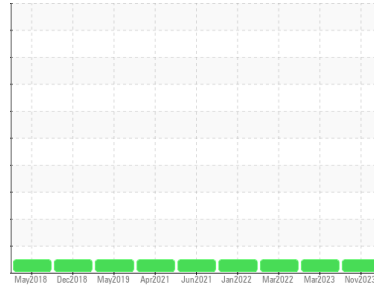




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**8419**  
 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 | <b>GFL0097617</b>  | GFL0072854  | GFL0041504  |
| Sample Date   | Client Info | <b>08 Nov 2023</b> | 12 Mar 2023 | 14 Mar 2022 |
| Machine Age   | hrs         | <b>1984</b>        | 759         | 9771        |
| Oil Age       | hrs         | <b>1195</b>        | 0           | 0           |
| Oil Changed   | Client Info | <b>Changed</b>     | N/A         | 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 D5185(m) >50 | <b>18</b>    | 34       | 8        |
| Chromium  | ppm ASTM D5185(m) >4  | <b>2</b>     | 4        | <1       |
| Nickel    | ppm ASTM D5185(m) >2  | <b>&lt;1</b> | 1        | <1       |
| Titanium  | ppm ASTM D5185(m)     | <b>0</b>     | <1       | 0        |
| Silver    | ppm ASTM D5185(m) >3  | <b>0</b>     | 0        | 0        |
| Aluminum  | ppm ASTM D5185(m) >9  | <b>2</b>     | 4        | 1        |
| Lead      | ppm ASTM D5185(m) >30 | <b>4</b>     | 2        | <1       |
| Copper    | ppm ASTM D5185(m) >35 | <b>5</b>     | 11       | 8        |
| Tin       | ppm ASTM D5185(m) >4  | <b>&lt;1</b> | 1        | <1       |
| Antimony  | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Vanadium  | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Beryllium | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |
| Cadmium   | ppm ASTM D5185(m)     | <b>0</b>     | 0        | 0        |

## ADDITIVES

| method     | limit/base             | current      | history1 | history2 |
|------------|------------------------|--------------|----------|----------|
| Boron      | ppm ASTM D5185(m) 50   | <b>8</b>     | 7        | 20       |
| Barium     | ppm ASTM D5185(m) 5    | <b>&lt;1</b> | 0        | 0        |
| Molybdenum | ppm ASTM D5185(m) 50   | <b>54</b>    | 57       | 49       |
| Manganese  | ppm ASTM D5185(m) 0    | <b>&lt;1</b> | 2        | <1       |
| Magnesium  | ppm ASTM D5185(m) 560  | <b>578</b>   | 592      | 566      |
| Calcium    | ppm ASTM D5185(m) 1510 | <b>1660</b>  | 1847     | 1497     |
| Phosphorus | ppm ASTM D5185(m) 780  | <b>703</b>   | 780      | 762      |
| Zinc       | ppm ASTM D5185(m) 870  | <b>918</b>   | 972      | 895      |
| Sulfur     | ppm ASTM D5185(m) 2040 | <b>1916</b>  | 2050     | 1986     |
| Lithium    | ppm ASTM D5185(m)      | <b>&lt;1</b> | <1       | <1       |

## CONTAMINANTS

| method    | limit/base              | current   | history1 | history2 |
|-----------|-------------------------|-----------|----------|----------|
| Silicon   | ppm ASTM D5185(m) >+100 | <b>4</b>  | 12       | 4        |
| Sodium    | ppm ASTM D5185(m)       | <b>14</b> | 15       | 7        |
| Potassium | ppm ASTM D5185(m) >20   | <b>1</b>  | 3        | <1       |

## INFRA-RED

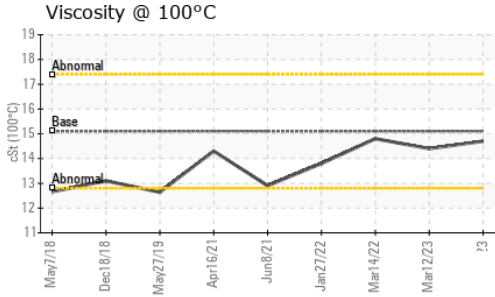
| method    | limit/base           | current     | history1 | history2 |
|-----------|----------------------|-------------|----------|----------|
| Soot %    | % ASTM D7844*        | <b>0</b>    | 0        | 0        |
| Nitration | Abs/cm ASTM D7624*   | <b>11.6</b> | 7.9      | 10.0     |
| Sulfation | Abs/.1mm ASTM D7415* | <b>25.3</b> | 21.1     | 21.3     |

## FLUID DEGRADATION

| method    | limit/base           | current     | history1 | history2 |
|-----------|----------------------|-------------|----------|----------|
| Oxidation | Abs/.1mm ASTM D7414* | <b>20.7</b> | 13.0     | 17.7     |



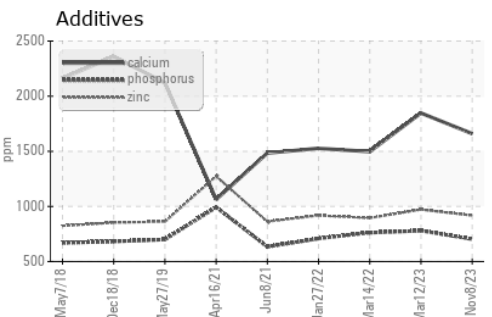
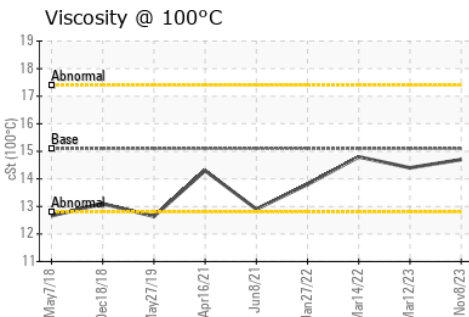
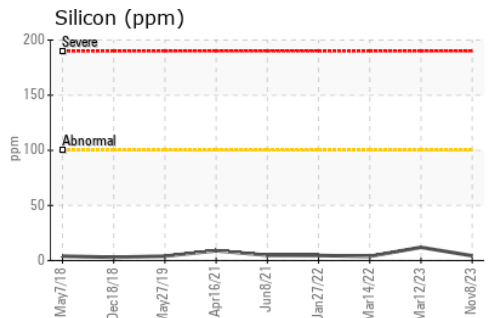
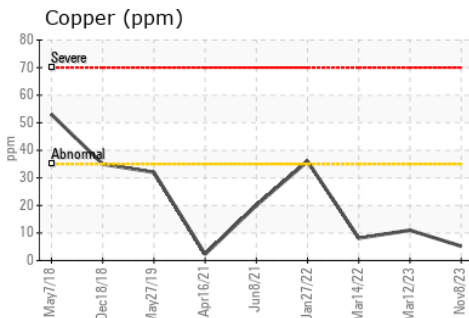
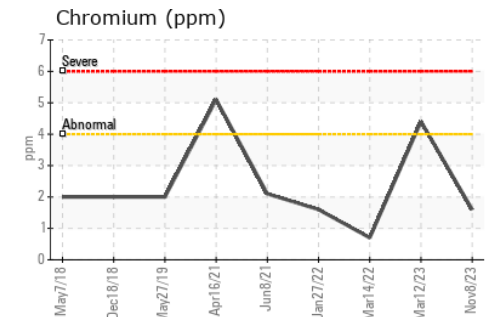
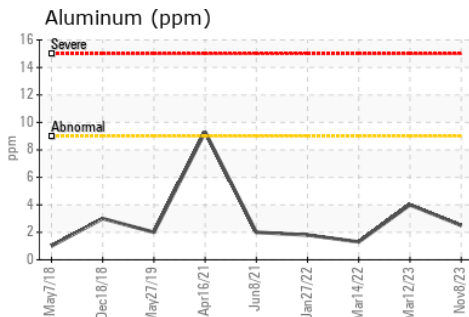
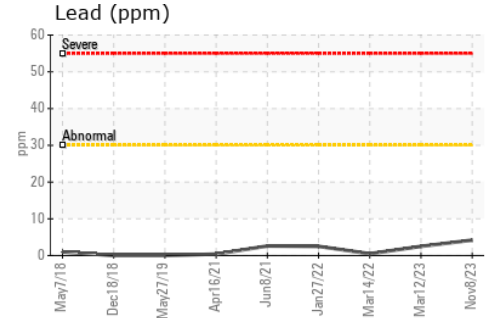
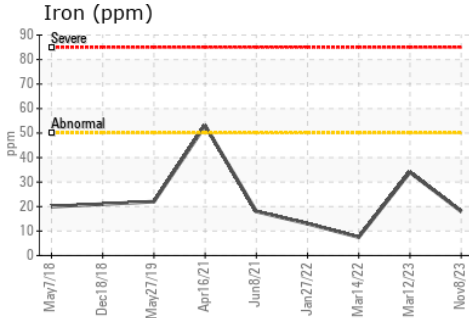
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| 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 D7279(m) | 15.1    | 14.7     | 14.4     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW  
**Sample No.** : GFL0097617 **Received** : 20 Nov 2023  
**Lab Number** : 02597435 **Diagnosed** : 20 Nov 2023  
**Unique Number** : 5682515 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1

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.

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