



# OIL ANALYSIS REPORT

Sample Rating Trend

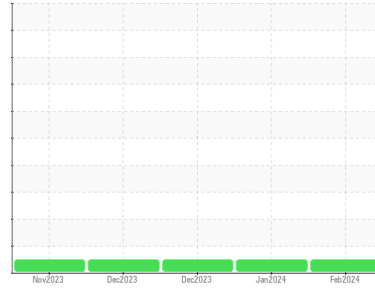
**NORMAL**



Machine Id  
**834047**

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

## SAMPLE INFORMATION

| method        | limit/base  | current            | history1    | history2    |     |
|---------------|-------------|--------------------|-------------|-------------|-----|
| Sample Number | Client Info | <b>GFL0108057</b>  | GFL0108123  | GFL0102467  |     |
| Sample Date   | Client Info | <b>21 Feb 2024</b> | 29 Jan 2024 | 30 Dec 2023 |     |
| Machine Age   | hrs         | Client Info        | <b>1123</b> | 997         | 853 |
| Oil Age       | hrs         | Client Info        | <b>1123</b> | 0           | 0   |
| Oil Changed   | Client Info | <b>Not Changed</b> | Not Changed | Not Changed |     |
| Sample Status |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |     |

## CONTAMINATION

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

## WEAR METALS

| method   | limit/base | current     | history1 | history2     |    |    |
|----------|------------|-------------|----------|--------------|----|----|
| Iron     | ppm        | ASTM D5185m | >50      | <b>72</b>    | 91 | 53 |
| Chromium | ppm        | ASTM D5185m | >4       | <b>&lt;1</b> | 1  | <1 |
| Nickel   | ppm        | ASTM D5185m | >2       | <b>2</b>     | 3  | 2  |
| Titanium | ppm        | ASTM D5185m |          | <b>0</b>     | <1 | 0  |
| Silver   | ppm        | ASTM D5185m | >3       | <b>0</b>     | <1 | <1 |
| Aluminum | ppm        | ASTM D5185m | >9       | <b>6</b>     | 7  | 4  |
| Lead     | ppm        | ASTM D5185m | >30      | <b>3</b>     | 4  | 2  |
| Copper   | ppm        | ASTM D5185m | >35      | <b>20</b>    | 29 | 16 |
| Tin      | ppm        | ASTM D5185m | >4       | <b>2</b>     | 3  | 2  |
| Vanadium | ppm        | ASTM D5185m |          | <b>0</b>     | <1 | 0  |
| Cadmium  | ppm        | ASTM D5185m |          | <b>0</b>     | <1 | 0  |

## ADDITIVES

| method     | limit/base | current     | history1 | history2    |      |      |
|------------|------------|-------------|----------|-------------|------|------|
| Boron      | ppm        | ASTM D5185m | 50       | <b>5</b>    | 6    | 6    |
| Barium     | ppm        | ASTM D5185m | 5        | <b>0</b>    | 18   | 2    |
| Molybdenum | ppm        | ASTM D5185m | 50       | <b>65</b>   | 84   | 55   |
| Manganese  | ppm        | ASTM D5185m | 0        | <b>14</b>   | 19   | 12   |
| Magnesium  | ppm        | ASTM D5185m | 560      | <b>927</b>  | 1212 | 867  |
| Calcium    | ppm        | ASTM D5185m | 1510     | <b>1327</b> | 1739 | 1218 |
| Phosphorus | ppm        | ASTM D5185m | 780      | <b>872</b>  | 1085 | 811  |
| Zinc       | ppm        | ASTM D5185m | 870      | <b>1057</b> | 1361 | 1010 |
| Sulfur     | ppm        | ASTM D5185m | 2040     | <b>2511</b> | 3936 | 2474 |

## CONTAMINANTS

| method    | limit/base | current     | history1 | history2  |    |    |
|-----------|------------|-------------|----------|-----------|----|----|
| Silicon   | ppm        | ASTM D5185m | >+100    | <b>33</b> | 45 | 32 |
| Sodium    | ppm        | ASTM D5185m |          | <b>8</b>  | 5  | 5  |
| Potassium | ppm        | ASTM D5185m | >20      | <b>2</b>  | 4  | 2  |

## INFRA-RED

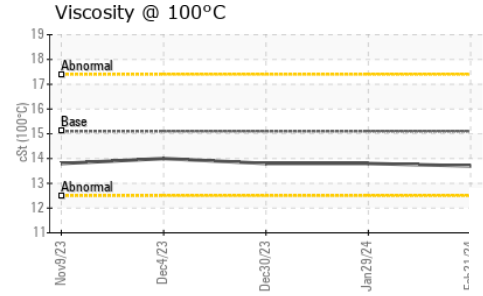
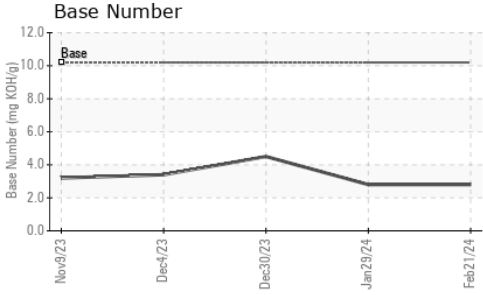
| method    | limit/base | current     | history1 | history2    |      |      |
|-----------|------------|-------------|----------|-------------|------|------|
| Soot %    | %          | *ASTM D7844 |          | <b>0</b>    | 0    | 0.3  |
| Nitration | Abs/cm     | *ASTM D7624 | >20      | <b>13.6</b> | 13.4 | 11.3 |
| Sulfation | Abs/.1mm   | *ASTM D7415 | >30      | <b>26.8</b> | 26.0 | 23.2 |

## FLUID DEGRADATION

| method           | limit/base | current     | history1 | history2    |      |      |
|------------------|------------|-------------|----------|-------------|------|------|
| Oxidation        | Abs/.1mm   | *ASTM D7414 | >25      | <b>25.4</b> | 24.2 | 20.3 |
| Base Number (BN) | mg KOH/g   | ASTM D2896  | 10.2     | <b>2.8</b>  | 2.8  | 4.5  |



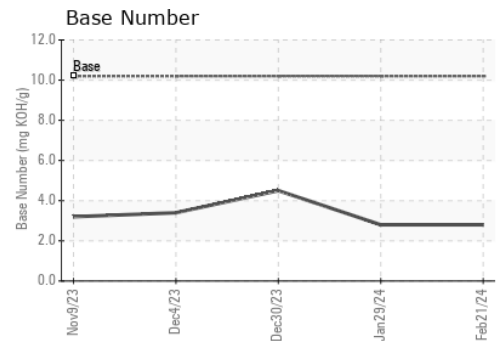
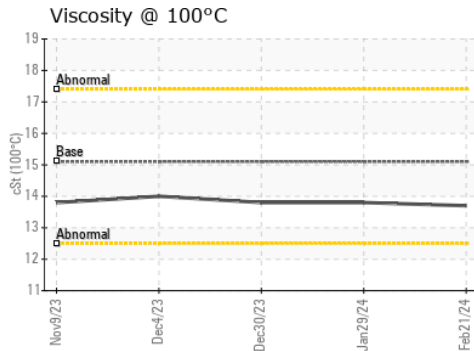
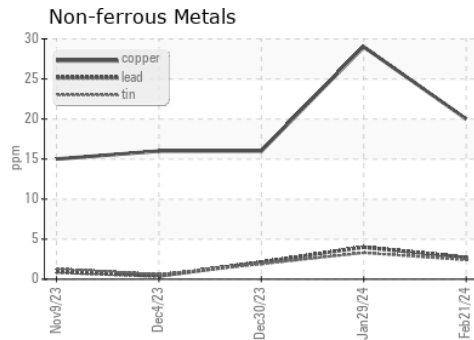
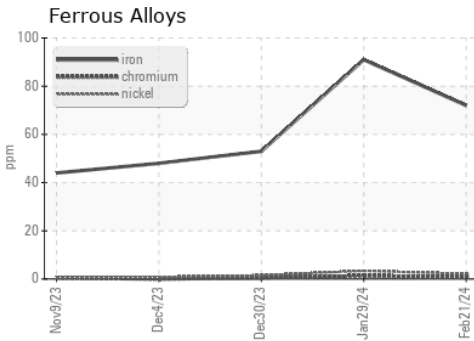
# OIL ANALYSIS REPORT



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

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |      |
|------------------|--------|------------|---------|-------------|----------|------|
| Visc @ 100°C     | cSt    | ASTM D445  | 15.1    | <b>13.7</b> | 13.8     | 13.8 |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108057  
**Lab Number** : **06103585**  
**Unique Number** : 10901815  
**Test Package** : FLEET

**Received** : 28 Feb 2024  
**Tested** : 02 Mar 2024  
**Diagnosed** : 02 Mar 2024 - Don Baldrige

**GFL Environmental - 837 - Harrison TS**  
 22820 S State Route 291  
 Harrisonville, MO  
 US 64701  
 Contact: JOHNNY PEREZ  
 johnny.perez@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)

T:  
F: