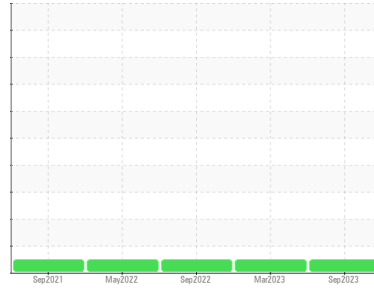




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**731040**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- LTR)**

## 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>GFL0085889</b>  | GFL0071081  | GFL0054869  |
| Sample Date   | Client Info |             | <b>08 Sep 2023</b> | 04 Mar 2023 | 08 Sep 2022 |
| Machine Age   | hrs         | Client Info | <b>4123</b>        | 4123        | 3010        |
| Oil Age       | hrs         | Client Info | <b>4123</b>        | 1000        | 1200        |
| Oil Changed   | Client Info |             | <b>N/A</b>         | Changed     | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR METALS

|           | method | limit/base    | current | history1     | history2 |    |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron      | ppm    | ASTM D5185(m) | >50     | <b>11</b>    | 12       | 10 |
| Chromium  | ppm    | ASTM D5185(m) | >4      | <b>&lt;1</b> | <1       | <1 |
| Nickel    | ppm    | ASTM D5185(m) | >2      | <b>&lt;1</b> | <1       | <1 |
| Titanium  | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1 |
| Silver    | ppm    | ASTM D5185(m) | >3      | <b>0</b>     | 0        | 0  |
| Aluminum  | ppm    | ASTM D5185(m) | >9      | <b>2</b>     | 2        | 2  |
| Lead      | ppm    | ASTM D5185(m) | >30     | <b>4</b>     | 5        | 1  |
| Copper    | ppm    | ASTM D5185(m) | >35     | <b>2</b>     | 2        | 2  |
| Tin       | ppm    | ASTM D5185(m) | >4      | <b>&lt;1</b> | <1       | <1 |
| Antimony  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | <1 |
| 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>6</b>     | 5        | 9    |
| Barium     | ppm    | ASTM D5185(m) | 5       | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm    | ASTM D5185(m) | 50      | <b>55</b>    | 53       | 51   |
| Manganese  | ppm    | ASTM D5185(m) | 0       | <b>&lt;1</b> | <1       | <1   |
| Magnesium  | ppm    | ASTM D5185(m) | 560     | <b>575</b>   | 583      | 519  |
| Calcium    | ppm    | ASTM D5185(m) | 1510    | <b>1523</b>  | 1714     | 1530 |
| Phosphorus | ppm    | ASTM D5185(m) | 780     | <b>701</b>   | 747      | 687  |
| Zinc       | ppm    | ASTM D5185(m) | 870     | <b>910</b>   | 945      | 867  |
| Sulfur     | ppm    | ASTM D5185(m) | 2040    | <b>2018</b>  | 2134     | 1968 |
| 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>     | 4        | 4  |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>8</b>     | 10       | 7  |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>&lt;1</b> | <1       | <1 |

## INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* |         | <b>0</b>    | 0        | 0    |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>11.3</b> | 10.1     | 10.7 |
| Sulfation | Abs/.1mm | ASTM D7415* | >30     | <b>24.1</b> | 24.1     | 22.2 |

## FLUID DEGRADATION

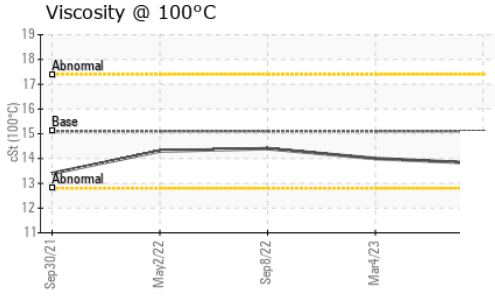
|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Oxidation | Abs/.1mm | ASTM D7414* | >25     | <b>19.0</b> | 17.1     | 17.9 |

## VISUAL

|                  | method | limit/base | current | history1   | history2 |     |
|------------------|--------|------------|---------|------------|----------|-----|
| Emulsified Water | scalar | Visual*    | >0.1    | <b>NEG</b> | NEG      | NEG |
| Free Water       | scalar | Visual*    |         | <b>NEG</b> | NEG      | NEG |

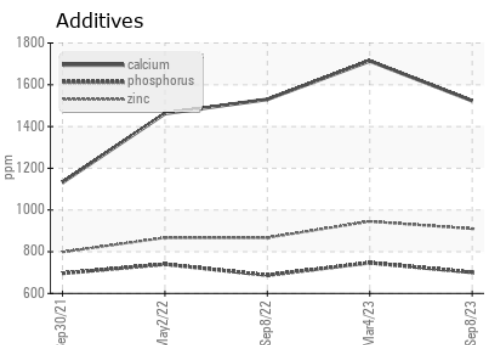
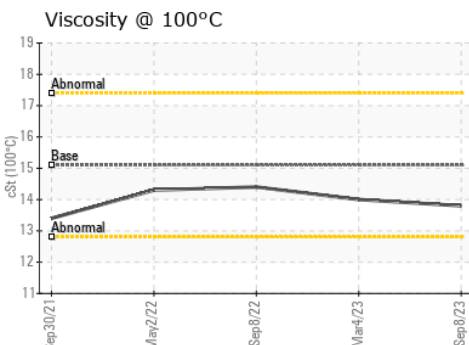
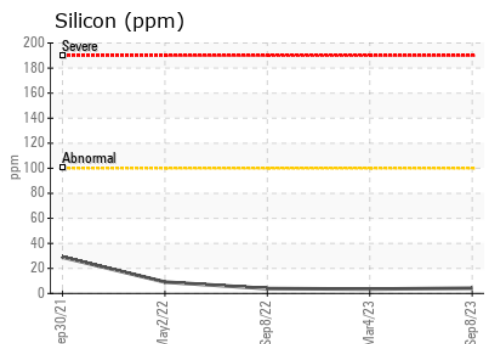
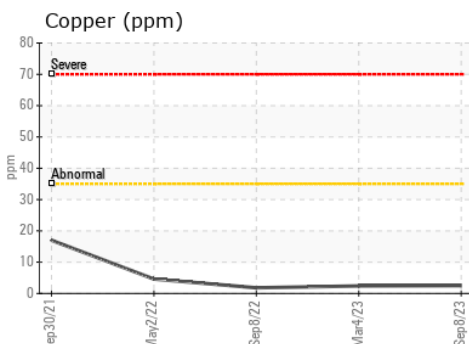
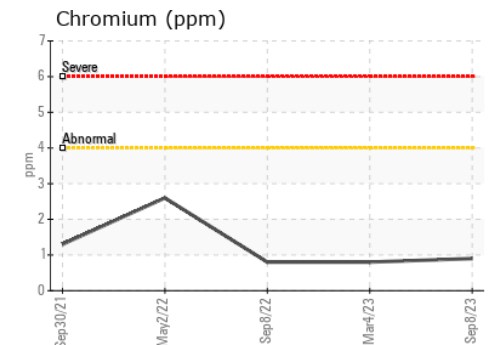
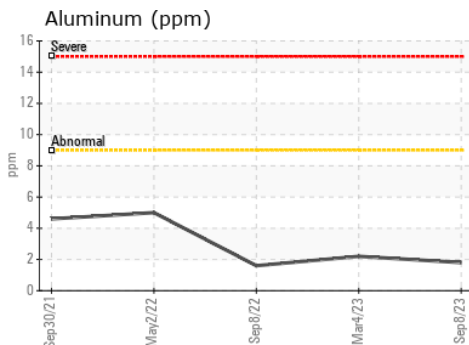
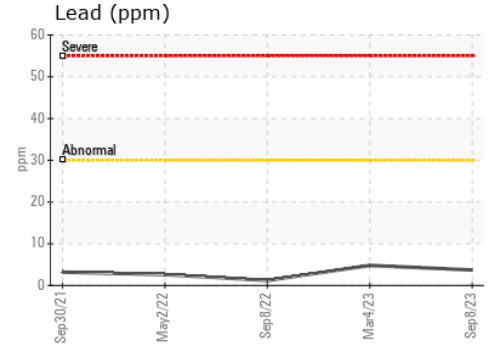
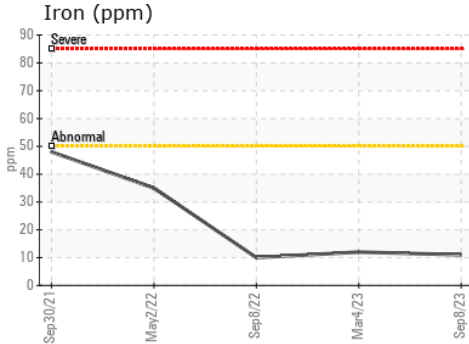


# OIL ANALYSIS REPORT



| FLUID PROPERTIES |     | method        | limit/base | current | history1 | history2 |
|------------------|-----|---------------|------------|---------|----------|----------|
| Visc @ 100°C     | cSt | ASTM D7279(m) | 15.1       | 13.8    | 14.0     | 14.4     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 209 - Hamilton**  
**Sample No.** : GFL0085889 **Received** : 11 Sep 2023  
**Lab Number** : 02581318 **Diagnosed** : 11 Sep 2023  
**Unique Number** : 5642383 **Diagnostician** : Wes Davis  
**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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