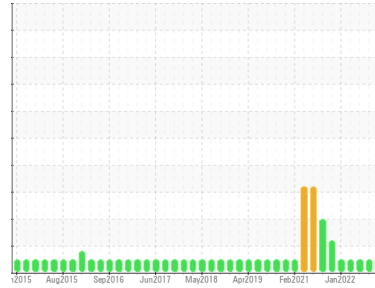




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**(Vin)**  
Machine Id  
**10503C Autocar ACX64**  
Component  
**Natural Gas Engine**  
Fluid  
**PETRO CANADA DURON GEO LD 15W40 (28 QTS)**

## 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>GFL0089345</b>  | GFL0056516  | GFL0052459  |
| Sample Date   | Client Info | <b>20 Jul 2023</b> | 11 Oct 2022 | 12 May 2022 |
| Machine Age   | hrs         | <b>7241</b>        | 5384        | 4748        |
| Oil Age       | hrs         | <b>0</b>           | 951         | 317         |
| Oil Changed   | Client Info | <b>Not Changed</b> | Changed     | Not Changed |
| Sample Status |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR METALS

| method   | limit/base | current         | history1     | history2 |    |
|----------|------------|-----------------|--------------|----------|----|
| Iron     | ppm        | ASTM D5185m >50 | <b>15</b>    | 6        | 9  |
| Chromium | ppm        | ASTM D5185m >4  | <b>2</b>     | 2        | 1  |
| Nickel   | ppm        | ASTM D5185m >2  | <b>&lt;1</b> | 0        | <1 |
| Titanium | ppm        | ASTM D5185m     | <b>&lt;1</b> | <1       | 0  |
| Silver   | ppm        | ASTM D5185m >3  | <b>0</b>     | <1       | <1 |
| Aluminum | ppm        | ASTM D5185m >9  | <b>5</b>     | 1        | 2  |
| Lead     | ppm        | ASTM D5185m >30 | <b>0</b>     | 2        | <1 |
| Copper   | ppm        | ASTM D5185m >35 | <b>10</b>    | 1        | 5  |
| Tin      | ppm        | ASTM D5185m >4  | <b>&lt;1</b> | <1       | <1 |
| Vanadium | ppm        | ASTM D5185m     | <b>&lt;1</b> | <1       | 0  |
| Cadmium  | ppm        | ASTM D5185m     | <b>0</b>     | 0        | 0  |

## ADDITIVES

| method     | limit/base | current          | history1     | history2 |      |
|------------|------------|------------------|--------------|----------|------|
| Boron      | ppm        | ASTM D5185m 50   | <b>15</b>    | 30       | 24   |
| Barium     | ppm        | ASTM D5185m 5    | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm        | ASTM D5185m 50   | <b>54</b>    | 47       | 49   |
| Manganese  | ppm        | ASTM D5185m 0    | <b>&lt;1</b> | 1        | <1   |
| Magnesium  | ppm        | ASTM D5185m 560  | <b>585</b>   | 523      | 583  |
| Calcium    | ppm        | ASTM D5185m 1510 | <b>1707</b>  | 1520     | 1579 |
| Phosphorus | ppm        | ASTM D5185m 780  | <b>797</b>   | 716      | 747  |
| Zinc       | ppm        | ASTM D5185m 870  | <b>977</b>   | 908      | 924  |
| Sulfur     | ppm        | ASTM D5185m 2040 | <b>2928</b>  | 2683     | 2149 |

## CONTAMINANTS

| method    | limit/base | current           | history1  | history2 |    |
|-----------|------------|-------------------|-----------|----------|----|
| Silicon   | ppm        | ASTM D5185m >+100 | <b>6</b>  | 6        | 7  |
| Sodium    | ppm        | ASTM D5185m       | <b>10</b> | 12       | 10 |
| Potassium | ppm        | ASTM D5185m >20   | <b>4</b>  | 2        | 2  |

## INFRA-RED

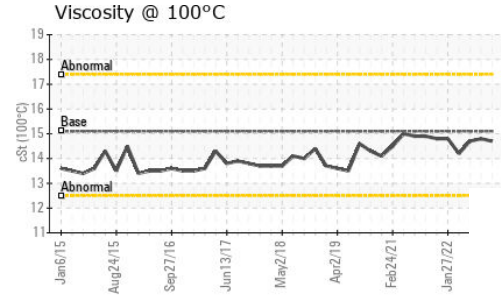
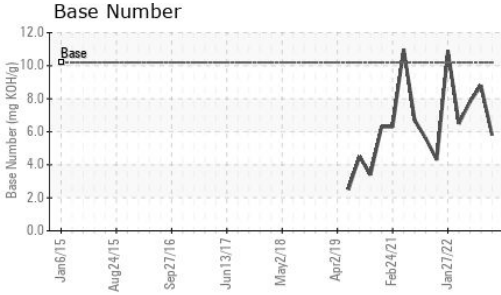
| method    | limit/base | current         | history1    | history2 |      |
|-----------|------------|-----------------|-------------|----------|------|
| Soot %    | %          | *ASTM D7844     | <b>0</b>    | 0.1      | 0.1  |
| Nitration | Abs/cm     | *ASTM D7624 >20 | <b>10.1</b> | 8.1      | 10.2 |
| Sulfation | Abs/.1mm   | *ASTM D7415 >30 | <b>21.7</b> | 20.6     | 20.1 |

## FLUID DEGRADATION

| method           | limit/base | current         | history1    | history2 |      |
|------------------|------------|-----------------|-------------|----------|------|
| Oxidation        | Abs/.1mm   | *ASTM D7414 >25 | <b>18.4</b> | 17.2     | 17.4 |
| Base Number (BN) | mg KOH/g   | ASTM D2896 10.2 | <b>5.8</b>  | 8.8      | 7.8  |



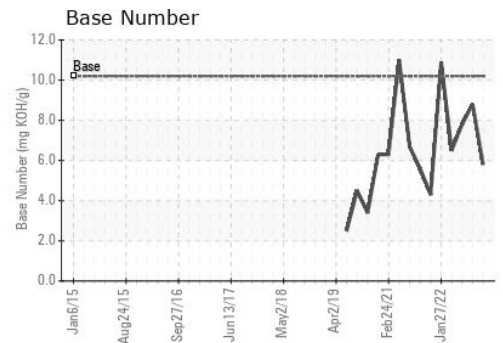
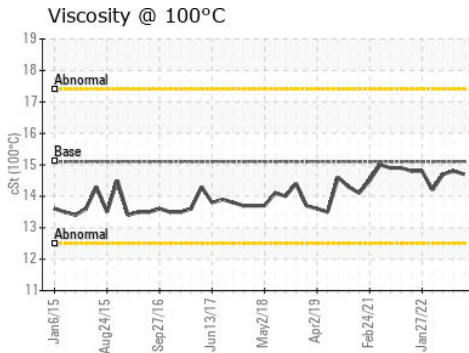
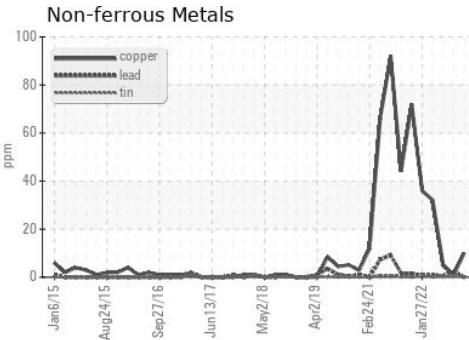
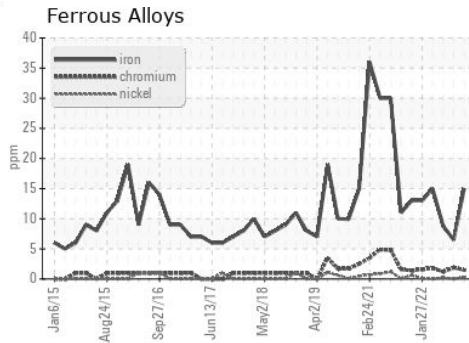
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Silt             | scalar | *Visual    | NONE    | NONE     | NONE     |
| Debris           | scalar | *Visual    | NONE    | NONE     | NONE     |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | NONE     |
| Appearance       | scalar | *Visual    | NORML   | NORML    | NORML    |
| Odor             | scalar | *Visual    | NORML   | NORML    | NORML    |
| Emulsified Water | scalar | *Visual    | >0.1    | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D445  | 15.1    | 14.7     | 14.8     |

## GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0089345 Received : 24 Jul 2023  
 Lab Number : 05905167 Diagnosed : 24 Jul 2023  
 Unique Number : 10566523 Diagnostician : Wes Davis  
 Test Package : FLEET

GFL Environmental - 001 - Raleigh(CNG)  
 3741 Conquest Drive  
 Garner, NC  
 US 27529  
 Contact: Craig Johnson  
 craig.johnson@gflenv.com  
 T: (919)662-7100  
 F: (919)662-7130

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)