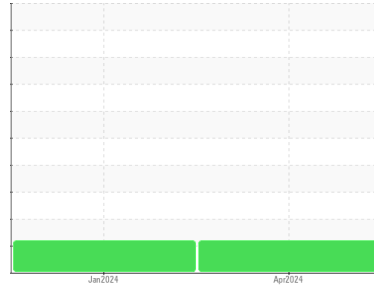




OIL ANALYSIS REPORT

Sample Rating Trend



COOL CHEMICALS



Machine Id
934068

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. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

▲ Contamination

Sodium and/or potassium levels are high. Test for glycol is negative.

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 | | | GFL0114443 | GFL0103933 | --- |
| Sample Date | Client Info | | | 02 Apr 2024 | 18 Jan 2024 | --- |
| Machine Age | hrs | Client Info | | 1182 | 594 | --- |
| Oil Age | hrs | Client Info | | 1182 | 594 | --- |
| Oil Changed | Client Info | | | Changed | Changed | --- |
| Sample Status | | | | ABNORMAL | ABNORMAL | --- |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m | >50 | 24 | 42 | --- |
| Chromium | ppm | ASTM D5185m | >4 | 2 | 2 | --- |
| Nickel | ppm | ASTM D5185m | >2 | 1 | 1 | --- |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >9 | 45 | 58 | --- |
| Lead | ppm | ASTM D5185m | >30 | <1 | 2 | --- |
| Copper | ppm | ASTM D5185m | >35 | 1 | 16 | --- |
| Tin | ppm | ASTM D5185m | >4 | 2 | 2 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|-------------|----------|----------|
| Boron | ppm | ASTM D5185m | 50 | 10 | 9 | --- |
| Barium | ppm | ASTM D5185m | 5 | 0 | 15 | --- |
| Molybdenum | ppm | ASTM D5185m | 50 | 55 | 49 | --- |
| Manganese | ppm | ASTM D5185m | 0 | 2 | 12 | --- |
| Magnesium | ppm | ASTM D5185m | 560 | 643 | 874 | --- |
| Calcium | ppm | ASTM D5185m | 1510 | 1736 | 1427 | --- |
| Phosphorus | ppm | ASTM D5185m | 780 | 792 | 797 | --- |
| Zinc | ppm | ASTM D5185m | 870 | 1059 | 892 | --- |
| Sulfur | ppm | ASTM D5185m | 2040 | 3079 | 2410 | --- |

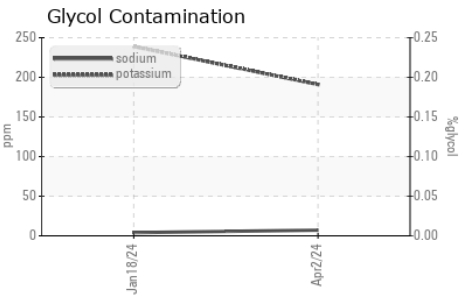
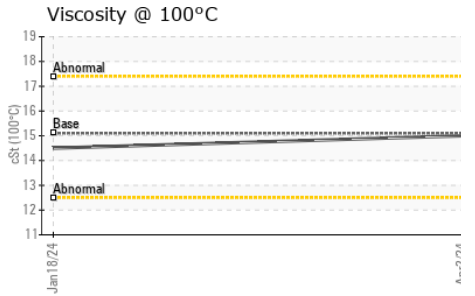
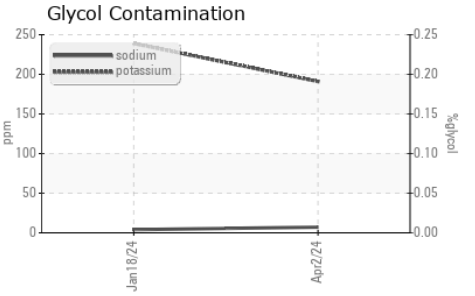
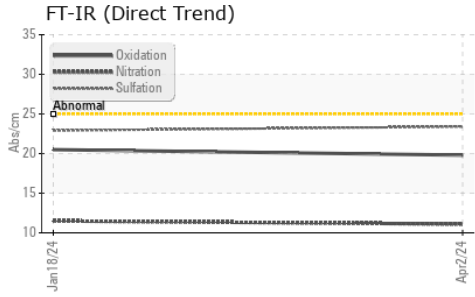
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|--------------|----------|
| Silicon | ppm | ASTM D5185m | >+100 | 8 | 31 | --- |
| Sodium | ppm | ASTM D5185m | | 7 | 4 | --- |
| Potassium | ppm | ASTM D5185m | >20 | ▲ 191 | ▲ 239 | --- |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot % | % | *ASTM D7844 | | 0.1 | 0 | --- |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 11.1 | 11.5 | --- |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.4 | 22.9 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.8 | 20.5 | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10.2 | 3.5 | 4.1 | --- |



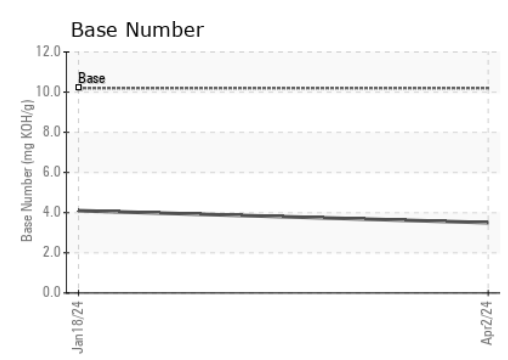
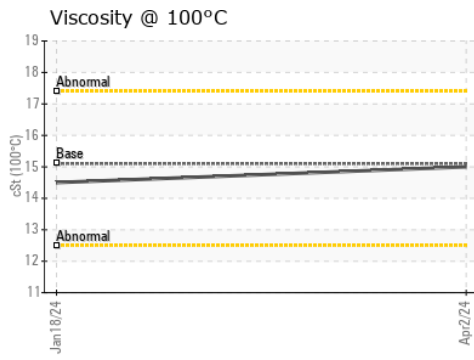
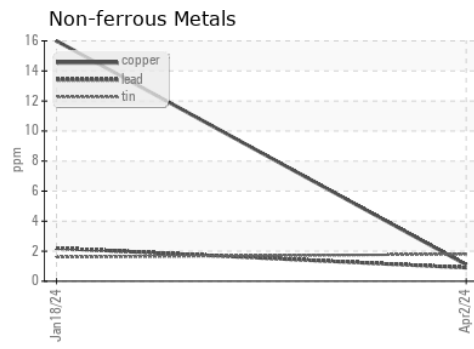
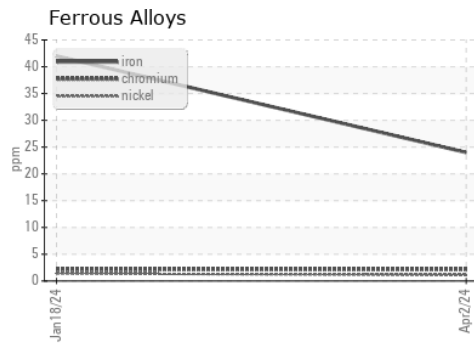
OIL ANALYSIS REPORT



| 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 | 15.0 | 14.5 |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0114443 **Received** : 08 Apr 2024
Lab Number : 06142119 **Tested** : 15 Apr 2024
Unique Number : 10966927 **Diagnosed** : 15 Apr 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: Glycol)

GFL Environmental - 865 - East Mount Hauling
 7213 East Mount Houston Road
 Houston, TX
 US 77050
 Contact: Saul Castillo
 saul.castillo@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)