



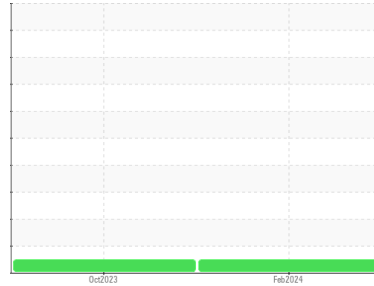
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**7804M**  
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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2 |
|---------------|-------------|-------------|--------------------|-------------|----------|
| Sample Number | Client Info |             | <b>GFL0110134</b>  | GFL0085000  | ---      |
| Sample Date   | Client Info |             | <b>06 Feb 2024</b> | 10 Oct 2023 | ---      |
| Machine Age   | hrs         | Client Info | <b>7238</b>        | 7027        | ---      |
| Oil Age       | hrs         | Client Info | <b>211</b>         | 7027        | ---      |
| Oil Changed   | Client Info |             | <b>Not Changed</b> | Changed     | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | ---      |

## CONTAMINATION

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

## WEAR METALS

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >90  | <b>14</b>    | 11       | ---      |
| Chromium | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | <1       | ---      |
| Nickel   | ppm    | ASTM D5185m >2   | <b>0</b>     | 0        | ---      |
| Titanium | ppm    | ASTM D5185m >2   | <b>0</b>     | 0        | ---      |
| Silver   | ppm    | ASTM D5185m >2   | <b>0</b>     | 0        | ---      |
| Aluminum | ppm    | ASTM D5185m >20  | <b>2</b>     | 4        | ---      |
| Lead     | ppm    | ASTM D5185m >40  | <b>0</b>     | 0        | ---      |
| Copper   | ppm    | ASTM D5185m >330 | <b>&lt;1</b> | <1       | ---      |
| Tin      | ppm    | ASTM D5185m >15  | <b>0</b>     | 0        | ---      |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | 0        | ---      |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | 0        | ---      |

## ADDITIVES

|            | method | limit/base       | current      | history1 | history2 |
|------------|--------|------------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 0    | <b>2</b>     | 0        | ---      |
| Barium     | ppm    | ASTM D5185m 0    | <b>0</b>     | 0        | ---      |
| Molybdenum | ppm    | ASTM D5185m 60   | <b>59</b>    | 57       | ---      |
| Manganese  | ppm    | ASTM D5185m 0    | <b>&lt;1</b> | <1       | ---      |
| Magnesium  | ppm    | ASTM D5185m 1010 | <b>929</b>   | 904      | ---      |
| Calcium    | ppm    | ASTM D5185m 1070 | <b>1050</b>  | 1011     | ---      |
| Phosphorus | ppm    | ASTM D5185m 1150 | <b>1054</b>  | 1035     | ---      |
| Zinc       | ppm    | ASTM D5185m 1270 | <b>1258</b>  | 1265     | ---      |
| Sulfur     | ppm    | ASTM D5185m 2060 | <b>2884</b>  | 2984     | ---      |

## CONTAMINANTS

|           | method | limit/base      | current  | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25 | <b>5</b> | 4        | ---      |
| Sodium    | ppm    | ASTM D5185m     | <b>5</b> | 3        | ---      |
| Potassium | ppm    | ASTM D5185m >20 | <b>0</b> | 2        | ---      |

## INFRA-RED

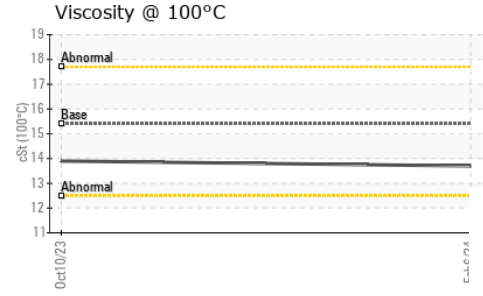
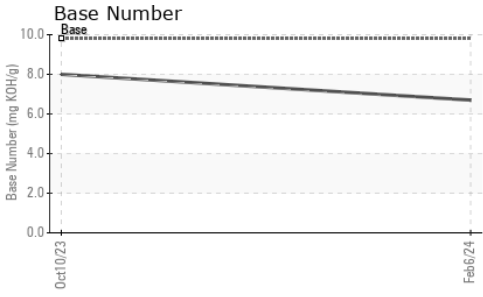
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >6  | <b>0.5</b>  | 0.4      | ---      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>10.0</b> | 8.8      | ---      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>20.8</b> | 19.9     | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>17.8</b> | 16.4     | ---      |
| Base Number (BN) | mg KOH/g | ASTM D2896 9.8  | <b>6.7</b>  | 8.0      | ---      |



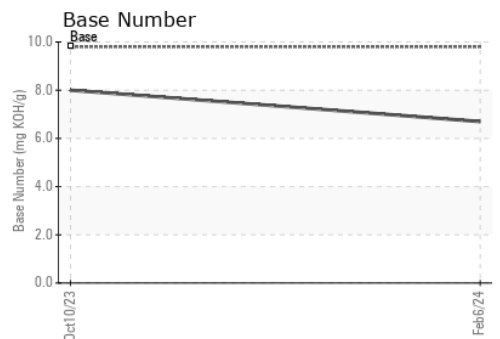
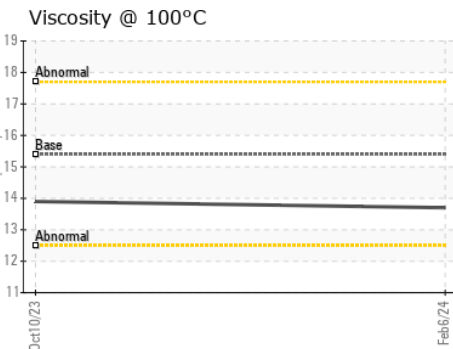
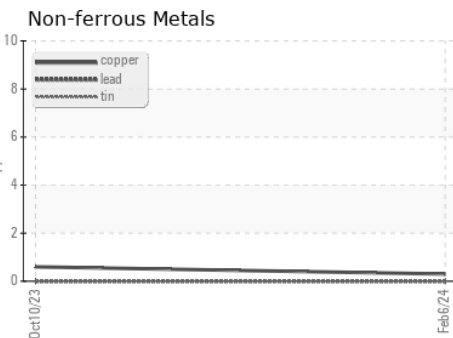
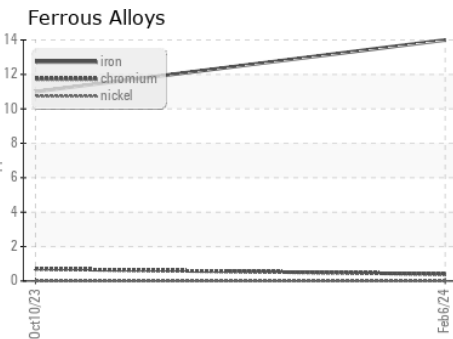
# OIL ANALYSIS REPORT



| PARAMETER        | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | *Visual    | >0.2    | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |     |
|------------------|--------|------------|---------|-------------|----------|-----|
| Visc @ 100°C     | cSt    | ASTM D445  | 15.4    | <b>13.7</b> | 13.9     | --- |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0110134      **Received** : 12 Feb 2024  
**Lab Number** : 06085758      **Tested** : 13 Feb 2024  
**Unique Number** : 10873203      **Diagnosed** : 13 Feb 2024 - Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 468 - Dearborn**  
 3051 Schaefer Rd  
 Dearborn, MI  
 US 48126  
 Contact:

To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

T:  
F: