



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

Machine Id  
**DR170**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON UHP 5W40 (38 LTR)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>PC0082028</b>   | PC0082226   | PC0082677   |
| Sample Date    |     | Client Info |           | <b>03 Apr 2024</b> | 05 Mar 2024 | 12 Jan 2024 |
| Machine Age    | hrs | Client Info |           | <b>16457</b>       | 16197       | 15915       |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 250         |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 250         |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

**WEAR**

All component wear rates are normal.

|          |     |               |      |              |    |    |
|----------|-----|---------------|------|--------------|----|----|
| Iron     | ppm | ASTM D5185(m) | >100 | <b>22</b>    | 20 | 6  |
| Chromium | ppm | ASTM D5185(m) | >20  | <b>0</b>     | <1 | 0  |
| Nickel   | ppm | ASTM D5185(m) | >4   | <b>&lt;1</b> | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | 0  |
| Silver   | ppm | ASTM D5185(m) | >3   | <b>0</b>     | 0  | 0  |
| Aluminum | ppm | ASTM D5185(m) | >20  | <b>1</b>     | 2  | 2  |
| Lead     | ppm | ASTM D5185(m) | >40  | <b>0</b>     | <1 | <1 |
| Copper   | ppm | ASTM D5185(m) | >330 | <b>3</b>     | 4  | <1 |
| Tin      | ppm | ASTM D5185(m) | >15  | <b>0</b>     | 0  | 0  |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | 0  |

**CONTAMINATION**

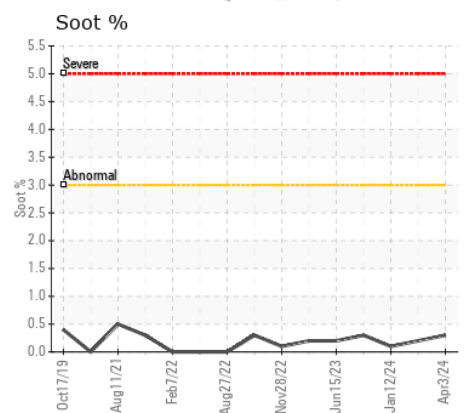
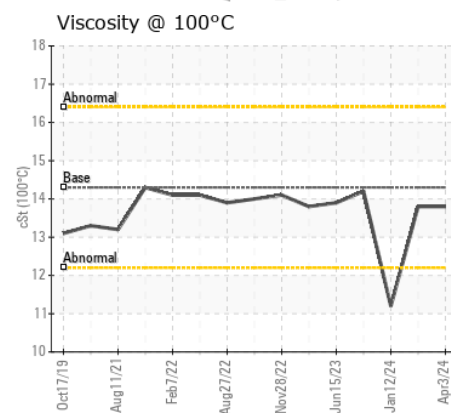
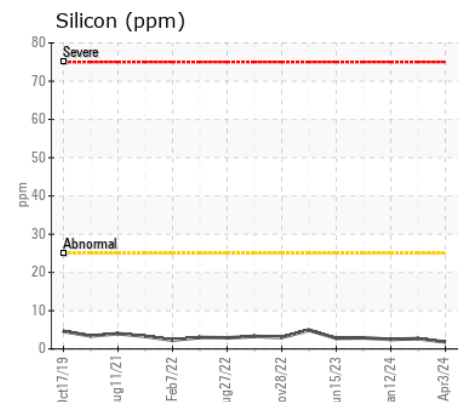
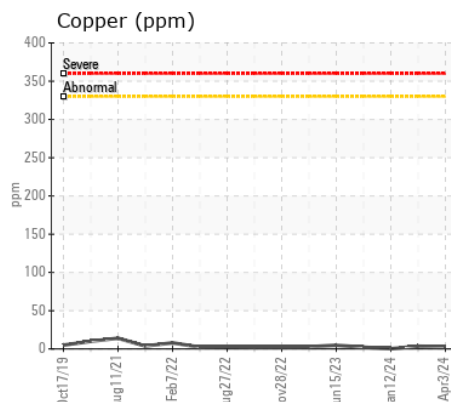
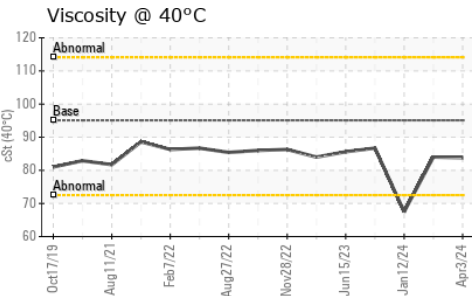
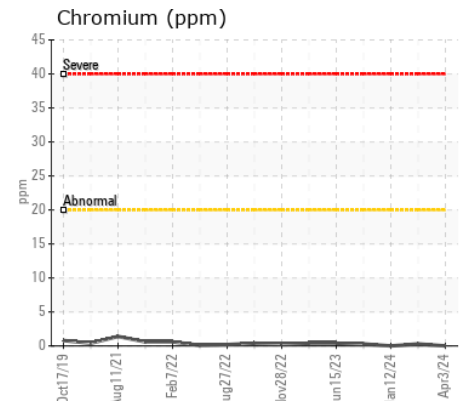
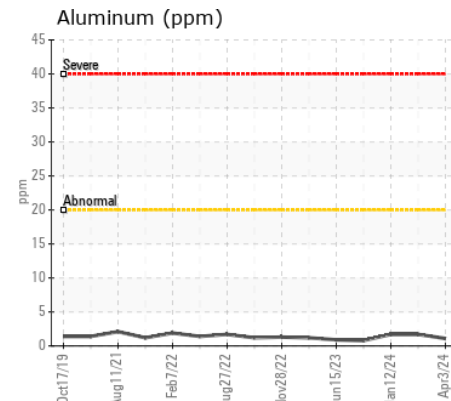
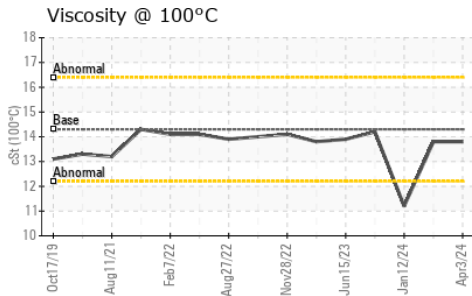
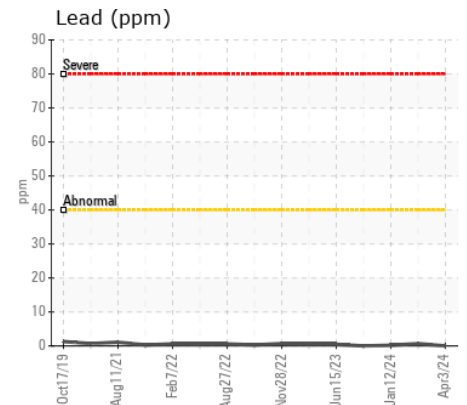
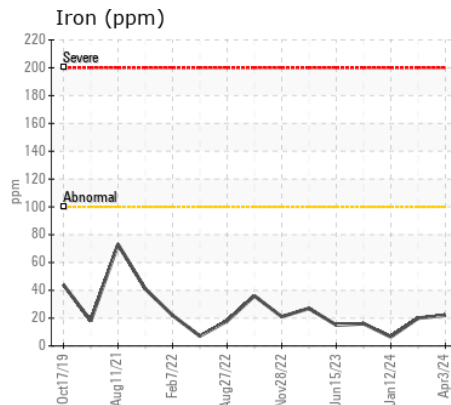
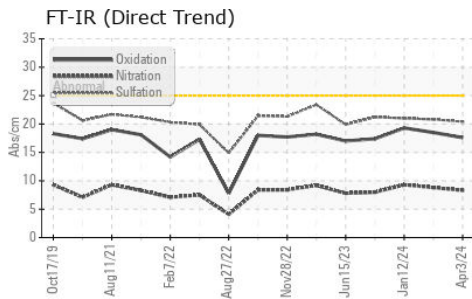
There is no indication of any contamination in the oil.

|                  |          |               |      |                |      |      |
|------------------|----------|---------------|------|----------------|------|------|
| Silicon          | ppm      | ASTM D5185(m) | >25  | <b>2</b>       | 3    | 2    |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>&lt;1</b>   | 1    | <1   |
| Fuel             |          | WC Method     | >5   | <b>&lt;1.0</b> | <1.0 | 1.1  |
| Water            |          | WC Method     | >0.2 | <b>NEG</b>     | NEG  | NEG  |
| Glycol           |          | WC Method     |      | <b>NEG</b>     | NEG  | NEG  |
| Soot %           | %        | ASTM D7844*   | >3   | <b>0.3</b>     | 0.2  | 0.1  |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>8.3</b>     | 8.8  | 9.3  |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>20.4</b>    | 20.8 | 21.0 |
| Emulsified Water | scalar   | Visual*       | >0.2 | <b>NEG</b>     | NEG  | NEG  |

**FLUID CONDITION**

The condition of the oil is acceptable for the time in service.

|                      |          |               |      |              |      |        |
|----------------------|----------|---------------|------|--------------|------|--------|
| Sodium               | ppm      | ASTM D5185(m) |      | <b>4</b>     | 4    | 4      |
| Boron                | ppm      | ASTM D5185(m) | 65   | <b>34</b>    | 42   | 39     |
| Barium               | ppm      | ASTM D5185(m) | 0    | <b>0</b>     | 0    | 0      |
| Molybdenum           | ppm      | ASTM D5185(m) | 65   | <b>52</b>    | 55   | 58     |
| Manganese            | ppm      | ASTM D5185(m) | 0    | <b>&lt;1</b> | 0    | 0      |
| Magnesium            | ppm      | ASTM D5185(m) | 1160 | <b>1033</b>  | 1091 | 1095   |
| Calcium              | ppm      | ASTM D5185(m) | 820  | <b>781</b>   | 804  | 941    |
| Phosphorus           | ppm      | ASTM D5185(m) | 1160 | <b>920</b>   | 1009 | 1079   |
| Zinc                 | ppm      | ASTM D5185(m) | 1260 | <b>1119</b>  | 1165 | 1224   |
| Sulfur               | ppm      | ASTM D5185(m) | 3000 | <b>2563</b>  | 2919 | 3115   |
| Oxidation            | Abs/.1mm | ASTM D7414*   | >25  | <b>17.6</b>  | 18.5 | 19.3   |
| Visc @ 40°C          | cSt      | ASTM D7279(m) | 95.1 | <b>83.8</b>  | 84.0 | ▲ 67.5 |
| Visc @ 100°C         | cSt      | ASTM D7279(m) | 14.3 | <b>13.8</b>  | 13.8 | ▲ 11.2 |
| Viscosity Index (VI) | Scale    | ASTM D2270*   | 169  | <b>169</b>   | 168  | 159    |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC0082028  
**Lab Number** : 02627832  
**Unique Number** : 5760964  
**Test Package** : MOB 1 ( 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.