



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

Area

**(YA144032)**

Machine Id

**3797C**

Component

**Natural Gas Engine**

Fluid

**PETRO CANADA DURON GEO LD 15W40 (46 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0116008</b>  | GFL0066847  | GFL0074416  |
| Sample Date    |     | Client Info |           | <b>18 Jun 2024</b> | 21 Jun 2023 | 07 Apr 2023 |
| Machine Age    | hrs | Client Info |           | <b>9734</b>        | 9734        | 9734        |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 9734        | 9734        |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Chngd</b>   | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ABNORMAL    | ATTENTION   |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |       |      |
|--------------|--------|-------------|------|--------------|-------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>8</b>     | 32    | 28   |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 1     | 0    |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 1     | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 3     | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0     | 0    |
| Aluminum     | ppm    | ASTM D5185m | >9   | <b>2</b>     | 4     | 8    |
| Lead         | ppm    | ASTM D5185m | >30  | <b>0</b>     | 3     | 16   |
| Copper       | ppm    | ASTM D5185m | >35  | <b>0</b>     | ▲ 183 | 14   |
| Tin          | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 2     | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0     | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE  | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE  | NONE |

**CONTAMINATION**

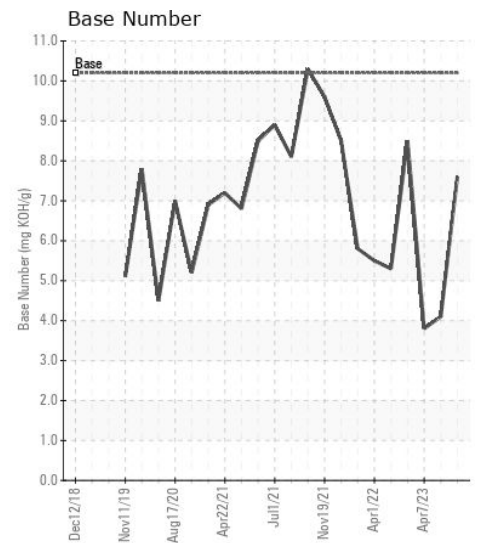
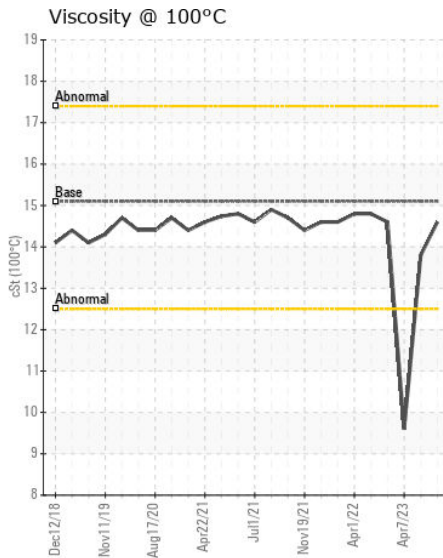
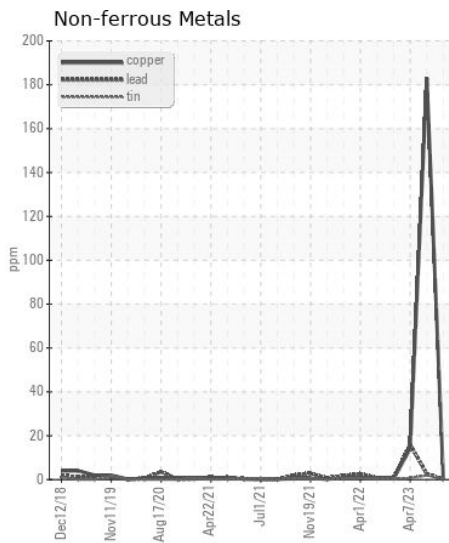
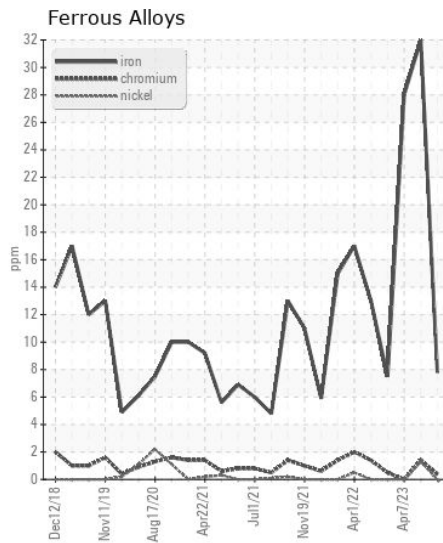
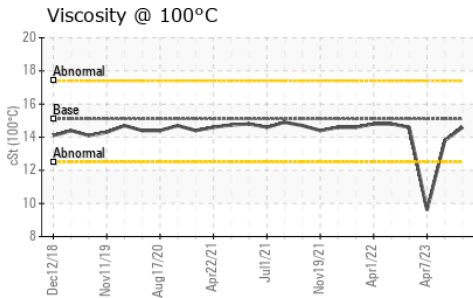
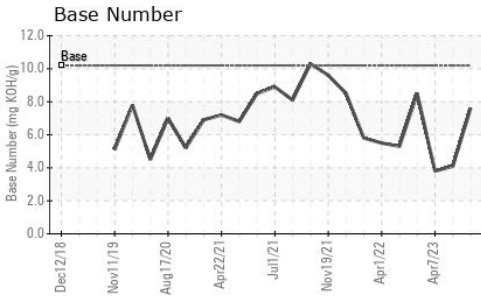
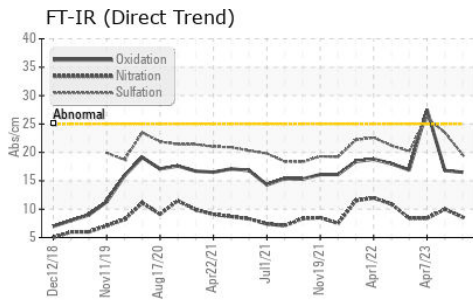
There is no indication of any contamination in the oil.

|                  |          |             |       |              |       |       |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >+100 | <b>6</b>     | 21    | 22    |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>2</b>     | 3     | 2     |
| Water            |          | WC Method   | >0.1  | <b>NEG</b>   | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 |       | <b>0.1</b>   | 0     | 0.1   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>8.6</b>   | 10.0  | 8.4   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.6</b>  | 23.5  | 26.1  |
| 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>6</b>     | 1    | 25    |
| Boron            | ppm      | ASTM D5185m | 50   | <b>18</b>    | 5    | 40    |
| Barium           | ppm      | ASTM D5185m | 5    | <b>0</b>     | 0    | 0     |
| Molybdenum       | ppm      | ASTM D5185m | 50   | <b>50</b>    | 104  | 22    |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 10   | 1     |
| Magnesium        | ppm      | ASTM D5185m | 560  | <b>650</b>   | 325  | ● 226 |
| Calcium          | ppm      | ASTM D5185m | 1510 | <b>1568</b>  | 1972 | ● 792 |
| Phosphorus       | ppm      | ASTM D5185m | 780  | <b>827</b>   | 756  | ● 448 |
| Zinc             | ppm      | ASTM D5185m | 870  | <b>1005</b>  | 972  | ● 405 |
| Sulfur           | ppm      | ASTM D5185m | 2040 | <b>2905</b>  | 2995 | 2315  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>16.5</b>  | 16.8 | 27.5  |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.2 | <b>7.6</b>   | 4.1  | 3.8   |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.1 | <b>14.6</b>  | 13.8 | ● 9.6 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116008  
**Lab Number** : 06214472  
**Unique Number** : 11087336  
**Test Package** : FLEET

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

**GFL Environmental - 018 - Fayetteville**  
 4621 Marracco Drive  
 Hope Mills, NC  
 US 28348

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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)