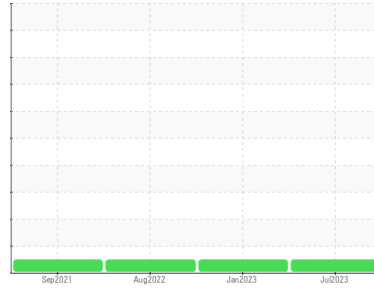




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**201074**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON HP 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>GFL0084200</b>  | GFL0063646  | GFL0050498  |
| Sample Date   | Client Info | <b>24 Jul 2023</b> | 30 Jan 2023 | 05 Aug 2022 |
| Machine Age   | hrs         | <b>4425</b>        | 4332        | 43538       |
| Oil Age       | hrs         | <b>600</b>         | 600         | 0           |
| Oil Changed   | Client Info | <b>N/A</b>         | N/A         | Changed     |
| Sample Status |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

| method | limit/base   | current        | history1 | history2 |
|--------|--------------|----------------|----------|----------|
| Fuel   | WC Method >5 | <b>&lt;1.0</b> | <1.0     | <1.0     |
| Glycol | WC Method    | <b>NEG</b>     | NEG      | NEG      |

## WEAR METALS

| method    | limit/base             | current      | history1 | history2 |
|-----------|------------------------|--------------|----------|----------|
| Iron      | ppm ASTM D5185(m) >100 | <b>27</b>    | 32       | 68       |
| Chromium  | ppm ASTM D5185(m) >20  | <b>0</b>     | 0        | <1       |
| Nickel    | ppm ASTM D5185(m) >4   | <b>0</b>     | 0        | <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) >20  | <b>2</b>     | 2        | 5        |
| Lead      | ppm ASTM D5185(m) >40  | <b>&lt;1</b> | 2        | 3        |
| Copper    | ppm ASTM D5185(m) >330 | <b>3</b>     | 8        | 26       |
| Tin       | ppm ASTM D5185(m) >15  | <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) 0    | <b>6</b>     | 4        | 4        |
| Barium     | ppm ASTM D5185(m) 0    | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm ASTM D5185(m) 60   | <b>58</b>    | 58       | 56       |
| Manganese  | ppm ASTM D5185(m) 0    | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm ASTM D5185(m) 1010 | <b>968</b>   | 963      | 950      |
| Calcium    | ppm ASTM D5185(m) 1070 | <b>1007</b>  | 1081     | 1048     |
| Phosphorus | ppm ASTM D5185(m) 1150 | <b>1066</b>  | 1084     | 997      |
| Zinc       | ppm ASTM D5185(m) 1270 | <b>1160</b>  | 1163     | 1169     |
| Sulfur     | ppm ASTM D5185(m) 2060 | <b>2641</b>  | 2722     | 2716     |
| 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>3</b> | 4        | 7        |
| Sodium    | ppm ASTM D5185(m)     | <b>1</b> | 2        | 3        |
| Potassium | ppm ASTM D5185(m) >20 | <b>0</b> | <1       | <1       |

## INFRA-RED

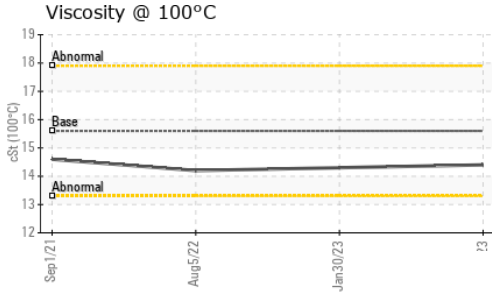
| method    | limit/base               | current     | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot %    | % ASTM D7844* >3         | <b>0</b>    | 0        | 0        |
| Nitration | Abs/cm ASTM D7624* >20   | <b>4.4</b>  | 5.0      | 5.1      |
| Sulfation | Abs/.1mm ASTM D7415* >30 | <b>17.5</b> | 20.0     | 17.8     |

## FLUID DEGRADATION

| method    | limit/base               | current     | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Oxidation | Abs/.1mm ASTM D7414* >25 | <b>12.2</b> | 14.3     | 13.6     |



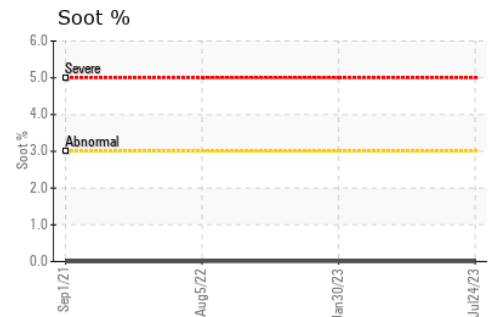
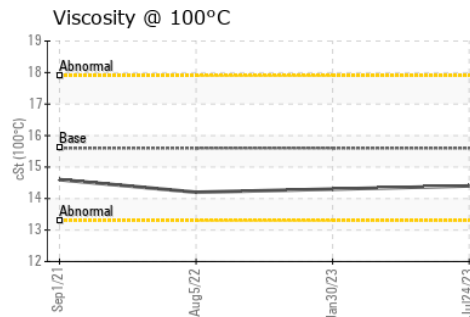
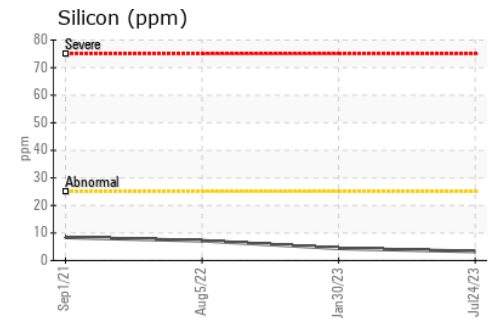
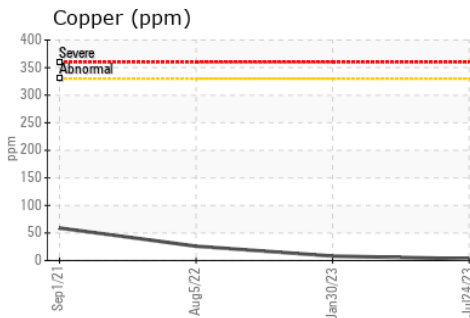
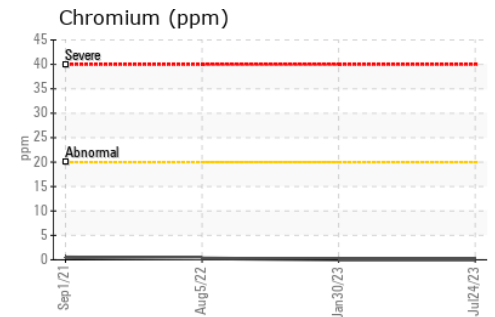
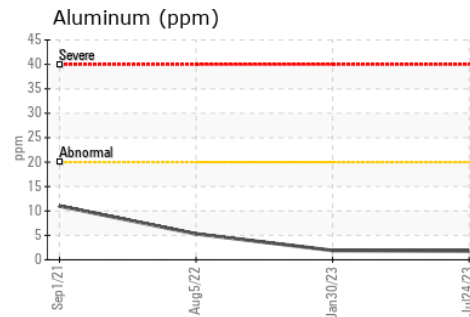
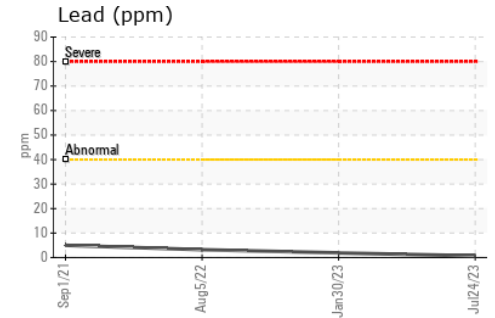
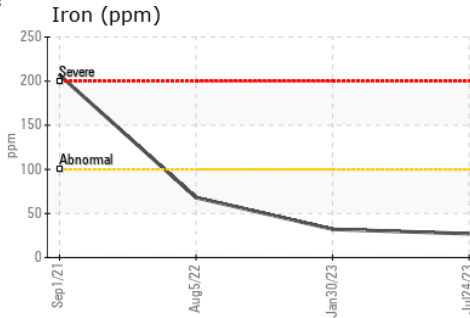
# OIL ANALYSIS REPORT



| VISUAL           |        | method  | limit/base | current    | history1 | history2 |
|------------------|--------|---------|------------|------------|----------|----------|
| Emulsified Water | scalar | Visual* | >0.2       | <b>NEG</b> | NEG      | NEG      |
| Free Water       | scalar | Visual* |            | <b>NEG</b> | NEG      | NEG      |

| FLUID PROPERTIES |     | method        | limit/base | current     | history1 | history2 |
|------------------|-----|---------------|------------|-------------|----------|----------|
| Visc @ 100°C     | cSt | ASTM D7279(m) | 15.6       | <b>14.4</b> | 14.3     | 14.2     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 574 - Vancouver Fleet  
**Sample No.** : GFL0084200 **Received** : 02 Aug 2023  
**Lab Number** : 02573589 **Diagnosed** : 02 Aug 2023  
**Unique Number** : 5618640 **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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