



SGS OIL, GAS AND CHEMICALS
TRANSFORMER OIL ANALYSIS

SGS

TRANSFORMER OIL ANALYSIS

SGS provides in depth analysis of transformer oils, using state-of-the-art laboratory instruments and certified technicians. The tests listed are designed to assist you in maintaining your transformer oil.

Transformer Oil is used to both cool the transformer and to insulate internal components. Because it bathes every internal component, the oil contains a great deal of diagnostic information. Our laboratory analysis of the transformer fluid can provide advance warning of developing conditions such as contamination and arcing.

Testing can include:

DISSOLVED GAS ANALYSIS ASTM D-3612 (REPORTED IN PPM)

- Oil Temp – C
- Hydrogen – H₂
- Methane – CH₄
- Ethane – C₂H₆
- Ethylene – C₂H₄
- Acetylene – C₂H₂
- Carbon Monoxide- CO
- Carbon Dioxide – CO₂
- Nitrogen – N₂
- Oxygen – O₂

OIL SCREENING ANALYSES

- Acid Number ASTM D-974
- Appearance HL-1121
- Color ASTM D-1500
- Specific Gravity ASTM D-1298
- Dielectric Strength ASTM D-877
- Interfacial Tension ASTM D-971
- Power Factor @ 25C ASTM D-924
- Power Factor @ 100C ASTM D-924
- Water by Karl Fischer ASTM D-1533

GENERAL TRANSFORMER OIL TESTING

- Acid Number ASTM D-974
- Appearance ASTM D-1121
- Color ASTM ASTM D-1500
- Copper Corrosion by Copper Strip SEE

ASTM 1275 ASTM D-130

- Density by Digital Density Meter ASTM D-4052
- Density, Relative Density (Specific Gravity) ASTM D-1298
- Dielectric Breakdown of Insulating Oils ASTM D-1816
- Dielectric Strength of Insulating Oils ASTM D-877
- Dissolved Gas Analysis (DGA) ASTM D-3612
- Filter Patch Test HL-1142
- Flash & Fire Point by Cleveland Open Cup ASTM D-92
- Flash or Fire Point by Cleveland Open Cup ASTM D-92
- Furanic Compounds (Cellulose Degradation) ASTM D-5837
- HIAC Particle Count HL-1184
- HMB Biomass Culture Study HL-1161
- Interfacial Tension ASTM D-971
- Metals by ICP (24 Elements) HL-1158
- Metals by ICP Additional Elements (each) HL-1158
- Microbial Growth HL-7687
- Oxidation Inhibitor (DBPC / DBP) ASTM D-2668
- Oxidation Stability (pressure vessel) ASTM D-2112
- PCB Screen (A), PCB Level (B) HL-1147
- Pour Point ASTM D-97
- Power Factor @ 100C ASTM D-924
- Power Factor @ 25C ASTM D-924
- Power Factor @ 25c and 100C ASTM D-924
- Refractive Index ASTM D-1218
- Resistivity ASTM D-1169
- Viscosity at 100F -SUS ASTM D-445
- Viscosity, Kinematic 40C cSt ASTM D-445
- Viscosity, Special Temperature ASTM D-445
- Water by Karl Fischer ASTM D-1533

SAMPLE SYRINGES

- Sample syringes are available with 3 way valves and plugs along with 32 oz bottles for sampling.



SAMPLING TRANSFORMER OILS

Detailed sampling instructions can be found in the American Society of Testing and Materials (ASTM) Standard Book Volume 10.03. These standard practices are available through SGS or www.astm.org.

SGS is the world's leading inspection, verification, testing and certification company. Recognized as the global benchmark for quality and integrity, we employ over 85 000 people and operate a network of more than 1 800 offices and laboratories around the world.

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