



# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id

**1206**

Component

**Diesel Engine**

Fluid

**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

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

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1 | history2 |
|---------------|-------------|-------------|--------------------|----------|----------|
| Sample Number | Client Info |             | <b>WC0897914</b>   | ---      | ---      |
| Sample Date   | Client Info |             | <b>09 Apr 2024</b> | ---      | ---      |
| Machine Age   | mls         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Age       | mls         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed   | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status |             |             | <b>NORMAL</b>      | ---      | ---      |

## CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >5         | <b>&lt;1.0</b> | ---      | ---      |
| Water  | WC Method | >0.2       | <b>NEG</b>     | ---      | ---      |
| Glycol | WC Method |            | <b>NEG</b>     | ---      | ---      |

## WEAR METALS

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >100 | <b>11</b>    | ---      | ---      |
| Chromium | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | ---      | ---      |
| Nickel   | ppm    | ASTM D5185m >4   | <b>0</b>     | ---      | ---      |
| Titanium | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Silver   | ppm    | ASTM D5185m >3   | <b>0</b>     | ---      | ---      |
| Aluminum | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | ---      | ---      |
| Lead     | ppm    | ASTM D5185m >40  | <b>0</b>     | ---      | ---      |
| Copper   | ppm    | ASTM D5185m >330 | <b>0</b>     | ---      | ---      |
| Tin      | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | ---      | ---      |
| Vanadium | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |

## ADDITIVES

|            | method | limit/base       | current     | history1 | history2 |
|------------|--------|------------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 250  | <b>1</b>    | ---      | ---      |
| Barium     | ppm    | ASTM D5185m 10   | <b>0</b>    | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m 100  | <b>56</b>   | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m      | <b>0</b>    | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m 450  | <b>890</b>  | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m 3000 | <b>1057</b> | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m 1150 | <b>1002</b> | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m 1350 | <b>1184</b> | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m 4250 | <b>3254</b> | ---      | ---      |

## CONTAMINANTS

|           | method | limit/base       | current      | history1 | history2 |
|-----------|--------|------------------|--------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25  | <b>14</b>    | ---      | ---      |
| Sodium    | ppm    | ASTM D5185m >158 | <b>0</b>     | ---      | ---      |
| Potassium | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | ---      | ---      |

## INFRA-RED

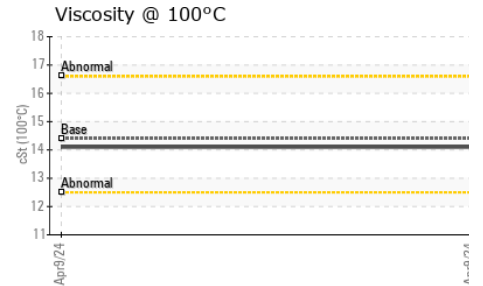
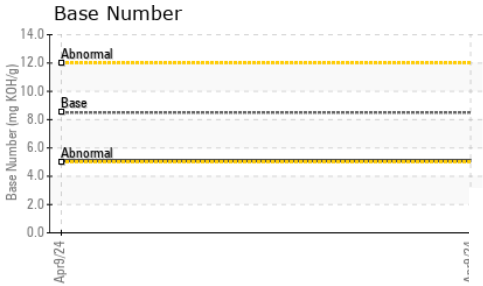
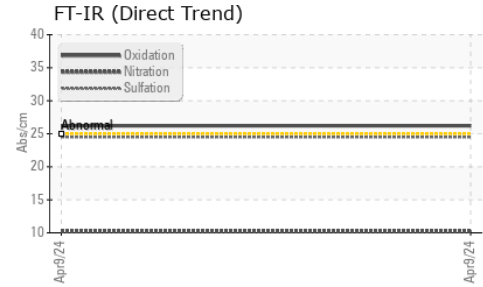
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >3  | <b>0.5</b>  | ---      | ---      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>10.2</b> | ---      | ---      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>24.5</b> | ---      | ---      |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>26.2</b> | ---      | ---      |
| Base Number (BN) | mg KOH/g | ASTM D2896 8.5  | <b>5.1</b>  | ---      | ---      |



