



Area

(YA134232)

Machine Id

2667C

Component

Natural Gas Engine

Fluid

PETRO CANADA DURON GEO LD 15W40 (12 GAL)

**RECOMMENDATION**

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0118401</b>  | GFL0112923  | GFL0098121  |
| Sample Date    |     | Client Info |           | <b>30 May 2024</b> | 26 Feb 2024 | 04 Dec 2023 |
| Machine Age    | hrs | Client Info |           | <b>6792</b>        | 6792        | 6792        |
| Oil Age        | hrs | Client Info |           | <b>590</b>         | 581         | 556         |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>SEVERE</b>      | SEVERE      | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >50  | <b>20</b>    | 9    | 10   |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>2</b>     | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>&lt;1</b> | 0    | <1   |
| Aluminum     | ppm    | ASTM D5185m | >9   | <b>2</b>     | 2    | 2    |
| Lead         | ppm    | ASTM D5185m | >30  | <b>4</b>     | <1   | 1    |
| Copper       | ppm    | ASTM D5185m | >35  | <b>&lt;1</b> | <1   | 0    |
| Tin          | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 0    | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

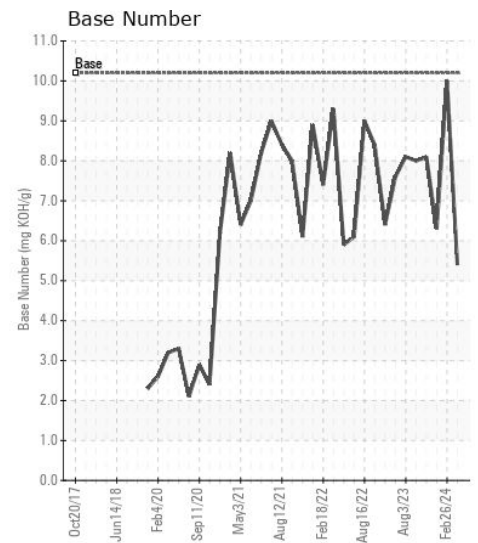
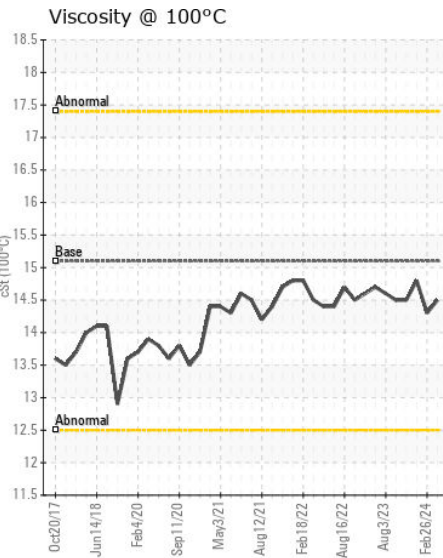
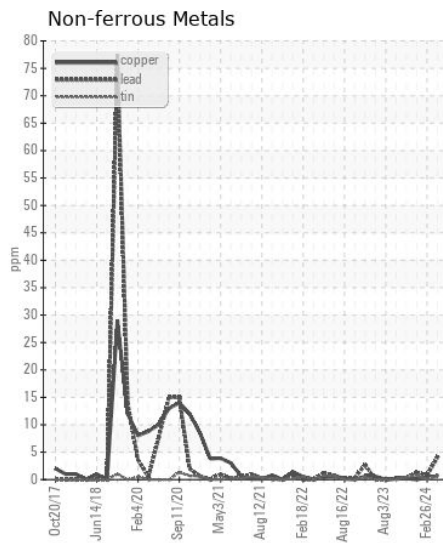
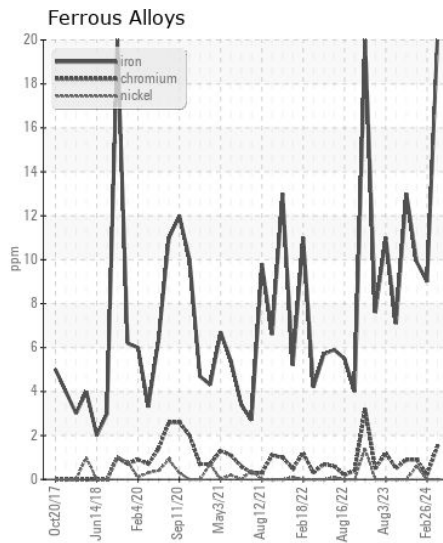
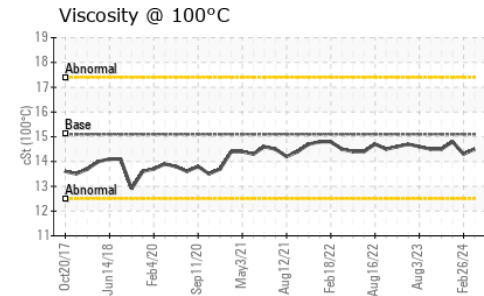
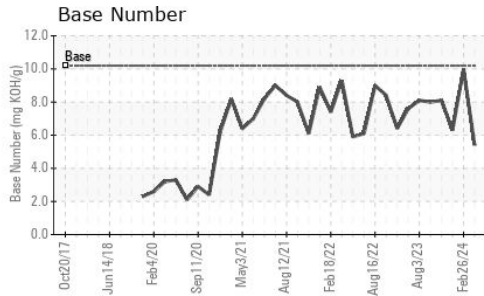
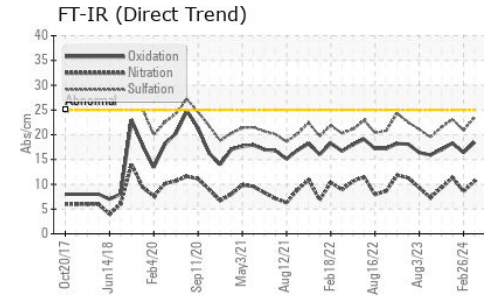
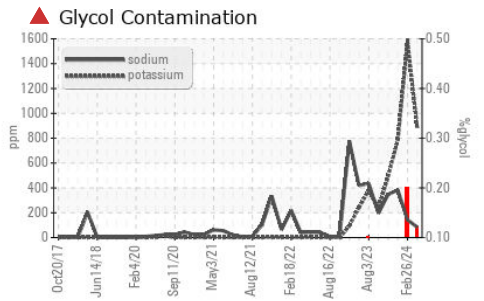
Sodium and/or potassium levels are high. Test for glycol is positive.

|                  |          |             |       |              |       |       |
|------------------|----------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >+100 | <b>22</b>    | 39    | 15    |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>887</b>   | 1578  | 787   |
| Water            |          | WC Method   | >0.1  | <b>NEG</b>   | NEG   | NEG   |
| Glycol           | %        | *ASTM D2982 |       | <b>0.12</b>  | 0.20  | ---   |
| Soot %           | %        | *ASTM D7844 |       | <b>0</b>     | 0     | 0     |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>10.6</b>  | 8.6   | 11.3  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>23.5</b>  | 20.9  | 23.1  |
| 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 oil is no longer serviceable due to the presence of contaminants.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>84</b>    | 143  | 383  |
| Boron            | ppm      | ASTM D5185m | 50   | <b>7</b>     | 16   | 11   |
| Barium           | ppm      | ASTM D5185m | 5    | <b>0</b>     | 8    | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 50   | <b>53</b>    | 50   | 62   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 0    | <1   |
| Magnesium        | ppm      | ASTM D5185m | 560  | <b>550</b>   | 500  | 523  |
| Calcium          | ppm      | ASTM D5185m | 1510 | <b>1742</b>  | 1325 | 1515 |
| Phosphorus       | ppm      | ASTM D5185m | 780  | <b>693</b>   | 774  | 636  |
| Zinc             | ppm      | ASTM D5185m | 870  | <b>1026</b>  | 838  | 987  |
| Sulfur           | ppm      | ASTM D5185m | 2040 | <b>3192</b>  | 2494 | 2699 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>18.5</b>  | 16.4 | 18.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.2 | <b>5.4</b>   | 10.0 | 6.3  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.1 | <b>14.5</b>  | 14.3 | 14.8 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0118401  
**Lab Number** : 06195095  
**Unique Number** : 11057218  
**Test Package** : FLEET ( Additional Tests: Glycol )

**GFL Environmental - 017 - Durham**  
 148 Stone Park Court  
 Durham, NC  
 US 27703  
 Contact:

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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