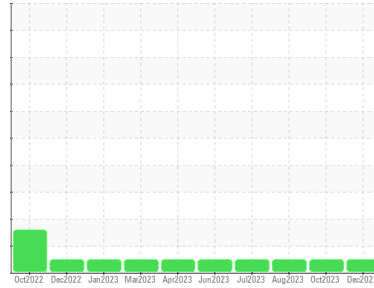




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id

**2114**

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

All component wear rates are normal.

### 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>WC0877991</b>   | WC0830207   | WC0849949   |
| Sample Date        | Client Info |             |            | <b>04 Dec 2023</b> | 17 Oct 2023 | 30 Aug 2023 |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | 80002       | 69786       |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Changed        | Client Info |             |            | <b>N/A</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        | 7        |
| Chromium    | ppm | ASTM D5185(m) | >4         | <b>&lt;1</b> | <1       | <1       |
| Nickel      | ppm | ASTM D5185(m) | >2         | <b>&lt;1</b> | <1       | <1       |
| Titanium    | ppm | ASTM D5185(m) |            | <b>0</b>     | 0        | <1       |
| Silver      | ppm | ASTM D5185(m) | >3         | <b>&lt;1</b> | <1       | 0        |
| Aluminum    | ppm | ASTM D5185(m) | >9         | <b>1</b>     | 2        | 1        |
| Lead        | ppm | ASTM D5185(m) | >30        | <b>&lt;1</b> | <1       | <1       |
| Copper      | ppm | ASTM D5185(m) | >35        | <b>&lt;1</b> | <1       | <1       |
| Tin         | ppm | ASTM D5185(m) | >4         | <b>&lt;1</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>11</b>    | 9        | 10       |
| Barium     | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | <1       | 0        |
| Molybdenum | ppm | ASTM D5185(m) |            | <b>53</b>    | 54       | 51       |
| Manganese  | ppm | ASTM D5185(m) |            | <b>0</b>     | 0        | <1       |
| Magnesium  | ppm | ASTM D5185(m) |            | <b>778</b>   | 797      | 792      |
| Calcium    | ppm | ASTM D5185(m) |            | <b>1214</b>  | 1236     | 1203     |
| Phosphorus | ppm | ASTM D5185(m) |            | <b>633</b>   | 633      | 680      |
| Zinc       | ppm | ASTM D5185(m) |            | <b>868</b>   | 875      | 854      |
| Sulfur     | ppm | ASTM D5185(m) |            | <b>1958</b>  | 1939     | 1941     |
| Lithium    | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | <1       | <1       |

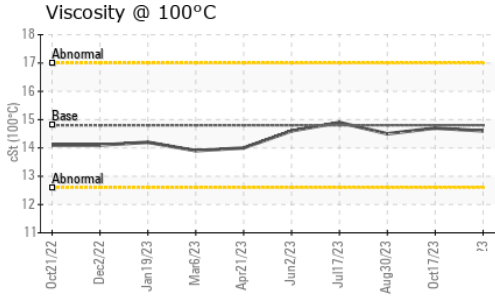
| CONTAMINANTS |     | method        | limit/base | current  | history1 | history2 |
|--------------|-----|---------------|------------|----------|----------|----------|
| Silicon      | ppm | ASTM D5185(m) | >+100      | <b>4</b> | 4        | 4        |
| Sodium       | ppm | ASTM D5185(m) |            | <b>2</b> | 2        | 2        |
| Potassium    | ppm | ASTM D5185(m) | >20        | <b>0</b> | 0        | <1       |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844* |            | <b>0</b>    | 0        | 0        |
| Nitration | Abs/cm   | ASTM D7624* | >20        | <b>12.3</b> | 12.5     | 11.9     |
| Sulfation | Abs/.1mm | ASTM D7415* | >30        | <b>22.0</b> | 23.1     | 22.5     |

| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs/.1mm | ASTM D7414* | >25        | <b>19.8</b> | 20.5     | 19.3     |



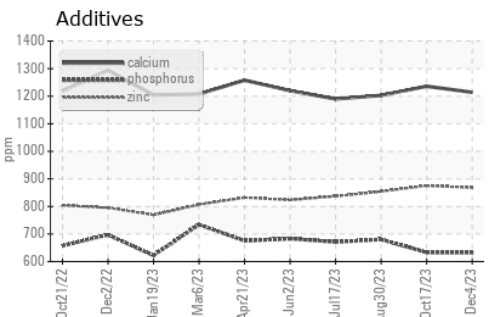
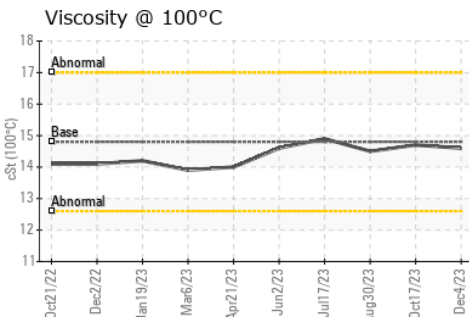
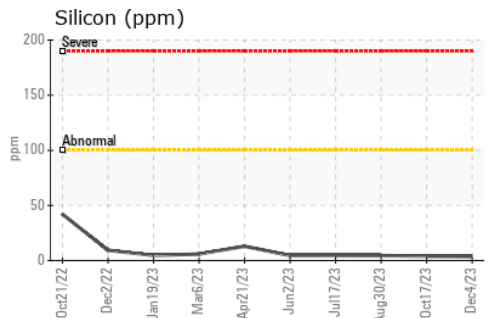
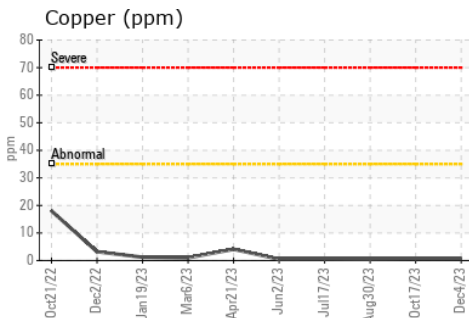
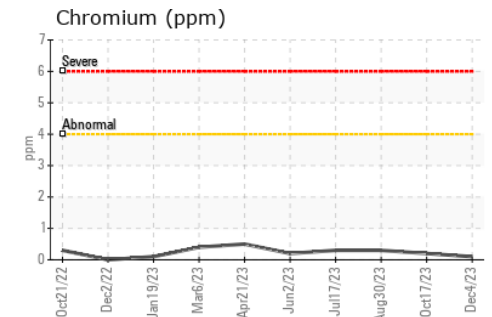
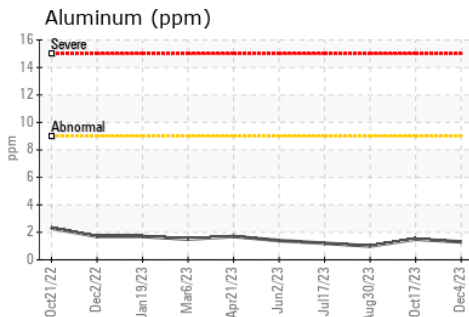
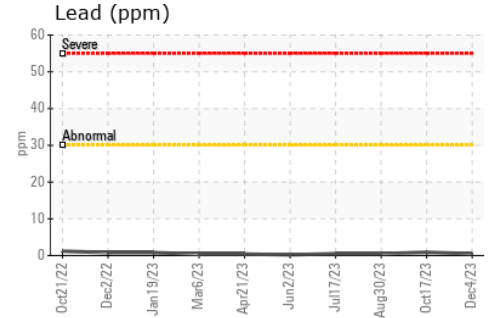
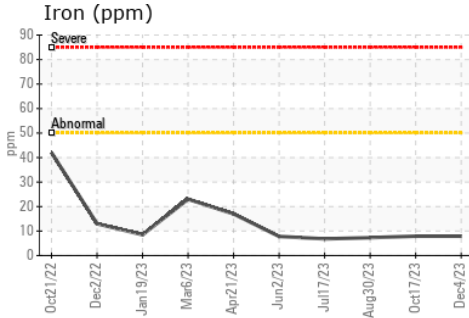
# OIL ANALYSIS REPORT



| 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    | 14.6     | 14.7     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0877991 **Received** : 06 Dec 2023  
**Lab Number** : 02601183 **Diagnosed** : 06 Dec 2023  
**Unique Number** : 5694268 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

**CITY OF HAMILTON**  
 2200 UPPER JAMES., MOUNTAIN TRANSIT STOREROOM  
 MOUNT HOPE, ON  
 CA L0R 1W0  
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 jeff.parr@hamilton.ca  
 T: (905)546-2424  
 F: (905)679-4502

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.