



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



Machine Id  
**CATERPILLAR 349F 40.025 (S/N BZ200744)**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|----------|----------|
| Sample Number  |     | Client Info |           | <b>JR0189330</b>   | ---      | ---      |
| Sample Date    |     | Client Info |           | <b>26 Jan 2024</b> | ---      | ---      |
| Machine Age    | hrs | Client Info |           | <b>5137</b>        | ---      | ---      |
| Oil Age        | hrs | Client Info |           | <b>500</b>         | ---      | ---      |
| Filter Age     | hrs | Client Info |           | <b>500</b>         | ---      | ---      |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | ---      | ---      |
| Sample Status  |     |             |           | <b>NORMAL</b>      | ---      | ---      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |     |     |
|--------------|--------|-------------|------|--------------|-----|-----|
| Iron         | ppm    | ASTM D5185m | >100 | <b>31</b>    | --- | --- |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | --- | --- |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | --- | --- |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | --- | --- |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | --- | --- |
| Aluminum     | ppm    | ASTM D5185m | >25  | <b>1</b>     | --- | --- |
| Lead         | ppm    | ASTM D5185m | >40  | <b>&lt;1</b> | --- | --- |
| Copper       | ppm    | ASTM D5185m | >330 | <b>6</b>     | --- | --- |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>     | --- | --- |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | --- | --- |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | --- | --- |

### CONTAMINATION

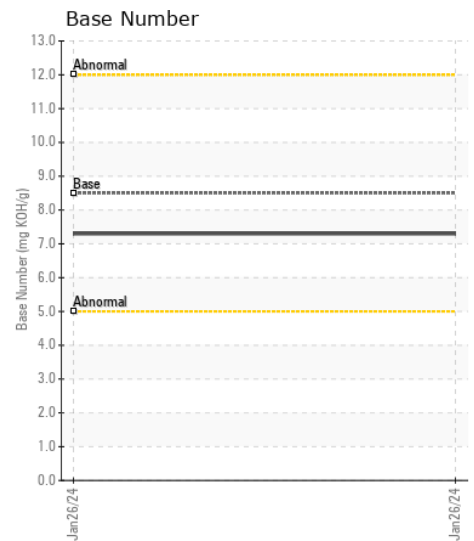
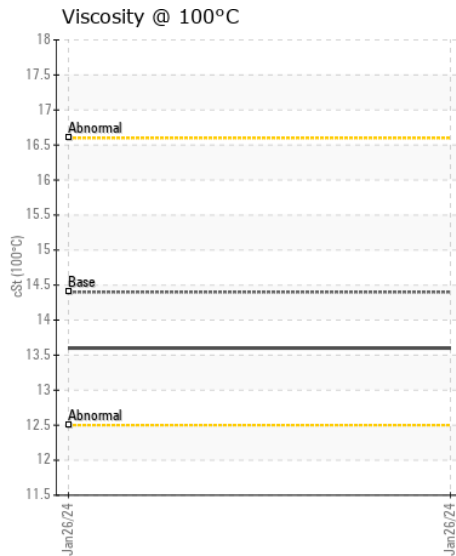
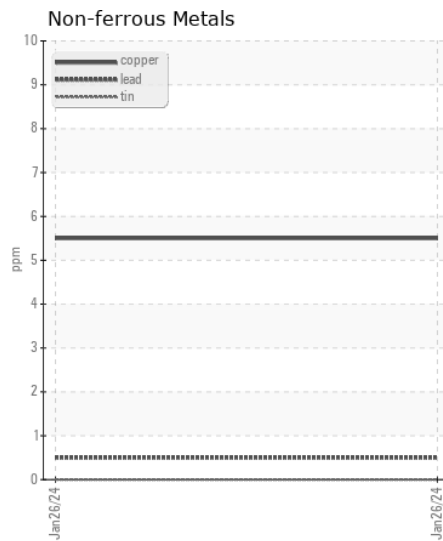
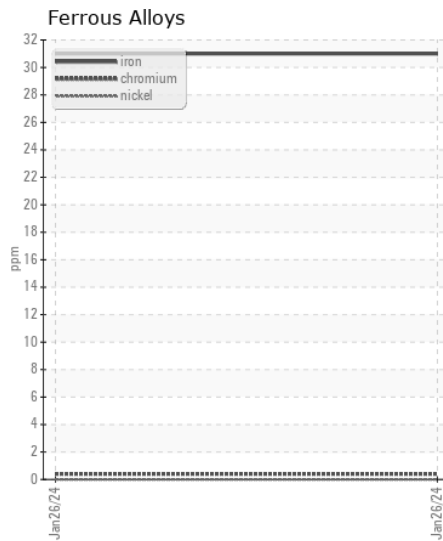
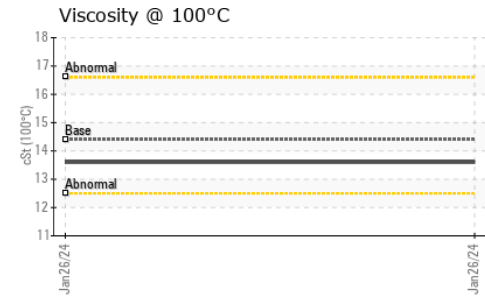
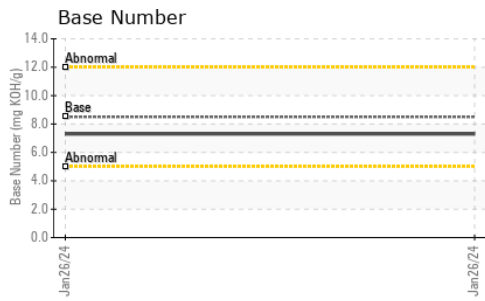
There is no indication of any contamination in the oil.

|                  |          |             |       |                |     |     |
|------------------|----------|-------------|-------|----------------|-----|-----|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>6</b>       | --- | --- |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>5</b>       | --- | --- |
| Fuel             |          | WC Method   | >5    | <b>&lt;1.0</b> | --- | --- |
| Water            |          | WC Method   | >0.2  | <b>NEG</b>     | --- | --- |
| Glycol           |          | WC Method   |       | <b>NEG</b>     | --- | --- |
| Soot %           | %        | *ASTM D7844 | >3    | <b>0.6</b>     | --- | --- |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>12.8</b>    | --- | --- |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>25.4</b>    | --- | --- |
| Silt             | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Debris           | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Sand/Dirt        | scalar   | *Visual     | NONE  | <b>NONE</b>    | --- | --- |
| Appearance       | scalar   | *Visual     | NORML | <b>NORML</b>   | --- | --- |
| Odor             | scalar   | *Visual     | NORML | <b>NORML</b>   | --- | --- |
| Emulsified Water | scalar   | *Visual     | >0.2  | <b>NEG</b>     | --- | --- |

### 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 | >216 | <b>19</b>   | --- | --- |
| Boron            | ppm      | ASTM D5185m | 250  | <b>32</b>   | --- | --- |
| Barium           | ppm      | ASTM D5185m | 10   | <b>0</b>    | --- | --- |
| Molybdenum       | ppm      | ASTM D5185m | 100  | <b>42</b>   | --- | --- |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>    | --- | --- |
| Magnesium        | ppm      | ASTM D5185m | 450  | <b>426</b>  | --- | --- |
| Calcium          | ppm      | ASTM D5185m | 3000 | <b>1780</b> | --- | --- |
| Phosphorus       | ppm      | ASTM D5185m | 1150 | <b>920</b>  | --- | --- |
| Zinc             | ppm      | ASTM D5185m | 1350 | <b>1187</b> | --- | --- |
| Sulfur           | ppm      | ASTM D5185m | 4250 | <b>2902</b> | --- | --- |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>25.4</b> | --- | --- |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 8.5  | <b>7.3</b>  | --- | --- |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | <b>13.6</b> | --- | --- |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0189330 **Received** : 13 Feb 2024  
**Lab Number** : 06087125 **Tested** : 14 Feb 2024  
**Unique Number** : 10874570 **Diagnosed** : 14 Feb 2024 - Don Baldrige  
**Test Package** : CONST ( 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)

**CAROLINA CIVIL**  
 6213 OAK RIDGE RD  
 CLOVER, SC  
 US 29710  
 Contact: ROY TAYLOR  
 roy.taylor@carolinacivil.net  
 T: (803)818-7309  
 F: