



ATLAS LAB

Setting the standard

LUBE OIL TESTING BROCHURE

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Lube Oil Analysis

Benefits of Used Oil Monitoring System

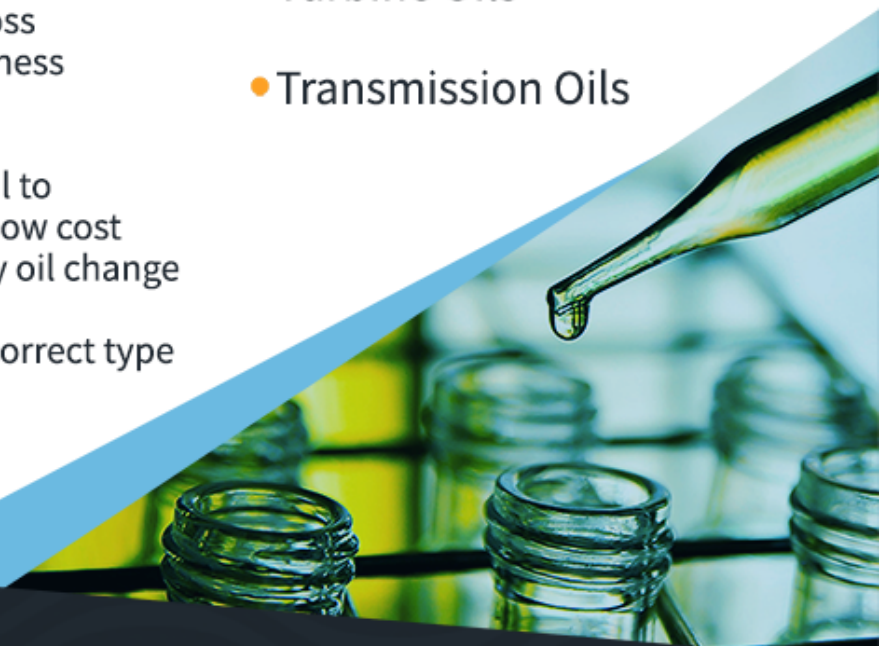
- Stop costly abrasion and wear
- Spot coolant leaks
- Detect and measure fuel dilution
- Verify warranty problems
- Spot operator abuse
- Spot oil degradation
- Monitor air filtration systems
- Determine your best oil change intervals
- Extend equipment life
- Increase equipment trade-in value
- Stop progressive damage and breakdowns

Why Oil Analysis?

1. **Analysis for wear metals** to provide an indication of the mechanical condition of the unit and allow early detection of faults
2. **Physical testing** to detect the presence of contaminations which can indicate problems (eg. Fuel or water in engine oil and/or cross contamination of lubricants) Test cleanliness of oils to **ISO 4406** and **NAS 1638**
3. **Assessment of the condition** of the oil to estimate its remaining service life and allow cost effective top up rather than an unnecessary oil change
4. **Analysis of the oil** to ensure that the correct type and grade have been used and that the appropriate additives are present

Lube Oils tested by Atlas Lab:

- Engine Oils
- Auxillary Engine Oils
- Gear Oils
- Hydraulic Oils
- Turbine Oils
- Stern Tube Oils
- Compressor Oils
- Quenching Oils
- Turbine Oils
- Transmission Oils

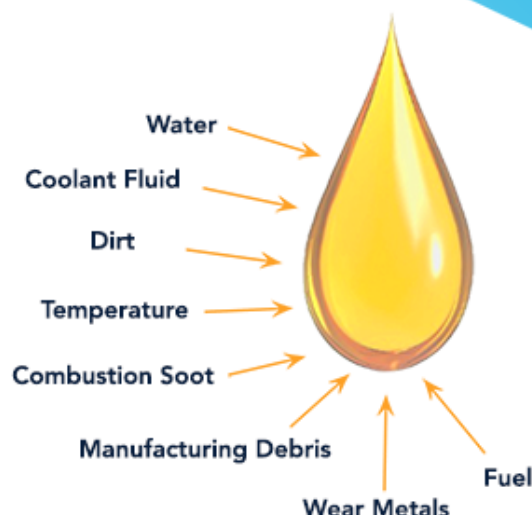


Analysis for Wear Metals

- Avoids catastrophic failure of a machine
- Prevents costly downtime with resulting inconvenience
- Allows for preventative maintenance to be carried out
- Avoids the need for expensive repairs
- Allows maintenance to be scheduled with confidence

Analysis for the Oil

- Ensures the correct grade of oil is being used
- Ensures that the correct additives are present in the right concentrations to lubricate effectively
- Identifies leakage of water, coolant, or fuel into it
- Avoids unnecessary oil changes



Tests conducted by Atlas Lab for Lube Oils :

Parameter	Test Method
Appearance	Visual
Acid Number	ASTM D664
API Gravity	ASTM D1298
Ash	ASTM D482
Cloud Point	ASTM D2500
Colour	ASTM D1500
Conradson Carbon Residue	ASTM D189
Copper Strip Corrosion	ASTM D130
Density	ASTM D1298
Flash Point - Abel	IP 170
Flash Point - (COC)	ASTM D92
Flash Point - (PMCC)	ASTM D93
Flash Point - Setaflash / TAG	ASTM D3278
Foaming Characteristics	ASTM D892
Precipitation number	ASTM D91
Nitration	ASTM E2412

Parameter	Test Method
Insolubles - Benzene Insolubles	ASTM D2317
Insolubles - Heptane Insolubles	ASTM D6560
Insolubles - Pentane Insolubles	ASTM D893
Insolubles - Toluene Insolubles	ASTM D893
ISO Cleanliness Code - ISO 4406	ISO 4406
NAS Value - 1638	NAS 1638
Particle Count	NAS 1638
Pour Point	ASTM D97
Ramsbottom Carbon Residue	ASTM D524
Relative Density	ASTM D1298
Soot	ASTM E2412
Specific Gravity	ASTM D1298
Sulphation	ASTM D2412
Sulphated Ash	ASTM D874
Sulphur	ASTM D4294
Refractive Index	By Refractive Meter

Parameter	Test Method
Total Acid Number (TAN)	ASTM D664
Total Base Number (TBN)	ASTM D2896
Viscosity @ 40 °C	ASTM D445
Viscosity @ 100 °C	ASTM D445
Viscosity Index	ASTM D2270
Wear Metals	ASTM D5185
Water Content-by Karl Fisher	ASTM D1744
Water Content-by Coulometer	ASTM D6304
Water Content-by Oven Method	ASTM D4442
Water Content-by Dean & Stark	ASTM D 95
Water & Sediments	ASTM D4007
Aniline Point °C	ASTM D611
Carbon Type Analysis, Ca%, Cp%	ASTM E2412
Fuel Dilution	ASTM E2412
Glycol	ASTM E2412
Oxidation	ASTM E2412

About Atlas Lab

Atlas Lab is a industry leading Testing, Inspection and Certification Company duly accredited by NABL and Certified by ISO 17025. We believe in putting the customer first by constantly innovating and evolving to provide reliable and consistent solutions. We are a team of dynamic, passionate professionals with strong technical expertise in the realm of Lubricating Oils and Petroleum products serving industries of all sizes on a global scale.

We are approved and accredited by



ISO / IEC 17025 : 2017



Certificate No. IND.20.6148/QM/U



TC - 6087



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approved
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