



# OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



Machine Id  
**8913733**

Component  
**Diesel Engine**

Fluid  
**MOBIL 1 SAE 10W30 (--- GAL)**

## DIAGNOSIS

### ▲ Recommendation

We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### ▲ Fluid Condition

The BN level is low. The oil is no longer serviceable.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info |             | <b>IL0034907</b>   | ---      | ---      |
| Sample Date   | Client Info |             | <b>10 Jan 2024</b> | ---      | ---      |
| Machine Age   | mls         | Client Info | <b>140788</b>      | ---      | ---      |
| Oil Age       | mls         | Client Info | <b>40000</b>       | ---      | ---      |
| Oil Changed   | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status |             |             | <b>ABNORMAL</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 D5185m >100 | <b>81</b>    | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >20  | <b>3</b>     | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >4   | <b>&lt;1</b> | ---      | ---      |
| Titanium | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Silver   | ppm    | ASTM D5185m >3   | <b>&lt;1</b> | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >20  | <b>5</b>     | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >40  | <b>36</b>    | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >330 | <b>2</b>     | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >15  | <b>2</b>     | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |

## ADDITIVES

|            | method | limit/base  | current     | history1 | history2 |
|------------|--------|-------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>17</b>   | ---      | ---      |
| Barium     | ppm    | ASTM D5185m | <b>0</b>    | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m | <b>41</b>   | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m | <b>1</b>    | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m | <b>474</b>  | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m | <b>1578</b> | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m | <b>759</b>  | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m | <b>911</b>  | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m | <b>2285</b> | ---      | ---      |

## CONTAMINANTS

|           | method | limit/base      | current   | history1 | history2 |
|-----------|--------|-----------------|-----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25 | <b>20</b> | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m     | <b>3</b>  | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20 | <b>8</b>  | ---      | ---      |

## INFRA-RED

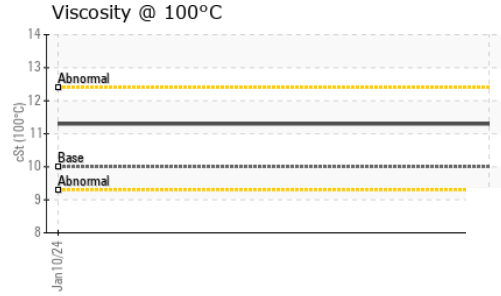
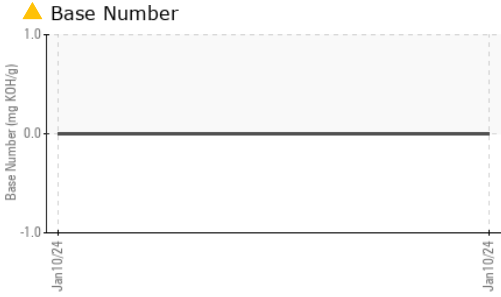
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >3  | <b>0.8</b>  | ---      | ---      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>16.9</b> | ---      | ---      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>38.3</b> | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base      | current      | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>56.2</b>  | ---      | ---      |
| Base Number (BN) | mg KOH/g | ASTM D2896      | <b>▲ 0.0</b> | ---      | ---      |



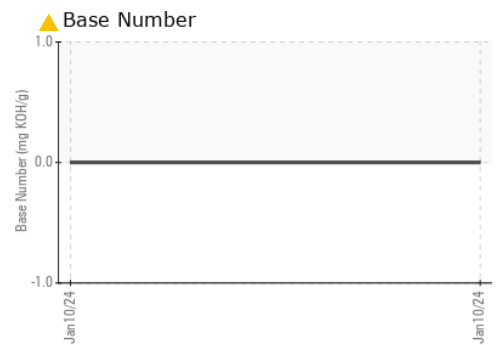
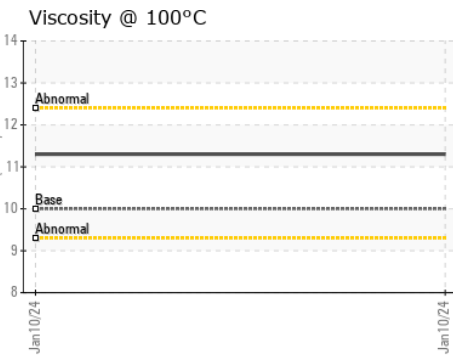
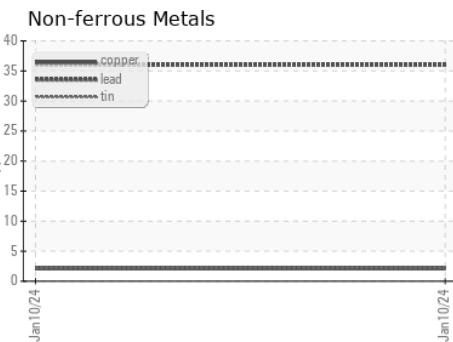
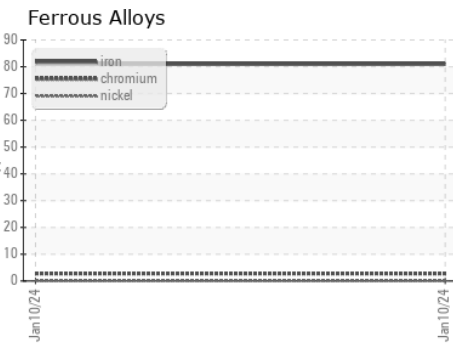
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |     |
|------------------|--------|------------|---------|----------|----------|-----|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      | --- |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      | --- |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      | --- |
| Emulsified Water | scalar | *Visual    | >0.2    | NEG      | ---      | --- |
| Free Water       | scalar | *Visual    |         | NEG      | ---      | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |     |
|------------------|--------|------------|---------|----------|----------|-----|
| Visc @ 100°C     | cSt    | ASTM D445  | 10      | 11.3     | ---      | --- |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0034907 **Recieved** : 17 Jan 2024  
**Lab Number** : 06063345 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10834727 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)