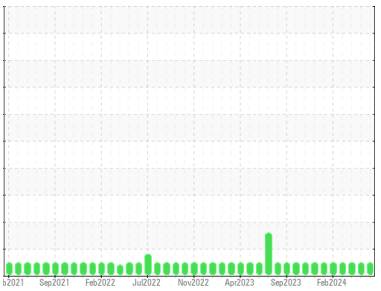
# OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL

Area
## FINISHING
Machine Id
## TandG Strapper Hydraulic Unit (S/N SA605H10U)
Component
**Hydraulic System**
Fluid
**VALVOLINE AW HYDRAULIC 68 (--- GAL)**

## DIAGNOSIS

**Recommendation**
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**
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

**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 | | **WC0895121** | WC0895022 | WC0895076 |
| Sample Date | | Client Info | | **07 Jun 2024** | 13 May 2024 | 08 Apr 2024 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.05 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **<1** | 0 | <1 |
| Chromium | ppm | ASTM D5185m | >20 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Silver | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **0** | 0 | 2 |
| Lead | ppm | ASTM D5185m | >20 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >20 | **4** | 5 | 5 |
| Tin | ppm | ASTM D5185m | >20 | **0** | 0 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | <1 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | 2.6 | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | 0 | **<1** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | **<1** | 1 | 1 |
| Manganese | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 1.9 | **5** | 6 | 9 |
| Calcium | ppm | ASTM D5185m | 81 | **109** | 122 | 111 |
| Phosphorus | ppm | ASTM D5185m | 350 | **332** | 345 | 367 |
| Zinc | ppm | ASTM D5185m | 445 | **407** | 448 | 431 |
| Sulfur | ppm | ASTM D5185m | 1850 | **1053** | 1060 | 1055 |

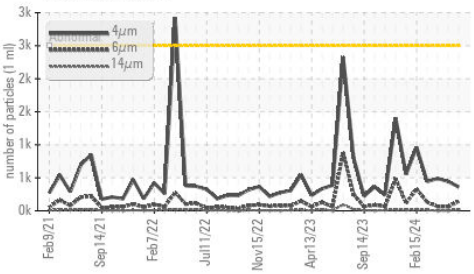
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **<1** | <1 | 0 |
| Sodium | ppm | ASTM D5185m | | **15** | 14 | 12 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | 2 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >2500 | **362** | 445 | 490 |
| Particles >6µm | | ASTM D7647 | >640 | **144** | 62 | 64 |
| Particles >14µm | | ASTM D7647 | >80 | **16** | 4 | 4 |
| Particles >21µm | | ASTM D7647 | >20 | **3** | 2 | 2 |
| Particles >38µm | | ASTM D7647 | >4 | **0** | 0 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/13 | **16/14/11** | 16/13/9 | 16/13/9 |

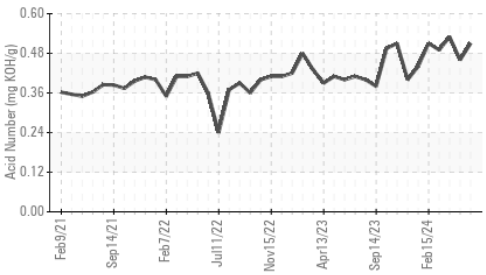
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.51** | 0.46 | 0.53 |

# OIL ANALYSIS REPORT

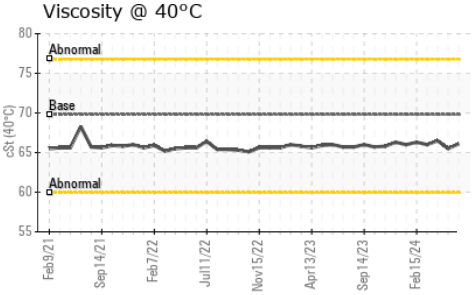
Particle Trend



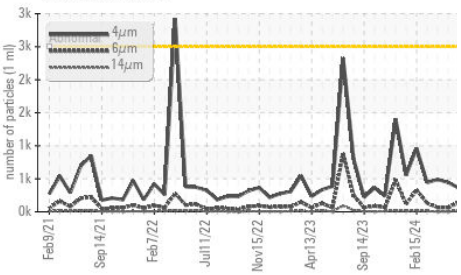

Acid Number




Viscosity @ 40°C




Particle Trend



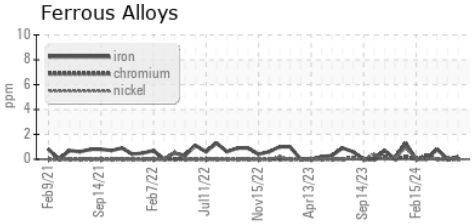

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.05 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 69.8 | **66.1** | 65.5 | 66.5 |

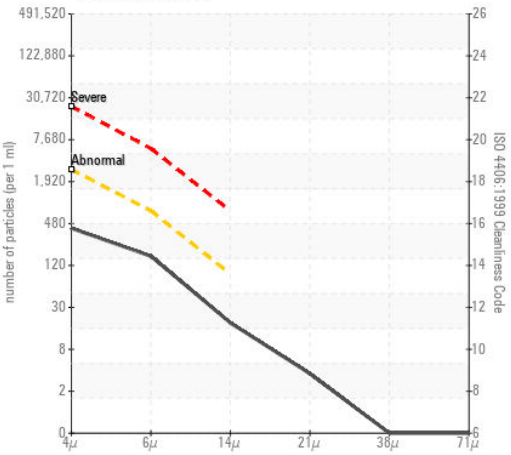
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

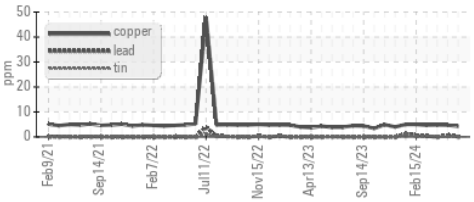
Ferrous Alloys



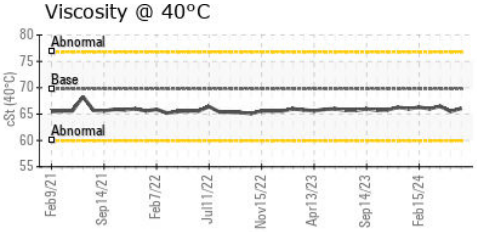

Particle Count



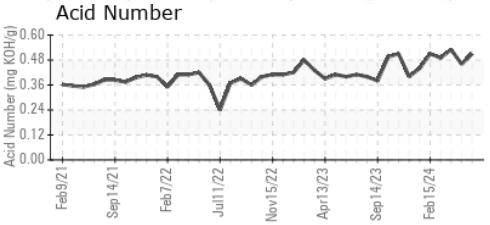

Non-ferrous Metals




Viscosity @ 40°C




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0895121
**Lab Number** : 06206478
**Unique Number** : 11073939
**Test Package** : IND 2

**Received** : 11 Jun 2024
**Tested** : 13 Jun 2024
**Diagnosed** : 13 Jun 2024 - Wes Davis

*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)*

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