



# OIL ANALYSIS REPORT

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

Machine Id  
**1046**  
Component  
**Rear Diesel Engine**  
Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0932502</b>   | WC0905440   | WC0882982   |
| Sample Date    |     | Client Info |           | <b>08 May 2024</b> | 04 Mar 2024 | 05 Dec 2023 |
| Machine Age    | hrs | Client Info |           | <b>47657</b>       | 47199       | 0           |
| Oil Age        | hrs | Client Info |           | <b>458</b>         | 501         | 466         |
| Filter Age     | hrs | Client Info |           | <b>458</b>         | 501         | 466         |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | ABNORMAL    | SEVERE      |

## WEAR

All component wear rates are normal.

|          |     |               |      |              |    |    |
|----------|-----|---------------|------|--------------|----|----|
| Iron     | ppm | ASTM D5185(m) | >100 | <b>40</b>    | 41 | 34 |
| Chromium | ppm | ASTM D5185(m) | >20  | <b>2</b>     | 3  | 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  | 0  |
| Aluminum | ppm | ASTM D5185(m) | >20  | <b>2</b>     | 1  | 3  |
| Lead     | ppm | ASTM D5185(m) | >40  | <b>&lt;1</b> | 0  | <1 |
| Copper   | ppm | ASTM D5185(m) | >330 | <b>2</b>     | 2  | 2  |
| Tin      | ppm | ASTM D5185(m) | >15  | <b>0</b>     | 0  | <1 |
| Vanadium | ppm | ASTM D5185(m) |      | <b>0</b>     | 0  | 0  |

## CONTAMINATION

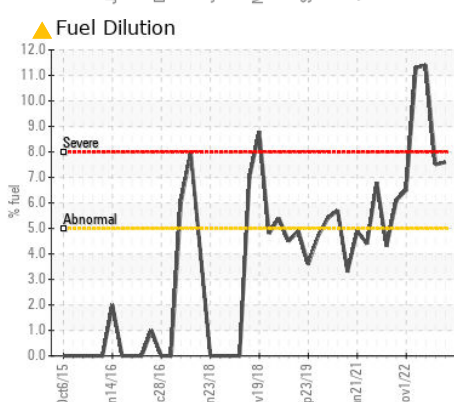
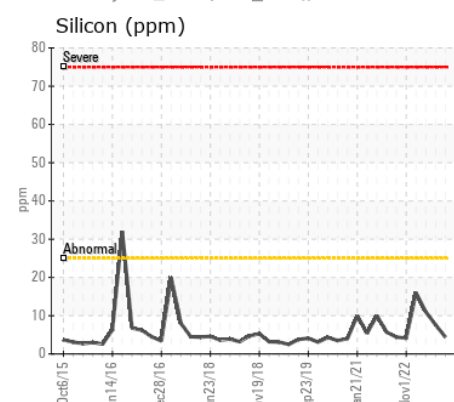
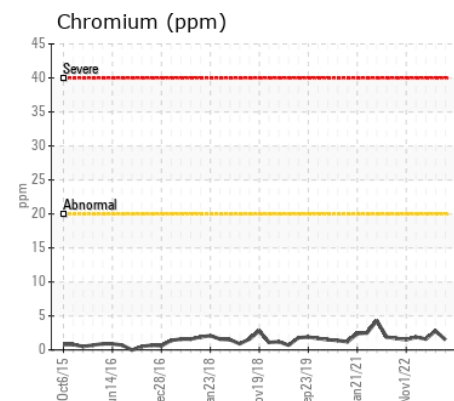
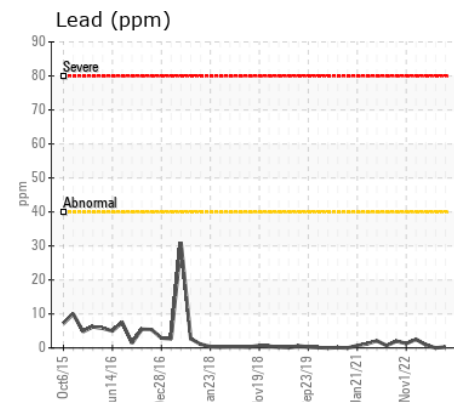
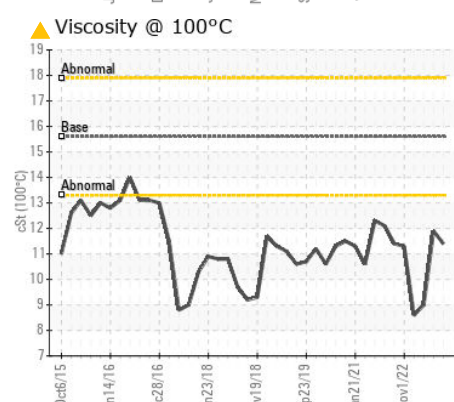
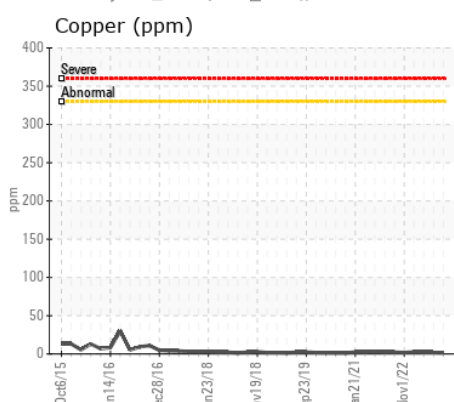
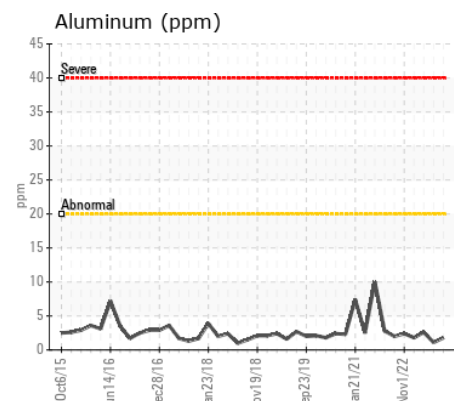
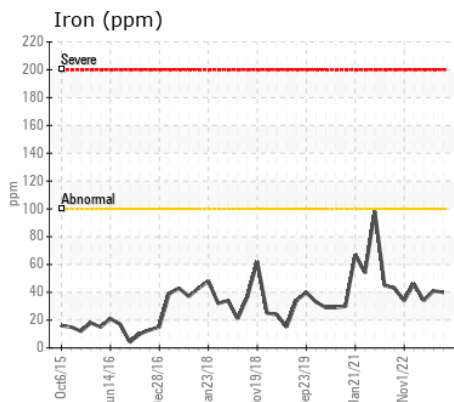
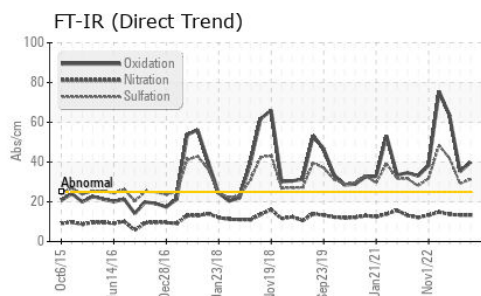
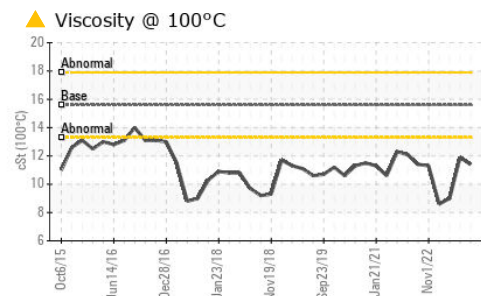
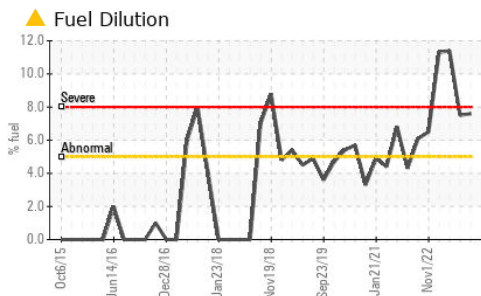
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

|                  |          |               |      |              |       |        |
|------------------|----------|---------------|------|--------------|-------|--------|
| Silicon          | ppm      | ASTM D5185(m) | >25  | <b>4</b>     | 8     | 11     |
| Potassium        | ppm      | ASTM D5185(m) | >20  | <b>&lt;1</b> | 0     | <1     |
| Fuel             | %        | ASTM D7593*   | >5   | <b>▲ 7.6</b> | ▲ 7.5 | ▲ 11.4 |
| Water            |          | WC Method     | >0.2 | <b>NEG</b>   | NEG   | NEG    |
| Glycol           |          | WC Method     |      | <b>NEG</b>   | NEG   | NEG    |
| Soot %           | %        | ASTM D7844*   | >3   | <b>0.7</b>   | 0.8   | 0.7    |
| Nitration        | Abs/cm   | ASTM D7624*   | >20  | <b>13.3</b>  | 13.4  | 13.6   |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30  | <b>31.3</b>  | 29.2  | 41.8   |
| 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>2</b>      | 2      | 2    |
| Boron        | ppm      | ASTM D5185(m) | 0    | <b>2</b>      | 0      | 1    |
| Barium       | ppm      | ASTM D5185(m) | 0    | <b>0</b>      | 0      | 0    |
| Molybdenum   | ppm      | ASTM D5185(m) | 60   | <b>55</b>     | 57     | 50   |
| Manganese    | ppm      | ASTM D5185(m) | 0    | <b>&lt;1</b>  | 0      | 0    |
| Magnesium    | ppm      | ASTM D5185(m) | 1010 | <b>898</b>    | 953    | 797  |
| Calcium      | ppm      | ASTM D5185(m) | 1070 | <b>984</b>    | 1023   | 889  |
| Phosphorus   | ppm      | ASTM D5185(m) | 1150 | <b>904</b>    | 952    | 831  |
| Zinc         | ppm      | ASTM D5185(m) | 1270 | <b>1101</b>   | 1129   | 965  |
| Sulfur       | ppm      | ASTM D5185(m) | 2060 | <b>2292</b>   | 2350   | 2168 |
| Oxidation    | Abs/.1mm | ASTM D7414*   | >25  | <b>39.9</b>   | 35.2   | 63.4 |
| Visc @ 100°C | cSt      | ASTM D7279(m) | 15.6 | <b>▲ 11.4</b> | ▲ 11.9 | ▲ 9  |



ISO 17025:2017  
Accredited  
Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0932502  
**Lab Number** : 02634483  
**Unique Number** : 5775636  
**Test Package** : MOB 1 ( Additional Tests: PercentFuel )

**Received** : 10 May 2024  
**Tested** : 13 May 2024  
**Diagnosed** : 13 May 2024 - Kevin Marson

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.

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