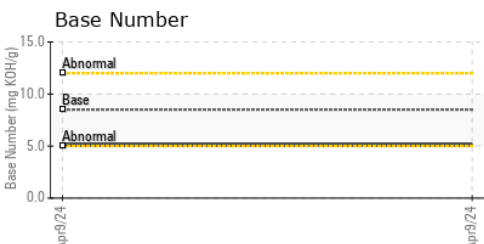
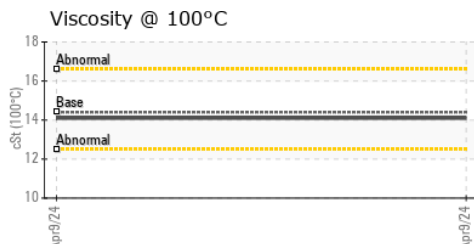
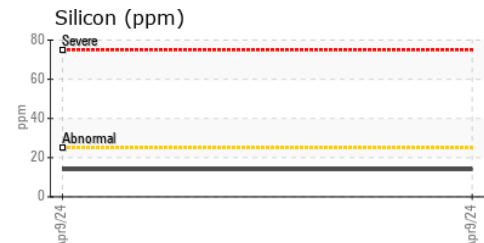
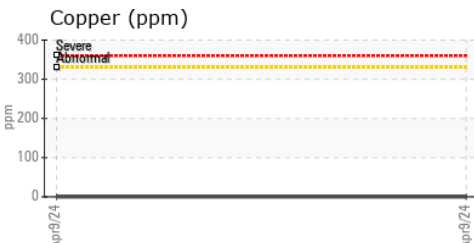
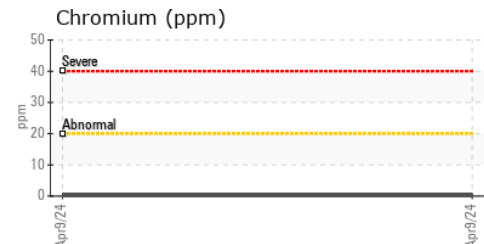
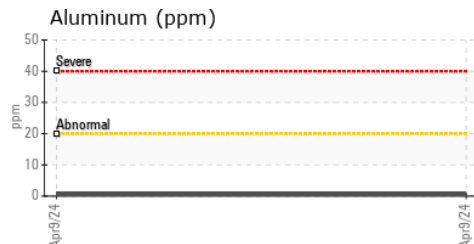
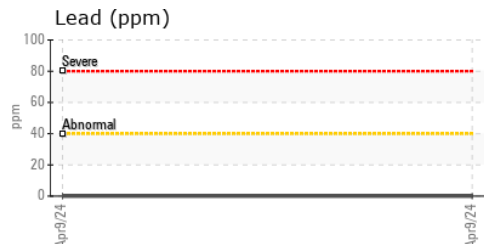
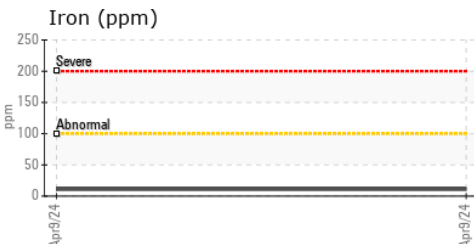
# OIL ANALYSIS REPORT



| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| Precipitate      | scalar | *Visual    | NONE    | NONE     | ---      |
| Silt             | scalar | *Visual    | NONE    | NONE     | ---      |
| Debris           | scalar | *Visual    | NONE    | NONE     | ---      |
| Sand/Dirt        | scalar | *Visual    | NONE    | NONE     | ---      |
| Appearance       | scalar | *Visual    | NORML   | NORML    | ---      |
| Odor             | scalar | *Visual    | NORML   | NORML    | ---      |
| Emulsified Water | scalar | *Visual    | >0.2    | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D445  | 14.4    | 14.1     | ---      |

### GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0897914      **Received** : 17 Apr 2024  
**Lab Number** : **06151527**      **Tested** : 18 Apr 2024  
**Unique Number** : 10981605      **Diagnosed** : 19 Apr 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**GO DURHAM - RAPT**  
 1903 FAYETTEVILLE ST  
 DURHAM, NC  
 US 27701

Contact: Robert Iosiniecki  
Robert.iosiniecki@ratpdev.com

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)

T:  
F: