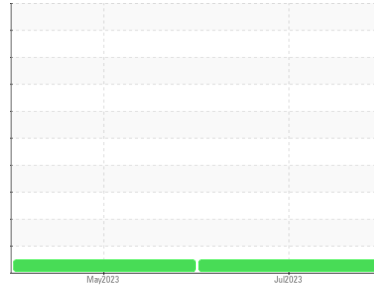




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
H1 (S/N 10875337)

Component
Hydraulic System

Fluid
FIRE-RESISTANT FLUID ISO 46 (225 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the component. The amount and size of particulates present in the system 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 | | | USP248435 | USP248433 | --- |
| Sample Date | Client Info | | | 17 Jul 2023 | 01 May 2023 | --- |
| Machine Age | mths | Client Info | | 12 | 10 | --- |
| Oil Age | mths | Client Info | | 12 | 10 | --- |
| Oil Changed | Client Info | | | Not Changed | Not Changed | --- |
| Sample Status | | | | NORMAL | NORMAL | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|-------------|-----|-------------|------------|----------|----------|----------|
| Iron | ppm | ASTM D5185m | >20 | 2 | 3 | --- |
| Chromium | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Silver | ppm | ASTM D5185m | | 0 | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Lead | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Copper | ppm | ASTM D5185m | >75 | 0 | <1 | --- |
| Tin | ppm | ASTM D5185m | >10 | 0 | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | 0 | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|------------|----------|----------|
| Boron | ppm | ASTM D5185m | 5 | 0 | 0 | --- |
| Barium | ppm | ASTM D5185m | 5 | 0 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | 5 | 0 | 0 | --- |
| Manganese | ppm | ASTM D5185m | | 0 | 0 | --- |
| Magnesium | ppm | ASTM D5185m | 5 | 0 | <1 | --- |
| Calcium | ppm | ASTM D5185m | 50 | 2 | <1 | --- |
| Phosphorus | ppm | ASTM D5185m | 175 | 48 | 68 | --- |
| Zinc | ppm | ASTM D5185m | 62 | 0 | 8 | --- |
| Sulfur | ppm | ASTM D5185m | 500 | 124 | 124 | --- |

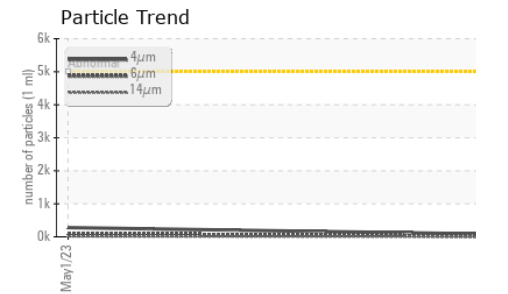
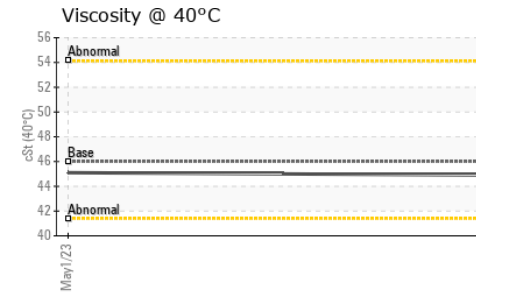
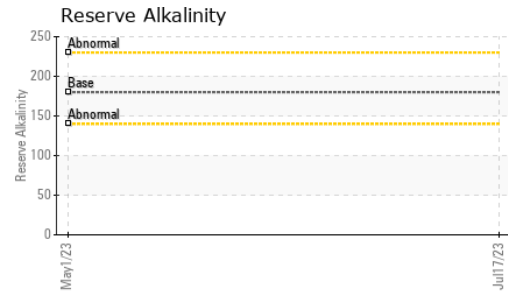
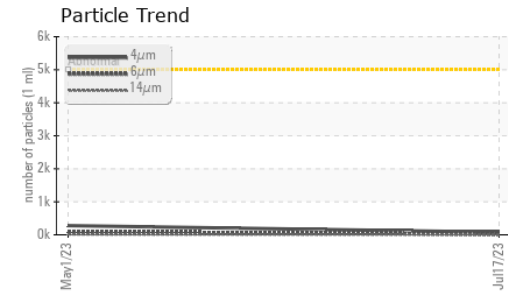
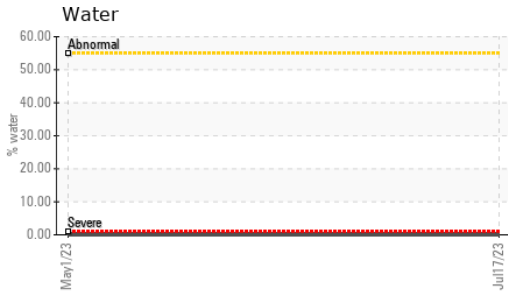
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|--------------|-----|-------------|------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >20 | 4 | 5 | --- |
| Sodium | ppm | ASTM D5185m | | <1 | 0 | --- |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 1 | --- |
| Water | % | ASTM D6304 | >55 | 0.002 | 0.003 | --- |
| ppm Water | ppm | ASTM D6304 | >55000 | 22.1 | 29.3 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|----------------|----------|----------|
| Particles >4µm | | ASTM D7647 | >5000 | 80 | 279 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | 19 | 94 | --- |
| Particles >14µm | | ASTM D7647 | >160 | 3 | 10 | --- |
| Particles >21µm | | ASTM D7647 | >40 | 1 | 2 | --- |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | --- |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 13/11/9 | 15/14/10 | --- |

| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 3.63 | 0.34 | 1.90 | --- |



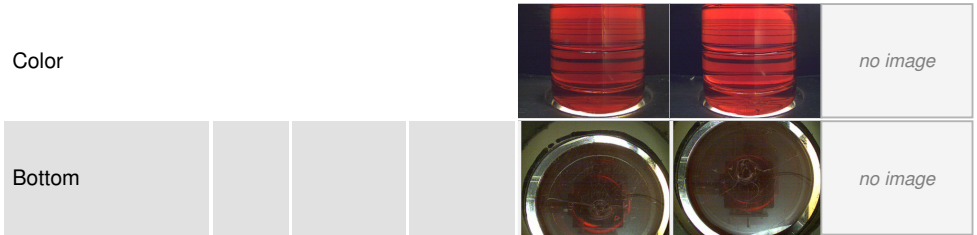
OIL ANALYSIS REPORT



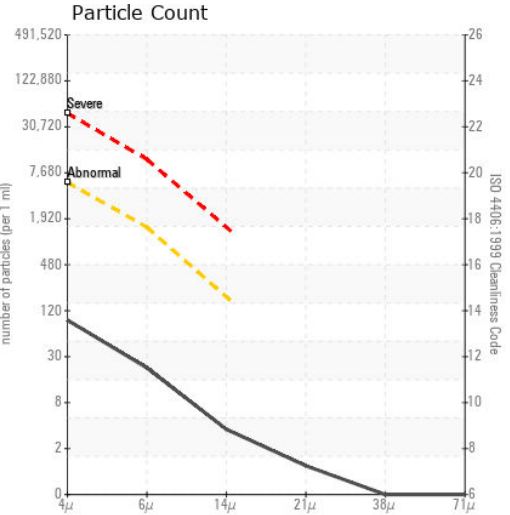
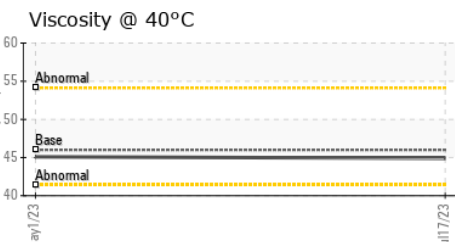
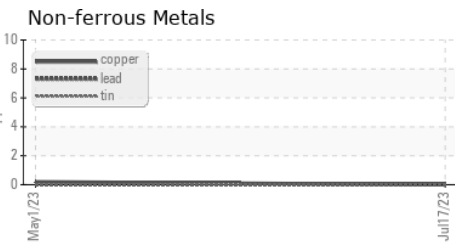
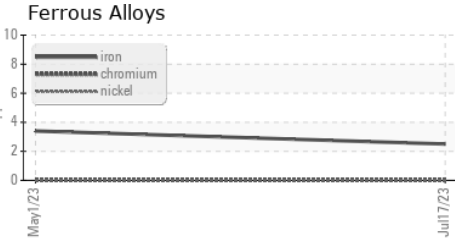
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | --- |
| Silt | scalar | *Visual | NONE | NONE | --- |
| Debris | scalar | *Visual | NONE | NONE | --- |
| Sand/Dirt | scalar | *Visual | NONE | NONE | --- |
| Appearance | scalar | *Visual | NORML | NORML | --- |
| Odor | scalar | *Visual | NORML | NORML | --- |
| Emulsified Water | scalar | *Visual | >55 | NEG | --- |
| Free Water | scalar | *Visual | | NEG | --- |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 46 | 44.9 | 45.1 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : USP248435 Received : 20 Jul 2023
 Lab Number : 05903760 Diagnosed : 24 Jul 2023
 Unique Number : 10565116 Diagnostician : Doug Bogart
 Test Package : IND 2 (Additional Tests: pH, ReserveAlk)

NIAGARA BOTTLING
 5711 E GRAND PARKWAY
 BAYTOWN, TX
 US 77523
 Contact: Service Manager

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)

T:
F: