



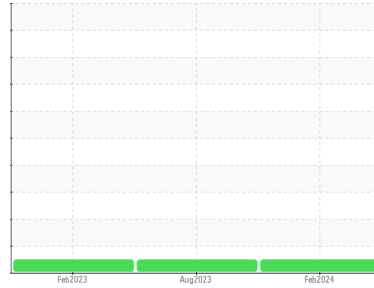
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
432000
Component
Natural Gas Engine
Fluid
PETRO CANADA DURON GEO LD 15W40 (--- GAL)



DIAGNOSIS

Recommendation

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 condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

| | method | limit/base | current | history1 | history2 |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | | GFL0110219 | GFL0085852 | GFL0064287 |
| Sample Date | Client Info | | 05 Feb 2024 | 14 Aug 2023 | 14 Feb 2023 |
| Machine Age | hrs | Client Info | 3580 | 2213 | 7370 |
| Oil Age | hrs | Client Info | 150 | 1200 | 1093 |
| Oil Changed | Client Info | | Changed | Changed | Changed |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

CONTAMINATION

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

WEAR METALS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron | ppm | ASTM D5185(m) | >50 | 7 | 11 | 50 |
| Chromium | ppm | ASTM D5185(m) | >4 | <1 | <1 | 1 |
| Nickel | ppm | ASTM D5185(m) | >2 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185(m) | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >9 | 1 | 2 | 5 |
| Lead | ppm | ASTM D5185(m) | >30 | 12 | 4 | 3 |
| Copper | ppm | ASTM D5185(m) | >35 | 4 | 5 | 14 |
| Tin | ppm | ASTM D5185(m) | >4 | <1 | 1 | 2 |
| Antimony | ppm | ASTM D5185(m) | | 0 | 0 | <1 |
| Vanadium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | 0 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 | |
|------------|--------|---------------|---------|--------------|----------|------|
| Boron | ppm | ASTM D5185(m) | 50 | 7 | 12 | 13 |
| Barium | ppm | ASTM D5185(m) | 5 | 0 | <1 | 6 |
| Molybdenum | ppm | ASTM D5185(m) | 50 | 54 | 59 | 101 |
| Manganese | ppm | ASTM D5185(m) | 0 | 0 | <1 | 4 |
| Magnesium | ppm | ASTM D5185(m) | 560 | 557 | 515 | 695 |
| Calcium | ppm | ASTM D5185(m) | 1510 | 1543 | 1550 | 1422 |
| Phosphorus | ppm | ASTM D5185(m) | 780 | 681 | 687 | 757 |
| Zinc | ppm | ASTM D5185(m) | 870 | 878 | 859 | 845 |
| Sulfur | ppm | ASTM D5185(m) | 2040 | 2134 | 1973 | 2271 |
| Lithium | ppm | ASTM D5185(m) | | <1 | <1 | <1 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 | |
|-----------|--------|---------------|---------|----------|----------|----|
| Silicon | ppm | ASTM D5185(m) | >+100 | 7 | 15 | 76 |
| Sodium | ppm | ASTM D5185(m) | | 7 | 4 | 4 |
| Potassium | ppm | ASTM D5185(m) | >20 | 1 | <1 | 5 |

INFRA-RED

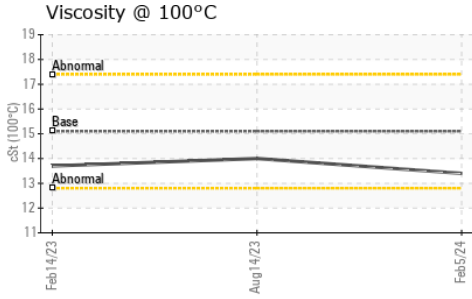
| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot % | % | ASTM D7844* | | 0 | 0 | 0 |
| Nitration | Abs/cm | ASTM D7624* | >20 | 11.5 | 11.2 | 10.2 |
| Sulfation | Abs./1mm | ASTM D7415* | >30 | 26.2 | 25.0 | 25.0 |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 | |
|-----------|----------|-------------|---------|-------------|----------|------|
| Oxidation | Abs./1mm | ASTM D7414* | >25 | 21.8 | 20.3 | 18.9 |



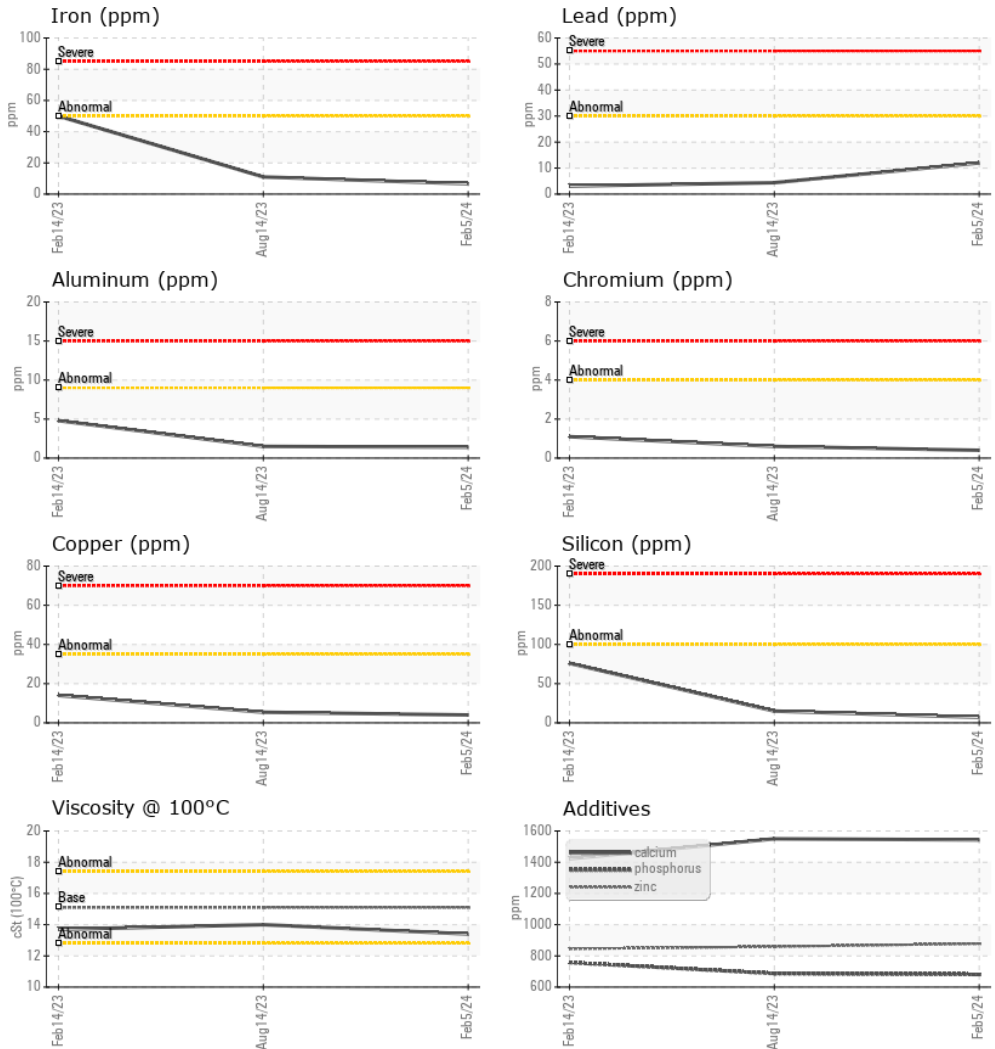
OIL ANALYSIS REPORT



| 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 | NORML | NORML |
| Emulsified Water | scalar | Visual* | >0.1 | NEG | NEG | NEG |
| Free Water | scalar | Visual* | | NEG | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|------------------|-----|---------------|------------|-------------|----------|----------|
| Visc @ 100°C | cSt | ASTM D7279(m) | 15.1 | 13.4 | 14.0 | 13.7 |

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : GFL0110219 **Received** : 08 Feb 2024
Lab Number : **02614225** **Tested** : 08 Feb 2024
Unique Number : 5723320 **Diagnosed** : 08 Feb 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: Visual)

GFL Environmental - 209 - Hamilton
 560 Seaman Street
 Stoney Creek, ON
 CA L8E 3X7
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 T: (289)925-6693
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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.