

Machine Id  
**1201**  
Component  
**Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (24 LTR)**

**RECOMMENDATION**

We advise that you check the fuel injection system. 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>PC0081949</b>   | PC0082742   | PC0076646   |
| Sample Date    |     | Client Info |           | <b>24 Apr 2024</b> | 31 Jan 2024 | 20 Nov 2023 |
| Machine Age    | kms | Client Info |           | <b>737666</b>      | 724630      | 711452      |
| Oil Age        | kms | Client Info |           | <b>12938</b>       | 12976       | 13685       |
| Filter Age     | kms | Client Info |           | <b>12938</b>       | 12976       | 13685       |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>SEVERE</b>      | ATTENTION   | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|              |        |               |      |              |      |      |
|--------------|--------|---------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185(m) | >100 | <b>17</b>    | 9    | 40   |
| Chromium     | ppm    | ASTM D5185(m) | >20  | <b>&lt;1</b> | <1   | 2    |
| Nickel       | ppm    | ASTM D5185(m) | >4   | <b>0</b>     | <1   | <1   |
| Titanium     | ppm    | ASTM D5185(m) |      | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185(m) | >3   | <b>0</b>     | 0    | <1   |
| Aluminum     | ppm    | ASTM D5185(m) | >20  | <b>2</b>     | 2    | 2    |
| Lead         | ppm    | ASTM D5185(m) | >40  | <b>0</b>     | <1   | <1   |
| Copper       | ppm    | ASTM D5185(m) | >330 | <b>3</b>     | 5    | 4    |
| Tin          | ppm    | ASTM D5185(m) | >15  | <b>0</b>     | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185(m) |      | <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**

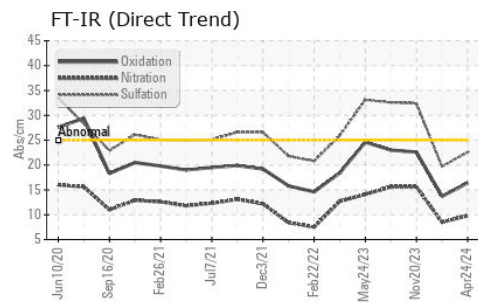
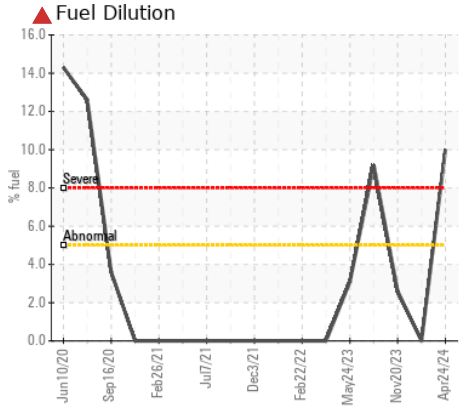
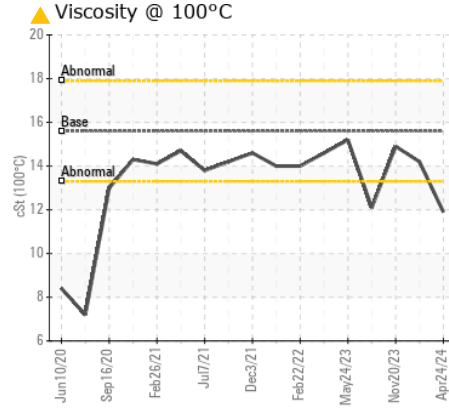
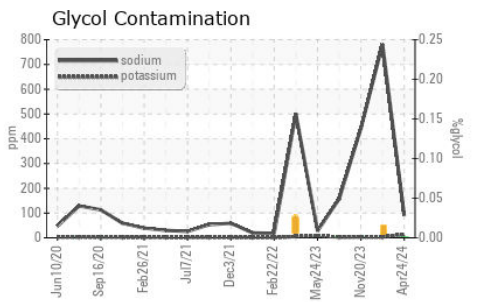
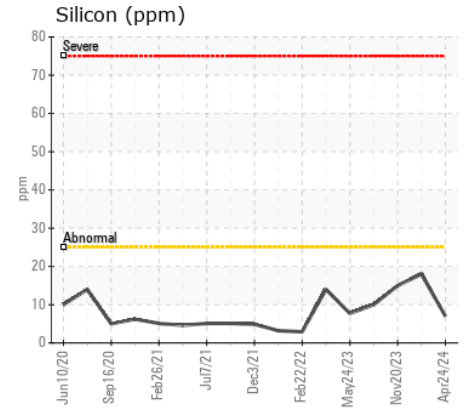
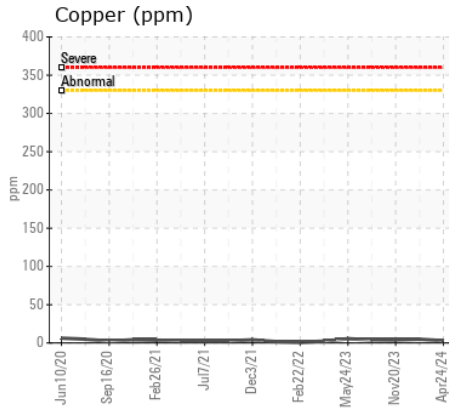
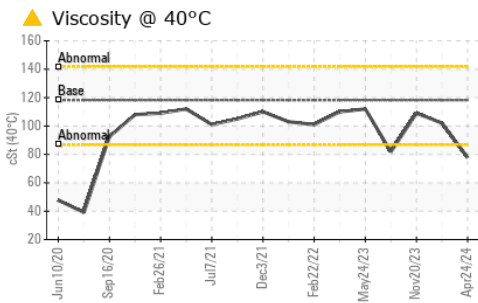
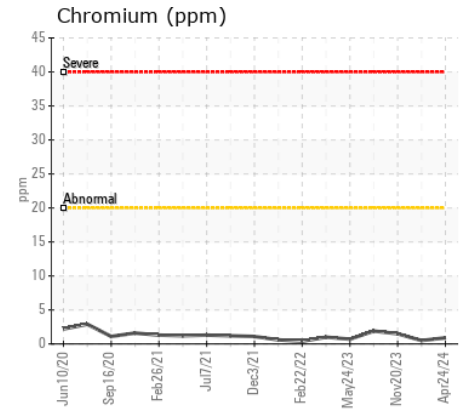
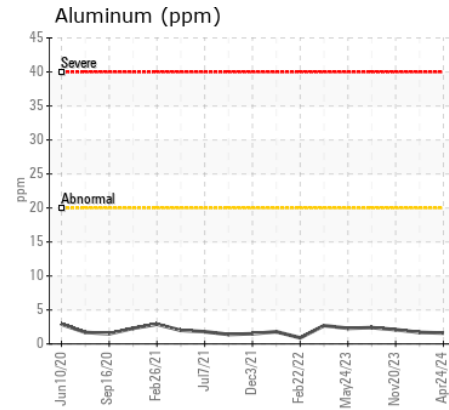
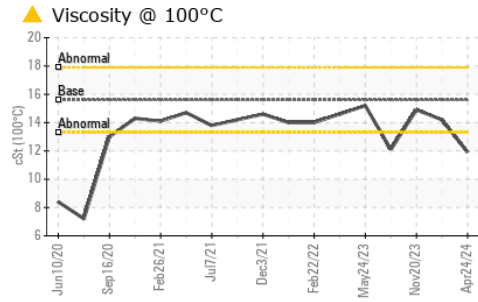
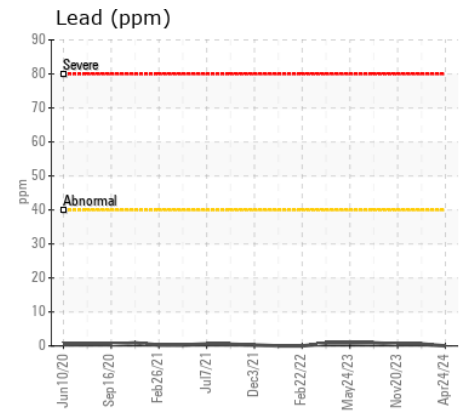
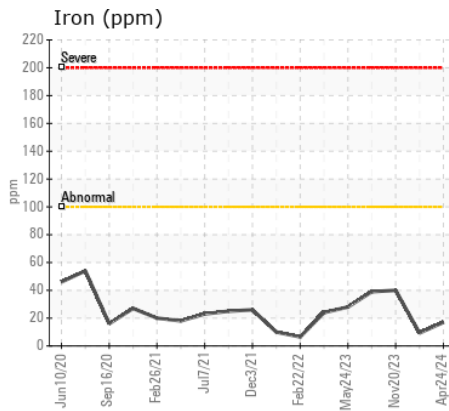
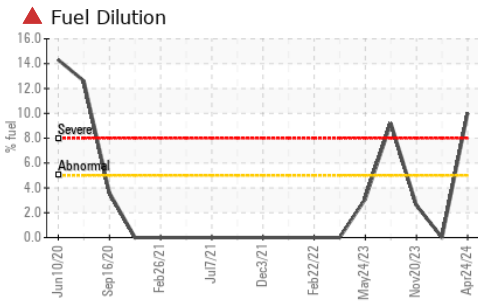
There is a high amount of fuel present in the oil. Test for glycol is negative. Tests confirm the presence of fuel in the oil.

|                  |          |               |       |              |         |       |
|------------------|----------|---------------|-------|--------------|---------|-------|
| Silicon          | ppm      | ASTM D5185(m) | >25   | <b>7</b>     | 18      | 15    |
| Potassium        | ppm      | ASTM D5185(m) | >20   | <b>14</b>    | 3       | 3     |
| Fuel             | %        | ASTM D7593*   | >5    | <b>▲ 10</b>  | <1.0    | ▲ 2.6 |
| Water            |          | WC Method     | >0.2  | <b>NEG</b>   | NEG     | NEG   |
| Glycol           | %        | ASTM D7922*   |       | <b>0.0</b>   | ▲ 0.015 | 0.0   |
| Soot %           | %        | ASTM D7844*   | >3    | <b>1.4</b>   | 0.5     | ▲ 3.6 |
| Nitration        | Abs/cm   | ASTM D7624*   | >20   | <b>9.8</b>   | 8.5     | 15.6  |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30   | <b>22.6</b>  | 19.7    | 32.4  |
| 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**

Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

|                      |          |               |       |               |       |       |
|----------------------|----------|---------------|-------|---------------|-------|-------|
| Sodium               | ppm      | ASTM D5185(m) |       | <b>90</b>     | ● 781 | ● 442 |
| Boron                | ppm      | ASTM D5185(m) | 0     | <b>2</b>      | 16    | 9     |
| Barium               | ppm      | ASTM D5185(m) | 0     | <b>0</b>      | 0     | <1    |
| Molybdenum           | ppm      | ASTM D5185(m) | 60    | <b>59</b>     | 82    | 80    |
| Manganese            | ppm      | ASTM D5185(m) | 0     | <b>&lt;1</b>  | 0     | 0     |
| Magnesium            | ppm      | ASTM D5185(m) | 1010  | <b>929</b>    | 912   | 1005  |
| Calcium              | ppm      | ASTM D5185(m) | 1070  | <b>997</b>    | 1055  | 1237  |
| Phosphorus           | ppm      | ASTM D5185(m) | 1150  | <b>956</b>    | 1005  | 1033  |
| Zinc                 | ppm      | ASTM D5185(m) | 1270  | <b>1110</b>   | 1147  | 1295  |
| Sulfur               | ppm      | ASTM D5185(m) | 2060  | <b>2308</b>   | 2765  | 2582  |
| Oxidation            | Abs/.1mm | ASTM D7414*   | >25   | <b>16.4</b>   | 13.7  | 22.6  |
| Visc @ 40°C          | cSt      | ASTM D7279(m) | 118.2 | ▲ <b>77.7</b> | 102   | 109   |
| Visc @ 100°C         | cSt      | ASTM D7279(m) | 15.6  | ▲ <b>11.9</b> | 14.2  | 14.9  |
| Viscosity Index (VI) | Scale    | ASTM D2270*   | 139   | <b>147</b>    | 142   | 141   |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0081949 **Received** : 03 May 2024  
**Lab Number** : 02633046 **Tested** : 06 May 2024  
**Unique Number** : 5774199 **Diagnosed** : 06 May 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, Glycol, KV40, PercentFuel, VI, Visual )

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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.