



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

Machine Id  
**INTERNATIONAL 112776**  
Component  
**Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>IL0032957</b>   | IL0032753   | IL0027495   |
| Sample Date    |     | Client Info |           | <b>06 Feb 2024</b> | 19 Oct 2023 | 22 Jun 2023 |
| Machine Age    | mls | Client Info |           | <b>341189</b>      | 309882      | 275282      |
| Oil Age        | mls | Client Info |           | <b>31307</b>       | 34600       | 42418       |
| Filter Age     | mls | Client Info |           | <b>31307</b>       | 34600       | 42418       |
| 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 | >90  | <b>24</b>    | 29   | 30   |
| Chromium     | ppm    | ASTM D5185m | >20  | <b>&lt;1</b> | <1   | 1    |
| Nickel       | ppm    | ASTM D5185m | >2   | <b>0</b>     | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m | >2   | <b>&lt;1</b> | <1   | <1   |
| Silver       | ppm    | ASTM D5185m | >2   | <b>0</b>     | <1   | 0    |
| Aluminum     | ppm    | ASTM D5185m | >20  | <b>2</b>     | 3    | 2    |
| Lead         | ppm    | ASTM D5185m | >40  | <b>2</b>     | 4    | 6    |
| Copper       | ppm    | ASTM D5185m | >330 | <b>1</b>     | 1    | 1    |
| Tin          | ppm    | ASTM D5185m | >15  | <b>&lt;1</b> | 1    | <1   |
| 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

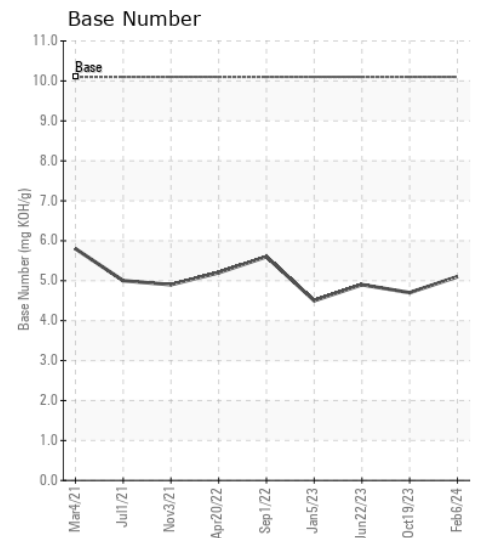
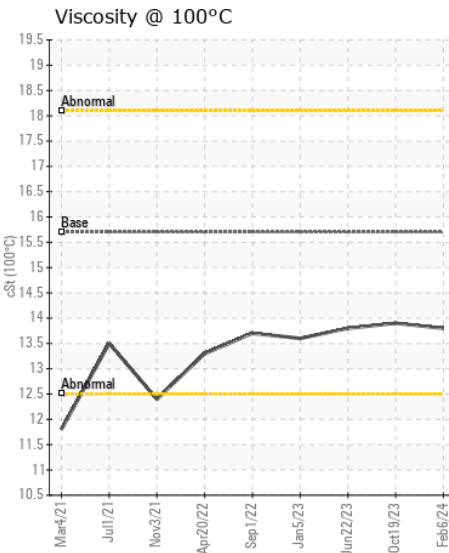
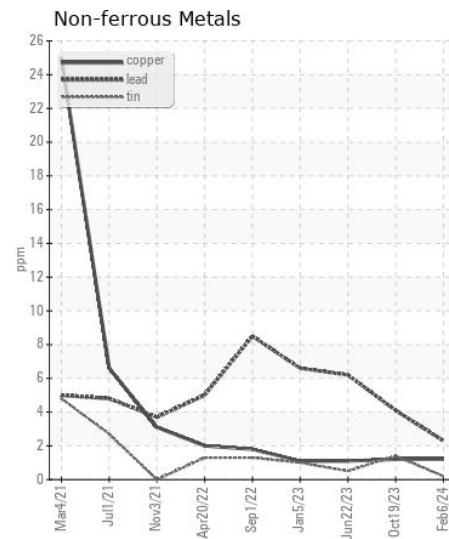
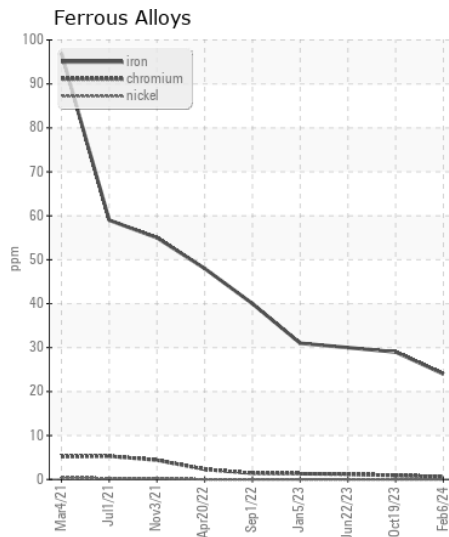
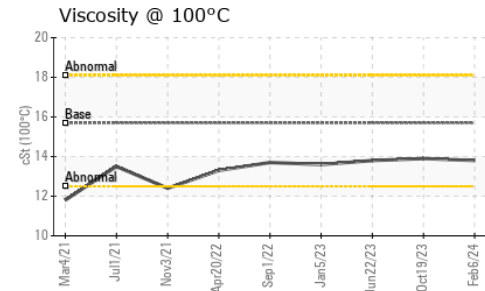
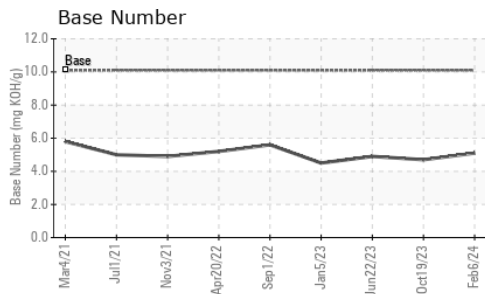
There is no indication of any contamination in the oil.

|                  |          |             |       |                |       |       |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon          | ppm      | ASTM D5185m | >25   | <b>6</b>       | 5     | 5     |
| Potassium        | ppm      | ASTM D5185m | >20   | <b>9</b>       | 12    | 5     |
| Fuel             |          | WC Method   | >3.0  | <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 | >6    | <b>0.7</b>     | 0.7   | 0.9   |
| Nitration        | Abs/cm   | *ASTM D7624 | >20   | <b>11.0</b>    | 11.1  | 12.4  |
| Sulfation        | Abs/.1mm | *ASTM D7415 | >30   | <b>27.1</b>    | 27.0  | 28.1  |
| 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 |      | <b>&lt;1</b> | 6    | 2    |
| Boron            | ppm      | ASTM D5185m | 316  | <b>45</b>    | 38   | 33   |
| Barium           | ppm      | ASTM D5185m | 0.0  | <b>0</b>     | 20   | 11   |
| Molybdenum       | ppm      | ASTM D5185m | 1.2  | <b>35</b>    | 29   | 63   |
| Manganese        | ppm      | ASTM D5185m |      | <b>0</b>     | <1   | <1   |
| Magnesium        | ppm      | ASTM D5185m | 24   | <b>321</b>   | 211  | 42   |
| Calcium          | ppm      | ASTM D5185m | 2292 | <b>1886</b>  | 1879 | 1781 |
| Phosphorus       | ppm      | ASTM D5185m | 1064 | <b>989</b>   | 962  | 774  |
| Zinc             | ppm      | ASTM D5185m | 1160 | <b>1238</b>  | 1157 | 985  |
| Sulfur           | ppm      | ASTM D5185m | 4996 | <b>3097</b>  | 3804 | 3137 |
| Oxidation        | Abs/.1mm | *ASTM D7414 | >25  | <b>23.9</b>  | 23.2 | 24.0 |
| Base Number (BN) | mg KOH/g | ASTM D2896  | 10.1 | <b>5.1</b>   | 4.7  | 4.9  |
| Visc @ 100°C     | cSt      | ASTM D445   | 15.7 | <b>13.8</b>  | 13.9 | 13.8 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : IL0032957  
**Lab Number** : 06087018  
**Unique Number** : 10874463  
**Test Package** : FLEET

**Received** : 13 Feb 2024  
**Tested** : 14 Feb 2024  
**Diagnosed** : 14 Feb 2024 - Wes Davis

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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)