



# WEAR CHECK

## OIL ANALYSIS REPORT

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

Machine Id  
**29247**  
Component  
**Diesel Engine**  
Fluid  
**EXXON 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>WC0939062</b>   | WC0829724   | WC0829449   |
| Sample Date    |     | Client Info |           | <b>02 Jul 2024</b> | 11 Dec 2023 | 01 Oct 2023 |
| Machine Age    | mls | Client Info |           | <b>395864</b>      | 324938      | 300972      |
| Oil Age        | mls | Client Info |           | <b>0</b>           | 324938      | 0           |
| Filter Age     | mls | Client Info |           | <b>0</b>           | 324938      | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | N/A         | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | N/A         | Changed     |
| Sample Status  |     |             |           | <b>NORMAL</b>      | NORMAL      | NORMAL      |

### WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >100 | <b>23</b>    | 10   | 14   |
| 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>&lt;1</b> | 0    | 0    |
| Silver       | ppm    | ASTM D5185m | >3   | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>5</b>     | 2    | 2    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>0</b>     | 0    | 0    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>2</b>     | 2    | 4    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>0</b>     | 0    | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 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.

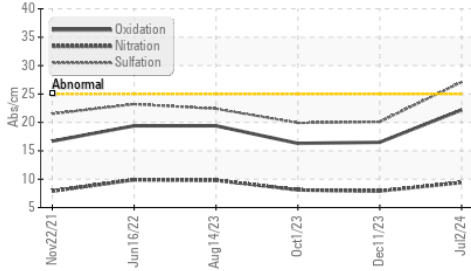
|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>8</b>       | 5     | 5     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>5</b>       | 2     | 2     |
| 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>0.8</b>     | 0.4   | 0.4   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>9.4</b>     | 7.9   | 8.1   |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>27.1</b>    | 20.1  | 19.9  |
| 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

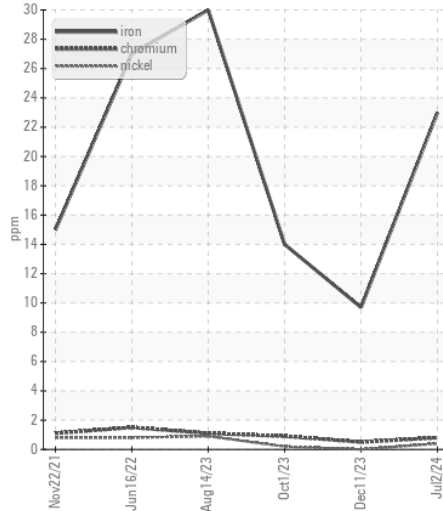
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

|                  |          |             |      |             |      |      |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium           | ppm      | ASTM D5185m |      | <b>2</b>    | 1    | <1   |
| Boron            | ppm      | ASTM D5185m |      | <b>57</b>   | <1   | 4    |
| Barium           | ppm      | ASTM D5185m |      | <b>0</b>    | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m |      | <b>99</b>   | 58   | 60   |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>    | 0    | <1   |
| Magnesium        | ppm      | ASTM D5185m |      | <b>468</b>  | 972  | 978  |
| Calcium          | ppm      | ASTM D5185m |      | <b>1428</b> | 1128 | 1153 |
| Phosphorus       | ppm      | ASTM D5185m |      | <b>959</b>  | 971  | 1030 |
| Zinc             | ppm      | ASTM D5185m |      | <b>1249</b> | 1240 | 1293 |
| Sulfur           | ppm      | ASTM D5185m |      | <b>2685</b> | 2714 | 2911 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>22.2</b> | 16.5 | 16.3 |
| Base Number (BN) | mg KOH/g | ASTM D2896  |      | <b>4.8</b>  | 9.0  | 8.3  |
| Visc @ 100°C     | cSt      | ASTM D445   | 14.4 | <b>13.2</b> | 12.7 | 12.7 |

