



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

Machine Id  
**7755**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0113167</b>  | GFL0104507  | GFL0090572  |
| Sample Date    |     | Client Info |           | <b>28 Feb 2024</b> | 11 Dec 2023 | 21 Sep 2023 |
| Machine Age    | kms | Client Info |           | <b>179075</b>      | 29737       | 172204      |
| Oil Age        | kms | Client Info |           | <b>0</b>           | 172203      | 0           |
| Filter Age     | kms | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | N/A         | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | N/A         | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|          |     |               |      |              |    |    |
|----------|-----|---------------|------|--------------|----|----|
| Iron     | ppm | ASTM D5185(m) | >165 | <b>17</b>    | 15 | 17 |
| Chromium | ppm | ASTM D5185(m) | >5   | <b>&lt;1</b> | <1 | <1 |
| Nickel   | ppm | ASTM D5185(m) | >4   | <b>0</b>     | <1 | 0  |
| Titanium | ppm | ASTM D5185(m) | >2   | <b>0</b>     | 0  | 0  |
| Silver   | ppm | ASTM D5185(m) | >2   | <b>0</b>     | <1 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >20  | <b>2</b>     | 2  | 1  |
| Lead     | ppm | ASTM D5185(m) | >150 | <b>1</b>     | <1 | <1 |
| Copper   | ppm | ASTM D5185(m) | >90  | <b>&lt;1</b> | <1 | 1  |
| Tin      | ppm | ASTM D5185(m) | >5   | <b>0</b>     | 0  | 0  |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | 0  |

**CONTAMINATION**

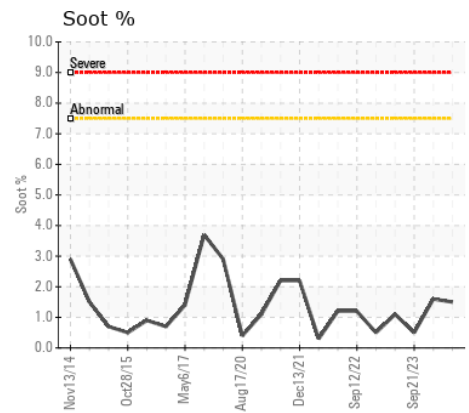
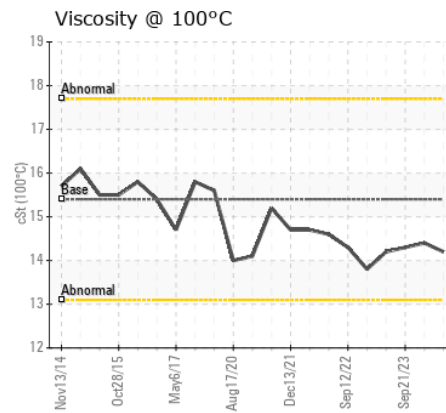
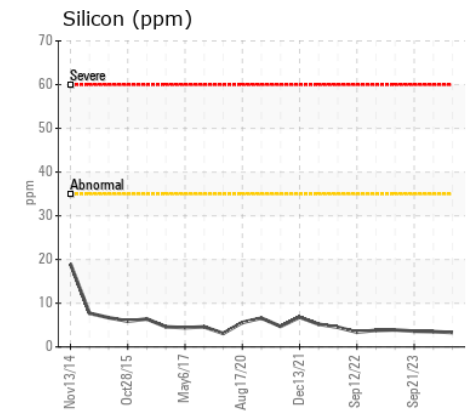
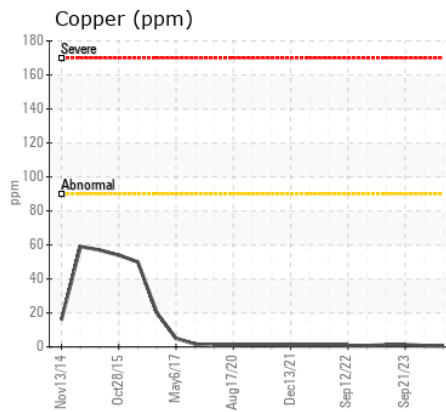
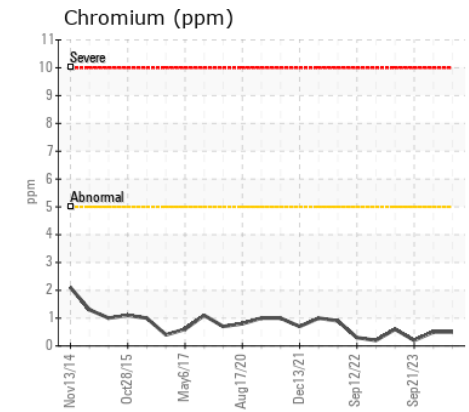
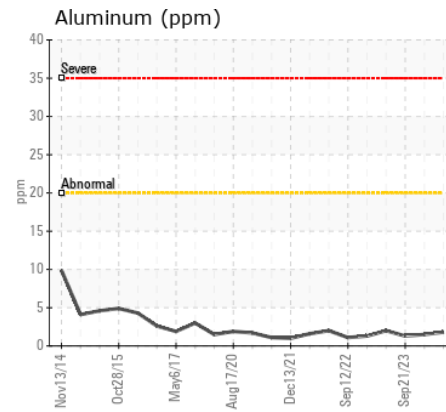
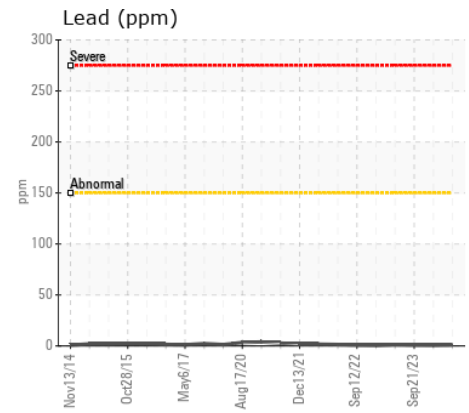
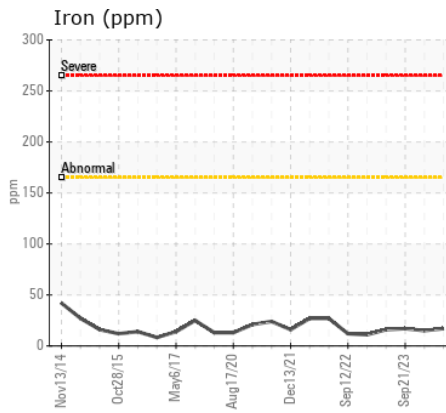
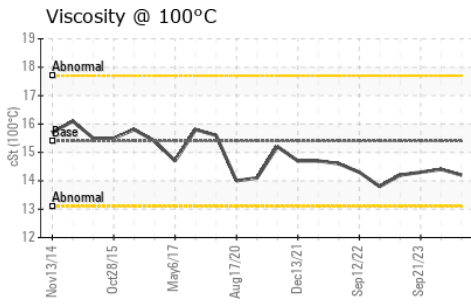
There is no indication of any contamination in the oil.

|                  |          |               |      |                |      |      |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon          | ppm      | ASTM D5185(m) | >35  | <b>3</b>       | 4    | 4    |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>2</b>       | 0    | 13   |
| 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  | 0.0  |
| Soot %           | %        | ASTM D7844*   | >7.5 | <b>1.5</b>     | 1.6  | 0.5  |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>10.4</b>    | 10.3 | 8.0  |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>23.3</b>    | 23.6 | 20.6 |
| Emulsified Water | scalar   | Visual*       | >0.2 | <b>NEG</b>     | NEG  | NEG  |

**FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

|              |          |               |      |             |      |      |
|--------------|----------|---------------|------|-------------|------|------|
| Sodium       | ppm      | ASTM D5185(m) |      | <b>70</b>   | 39   | 68   |
| Boron        | ppm      | ASTM D5185(m) | 0    | <b>5</b>    | 2    | 2    |
| Barium       | ppm      | ASTM D5185(m) | 0    | <b>0</b>    | <1   | <1   |
| Molybdenum   | ppm      | ASTM D5185(m) | 60   | <b>62</b>   | 63   | 62   |
| Manganese    | ppm      | ASTM D5185(m) | 0    | <b>0</b>    | 0    | 0    |
| Magnesium    | ppm      | ASTM D5185(m) | 1010 | <b>982</b>  | 990  | 1016 |
| Calcium      | ppm      | ASTM D5185(m) | 1070 | <b>1099</b> | 1088 | 1111 |
| Phosphorus   | ppm      | ASTM D5185(m) | 1150 | <b>1042</b> | 1003 | 1021 |
| Zinc         | ppm      | ASTM D5185(m) | 1270 | <b>1209</b> | 1240 | 1249 |
| Sulfur       | ppm      | ASTM D5185(m) | 2060 | <b>2733</b> | 2527 | 2558 |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25  | <b>17.9</b> | 17.9 | 15.6 |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 15.4 | <b>14.2</b> | 14.4 | 14.3 |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0113167  
**Lab Number** : 02619463  
**Unique Number** : 5736573  
**Test Package** : MOB 1  
**Received** : 04 Mar 2024  
**Tested** : 04 Mar 2024  
**Diagnosed** : 04 Mar 2024 - Wes Davis

**GFL Environmental - 225 - COT(D2)**  
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To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.