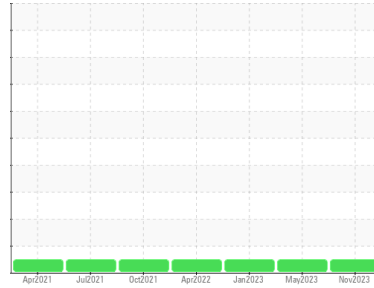




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**4192**

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>WC0853111</b>   | WC0796614   | WC0702929   |
| Sample Date   | Client Info |             | <b>02 Nov 2023</b> | 03 May 2023 | 29 Jan 2023 |
| Machine Age   | kms         | Client Info | <b>129925</b>      | 110809      | 101649      |
| Oil Age       | kms         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>Not Changed</b> | Not Changed | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >3.0       | <b>&lt;1.0</b> | <1.0     | <1.0     |
| 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) | >130    | <b>20</b>    | 25       | 48 |
| Chromium  | ppm    | ASTM D5185(m) | >10     | <b>&lt;1</b> | 1        | 2  |
| Nickel    | ppm    | ASTM D5185(m) | >4      | <b>&lt;1</b> | <1       | 1  |
| Titanium  | ppm    | ASTM D5185(m) | >2      | <b>0</b>     | <1       | <1 |
| Silver    | ppm    | ASTM D5185(m) | >2      | <b>&lt;1</b> | 0        | 0  |
| Aluminum  | ppm    | ASTM D5185(m) | >20     | <b>9</b>     | 15       | 32 |
| Lead      | ppm    | ASTM D5185(m) | >20     | <b>&lt;1</b> | <1       | 1  |
| Copper    | ppm    | ASTM D5185(m) | >125    | <b>2</b>     | 4        | 7  |
| Tin       | ppm    | ASTM D5185(m) | >4      | <b>0</b>     | <1       | <1 |
| 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>48</b>    | 54       | 31   |
| Barium     | ppm    | ASTM D5185(m) | 10      | <b>0</b>     | 0        | 0    |
| Molybdenum | ppm    | ASTM D5185(m) | 100     | <b>1</b>     | 4        | 10   |
| Manganese  | ppm    | ASTM D5185(m) |         | <b>0</b>     | <1       | 1    |
| Magnesium  | ppm    | ASTM D5185(m) | 450     | <b>686</b>   | 708      | 691  |
| Calcium    | ppm    | ASTM D5185(m) | 3000    | <b>1264</b>  | 1361     | 1315 |
| Phosphorus | ppm    | ASTM D5185(m) | 1150    | <b>667</b>   | 751      | 699  |
| Zinc       | ppm    | ASTM D5185(m) | 1350    | <b>737</b>   | 773      | 722  |
| Sulfur     | ppm    | ASTM D5185(m) | 4250    | <b>2559</b>  | 2488     | 2470 |
| Lithium    | ppm    | ASTM D5185(m) |         | <b>&lt;1</b> | <1       | <1   |

## CONTAMINANTS

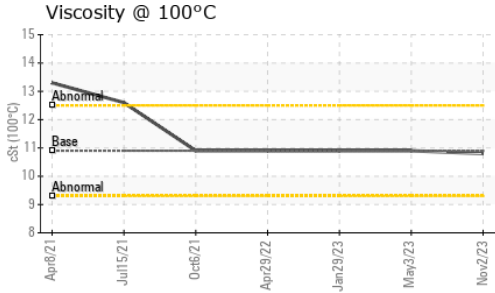
|           | method | limit/base    | current | history1  | history2 |    |
|-----------|--------|---------------|---------|-----------|----------|----|
| Silicon   | ppm    | ASTM D5185(m) | >25     | <b>4</b>  | 5        | 7  |
| Sodium    | ppm    | ASTM D5185(m) |         | <b>2</b>  | 3        | 3  |
| Potassium | ppm    | ASTM D5185(m) | >20     | <b>11</b> | 22       | 53 |

## INFRA-RED

|           | method   | limit/base  | current | history1    | history2 |      |
|-----------|----------|-------------|---------|-------------|----------|------|
| Soot %    | %        | ASTM D7844* | >6      | <b>0.4</b>  | 0.3      | 0.5  |
| Nitration | Abs/cm   | ASTM D7624* | >20     | <b>9.8</b>  | 10.4     | 11.9 |
| Sulfation | Abs./1mm | ASTM D7415* | >30     | <b>20.2</b> | 20.8     | 25.4 |



# OIL ANALYSIS REPORT

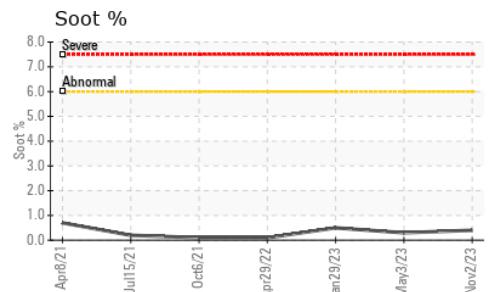
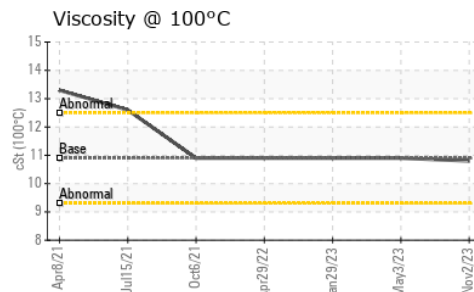
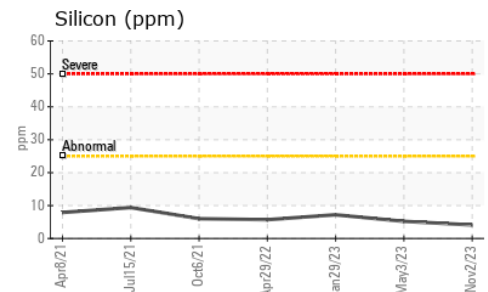
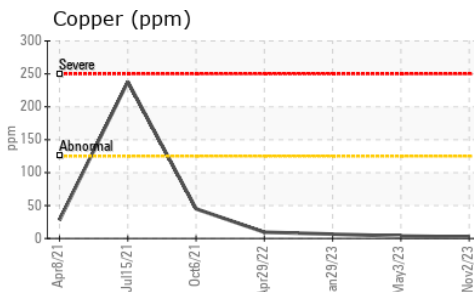
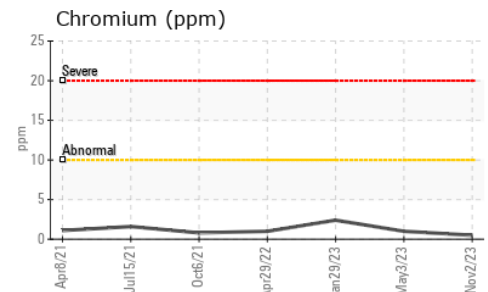
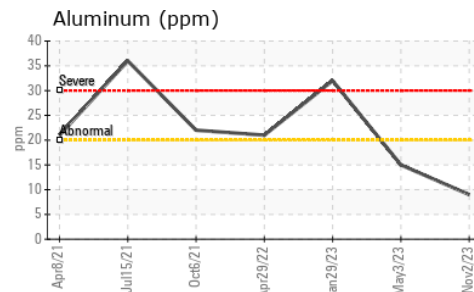
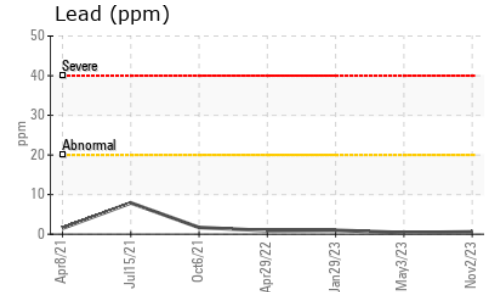
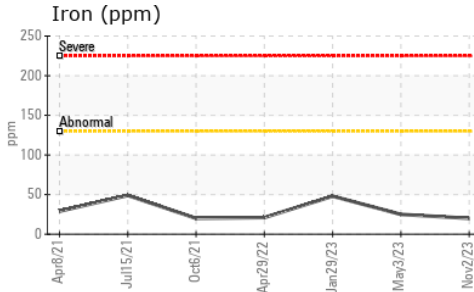


| FLUID DEGRADATION |          | method      | limit/base | current     | history1 | history2 |
|-------------------|----------|-------------|------------|-------------|----------|----------|
| Oxidation         | Abs./1mm | ASTM D7414* | >25        | <b>15.3</b> | 15.7     | 19.9     |

| 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>10.8</b> | 10.9     | 10.9     |

## GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0853111 **Received** : 19 Jan 2024  
**Lab Number** : **02609903** **Diagnosed** : 19 Jan 2024  
**Unique Number** : 5710989 **Diagnostician** : Kevin Marson  
**Test Package** : MOB 1

**Rush Truck Centres**  
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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.