

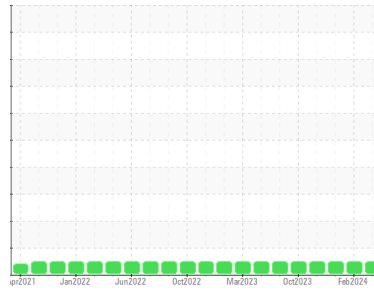


# OIL ANALYSIS REPORT



Area  
**OKLAHOMA/1052**  
 Machine Id  
**45.58L [OKLAHOMA^1052]**  
 Component  
**Diesel Engine**  
 Fluid  
**MOBIL DELVAC 1300 SUPER15W40 (5 GAL)**

Sample Rating Trend



**NORMAL**



## 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 suitable for further service.

## SAMPLE INFORMATION

|               | method      | limit/base  | current            | history1    | history2    |
|---------------|-------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info |             | <b>WC0848875</b>   | WC0857433   | WC0848854   |
| Sample Date   | Client Info |             | <b>09 Apr 2024</b> | 13 Feb 2024 | 20 Dec 2023 |
| Machine Age   | hrs         | Client Info | <b>7983</b>        | 7499        | 7241        |
| Oil Age       | hrs         | Client Info | <b>263</b>         | 250         | 250         |
| Oil Changed   | Client Info |             | <b>Changed</b>     | Changed     | 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     |
| Water  | WC Method | >0.2       | <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 >100 | <b>8</b> | 6        | 4        |
| Chromium | ppm    | ASTM D5185m >20  | <b>0</b> | 0        | <1       |
| Nickel   | ppm    | ASTM D5185m >2   | <b>0</b> | <1       | 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>3</b> | 3        | 2        |
| Lead     | ppm    | ASTM D5185m >40  | <b>0</b> | 0        | <1       |
| Copper   | ppm    | ASTM D5185m >330 | <b>0</b> | 0        | <1       |
| Tin      | ppm    | ASTM D5185m >15  | <b>0</b> | 0        | <1       |
| Vanadium | ppm    | ASTM D5185m      | <b>0</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>41</b>   | 55       | 48       |
| Barium     | ppm    | ASTM D5185m 0 | <b>0</b>    | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m 0 | <b>41</b>   | 40       | 38       |
| Manganese  | ppm    | ASTM D5185m   | <b>0</b>    | 0        | <1       |
| Magnesium  | ppm    | ASTM D5185m 0 | <b>540</b>  | 555      | 484      |
| Calcium    | ppm    | ASTM D5185m   | <b>1839</b> | 1834     | 1635     |
| Phosphorus | ppm    | ASTM D5185m   | <b>812</b>  | 828      | 795      |
| Zinc       | ppm    | ASTM D5185m   | <b>969</b>  | 995      | 875      |
| Sulfur     | ppm    | ASTM D5185m   | <b>3221</b> | 2827     | 2524     |

## CONTAMINANTS

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

## INFRA-RED

|           | method   | limit/base      | current     | history1 | history2 |
|-----------|----------|-----------------|-------------|----------|----------|
| Soot %    | %        | *ASTM D7844 >3  | <b>0.1</b>  | 0.1      | 0.2      |
| Nitration | Abs/cm   | *ASTM D7624 >20 | <b>6.9</b>  | 6.2      | 6.4      |
| Sulfation | Abs/.1mm | *ASTM D7415 >30 | <b>21.5</b> | 21.4     | 21.9     |

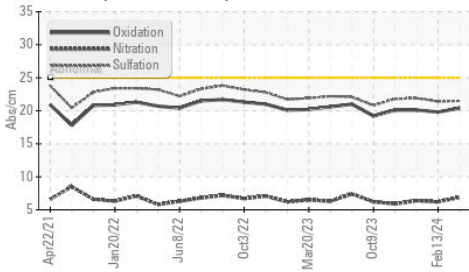
## FLUID DEGRADATION

|                  | method   | limit/base      | current     | history1 | history2 |
|------------------|----------|-----------------|-------------|----------|----------|
| Oxidation        | Abs/.1mm | *ASTM D7414 >25 | <b>20.4</b> | 19.8     | 20.1     |
| Base Number (BN) | mg KOH/g | ASTM D2896 9.4  | <b>9.3</b>  | 9.5      | 9.7      |

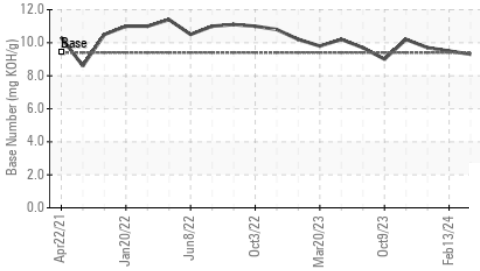


# OIL ANALYSIS REPORT

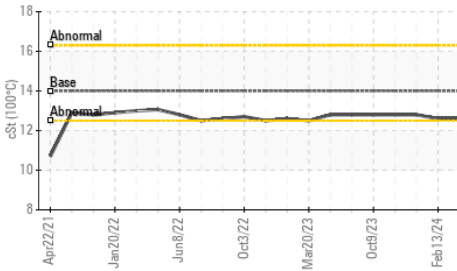
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C

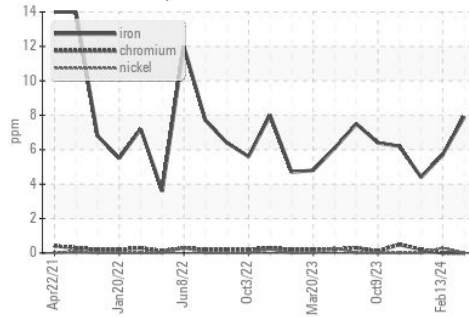


| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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      |

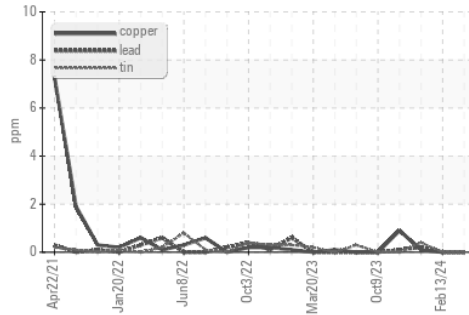
| FLUID PROPERTIES | method | limit/base   | current | history1 | history2 |
|------------------|--------|--------------|---------|----------|----------|
| Visc @ 100°C     | cSt    | ASTM D445 14 | 12.6    | 12.6     | 12.8     |

## GRAPHS

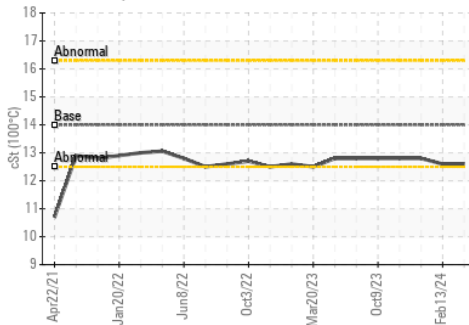
Ferrous Alloys



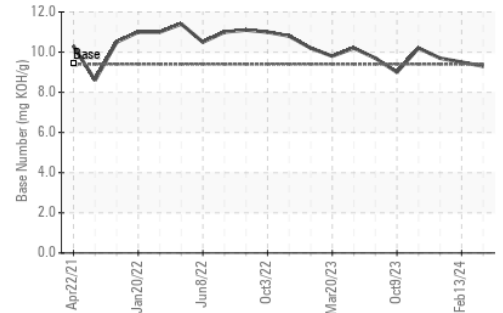
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : WC0848875

Lab Number : 06160083

Unique Number : 10995506

Test Package : CONST ( Additional Tests: TBN )

Received : 25 Apr 2024

Tested : 25 Apr 2024

Diagnosed : 25 Apr 2024 - Wes Davis

SHERWOOD CONSTRUCTION CO INC

3219 WEST MAY ST

WICHITA, KS

US 67213

Contact: SHAWN SOUTH

shawn.south@sherwood.net

T:

F:

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)