

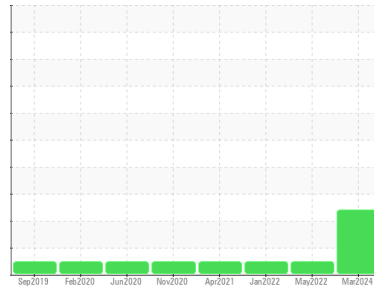


# OIL ANALYSIS REPORT



Area  
**OKLAHOMA/102/EG - MOTOR GRADER**  
 Machine Id  
**78.256 [OKLAHOMA^102^EG - MOTOR GRADER]**  
 Component  
**Right Tandem**  
 Fluid  
**NOT GIVEN (--- GAL)**

Sample Rating Trend



**WATER**



## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

The copper level is abnormal. All other component wear rates are normal.

### Contamination

There is a light concentration of water present in the oil.

### Fluid Condition

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>WC0886898</b>   | WC0686871   | WC0642909   |
| Sample Date   | Client Info |             | <b>11 Mar 2024</b> | 20 May 2022 | 18 Jan 2022 |
| Machine Age   | hrs         | Client Info | <b>8775</b>        | 5860        | 5480        |
| Oil Age       | hrs         | Client Info | <b>1000</b>        | 981         | 500         |
| Oil Changed   | Client Info |             | <b>Changed</b>     | Not Changd  | Not Changd  |
| Sample Status |             |             | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

## WEAR METALS

|          | method | limit/base       | current      | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron     | ppm    | ASTM D5185m >425 | <b>163</b>   | 58       | 60       |
| Chromium | ppm    | ASTM D5185m >5   | <b>2</b>     | <1       | <1       |
| Nickel   | ppm    | ASTM D5185m >5   | <b>&lt;1</b> | 0        | 0        |
| Titanium | ppm    | ASTM D5185m      | <b>&lt;1</b> | <1       | 0        |
| Silver   | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Aluminum | ppm    | ASTM D5185m >5   | <b>4</b>     | 2        | <1       |
| Lead     | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Copper   | ppm    | ASTM D5185m >8   | <b>▲ 50</b>  | <1       | <1       |
| Tin      | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Antimony | ppm    | ASTM D5185m >5   | <b>---</b>   | ---      | 0        |
| Vanadium | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |
| Cadmium  | ppm    | ASTM D5185m      | <b>&lt;1</b> | 0        | 0        |

## ADDITIVES

|            | method | limit/base  | current     | history1 | history2 |
|------------|--------|-------------|-------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>24</b>   | 23       | 33       |
| Barium     | ppm    | ASTM D5185m | <b>0</b>    | 0        | 0        |
| Molybdenum | ppm    | ASTM D5185m | <b>2</b>    | 1        | 1        |
| Manganese  | ppm    | ASTM D5185m | <b>2</b>    | <1       | <1       |
| Magnesium  | ppm    | ASTM D5185m | <b>29</b>   | 21       | 22       |
| Calcium    | ppm    | ASTM D5185m | <b>2729</b> | 2978     | 3105     |
| Phosphorus | ppm    | ASTM D5185m | <b>1040</b> | 974      | 1030     |
| Zinc       | ppm    | ASTM D5185m | <b>1266</b> | 1160     | 1237     |
| Sulfur     | ppm    | ASTM D5185m | <b>4727</b> | 5920     | 4873     |

## CONTAMINANTS

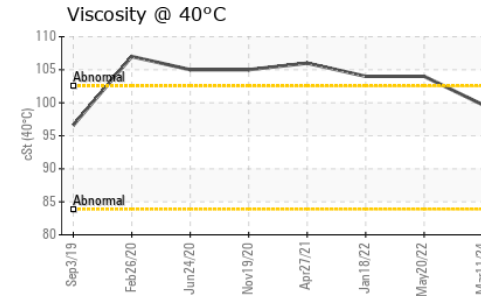
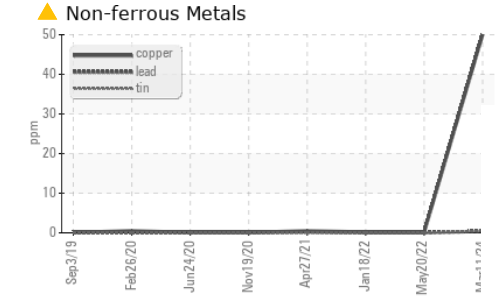
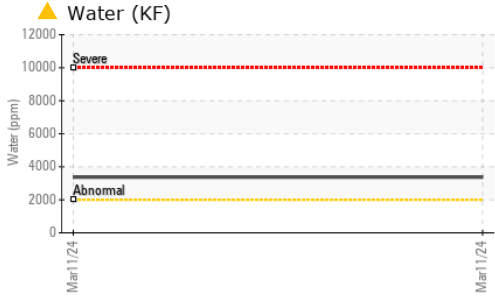
|           | method | limit/base       | current        | history1 | history2 |
|-----------|--------|------------------|----------------|----------|----------|
| Silicon   | ppm    | ASTM D5185m >50  | <b>19</b>      | 5        | 5        |
| Sodium    | ppm    | ASTM D5185m      | <b>8</b>       | 2        | 1        |
| Potassium | ppm    | ASTM D5185m >20  | <b>4</b>       | 0        | 0        |
| Water     | %      | ASTM D6304 >0.2  | <b>▲ 0.337</b> | ---      | ---      |
| ppm Water | ppm    | ASTM D6304 >2000 | <b>▲ 3370</b>  | ---      | ---      |

## VISUAL

|                  | method | limit/base    | current      | history1 | history2 |
|------------------|--------|---------------|--------------|----------|----------|
| White Metal      | scalar | *Visual NONE  | <b>NONE</b>  | NONE     | LIGHT    |
| Yellow Metal     | scalar | *Visual NONE  | <b>NONE</b>  | NONE     | NONE     |
| Precipitate      | scalar | *Visual NONE  | <b>NONE</b>  | NONE     | NONE     |
| Silt             | scalar | *Visual NONE  | <b>MODER</b> | NONE     | NONE     |
| Debris           | scalar | *Visual NONE  | <b>NONE</b>  | NONE     | VLITE    |
| 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>0.2%</b>  | NEG      | NEG      |
| Free Water       | scalar | *Visual       | <b>NEG</b>   | NEG      | NEG      |



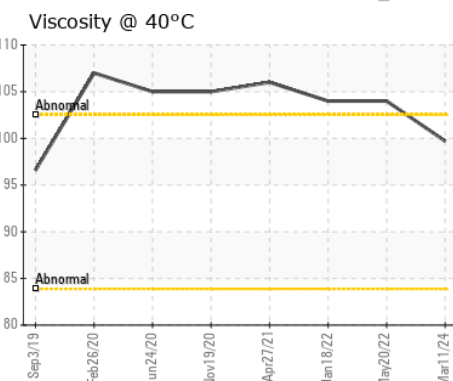
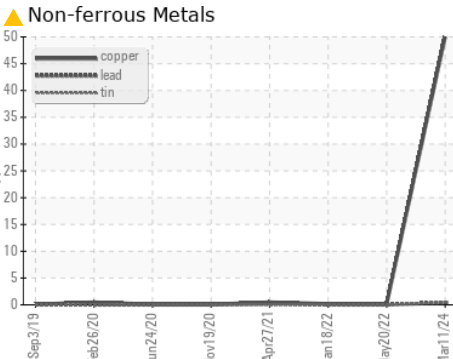
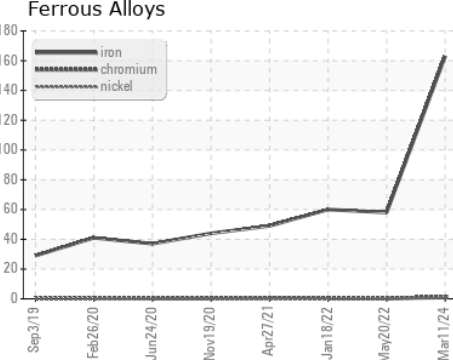
# OIL ANALYSIS REPORT



| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 99.7    | 104      | 104      |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
| Color         |        |            |         | no image | no image |
| Bottom        |        |            |         | no image | no image |

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0886898 **Received** : 28 Mar 2024  
**Lab Number** : 06132397 **Tested** : 02 Apr 2024  
**Unique Number** : 10951862 **Diagnosed** : 02 Apr 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: KF )

**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)