



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

Machine Id  
**829020-1071**  
 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>GFL0127182</b>  | GFL0122039  | GFL0116562  |
| Sample Date    |     | Client Info |           | <b>10 Jul 2024</b> | 06 Jun 2024 | 29 Mar 2024 |
| Machine Age    | hrs | Client Info |           | <b>14803</b>       | 14803       | 14334       |
| Oil Age        | hrs | Client Info |           | <b>14803</b>       | 469         | 13168       |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >110 | <b>21</b>    | 28   | 18   |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 2    | <1   |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >25  | <b>3</b>     | 2    | 2    |
| Lead         | ppm    | ASTM D5185m | >45  | <b>&lt;1</b> | <1   | 0    |
| Copper       | ppm    | ASTM D5185m | >85  | <b>1</b>     | 1    | <1   |
| Tin          | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | <1   | 0    |
| 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**

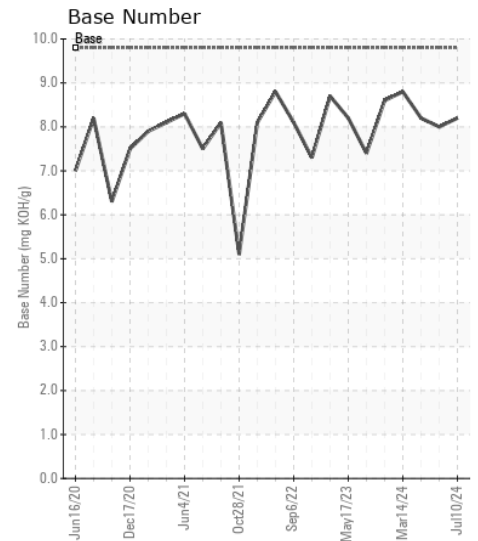
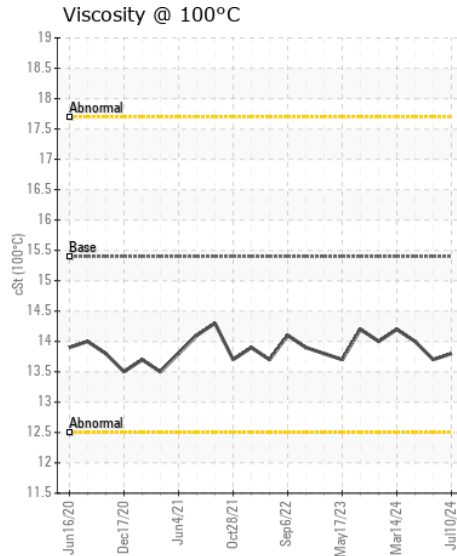
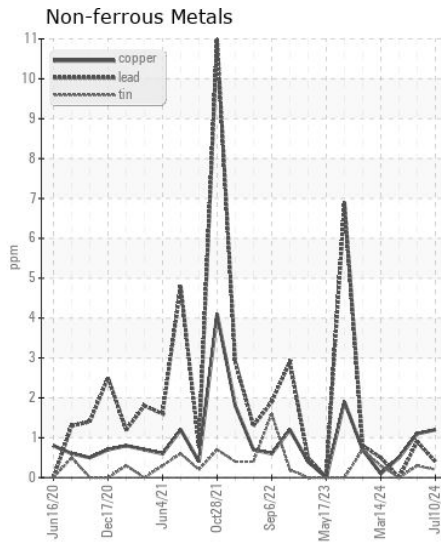
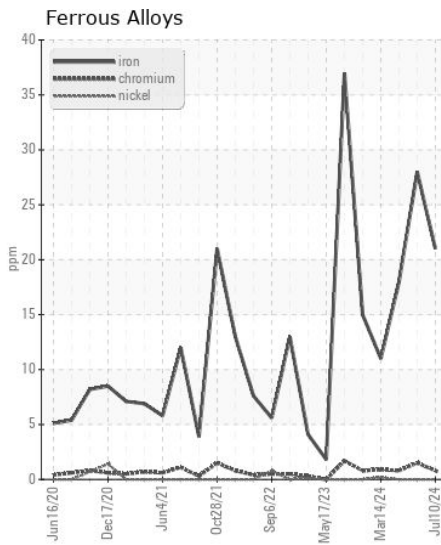
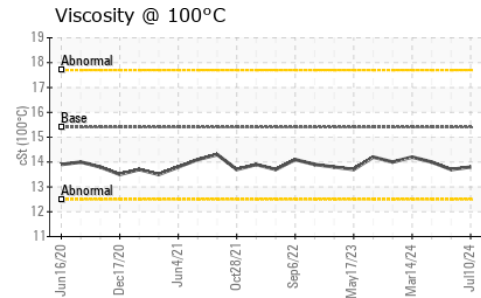
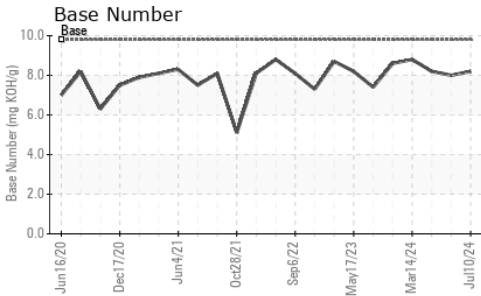
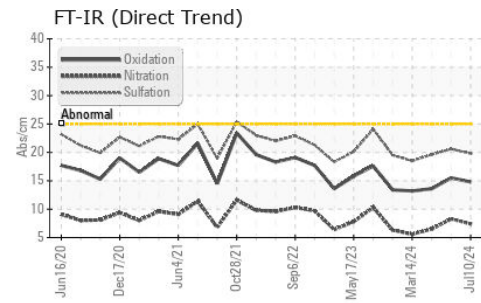
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >30   | <b>19</b>      | 25    | ▲ 44  |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>3</b>       | 4     | <1    |
| Fuel             |          | WC Method   | >5    | <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 | >3    | <b>0.4</b>     | 0.8   | 1.1   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>7.4</b>     | 8.3   | 6.5   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.8</b>    | 20.6  | 19.6  |
| 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>1</b>     | 3    | 2    |
| Boron            | ppm      | ASTM D5185m | 0    | <b>20</b>    | 10   | 13   |
| Barium           | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 60   | <b>73</b>    | 65   | 61   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>0</b>     | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m | 1010 | <b>1081</b>  | 955  | 946  |
| Calcium          | ppm      | ASTM D5185m | 1070 | <b>1396</b>  | 1177 | 1190 |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1107</b>  | 936  | 1032 |
| Zinc             | ppm      | ASTM D5185m | 1270 | <b>1447</b>  | 1239 | 1250 |
| Sulfur           | ppm      | ASTM D5185m | 2060 | <b>3421</b>  | 3042 | 3498 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>14.8</b>  | 15.5 | 13.6 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>8.2</b>   | 8.0  | 8.2  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>13.8</b>  | 13.7 | 14.0 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0127182  
**Lab Number** : 06235559  
**Unique Number** : 11124393  
**Test Package** : FLEET

**Received** : 15 Jul 2024  
**Tested** : 15 Jul 2024  
**Diagnosed** : 15 Jul 2024 - Wes Davis

**GFL Environmental - 652 - Fredericksburg Hauling**  
 10954 Houser Drive  
 Fredericksburg, VA  
 US 22408  
 Contact: WILLIAM MILO  
 wmi@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: