



# OIL ANALYSIS REPORT

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

Machine Id  
**MOBILE DIESEL - MD3 (S/N 528100145)**  
 Component  
**Diesel Engine**  
 Fluid  
**PETRO CANADA DURON HP 15W40 (340 LTR)**

## RECOMMENDATION

We advise that you check for visible metal particles in the oil. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0706115</b>   | WC0455697   | WC0328034   |
| Sample Date    |     | Client Info |           | <b>18 Jun 2024</b> | 27 Apr 2023 | 11 May 2022 |
| Machine Age    | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>N/A</b>         | N/A         | N/A         |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

## WEAR

Light concentration of visible metal present.

|              |        |               |      |                |     |     |
|--------------|--------|---------------|------|----------------|-----|-----|
| Iron         | ppm    | ASTM D5185(m) | >200 | <b>26</b>      | 23  | 21  |
| Chromium     | ppm    | ASTM D5185(m) | >6   | <b>2</b>       | 2   | 2   |
| Nickel       | ppm    | ASTM D5185(m) | >4   | <b>&lt;1</b>   | <1  | 0   |
| Titanium     | ppm    | ASTM D5185(m) | >2   | <b>&lt;1</b>   | <1  | <1  |
| Silver       | ppm    | ASTM D5185(m) | >2   | <b>0</b>       | 0   | 0   |
| Aluminum     | ppm    | ASTM D5185(m) | >30  | <b>2</b>       | 2   | 2   |
| Lead         | ppm    | ASTM D5185(m) | >30  | <b>1</b>       | 2   | 1   |
| Copper       | ppm    | ASTM D5185(m) | >30  | <b>6</b>       | 5   | 5   |
| Tin          | ppm    | ASTM D5185(m) | >10  | <b>&lt;1</b>   | <1  | <1  |
| Vanadium     | ppm    | ASTM D5185(m) |      | <b>0</b>       | 0   | 0   |
| White Metal  | scalar | Visual*       | NONE | <b>▲ VLITE</b> | --- | --- |
| Yellow Metal | scalar | Visual*       | NONE | <b>NONE</b>    | --- | --- |

## CONTAMINATION

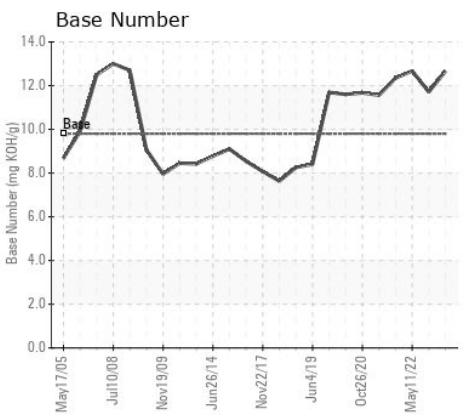
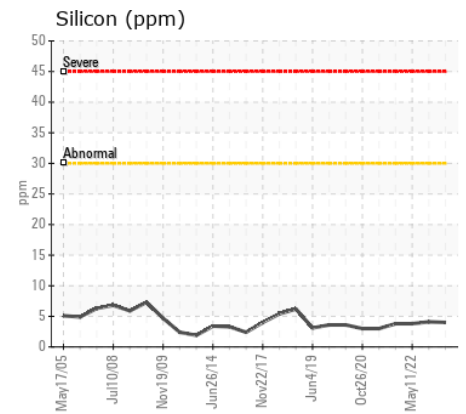
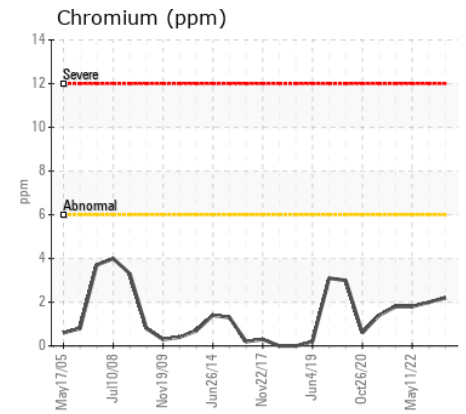
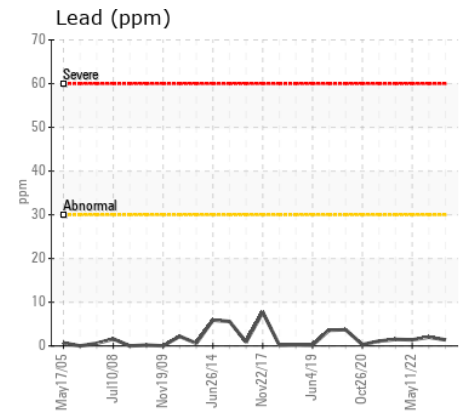
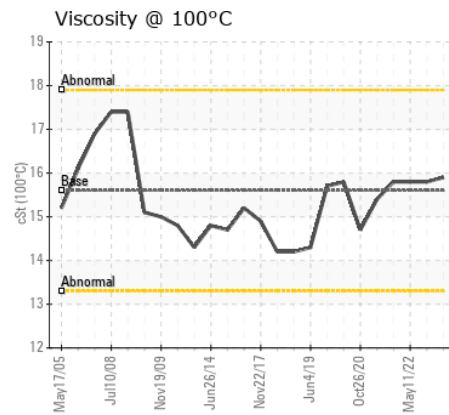
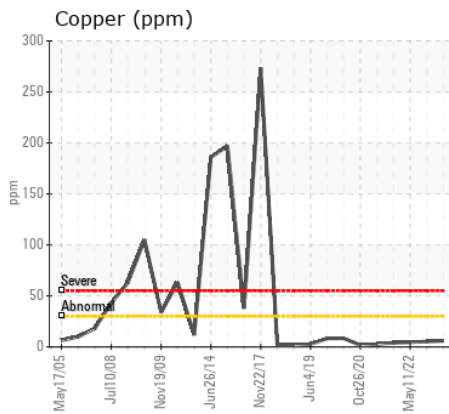
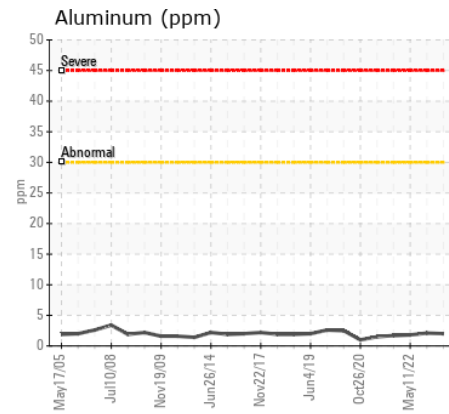
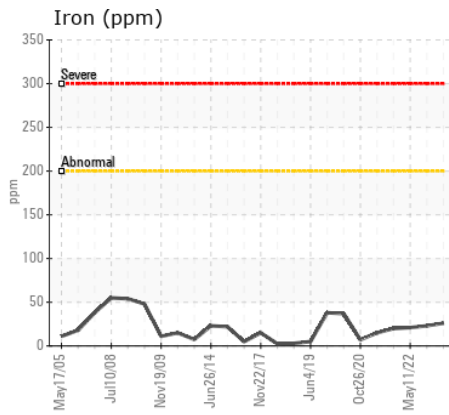
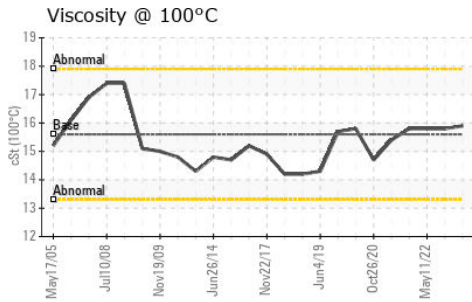
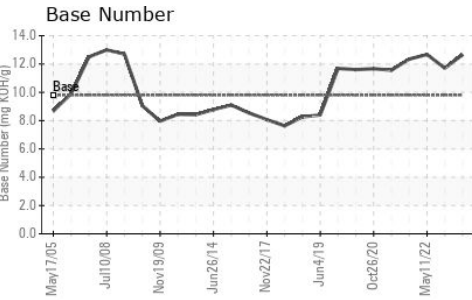
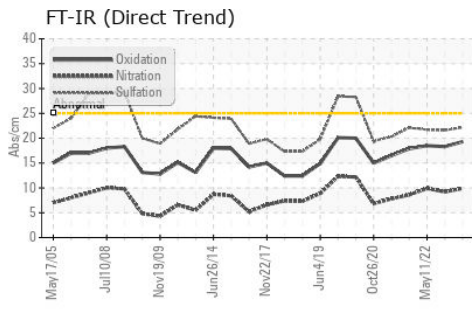
There is no indication of any contamination in the oil.

|                  |          |               |       |                |       |       |
|------------------|----------|---------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185(m) | >30   | <b>4</b>       | 4     | 4     |
| Potassium        | ppm      | ASTM D5185(m) | >20   | <b>0</b>       | 0     | <1    |
| 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   | NEG   |
| Soot %           | %        | ASTM D7844*   | >3    | <b>0.2</b>     | 0.2   | 0.1   |
| Nitration        | Abs/cm   | ASTM D7624*   | >20   | <b>9.9</b>     | 9.2   | 9.9   |
| Sulfation        | Abs/.1mm | ASTM D7415*   | >30   | <b>22.2</b>    | 21.6  | 21.7  |
| Silt             | scalar   | Visual*       | NONE  | <b>VLITE</b>   | ---   | ---   |
| Debris           | scalar   | Visual*       | NONE  | <b>NONE</b>    | ---   | ---   |
| Sand/Dirt        | scalar   | Visual*       | NONE  | <b>NONE</b>    | ---   | ---   |
| Appearance       | scalar   | Visual*       | NORML | <b>NORML</b>   | ---   | ---   |
| Odor             | scalar   | Visual*       | NORML | <b>NORML</b>   | NORML | NORML |
| 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>2</b>     | 2     | 2     |
| Boron            | ppm      | ASTM D5185(m) | 0    | <b>2</b>     | 2     | 1     |
| Barium           | ppm      | ASTM D5185(m) | 0    | <b>&lt;1</b> | 0     | 0     |
| Molybdenum       | ppm      | ASTM D5185(m) | 60   | <b>76</b>    | 75    | 75    |
| Manganese        | ppm      | ASTM D5185(m) | 0    | <b>&lt;1</b> | <1    | <1    |
| Magnesium        | ppm      | ASTM D5185(m) | 1010 | <b>1221</b>  | 1265  | 1261  |
| Calcium          | ppm      | ASTM D5185(m) | 1070 | <b>1331</b>  | 1413  | 1381  |
| Phosphorus       | ppm      | ASTM D5185(m) | 1150 | <b>1178</b>  | 1283  | 1259  |
| Zinc             | ppm      | ASTM D5185(m) | 1270 | <b>1488</b>  | 1537  | 1535  |
| Sulfur           | ppm      | ASTM D5185(m) | 2060 | <b>2639</b>  | 2839  | 2826  |
| Oxidation        | Abs/.1mm | ASTM D7414*   | >25  | <b>19.3</b>  | 18.3  | 18.5  |
| Base Number (BN) | mg KOH/g | ASTM D2896*   | 9.8  | <b>12.66</b> | 11.71 | 12.67 |
| Visc @ 100°C     | cSt      | ASTM D7279(m) | 15.6 | <b>15.9</b>  | 15.8  | 15.8  |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0706115  
**Lab Number** : 02642795  
**Unique Number** : 5800334  
**Test Package** : MOB 2 ( Additional Tests: BottomAnalysis, FILTERPATCH, Visual )

**NEWFOUNDLAND POWER INC.**  
 50 DUFFY PLACE, PO BOX 8910  
 ST. JOHNS, NL  
 CA A1B 3P6  
 Contact: Paul Martin  
 pmartin@newfoundlandpower.com  
 T:  
 F: (709)737-2926

*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.*