



# OIL ANALYSIS REPORT

|                 |        |
|-----------------|--------|
| WEAR            | NORMAL |
| CONTAMINATION   | NORMAL |
| FLUID CONDITION | NORMAL |

Machine Id  
**1733**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0870821</b>   | WC0821228   | WC0806515   |
| Sample Date    |     | Client Info |           | <b>27 Nov 2023</b> | 08 Jun 2023 | 04 May 2023 |
| Machine Age    | mls | Client Info |           | <b>64092</b>       | 54220       | 50789       |
| Oil Age        | mls | Client Info |           | <b>0</b>           | 0           | 0           |
| Filter Age     | mls | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Not Changd</b>  | N/A         | N/A         |
| Filter Changed |     | Client Info |           | <b>Not Changd</b>  | N/A         | N/A         |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

Metal levels are typical for a new component breaking in.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>16</b>    | 30   | 22   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 0    | <1   |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>8</b>     | 15   | 13   |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>6</b>     | 1    | <1   |
| Tin          | ppm    | ASTM D5185m | >15  | <b>&lt;1</b> | 0    | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | <1   |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

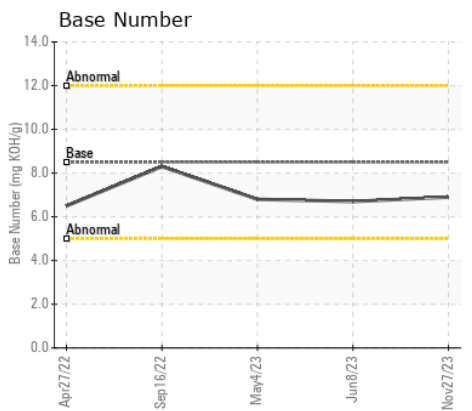
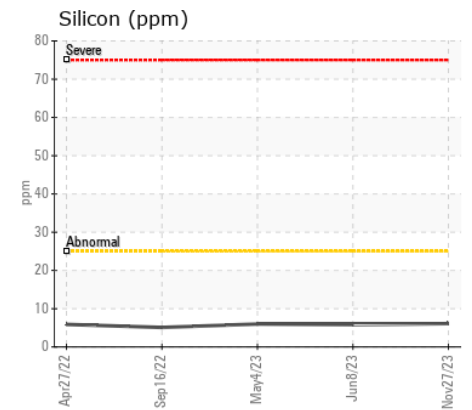
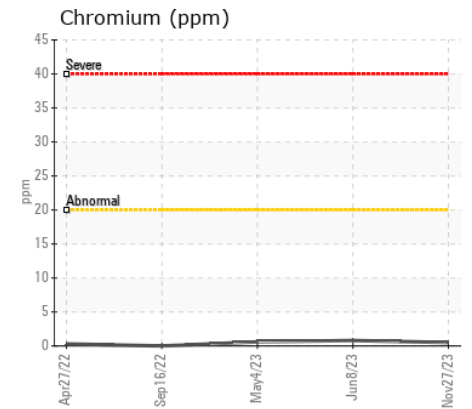
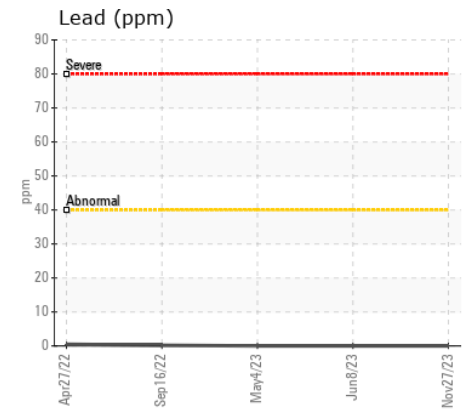
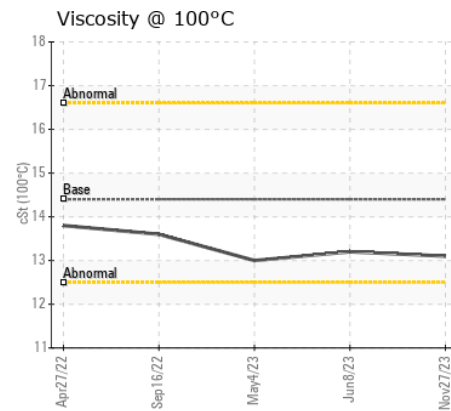
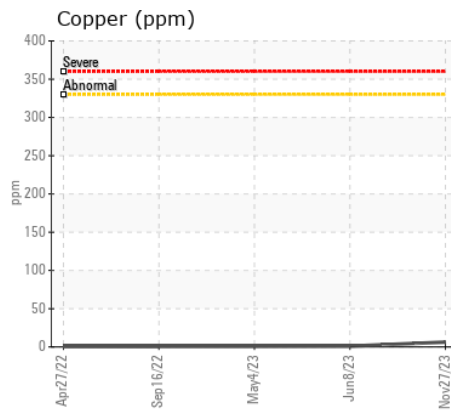
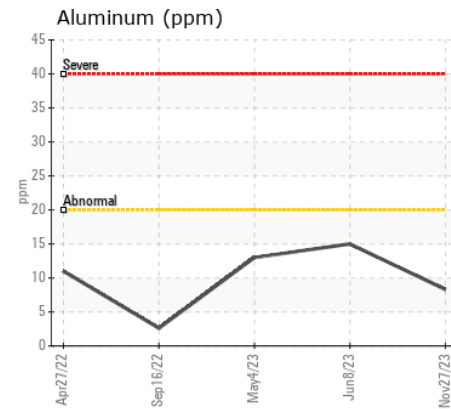
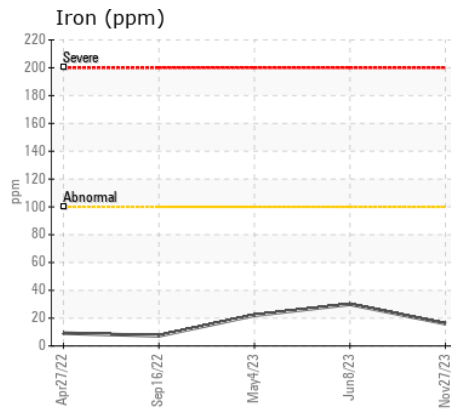
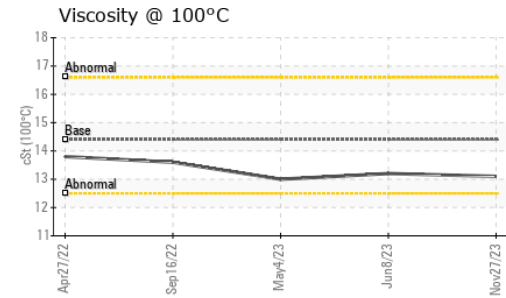
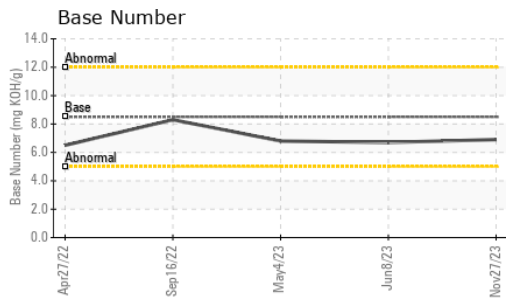
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>6</b>       | 6     | 6     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>10</b>      | 26    | 16    |
| 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   |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.3</b>     | 0.6   | 0.4   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.0</b>     | 11.1  | 9.7   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>18.5</b>    | 22.4  | 20.1  |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | NONE  | NONE  |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | NORML | NORML |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | NEG   | NEG   |

## FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |              |      |      |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m | >158 | <b>3</b>     | 11   | 3    |
| Boron            | ppm      | ASTM D5185m | 250  | <b>42</b>    | 24   | 31   |
| Barium           | ppm      | ASTM D5185m | 10   | <b>4</b>     | 0    | 2    |
| Molybdenum       | ppm      | ASTM D5185m | 100  | <b>77</b>    | 85   | 88   |
| Manganese        | ppm      | ASTM D5185m |      | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m | 450  | <b>163</b>   | 132  | 123  |
| Calcium          | ppm      | ASTM D5185m | 3000 | <b>1832</b>  | 2292 | 2224 |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>931</b>   | 1093 | 1114 |
| Zinc             | ppm      | ASTM D5185m | 1350 | <b>1114</b>  | 1357 | 1323 |
| Sulfur           | ppm      | ASTM D5185m | 4250 | <b>3512</b>  | 4611 | 3873 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>14.6</b>  | 18.3 | 16.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5  | <b>6.9</b>   | 6.7  | 6.8  |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | <b>13.1</b>  | 13.2 | 13.0 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0870821 **Received** : 12 Jan 2024  
**Lab Number** : 06059818 **Diagnosed** : 15 Jan 2024  
**Unique Number** : 10831200 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

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)

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