

POWER GENERATION MARKET

Energy

TRIBO-LABS will help you
increase your company's
profitability.

Lubricants, greases and coolants under control, backed by **TRIBO-LABS**,
our lubricant analysis laboratory.

The analysis of **lubricants, greases and coolants** is now a key factor in the optimal performance of power generation plants, which makes monitoring and controlling their fluids essential. It increases the reliability of generators in thermal, wind, hydroelectric and ocean power plants.

It has been shown that 70% of rotating equipment failures are caused by contaminated lubricants. That is why fluid monitoring and control are key to increasing your company's returns and profitability.

At **TRIBO-LABS** we help you identify the right test for your equipment and issue reports with recommendations and solutions to improve its reliability.

70% of rotating equipment failures are caused by contaminated lubricants.



How it **works**



01

Take the sample with the system running at operating temperature.



02

Fill out the TRIBO-LABS form for the corresponding test.



03

Send the sample to the laboratory for analysis.



04

TRIBO-LABS logs and analyzes the sample and generates an e-report.



05

You receive the report by email and review the recommendations.



24-48 h

Turnaround time once the sample is logged.

Benefits of **fluid analysis**

- ✓ Fluid quality maintained
- ✓ Longer equipment life

- ✓ More equipment uptime
- ✓ Higher profitability

- ✓ More reliable assets
- ✓ Fewer unplanned shutdowns

TRIBO-LABS test packages



Diesel engines & generators

DIESEL FUEL ANALYSIS

TRIBO 5 Basic diesel fuel test

Sample volume: 1 L

- Elemental analysis by ICP ASTM D5185
- Water and sediment ASTM D2709
- Bacteria, fungi and mold manufacturer
- ISO particle count ISO 4406:99
- Pensky-Martens flash point ASTM D3828

TRIBO 6 Advanced diesel fuel test

Sample volume: 1 L

- Elemental analysis by ICP ASTM D5185
- Pour point ASTM D7346
- Water and sediment ASTM D2709
- Bacteria, fungi and mold manufacturer
- Thermal stability ASTM D6468
- Viscosity ASTM D445
- Sulfur (ppm) ASTM D7220
- FBT ASTM D2068
- Flash point ASTM D3828
- Cetane index ASTM D976
- Cloud point ASTM D7689
- Distillation ASTM D7345
- ISO particle count ISO 4406:99
- Copper strip corrosion ASTM D130



OIL ANALYSIS

TRIBO 4 Engine oil test

Sample volume: 100 ml

- 24 elemental metals by ICP ASTM D5185
- Viscosity at 100 °C ASTM D445
- Fuel dilution % ASTM D7593
- Soot % ASTM E2412
- Water % by crackle in-house method
- Base number ASTM D4739
- Oxidation / Nitration ASTM E2412

COOLANT ANALYSIS

TRIBO 8 Coolant test

Sample volume: 100 ml

- Visual: color, oil and/or fuel contamination, precipitate, odor, foam, magnetic / non-magnetic in-house method
- pH ASTM D1287
- Glycol % (ethylene or propylene)
- Freezing point ASTM D3321
- Boiling point in-house method
- Nitrite in-house method
- TDS (total dissolved solids)
- Specific conductance in-house method
- SCA # in-house method
- Total hardness in-house method

Turbines

TRIBO 2 Advanced industrial oil test

Sample volume: 100 ml

- 24 elemental metals by ICP ASTM D5185
- Water % by Karl Fischer ASTM D6304C
- Viscosity at 40 °C or 100 °C ASTM D445
- Acid number ASTM D664
- Oxidation / Nitration ASTM E2412
- ISO particle count ISO 4406:99

TRIBO 3 Advanced turbine oil test

Sample volume: 1 L

- 24 elemental metals by ICP ASTM D5185
- Water % by Karl Fischer ASTM D6304C
- Viscosity at 40 °C or 100 °C ASTM D445
- Acid number ASTM D664
- Oxidation / Nitration ASTM E2412
- ISO particle count ISO 4406:99
- RPVOT ASTM D2272
- Water separability characteristics
- RULER (LSV, % phenols / amines) ASTM D6971
- Foam in-house method
- Copper corrosion, 3 h at 100 °C ASTM D130
- Flash point ASTM D92
- Color ASTM D6045
- Viscosity index ASTM D2270
- Pour point in-house method
- Density at 15 °C ASTM D7777

Hydraulic systems & compressors

TRIBO 1 Basic industrial oil test

Sample volume: 100 ml

- 24 elemental metals by ICP ASTM D5185
- Water % by crackle in-house method
- Viscosity at 40 °C or 100 °C ASTM D445
- Acid number ASTM D664
- Oxidation / Nitration ASTM E2412
- ISO particle count ISO 4406:99

TRIBO 2 Advanced industrial oil test

Sample volume: 100 ml

- 24 elemental metals by ICP ASTM D5185
- Water % by Karl Fischer ASTM D6304C
- Viscosity at 40 °C or 100 °C ASTM D445
- Acid number ASTM D664
- Oxidation / Nitration ASTM E2412
- ISO particle count ISO 4406:99

Gear systems

TRIBO 1 Basic industrial oil test

Sample volume: 100 ml

- 24 elemental metals by ICP ASTM D5185
- Water % by crackle in-house method
- Viscosity at 40 °C or 100 °C ASTM D445
- Acid number ASTM D664
- Oxidation / Nitration ASTM E2412
- ISO particle count ISO 4406:99

For more information,
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