



# OIL ANALYSIS REPORT

|                 |                 |
|-----------------|-----------------|
| WEAR            | <b>NORMAL</b>   |
| CONTAMINATION   | <b>ABNORMAL</b> |
| FLUID CONDITION | <b>NORMAL</b>   |



Area  
**OKLAHOMA/102**  
Machine Id  
**74.28 [OKLAHOMA^102]**  
Component  
**Hydraulic System**  
Fluid  
**MOBIL DELVAC 1300 SUPER15W40 (38 GAL)**

## RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

| Test           | UOM | Method      | Limit/Abn | Current            | History1    | History2    |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number  |     | Client Info |           | <b>WC0945686</b>   | WC0935211   | WC0848983   |
| Sample Date    |     | Client Info |           | <b>03 Jul 2024</b> | 26 Apr 2024 | 14 Sep 2023 |
| Machine Age    | hrs | Client Info |           | <b>2671</b>        | 2257        | 2160        |
| Oil Age        | hrs | Client Info |           | <b>2160</b>        | 500         | 1000        |
| Filter Age     | hrs | Client Info |           | <b>200</b>         | 500         | 1000        |
| Oil Changed    |     | Client Info |           | <b>Changed</b>     | N/A         | Changed     |
| Filter Changed |     | Client Info |           | <b>Changed</b>     | Changed     | Changed     |
| Sample Status  |     |             |           | <b>ABNORMAL</b>    | NORMAL      | NORMAL      |

## WEAR

All component wear rates are normal.

|              |        |             |      |              |      |      |
|--------------|--------|-------------|------|--------------|------|------|
| Iron         | ppm    | ASTM D5185m | >20  | <b>8</b>     | 9    | 16   |
| Chromium     | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | 0    | 0    |
| Nickel       | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | 0    | 0    |
| Titanium     | ppm    | ASTM D5185m |      | <b>&lt;1</b> | <1   | 0    |
| Silver       | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| Aluminum     | ppm    | ASTM D5185m | >10  | <b>2</b>     | 2    | 1    |
| Lead         | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | 0    |
| Copper       | ppm    | ASTM D5185m | >75  | <b>2</b>     | 1    | 5    |
| Tin          | ppm    | ASTM D5185m | >10  | <b>&lt;1</b> | <1   | 0    |
| Vanadium     | ppm    | ASTM D5185m |      | <b>0</b>     | 0    | 0    |
| White Metal  | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |
| Yellow Metal | scalar | *Visual     | NONE | <b>NONE</b>  | NONE | NONE |

## CONTAMINATION

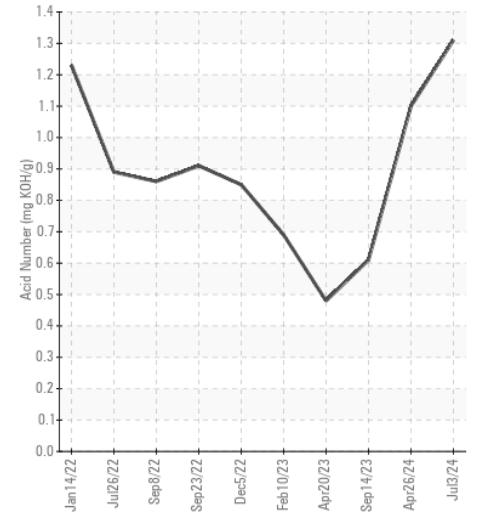
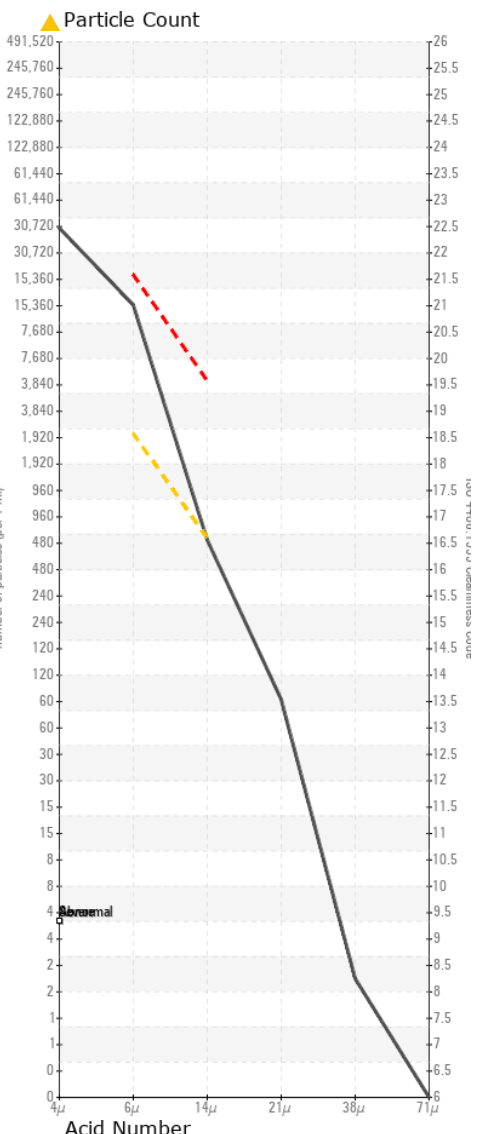
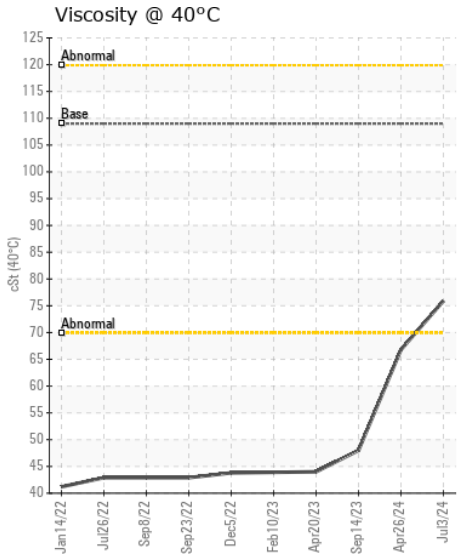
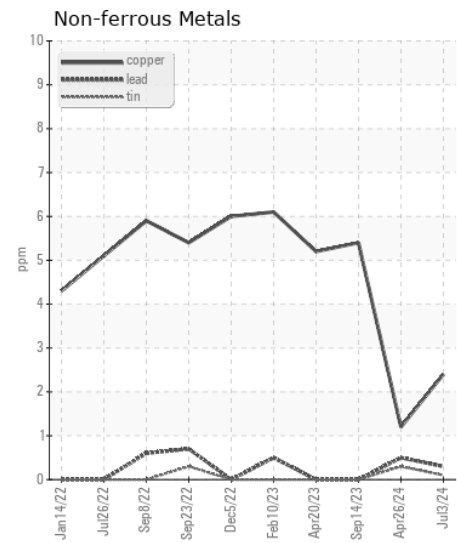
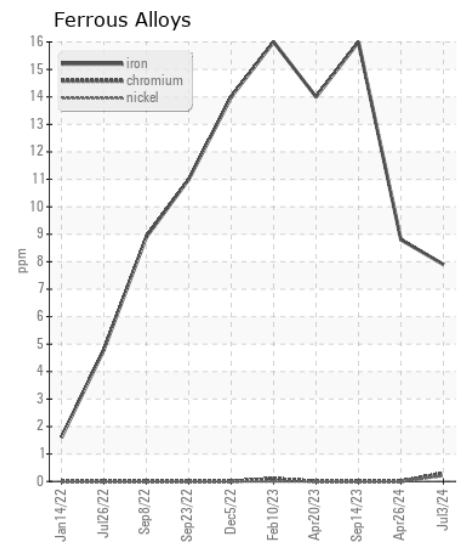
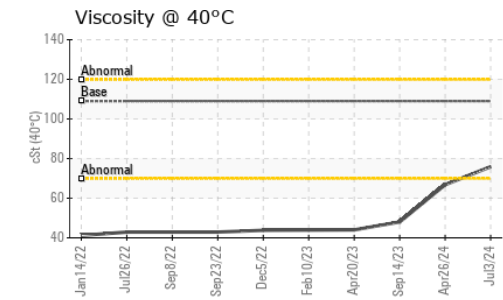
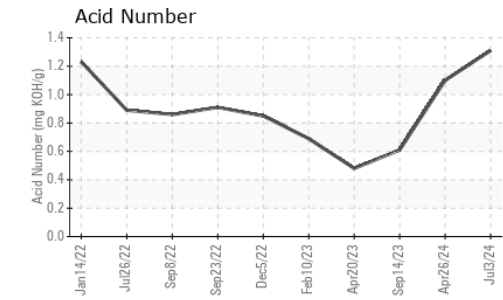
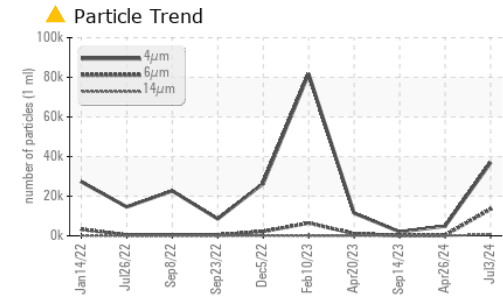
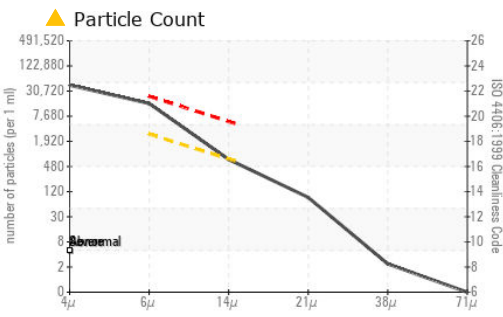
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

|                  |        |              |          |                 |          |          |
|------------------|--------|--------------|----------|-----------------|----------|----------|
| Silicon          | ppm    | ASTM D5185m  | >20      | <b>8</b>        | 8        | 9        |
| Potassium        | ppm    | ASTM D5185m  | >20      | <b>3</b>        | 2        | 5        |
| Water            |        | WC Method    | >0.1     | <b>NEG</b>      | NEG      | NEG      |
| Particles >4µm   |        | ASTM D7647   |          | <b>36892</b>    | 4867     | 1997     |
| Particles >6µm   |        | ASTM D7647   | >2500    | <b>13471</b>    | 242      | 156      |
| Particles >14µm  |        | ASTM D7647   | >640     | <b>622</b>      | 9        | 13       |
| Particles >21µm  |        | ASTM D7647   | >160     | <b>77</b>       | 3        | 3        |
| Particles >38µm  |        | ASTM D7647   | >40      | <b>2</b>        | 0        | 0        |
| Particles >71µm  |        | ASTM D7647   | >10      | <b>0</b>        | 0        | 0        |
| Oil Cleanliness  |        | ISO 4406 (c) | >-/18/16 | <b>22/21/16</b> | 19/15/10 | 18/14/11 |
| 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      | >0.1     | <b>NEG</b>      | NEG      | NEG      |

## FLUID CONDITION

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

|                  |          |             |     |              |      |      |
|------------------|----------|-------------|-----|--------------|------|------|
| Sodium           | ppm      | ASTM D5185m |     | <b>0</b>     | 2    | 3    |
| Boron            | ppm      | ASTM D5185m | 0   | <b>29</b>    | 22   | 4    |
| Barium           | ppm      | ASTM D5185m | 0   | <b>0</b>     | 0    | 0    |
| Molybdenum       | ppm      | ASTM D5185m | 0   | <b>&lt;1</b> | 0    | 0    |
| Manganese        | ppm      | ASTM D5185m |     | <b>&lt;1</b> | <1   | 0    |
| Magnesium        | ppm      | ASTM D5185m | 0   | <b>13</b>    | 14   | 10   |
| Calcium          | ppm      | ASTM D5185m |     | <b>2276</b>  | 1922 | 740  |
| Phosphorus       | ppm      | ASTM D5185m |     | <b>946</b>   | 940  | 739  |
| Zinc             | ppm      | ASTM D5185m |     | <b>1150</b>  | 1100 | 983  |
| Sulfur           | ppm      | ASTM D5185m |     | <b>3734</b>  | 3982 | 2693 |
| Acid Number (AN) | mg KOH/g | ASTM D8045  |     | <b>1.31</b>  | 1.10 | 0.61 |
| Visc @ 40°C      | cSt      | ASTM D445   | 109 | <b>75.9</b>  | 66.8 | 48.0 |



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0945686 **Received** : 15 Jul 2024  
**Lab Number** : 06235846 **Tested** : 16 Jul 2024  
**Unique Number** : 11124680 **Diagnosed** : 16 Jul 2024 - Wes Davis  
**Test Package** : CONST

**SHERWOOD CONSTRUCTION CO INC**  
 3219 WEST MAY ST  
 WICHITA, KS  
 US 67213  
 Contact: RANDY ROBERTS  
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 T:  
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Certificate L2367  
 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)