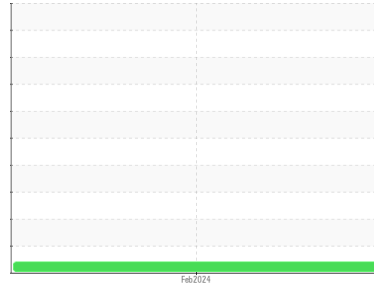




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
833030

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. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

▲ Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

| method | limit/base | current | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info | GFL0098075 | --- | --- |
| Sample Date | Client Info | 19 Feb 2024 | --- | --- |
| Machine Age | hrs Client Info | 1171 | --- | --- |
| Oil Age | hrs Client Info | 1171 | --- | --- |
| Oil Changed | Client Info | Changed | --- | --- |
| Sample Status | | ATTENTION | --- | --- |

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 | 32 | --- | --- |
| Chromium | ppm ASTM D5185m >4 | 1 | --- | --- |
| Nickel | ppm ASTM D5185m >2 | <1 | --- | --- |
| Titanium | ppm ASTM D5185m | <1 | --- | --- |
| Silver | ppm ASTM D5185m >3 | 0 | --- | --- |
| Aluminum | ppm ASTM D5185m >9 | 3 | --- | --- |
| Lead | ppm ASTM D5185m >30 | 7 | --- | --- |
| Copper | ppm ASTM D5185m >35 | 13 | --- | --- |
| Tin | ppm ASTM D5185m >4 | 2 | --- | --- |
| Vanadium | ppm ASTM D5185m | 0 | --- | --- |
| Cadmium | ppm ASTM D5185m | 0 | --- | --- |

ADDITIVES

| method | limit/base | current | history1 | history2 |
|------------|----------------------|-------------|----------|----------|
| Boron | ppm ASTM D5185m 50 | 8 | --- | --- |
| Barium | ppm ASTM D5185m 5 | 3 | --- | --- |
| Molybdenum | ppm ASTM D5185m 50 | 56 | --- | --- |
| Manganese | ppm ASTM D5185m 0 | 4 | --- | --- |
| Magnesium | ppm ASTM D5185m 560 | 775 | --- | --- |
| Calcium | ppm ASTM D5185m 1510 | 1169 | --- | --- |
| Phosphorus | ppm ASTM D5185m 780 | 689 | --- | --- |
| Zinc | ppm ASTM D5185m 870 | 860 | --- | --- |
| Sulfur | ppm ASTM D5185m 2040 | 2094 | --- | --- |

CONTAMINANTS

| method | limit/base | current | history1 | history2 |
|-----------|-----------------------|-----------|----------|----------|
| Silicon | ppm ASTM D5185m >+100 | 90 | --- | --- |
| Sodium | ppm ASTM D5185m | 6 | --- | --- |
| Potassium | ppm ASTM D5185m >20 | 10 | --- | --- |

INFRA-RED

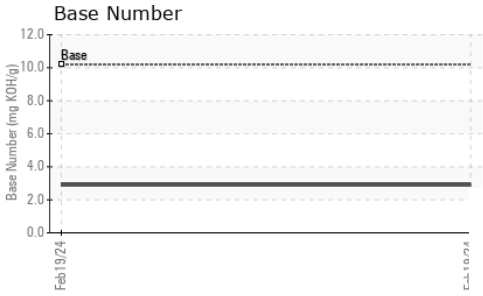
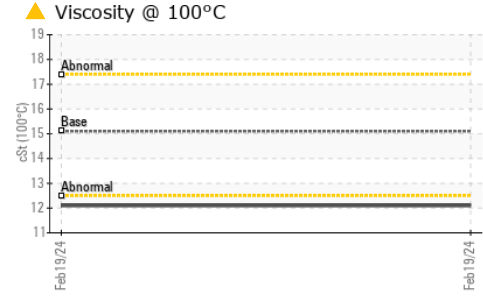
| method | limit/base | current | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot % | % *ASTM D7844 | 0.1 | --- | --- |
| Nitration | Abs/cm *ASTM D7624 >20 | 14.0 | --- | --- |
| Sulfation | Abs/.1mm *ASTM D7415 >30 | 26.3 | --- | --- |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Oxidation | Abs/.1mm *ASTM D7414 >25 | 24.0 | --- | --- |
| Base Number (BN) | mg KOH/g ASTM D2896 10.2 | 2.9 | --- | --- |



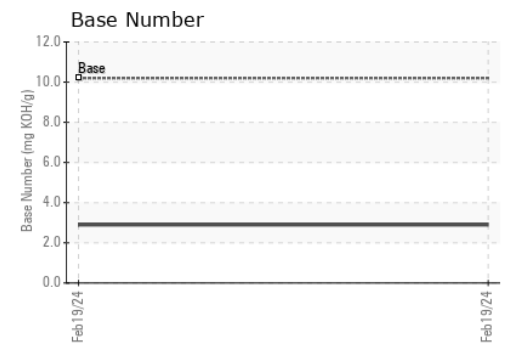
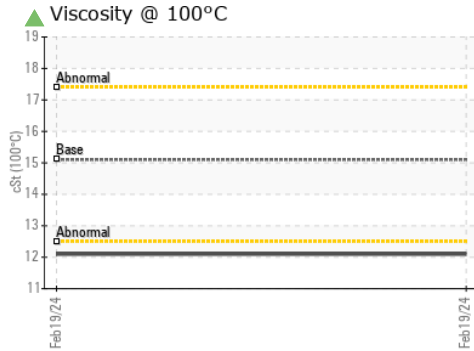
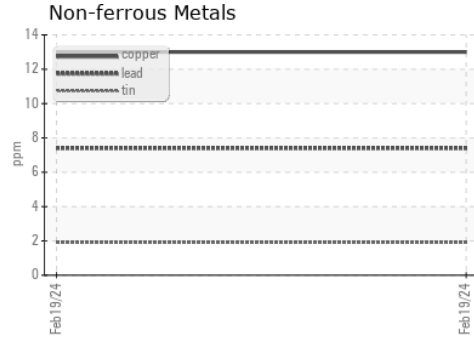
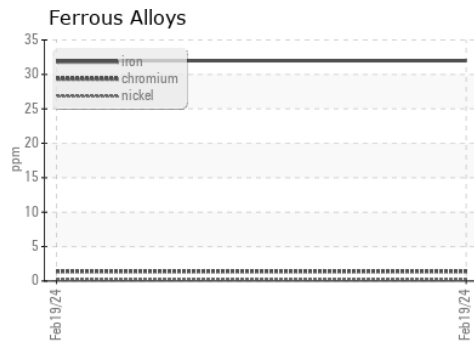
OIL ANALYSIS REPORT



| 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 ▲ 12.1 | --- | --- |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0098075 **Received** : 23 Feb 2024
Lab Number : 06098148 **Tested** : 27 Feb 2024
Unique Number : 10896378 **Diagnosed** : 27 Feb 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FUELDILUTION, PercentFuel)

GFL Environmental - 932 - Muskego HC
 W144 S6400 College Ct.
 Muskego, WI
 US 53150
 Contact: Brian Schlomann
 brian.schlomann@gflenv.com
 T: (262)510-4586
 F:

Certificate L2367
 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)