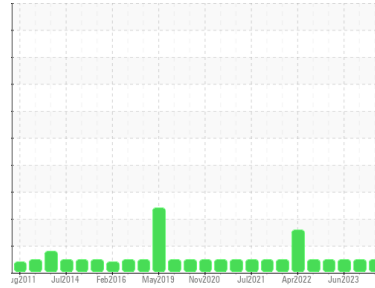




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area  
**OKLAHOMA/102/EG - OTHER SERVICE**  
 Machine Id  
**54.09L [OKLAHOMA^102^EG - OTHER SERVICE]**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL DELVAC 1300 SUPER15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. ( Customer Sample Comment: 1454 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>WC0864353</b>   | WC0778263   | WC0807956   |
| Sample Date   | Client Info |             | <b>17 Jan 2024</b> | 25 Sep 2023 | 02 Jun 2023 |
| Machine Age   | hrs         | Client Info | <b>10997</b>       | 1785        | 1639        |
| Oil Age       | hrs         | Client Info | <b>10997</b>       | 138         | 102         |
| Oil Changed   | Client Info |             | <b>N/A</b>         | Changed     | Changed     |
| Sample Status |             |             | <b>NORMAL</b>      | NORMAL      | NORMAL      |

## CONTAMINATION

|        | method    | limit/base | current        | history1 | history2 |
|--------|-----------|------------|----------------|----------|----------|
| Fuel   | WC Method | >2.1       | <b>&lt;1.0</b> | <1.0     | <1.0     |
| Water  | WC Method | >0.21      | <b>NEG</b>     | NEG      | NEG      |
| Glycol | WC Method |            | <b>NEG</b>     | NEG      | NEG      |

## WEAR METALS

|          | method | limit/base      | current      | history1 | history2 |
|----------|--------|-----------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >51 | <b>4</b>     | 13       | 15       |
| Chromium | ppm    | ASTM D5185m >11 | <b>0</b>     | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m >5  | <b>0</b>     | <1       | 0        |
| Titanium | ppm    | ASTM D5185m     | <b>&lt;1</b> | <1       | <1       |
| Silver   | ppm    | ASTM D5185m >3  | <b>0</b>     | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >31 | <b>&lt;1</b> | 3        | 4        |
| Lead     | ppm    | ASTM D5185m >26 | <b>0</b>     | 3        | 3        |
| Copper   | ppm    | ASTM D5185m >26 | <b>&lt;1</b> | <1       | <1       |
| Tin      | ppm    | ASTM D5185m >4  | <b>0</b>     | <1       | <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>72</b>   | 60       | 51       |
| Barium     | ppm    | ASTM D5185m 0 | <b>0</b>    | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m 0 | <b>39</b>   | 45       | 30       |
| Manganese  | ppm    | ASTM D5185m   | <b>0</b>    | 0        | <1       |
| Magnesium  | ppm    | ASTM D5185m 0 | <b>495</b>  | 500      | 362      |
| Calcium    | ppm    | ASTM D5185m   | <b>1669</b> | 1655     | 1231     |
| Phosphorus | ppm    | ASTM D5185m   | <b>724</b>  | 757      | 528      |
| Zinc       | ppm    | ASTM D5185m   | <b>888</b>  | 923      | 657      |
| Sulfur     | ppm    | ASTM D5185m   | <b>2586</b> | 2898     | 2161     |

## CONTAMINANTS

|           | method | limit/base      | current  | history1 | history2 |
|-----------|--------|-----------------|----------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >22 | <b>5</b> | 9        | 7        |
| Sodium    | ppm    | ASTM D5185m >31 | <b>2</b> | 2        | 1        |
| Potassium | ppm    | ASTM D5185m >20 | <b>0</b> | 2        | 0        |

## INFRA-RED

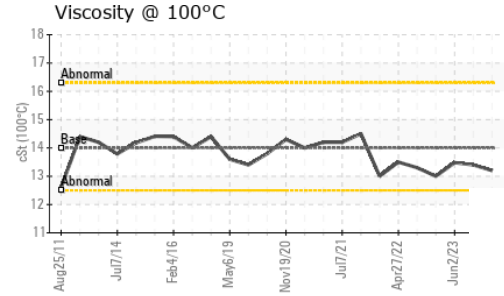
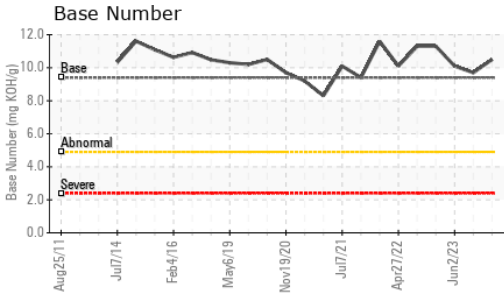
|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >3  | <b>0.1</b>  | 0.1      | 0.1      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>5.4</b>  | 6.9      | 6.4      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>21.6</b> | 21.1     | 22.3     |

## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>19.9</b> | 20.7     | 21.9     |
| Base Number (BN) | mg KOH/g | ASTM D2896 9.4  | <b>10.5</b> | 9.7      | 10.1     |



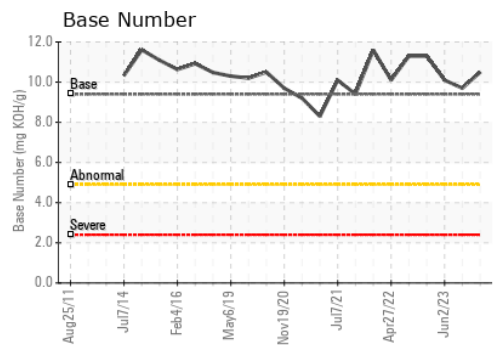
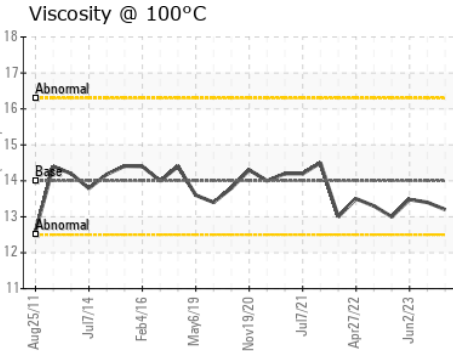
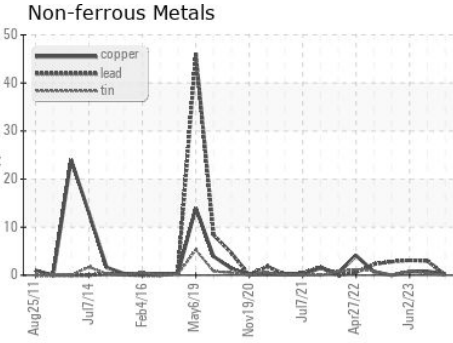
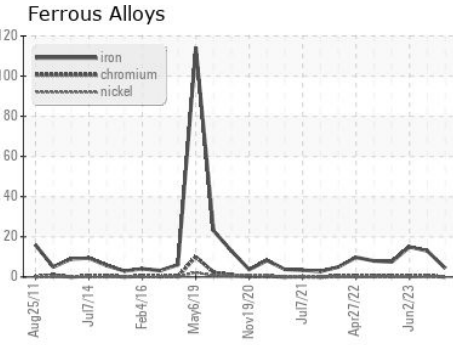
# OIL ANALYSIS REPORT



| 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    | >0.21   | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |       |
|------------------|--------|------------|---------|-------------|----------|-------|
| Visc @ 100°C     | cSt    | ASTM D445  | 14      | <b>13.2</b> | 13.4     | 13.48 |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0864353      **Received** : 30 Jan 2024  
**Lab Number** : **06073504**      **Diagnosed** : 31 Jan 2024  
**Unique Number** : 10850181      **Diagnostician** : Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**SHERWOOD CONSTRUCTION CO INC**  
 3219 WEST MAY ST  
 WICHITA, KS  
 US 67213  
 Contact: DOUG KING  
 doug.king@sherwood.net  
 T: (316)617-3161  
 F: x:

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)