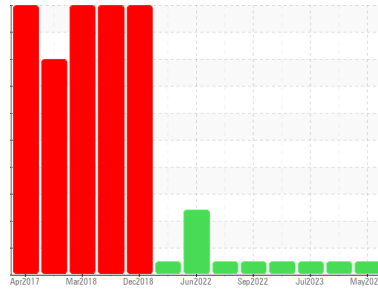




# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id  
**9258**  
 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

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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>GFL0112529</b>  | GFL0101698  | GFL0085923  |
| Sample Date   | Client Info | <b>17 May 2024</b> | 21 Dec 2023 | 04 Jul 2023 |
| Machine Age   | hrs         | <b>2001</b>        | 902         | 17061       |
| Oil Age       | hrs         | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info | <b>Changed</b>     | N/A         | N/A         |
| Sample Status |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

| method | limit/base | current | history1   | history2 |     |
|--------|------------|---------|------------|----------|-----|
| Water  | WC Method  | >0.1    | <b>NEG</b> | NEG      | NEG |
| Glycol | WC Method  |         | <b>---</b> | ---      | 0.0 |

## WEAR METALS

| method    | limit/base | current       | history1 | history2     |    |    |
|-----------|------------|---------------|----------|--------------|----|----|
| Iron      | ppm        | ASTM D5185(m) | >50      | <b>27</b>    | 25 | 18 |
| Chromium  | ppm        | ASTM D5185(m) | >5       | <b>3</b>     | 2  | 2  |
| Nickel    | ppm        | ASTM D5185(m) | >4       | <b>&lt;1</b> | <1 | <1 |
| Titanium  | ppm        | ASTM D5185(m) | >5       | <b>0</b>     | 0  | 0  |
| Silver    | ppm        | ASTM D5185(m) | >3       | <b>0</b>     | 0  | 0  |
| Aluminum  | ppm        | ASTM D5185(m) | >25      | <b>4</b>     | 5  | 5  |
| Lead      | ppm        | ASTM D5185(m) | >40      | <b>&lt;1</b> | 2  | 5  |
| Copper    | ppm        | ASTM D5185(m) | >150     | <b>2</b>     | 2  | 3  |
| Tin       | ppm        | ASTM D5185(m) | >4       | <b>0</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>4</b>     | 8    | 14   |
| Barium     | ppm        | ASTM D5185(m) | 5        | <b>0</b>     | 0    | 0    |
| Molybdenum | ppm        | ASTM D5185(m) | 50       | <b>65</b>    | 58   | 58   |
| Manganese  | ppm        | ASTM D5185(m) | 0        | <b>&lt;1</b> | <1   | <1   |
| Magnesium  | ppm        | ASTM D5185(m) | 560      | <b>847</b>   | 637  | 662  |
| Calcium    | ppm        | ASTM D5185(m) | 1510     | <b>1575</b>  | 1732 | 1755 |
| Phosphorus | ppm        | ASTM D5185(m) | 780      | <b>909</b>   | 793  | 902  |
| Zinc       | ppm        | ASTM D5185(m) | 870      | <b>1131</b>  | 979  | 1021 |
| Sulfur     | ppm        | ASTM D5185(m) | 2040     | <b>2187</b>  | 2135 | 2038 |
| Lithium    | ppm        | ASTM D5185(m) |          | <b>&lt;1</b> | <1   | <1   |

## CONTAMINANTS

| method    | limit/base | current       | history1 | history2  |    |    |
|-----------|------------|---------------|----------|-----------|----|----|
| Silicon   | ppm        | ASTM D5185(m) | >25      | <b>4</b>  | 5  | 5  |
| Sodium    | ppm        | ASTM D5185(m) |          | <b>10</b> | 10 | 12 |
| Potassium | ppm        | ASTM D5185(m) | >20      | <b>7</b>  | 12 | 10 |

## INFRA-RED

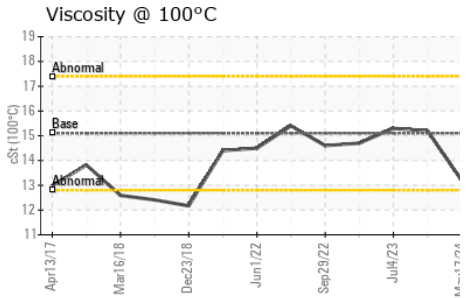
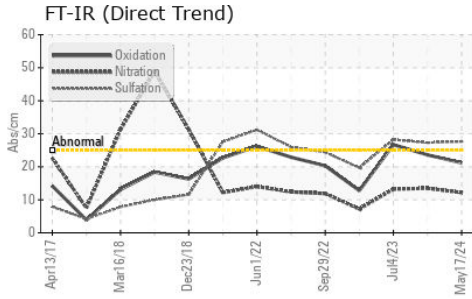
| method    | limit/base | current     | history1 | history2    |      |      |
|-----------|------------|-------------|----------|-------------|------|------|
| Soot %    | %          | ASTM D7844* |          | <b>0</b>    | 0    | 0    |
| Nitration | Abs/cm     | ASTM D7624* | >20      | <b>12.2</b> | 13.5 | 13.2 |
| Sulfation | Abs/.1mm   | ASTM D7415* | >30      | <b>27.6</b> | 27.3 | 28.2 |

