



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



Machine Id  
**834044**

Component  
**Diesel 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>GFL0108122</b>  | GFL0102470  | GFL0108171  |
| Sample Date    |     | Client Info |           | <b>07 Feb 2024</b> | 31 Jan 2024 | 08 Jan 2024 |
| Machine Age    | hrs | Client Info |           | <b>1172</b>        | 12078       | 979         |
| Oil Age        | hrs | Client Info |           | <b>979</b>         | 1133        | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | N/A         | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | N/A         | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >120 | <b>53</b>    | 50   | 48   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>1</b>     | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>1</b>     | 2    | <1   |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | <1   | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>5</b>     | 6    | 4    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>4</b>     | 3    | 3    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>14</b>    | 13   | 14   |
| Tin          | ppm    | ASTM D5185m | >15  | <b>2</b>     | 2    | 2    |
| 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**

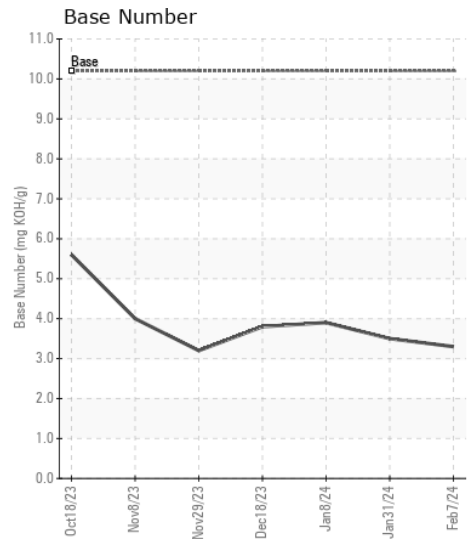
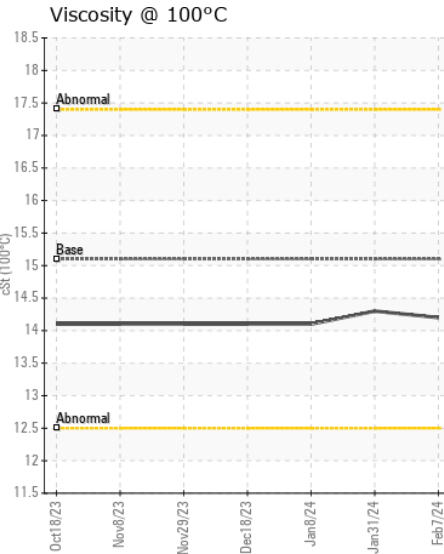
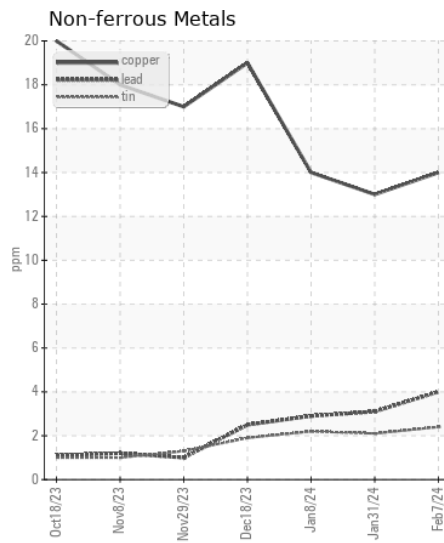
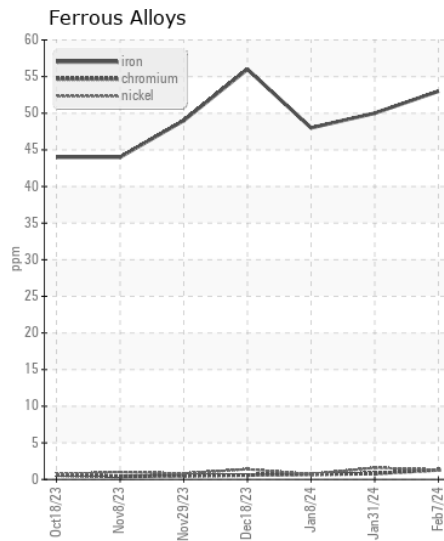
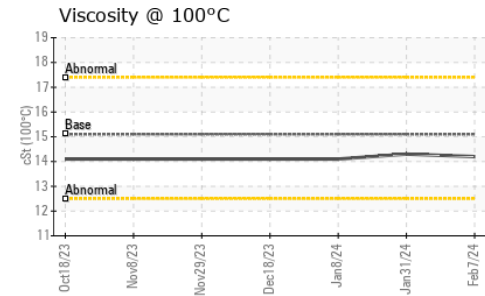
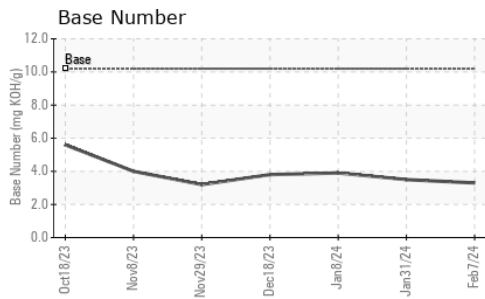
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>25</b>      | 26    | 27    |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>10</b>      | 11    | 9     |
| Fuel             |          | WC Method   | >3.0  | <b>&lt;1.0</b> | <1.0  | <1.0  |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | NEG   | NEG   |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | NEG   | NEG   |
| Soot %           | %        | *ASTM D7844 | >4    | <b>0</b>       | 0     | 0     |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>12.3</b>    | 12.2  | 12.8  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>25.9</b>    | 25.5  | 24.7  |
| 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     | >0.2  | <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>5</b>    | 5    | 5    |
| Boron            | ppm      | ASTM D5185m | 50   | <b>8</b>    | 11   | 13   |
| Barium           | ppm      | ASTM D5185m | 5    | <b>3</b>    | <1   | 2    |
| Molybdenum       | ppm      | ASTM D5185m | 50   | <b>70</b>   | 71   | 63   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>12</b>   | 12   | 12   |
| Magnesium        | ppm      | ASTM D5185m | 560  | <b>891</b>  | 843  | 856  |
| Calcium          | ppm      | ASTM D5185m | 1510 | <b>1302</b> | 1278 | 1321 |
| Phosphorus       | ppm      | ASTM D5185m | 780  | <b>792</b>  | 804  | 779  |
| Zinc             | ppm      | ASTM D5185m | 870  | <b>1011</b> | 1024 | 987  |
| Sulfur           | ppm      | ASTM D5185m | 2040 | <b>2452</b> | 2487 | 2307 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>23.9</b> | 23.1 | 22.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.2 | <b>3.3</b>  | 3.5  | 3.9  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.1 | <b>14.2</b> | 14.3 | 14.1 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108122 **Received** : 14 Feb 2024  
**Lab Number** : 06089384 **Tested** : 15 Feb 2024  
**Unique Number** : 10876829 **Diagnosed** : 16 Feb 2024 - Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 837 - Harrison TS**  
 22820 S State Route 291  
 Harrisonville, MO  
 US 64701  
 Contact: JEREMY BROWN  
 jeremyb@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)