



# OIL ANALYSIS REPORT

|                 |               |
|-----------------|---------------|
| WEAR            | <b>NORMAL</b> |
| CONTAMINATION   | <b>NORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b> |

Machine Id  
**39**  
 Component  
**Diesel Engine**  
 Fluid  
**DURAMAX 10W30 (--- GAL)**

## 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>DC0030916</b>   | DC0033574   | DC0020768   |
| Sample Date    |     | Client Info |           | <b>17 May 2024</b> | 29 Mar 2024 | 31 May 2022 |
| Machine Age    | mls | Client Info |           | <b>525000</b>      | 277809      | 230280      |
| Oil Age        | mls | Client Info |           | <b>20000</b>       | 25000       | 30000       |
| Filter Age     | mls | Client Info |           | <b>20000</b>       | 25000       | 30000       |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>7</b>     | 15   | 17   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | <1   |
| Nickel       | ppm    | ASTM D5185m | >4   | <b>&lt;1</b> | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>1</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>4</b>     | 4    | 5    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>&lt;1</b> | <1   | <1   |
| Copper       | ppm    | ASTM D5185m | >330 | <b>2</b>     | 2    | 1    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>1</b>     | <1   | <1   |
| Vanadium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

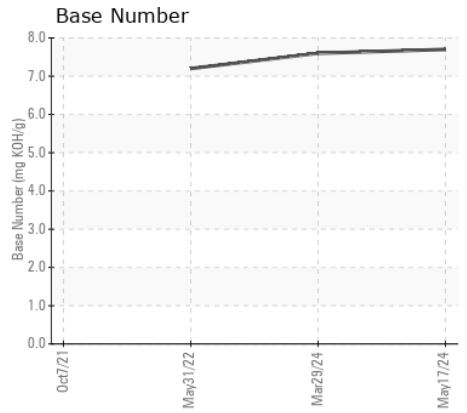
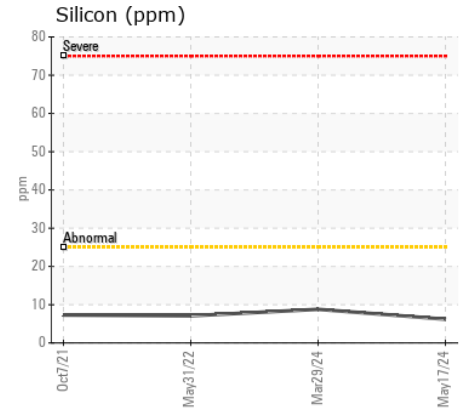
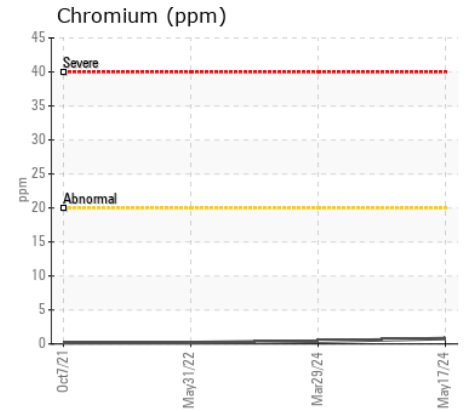
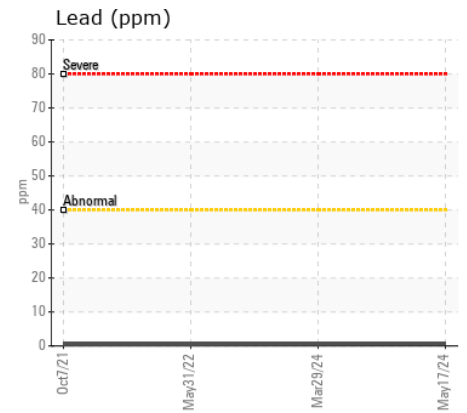
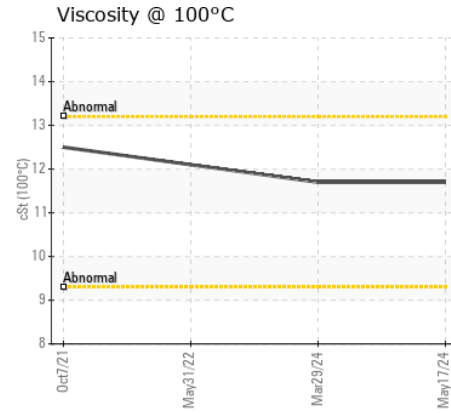
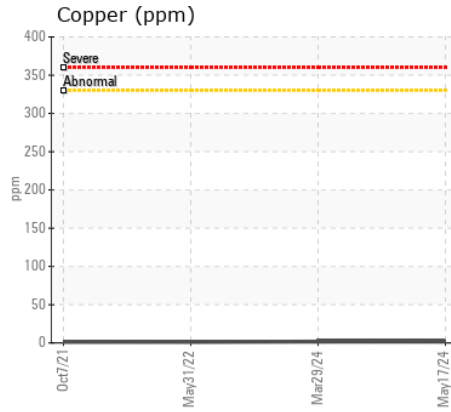
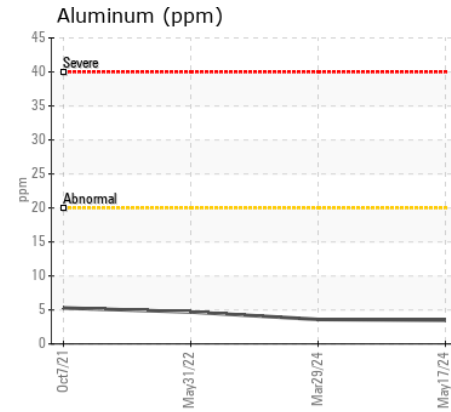
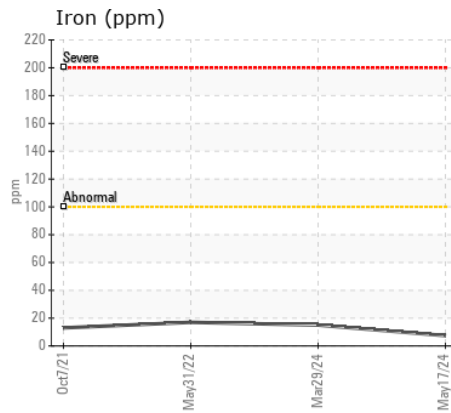
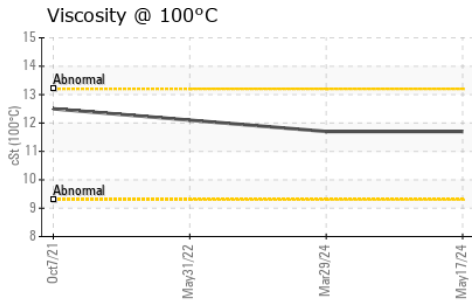
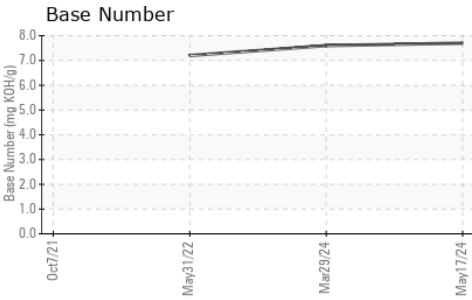
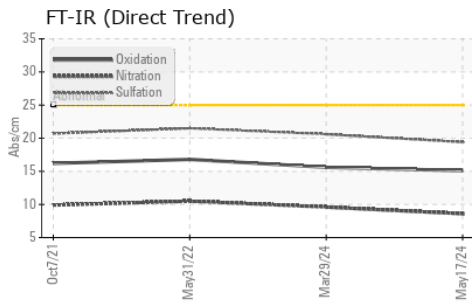
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>6</b>       | 9     | 7     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>4</b>       | 7     | 5     |
| 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   | 0.7   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>8.6</b>     | 9.6   | 10.5  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>19.4</b>    | 20.6  | 21.5  |
| 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 |     | <b>3</b>     | 0    | 1    |
| Boron            | ppm      | ASTM D5185m |     | <b>6</b>     | 2    | 4    |
| Barium           | ppm      | ASTM D5185m |     | <b>&lt;1</b> | 2    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |     | <b>58</b>    | 60   | 57   |
| Manganese        | ppm      | ASTM D5185m |     | <b>&lt;1</b> | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m |     | <b>837</b>   | 822  | 888  |
| Calcium          | ppm      | ASTM D5185m |     | <b>1240</b>  | 1245 | 1173 |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>1034</b>  | 1008 | 976  |
| Zinc             | ppm      | ASTM D5185m |     | <b>1189</b>  | 1136 | 1220 |
| Sulfur           | ppm      | ASTM D5185m |     | <b>3439</b>  | 3089 | 2942 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25 | <b>15.1</b>  | 15.6 | 16.8 |
| Base Number (BN) | mg KOH/g | ASTM D2896  |     | <b>7.7</b>   | 7.6  | 7.2  |
| Visc @ 100°C     | cSt      | ASTM D445   |     | <b>11.7</b>  | 11.7 | 12.1 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : DC0030916 **Received** : 28 May 2024  
**Lab Number** : 06191997 **Tested** : 29 May 2024  
**Unique Number** : 11048749 **Diagnosed** : 29 May 2024 - 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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