



# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**TICO 8248956**

Component  
**Diesel Engine**

Fluid  
**DIESEL ENGINE OIL SAE 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>WC0889849</b>   | ---      | ---      |
| Sample Date        | Client Info |             |            | <b>09 Feb 2024</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info |            | <b>1200</b>        | ---      | ---      |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | ---      | ---      |
| Oil Changed        | Client Info |             |            | <b>Changed</b>     | ---      | ---      |
| Sample Status      |             |             |            | <b>NORMAL</b>      | ---      | ---      |

| CONTAMINATION |           | method | limit/base | current        | history1 | history2 |
|---------------|-----------|--------|------------|----------------|----------|----------|
| Fuel          | WC Method | >5     |            | <b>&lt;1.0</b> | ---      | ---      |
| Water         | WC Method | >0.2   |            | <b>NEG</b>     | ---      | ---      |
| Glycol        | WC Method |        |            | <b>NEG</b>     | ---      | ---      |

| WEAR METALS |     | method        | limit/base | current      | history1 | history2 |
|-------------|-----|---------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185(m) | >100       | <b>27</b>    | ---      | ---      |
| Chromium    | ppm | ASTM D5185(m) | >20        | <b>&lt;1</b> | ---      | ---      |
| Nickel      | ppm | ASTM D5185(m) | >4         | <b>0</b>     | ---      | ---      |
| Titanium    | ppm | ASTM D5185(m) |            | <b>0</b>     | ---      | ---      |
| Silver      | ppm | ASTM D5185(m) | >3         | <b>0</b>     | ---      | ---      |
| Aluminum    | ppm | ASTM D5185(m) | >20        | <b>3</b>     | ---      | ---      |
| Lead        | ppm | ASTM D5185(m) | >40        | <b>0</b>     | ---      | ---      |
| Copper      | ppm | ASTM D5185(m) | >330       | <b>19</b>    | ---      | ---      |
| Tin         | ppm | ASTM D5185(m) | >15        | <b>0</b>     | ---      | ---      |
| Antimony    | ppm | ASTM D5185(m) |            | <b>0</b>     | ---      | ---      |
| Vanadium    | ppm | ASTM D5185(m) |            | <b>0</b>     | ---      | ---      |
| Beryllium   | ppm | ASTM D5185(m) |            | <b>0</b>     | ---      | ---      |
| Cadmium     | ppm | ASTM D5185(m) |            | <b>0</b>     | ---      | ---      |

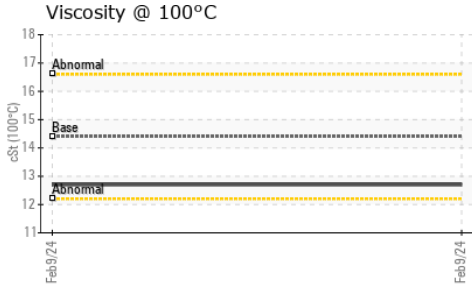
| ADDITIVES  |     | method        | limit/base | current      | history1 | history2 |
|------------|-----|---------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185(m) | 250        | <b>5</b>     | ---      | ---      |
| Barium     | ppm | ASTM D5185(m) | 10         | <b>1</b>     | ---      | ---      |
| Molybdenum | ppm | ASTM D5185(m) | 100        | <b>9</b>     | ---      | ---      |
| Manganese  | ppm | ASTM D5185(m) |            | <b>0</b>     | ---      | ---      |
| Magnesium  | ppm | ASTM D5185(m) | 450        | <b>33</b>    | ---      | ---      |
| Calcium    | ppm | ASTM D5185(m) | 3000       | <b>2204</b>  | ---      | ---      |
| Phosphorus | ppm | ASTM D5185(m) | 1150       | <b>830</b>   | ---      | ---      |
| Zinc       | ppm | ASTM D5185(m) | 1350       | <b>982</b>   | ---      | ---      |
| Sulfur     | ppm | ASTM D5185(m) | 4250       | <b>2856</b>  | ---      | ---      |
| Lithium    | ppm | ASTM D5185(m) |            | <b>&lt;1</b> | ---      | ---      |

| CONTAMINANTS |     | method        | limit/base | current  | history1 | history2 |
|--------------|-----|---------------|------------|----------|----------|----------|
| Silicon      | ppm | ASTM D5185(m) | >25        | <b>8</b> | ---      | ---      |
| Sodium       | ppm | ASTM D5185(m) | >158       | <b>2</b> | ---      | ---      |
| Potassium    | ppm | ASTM D5185(m) | >20        | <b>1</b> | ---      | ---      |

| INFRA-RED |          | method      | limit/base | current     | history1 | history2 |
|-----------|----------|-------------|------------|-------------|----------|----------|
| Soot %    | %        | ASTM D7844* | >3         | <b>0</b>    | ---      | ---      |
| Nitration | Abs/cm   | ASTM D7624* | >20        | <b>8.7</b>  | ---      | ---      |
| Sulfation | Abs./1mm | ASTM D7415* | >30        | <b>21.1</b> | ---      | ---      |



# OIL ANALYSIS REPORT



| FLUID DEGRADATION |  | method | limit/base | current | history1 | history2 |
|-------------------|--|--------|------------|---------|----------|----------|
|-------------------|--|--------|------------|---------|----------|----------|

|           |          |             |     |             |     |     |
|-----------|----------|-------------|-----|-------------|-----|-----|
| Oxidation | Abs./1mm | ASTM D7414* | >25 | <b>12.9</b> | --- | --- |
|-----------|----------|-------------|-----|-------------|-----|-----|

| VISUAL |  | method | limit/base | current | history1 | history2 |
|--------|--|--------|------------|---------|----------|----------|
|--------|--|--------|------------|---------|----------|----------|

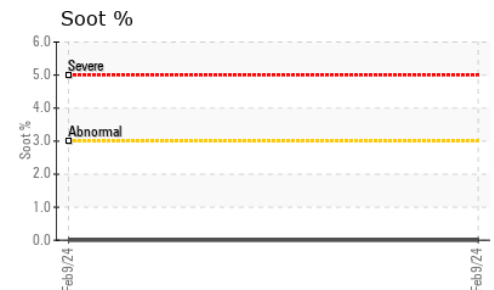
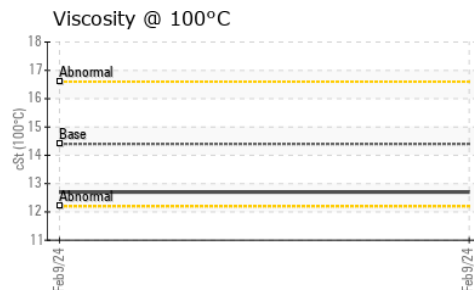
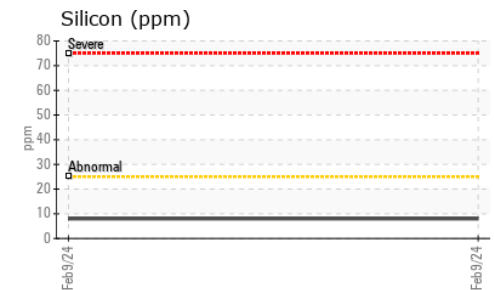
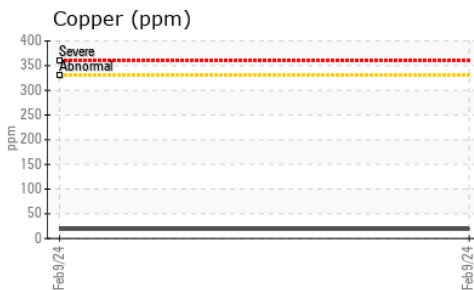
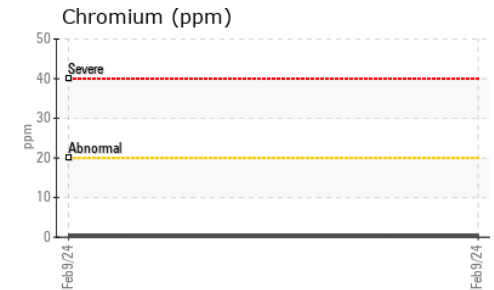
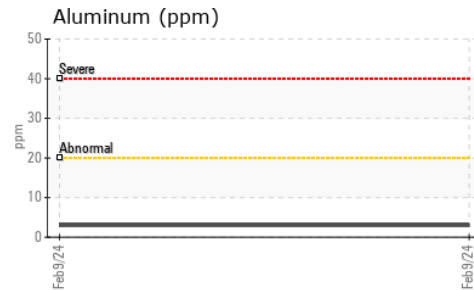
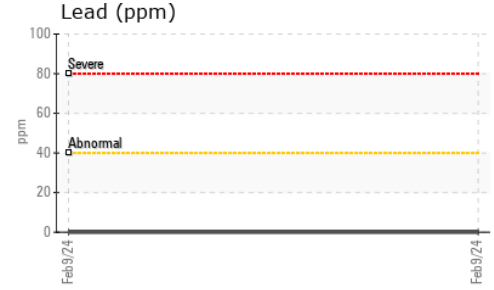
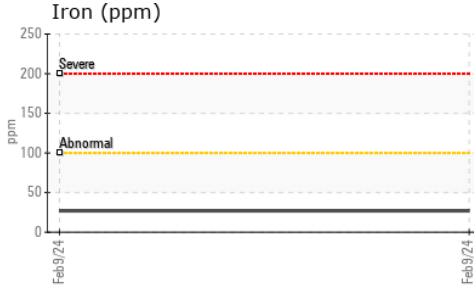
|                  |        |         |      |            |     |     |
|------------------|--------|---------|------|------------|-----|-----|
| Emulsified Water | scalar | Visual* | >0.2 | <b>NEG</b> | --- | --- |
|------------------|--------|---------|------|------------|-----|-----|

|            |        |         |  |            |     |     |
|------------|--------|---------|--|------------|-----|-----|
| Free Water | scalar | Visual* |  | <b>NEG</b> | --- | --- |
|------------|--------|---------|--|------------|-----|-----|

| FLUID PROPERTIES |  | method | limit/base | current | history1 | history2 |
|------------------|--|--------|------------|---------|----------|----------|
|------------------|--|--------|------------|---------|----------|----------|

|              |     |               |      |             |     |     |
|--------------|-----|---------------|------|-------------|-----|-----|
| Visc @ 100°C | cSt | ASTM D7279(m) | 14.4 | <b>12.7</b> | --- | --- |
|--------------|-----|---------------|------|-------------|-----|-----|

| GRAPHS |  |  |  |  |  |  |
|--------|--|--|--|--|--|--|
|--------|--|--|--|--|--|--|



**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
**Sample No.** : WC0889849      **Received** : 22 Mar 2024  
**Lab Number** : **02623921**      **Tested** : 22 Mar 2024  
**Unique Number** : 5749040      **Diagnosed** : 22 Mar 2024 - Wes Davis  
**Test Package** : MOB 1

**BRITANNIA FLEET SERVICES**  
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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.