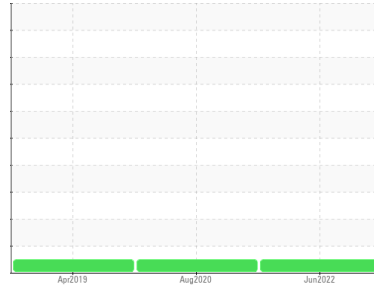




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Area

**GARNISON OF MONTREAL [VQ5997]**

Machine Id

**GD4102**

Component

**Diesel Engine**

Fluid

**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Échantillonner de nouveau l'équipement au prochain intervalle de vidange afin d'en surveiller la condition.

### Wear

Les taux de métaux sont typiques pour la période de rodage d'un nouveau composant.

### Contamination

Il n'y a aucun indice de contamination dans l'huile.

### Fluid Condition

L'état de l'huile est acceptable pour la durée de service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>GD0005338</b>   | GD0004281   | GD0003298   |
| Sample Date   | Client Info |             | <b>23 Jun 2022</b> | 13 Aug 2020 | 25 Apr 2019 |
| Machine Age   | hrs         | Client Info | <b>700</b>         | 641         | 615         |
| Oil Age       | hrs         | Client Info | <b>0</b>           | 0           | 0           |
| Oil Changed   | Client Info |             | <b>N/A</b>         | Changed     | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >5         | <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) >100 | <b>2</b>     | 3        | 5        |
| Chromium  | ppm    | ASTM D5185(m) >20  | <b>0</b>     | <1       | 0        |
| Nickel    | ppm    | ASTM D5185(m) >4   | <b>0</b>     | 0        | 0        |
| Titanium  | ppm    | ASTM D5185(m)      | <b>0</b>     | <1       | 0        |
| Silver    | ppm    | ASTM D5185(m) >3   | <b>0</b>     | 0        | 0        |
| Aluminum  | ppm    | ASTM D5185(m) >20  | <b>&lt;1</b> | <1       | 2        |
| Lead      | ppm    | ASTM D5185(m) >40  | <b>&lt;1</b> | <1       | 1        |
| Copper    | ppm    | ASTM D5185(m) >330 | <b>&lt;1</b> | <1       | <1       |
| Tin       | ppm    | ASTM D5185(m) >15  | <b>0</b>     | <1       | 0        |
| Antimony  | ppm    | ASTM D5185(m)      | <b>0</b>     | <1       | 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>&lt;1</b> | 4        | 48       |
| Barium     | ppm    | ASTM D5185(m) 10   | <b>0</b>     | <1       | <1       |
| Molybdenum | ppm    | ASTM D5185(m) 100  | <b>58</b>    | 58       | <1       |
| Manganese  | ppm    | ASTM D5185(m)      | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185(m) 450  | <b>978</b>   | 943      | 10       |
| Calcium    | ppm    | ASTM D5185(m) 3000 | <b>1051</b>  | 1148     | 2269     |
| Phosphorus | ppm    | ASTM D5185(m) 1150 | <b>1045</b>  | 1067     | 973      |
| Zinc       | ppm    | ASTM D5185(m) 1350 | <b>1189</b>  | 1240     | 1147     |
| Sulfur     | ppm    | ASTM D5185(m) 4250 | <b>2736</b>  | 2816     | 3502     |
| Lithium    | ppm    | ASTM D5185(m)      | <b>&lt;1</b> | <1       | 0        |

## CONTAMINANTS

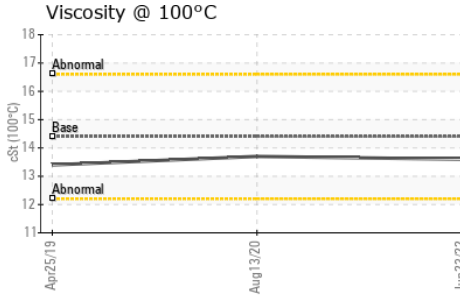
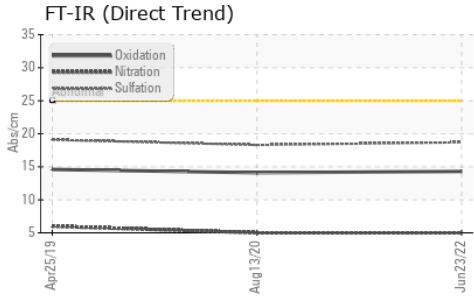
|           | method | limit/base         | current      | history1 | history2 |
|-----------|--------|--------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185(m) >25  | <b>3</b>     | 10       | 2        |
| Sodium    | ppm    | ASTM D5185(m) >158 | <b>1</b>     | <1       | 4        |
| Potassium | ppm    | ASTM D5185(m) >20  | <b>&lt;1</b> | <1       | <1       |

## INFRA-RED

|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844* >3  | <b>0</b>    | 0        | 0        |
| Nitration | Abs/cm   | ASTM D7624* >20 | <b>5.0</b>  | 5.0      | 6.0      |
| Sulfation | Abs./1mm | ASTM D7415* >30 | <b>18.7</b> | 18.3     | 19.1     |



# OIL ANALYSIS REPORT



### FLUID DEGRADATION

|           | method   | limit/base  | current | history1    | history2 |
|-----------|----------|-------------|---------|-------------|----------|
| Oxidation | Abs./1mm | ASTM D7414* | >25     | <b>14.3</b> | 14.1     |

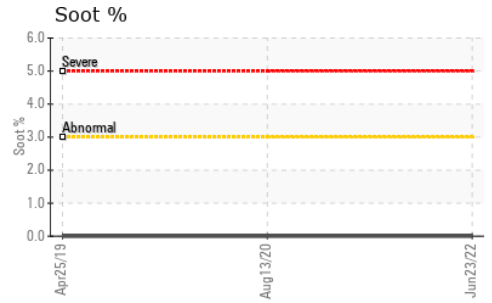
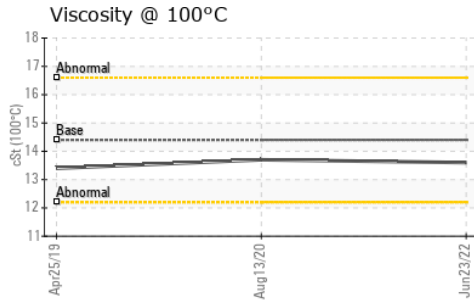
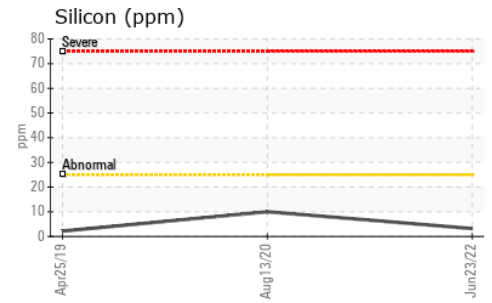
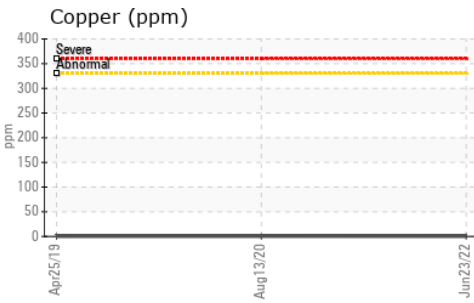
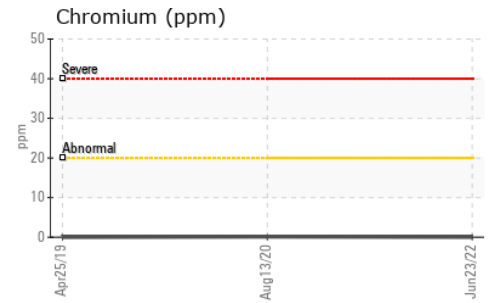
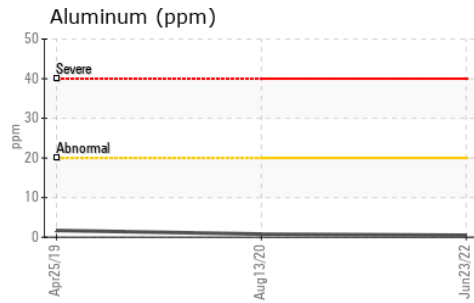
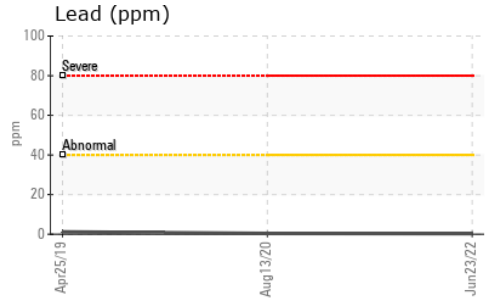
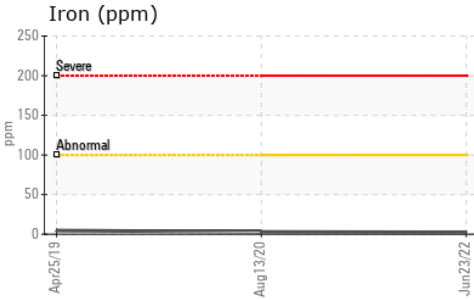
### VISUAL

|                  | method | limit/base | current | history1   | history2 |
|------------------|--------|------------|---------|------------|----------|
| Emulsified Water | scalar | Visual*    | >0.2    | <b>NEG</b> | NEG      |
| Free Water       | scalar | Visual*    |         | <b>NEG</b> | NEG      |

### FLUID PROPERTIES

|              | method | limit/base    | current | history1    | history2 |
|--------------|--------|---------------|---------|-------------|----------|
| Visc @ 100°C | cSt    | ASTM D7279(m) | 14.4    | <b>13.6</b> | 13.7     |

### GRAPHS



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : GD0005338  
**Lab Number** : 02500780  
**Unique Number** : 5425740  
**Test Package** : MOB 1  
**Received** : 20 Jul 2022  
**Tested** : 20 Jul 2022  
**Diagnosed** : 20 Jul 2022 - Wes Davis

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 T: (819)398-6811  
 F: (819)398-7022

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.