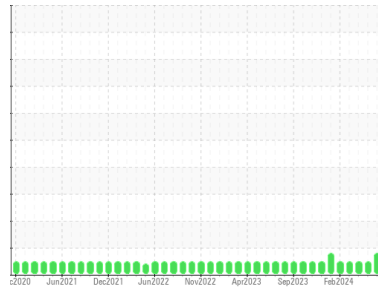




# OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

**FINISHING**

Machine Id

**TandG Grade Line Hydraulic Unit (S/N SA205H05U)**

Component

**Hydraulic System**

Fluid

**VALVOLINE AW HYDRAULIC 68 (--- GAL)**

## DIAGNOSIS

### Recommendation

We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

### Wear

All component wear rates are normal.

### Contamination

There is a light amount of silt (particulates < 14 microns in size) present in the oil.

### Fluid Condition

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

## SAMPLE INFORMATION

| method        | limit/base  | current            | history1    | history2    |
|---------------|-------------|--------------------|-------------|-------------|
| Sample Number | Client Info | <b>WC0895127</b>   | WC0895023   | WC0895070   |
| Sample Date   | Client Info | <b>07 Jun 2024</b> | 13 May 2024 | 08 Apr 2024 |
| Machine Age   | hrs         | Client Info        | 0           | 0           |
| Oil Age       | hrs         | Client Info        | 0           | 0           |
| Oil Changed   | Client Info | <b>N/A</b>         | N/A         | N/A         |
| Sample Status |             | <b>ATTENTION</b>   | NORMAL      | NORMAL      |

## CONTAMINATION

| method | limit/base | current    | history1 | history2 |
|--------|------------|------------|----------|----------|
| Water  | WC Method  | <b>NEG</b> | NEG      | NEG      |

## WEAR METALS

| method   | limit/base | current     | history1 | history2     |    |    |
|----------|------------|-------------|----------|--------------|----|----|
| Iron     | ppm        | ASTM D5185m | >20      | <b>&lt;1</b> | 2  | 1  |
| Chromium | ppm        | ASTM D5185m | >20      | <b>0</b>     | <1 | 0  |
| Nickel   | ppm        | ASTM D5185m | >20      | <b>0</b>     | <1 | 0  |
| Titanium | ppm        | ASTM D5185m |          | <b>0</b>     | <1 | <1 |
| Silver   | ppm        | ASTM D5185m |          | <b>0</b>     | <1 | 0  |
| Aluminum | ppm        | ASTM D5185m | >20      | <b>0</b>     | 2  | 2  |
| Lead     | ppm        | ASTM D5185m | >20      | <b>0</b>     | 1  | <1 |
| Copper   | ppm        | ASTM D5185m | >20      | <b>7</b>     | 9  | 8  |
| Tin      | ppm        | ASTM D5185m | >20      | <b>0</b>     | 1  | <1 |
| Vanadium | ppm        | ASTM D5185m |          | <b>0</b>     | <1 | 0  |
| Cadmium  | ppm        | ASTM D5185m |          | <b>0</b>     | <1 | 0  |

## ADDITIVES

| method     | limit/base | current     | history1 | history2   |     |     |
|------------|------------|-------------|----------|------------|-----|-----|
| Boron      | ppm        | ASTM D5185m | 2.6      | <b>0</b>   | <1  | <1  |
| Barium     | ppm        | ASTM D5185m | 0        | <b>0</b>   | 0   | 0   |
| Molybdenum | ppm        | ASTM D5185m | 0        | <b>1</b>   | 3   | 2   |
| Manganese  | ppm        | ASTM D5185m |          | <b>0</b>   | <1  | 0   |
| Magnesium  | ppm        | ASTM D5185m | 1.9      | <b>8</b>   | 12  | 11  |
| Calcium    | ppm        | ASTM D5185m | 81       | <b>90</b>  | 101 | 98  |
| Phosphorus | ppm        | ASTM D5185m | 350      | <b>334</b> | 342 | 367 |
| Zinc       | ppm        | ASTM D5185m | 445      | <b>410</b> | 430 | 435 |
| Sulfur     | ppm        | ASTM D5185m | 1850     | <b>982</b> | 863 | 996 |

## CONTAMINANTS

| method    | limit/base | current     | history1 | history2     |    |   |
|-----------|------------|-------------|----------|--------------|----|---|
| Silicon   | ppm        | ASTM D5185m | >15      | <b>&lt;1</b> | 1  | 0 |
| Sodium    | ppm        | ASTM D5185m |          | <b>2</b>     | <1 | 0 |
| Potassium | ppm        | ASTM D5185m | >20      | <b>0</b>     | 2  | 2 |

## FLUID CLEANLINESS

| method          | limit/base   | current   | history1        | history2 |          |
|-----------------|--------------|-----------|-----------------|----------|----------|
| Particles >4µm  | ASTM D7647   | >2500     | <b>2553</b>     | 829      | 930      |
| Particles >6µm  | ASTM D7647   | >640      | <b>175</b>      | 53       | 63       |
| Particles >14µm | ASTM D7647   | >80       | <b>7</b>        | 5        | 7        |
| Particles >21µm | ASTM D7647   | >20       | <b>1</b>        | 2        | 2        |
| Particles >38µm | ASTM D7647   | >4        | <b>0</b>        | 1        | 0        |
| Particles >71µm | ASTM D7647   | >3        | <b>0</b>        | 1        | 0        |
| Oil Cleanliness | ISO 4406 (c) | >18/16/13 | <b>19/15/10</b> | 17/13/10 | 17/13/10 |

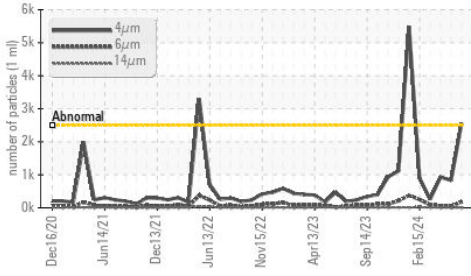
## FLUID DEGRADATION

| method           | limit/base | current    | history1 | history2    |      |      |
|------------------|------------|------------|----------|-------------|------|------|
| Acid Number (AN) | mg KOH/g   | ASTM D8045 |          | <b>0.37</b> | 0.40 | 0.42 |

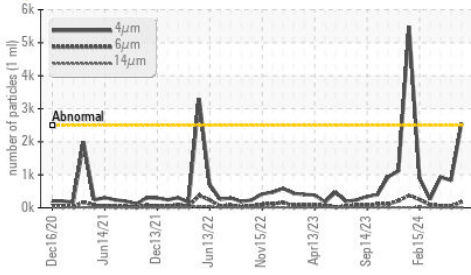


# OIL ANALYSIS REPORT

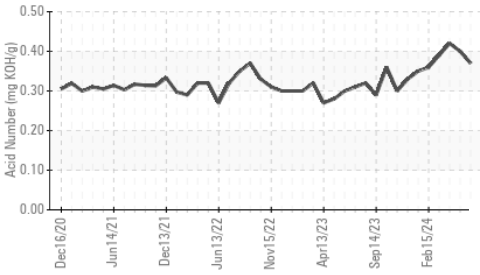
**Particle Trend**



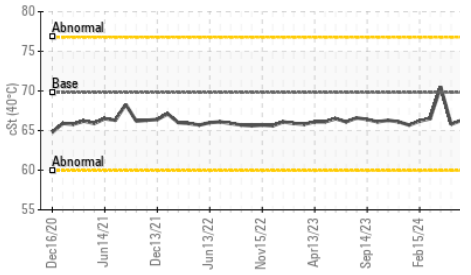
**Particle Trend**



**Acid Number**



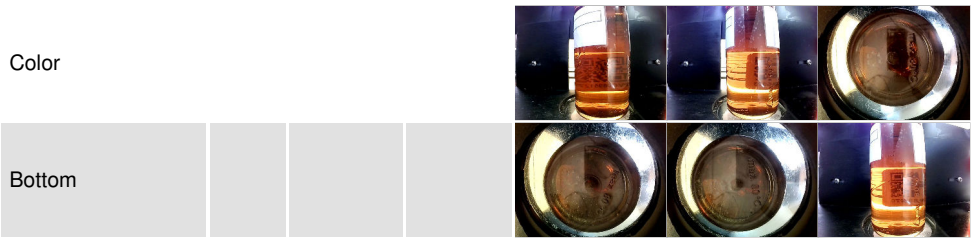
**Viscosity @ 40°C**



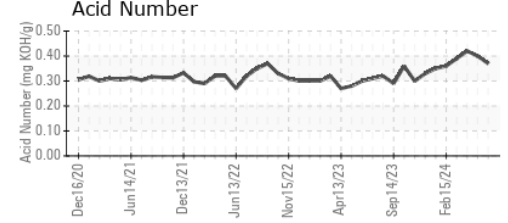
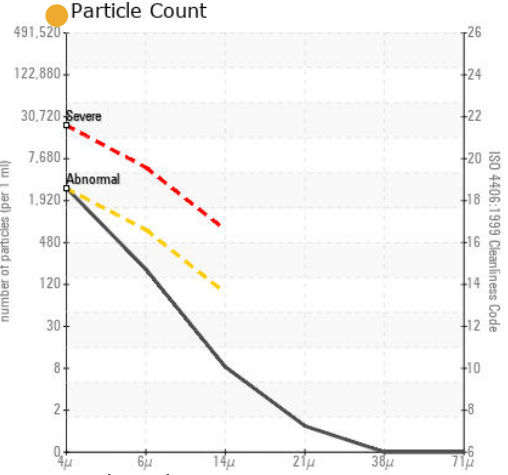
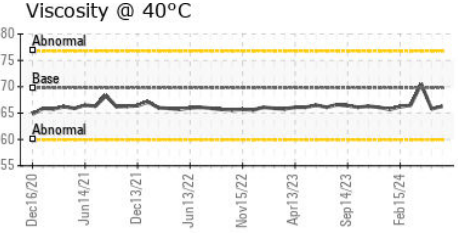
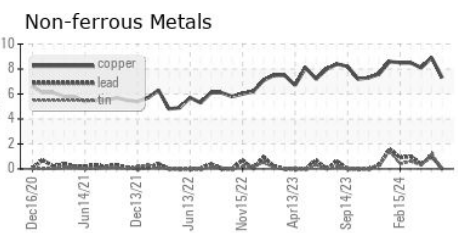
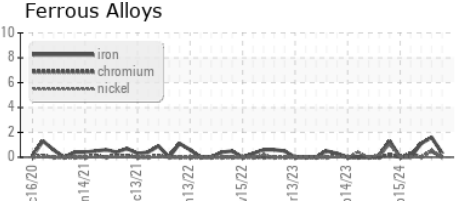
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | NONE     |
| 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    | >0.05   | NEG      | NEG      |
| Free Water       | scalar | *Visual    |         | NEG      | NEG      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 69.8    | 66.3     | 65.8     |

| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0895127 **Received** : 11 Jun 2024  
**Lab Number** : 06206475 **Tested** : 13 Jun 2024  
**Unique Number** : 11073936 **Diagnosed** : 13 Jun 2024 - Wes Davis  
**Test Package** : IND 2

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 US 24539  
 Contact: Ted Hudson  
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 T: (434)476-6628  
 F: (434)476-8133

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)