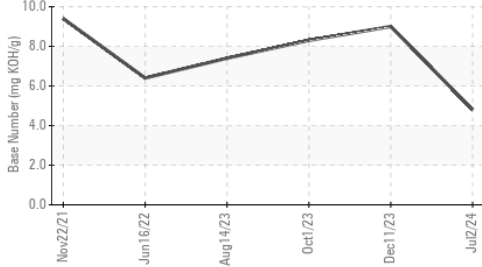
**FT-IR (Direct Trend)**



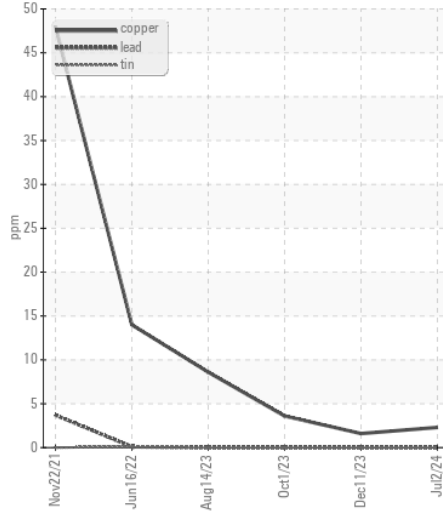
**Ferrous Alloys**



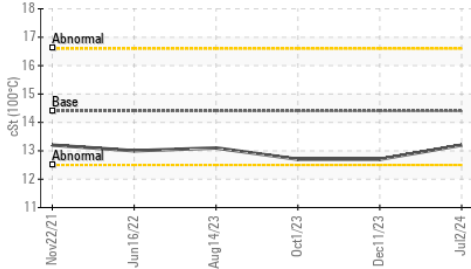
**Base Number**



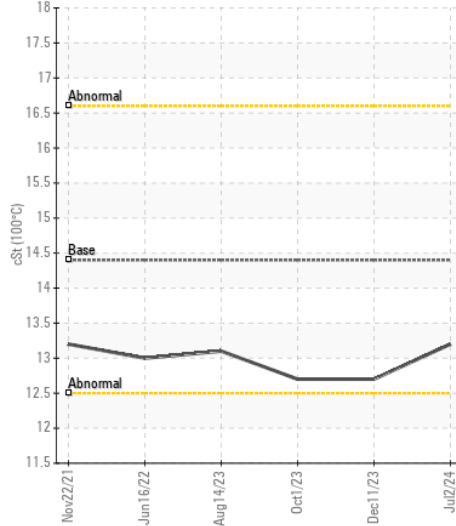
**Non-ferrous Metals**



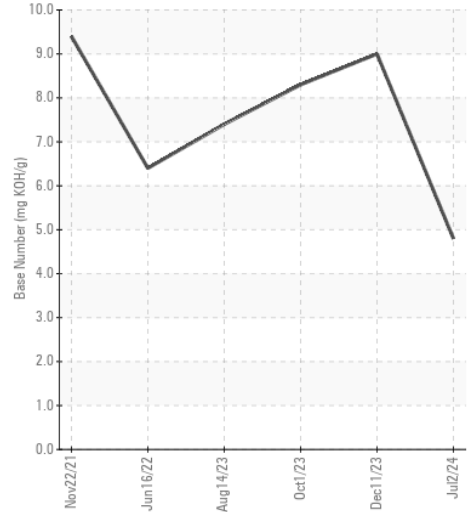
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0939062  
**Lab Number** : 06241255  
**Unique Number** : 11130089  
**Test Package** : FLEET

**Received** : 18 Jul 2024  
**Tested** : 19 Jul 2024  
**Diagnosed** : 19 Jul 2024 - Wes Davis

**SALEM NATIONALEASE CORPORATION**  
 198 PARK PLAZA DRIVE  
 WINSTON SALEM, NC  
 US 27105

Contact: Audrey Hopkins  
 Audrey.Hopkins@salemcorp.com  
 T: (336)767-9642

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)

F: x: