



# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**946001**

Component  
**Natural Gas Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a components first oil change.

### 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>GFL0113984</b>  | ---      | ---      |
| Sample Date   | Client Info     | <b>14 Mar 2024</b> | ---      | ---      |
| Machine Age   | hrs Client Info | <b>10391</b>       | ---      | ---      |
| Oil Age       | hrs Client Info | <b>10391</b>       | ---      | ---      |
| Oil Changed   | Client Info     | <b>Changed</b>     | ---      | ---      |
| Sample Status |                 | <b>NORMAL</b>      | ---      | ---      |

## CONTAMINATION

| method | limit/base     | current    | history1 | history2 |
|--------|----------------|------------|----------|----------|
| Water  | WC Method >0.1 | <b>NEG</b> | ---      | ---      |

## WEAR METALS

| method   | limit/base          | current      | history1 | history2 |
|----------|---------------------|--------------|----------|----------|
| Iron     | ppm ASTM D5185m >50 | <b>12</b>    | ---      | ---      |
| Chromium | ppm ASTM D5185m >4  | <b>&lt;1</b> | ---      | ---      |
| Nickel   | ppm ASTM D5185m >2  | <b>&lt;1</b> | ---      | ---      |
| Titanium | ppm ASTM D5185m     | <b>&lt;1</b> | ---      | ---      |
| Silver   | ppm ASTM D5185m >3  | <b>0</b>     | ---      | ---      |
| Aluminum | ppm ASTM D5185m >9  | <b>4</b>     | ---      | ---      |
| Lead     | ppm ASTM D5185m >30 | <b>3</b>     | ---      | ---      |
| Copper   | ppm ASTM D5185m >35 | <b>1</b>     | ---      | ---      |
| Tin      | ppm ASTM D5185m >4  | <b>&lt;1</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>13</b>    | ---      | ---      |
| Barium     | ppm ASTM D5185m 5    | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm ASTM D5185m 50   | <b>55</b>    | ---      | ---      |
| Manganese  | ppm ASTM D5185m 0    | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm ASTM D5185m 560  | <b>574</b>   | ---      | ---      |
| Calcium    | ppm ASTM D5185m 1510 | <b>1680</b>  | ---      | ---      |
| Phosphorus | ppm ASTM D5185m 780  | <b>785</b>   | ---      | ---      |
| Zinc       | ppm ASTM D5185m 870  | <b>1020</b>  | ---      | ---      |
| Sulfur     | ppm ASTM D5185m 2040 | <b>2638</b>  | ---      | ---      |

## CONTAMINANTS

| method    | limit/base            | current   | history1 | history2 |
|-----------|-----------------------|-----------|----------|----------|
| Silicon   | ppm ASTM D5185m >+100 | <b>10</b> | ---      | ---      |
| Sodium    | ppm ASTM D5185m       | <b>43</b> | ---      | ---      |
| Potassium | ppm ASTM D5185m >20   | <b>6</b>  | ---      | ---      |

## INFRA-RED

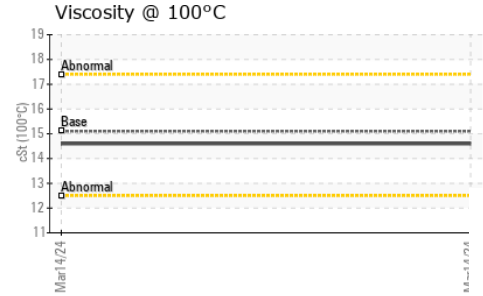
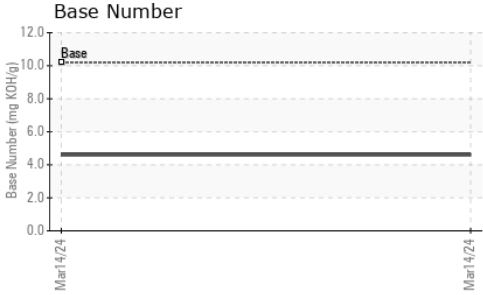
| method    | limit/base               | current     | history1 | history2 |
|-----------|--------------------------|-------------|----------|----------|
| Soot %    | % *ASTM D7844            | <b>0</b>    | ---      | ---      |
| Nitration | Abs/cm *ASTM D7624 >20   | <b>12.4</b> | ---      | ---      |
| Sulfation | Abs/.1mm *ASTM D7415 >30 | <b>24.6</b> | ---      | ---      |

## FLUID DEGRADATION

| method           | limit/base               | current     | history1 | history2 |
|------------------|--------------------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm *ASTM D7414 >25 | <b>21.3</b> | ---      | ---      |
| Base Number (BN) | mg KOH/g ASTM D2896 10.2 | <b>4.6</b>  | ---      | ---      |



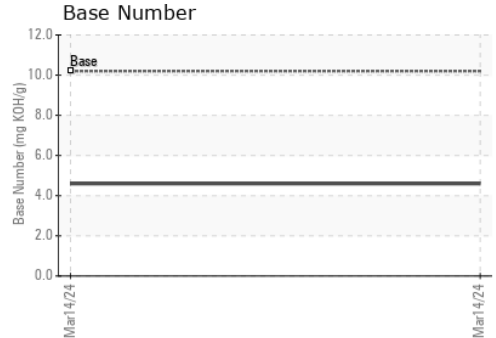
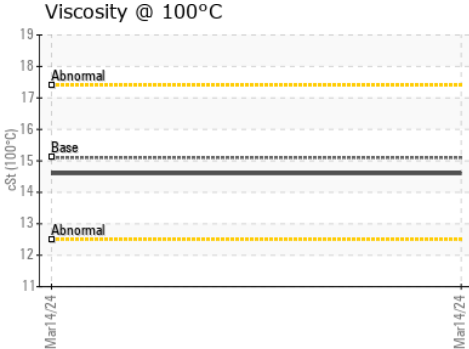
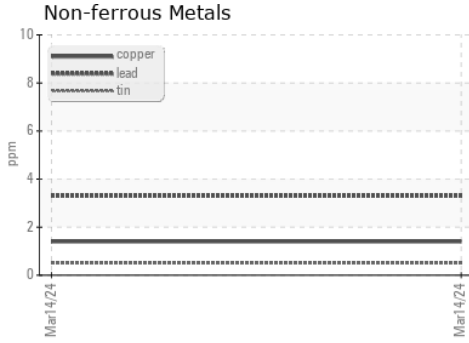
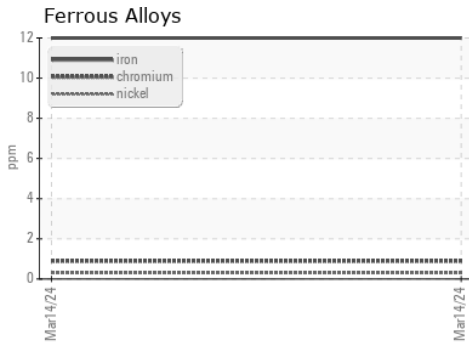
# OIL ANALYSIS REPORT



| VISUAL           | 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    | >0.1    | NEG      | ---      | --- |
| Free Water       | scalar | *Visual    |         | NEG      | ---      | --- |

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |     |
|------------------|--------|------------|---------|-------------|----------|-----|
| Visc @ 100°C     | cSt    | ASTM D445  | 15.1    | <b>14.6</b> | ---      | --- |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0113984  
**Lab Number** : **06122211**  
**Unique Number** : 10936362  
**Test Package** : FLEET

**Received** : 19 Mar 2024  
**Tested** : 20 Mar 2024  
**Diagnosed** : 20 Mar 2024 - Wes Davis

**GFL Environmental - 932 - Muskego HC**  
 W144 S6400 College Ct.  
 Muskego, WI  
 US 53150  
 Contact: Brian Schlomann  
 brian.schlomann@gflenv.com  
 T: (262)510-4586  
 F:

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)