

An Overview of WearCheck Oil Analysis Services



the oil speaks.
wearcheck listens.

A photograph of laboratory equipment, specifically a multi-well plate reader or similar instrument, with several test tubes containing pink liquid in the wells.

WearCheck International
WebCheck
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OEM Programs
Fleet Programs
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wearcheck international



five decades of experience behind our name

WearCheck is a group of independent laboratories, spanning the globe, dedicated to oil and wear particle analysis. Each member country belongs to WearCheck International (WCI).

our mission

"WearCheck is committed to remain the worldwide leader in oil and wear particle analysis. Our mission is to continually improve all aspects of our business operations so that we may provide the best service possible to our customers. We understand that in order to provide the best service, requires the use of the most modern, and state of the art analytical instrumentation, and recognized standard testing methods and procedures. We will establish and maintain a continuous quality improvement program that is second to none, and create a work environment that enhances learning, innovation, and excellent communication among our employees and customers."



The leader in oil analysis

WearCheck International

Africa, Australia, Europe, North America, South America



The leader in oil analysis

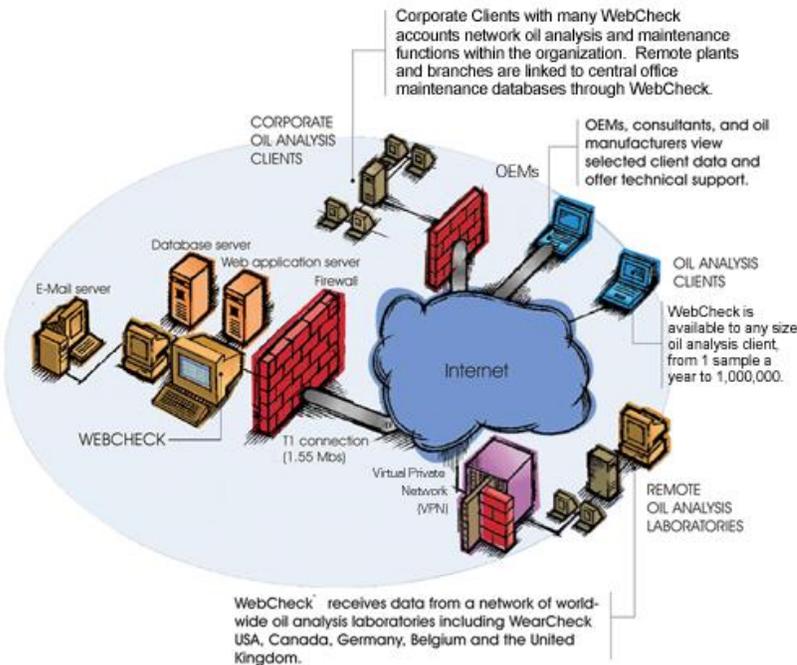
@ Oil Analysis Client Extranet

Conquer your biggest maintenance challenges

Different sites, different departments, different responsibilities?
Collaborate in one common maintenance workplace.
Different maintenance systems, different maintenance databases?
A common maintenance workspace.
Overload of oil analysis data, poorly organized program, no follow up?
A system to track your oil analysis program.

Maintenance management made easy.

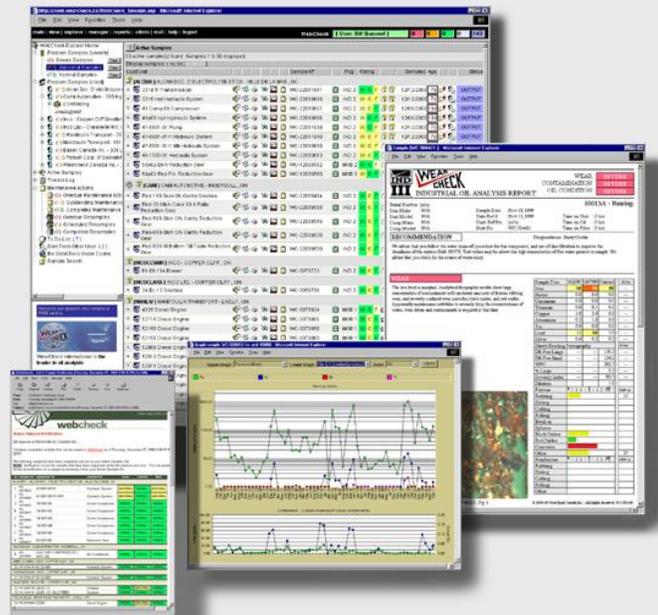
WebCheck® uses your Internet browser to give you access to your sample data. Log on to a secure Web site, search, and track your oil analysis samples, and print sample and management reports all from your Web browser.



WebCheck allows clients, OEMs and laboratories to work together in a collaborative environment.

With WebCheck you can

- schedule maintenance actions
- manage your equipment
- take and confirm maintenance actions
- review oil analysis results
- generate management reports
- effectively manage your oil analysis program



View oil analysis sample reports, test results, trending graphs as well as recommendations.

Custom Logo Kits & Reports

YOURNAMEHERE
MOBILE OIL ANALYSIS REPORT

CONTAMINATION WEAR: **SEVERE**
OIL CONDITION: **NORMAL**

52110 - Diesel Engine

Unit Make : 1998 Navistar
Unit Model : 9200 DC
Comp Make : Caterpillar
Comp Model : C-10

Serial No : 8YS02089
Cust Ref No : (n/a)
Stub No : WC-0079921

Date Rec'd : Jan 3, 2001
Sample Date : Dec 28, 2000
Diagnostician : D.Muht

RECOMMENDATION

We advise that you check for the source of the coolant leak. We

Customer File Stub

RGA / Job No: _____ Unit Id: **YNH 01234567**

Serial No: _____

Date Made: _____

Sample Taken By: _____

Inquiries: (US) 1-800-237-1389 / (CAN) 1-800-288-2131

501 Madison Avenue
Cary, NC 27513
1-800-237-1389
(919) 379-4102
Fax (919) 379-4050

4161 Starview Cres., Unit 13
Mississauga, ON L5L 5R3
Canada
1-800-288-2131
(905) 608-8000
Fax (905) 569-8005

DEALER NAME: _____ LOCATION: _____

EQUIPMENT OWNER: _____

ADDRESS: _____

CITY/STATE/PROV: _____ ZIP/POSTAL CODE: _____

ATTN: _____

PHONE () _____ FAX () _____

Make / Model: _____ MIC Hours: _____

Serial No: _____

RGA / Job No: _____

Unit Id: _____

Sample Date	8/7/00	10/2/00	11/7/00	Current	UOM
Time on Unit	251882	2709164	283019	299740	hrs
Time on Oil	19621	9018	12103	16721	hrs
Time on Ftr	19621	9018	12103	16721	hrs
Oil Maint.	Changed	Changed	Changed	Changed	---
Filter Maint.	Changed	Changed	Changed	Changed	---

Sample Date	8/7/00	10/2/00	11/7/00	Current	Abn
Silicon	38	36	50	29	15
Potassium	106	779	765	232	10
Sodium	135	1270	1406	740	50
Fuel (%)	<2.0	<2.0	<2.0	<2.0	2.0
Glycol (%)	0.0	0.20	0.0	0.12	0.02
Water (%)	<0.1	<0.1	<0.1	<0.1	0.1
Soot (%)	0.9	0.8	0.7	0.3	2.0
Sulfation	68	53	44	70	100
Nitration	64	64	36	91	100

Sample Date	8/7/00	10/2/00	11/7/00	Current	Abn
Iron	10	87	40	26	---
Nickel	0.0	0.0	0.0	0.0	---
---	---	---	---	457	---
---	---	---	---	6.5	---
---	---	---	---	1.5	---
---	---	---	---	0.7	---

Advanced Oil Analysis Kits

TC-M082-12
Quantity 12

WearCheck can provide customized oil analysis programs to meet our clients requirements. Your program will include a customized Sample Information Form (SIF), oil analysis sample report, and sample kits featuring your logo and program name.



WearCheck Private Label Programs offer recognized companies a value-added service;

A WearCheck private label program provides oil companies, original equipment manufacturers (OEMs), product distributors, service providers and private corporations with a means to include oil analysis as part of their service offering, while simultaneously providing a strong marketing edge through a brand-recognized value-added service.

Contact WearCheck today to find out how your company can begin offering your clients an oil analysis program using your established brand. All backed up by WearCheck's strong international reputation for oil analysis excellence.

WearCheck currently provides over 100 branded programs for oil companies, original equipment manufacturers (OEMs), product distributors, service providers and private corporations.



WebCheck OEM Module

WebCheck makes warranty program administration easy by providing the tools that allow the OEM administrator to register, manage and track equipment under warranty.

WearCheck will tailor an OEM warranty program to meet your needs. From a customized branded program featuring your OEM logo on the Sample Information Form (SIF), Sample Report, and a customized OEM Administrator module within WebCheck. WearCheck brings OEM warranty program administration into the new millenium, by giving appointed OEM Administrators the tools to register, manage, and track equipment on a warranty-based oil analysis program.



WebCheck gives OEMs the tools to manage their warranty programs;

On-Line Warranty Registration – Allows the OEM administrator to generate an equipment registration. New registrations automatically trigger WearCheck to send out sample kits with pre-printed sample labels for the new warranty.

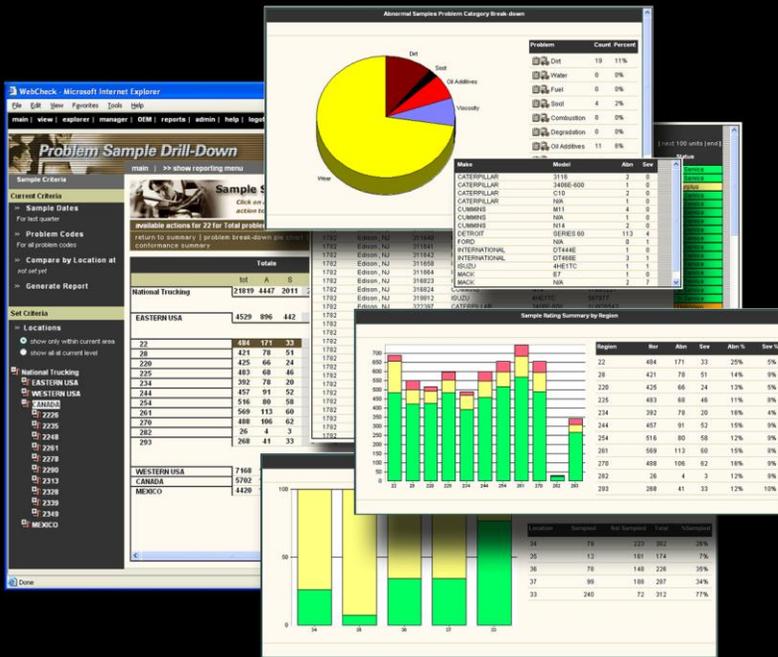
Dealer Management – Allows the OEM administrator to add and modify equipment dealer information.

Model Management- Allows the OEM administrator to add or modify equipment models including sub-components and warranty sampling hours.

Warranty Tracking – Allows the OEM administrator to immediately determine the condition of the equipment and conformance to the warranty sampling program of any warranted unit.



WebCheck Management Reporting Module and Problem Sample Drill-Down



WebCheck makes managing a large fleet oil analysis program simple by providing detailed dashboards with drill-down capabilities. Everything a Fleet Manager requires to identify oil related problems quickly and easily.



Your fleet represents a large investment, and sometimes the difference between profit and loss depends on keeping operating costs **low**. Knowledgeable owners understand the benefit of proper maintenance and care of equipment. WearChecks's oil analysis service detects abnormal equipment condition before that equipment runs into costly repairs and provides the fleet manager with the tools to schedule corrective action before the need for costly repairs.



WebCheck gives Fleet Managers the tools to manage their oil analysis program;

Automatic Kit Re-stocking – Fleet Managers have the option of allowing WearCheck to automatically stock all depots when sample volumes fall below a predefined quantity.

Automatic Problem Sample Notification – WebCheck e-mail sample notifications provide instant updates on problem units. This coupled with the collaborative abilities of WebCheck allow monitoring of any number of branch locations distributed across North America.

Problem Sample Drill-Down- Allows Fleet Managers to monitor the overall health of their distributed fleet by summarizing oil sample reports into a dashboard with detailed drill-down capabilities.

laboratory overview



At WearCheck, oil analysis is not simply an add-on service. It is a partnership with the client encompassing analysis, interpretation and training, with each element being an integral part of the whole.

WearCheck's holistic approach to oil analysis demands the highest technological standards and the highest caliber of suitably qualified and experienced staff. This quest for excellence is reflected in each organization's level of quality.

Routine Oil Testing Methods

Metals by ICP Analysis	ASTM D5185
Viscosity Automatic Method	ASTM D445
Particle Count	ISO 4406:1999
Water by Karl Fischer	ASTM D6304
Acid Number (AN)	ASTM D664
Base Number (BN)	ASTM D4739
Fuel Dilution in Oil	ASTM D3524
Glycol Contamination in Oil	ASTM D2982
Soot level in Oil	JOAP-TSC
Oxidation level of Oil	JOAP-TSC
Sulfation/Nitration level of Oil	JOAP-TSC

Non-Routine Oil Testing Methods

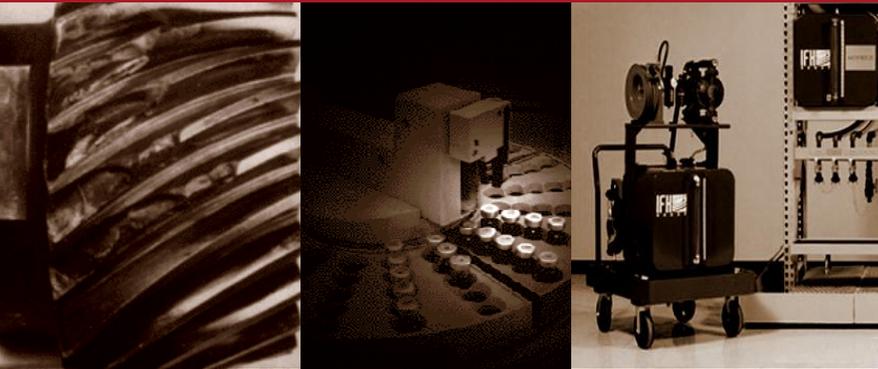
Flash/Fire Point of Oil	ASTM D92
Pour Point of Oil	ASTM D97
Cloud Point of Oil	ASTM D2500
Pentane Insolubles	ASTM D4055

Other Testing Capabilities

Analytical and Direct-Reading Ferrography
Coolant Analysis
Diesel Fuel Analysis
Brake Fluid Analysis

This is only a partial test method list and does not comprise our full analytical capabilities. If you have any other testing requirements, please contact us.





Lubricant Management

- What is Lubricant Management
- Goals of the Lube Audit
- Implementing a Lubricant Management Program
- Lube Survey
- Selecting an Oil Vendor
- Rating Your Current Lube Practices
- Developing Lubrication Policies and Manual
- Lubricant Storage and Delivery
- Safety, Cleanliness and Disposal
- Oil Related Problems
- New Oil Cleanliness
- Mixing of Oils
- Lubricant Shelf-Life
- Machine Ingress Control
- Oil Reclamation

Lubricant Fundamentals

- Mineral oil refining
- synthetic oils
- oil additives
- classification of oils
- Functions of Lubricating Oil**
- Lubrication films
- Lubricated system wear modes
- Overheating of lubricated systems
- Common oil contaminants

Fundamentals of Oil Analysis

- Oil Analysis tests for Contamination
- Oil Analysis tests for Lubricant Degradation
- Oil Analysis tests for Wear

Managing an Oil Analysis Program

- Benefits and Goals of Oil Analysis
- Setting up an OA Program
- Purchasing OA Test Kits
- Taking Oil Samples
- Reviewing Sample Results
- Taking and Reviewing Corrective Actions
- Monitoring the Progress of your OA Program



WearCheck provides a range of training courses covering oil & wear particle analysis, lubrication management, WebCheck and the management of an oil analysis program.

Courses are conducted regularly at the laboratories, however, customers can bring an oil analysis and/or WebCheck training course on-site to their facility. On-site training courses can be customized to meet a customer's specific training requirements.

A current training schedule can be found at:

<http://www.wearcheck.com/services/training.asp>



All WearCheck training programs make use of detailed color slides, and participant course materials include a comprehensive training manual.

contacting wearcheck



North America

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f: +1(905)569-8605

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9 le Mans Place, Westmead, SA
p: +27 (31) 7005460
f: +27 (31) 7005471

WearCheck will help you start your oil analysis program with a minimum of delay. Start realizing a return on your oil analysis investment by letting WearCheck design an effective program for you today.



General Enquiries

Web site www.wearcheck.com
Web contact info.sales@wearcheck.com
WebCheck www.oilanalysis.net

Membership in WCI

If you are interested in joining the WearCheck International group contact:

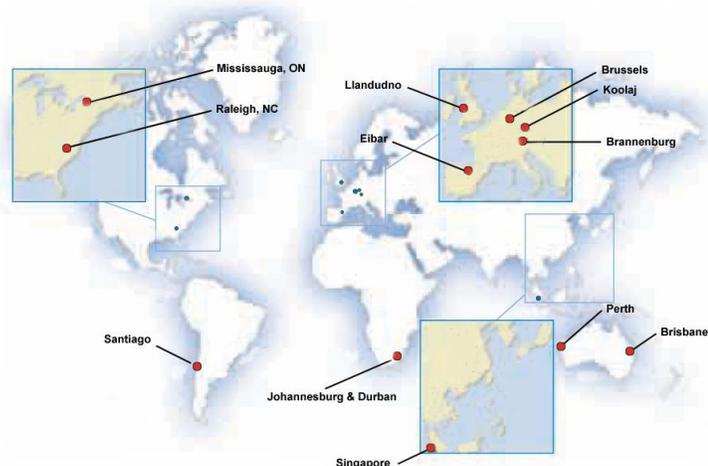
wci.membership@wearcheck.com

You can download a registration form from the following site:

<http://www.wearcheck.com/aboutus/organization.asp>

WearCheck International holds an annual meeting each spring/summer in a selected member country. If you are interested in meeting with WCI please send a request to:

wci.meeting@wearcheck.com



This brochure is available on-line at:

<http://www.wearcheck.com/literature/brochures/wci.pdf>