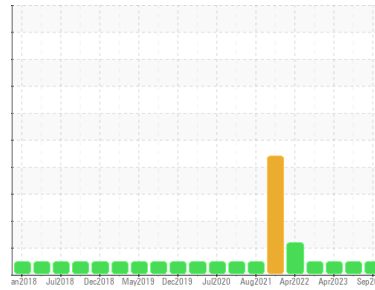




# OIL ANALYSIS REPORT

## Sample Rating Trend

**NORMAL**



Machine Id  
**801048**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (25 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>GFL0094207</b>  | GFL0086514  | GFL0068338  |
| Sample Date   | Client Info | <b>19 Sep 2023</b> | 04 Jul 2023 | 05 Apr 2023 |
| Machine Age   | hrs         | <b>67063</b>       | 11573       | 67063       |
| Oil Age       | hrs         | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info | <b>Changed</b>     | Changed     | 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      | 0.0      |

## WEAR METALS

| method    | limit/base             | current      | history1 | history2 |
|-----------|------------------------|--------------|----------|----------|
| Iron      | ppm ASTM D5185(m) >80  | <b>25</b>    | 23       | 24       |
| Chromium  | ppm ASTM D5185(m) >5   | <b>1</b>     | 1        | 1        |
| Nickel    | ppm ASTM D5185(m) >2   | <b>&lt;1</b> | <1       | <1       |
| Titanium  | ppm ASTM D5185(m)      | <b>0</b>     | <1       | <1       |
| Silver    | ppm ASTM D5185(m) >3   | <b>&lt;1</b> | <1       | 0        |
| Aluminum  | ppm ASTM D5185(m) >30  | <b>2</b>     | 2        | 3        |
| Lead      | ppm ASTM D5185(m) >30  | <b>&lt;1</b> | <1       | <1       |
| Copper    | ppm ASTM D5185(m) >150 | <b>1</b>     | 1        | 2        |
| Tin       | ppm ASTM D5185(m) >5   | <b>0</b>     | 0        | <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) 0    | <b>4</b>     | 4        | 7        |
| Barium     | ppm ASTM D5185(m) 0    | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm ASTM D5185(m) 60   | <b>58</b>    | 57       | 48       |
| Manganese  | ppm ASTM D5185(m) 0    | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm ASTM D5185(m) 1010 | <b>937</b>   | 924      | 717      |
| Calcium    | ppm ASTM D5185(m) 1070 | <b>1050</b>  | 1056     | 1367     |
| Phosphorus | ppm ASTM D5185(m) 1150 | <b>1037</b>  | 1036     | 1003     |
| Zinc       | ppm ASTM D5185(m) 1270 | <b>1167</b>  | 1183     | 1125     |
| Sulfur     | ppm ASTM D5185(m) 2060 | <b>2528</b>  | 2474     | 2662     |
| Lithium    | ppm ASTM D5185(m)      | <b>&lt;1</b> | <1       | <1       |

## CONTAMINANTS

| method    | limit/base            | current  | history1 | history2 |
|-----------|-----------------------|----------|----------|----------|
| Silicon   | ppm ASTM D5185(m) >20 | <b>6</b> | 8        | 7        |
| Sodium    | ppm ASTM D5185(m)     | <b>7</b> | 8        | 8        |
| Potassium | ppm ASTM D5185(m) >20 | <b>1</b> | 1        | 17       |

## INFRA-RED

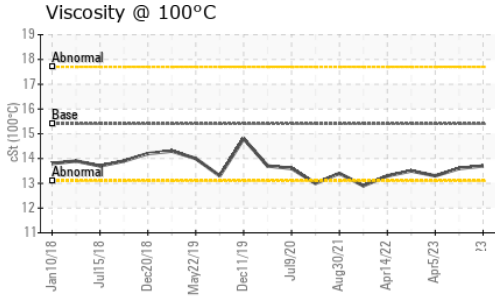
| method    | limit/base               | current     | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot %    | % ASTM D7844* >3         | <b>0.4</b>  | 0.4      | 0.3      |
| Nitration | Abs/cm ASTM D7624* >20   | <b>8.5</b>  | 9.4      | 9.6      |
| Sulfation | Abs/.1mm ASTM D7415* >30 | <b>19.3</b> | 20.1     | 22.5     |

## FLUID DEGRADATION

| method    | limit/base               | current     | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Oxidation | Abs/.1mm ASTM D7414* >25 | <b>15.4</b> | 16.4     | 15.8     |



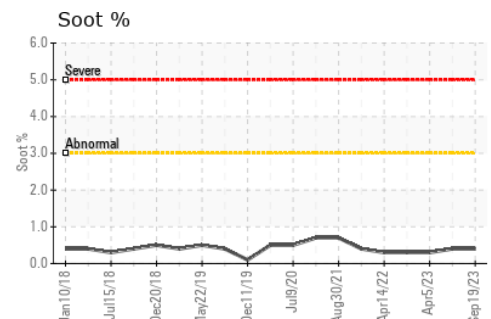
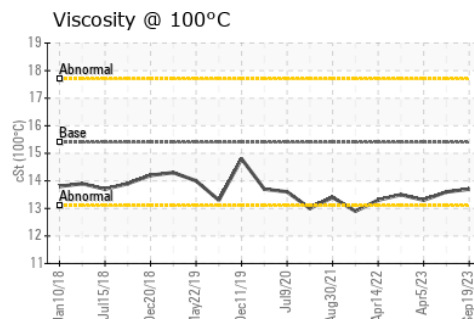
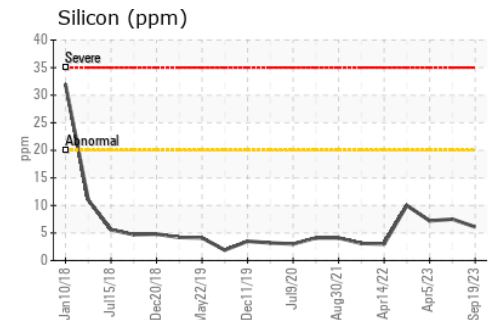
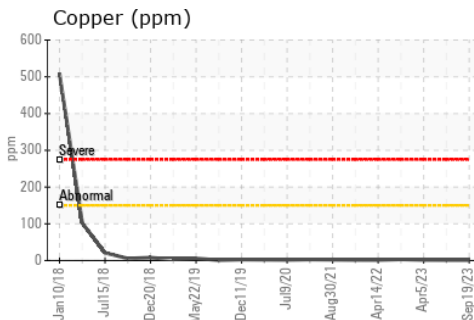
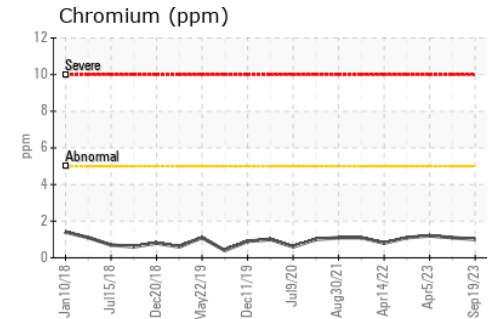
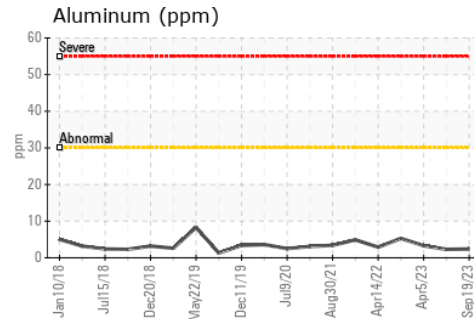
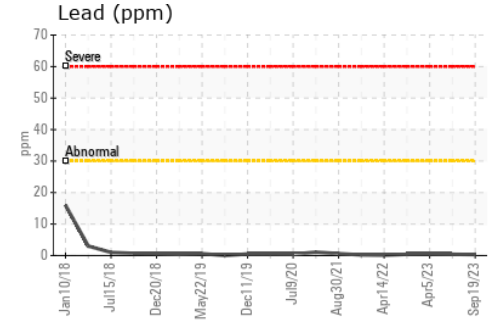
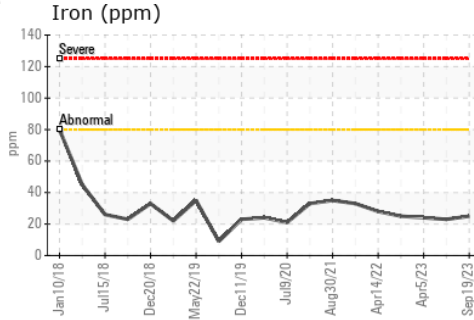
# OIL ANALYSIS REPORT



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

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D7279(m) | 15.4    | 13.7     | 13.6     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0094207  
**Lab Number** : 02584329  
**Unique Number** : 5645394  
**Test Package** : MOB 1

**GFL Environmental - 217 - Aurora**  
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 AURORA, ON  
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 Contact: Mike Havens  
 MHavens@gflenv.com  
 T:  
 F: (905)713-2445

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.