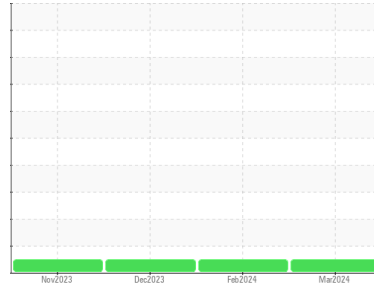




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id

**2367**

Component

**Natural Gas Engine**

Fluid

**VALVOLINE PREMIUM BLUE 9200 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

### 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>WC0917534</b>   | WC0890964   | WC0878179   |
| Sample Date        | Client Info |             |            | <b>23 Mar 2024</b> | 05 Feb 2024 | 18 Dec 2023 |
| Machine Age        | kms         | Client Info |            | <b>28730</b>       | 0           | 18043       |
| Oil Age            | kms         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Changed        | Client Info |             |            | <b>Changed</b>     | N/A         | N/A         |
| Sample Status      |             |             |            | <b>NORMAL</b>      | NORMAL      | NORMAL      |

| CONTAMINATION |           | method | limit/base | current    | history1 | history2 |
|---------------|-----------|--------|------------|------------|----------|----------|
| Water         | WC Method |        | >0.1       | <b>NEG</b> | NEG      | NEG      |

| WEAR METALS |     | method        | limit/base | current      | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185(m) | >50        | <b>8</b>     | 8        | 13       |
| Chromium    | ppm | ASTM D5185(m) | >4         | <b>0</b>     | 0        | <1       |
| Nickel      | ppm | ASTM D5185(m) | >2         | <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) | >9         | <b>1</b>     | 2        | 2        |
| Lead        | ppm | ASTM D5185(m) | >30        | <b>0</b>     | <1       | <1       |
| Copper      | ppm | ASTM D5185(m) | >35        | <b>1</b>     | 2        | 3        |
| Tin         | ppm | ASTM D5185(m) | >4         | <b>0</b>     | <1       | <1       |
| Antimony    | ppm | ASTM D5185(m) |            | <b>0</b>     | 0        | 0        |
| 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) |            | <b>20</b>    | 12       | 11       |
| Barium     | ppm | ASTM D5185(m) |            | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm | ASTM D5185(m) |            | <b>51</b>    | 51       | 55       |
| Manganese  | ppm | ASTM D5185(m) |            | <b>0</b>     | <1       | 1        |
| Magnesium  | ppm | ASTM D5185(m) |            | <b>768</b>   | 716      | 747      |
| Calcium    | ppm | ASTM D5185(m) |            | <b>1171</b>  | 1173     | 1177     |
| Phosphorus | ppm | ASTM D5185(m) |            | <b>683</b>   | 618      | 658      |
| Zinc       | ppm | ASTM D5185(m) |            | <b>801</b>   | 809      | 803      |
| Sulfur     | ppm | ASTM D5185(m) |            | <b>1900</b>  | 2015     | 1976     |
| Lithium    | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | <1       | <1       |

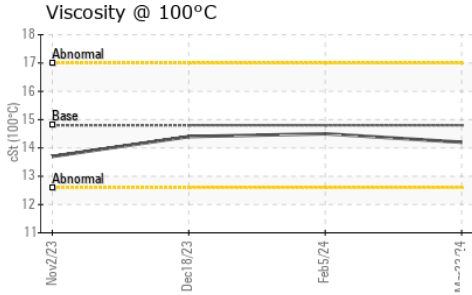
| CONTAMINANTS |     | method        | limit/base | current      | history1 | history2 |
|--------------|-----|---------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185(m) | >+100      | <b>5</b>     | 6        | 9        |
| Sodium       | ppm | ASTM D5185(m) |            | <b>5</b>     | 4        | 2        |
| Potassium    | ppm | ASTM D5185(m) | >20        | <b>&lt;1</b> | <1       | <1       |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844* |            | <b>0</b>    | 0        | 0        |
| Nitration | Abs/cm   | ASTM D7624* | >20        | <b>10.3</b> | 11.2     | 12.2     |
| Sulfation | Abs/.1mm | ASTM D7415* | >30        | <b>20.5</b> | 21.1     | 22.7     |

| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs/.1mm | ASTM D7414* | >25        | <b>17.6</b> | 18.7     | 19.8     |



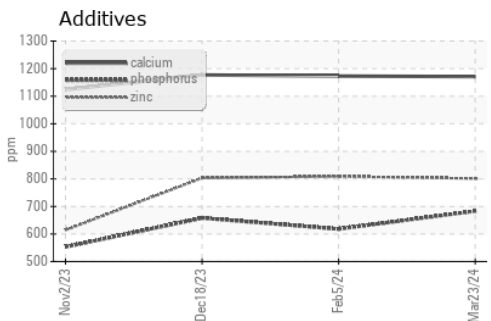
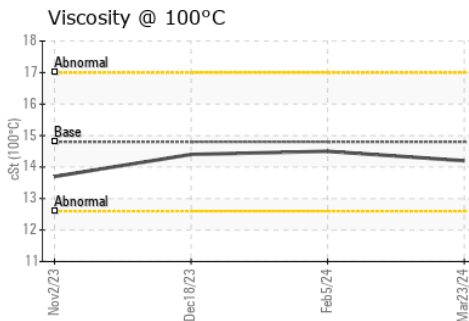
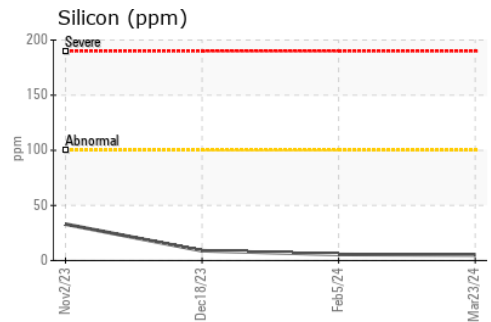
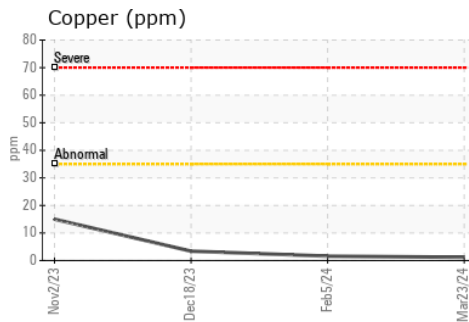
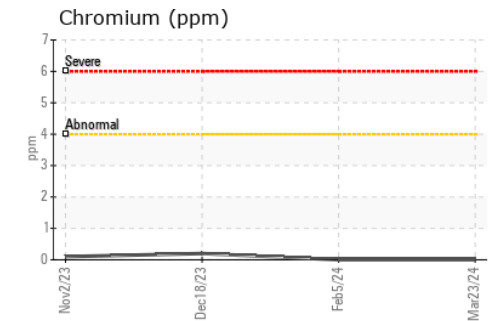
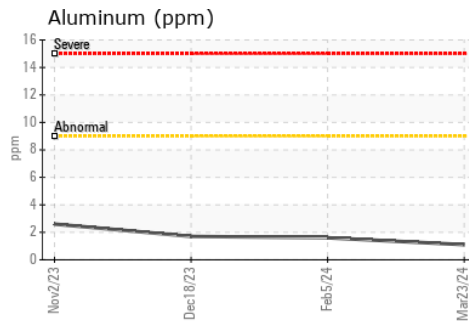
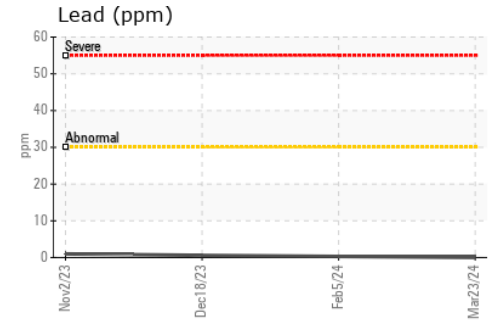
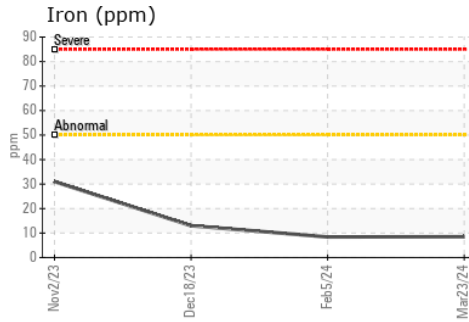
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Emulsified Water | scalar | Visual*    | >0.1    | NEG      | NEG      |
| Free Water       | scalar | Visual*    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base    | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D7279(m) | 14.8    | 14.2     | 14.5     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0917534  
**Lab Number** : 02625660  
**Unique Number** : 5750779  
**Test Package** : MOB 1  
**Received** : 01 Apr 2024  
**Tested** : 01 Apr 2024  
**Diagnosed** : 01 Apr 2024 - Wes Davis

**CITY OF HAMILTON**  
 2200 UPPER JAMES., MOUNTAIN TRANSIT STOREROOM  
 MOUNT HOPE, ON  
 CA L0R 1W0  
 Contact: Ron Skinner  
 ron.skinner@hamilton.ca  
 T:

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.

F: (905)679-4502