Oil Analyzers INC. | Instructions for Component Registration - Oil Analysis

A Complete the Component Registration Form when submitting a sample for the first time or when submitting a change to a component that is already registered with OIL ANALYZERS INC. Provide complete and accurate information to ensure you receive accurate recommendations from OAI. Only steps B - D are necessary when sending subsequent samples for components already registered with OAI.

B Complete the OIL ANALYZERS sample label and affix it to the sample jar. Do not attach it to the black mailing canister.
For Lube Time, enter the number of miles on the oil. For Unit Time, enter the number of miles on the vehicle. Leave the ACCT # field blank; OAI will assign an account number.

C Mailing labels are provided for the convenience of customers with non-postage-paid kits. Choose the mailing label for the laboratory nearest you and affix it to the mailing package. Postage pre-paid kits are pre-labeled for mailing.

D Retain the Tracking Number Stub for your records.

C

NALYZERS LABORATORY
W. SAM HOUSTON PKWY NORTH
SUITE 700
HOUSTON, TX 77064-9903

OIL ANALYZERS LABORATORY
7898 ZIONSVILLE ROAD
P.O BOX 68983
INDIANAPOLIS, IN 46268-2177

OIL ANALYZERS LABORATORY
3060 CALIFORNIA AVE, SUITE B
P.O. BOX 30820
SALT LAKE CITY, UT 84104

OIL ANALYZERS LABORATORY
5140 75TH STREET
EDMONTON, AB T6E 6W2
CANADA

B

D

Retain Tracking Number To View Status Or Report

8

UNIT ID:
Tracking:
00000A00000
www.trackmysample.com
877-458-3315

A

1 Carefully complete the Customer Information section.

2 Complete the Unit ID information. Indicate the vehicle's year, make and model in the Secondary ID field.
(e.g. VIN number, Serial number, or John's Truck)

This is your opportunity to give your vehicle a unique ID. This is especially helpful for those who test multiple vehicles or manage a fleet of vehicles.

3 Complete the Unit Type section to the best of your ability.
(e.g. Engines, Mobile Gear/Bearing System, Transmission, etc.)

4 Provide complete Unit Manufacturer and Unit Model information.
(e.g. CAT, Cummins, GM; CI5, 5.9L, Duramax)

Proper identification of equipment will ensure accurate testing for specific metallurgies. NOTE: OAI needs component manufacturer and model information, not vehicle manufacturer information.

5 Choose the best description of the operating environment of the equipment.

An accurate description of the environment will help determine the possibility of exposure to certain contaminants.

6 Provide information regarding the lubricant currently installed, including the brand, product name or code and viscosity.
(e.g. AMSOIL Synthetic Motor Oil, (ASL), SAE 5W-30)

7 Include information in the Special Comments or Problems section that you feel is important, but is not listed in the Component Registration Form.

8 Write the Unit ID (designated in step 2) on the Tracking Number Stub and retain for your records.

Before Shipping:

- Ensure the OIL ANALYZERS label is affixed to the sample bottle.
- Remove the Tracking Number Stub and retain for your records.
- Verify you have included the Component Registration Form.

For additional assistance, call OAI at (715) 395-0222.

Oil Analysis Report Glossary

PHYSICAL PROPERTIES

Glycol Anti-freeze contaminant. Always detrimental to oil quality.

Water Contaminant. Coolant leak or condensation.

Fuel Contaminant. Fuel leak, excessive idling, or incomplete combustion.

Viscosity Measure of resistance to flow. Used to determine oil grade. See below.

Solids Contaminant. Reflects oxidation and nitration. High levels may indicate combustion problems or overextended drain intervals.

SAE Engine Oil Grade @ 100 °C	Min cSt	Max cSt		SAE Gear Oil Grade @ 100°C	Min cSt	Max cSt
20	5.6	< 9.3		90	13.5	< 24.0
30	9.3	< 12.5		140	24.0	< 41.0
40	12.5	< 16.3		250	41.0	No. Req.
50	16.3	< 21.9				
60	21.9	< 26.1				

ISO Viscosity Grade @ 40 °C	Min cSt	Max cSt		ISO Viscosity Grade @ 40°C	Min cSt	Max cSt
21	.982	.42		68 (AGMA 2)	61.2	74.8
32	.88	3.52		100 (AGMA 3)	90.0	110
54	.145	.06		150 (AGMA 4)	135	165
76	.127	.48		220 (AGMA 5)	198	242
10	9.00	11.0		320 (AGMA 6)	288	352
15	13.5	16.5		460 (AGMA 7)	414	506
22	19.8	24.2		680 (AGMA 8)	612	748
32	28.8	35.2		1000 (AGMA 8A)	900	1100
46 (AGMA 1)	41.4	50.6		1500	1350	1650

OIL DEGREDATION

Soot Contaminant. By-product of combustion or blowby. High levels may indicate combustion problems or overextended drain intervals.

Oxidation Causes increased viscosity and acid formation.

Nitration Causes sludge and varnish formation. Up to 100% allowed.

TBN Total Base Number. Reported on engine oil.

TAN Total Acid Number. Reported on non-engine oils. Increases with use.

SOURCE OF ELEMENTS

Iron (Fe) Wear metal. Iron or steel components or rust.

Chromium (Cr) Wear metal, coolant additive. Chrome and alloys.

Lead (Pb) Wear metal. Additive in gear oils and gasoline. Alloyed with copper, tin or aluminum in plain bearings and bushings.

Copper (Cu) Wear metal or additive. Alloyed with lead, tin or aluminum in bushings. Leachate from gaskets/sealant or coolers.

Tin (Sn) Wear metal. Alloyed with lead, copper, or aluminum.

Aluminum (Al) Wear metal. May be alone or in alloys.

Nickel (Ni) Wear metal. Used in steel alloys.

Silver (Ag) Wear metal. Bearings in EMD diesel engines.

Manganese (Mn) Wear metal or gasoline additive. Used in steel alloys.

Silicon (Si) Contaminant. Dirt particle, anti-foam additive, or leachate from gaskets/sealant compounds.

Boron (B) Contaminant. Additive in engine coolant or oil. Compare to level in used oil.

Sodium (Na) Contaminant. Additive in engine coolant or oil. Compare to level in unused oil.

Magnesium (Mg) Dispersant/Detergent oil additive. Wear metal in steel alloys.

Calcium (Ca) Dispersant/Detergent oil additive. May indicate water contamination.

Barium (Ba) Diesel fuel additive.

Phosphorus (P) Anti-wear oil additive.

Zinc (Zn) Anti-wear oil additive.

Molybdenum (Mo) Wear metal or oil additive. Compare to level in unused oil.

Titanium (Ti) Wear metal in steel alloys.

Vanadium (V) Wear metal in steel alloys.

Cadmium (Cd) Wear metal in steel alloys. Engine coolant additive.