

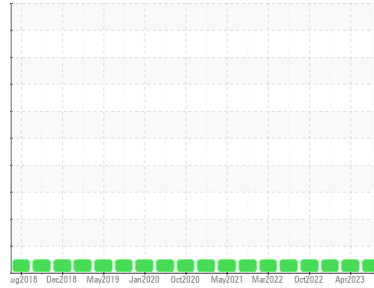


# OIL ANALYSIS REPORT



Area  
**OKLAHOMA/102/EG - LOADER**  
 Machine Id  
**45.42L [OKLAHOMA^102^EG - LOADER]**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL DELVAC 1300 SUPER15W40 (--- GAL)**

Sample Rating Trend



**NORMAL**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: 6241 hrs )

### 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 suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>WC0819984</b>   | WC0800913   | WC0758640   |
| Sample Date   | Client Info |             | <b>22 Sep 2023</b> | 14 Apr 2023 | 05 Feb 2023 |
| Machine Age   | hrs         | Client Info | <b>6241</b>        | 5748        | 5748        |
| Oil Age       | hrs         | Client Info | <b>5748</b>        | 5748        | 393         |
| Oil Changed   | Client Info |             | <b>N/A</b>         | N/A         | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

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

## WEAR METALS

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >100 | <b>8</b>     | 6        | 8        |
| Chromium | ppm    | ASTM D5185m >20  | <b>&lt;1</b> | 0        | <1       |
| Nickel   | ppm    | ASTM D5185m >2   | <b>0</b>     | 0        | 0        |
| Titanium | ppm    | ASTM D5185m >2   | <b>0</b>     | 0        | 0        |
| Silver   | ppm    | ASTM D5185m >2   | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >25  | <b>5</b>     | 6        | 6        |
| Lead     | ppm    | ASTM D5185m >40  | <b>&lt;1</b> | 0        | <1       |
| Copper   | ppm    | ASTM D5185m >330 | <b>&lt;1</b> | 0        | <1       |
| Tin      | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | 0        | <1       |
| Vanadium | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m      | <b>0</b>     | 0        | 0        |

## ADDITIVES

|            | method | limit/base    | current      | history1 | history2 |
|------------|--------|---------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m 0 | <b>53</b>    | 51       | 51       |
| Barium     | ppm    | ASTM D5185m 0 | <b>0</b>     | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m 0 | <b>42</b>    | 36       | 41       |
| Manganese  | ppm    | ASTM D5185m   | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m 0 | <b>509</b>   | 444      | 534      |
| Calcium    | ppm    | ASTM D5185m   | <b>1669</b>  | 1483     | 1754     |
| Phosphorus | ppm    | ASTM D5185m   | <b>738</b>   | 657      | 761      |
| Zinc       | ppm    | ASTM D5185m   | <b>906</b>   | 801      | 987      |
| Sulfur     | ppm    | ASTM D5185m   | <b>2586</b>  | 2453     | 3133     |

## CONTAMINANTS

|           | method | limit/base      | current  | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >25 | <b>4</b> | 3        | 3        |
| Sodium    | ppm    | ASTM D5185m     | <b>2</b> | <1       | 2        |
| Potassium | ppm    | ASTM D5185m >20 | <b>0</b> | <1       | 1        |

## INFRA-RED

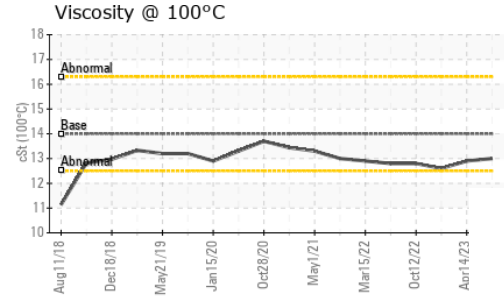
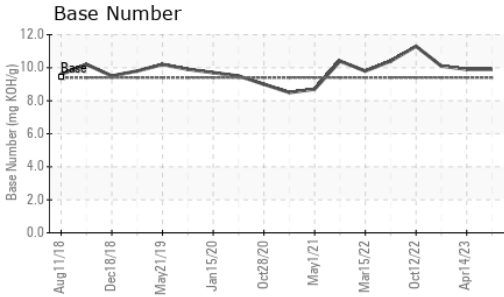
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >3  | <b>0.3</b>  | 0.2      | 0.2      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>6.8</b>  | 6.3      | 7.2      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>21.7</b> | 21.7     | 21.7     |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>20.3</b> | 20.1     | 20.3     |
| Base Number (BN) | mg KOH/g | ASTM D2896 9.4  | <b>9.9</b>  | 9.9      | 10.1     |



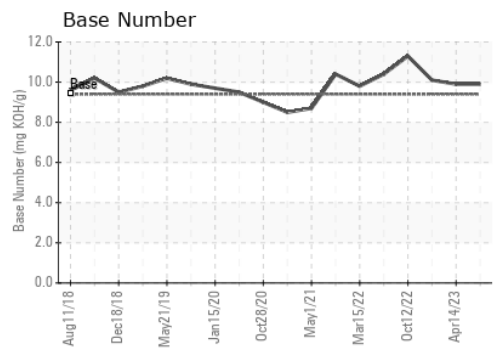
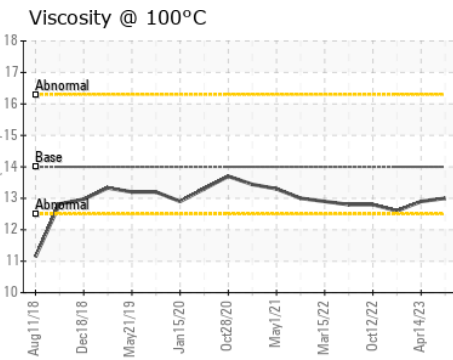
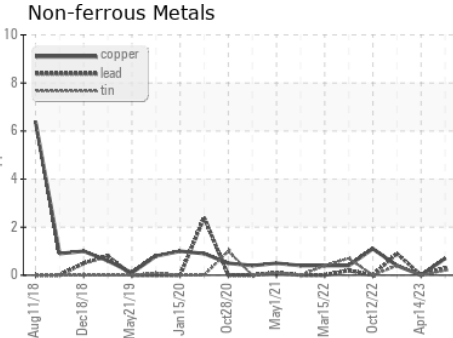
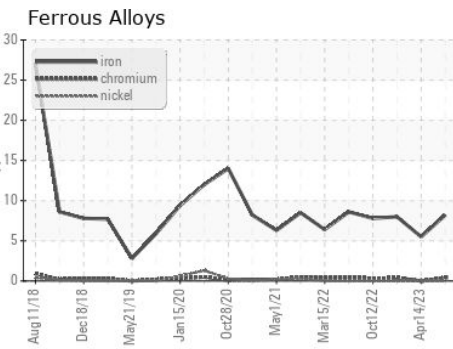
# OIL ANALYSIS REPORT



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

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |      |
|------------------|--------|------------|---------|-------------|----------|------|
| Visc @ 100°C     | cSt    | ASTM D445  | 14      | <b>13.0</b> | 12.9     | 12.6 |

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0819984 **Received** : 02 Oct 2023  
**Lab Number** : **05966968** **Diagnosed** : 04 Oct 2023  
**Unique Number** : 10673519 **Diagnostician** : Jonathan Hester  
**Test Package** : CONST ( Additional Tests: TBN )

**SHERWOOD CONSTRUCTION CO INC**  
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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)