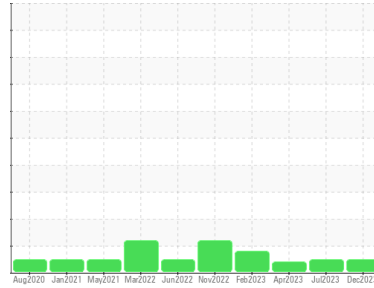




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**9616**

Component

**Diesel Engine**

Fluid

**DIESEL ENGINE OIL SAE 10W30 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### 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. 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>WC0853050</b>   | WC0796294   | WC0796382   |
| Sample Date   | Client Info |             | <b>06 Dec 2023</b> | 23 Jul 2023 | 27 Apr 2023 |
| Machine Age   | kms         | Client Info | <b>446463</b>      | 429497      | 917359      |
| Oil Age       | kms         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>Not Changed</b> | Not Changed | Not Changed |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | ABNORMAL    |

## CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >3.0       | <b>&lt;1.0</b> | <1.0     | 1.5      |
| Water  | WC Method | >0.2       | <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) | >165    | <b>64</b>    | 35       | 13 |
| Chromium  | ppm    | ASTM D5185(m) | >5      | <b>2</b>     | <1       | <1 |
| Nickel    | ppm    | ASTM D5185(m) | >4      | <b>&lt;1</b> | <1       | 0  |
| Titanium  | ppm    | ASTM D5185(m) | >2      | <b>0</b>     | 0        | <1 |
| Silver    | ppm    | ASTM D5185(m) | >2      | <b>&lt;1</b> | <1       | 0  |
| Aluminum  | ppm    | ASTM D5185(m) | >20     | <b>9</b>     | 5        | 2  |
| Lead      | ppm    | ASTM D5185(m) | >150    | <b>3</b>     | <1       | <1 |
| Copper    | ppm    | ASTM D5185(m) | >90     | <b>3</b>     | 3        | 2  |
| Tin       | ppm    | ASTM D5185(m) | >5      | <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) | 250     | <b>30</b>    | 54       | 85   |
| Barium     | ppm    | ASTM D5185(m) | 10      | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm    | ASTM D5185(m) | 100     | <b>6</b>     | 3        | 3    |
| Manganese  | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |
| Magnesium  | ppm    | ASTM D5185(m) | 450     | <b>682</b>   | 696      | 681  |
| Calcium    | ppm    | ASTM D5185(m) | 3000    | <b>1369</b>  | 1290     | 1350 |
| Phosphorus | ppm    | ASTM D5185(m) | 1150    | <b>702</b>   | 704      | 712  |
| Zinc       | ppm    | ASTM D5185(m) | 1350    | <b>775</b>   | 744      | 731  |
| Sulfur     | ppm    | ASTM D5185(m) | 4250    | <b>2621</b>  | 2425     | 2465 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

## CONTAMINANTS

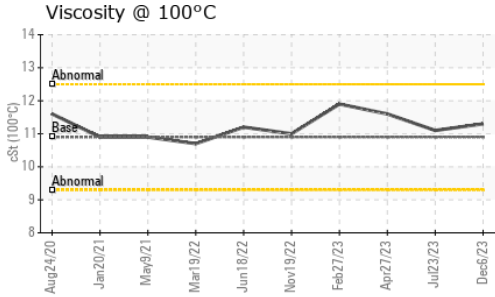
|           | method | limit/base    | current | history1  | history2 |   |
|-----------|--------|---------------|---------|-----------|----------|---|
| Silicon   | ppm    | ASTM D5185(m) | >35     | <b>5</b>  | 4        | 5 |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>3</b>  | 3        | 2 |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>20</b> | 6        | 4 |

## INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* | >7.5    | <b>0.4</b>  | 0.1      | 0    |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>11.9</b> | 10.3     | 7.8  |
| Sulfation | Abs/.1mm | ASTM D7415* | >30     | <b>24.3</b> | 20.7     | 19.6 |



# OIL ANALYSIS REPORT



### FLUID DEGRADATION

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Oxidation | Abs./1mm | ASTM D7414* | >25     | <b>20.1</b> | 16.9     | 13.9 |

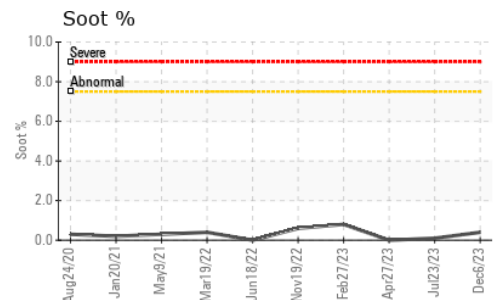
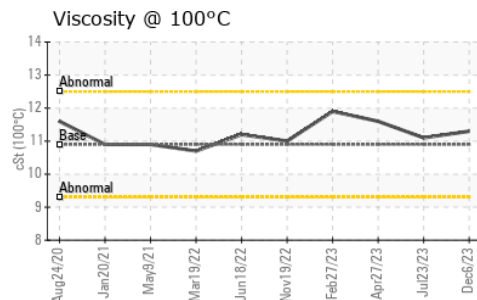
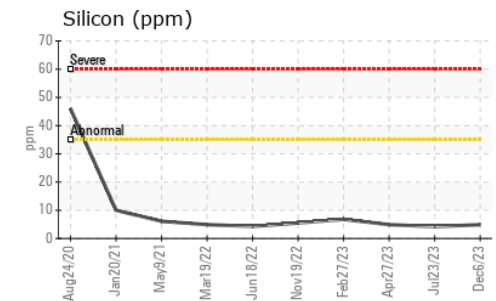
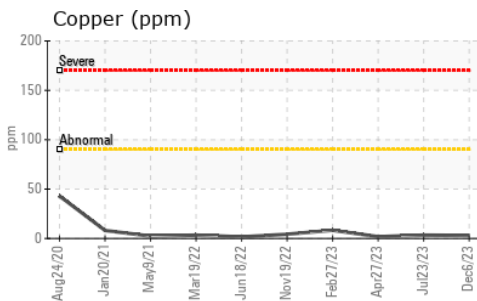
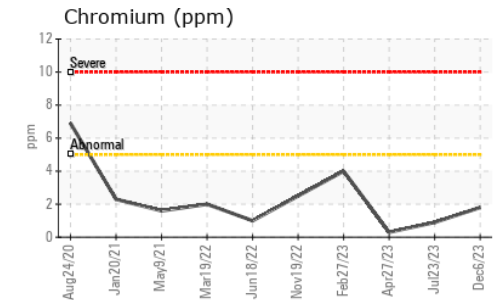
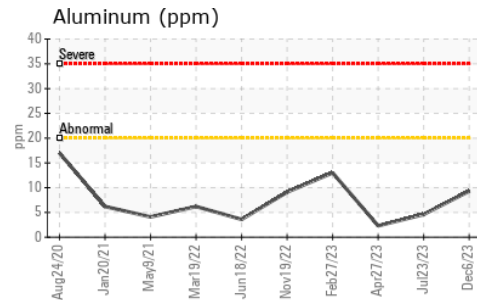
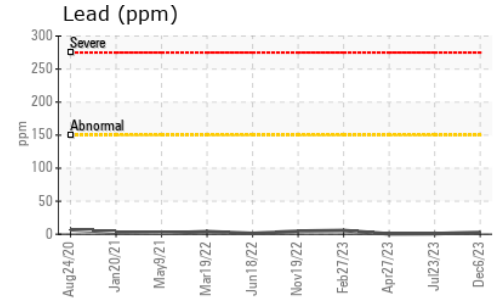
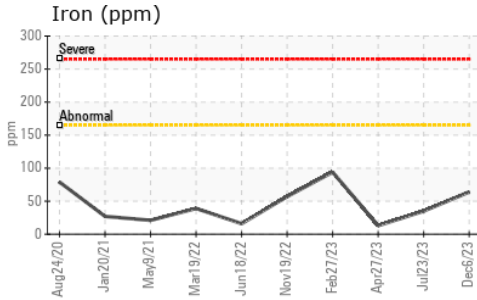
### VISUAL

|                  | method | limit/base | current | history1   | history2 |     |
|------------------|--------|------------|---------|------------|----------|-----|
| Emulsified Water | scalar | Visual*    | >0.2    | <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) | 10.9    | <b>11.3</b> | 11.1     | ▲ 11.6 |

### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0853050 **Received** : 19 Jan 2024  
**Lab Number** : **02609862** **Diagnosed** : 19 Jan 2024  
**Unique Number** : 5710948 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1

**Rush Truck Centres**  
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 sokur@rushtruckcentres.ca  
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 F:

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.