



OIL ANALYSIS REPORT

Sample Rating Trend

WEAR



Machine Id
447000
 Component
Natural Gas Engine
 Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)



DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear

The copper level is abnormal. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info | GFL0102750 | --- | --- |
| Sample Date | Client Info | 28 Dec 2023 | --- | --- |
| Machine Age | hrs Client Info | 15917 | --- | --- |
| Oil Age | hrs Client Info | 15917 | --- | --- |
| Oil Changed | Client Info | Changed | --- | --- |
| Sample Status | | ABNORMAL | --- | --- |

CONTAMINATION

| method | limit/base | current | history1 | history2 |
|--------|----------------|------------|----------|----------|
| Water | WC Method >0.1 | NEG | --- | --- |

WEAR METALS

| method | limit/base | current | history1 | history2 |
|----------|---------------------|--------------|----------|----------|
| Iron | ppm ASTM D5185m >50 | 54 | --- | --- |
| Chromium | ppm ASTM D5185m >4 | 4 | --- | --- |
| Nickel | ppm ASTM D5185m >2 | 2 | --- | --- |
| Titanium | ppm ASTM D5185m | <1 | --- | --- |
| Silver | ppm ASTM D5185m >3 | 0 | --- | --- |
| Aluminum | ppm ASTM D5185m >9 | 2 | --- | --- |
| Lead | ppm ASTM D5185m >30 | 2 | --- | --- |
| Copper | ppm ASTM D5185m >35 | 81 | --- | --- |
| Tin | ppm ASTM D5185m >4 | 2 | --- | --- |
| Vanadium | ppm ASTM D5185m | <1 | --- | --- |
| Cadmium | ppm ASTM D5185m | 0 | --- | --- |

ADDITIVES

| method | limit/base | current | history1 | history2 |
|------------|----------------------|--------------|----------|----------|
| Boron | ppm ASTM D5185m 50 | 16 | --- | --- |
| Barium | ppm ASTM D5185m 5 | <1 | --- | --- |
| Molybdenum | ppm ASTM D5185m 50 | 81 | --- | --- |
| Manganese | ppm ASTM D5185m 0 | 1 | --- | --- |
| Magnesium | ppm ASTM D5185m 560 | 807 | --- | --- |
| Calcium | ppm ASTM D5185m 1510 | 2151 | --- | --- |
| Phosphorus | ppm ASTM D5185m 780 | 1041 | --- | --- |
| Zinc | ppm ASTM D5185m 870 | 1304 | --- | --- |
| Sulfur | ppm ASTM D5185m 2040 | 2684 | --- | --- |

CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|-----------|-----------------------|-----------|----------|----------|
| Silicon | ppm ASTM D5185m >+100 | 8 | --- | --- |
| Sodium | ppm ASTM D5185m | 27 | --- | --- |
| Potassium | ppm ASTM D5185m >20 | 0 | --- | --- |

INFRA-RED

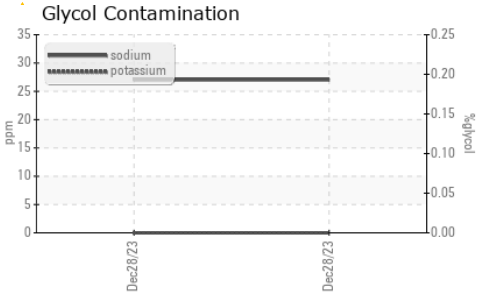
| method | limit/base | current | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot % | % *ASTM D7844 | 0.1 | --- | --- |
| Nitration | Abs/cm *ASTM D7624 >20 | 14.1 | --- | --- |
| Sulfation | Abs/.1mm *ASTM D7415 >30 | 26.9 | --- | --- |

FLUID DEGRADATION

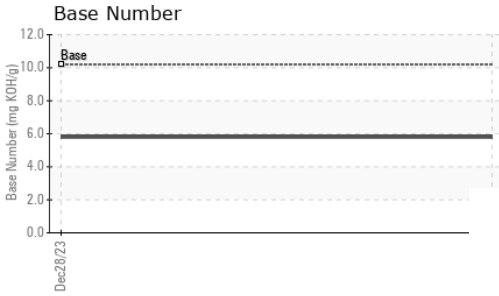
| method | limit/base | current | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Oxidation | Abs/.1mm *ASTM D7414 >25 | 24.4 | --- | --- |
| Base Number (BN) | mg KOH/g ASTM D2896 10.2 | 5.8 | --- | --- |



OIL ANALYSIS REPORT

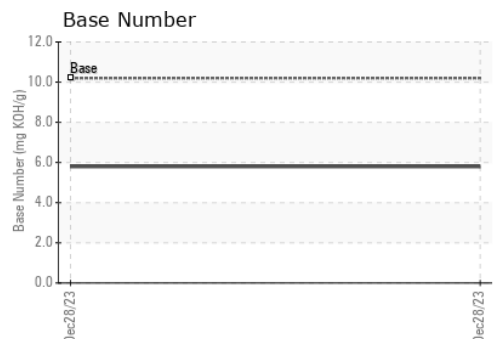
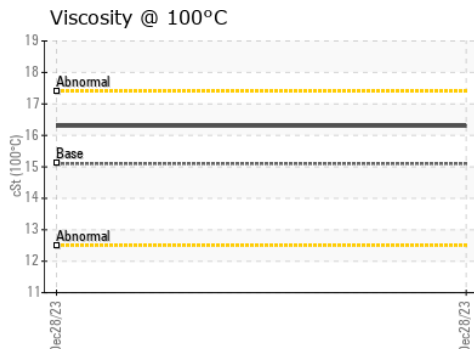
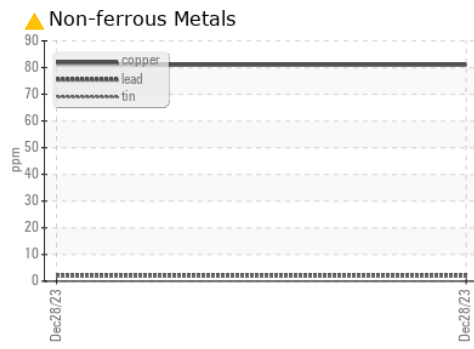
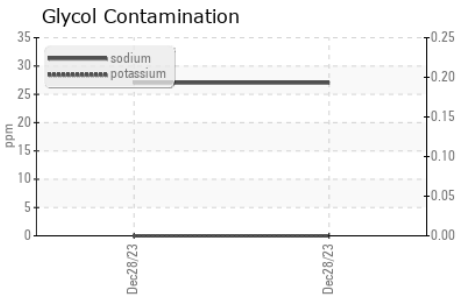
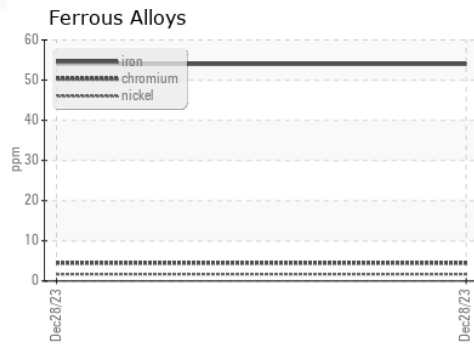
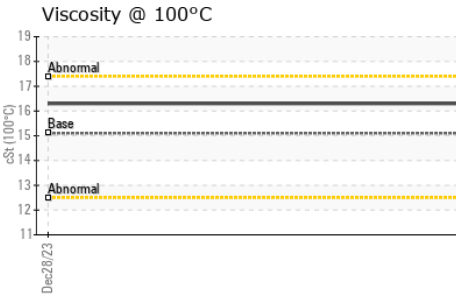


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- |
| Silt | scalar | *Visual | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >0.1 | NEG | --- |
| Free Water | scalar | *Visual | | NEG | --- |



| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C | cSt | ASTM D445 | 15.1 | 16.3 | --- |

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102750 **Received** : 04 Jan 2024
Lab Number : 06050641 **Diagnosed** : 05 Jan 2024
Unique Number : 10816590 **Diagnostician** : Don Baldrige
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 963 - Peoria HC Disposal
 1113 N. Swords Ave.
 West Peoria, IL
 US 61604
 Contact: Corey Dozard
 cdozard@gflenv.com

To discuss this sample report, contact Customer Service at 1-800-237-1369.
 * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.
 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)