## FLUID DEGRADATION

| method    | limit/base | current     | history1 | history2    |      |      |
|-----------|------------|-------------|----------|-------------|------|------|
| Oxidation | Abs/.1mm   | ASTM D7414* | >25      | <b>21.2</b> | 23.6 | 26.7 |



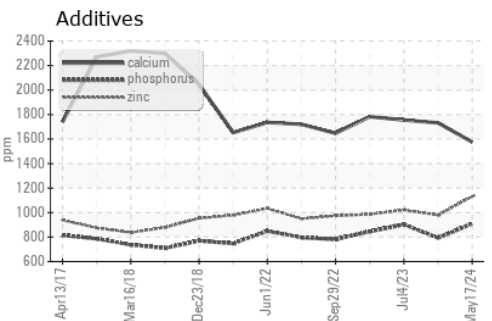
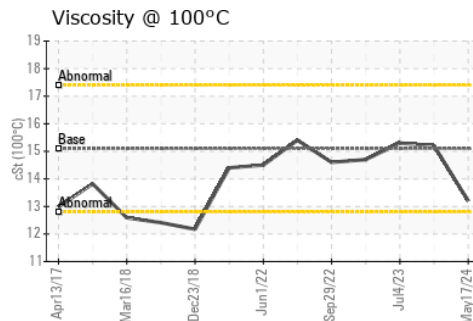
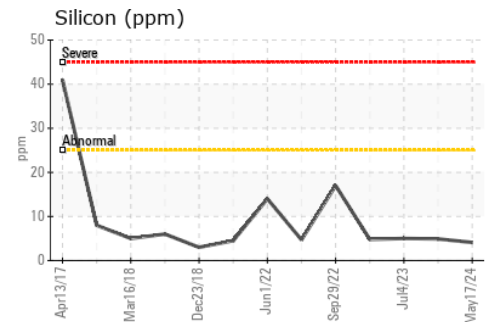
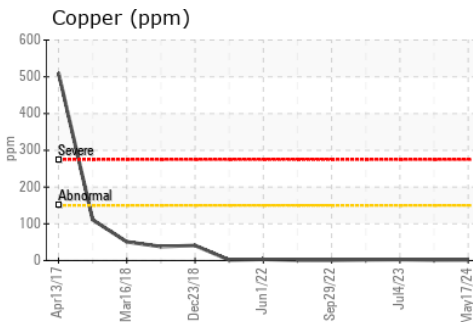
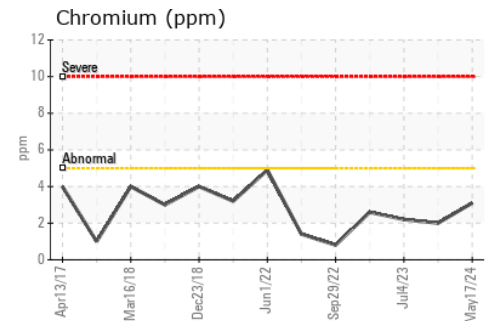
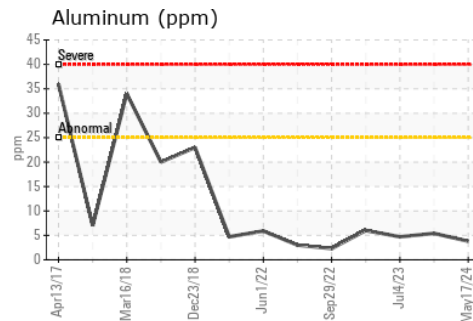
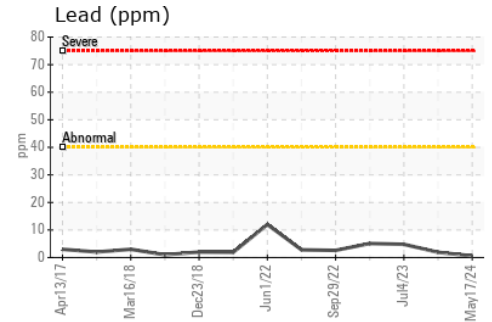
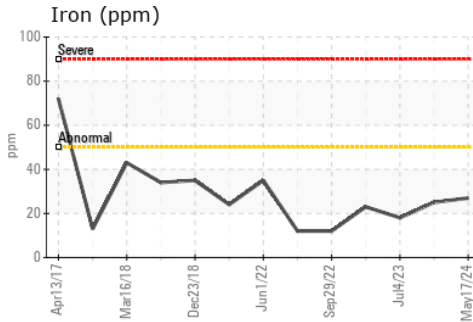
# OIL ANALYSIS REPORT



| 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    | 13.2     | 15.2     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0112529  
**Lab Number** : 02638389  
**Unique Number** : 5787551  
**Test Package** : MOB 1

**GFL Environmental - 554 - Edmonton SW**  
 8409 -15th Street NW  
 Edmonton, AB  
 CA T6P 0B8  
 Contact: Tim Greig  
 tgreig@gflenv.com  
 T: (780)231-0521  
 F:

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.