, 30, 40, 50
Dilution by Diesel oil:	0 to 14%

## Sea Water Detection\*

### Test method

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.

### Specifications

Range:	0 to 5 g NaCl / litre
Accuracy:	0.25 g NaCl / litre
Test time:	10 minutes (+ 1 hour unattended)
Oil sample required:	10ml

(\* option)

## Carbon Matters Content

### Test Method

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

### Specifications

Concentration:	0 to 4.5%
Test time:	2 minutes
Sensitivity:	<0.1%
Battery life:	2 years typical (user replaceable battery)
Memory:	90 tests including measured data, test evaluation, date and time
Coms:	Mini USB port

## Dispersant and Detergent Capacity

### Test Method

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.

### Specifications

Residual dispersant capacity:	good / bad
Residual detergent capacity:	good / bad
Detection of water, diesel oil and antifreeze agents	
Test time:	5 minutes (+ 2 hours unattended)
Oil sample required:	10ml

## Other Specifications

Tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with document holder and compass.

The kit includes all accessories, reagents and operating manuals for performing and understanding 50 tests\*.

Dimensions:	534 x 427 x 157
Gross weight:	7,000 kg

(\*Except sea water detection: 30 tests)

### Product codes:

CLM with ROTG – Non Hazardous	MT9034
Sea water detection option:	RC9100

## About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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 four important characteristics of the lubricant on the Engine operation site:

- Water content
- Alkaline reserve (BN)
- Sea water presence (option)
- Viscosity (option)

The GESERCO Water In Oil + BN test kit incorporates the new Rapid Oil Test Gauge, a documenting tester which not only provides fast, simple, accurate results for Water in Oil and Base Number (BN) but also makes it easier to monitor the condition of used oils over time.

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.



## Digital Rapid Oil Test Gauge

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

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

Local features include:

- Local display of test instructions
- Memory for 90 tests
- Instant test result evaluation
- Excess water content alarm
- Time stamping of test results
- USB port for downloading results to a computer



## Water Content

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

Free 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, allows for microbial development...

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

### Specifications

Ranges:	0 -1.5%, 0-15000 ppm, 0-15%
Accuracy:	0.05 % H <sub>2</sub> O typical
Test time:	3 minutes typical
Battery life:	2 years typical (user replaceable battery)
Memory:	90 tests including measured data, test evaluation, date and time
Coms:	Mini USB port

## Alkaline Reserve (BN)

The alkaline reserve formulated into engine oils neutralizes the acids produced by the combustion of fuels containing sulphur.

In service, the BN of lubricating oils will fall from its original value.

GESERCO's state of the art Rapid Oil Test Gauge 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.

### Specifications

Range:	0 - 100 BN
Accuracy:	±8 % of new oil BN typical
Test time:	3 minutes typical
Battery life:	2 years typical (user replaceable battery)
Memory:	90 tests including measured data, test evaluation, date and time
Coms:	Mini USB port

## Viscosity (option)

### Test Method

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.

### Specifications

Test philosophy:	Go / No Go
3 visual detection levels:	Red: Alarm Orange: Average Green: Satisfying
Time to test result:	2 minutes
Oil sample required:	5ml

## Sea Water Detection (option)

### Test method

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.

### Specifications

Range:	0 to 5 g NaCl / litre
Accuracy:	0.25 g NaCl / litre
Test time:	10 minutes (+ 1 hour unattended)
Oil sample required:	10ml

## Other Specifications

The tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with compass. The kit includes all accessories, reagents and operating manuals for performing and understanding 50 tests\*.

(\* except sea water detection: 30 tests)

Dimensions:	534 x 427 x 157
Gross weight:	7.500 kg

### Product code:

Water In Oil + BN kit:	MT9030
Sea water test option:	RC9300
ViscoTest option:	VT9004

## About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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 Kit

Mini-laboratory for testing Hydraulic, Turbine, and Industrial Oils

The GESERCO EVI TEST KIT is a true portable lubricants analysis mini laboratory.

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

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

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 equipments and hydraulic circuitries and increasing their lifespan.

(\* option)



### Water Content

#### Test method

The measurement method consists in adding some reagent to the oil sample which will produce a pressure proportional to the amount of water contained in the oil.

The produced pressure is measured by means of a dial pressure gauge or a liquid column volumetric gauge (UltraPreciWaterTest® or PreciWaterTest®).

The dial gauge is graduated with %H<sub>2</sub>O values, allowing for direct read-out of the %H<sub>2</sub>O measurement.

#### Specifications

Range: 0 to 15%H<sub>2</sub>O (extended range to 15%H<sub>2</sub>O)

Accuracy: 5ppm (with UPWT version)

Test time: 5 minutes

Oil sample required: 5ml

### Acidity & Oxidation (TAN)

#### Test method

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.

#### Specifications

Sensitivity: 0.01 mg KOH/g

Test duration: 30 minutes

Oil sample required: 200 to 1200 µl

## Viscosity

### Test method

This test uses a VISCOBILLE® V3T falling ball visco-meter.

The VISCOBILLE® V3T is fitted with samples of Reference Oils to which is compared the oil to be tested. The VISCOBILLE® V3T may also be used for monitoring the level of dilution of the oil sample.

The VISCOBILLE® V3T may be used for testing monograde and multigrade oils, VI100 and VI150, @ 20 °C and @ 40 °C.

### Specifications

VI100 @ 40°C scale:	10 to 400 cSt
VI100 @ 20°C scale:	30 to 1000 cSt
VI150 @ 40°C scale:	10 to 200 cSt
VI150 @ 20°C scale:	30 to 500 cSt
SAE multigrade:	10W30, 15W40, 20W50
SAE monograde:	20, 30, 40, 50

## Sea Water Detection\*

### Test method

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.

### Specifications

Range:	0 to 5 g NaCl / litre
Accuracy:	0.25 g NaCl / litre
Test time:	10 minutes (+ 1 hour unattended)
Oil sample required:	10ml

(\* optional)

## Particles Content Gauging / Sizing

### Test method

The test is performed with a patented POLLUVISION® apparatus which enables filtering the fluid and catching pollutants on a special filtering membrane.

The membrane is then compared using a binocular microscope with reference views which are calibrated to NAS 1638 standard.

### Specification

Determination: size, density and nature of the particles (copper, iron, silica, organic particles, sledge, dust, fibers,...).

Classification: to NAS 1638 standard.

Oil sample required: 100ml

## General Specifications

Portable assembly housed in 4 aluminum and wood cabinets (MT9013 model only).

The EVI kit includes all accessories, reagents, consumables and operating guides which are required for performing 50 complete tests\*.

Total Weight: 30 kg

### Product Code

EVI kit with PWT: MT9013  
EVI kit with WT015: MT9014  
EVI/NH kit with ROTG: MT9015  
Sea water option: RC9100

(\*Except Sea Water Detection -30 tests- and particle sizing/gauging -65 tests-)

## About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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.

## GoTest Test Kit

Portable mini-laboratory for testing Diesel oils

The GESERCO GoTest Test Kit is a true portable Diesel Oil analysis mini laboratory.

The kit is designed for monitoring on site three main characteristics of Diesel oil and verify the conformity of the oil to its specifications:

- Water content
- Viscosity
- Density

The tests are simple and rapid, and allow the engineer to make immediate decisions for maintaining the lifespan of the Diesel engine.



### Viscosity

#### Test Principle

The test uses a model VCD3T falling ball viscometer which allows for instant comparison of the Diesel oil viscosity with Reference Standards of minimum and maximum acceptable viscosity.

The user will then know quickly and simply if the Diesel oil is within acceptable limits.

The kit is delivered with Reference Standards to NF EN 590\*.

#### Specifications

Reference Standard #1:	2.00 mm <sup>2</sup> .s <sup>-1</sup>
Reference Standard #2:	4.50 mm <sup>2</sup> .s <sup>-1</sup>
Required Diesel oil sample:	10 ml
Test time:	3 minutes

(\* other viscosities optional)

### Water in Diesel Oil

#### Test method

The measurement method consists in adding some reagent to the oil sample which will produce a pressure proportional to the amount of water contained in the oil.

The produced pressure is measured by means of a dial pressure gauge.

The dial gauge is graduated with %H<sub>2</sub>O values, allowing for direct read-out of the %H<sub>2</sub>O measurement.

#### Specifications

Primary range:	0 to 0.3%H <sub>2</sub> O
Expanded range:	0 to 6 %H <sub>2</sub> O
Accuracy:	50ppm
Test time:	5 minutes
Oil sample required:	20ml

### Density

#### Test Principle

This test uses a selection of hydrometers which are standardized to NF T60101\* for petroleum products.

#### Measuring range

Kit for DO fuel:	800 – 900 g.l <sup>-1</sup>
Kit for LPFO fuel:	900 – 1000 g.l <sup>-1</sup>
Combo kit (DO+LPFO):	800 – 1000 g.l <sup>-1</sup>

#### Specifications

Division:	0.001
Accuracy:	±0.001
Length:	190mm
Ref. temperature:	15 °C

(\* alternative standards available as an option)

### General Specifications

The tests are housed in an aluminum shock resistant case with internal foam to secure and protect the reagents, instruments and accessories.

The kit includes all accessories, reagents and user instructions required for performing 50 water in Diesel oil tests. The number of viscosity and density tests is not restricted.

Dimensions:	570 x 430 x 106
Gross weight:	7,500 kg
Product Code:	

Kit for DO fuel:	MT9017
Kit for LPFO fuel:	MT9035
Combo kit (DO + LPFO)	MT9036

### About GESERCO

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

Available worldwide, the GESERCO products are applicable to the condition monitoring of mineral, synthetic and bio lubricants and fuels, whether they be 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 5 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 personnel.



### Application

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

Artego Freecor NBI, Artego 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
- Refractometers

### Other Specifications

The tests are housed in an aluminium case, with internal foam to secure and protect the reagents, instruments and accessories, with document holder and compass.

The kit includes all accessories, consumables and test guides for performing the tests.

### About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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™ Test Kit

Portable Mini-Laboratory for Testing Metal Machining Fluids

Jointly developed with  the French Technical Center for Mechanical Industries

The GESERCO MFTest Professional™ Test Kit is a standalone portable mini lab 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.

Tests provided for include:

- Color
- Odor
- Foaming
- Air in fluid emulsion
- Foreign oil presence
- Sludge, sediments and particles presence
- Oil concentration
- pH
- Alkaline Reserve (RA)
- Temperature
- Contamination from aerobic bacteria, fungi and yeasts
- Contamination from sulfate reducing bacteria
- Corrosion protection capability
- Water hardness
- Nitrites
- Nitrates



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

### Test Kit Content

- Kit for sampling, labeling, visually and olfactory inspecting the fluids
- Refractometer for concentration measurement
- pH test strips (200)
- RA test strips (100)
- Aerobic bacteria, fungi and yeasts test (20)
- Sulfate reducing bacteria test (18)
- Corrosion protection capability test (40)
- Water hardness test strips (200)
- NO<sub>3</sub><sup>-</sup> test strips (200)
- NO<sub>2</sub><sup>-</sup> test strips (200)
- Digital thermometer -50~+150 °C ± 0.2 °C

The kit includes all accessories required for undertaking the tests, a detailed test guide, and test documenting and fluid management documents.

### Product Code

<b>Complete MFTest Professional™ kit:</b>	<b>MT9011</b>
Alternate kit : MFTest Premium™:	MT9012
Includes odor, aspect, concentration, pH	
Incubator option for bacteria test:	BA9100
TAN test option, acidity of plain oils:	TA9301
Water content test with PreciWaterTest:	WT9005
Viscosity test with Viscobille® V3T	
falling ball viscometer:	VT9007
Particle content test:	PO9001

### Training Courses

CETIM offers training classes about the monitoring of machining and cutting fluids and their use. These classes are ideal for users wanting to develop a QA, Safety and Environmental Control plan.

CETIM contact: +33 4 77 79 40 42  
<http://www.cetim.fr/en/Services/All-our-services>



### About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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.

# NOTES

# 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.

The GESERCO sampling kits and solutions include everything you need to easily draw, preserve and document a representative and uncontaminated sample.

Housed in a rugged and lightweight case designed for field use, the GESERCO sampling kits contain flexible tubes, sampling pumps, sampling flasks, as well as any accessory required for labelling and documenting the samples and cleaning/drying equipment.



### PR9001 Sampling Kit

Rugged and lightweight kit including:

- 50 ea. 150 ml PH35 HD sampling flasks
- 1 roll of 25 m polyamide flexible tube
- 1 ea. 200 cc PMMA sampling pump with non adhesive soft silicon seal
- T connector with vacuum connector for connecting to the sampling flask
- 1 cleaning kit (cleaning gas cylinder, solvent dispenser, beaker, cleaning cloth)
- 1 sample documenting and labelling kit
- Operating manual

### PR9002 Sampling Kit

Rugged and lightweight kit including:

- 15 ea. 150 ml PH35 HD sampling flasks
- 1 roll of 25 m polyamide flexible tube
- 1 ea. 200 cc PMMA sampling pump with non adhesive soft silicon seal
- 1 cleaning kit (cleaning gas cylinder, solvent dispenser, beaker, cleaning cloth)
- 1 sample documenting and labelling kit
- Operating manual

### PR9003 Sampling Kit

Rugged and lightweight kit including:

- 24 ea. 240 ml HDPE sampling flasks
- 1 roll of 25 m polyamide flexible tube
- 1 ea. Aluminum vacuum sampling pump
- 1 cleaning kit (cleaning gas cylinder, solvent dispenser, beaker, cleaning cloth)
- 1 sample documenting and labelling kit
- Operating manual

### Options

- Vacuum sampling kit with electric vacuum pump
- High pressure sampling kit for MINIMESS 16x150 and 16x200 sampling ports including flow restrictor
- Circuitry sampling kit according to NF E 48 650 standard

### Other Sampling Equipment

- 60, 100, 150 250, 500 and 1000 cc sample flasks
- 50, 100, 200 and 300 cc PMMA sampling syringes
- 2 to 300 cc PP/PE sampling syringes



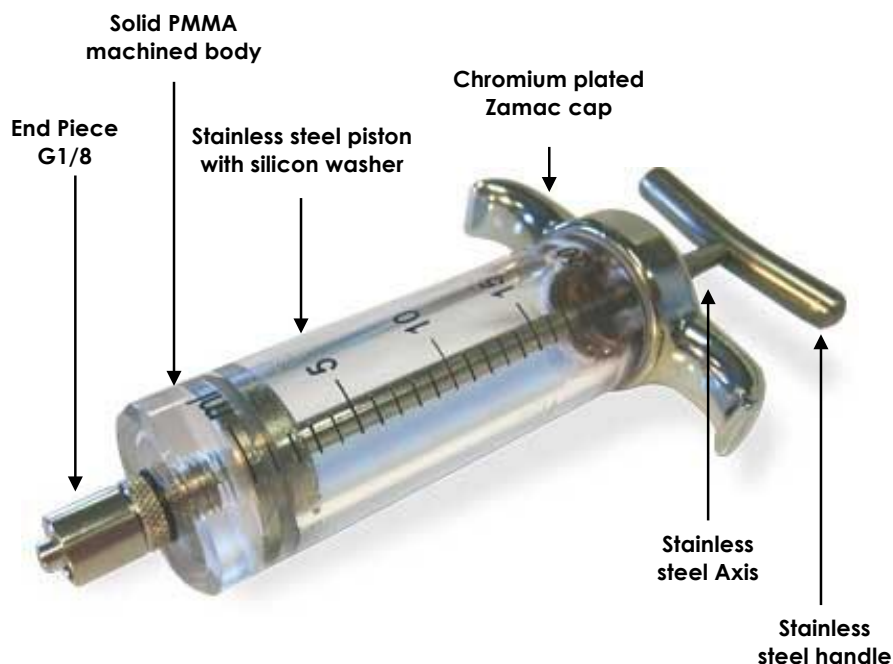
### About GESERCO

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

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

# Sampling Syringe

Sampling for lubricants, fuels, solvents



## Specifications

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

Flat, beveled silicone washers, extra strong, water resistant, nonstick, providing a perfect washer and smoothly sliding piston.

PMMA:

**STANDS** - Carbon tetrachloride

**DOES NOT STAND:**

- Ethyl Alcohol
- Turpentine
- Acetone
- Chloroform
- Petrol
- Ether

## Description

Piston:

Stainless steel

Washer:

Flexible silicone, 50 shore hardness – non-stick, hydrophobic, stands many high tempered sterilizations in damp or dry heat.

Cap:

Chrome-plated and molded Zamac.

Axis:

Stainless steel 18/8 chrome-plated brass quality.

