



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**1880**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. 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 acceptable for the time in service.

## SAMPLE INFORMATION

| method        | limit/base      | current            | history1 | history2 |
|---------------|-----------------|--------------------|----------|----------|
| Sample Number | Client Info     | <b>GFL0070771</b>  | ---      | ---      |
| Sample Date   | Client Info     | <b>10 Jul 2023</b> | ---      | ---      |
| Machine Age   | hrs Client Info | <b>6102</b>        | ---      | ---      |
| Oil Age       | hrs Client Info | <b>600</b>         | ---      | ---      |
| Oil Changed   | Client Info     | <b>Changed</b>     | ---      | ---      |
| Sample Status |                 | <b>NORMAL</b>      | ---      | ---      |

## CONTAMINATION

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

## WEAR METALS

| method   | limit/base           | current      | history1 | history2 |
|----------|----------------------|--------------|----------|----------|
| Iron     | ppm ASTM D5185m >90  | <b>8</b>     | ---      | ---      |
| Chromium | ppm ASTM D5185m >20  | <b>&lt;1</b> | ---      | ---      |
| Nickel   | ppm ASTM D5185m >2   | <b>0</b>     | ---      | ---      |
| Titanium | ppm ASTM D5185m >2   | <b>0</b>     | ---      | ---      |
| Silver   | ppm ASTM D5185m >2   | <b>0</b>     | ---      | ---      |
| Aluminum | ppm ASTM D5185m >20  | <b>2</b>     | ---      | ---      |
| Lead     | ppm ASTM D5185m >40  | <b>0</b>     | ---      | ---      |
| Copper   | ppm ASTM D5185m >330 | <b>0</b>     | ---      | ---      |
| Tin      | ppm ASTM D5185m >15  | <b>0</b>     | ---      | ---      |
| Vanadium | ppm ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm ASTM D5185m      | <b>0</b>     | ---      | ---      |

## ADDITIVES

| method     | limit/base           | current      | history1 | history2 |
|------------|----------------------|--------------|----------|----------|
| Boron      | ppm ASTM D5185m 50   | <b>348</b>   | ---      | ---      |
| Barium     | ppm ASTM D5185m 5    | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm ASTM D5185m 50   | <b>81</b>    | ---      | ---      |
| Manganese  | ppm ASTM D5185m 0    | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm ASTM D5185m 560  | <b>509</b>   | ---      | ---      |
| Calcium    | ppm ASTM D5185m 1510 | <b>1598</b>  | ---      | ---      |
| Phosphorus | ppm ASTM D5185m 780  | <b>1117</b>  | ---      | ---      |
| Zinc       | ppm ASTM D5185m 870  | <b>1342</b>  | ---      | ---      |
| Sulfur     | ppm ASTM D5185m 2040 | <b>4145</b>  | ---      | ---      |

## CONTAMINANTS

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

## INFRA-RED

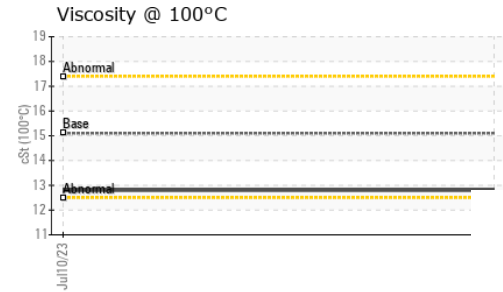
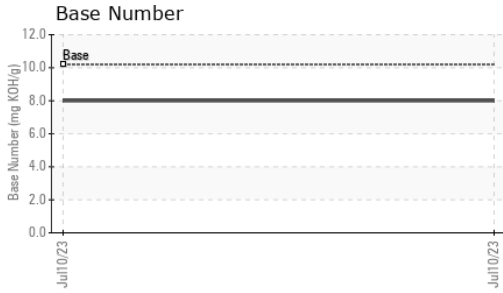
| method    | limit/base               | current     | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot %    | % *ASTM D7844 >6         | <b>0.1</b>  | ---      | ---      |
| Nitration | Abs/cm *ASTM D7624 >20   | <b>6.1</b>  | ---      | ---      |
| Sulfation | Abs/.1mm *ASTM D7415 >30 | <b>20.1</b> | ---      | ---      |

## FLUID DEGRADATION

| method           | limit/base               | current     | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm *ASTM D7414 >25 | <b>14.9</b> | ---      | ---      |
| Base Number (BN) | mg KOH/g ASTM D2896 10.2 | <b>8.0</b>  | ---      | ---      |



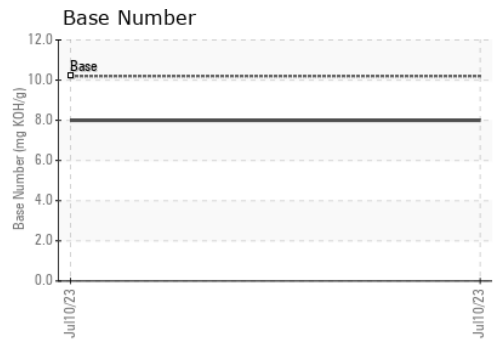
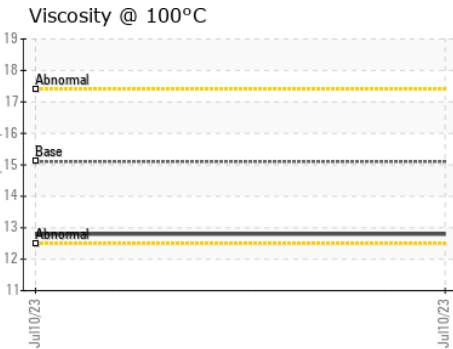
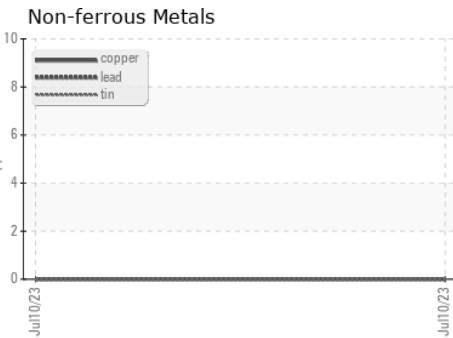
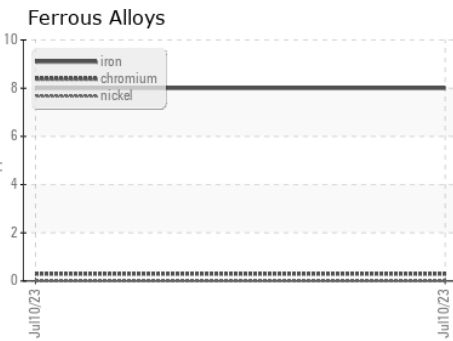
# OIL ANALYSIS REPORT



| 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  | 15.1    | 12.8     | ---      |

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0070771  
 Lab Number : 05904178  
 Unique Number : 10565534  
 Test Package : FLEET

GFL Environmental - 030 - Conway Myrtle Beach  
 3010 HWY 378  
 Conway, SC  
 US 29527  
 Contact: CHET STROSCHINE  
 cstroschine@gflenv.com

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: