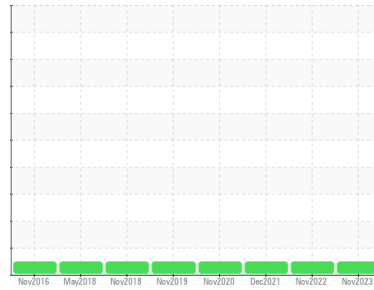




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**GR003**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 15W40 (10 LTR)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a new component breaking in.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>WC0836761</b>   | WC0709781   | WC0634046   |
| Sample Date   | Client Info |             | <b>27 Nov 2023</b> | 23 Nov 2022 | 07 Dec 2021 |
| Machine Age   | hrs         | Client Info | <b>367</b>         | 361         | 310         |
| Oil Age       | hrs         | Client Info | <b>6</b>           | 51          | 21          |
| Oil Changed   | Client Info |             | <b>Changed</b>     | Changed     | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >2.1       | <b>&lt;1.0</b> | <1.0     | <1.0     |
| Water  | WC Method | >0.21      | <b>NEG</b>     | NEG      | NEG      |
| Glycol | WC Method |            | <b>NEG</b>     | NEG      | NEG      |

## WEAR METALS

|           | method | limit/base    | current | history1     | history2 |    |
|-----------|--------|---------------|---------|--------------|----------|----|
| Iron      | ppm    | ASTM D5185(m) | >51     | <b>2</b>     | 4        | 2  |
| Chromium  | ppm    | ASTM D5185(m) | >11     | <b>0</b>     | 0        | 0  |
| Nickel    | ppm    | ASTM D5185(m) | >5      | <b>0</b>     | <1       | <1 |
| Titanium  | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | 0  |
| Silver    | ppm    | ASTM D5185(m) | >3      | <b>0</b>     | 0        | 0  |
| Aluminum  | ppm    | ASTM D5185(m) | >31     | <b>1</b>     | 1        | 1  |
| Lead      | ppm    | ASTM D5185(m) | >26     | <b>&lt;1</b> | <1       | <1 |
| Copper    | ppm    | ASTM D5185(m) | >26     | <b>&lt;1</b> | <1       | <1 |
| Tin       | ppm    | ASTM D5185(m) | >4      | <b>0</b>     | <1       | 0  |
| Antimony  | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | <1 |
| Vanadium  | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Beryllium | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |
| Cadmium   | ppm    | ASTM D5185(m) |         | <b>0</b>     | 0        | 0  |

## ADDITIVES

|            | method | limit/base    | current | history1     | history2 |      |
|------------|--------|---------------|---------|--------------|----------|------|
| Boron      | ppm    | ASTM D5185(m) | 250     | <b>3</b>     | 12       | 12   |
| Barium     | ppm    | ASTM D5185(m) | 10      | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm    | ASTM D5185(m) | 100     | <b>3</b>     | 14       | 13   |
| Manganese  | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | 0    |
| Magnesium  | ppm    | ASTM D5185(m) | 450     | <b>14</b>    | 28       | 27   |
| Calcium    | ppm    | ASTM D5185(m) | 3000    | <b>2218</b>  | 2368     | 2181 |
| Phosphorus | ppm    | ASTM D5185(m) | 1150    | <b>844</b>   | 963      | 915  |
| Zinc       | ppm    | ASTM D5185(m) | 1350    | <b>957</b>   | 1033     | 1025 |
| Sulfur     | ppm    | ASTM D5185(m) | 4250    | <b>3172</b>  | 3143     | 3053 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

## CONTAMINANTS

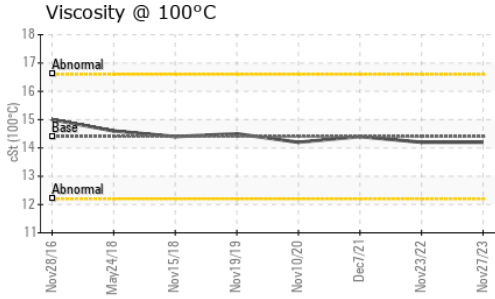
|           | method | limit/base    | current | history1 | history2 |   |
|-----------|--------|---------------|---------|----------|----------|---|
| Silicon   | ppm    | ASTM D5185(m) | >22     | <b>2</b> | 2        | 2 |
| Sodium    | ppm    | ASTM D5185(m) | >158    | <b>2</b> | 3        | 2 |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>1</b> | 1        | 2 |

## INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* | >3      | <b>0</b>    | 0        | 0    |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>5.5</b>  | 7.0      | 4.4  |
| Sulfation | Abs./1mm | ASTM D7415* | >30     | <b>15.3</b> | 17.1     | 14.1 |

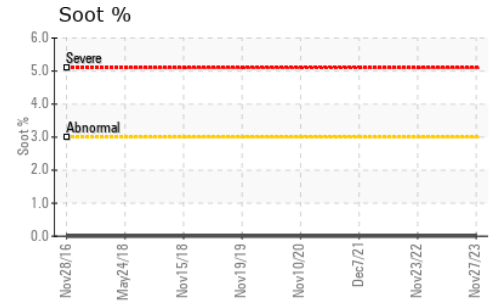
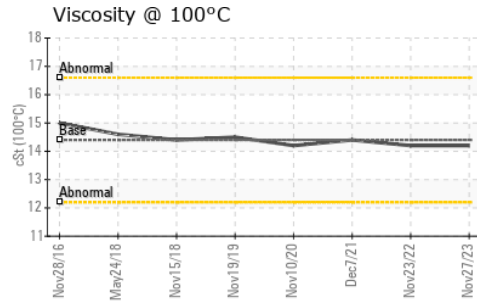
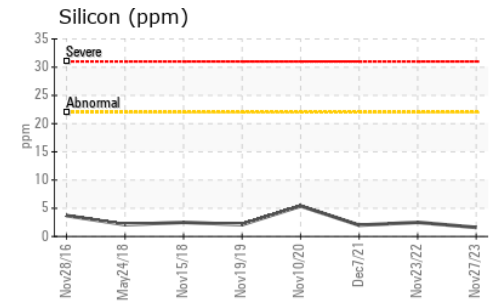
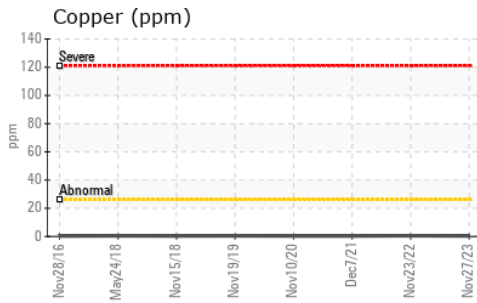
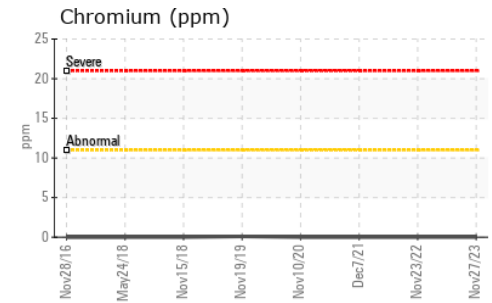
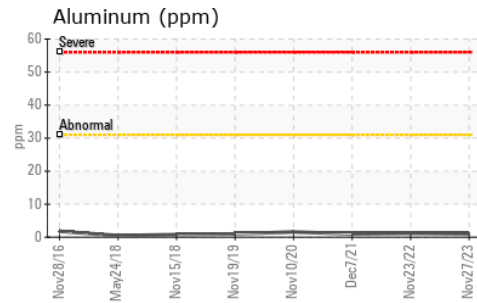
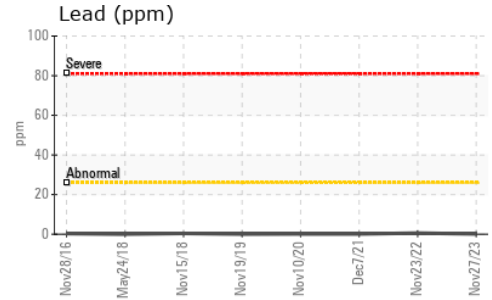
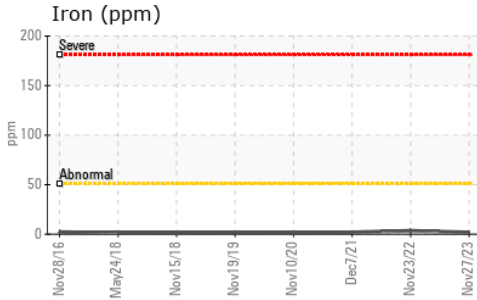


# OIL ANALYSIS REPORT



| FLUID DEGRADATION |          | method        | limit/base | current     | history1 | history2 |
|-------------------|----------|---------------|------------|-------------|----------|----------|
| Oxidation         | Abs./1mm | ASTM D7414*   | >25        | <b>8.9</b>  | 10.6     | 7.0      |
| VISUAL            |          | method        | limit/base | current     | history1 | history2 |
| Emulsified Water  | scalar   | Visual*       | >0.21      | <b>NEG</b>  | NEG      | NEG      |
| Free Water        | scalar   | Visual*       |            | <b>NEG</b>  | NEG      | NEG      |
| FLUID PROPERTIES  |          | method        | limit/base | current     | history1 | history2 |
| Visc @ 100°C      | cSt      | ASTM D7279(m) | 14.4       | <b>14.2</b> | 14.2     | 14.4     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0836761      **Received** : 05 Jan 2024  
**Lab Number** : **02606708**      **Diagnosed** : 05 Jan 2024  
**Unique Number** : 5707794      **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

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 F: (519)451-1707

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.