



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

Machine Id  
**429044-402387**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON SHP 15W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0121419</b>  | GFL0115853  | GFL0115825  |
| Sample Date    |     | Client Info |           | <b>16 May 2024</b> | 23 Apr 2024 | 03 Apr 2024 |
| Machine Age    | hrs | Client Info |           | <b>13808</b>       | 13677       | 13545       |
| Oil Age        | hrs | Client Info |           | <b>962</b>         | 831         | 699         |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >110 | <b>13</b>    | 10   | 6    |
| Chromium     | ppm    | ASTM D5185m | >4   | <b>0</b>     | <1   | 0    |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >25  | <b>&lt;1</b> | 2    | <1   |
| Lead         | ppm    | ASTM D5185m | >45  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >85  | <b>&lt;1</b> | 0    | 0    |
| Tin          | ppm    | ASTM D5185m | >4   | <b>0</b>     | <1   | 0    |
| 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**

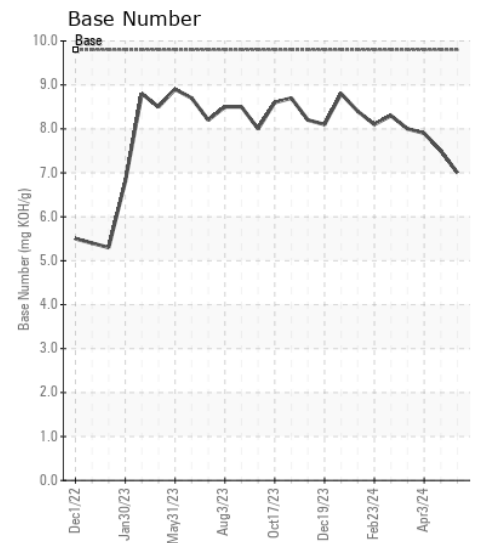
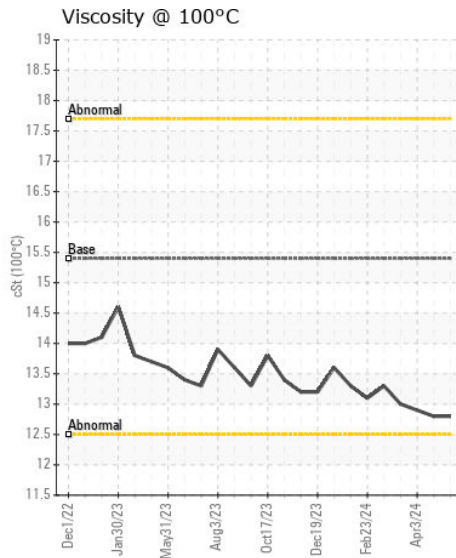
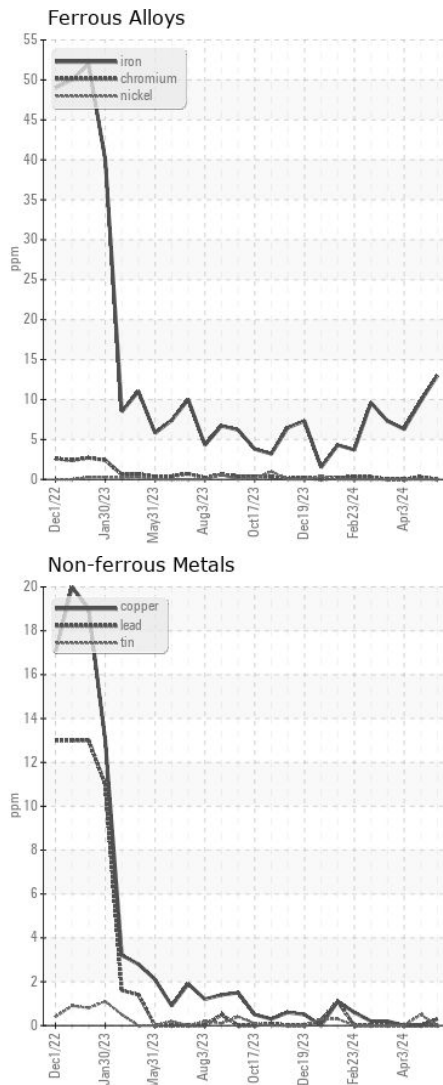
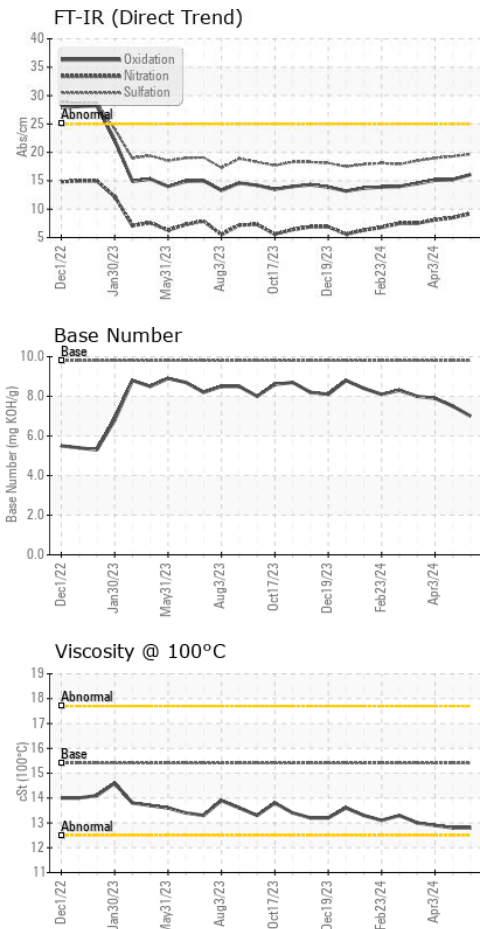
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >30   | <b>5</b>       | 5     | 4     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>&lt;1</b>   | <1    | 0     |
| 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>     | 0.3   | 0.3   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.2</b>     | 8.5   | 8.1   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.7</b>    | 19.3  | 19.0  |
| 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>6</b>     | 4    | 3    |
| Boron            | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 9    | 7    |
| Barium           | ppm      | ASTM D5185m | 0    | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 60   | <b>69</b>    | 68   | 65   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>0</b>     | <1   | 0    |
| Magnesium        | ppm      | ASTM D5185m | 1010 | <b>956</b>   | 907  | 876  |
| Calcium          | ppm      | ASTM D5185m | 1070 | <b>1157</b>  | 1037 | 1041 |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1061</b>  | 1043 | 1010 |
| Zinc             | ppm      | ASTM D5185m | 1270 | <b>1283</b>  | 1205 | 1162 |
| Sulfur           | ppm      | ASTM D5185m | 2060 | <b>3259</b>  | 3294 | 3067 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>16.1</b>  | 15.2 | 15.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>7.0</b>   | 7.5  | 7.9  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>12.8</b>  | 12.8 | 12.9 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0121419  
**Lab Number** : 06187482  
**Unique Number** : 11044234  
**Test Package** : FLEET

**Received** : 22 May 2024  
**Tested** : 23 May 2024  
**Diagnosed** : 23 May 2024 - Wes Davis

GFL Environmental - 868 - Childersburg Fines Hauling (Alpine)  
 13737 Plant Rd  
 Childersburg, AL  
 US 35044

Contact: JONATHAN WILLIAMS  
 jonathan.williams@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: