



|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |

Machine Id  
**731117**  
 Component  
**Natural Gas Engine**  
 Fluid  
**PETRO CANADA DURON GEO LD 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0120167</b>  | GFL0117173  | GFL0117175  |
| Sample Date    |     | Client Info |           | <b>23 May 2024</b> | 03 May 2024 | 11 Apr 2024 |
| Machine Age    | hrs | Client Info |           | <b>6737</b>        | 6633        | 6491        |
| Oil Age        | hrs | Client Info |           | <b>1200</b>        | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>1200</b>        | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Not Changd  | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>11</b>    | 7    | 27   |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>1</b>     | 1    | 2    |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | 1    | 1    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>1</b>     | <1   | 0    |
| Aluminum     | ppm    | ASTM D5185m | >9   | <b>2</b>     | 2    | 3    |
| Lead         | ppm    | ASTM D5185m | >30  | <b>3</b>     | 4    | 14   |
| Copper       | ppm    | ASTM D5185m | >35  | <b>2</b>     | <1   | 3    |
| Tin          | ppm    | ASTM D5185m | >4   | <b>1</b>     | 2    | 1    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

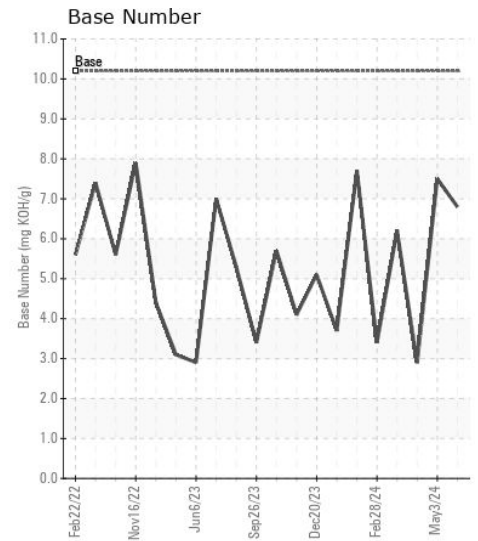
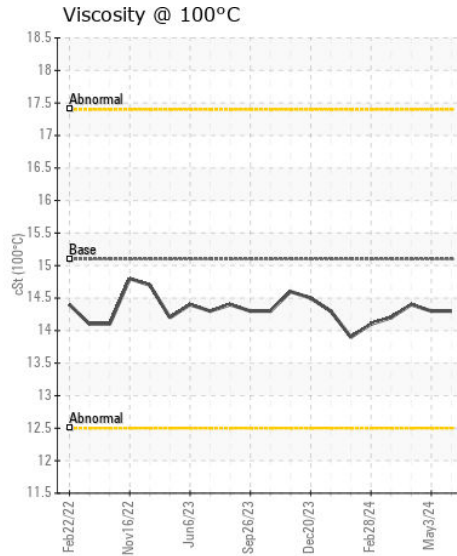
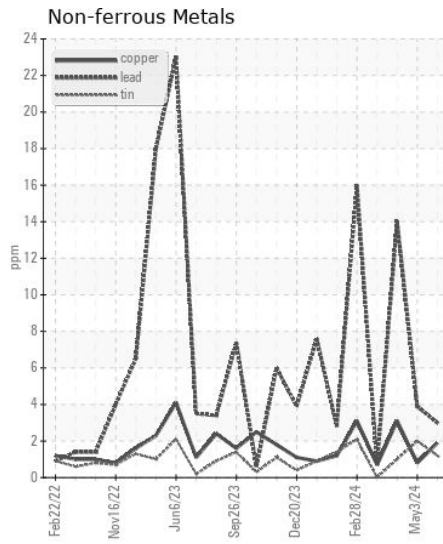
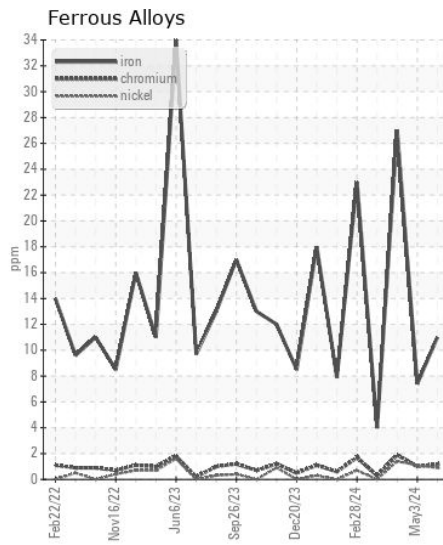
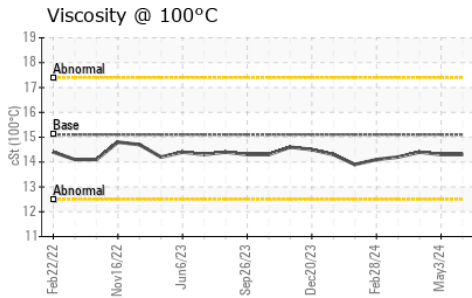
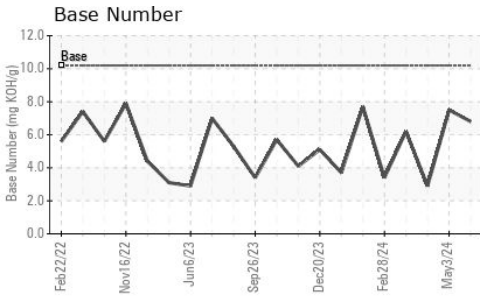
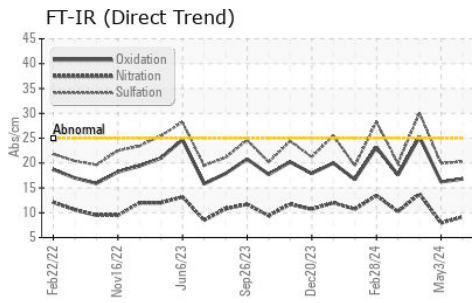
There is no indication of any contamination in the oil.

|                  |          |             |       |              |       |       |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >+100 | <b>5</b>     | 4     | 5     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>3</b>     | 2     | 11    |
| Water            |          | WC Method   | >0.1  | <b>NEG</b>   | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 |       | <b>0.1</b>   | 0.1   | 0.1   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.2</b>   | 7.9   | 13.8  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>20.3</b>  | 19.9  | 30.1  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b> | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b> | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.1  | <b>NEG</b>   | NEG   | NEG   |

**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.

|                  |          |             |      |              |      |       |
|------------------|----------|-------------|------|--------------|------|-------|
| Sodium           | ppm      | ASTM D5185m |      | <b>7</b>     | 6    | 10    |
| Boron            | ppm      | ASTM D5185m | 50   | <b>25</b>    | 27   | 10    |
| Barium           | ppm      | ASTM D5185m | 5    | <b>&lt;1</b> | 0    | 0     |
| Molybdenum       | ppm      | ASTM D5185m | 50   | <b>54</b>    | 48   | 65    |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 1    | 1     |
| Magnesium        | ppm      | ASTM D5185m | 560  | <b>588</b>   | 628  | 669   |
| Calcium          | ppm      | ASTM D5185m | 1510 | <b>1583</b>  | 1761 | 1904  |
| Phosphorus       | ppm      | ASTM D5185m | 780  | <b>782</b>   | 927  | 886   |
| Zinc             | ppm      | ASTM D5185m | 870  | <b>988</b>   | 1066 | 1068  |
| Sulfur           | ppm      | ASTM D5185m | 2040 | <b>2530</b>  | 3272 | 2880  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>16.8</b>  | 16.2 | 25.3  |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.2 | <b>6.8</b>   | 7.5  | ▲ 2.9 |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.1 | <b>14.3</b>  | 14.3 | 14.4  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0120167  
**Lab Number** : 06191872  
**Unique Number** : 11048624  
**Test Package** : FLEET

**Received** : 28 May 2024  
**Tested** : 29 May 2024  
**Diagnosed** : 29 May 2024 - Wes Davis

**GFL Environmental - 836 - Kansas City Hauling**  
 7801 East Truman Road  
 Kansas City, MO  
 US 64126  
 Contact: Loyce Stewart  
 loyce.stewart@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)

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F: