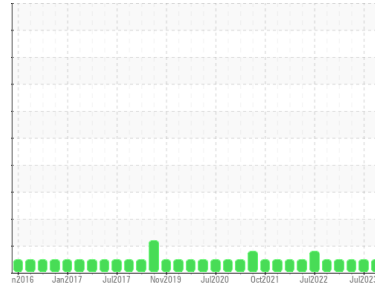




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**[1490765]**  
 Machine Id  
**NOVA BUS 1516**  
 Component  
**Natural Gas Engine**  
 Fluid  
**VALVOLINE PREMIUM BLUE 9200 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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>WC0849732</b>   | WC0830349   | WC0791410   |
| Sample Date   | Client Info |             | <b>08 Oct 2023</b> | 06 Jul 2023 | 09 Apr 2023 |
| Machine Age   | kms         | Client Info | <b>0</b>           | 0           | 452932      |
| Oil Age       | kms         | 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      |

## WEAR METALS

|           | method | limit/base        | current      | history1 | history2 |
|-----------|--------|-------------------|--------------|----------|----------|
| Iron      | ppm    | ASTM D5185(m) >50 | <b>12</b>    | 11       | 16       |
| Chromium  | ppm    | ASTM D5185(m) >4  | <b>&lt;1</b> | 1        | 2        |
| Nickel    | ppm    | ASTM D5185(m) >2  | <b>&lt;1</b> | <1       | <1       |
| Titanium  | ppm    | ASTM D5185(m)     | <b>0</b>     | <1       | 2        |
| Silver    | ppm    | ASTM D5185(m) >3  | <b>&lt;1</b> | 0        | 0        |
| Aluminum  | ppm    | ASTM D5185(m) >9  | <b>2</b>     | 2        | 2        |
| Lead      | ppm    | ASTM D5185(m) >30 | <b>3</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>9</b>     | 10       | 13       |
| Barium     | ppm    | ASTM D5185(m) | <b>&lt;1</b> | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185(m) | <b>59</b>    | 53       | 56       |
| Manganese  | ppm    | ASTM D5185(m) | <b>&lt;1</b> | <1       | 2        |
| Magnesium  | ppm    | ASTM D5185(m) | <b>904</b>   | 858      | 906      |
| Calcium    | ppm    | ASTM D5185(m) | <b>1336</b>  | 1275     | 1419     |
| Phosphorus | ppm    | ASTM D5185(m) | <b>741</b>   | 711      | 821      |
| Zinc       | ppm    | ASTM D5185(m) | <b>963</b>   | 897      | 948      |
| Sulfur     | ppm    | ASTM D5185(m) | <b>2041</b>  | 1928     | 2082     |
| 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>6</b>     | 6        | 9        |
| Sodium    | ppm    | ASTM D5185(m)       | <b>4</b>     | 4        | 8        |
| Potassium | ppm    | ASTM D5185(m) >20   | <b>&lt;1</b> | <1       | 0        |

## INFRA-RED

|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844*     | <b>0</b>    | 0        | 0        |
| Nitration | Abs/cm   | ASTM D7624* >20 | <b>12.8</b> | 12.8     | 7.5      |
| Sulfation | Abs/.1mm | ASTM D7415* >30 | <b>24.8</b> | 23.6     | 19.0     |

## FLUID DEGRADATION

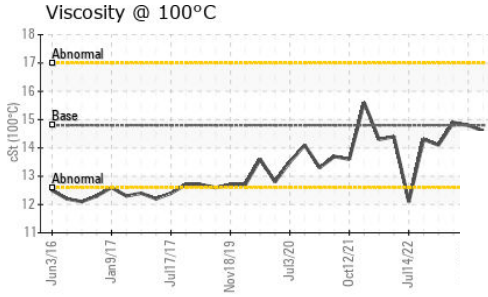
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Oxidation | Abs/.1mm | ASTM D7414* >25 | <b>21.9</b> | 21.7     | 11.2     |

## VISUAL

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

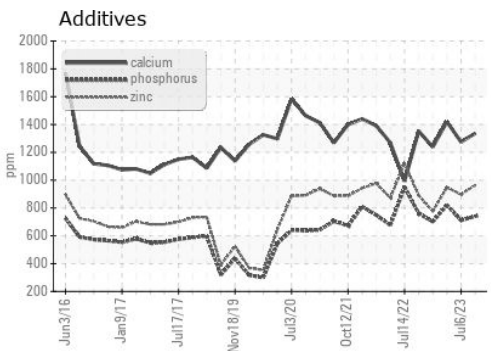
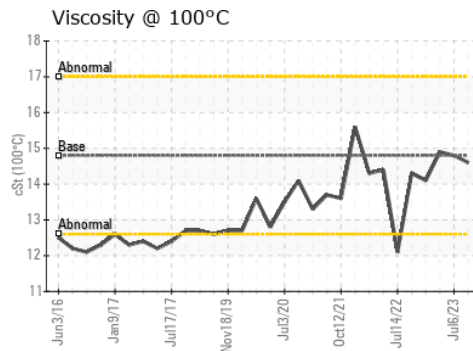
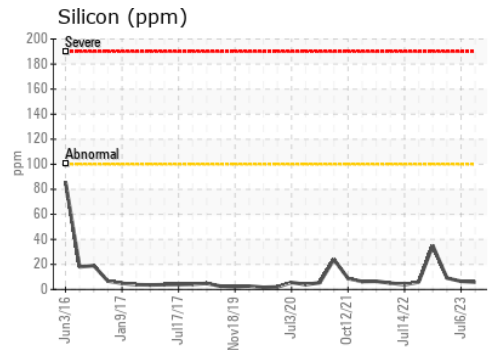
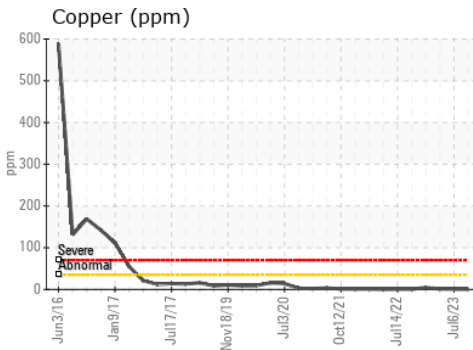
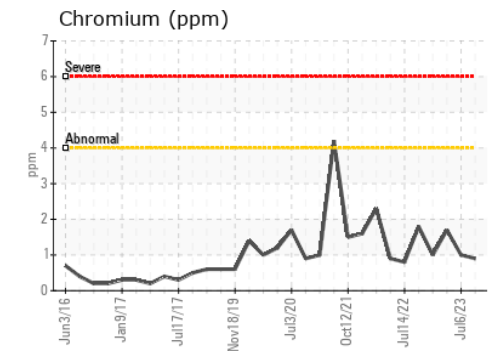
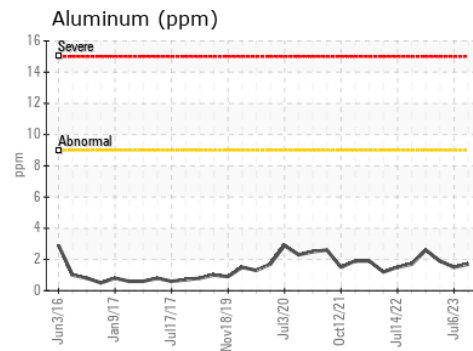
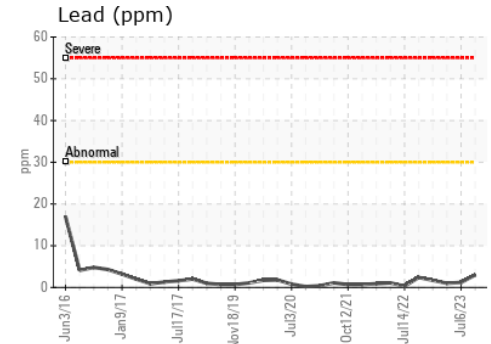
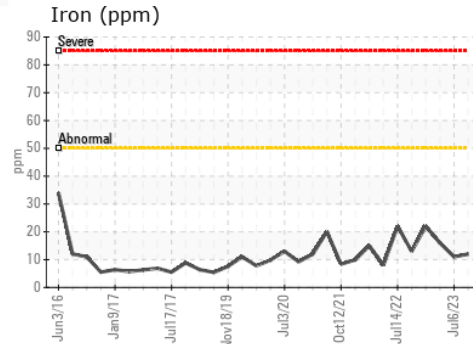


# OIL ANALYSIS REPORT



| FLUID PROPERTIES |     | method        | limit/base | current     | history1 | history2 |
|------------------|-----|---------------|------------|-------------|----------|----------|
| Visc @ 100°C     | cSt | ASTM D7279(m) | 14.8       | <b>14.6</b> | 14.8     | 14.9     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0849732 **Received** : 11 Oct 2023  
**Lab Number** : 02588226 **Diagnosed** : 11 Oct 2023  
**Unique Number** : 5657292 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

**CITY OF HAMILTON**  
 2200 UPPER JAMES., MOUNTAIN TRANSIT STOREROOM  
 MOUNT HOPE, ON  
 CA L0R 1W0  
 Contact: Jeff Parr  
 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.