

Machine Id  
**NO UNIT 02645782**  
Component  
**Diesel Engine**  
Fluid  
**{not provided} (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is SAE 10W30 Diesel Engine Oil. Please confirm the oil type and grade, and specify the brand of the oil on your next sample. Please specify the component make and model with your next sample.

**WEAR**

All component wear rates are normal.

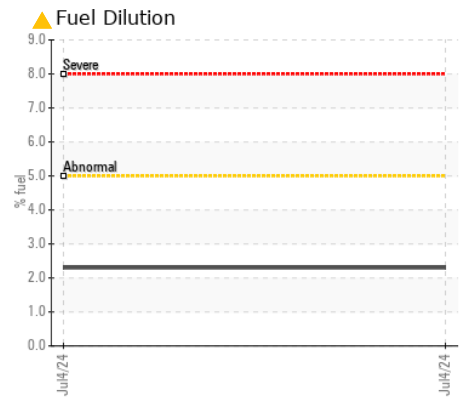
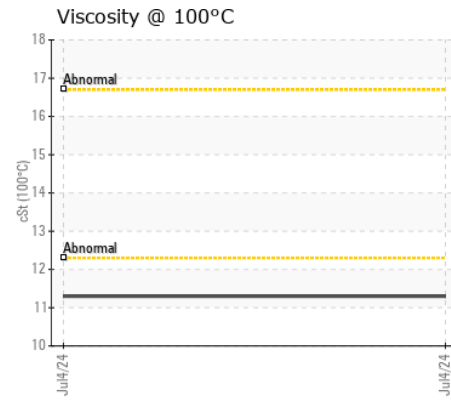
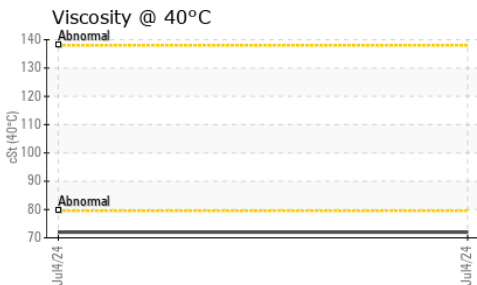
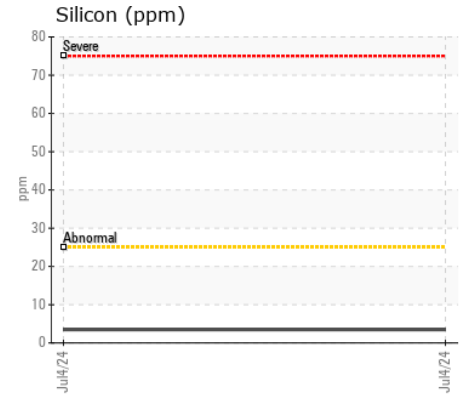
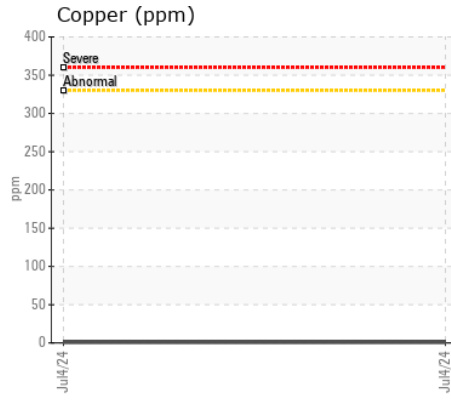
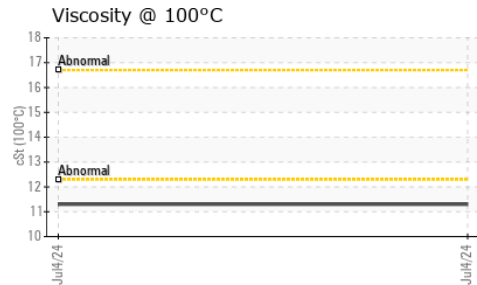
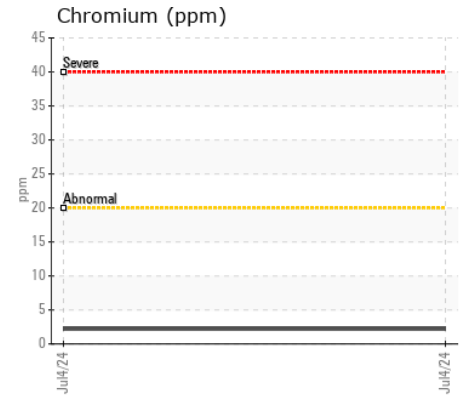
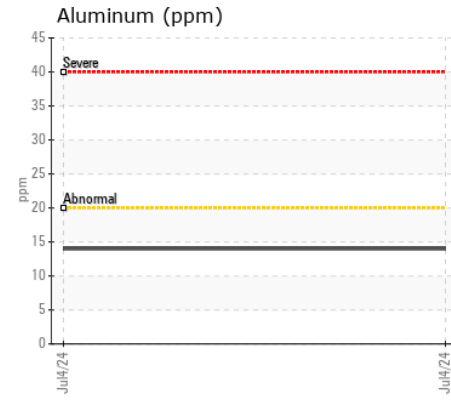
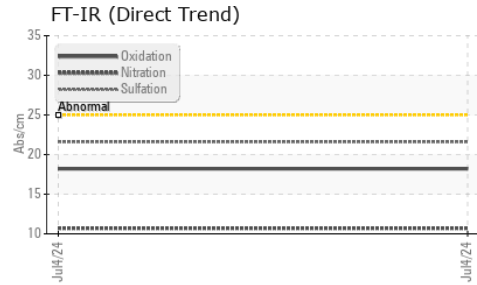
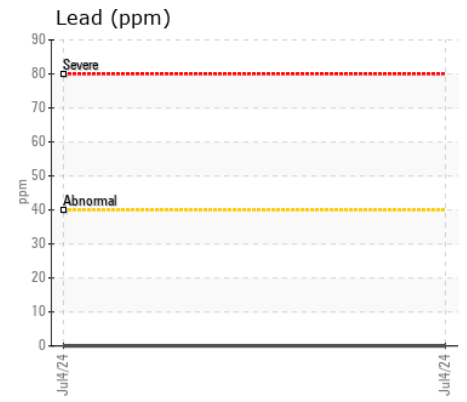
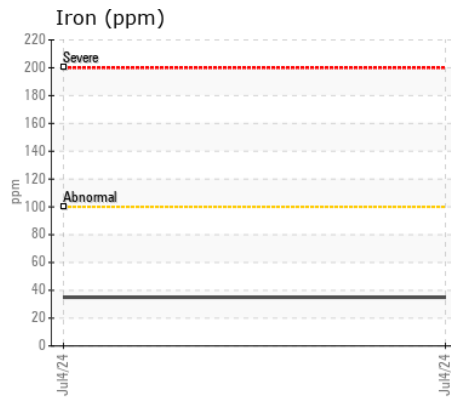
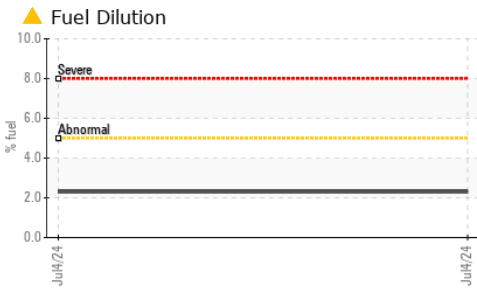
**CONTAMINATION**

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. Light fuel dilution occurring.

**FLUID CONDITION**

Fuel is present in the oil and is lowering the viscosity. The condition of the oil is acceptable for the time in service.

| Test                 | UOM      | Method        | Limit/Abn | Current            | History1 | History2 |
|----------------------|----------|---------------|-----------|--------------------|----------|----------|
| Sample Number        |          | Client Info   |           | <b>PC</b>          | ---      | ---      |
| Sample Date          |          | Client Info   |           | <b>04 Jul 2024</b> | ---      | ---      |
| Machine Age          | hrs      | Client Info   |           | <b>0</b>           | ---      | ---      |
| Oil Age              | hrs      | Client Info   |           | <b>0</b>           | ---      | ---      |
| Filter Age           | hrs      | Client Info   |           | <b>0</b>           | ---      | ---      |
| Oil Changed          |          | Client Info   |           | <b>N/A</b>         | ---      | ---      |
| Filter Changed       |          | Client Info   |           | <b>N/A</b>         | ---      | ---      |
| Sample Status        |          |               |           | <b>MARGINAL</b>    | ---      | ---      |
| Iron                 | ppm      | ASTM D5185(m) | >100      | <b>35</b>          | ---      | ---      |
| Chromium             | ppm      | ASTM D5185(m) | >20       | <b>2</b>           | ---      | ---      |
| Nickel               | ppm      | ASTM D5185(m) | >4        | <b>&lt;1</b>       | ---      | ---      |
| Titanium             | ppm      | ASTM D5185(m) |           | <b>0</b>           | ---      | ---      |
| Silver               | ppm      | ASTM D5185(m) | >3        | <b>0</b>           | ---      | ---      |
| Aluminum             | ppm      | ASTM D5185(m) | >20       | <b>14</b>          | ---      | ---      |
| Lead                 | ppm      | ASTM D5185(m) | >40       | <b>0</b>           | ---      | ---      |
| Copper               | ppm      | ASTM D5185(m) | >330      | <b>1</b>           | ---      | ---      |
| Tin                  | ppm      | ASTM D5185(m) | >15       | <b>0</b>           | ---      | ---      |
| Vanadium             | ppm      | ASTM D5185(m) |           | <b>0</b>           | ---      | ---      |
| Silicon              | ppm      | ASTM D5185(m) | >25       | <b>4</b>           | ---      | ---      |
| Potassium            | ppm      | ASTM D5185(m) | >20       | <b>19</b>          | ---      | ---      |
| Fuel                 | %        | ASTM D7593*   | >5        | <b>▲ 2.3</b>       | ---      | ---      |
| Water                |          | WC Method     | >0.2      | <b>NEG</b>         | ---      | ---      |
| Glycol               |          | WC Method     |           | <b>NEG</b>         | ---      | ---      |
| Soot %               | %        | ASTM D7844*   | >3        | <b>1.2</b>         | ---      | ---      |
| Nitration            | Abs/cm   | ASTM D7624*   | >20       | <b>10.7</b>        | ---      | ---      |
| Sulfation            | Abs/.1mm | ASTM D7415*   | >30       | <b>21.6</b>        | ---      | ---      |
| Emulsified Water     | scalar   | Visual*       | >0.2      | <b>NEG</b>         | ---      | ---      |
| Sodium               | ppm      | ASTM D5185(m) |           | <b>2</b>           | ---      | ---      |
| Boron                | ppm      | ASTM D5185(m) |           | <b>8</b>           | ---      | ---      |
| Barium               | ppm      | ASTM D5185(m) |           | <b>0</b>           | ---      | ---      |
| Molybdenum           | ppm      | ASTM D5185(m) |           | <b>56</b>          | ---      | ---      |
| Manganese            | ppm      | ASTM D5185(m) |           | <b>&lt;1</b>       | ---      | ---      |
| Magnesium            | ppm      | ASTM D5185(m) |           | <b>875</b>         | ---      | ---      |
| Calcium              | ppm      | ASTM D5185(m) |           | <b>1000</b>        | ---      | ---      |
| Phosphorus           | ppm      | ASTM D5185(m) |           | <b>930</b>         | ---      | ---      |
| Zinc                 | ppm      | ASTM D5185(m) |           | <b>1117</b>        | ---      | ---      |
| Sulfur               | ppm      | ASTM D5185(m) |           | <b>2369</b>        | ---      | ---      |
| Oxidation            | Abs/.1mm | ASTM D7414*   | >25       | <b>18.2</b>        | ---      | ---      |
| Visc @ 40°C          | cSt      | ASTM D7279(m) |           | <b>72.0</b>        | ---      | ---      |
| Visc @ 100°C         | cSt      | ASTM D7279(m) |           | <b>11.3</b>        | ---      | ---      |
| Viscosity Index (VI) | Scale    | ASTM D2270*   |           | <b>149</b>         | ---      | ---      |



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : PC **Received** : 05 Jul 2024  
**Lab Number** : 02645782 **Tested** : 08 Jul 2024  
**Unique Number** : 5803321 **Diagnosed** : 08 Jul 2024 - Kevin Marson  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, KV40, PercentFuel, VI )

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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