

Lube Oil / Lubricating Oil Analysis



Lubricating oil examination is a routine practice for evaluating oil contamination, oil health and machine health. Effective analysis of Lubricating Oil can determine the impurities and changes that can adversely affect machine health and reliability.

Characteristic kinds of oil impurities consist of water, fuel, air, soot debris such as engine section wear particles. All of these can result in the deterioration of the engine lubricant. The occurrence of these solid impurities in engine oils results in increased friction coefficient, wear and frictional power losses, aggravating the surface roughness.

Ideally the equipment execution starts with regular lube oil analysis. Accurate and reliable results can retain high levels of machines performance.

Optimal equipment performance starts with consistent machinery fluid testing and analysis. TUV India thus comes in picture to help to determine the operating efficiency of your machines.

TUV India's Lubricating Oil Analysis Services empowers you to:

- Effectively assess equipment and lubricant condition
- Eliminates breakdowns
- Improves equipment reliability
- Saves spare and replacement cost
- Boosts productivity 1999/IS 14861: 2000 GC Analysis)

Recommended tests for various type of lubricating oil are:

Test Parameters	Testing Methods
Appearance	ASTM E2680
Water Content	ASTM D6304, ASTM D95 & ASTM D1533
ASTM Colour	ASTM D1500
Density	IS 1448 (Part-16) / ASTM D1298 & ASTM D4052
Flash Point	IS 1448 (Part-69 & Part-21) / ASTM D92 & ASTM D93 / ISO 2592 & ISO 2719
Pour Point	IS 1448 (Part-10) / ASTM D97 / ISO 3016
Sulphur Content	ASTM D4294 & ASTM D5453 /ISO 8754
Total Chlorine	ASTM D4929, D6443 & IP 510
Glycol Content	ASTM D4291
PCB Content	ASTM D4059 & D6160
Kinematic Viscosity (KV)	IS 1448 (Part-25) / ASTM D445/ ISO 3104
Viscosity Index	IS 1448 (Part-56) / ASTM D2270
Acidity	IS 1448 (Part-2)
Total Acid Number (TAN)	IS 1448 (Part-1) / ASTM D974, D664 & D3339 / 139

Test Parameters	Testing Methods
Total Base Number (TBN)	ASTM D2896 & D4739 & D5984 / IP139
Carbon residue Ramsbottom	IS 1448 (Part-8) / IP 14
Conradson Carbon Residue	ASTM D189
Micro Carbon Residue	ASTM D4530
Ash	IS1448 (Part-4) / ASTM D482
Sulphated Ash	ASTM D874
Water separability (demulsibility)	ASTM D1401
Soot (FTIR)	ASTM E2412 & D7844
Foam Tendency/ Stability	IS 1448 (Part-67)
Oxidation Stability	IS 1448 (Part-106) / IP 280
Sulphation (FTIR)	ASTM D7415 & E2412
Nitration (FTIR)	ASTM E2412
Nitrogen Content	ASTM D4629 & D5762
Copper Strip Corrosion	IS 1448 (Part-15) / ASTM D130
Rust Preventing Characteristics	IS 1448 (Part-96)
Heptane/ Toluene Insoluble	ASTM D893
Wear metals and additive Elements (Mg, Na, Ba, Cu, B, Pb, Mn, Ni, Al, As, Cd, Ca, Fe, P, Zn, Cr, Sn, Si, V and other trace elements)	ASTM D5185
Particle Count (NAS Value)	ISO 4406/ NAS 1368
Analytical Ferrography	ASTM D7690

About Us:

TUV India Pvt. Ltd. (TÜV NORD GROUP) is a customer-focused, innovative, and independent, technical, quality & safety services organization, dedicated to providing future-proof solutions through technological excellence for the success of its customers with the highest level of integrity. With a presence at over 40 strategic locations in India; a branch office in Sri Lanka and Bangladesh; state-of-the-art laboratories at Pune, Bengaluru, Noida and Jamnagar; 100 important countries worldwide and through digital means, we are always connected to you, our esteemed customer, anywhere, anytime.

We are proud to provide increasing levels of services to the best known, largest global and national companies as well as medium and small industries in diverse sectors like Oil & Gas, Petro-chemical, Nuclear, Renewables, Infrastructure, Food, Power, Manufacturing, Chemicals, Pharma, Paper, Automobiles, Railways, Aerospace, Defence, IT, Health, Hospitality, Retail, etc.

Over 1400 competent and experienced TUV India experts spread across India and over 14000 TÜV NORD experts all over the world, enthusiastically support our clients by providing value-added services in Industry Inspection, European / International Approvals, Management System & IT Certification, Sustainability, Energy Audit, Water Audit, Carbon Services, Building Infrastructure & PMC, Renewable Energy, Food & Packaging Testing, Food Certification & Inspection; Testing of restricted and banned chemicals in Automotive and Electrical & Electronics components and other regulated industries, Product Testing – Electricals, Electronics and Industrial Machinery; Product Certification; Petroleum, Chemicals & Gas Cargo Inspection; Petroleum, Chemicals & Gas Testing; Railway Technology; Engineering, Safety Studies, and knowledge enhancing training programs under TUV India Training Academy.

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Testing Laboratory Presence at Other Locations

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