



Machine Id  
**7887**

Component  
**Natural Gas Engine**

Fluid  
**PETRO CANADA DURON GEO LD 15W40 (24 LTR)**

**RECOMMENDATION**

We advise that you monitor for an abnormal oil pressure drop and noise. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>GFL0086786</b>  | GFL0055408  | GFL0032442  |
| Sample Date    |     | Client Info |           | <b>04 Mar 2024</b> | 12 Oct 2022 | 16 Sep 2021 |
| Machine Age    | hrs | Client Info |           | <b>24098</b>       | 21839       | 19991       |
| Oil Age        | hrs | Client Info |           | <b>24098</b>       | 21839       | 600         |
| Filter Age     | hrs | Client Info |           | <b>24098</b>       | 21839       | 600         |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>SEVERE</b>      | NORMAL      | NORMAL      |

**WEAR**

Lead ppm levels are severe. Bearing wear is indicated.

|          |     |               |     |             |    |    |
|----------|-----|---------------|-----|-------------|----|----|
| Iron     | ppm | ASTM D5185(m) | >50 | <b>35</b>   | 10 | 26 |
| Chromium | ppm | ASTM D5185(m) | >4  | <b>2</b>    | 0  | 2  |
| Nickel   | ppm | ASTM D5185(m) | >2  | <b>1</b>    | 0  | <1 |
| Titanium | ppm | ASTM D5185(m) |     | <b>0</b>    | <1 | 0  |
| Silver   | ppm | ASTM D5185(m) | >3  | <b>0</b>    | 0  | 0  |
| Aluminum | ppm | ASTM D5185(m) | >9  | <b>3</b>    | 2  | 2  |
| Lead     | ppm | ASTM D5185(m) | >30 | <b>▲ 88</b> | <1 | <1 |
| Copper   | ppm | ASTM D5185(m) | >35 | <b>9</b>    | <1 | 7  |
| Tin      | ppm | ASTM D5185(m) | >4  | <b>1</b>    | <1 | <1 |
| Vanadium | ppm | ASTM D5185(m) |     | <b>0</b>    | 0  | 0  |

**CONTAMINATION**

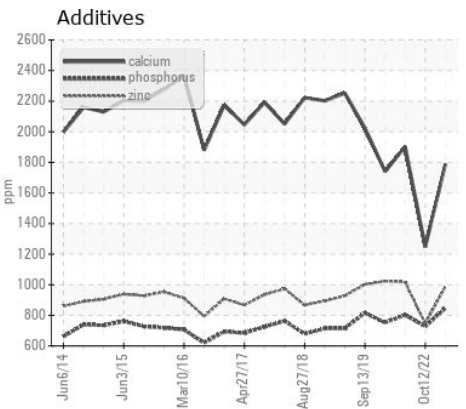
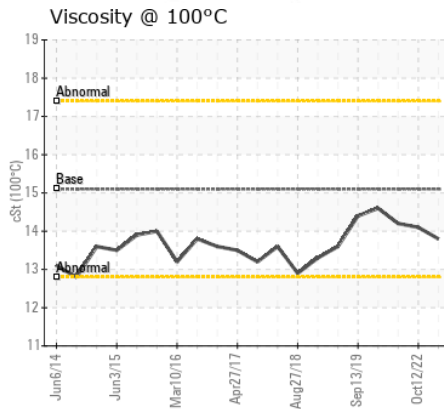
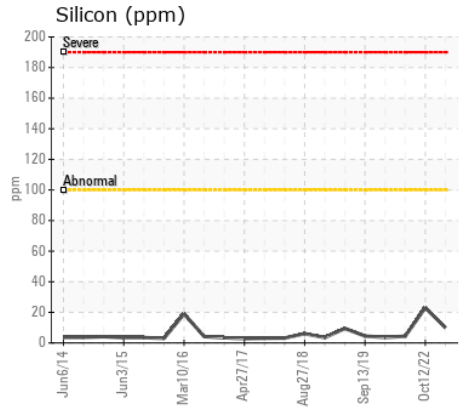
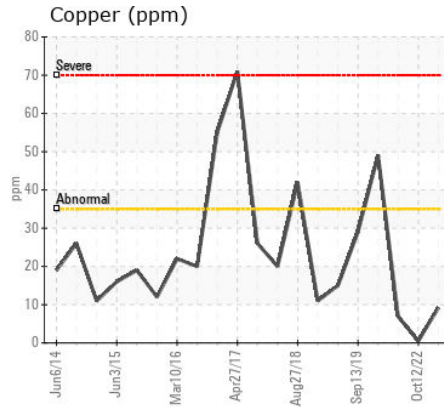
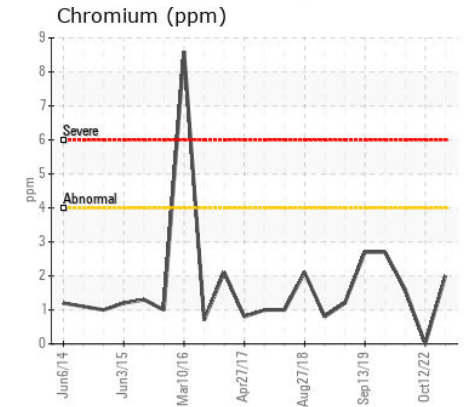
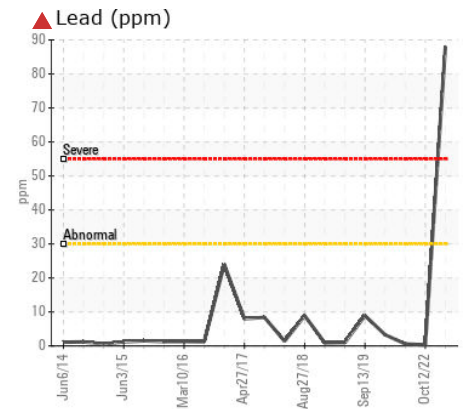
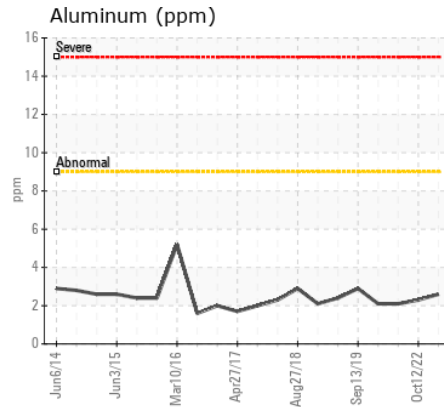
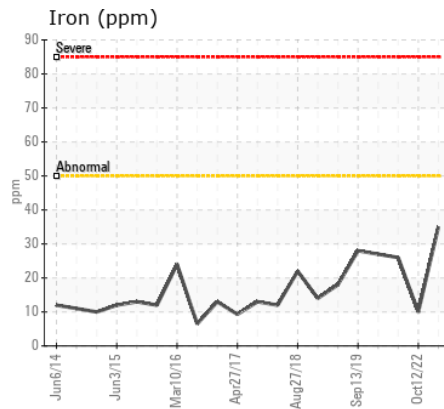
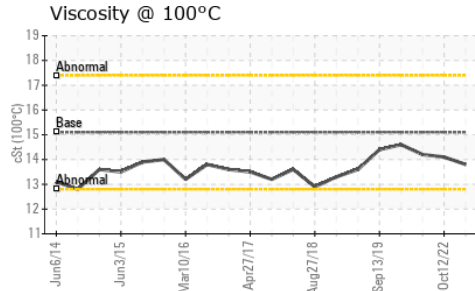
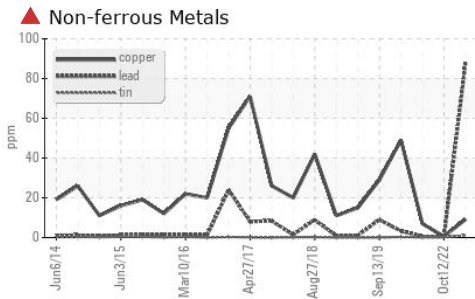
There is no indication of any contamination in the oil.

|                  |          |               |       |             |      |      |
|------------------|----------|---------------|-------|-------------|------|------|
| Silicon          | ppm      | ASTM D5185(m) | >+100 | <b>10</b>   | 23   | 4    |
| Potassium        | ppm      | ASTM D5185(m) | >20   | <b>1</b>    | <1   | 1    |
| Water            |          | WC Method     | >0.1  | <b>NEG</b>  | NEG  | NEG  |
| Soot %           | %        | ASTM D7844*   |       | <b>0</b>    | 0    | 0    |
| Nitration        | Abs/cm   | ASTM D7624*   | >20   | <b>13.1</b> | 5.5  | 9.6  |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30   | <b>27.2</b> | 21.6 | 20.5 |
| Emulsified Water | scalar   | Visual*       | >0.1  | <b>NEG</b>  | NEG  | NEG  |

**FLUID CONDITION**

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

|              |          |               |      |             |      |      |
|--------------|----------|---------------|------|-------------|------|------|
| Sodium       | ppm      | ASTM D5185(m) |      | <b>12</b>   | 2    | 6    |
| Boron        | ppm      | ASTM D5185(m) | 50   | <b>22</b>   | 78   | 18   |
| Barium       | ppm      | ASTM D5185(m) | 5    | <b>0</b>    | 0    | 0    |
| Molybdenum   | ppm      | ASTM D5185(m) | 50   | <b>64</b>   | 110  | 85   |
| Manganese    | ppm      | ASTM D5185(m) | 0    | <b>1</b>    | <1   | <1   |
| Magnesium    | ppm      | ASTM D5185(m) | 560  | <b>621</b>  | 628  | 415  |
| Calcium      | ppm      | ASTM D5185(m) | 1510 | <b>1788</b> | 1248 | 1902 |
| Phosphorus   | ppm      | ASTM D5185(m) | 780  | <b>847</b>  | 727  | 803  |
| Zinc         | ppm      | ASTM D5185(m) | 870  | <b>991</b>  | 746  | 1017 |
| Sulfur       | ppm      | ASTM D5185(m) | 2040 | <b>2212</b> | 2356 | 2186 |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25  | <b>22.0</b> | 14.6 | 15.1 |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 15.1 | <b>13.8</b> | 14.1 | 14.2 |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GFL0086786  
**Lab Number** : 02619915  
**Unique Number** : 5737025  
**Test Package** : MOB 1

**Received** : 05 Mar 2024  
**Tested** : 05 Mar 2024  
**Diagnosed** : 05 Mar 2024 - Kevin Marson

**GFL Environmental - 222 - Sandhill**  
 SANDHILL DISPOSAL & RECYCLING DIVIS, 19 COMMERCE ROAD  
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 T: (519)940-4167  
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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.