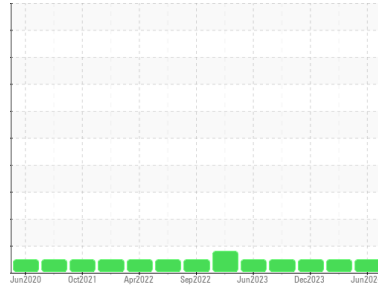




# OIL ANALYSIS REPORT

## Sample Rating Trend



**NORMAL**



Area  
**GFL207**  
 Machine Id  
**828008**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 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>GFL0120010</b>  | GFL0102739  | GFL0094552  |
| Sample Date   | Client Info |             | <b>09 Jun 2024</b> | 27 Feb 2024 | 21 Dec 2023 |
| Machine Age   | hrs         | Client Info | <b>13718</b>       | 13184       | 12709       |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>N/A</b>         | Changed     | N/A         |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

### CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >3.0       | <b>&lt;1.0</b> | <1.0     | <1.0     |
| Water  | WC Method | >0.2       | <b>NEG</b>     | NEG      | NEG      |
| Glycol | WC Method |            | <b>NEG</b>     | NEG      | NEG      |

### WEAR METALS

|           | method | limit/base    | current | history1     | history2 |    |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron      | ppm    | ASTM D5185(m) | >75     | <b>12</b>    | 10       | 14 |
| Chromium  | ppm    | ASTM D5185(m) | >5      | <b>&lt;1</b> | <1       | <1 |
| Nickel    | ppm    | ASTM D5185(m) | >4      | <b>0</b>     | <1       | <1 |
| Titanium  | ppm    | ASTM D5185(m) | >2      | <b>0</b>     | 0        | 0  |
| Silver    | ppm    | ASTM D5185(m) | >2      | <b>0</b>     | 0        | 0  |
| Aluminum  | ppm    | ASTM D5185(m) | >15     | <b>2</b>     | 2        | 3  |
| Lead      | ppm    | ASTM D5185(m) | >25     | <b>0</b>     | <1       | <1 |
| Copper    | ppm    | ASTM D5185(m) | >100    | <b>&lt;1</b> | <1       | 1  |
| Tin       | ppm    | ASTM D5185(m) | >4      | <b>0</b>     | 0        | 0  |
| 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>2</b>     | 3        | 2    |
| Barium     | ppm    | ASTM D5185(m) | 0       | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm    | ASTM D5185(m) | 60      | <b>59</b>    | 57       | 57   |
| Manganese  | ppm    | ASTM D5185(m) | 0       | <b>&lt;1</b> | 0        | 0    |
| Magnesium  | ppm    | ASTM D5185(m) | 1010    | <b>971</b>   | 923      | 926  |
| Calcium    | ppm    | ASTM D5185(m) | 1070    | <b>1041</b>  | 1003     | 1081 |
| Phosphorus | ppm    | ASTM D5185(m) | 1150    | <b>985</b>   | 958      | 923  |
| Zinc       | ppm    | ASTM D5185(m) | 1270    | <b>1189</b>  | 1128     | 1169 |
| Sulfur     | ppm    | ASTM D5185(m) | 2060    | <b>2405</b>  | 2538     | 2562 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

### CONTAMINANTS

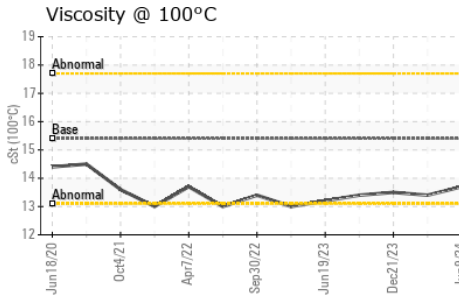
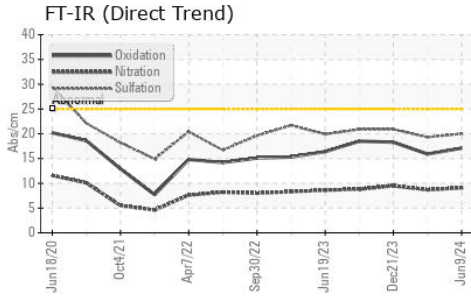
|           | method | limit/base    | current | history1 | history2 |   |
|-----------|--------|---------------|---------|----------|----------|---|
| Silicon   | ppm    | ASTM D5185(m) | >25     | <b>7</b> | 6        | 6 |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>6</b> | 6        | 7 |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>1</b> | 2        | 2 |

### INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* | >6      | <b>0.2</b>  | 0.2      | 0.3  |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>9.1</b>  | 8.7      | 9.5  |
| Sulfation | Abs/.1mm | ASTM D7415* | >30     | <b>20.0</b> | 19.3     | 20.9 |



# OIL ANALYSIS REPORT

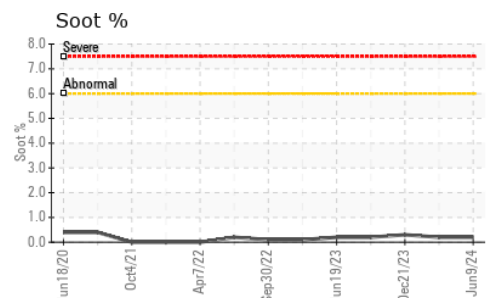
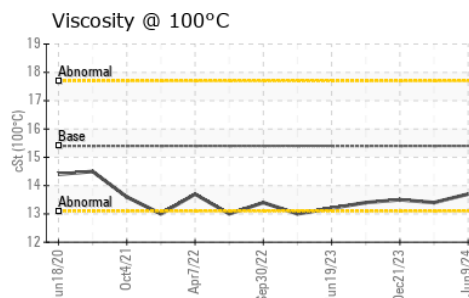
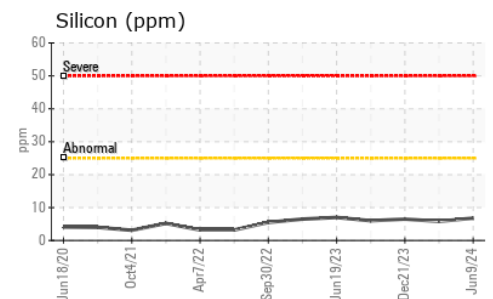
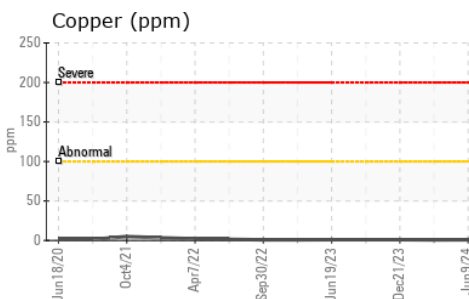
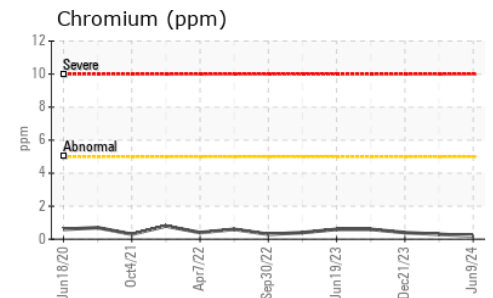
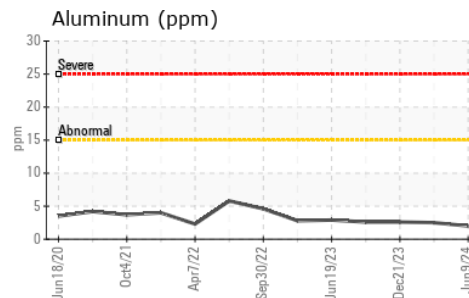
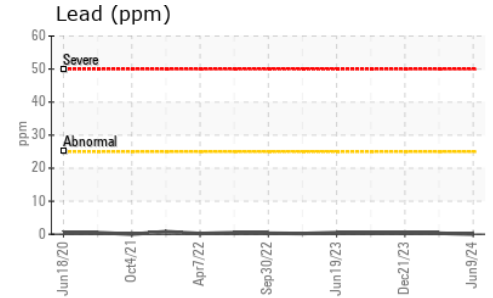
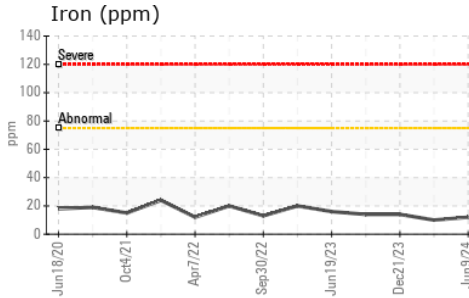


| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs./1mm | ASTM D7414* | >25        | <b>17.1</b> | 15.9     | 18.3     |

| 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) | 15.4       | <b>13.7</b> | 13.4     | 13.5     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 **GFL Environmental - 777 - Belleville-Municipal waste**  
**Sample No.** : GFL0120010 **Received** : 10 Jun 2024 **197 Putman Industrial Road**  
**Lab Number** : **02640695** **Tested** : 10 Jun 2024 **Belleville, ON**  
**Unique Number** : 5789857 **Diagnosed** : 10 Jun 2024 - Wes Davis **CA K8N 4Z6**  
**Test Package** : MOB 1 **Contact:** Ian Patton **ipatton@gflenv.com**

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.