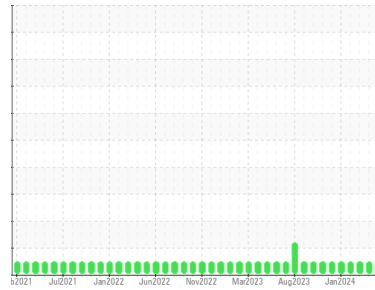




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Area

**CAPL - HYDRAULIC**

Machine Id

**CAPL ENTRY HYRDAULIC UNIT (S/N 16-4100-1010)**

Component

**Hydraulic System**

Fluid

**AW HYDRAULIC OIL ISO 46 (--- QTS)**

## DIAGNOSIS

### Recommendation

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. 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 |             |            | <b>RP0042509</b>   | RP0042736   | RP0042603   |
| Sample Date        | Client Info |             |            | <b>08 May 2024</b> | 26 Mar 2024 | 29 Feb 2024 |
| Machine Age        | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Age            | hrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Changed        | Client Info |             |            | <b>N/A</b>         | N/A         | N/A         |
| Sample Status      |             |             |            | <b>NORMAL</b>      | NORMAL      | NORMAL      |

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

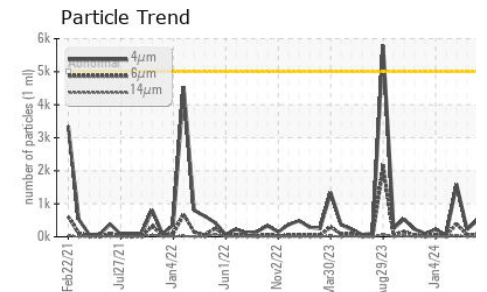
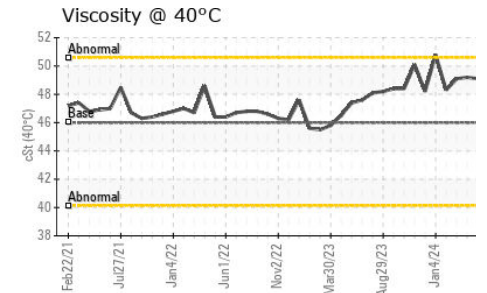
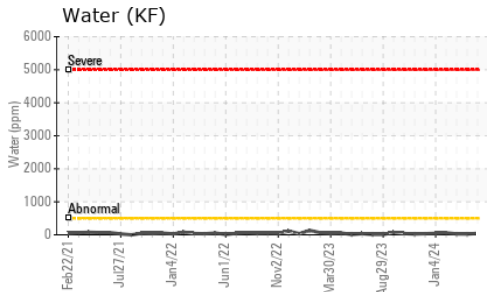
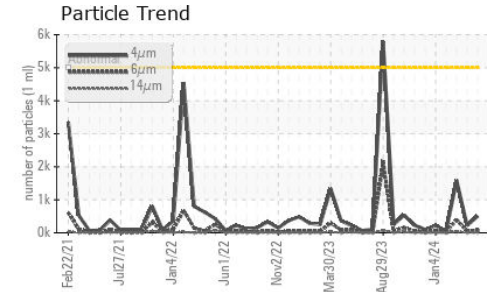
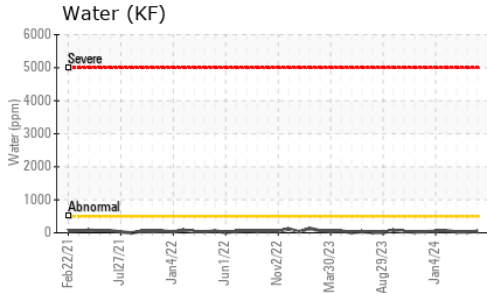
| ADDITIVES  |     | method      | limit/base | current    | history1 | history2 |
|------------|-----|-------------|------------|------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 5          | <b>0</b>   | 0        | 0        |
| Barium     | ppm | ASTM D5185m | 5          | <b>0</b>   | 0        | 0        |
| Molybdenum | ppm | ASTM D5185m | 5          | <b>0</b>   | 0        | 0        |
| Manganese  | ppm | ASTM D5185m |            | <b>0</b>   | 0        | 0        |
| Magnesium  | ppm | ASTM D5185m | 25         | <b>0</b>   | 0        | <1       |
| Calcium    | ppm | ASTM D5185m | 200        | <b>49</b>  | 42       | 47       |
| Phosphorus | ppm | ASTM D5185m | 300        | <b>352</b> | 308      | 319      |
| Zinc       | ppm | ASTM D5185m | 370        | <b>431</b> | 414      | 405      |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >15        | <b>2</b>     | 1        | 1        |
| Sodium       | ppm | ASTM D5185m |            | <b>&lt;1</b> | <1       | <1       |
| Potassium    | ppm | ASTM D5185m | >20        | <b>&lt;1</b> | 0        | 0        |
| Water        | %   | ASTM D6304  | >0.05      | <b>0.004</b> | 0.002    | 0.003    |
| ppm Water    | ppm | ASTM D6304  | >500       | <b>44</b>    | 24       | 27       |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   | >5000      | <b>508</b>      | 218      | 1589     |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>73</b>       | 55       | 394      |
| Particles >14µm   |  | ASTM D7647   | >160       | <b>10</b>       | 7        | 38       |
| Particles >21µm   |  | ASTM D7647   | >40        | <b>4</b>        | 2        | 9        |
| Particles >38µm   |  | ASTM D7647   | >10        | <b>0</b>        | 0        | 1        |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >19/17/14  | <b>16/13/10</b> | 15/13/10 | 18/16/12 |

| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.57       | <b>0.31</b> | 0.34     | 0.38     |

# OIL ANALYSIS REPORT



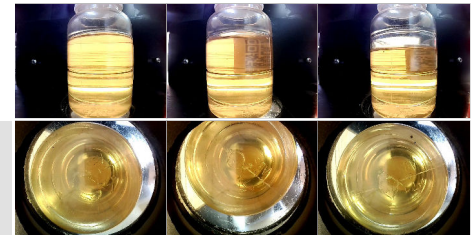
| VISUAL           | method | limit/base | current | history1     | history2 |
|------------------|--------|------------|---------|--------------|----------|
| White Metal      | scalar | *Visual    | NONE    | <b>NONE</b>  | NONE     |
| Yellow Metal     | scalar | *Visual    | NONE    | <b>NONE</b>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

| FLUID PROPERTIES | method | limit/base | current | history1    | history2 |
|------------------|--------|------------|---------|-------------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 46      | <b>49.1</b> | 49.2     |

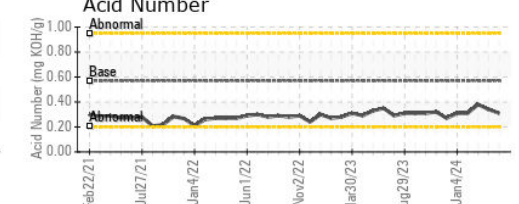
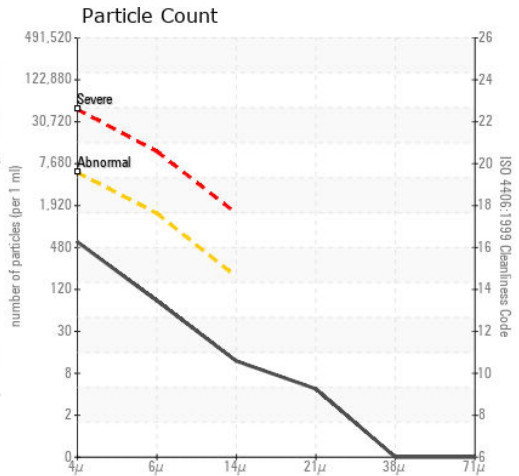
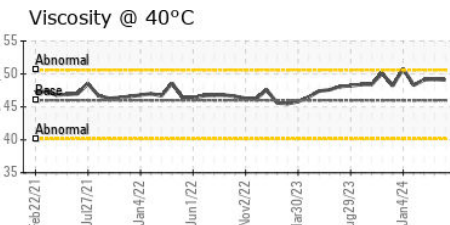
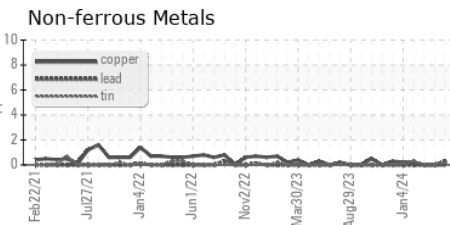
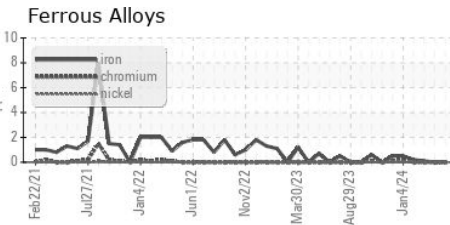
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---------------|--------|------------|---------|----------|----------|
|---------------|--------|------------|---------|----------|----------|

Color

Bottom



## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : RP0042509  
**Lab Number** : **06174595**  
**Unique Number** : 11020648  
**Test Package** : IND 2

**Received** : 09 May 2024  
**Tested** : 10 May 2024  
**Diagnosed** : 10 May 2024 - Wes Davis

**OUTOKUMPU STAINLESS USA**  
 HWY 43 N  
 CALVERT, AL  
 US 36513  
 Contact: MARIO JOHNSON  
 Mario.johnson@outokumpu.com  
 T: (251)321-4105  
 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)