Handle:

Stainless steel

## About GESERCO

Since 1973 GESERCO designs and manufactures a fully comprehensive range of rapid lubricant 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 sampling kits for drawing oil to be analyzed

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 Codes

Description	Code
60 ml kit	PR9013
100 ml kit	PR9011
150 ml kit	PR9014
250 ml kit	PR9012
500 ml kit	PR9015
1000 ml kit	PR9016

*Includes: 1 HDPE flask with screw caps, 1 PE/PP syringe, 50 cm PA flex tube, 1 label, 1 zip pouch.*

### Other Sampling Accessories

- Flasks 60, 100, 150, 250, 500 & 1000 cm<sup>3</sup>
- PP/PE syringes, 2 to 300 cm<sup>3</sup>
- PMMA syringes, 50, 100, 200 cm<sup>3</sup>



### Other Sampling Kits

- Vacuum sampling kits with power vacuum pump
- High pressure sampling kits for MINIMESS 16x150 and 16x200 ports, with flow restrictor
- On line sampling kits to NF E 48 650 standard
- Digital and alcohol-filled thermometers

### Sampling Combo Kits

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: flex tube, pump, flasks, as well as documenting, labeling and cleaning accessories.

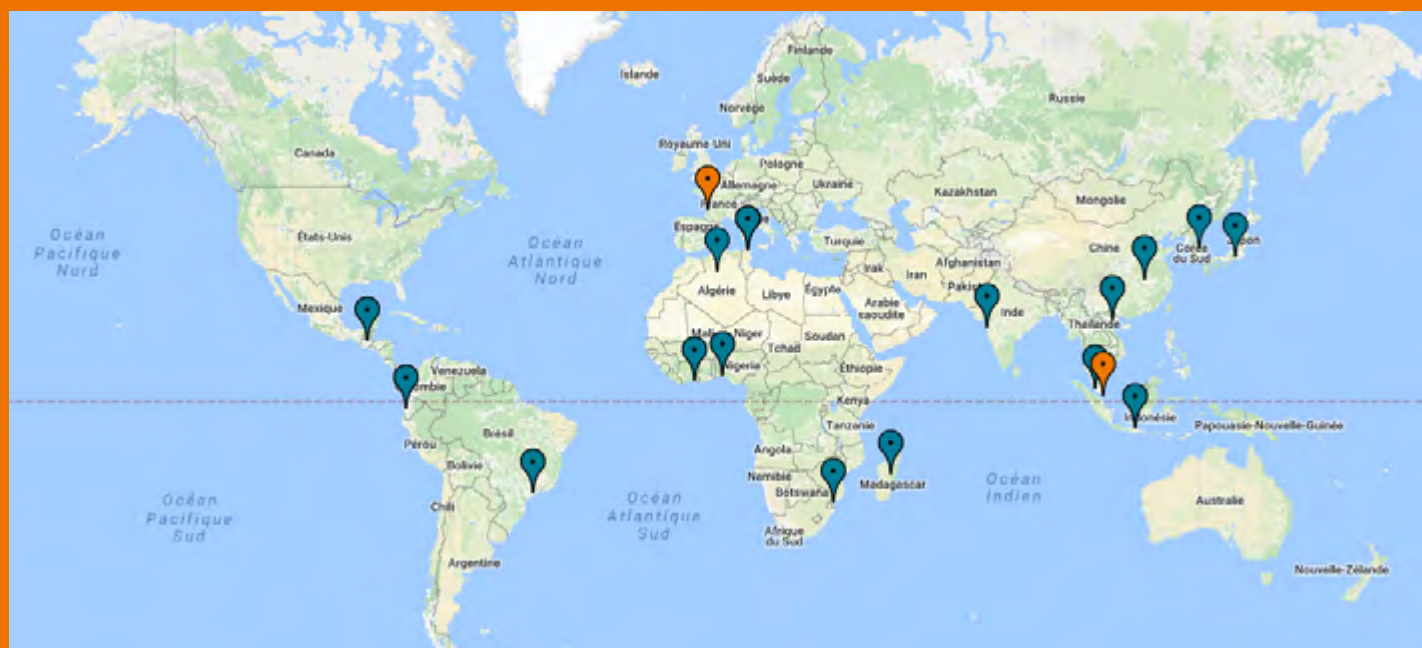


### About GESERCO

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

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





**NUMBER 1  
IN LUBRICANT CONDITION  
MONITORING TECHNOLOGY**

16 RUE FRANÇOIS ARAGO | 33700 MERIGNAC | FRANCE

TEL : +33 5 56 34 92 29 | FAX : +33 5 56 34 95 44

CONTACT@GESERCO.FR | WWW.GESERCO.FR

R.C.S. BORDEAUX 732 045 687 | SIRET 732 045 687 00033 | APE 4669B

TVA FR37 732 045 687