Tribo-Lab
FLUID ANALYSIS AND TRIBOLOGY SERVICES

VeneFilter
Absolute Filtration

EQUIPMENT ANALYSIS

Turbines



The right monitoring frequency ***improves*** your generating unit's ***results.***

> Turbines are key to power generation. ***TRIBO-LABS*** helps you set the right monitoring frequency based on model, application, environment and equipment age.

Turbines are very important, expensive, high-precision equipment, key to power generation and to sophisticated systems such as aircraft turbines. Scheduling their maintenance improves the results of any generating unit.

Oil drains on generating turbines and turbomachinery are especially costly, because other producers must cover the gap in the grid. That is why it is essential to extend drain intervals safely and catch problems early.

We recommend ***TRIBO 2*** for a routine program and ***TRIBO 3*** for complete monitoring. Routine testing is set every 500 h, depending on model, application, environment and equipment age; our specialists will help you adjust it.

Water is the main problem in hydro and steam turbines. In gas turbines, the main problem is contamination from absorbed dust, wear metals and lubricant degradation products.

TRIBO-LABS

Extend drain intervals *safely* and catch problems early.

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.

48–72 h
Turnaround time once the sample is logged.

TURBINES

TRIBO-LABS test packages

ROUTINE PROGRAM

TRIBO 2 Advanced industrial oil analysis 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

COMPLETE MONITORING

TRIBO 3 Advanced industrial oil test "TURBINES"

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 ASTM D1401
- 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

Standard *monitoring frequency*

250 h Gas turbines

500 h Steam turbines

Standard frequency for gas and steam turbines. Our specialists will recommend the ideal monitoring frequency based on the industry and application. As a general rule, the frequency shown is the standard parameter.

For more information, contact us:

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