



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



Machine Id

**52**

Component

**Diesel Engine**

Fluid

**PETRO CANADA DURON UHP 5W40 (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>PC0035320</b>   | PC0053992   | PC0045336   |
| Sample Date    |     | Client Info |           | <b>27 Mar 2024</b> | 23 Nov 2021 | 09 Mar 2021 |
| Machine Age    | hrs | Client Info |           | <b>5034</b>        | 3695        | 3420        |
| Oil Age        | hrs | Client Info |           | <b>250</b>         | 500         | 250         |
| Filter Age     | hrs | Client Info |           | <b>250</b>         | 500         | 250         |
| Oil Changed    |     | Client Info |           | <b>Not Chngd</b>   | Changed     | Not Chngd   |
| Filter Changed |     | Client Info |           | <b>Not Chngd</b>   | Changed     | Not Chngd   |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

**WEAR**

All component wear rates are normal.

|          |     |               |      |              |    |    |
|----------|-----|---------------|------|--------------|----|----|
| Iron     | ppm | ASTM D5185(m) | >75  | <b>12</b>    | 34 | 17 |
| Chromium | ppm | ASTM D5185(m) | >5   | <b>&lt;1</b> | <1 | <1 |
| Nickel   | ppm | ASTM D5185(m) | >4   | <b>0</b>     | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | >2   | <b>0</b>     | 0  | <1 |
| Silver   | ppm | ASTM D5185(m) | >2   | <b>0</b>     | <1 | <1 |
| Aluminum | ppm | ASTM D5185(m) | >15  | <b>2</b>     | 3  | 2  |
| Lead     | ppm | ASTM D5185(m) | >25  | <b>0</b>     | <1 | <1 |
| Copper   | ppm | ASTM D5185(m) | >100 | <b>&lt;1</b> | 3  | 2  |
| Tin      | ppm | ASTM D5185(m) | >4   | <b>0</b>     | <1 | <1 |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | 0  |

**CONTAMINATION**

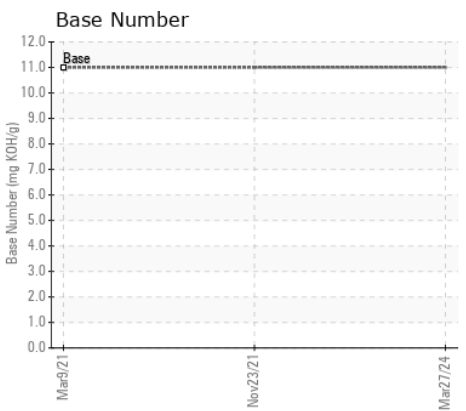
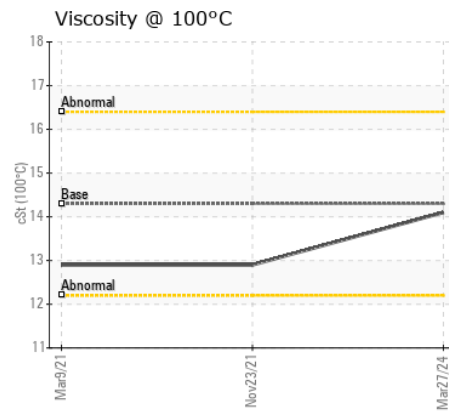
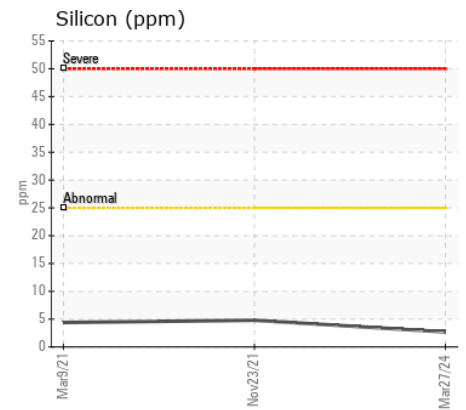
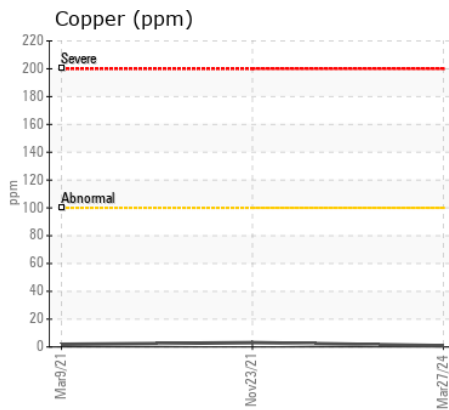
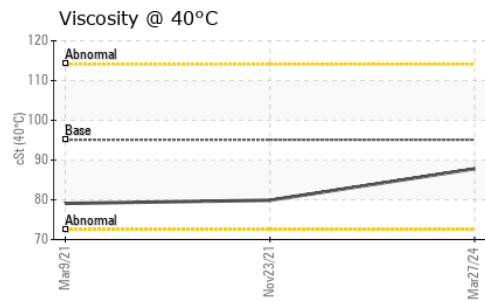
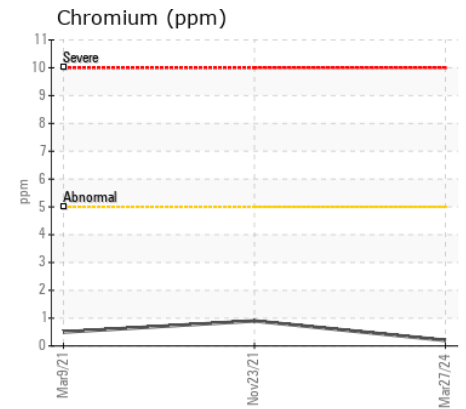
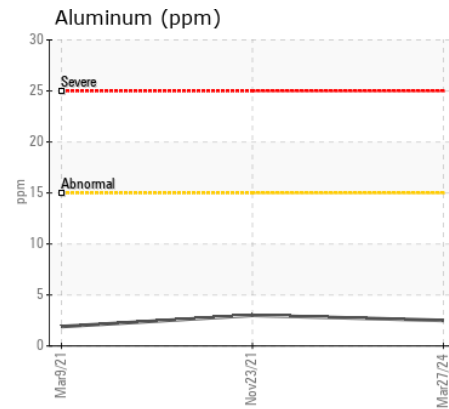
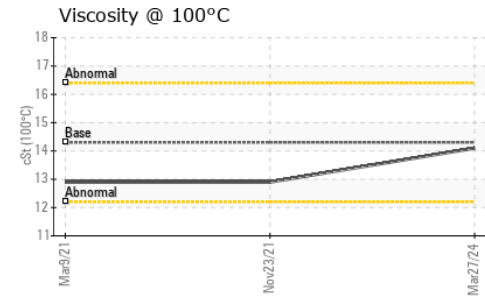
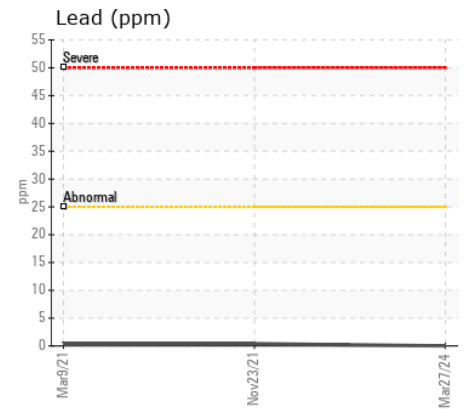
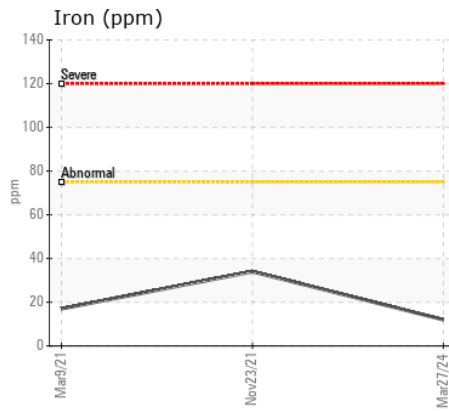
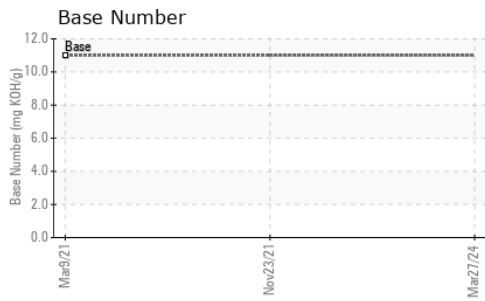
There is no indication of any contamination in the oil.

|                  |          |               |      |                |      |      |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon          | ppm      | ASTM D5185(m) | >25  | <b>3</b>       | 5    | 4    |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>3</b>       | 4    | 11   |
| 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  | 0.0  |
| Soot %           | %        | ASTM D7844*   | >6   | <b>0.3</b>     | 0.6  | 0.4  |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>9.4</b>     | 12.2 | 10.5 |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>21.1</b>    | 26.1 | 22.3 |
| 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 D5185(m) |      | <b>4</b>     | 4    | 4    |
| Boron                | ppm      | ASTM D5185(m) | 65   | <b>33</b>    | 21   | 29   |
| Barium               | ppm      | ASTM D5185(m) | 0    | <b>0</b>     | 0    | 0    |
| Molybdenum           | ppm      | ASTM D5185(m) | 65   | <b>54</b>    | 51   | 50   |
| Manganese            | ppm      | ASTM D5185(m) | 0    | <b>0</b>     | <1   | <1   |
| Magnesium            | ppm      | ASTM D5185(m) | 1160 | <b>1081</b>  | 1004 | 962  |
| Calcium              | ppm      | ASTM D5185(m) | 820  | <b>829</b>   | 912  | 928  |
| Phosphorus           | ppm      | ASTM D5185(m) | 1160 | <b>958</b>   | 996  | 964  |
| Zinc                 | ppm      | ASTM D5185(m) | 1260 | <b>1166</b>  | 1191 | 1233 |
| Sulfur               | ppm      | ASTM D5185(m) | 3000 | <b>2615</b>  | 2676 | 2829 |
| Oxidation            | Abs/.1mm | ASTM D7414*   | >25  | <b>19.6</b>  | 24.5 | 20.4 |
| Base Number (BN)     | mg KOH/g | ASTM D2896*   | 11.0 | <b>10.95</b> | ---  | ---  |
| Visc @ 40°C          | cSt      | ASTM D7279(m) | 95.1 | <b>87.8</b>  | 79.9 | 79.1 |
| Visc @ 100°C         | cSt      | ASTM D7279(m) | 14.3 | <b>14.1</b>  | 12.9 | 12.9 |
| Viscosity Index (VI) | Scale    | ASTM D2270*   | 169  | <b>165</b>   | 162  | 163  |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0035320 **Received** : 02 Apr 2024  
**Lab Number** : 02625971 **Tested** : 04 Apr 2024  
**Unique Number** : 5759103 **Diagnosed** : 04 Apr 2024 - Wes Davis  
**Test Package** : MOB 2 ( Additional Tests: KV40, VI )

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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.