



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

Machine Id  
**912092**

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>GFL0100192</b>  | GFL0100249  | GFL0100226  |
| Sample Date    |     | Client Info |           | <b>05 Jan 2024</b> | 12 Dec 2023 | 17 Nov 2023 |
| Machine Age    | mls | Client Info |           | <b>48459</b>       | 48459       | 3587        |
| Oil Age        | mls | Client Info |           | <b>28276</b>       | 0           | 0           |
| Filter Age     | mls | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | Not Changd  | Not Changd  |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

Metal levels are typical for a new component breaking in.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>11</b>    | 10   | 5    |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>0</b>     | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>7</b>     | 7    | 4    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | <1   | <1   |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | 1    | <1   |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>4</b>     | 4    | 2    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>     | <1   | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | <1   | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

**CONTAMINATION**

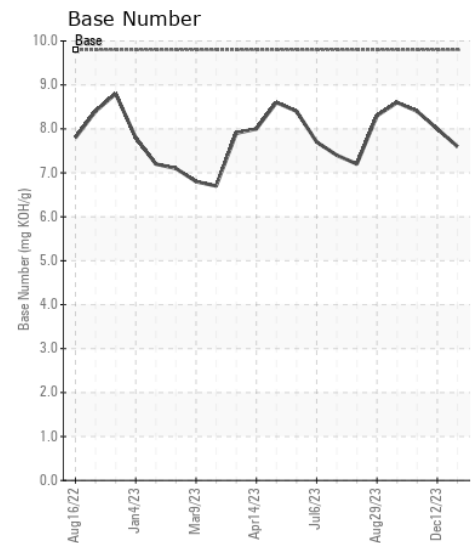
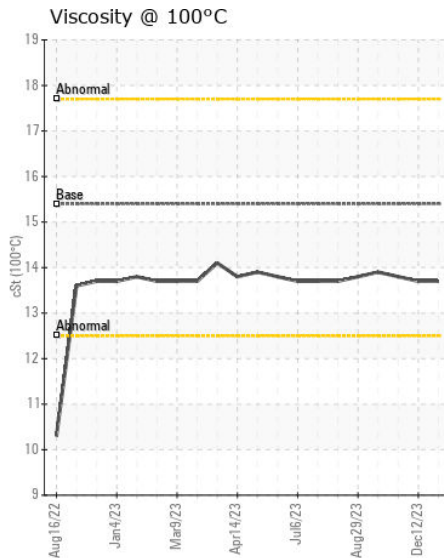
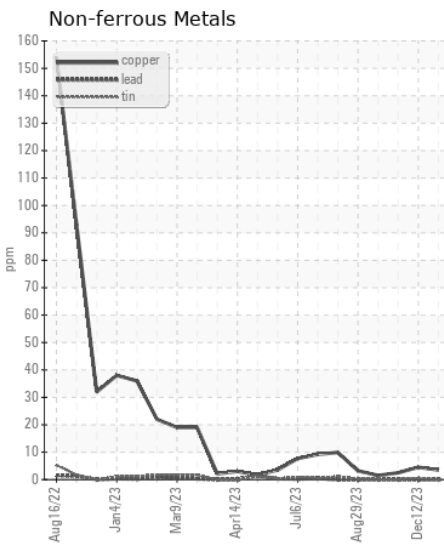
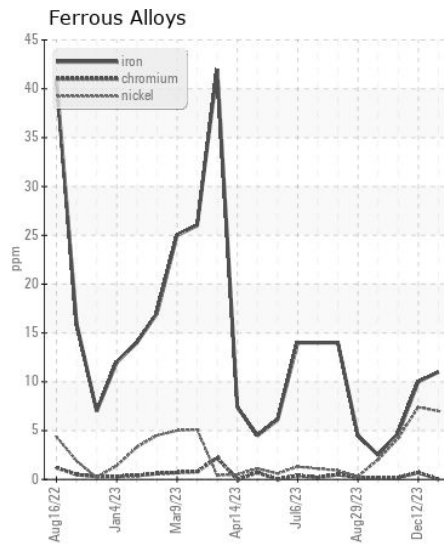
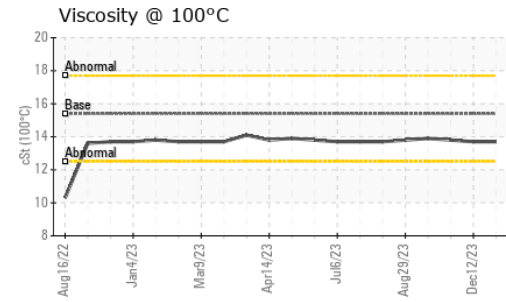
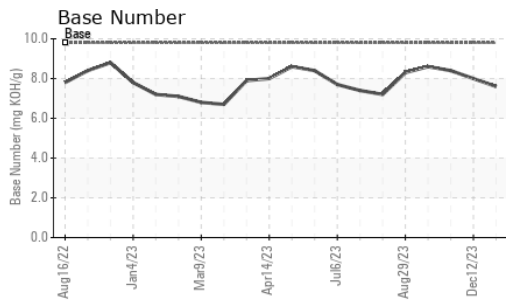
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>5</b>       | 6     | 4     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>0</b>       | 2     | 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>0.6</b>     | 0.5   | 0.3   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>7.9</b>     | 7.2   | 6.5   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.7</b>    | 19.4  | 19.1  |
| 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>3</b>     | 1    | 2    |
| Boron            | ppm      | ASTM D5185m | 0    | <b>&lt;1</b> | 0    | 0    |
| Barium           | ppm      | ASTM D5185m | 0    | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 60   | <b>59</b>    | 63   | 60   |
| Manganese        | ppm      | ASTM D5185m | 0    | <b>0</b>     | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m | 1010 | <b>1012</b>  | 987  | 1039 |
| Calcium          | ppm      | ASTM D5185m | 1070 | <b>1085</b>  | 1032 | 1068 |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>1003</b>  | 941  | 949  |
| Zinc             | ppm      | ASTM D5185m | 1270 | <b>1273</b>  | 1208 | 1341 |
| Sulfur           | ppm      | ASTM D5185m | 2060 | <b>2888</b>  | 3017 | 3104 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>15.3</b>  | 14.8 | 14.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 9.8  | <b>7.6</b>   | 8.0  | 8.4  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.4 | <b>13.7</b>  | 13.7 | 13.8 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0100192 **Received** : 12 Jan 2024  
**Lab Number** : 06058987 **Diagnosed** : 12 Jan 2024  
**Unique Number** : 10830369 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 166 - Phenix City**  
 18 Old Brickyard Rd  
 Phenix City, AL  
 US 36869  
 Contact: DEAN PEACE JR  
 dean.peace@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: