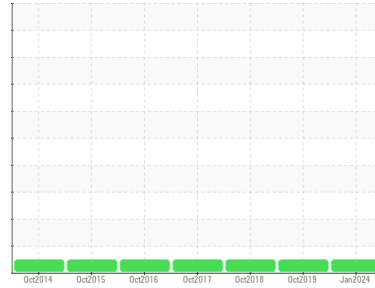




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**NISSEI A-14 - S23614002K1**

Component  
**Hydraulic System**

Fluid  
**AW HYDRAULIC OIL ISO 46 (248 GAL)**

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. 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 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>WC0819571</b>   | WCI2335483  | WCI2316536  |
| Sample Date        | Client Info |             |            | <b>17 Jan 2024</b> | 16 Oct 2019 | 02 Oct 2018 |
| Machine Age        | yrs         | Client Info |            | <b>0</b>           | 0           | 0           |
| Oil Age            | yrs         | 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      |

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

| WEAR METALS |     | method      | limit/base | current      | history1 | history2 |
|-------------|-----|-------------|------------|--------------|----------|----------|
| Iron        | ppm | ASTM D5185m | >20        | <b>0</b>     | <1       | <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>1</b>     | <1       | <1       |
| Copper      | ppm | ASTM D5185m | >20        | <b>11</b>    | 9        | 8        |
| Tin         | ppm | ASTM D5185m | >20        | <b>&lt;1</b> | 0        | <1       |
| Antimony    | ppm | ASTM D5185m |            | <b>---</b>   | 0        | 0        |
| Vanadium    | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |
| Cadmium     | ppm | ASTM D5185m |            | <b>0</b>     | 0        | 0        |

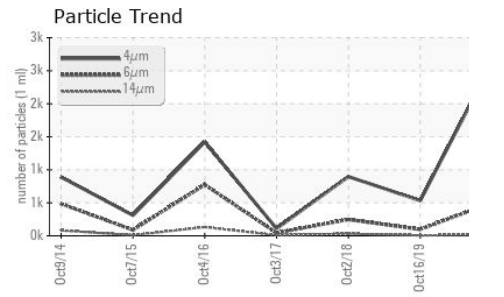
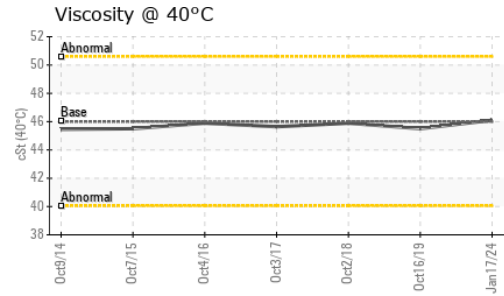
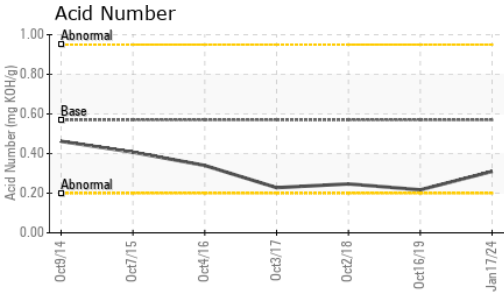
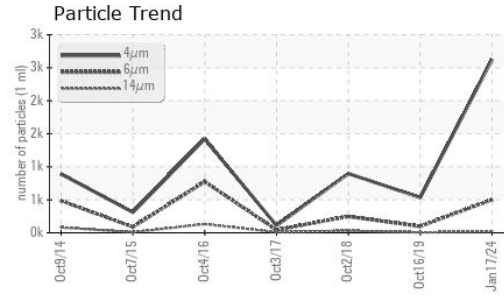
| ADDITIVES  |     | method      | limit/base | current      | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron      | ppm | ASTM D5185m | 5          | <b>0</b>     | 0        | 0        |
| Barium     | ppm | ASTM D5185m | 5          | <b>6</b>     | 8        | 8        |
| Molybdenum | ppm | ASTM D5185m | 5          | <b>0</b>     | 0        | 0        |
| Manganese  | ppm | ASTM D5185m |            | <b>&lt;1</b> | <1       | <1       |
| Magnesium  | ppm | ASTM D5185m | 25         | <b>2</b>     | <1       | <1       |
| Calcium    | ppm | ASTM D5185m | 200        | <b>41</b>    | 39       | 38       |
| Phosphorus | ppm | ASTM D5185m | 300        | <b>319</b>   | 299      | 277      |
| Zinc       | ppm | ASTM D5185m | 370        | <b>360</b>   | 342      | 324      |
| Sulfur     | ppm | ASTM D5185m | 2500       | <b>1467</b>  | 1238     | 1927     |

| CONTAMINANTS |     | method      | limit/base | current      | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon      | ppm | ASTM D5185m | >15        | <b>&lt;1</b> | <1       | <1       |
| Sodium       | ppm | ASTM D5185m |            | <b>0</b>     | <1       | 0        |
| Potassium    | ppm | ASTM D5185m | >20        | <b>0</b>     | 5        | <1       |

| FLUID CLEANLINESS |  | method       | limit/base | current         | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|----------|----------|
| Particles >4µm    |  | ASTM D7647   |            | <b>2624</b>     | 533      | 897      |
| Particles >6µm    |  | ASTM D7647   | >1300      | <b>501</b>      | 98       | 247      |
| Particles >14µm   |  | ASTM D7647   | >160       | <b>18</b>       | 6        | 31       |
| Particles >21µm   |  | ASTM D7647   | >40        | <b>4</b>        | 1        | 9        |
| Particles >38µm   |  | ASTM D7647   | >10        | <b>0</b>        | 0        | 0        |
| Particles >71µm   |  | ASTM D7647   | >3         | <b>0</b>        | 0        | 0        |
| Oil Cleanliness   |  | ISO 4406 (c) | >--/17/14  | <b>19/16/11</b> | 16/14/10 | 17/15/12 |



# OIL ANALYSIS REPORT

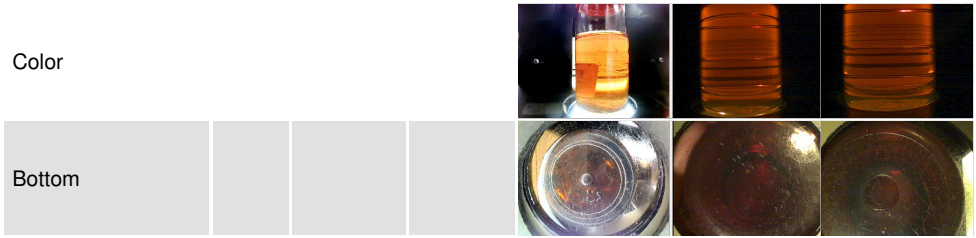


| FLUID DEGRADATION |          | method     | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | 0.57       | <b>0.31</b> | 0.217    | 0.247    |

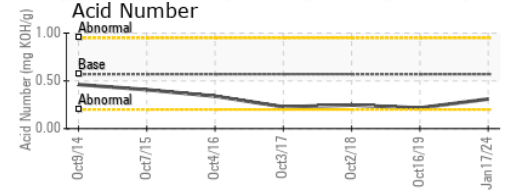
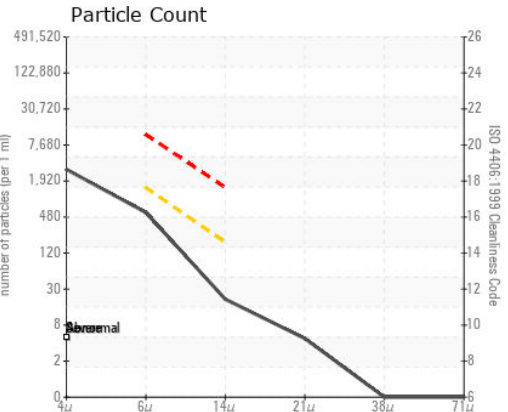
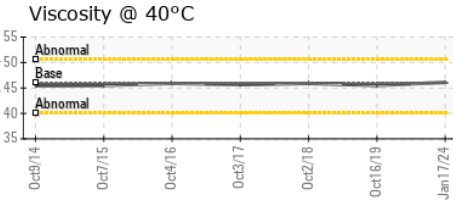
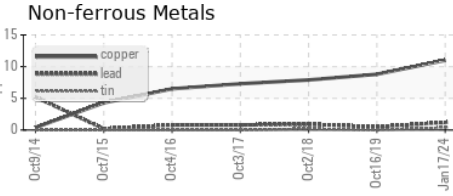
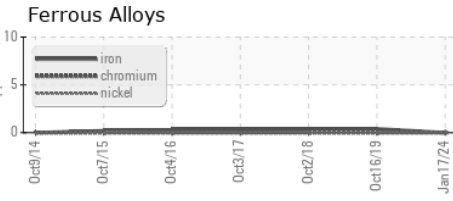
| VISUAL           |        | method  | limit/base | current      | history1 | history2 |
|------------------|--------|---------|------------|--------------|----------|----------|
| White Metal      | scalar | *Visual | NONE       | <b>NONE</b>  | NONE     | NONE     |
| Yellow Metal     | scalar | *Visual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

| FLUID PROPERTIES |     | method    | limit/base | current     | history1 | history2 |
|------------------|-----|-----------|------------|-------------|----------|----------|
| Visc @ 40°C      | cSt | ASTM D445 | 46         | <b>46.1</b> | 45.5     | 45.89    |

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



## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0819571 **Received** : 18 Jan 2024  
**Lab Number** : 06064269 **Diagnosed** : 19 Jan 2024  
**Unique Number** : 10835651 **Diagnostician** : Wes Davis  
**Test Package** : IND 2

**NIAGARA PLASTICS - CAPPLUGS**  
 7090 EDINBORO RD  
 ERIE, PA  
 US 16509  
 Contact: JOE SANDERS  
 joe.sanders@caplugs.com  
 T: (814)868-3671 x:5131  
 F: (814)868-9875

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)