



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

Area  
**(YA139493)**

Machine Id  
**3878**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON SHP 15W40 (10 GAL)**



**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: E service )

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0111075</b>  | GFL0111028  | GFL0098508  |
| Sample Date    |     | Client Info |           | <b>23 Apr 2024</b> | 01 Apr 2024 | 22 Nov 2023 |
| Machine Age    | hrs | Client Info |           | <b>15640</b>       | 15382       | 14600       |
| Oil Age        | hrs | Client Info |           | <b>258</b>         | 782         | 294         |
| 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 | >120 | <b>4</b>     | 23   | 16   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 0    | 4    |
| Nickel       | ppm    | ASTM D5185m | >5   | <b>0</b>     | 0    | <1   |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | <1   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 3    | 4    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>     | 2    | 4    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>1</b>     | 2    | 2    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>     | <1   | 2    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

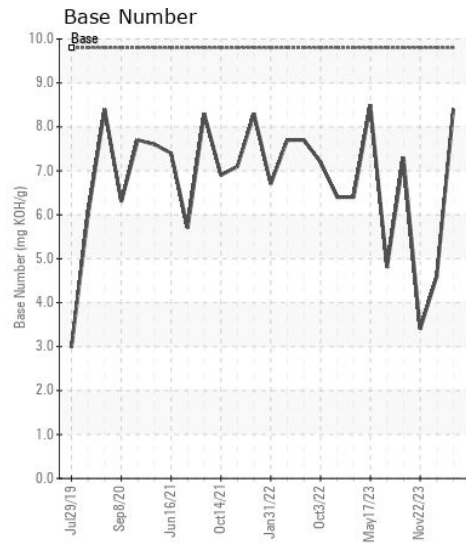
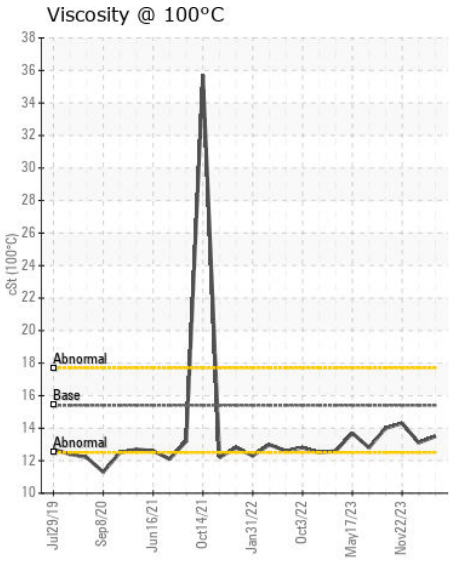
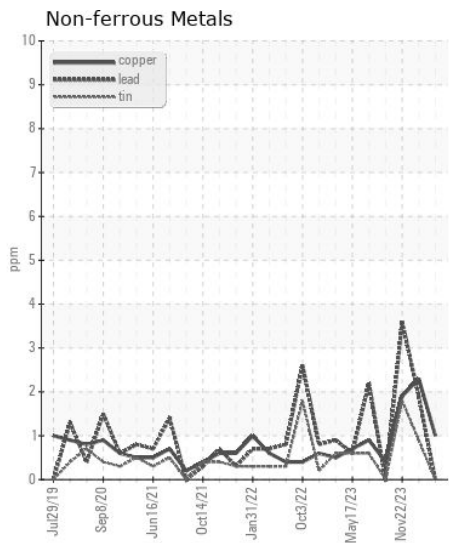
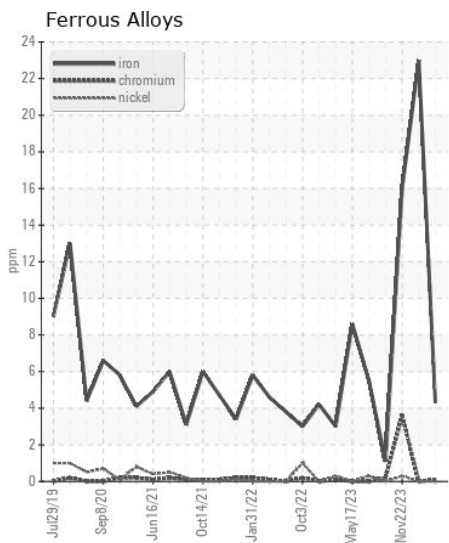
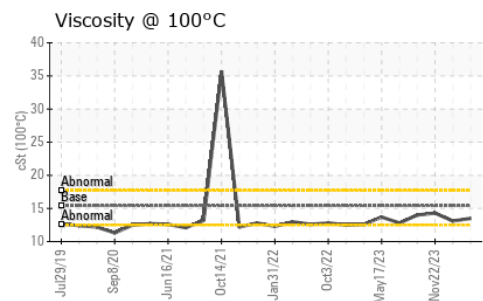
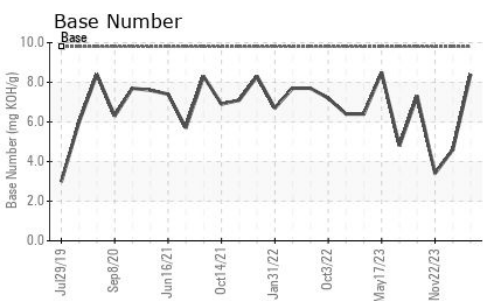
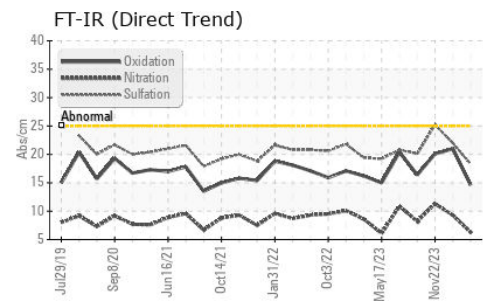
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>3</b>       | 11    | 13    |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>&lt;1</b>   | 14    | 0     |
| 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>0.1</b>     | 0.2   | 0     |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>6.3</b>     | 9.3   | 11.3  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>18.3</b>    | 22.0  | 25.2  |
| 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>4</b>     | 49   | 5     |
| Boron            | ppm      | ASTM D5185m | 0    | <b>2</b>     | 3    | 4     |
| Barium           | ppm      | ASTM D5185m | 0    | <b>0</b>     | 0    | 0     |
| Molybdenum       | ppm      | ASTM D5185m | 60   | <b>59</b>    | 60   | 55    |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | <1   | 4     |
| Magnesium        | ppm      | ASTM D5185m | 1010 | <b>940</b>   | 939  | 564   |
| Calcium          | ppm      | ASTM D5185m | 1070 | <b>1080</b>  | 1087 | 1628  |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1011</b>  | 1000 | 758   |
| Zinc             | ppm      | ASTM D5185m | 1270 | <b>1224</b>  | 1261 | 965   |
| Sulfur           | ppm      | ASTM D5185m | 2060 | <b>3261</b>  | 2850 | 2256  |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>14.6</b>  | 21.0 | 20.1  |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>8.4</b>   | 4.6  | ▲ 3.4 |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>13.5</b>  | 13.1 | 14.3  |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0111075  
**Lab Number** : 06158918  
**Unique Number** : 10994341  
**Test Package** : FLEET

**Received** : 24 Apr 2024  
**Tested** : 25 Apr 2024  
**Diagnosed** : 26 Apr 2024 - Jonathan Hester

**GFL Environmental - 006 - Wilmington**  
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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)