



# OIL ANALYSIS REPORT

|                 |                  |
|-----------------|------------------|
| WEAR            | <b>MARGINAL</b>  |
| CONTAMINATION   | <b>NORMAL</b>    |
| FLUID CONDITION | <b>ATTENTION</b> |



Area  
**COLORADO/443/EG - MOTOR GRADER**  
Machine Id  
**78.250 [COLORADO^443^EG - MOTOR GRADER]**  
Component  
**Circle Gearbox**  
Fluid  
**MOBIL MOBILUBE HD PLUS 85W140 (--- GAL)**

## RECOMMENDATION

No corrective action is recommended at this time. The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0798984</b>   | WC0718258   | WC0607776   |
| Sample Date    |     | Client Info |           | <b>31 Jul 2023</b> | 10 Nov 2022 | 23 Sep 2021 |
| Machine Age    | hrs | Client Info |           | <b>10888</b>       | 11244       | 9418        |
| Oil Age        | hrs | Client Info |           | <b>0</b>           | 8876        | 0           |
| Filter Age     | hrs | Client Info |           | <b>0</b>           | 0           | 0           |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | Not Changd  | Not Changd  |
| Filter Changed |     | Client Info |           | <b>Not Changed</b> | Not Changed | Not Changed |
| Sample Status  |     |             |           | <b>ATTENTION</b>   | ATTENTION   | ATTENTION   |

## WEAR

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

|              |        |             |      |              |       |       |
|--------------|--------|-------------|------|--------------|-------|-------|
| Iron         | ppm    | ASTM D5185m | >200 | <b>29</b>    | 24    | 10    |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | 0     | <1    |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>0</b>     | 0     | <1    |
| Titanium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0     | 0     |
| Silver       | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0     | 0     |
| Aluminum     | ppm    | ASTM D5185m |      | <b>▲ 48</b>  | ▲ 35  | 13    |
| Lead         | ppm    | ASTM D5185m |      | <b>0</b>     | <1    | <1    |
| Copper       | ppm    | ASTM D5185m |      | <b>7</b>     | 6     | 3     |
| Tin          | ppm    | ASTM D5185m |      | <b>&lt;1</b> | 0     | 0     |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0     | 0     |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | MODER | MODER |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE  | NONE  |

## CONTAMINATION

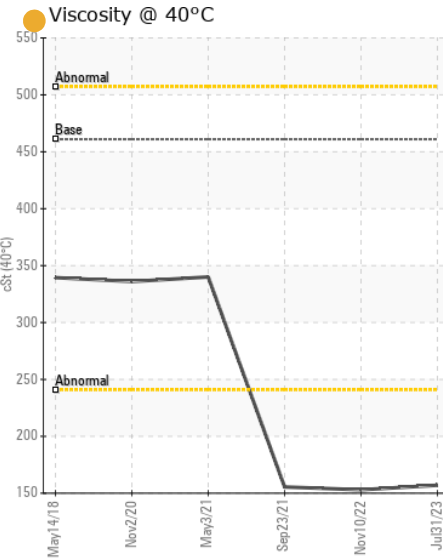
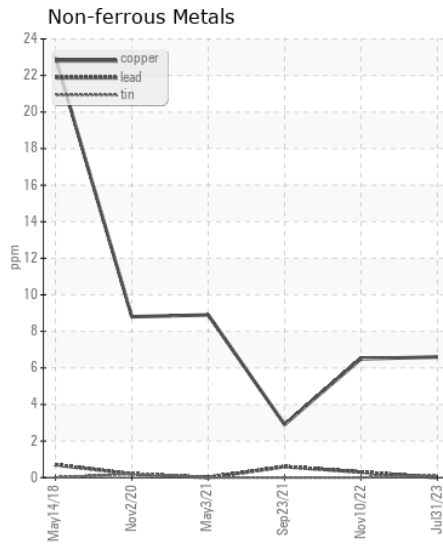
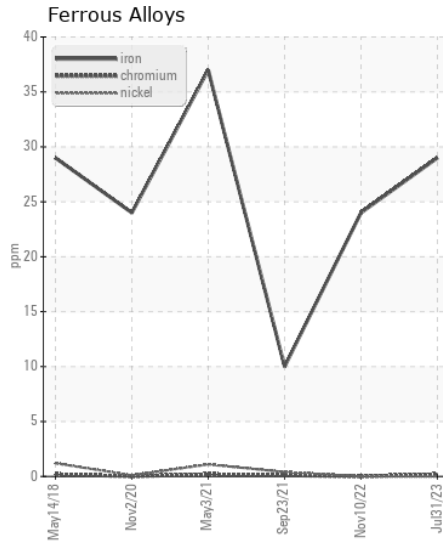
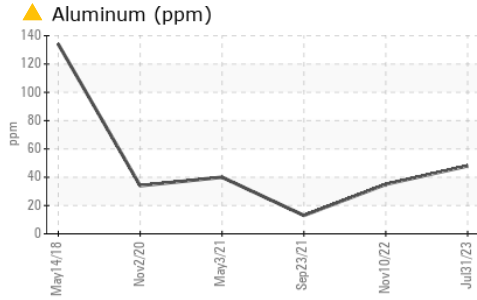
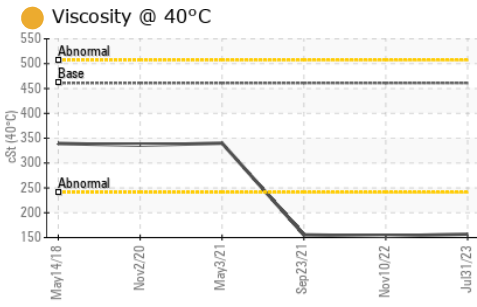
There is no indication of any contamination in the oil.

|                  |        |             |       |              |       |       |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon          | ppm    | ASTM D5185m |       | <b>7</b>     | 4     | 2     |
| Potassium        | ppm    | ASTM D5185m | >20   | <b>&lt;1</b> | 2     | 2     |
| Water            |        | WC Method   | >0.2  | <b>NEG</b>   | NEG   | NEG   |
| Silt             | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| Debris           | scalar | *Visual     | NONE  | <b>NONE</b>  | NONE  | NONE  |
| 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>NEG</b>   | NEG   | NEG   |

## FLUID CONDITION

The oil viscosity is lower than normal. Confirm oil type.

|             |     |             |     |              |       |         |
|-------------|-----|-------------|-----|--------------|-------|---------|
| Sodium      | ppm | ASTM D5185m |     | <b>&lt;1</b> | 0     | <1      |
| Boron       | ppm | ASTM D5185m |     | <b>173</b>   | 179   | 160     |
| Barium      | ppm | ASTM D5185m |     | <b>&lt;1</b> | 1     | 0       |
| Molybdenum  | ppm | ASTM D5185m |     | <b>&lt;1</b> | <1    | <1      |
| Manganese   | ppm | ASTM D5185m |     | <b>&lt;1</b> | <1    | <1      |
| Magnesium   | ppm | ASTM D5185m |     | <b>4</b>     | 1     | <1      |
| Calcium     | ppm | ASTM D5185m |     | <b>37</b>    | 50    | 17      |
| Phosphorus  | ppm | ASTM D5185m |     | <b>914</b>   | 972   | 814     |
| Zinc        | ppm | ASTM D5185m |     | <b>20</b>    | 18    | 5       |
| Sulfur      | ppm | ASTM D5185m |     | <b>24455</b> | 26718 | 32688   |
| Visc @ 40°C | cSt | ASTM D445   | 461 | <b>● 157</b> | ● 153 | ● 155.5 |



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0798984  
**Lab Number** : 05915716  
**Unique Number** : 10587630  
**Test Package** : CONST

**Received** : 03 Aug 2023  
**Tested** : 04 Aug 2023  
**Diagnosed** : 06 Aug 2023 - Doug Bogart

**SHERWOOD CONSTRUCTION CO INC**  
 3219 WEST MAY ST  
 WICHITA, KS  
 US 67213

Contact: JIMMY DERAMUS  
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 T: (918)691-3306

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)

F: x: