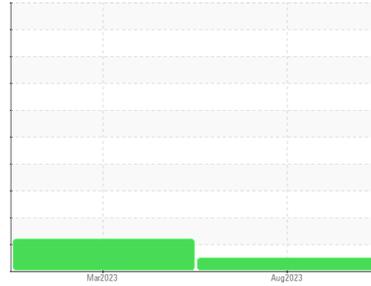




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
050-06 WC-09 (S/N 7142-0314)

Component
Hydraulic System

Fluid
PERFORMANCE PLUS TURBINE R&O 46 (53 GAL)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

The amount and size of particulates present in the system are 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 | | | PH0001964 | PH0000457 | --- |
| Sample Date | Client Info | | | 04 Aug 2023 | 15 Mar 2023 | --- |
| Machine Age | hrs | Client Info | | 216 | 10746 | --- |
| Oil Age | hrs | Client Info | | 216 | 10746 | --- |
| Oil Changed | | Client Info | | Changed | N/A | --- |
| Sample Status | | | | NORMAL | ATTENTION | --- |

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

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|------------|-----|-------------|------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | | 0 | 0 | --- |
| Barium | ppm | ASTM D5185m | | <1 | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | <1 | 0 | --- |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | --- |
| Magnesium | ppm | ASTM D5185m | | 7 | 0 | --- |
| Calcium | ppm | ASTM D5185m | | 31 | 19 | --- |
| Phosphorus | ppm | ASTM D5185m | | 307 | 309 | --- |
| Zinc | ppm | ASTM D5185m | | 375 | 356 | --- |
| Sulfur | ppm | ASTM D5185m | | 751 | 843 | --- |

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

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|-------------------|--|--------------|------------|-----------------|------------|----------|
| Particles >4µm | | ASTM D7647 | >2500 | 2108 | ▲ 3955 | --- |
| Particles >6µm | | ASTM D7647 | >640 | 585 | ▲ 1170 | --- |
| Particles >14µm | | ASTM D7647 | >160 | 41 | 41 | --- |
| Particles >21µm | | ASTM D7647 | >40 | 8 | 7 | --- |
| Particles >38µm | | ASTM D7647 | >10 | 0 | 0 | --- |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >18/16/14 | 18/16/13 | ▲ 19/17/13 | --- |

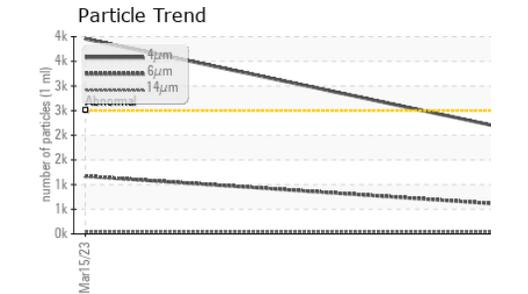
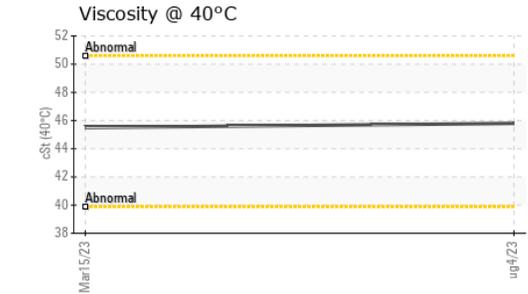
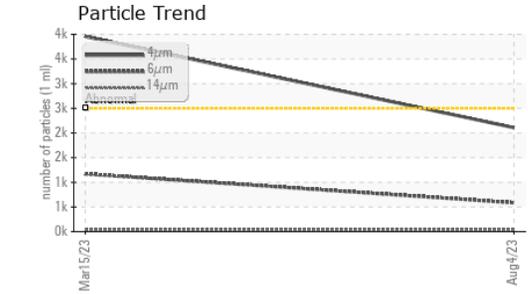
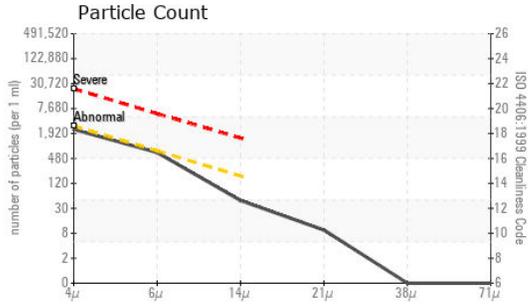
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|-------------------|----------|------------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.35 | 0.38 | --- |

Particle Filter (Magn: 200 x)





OIL ANALYSIS REPORT



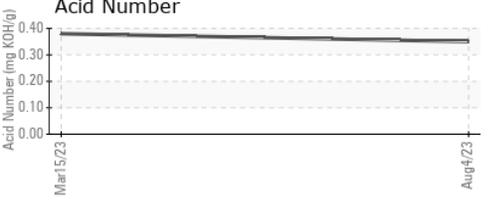
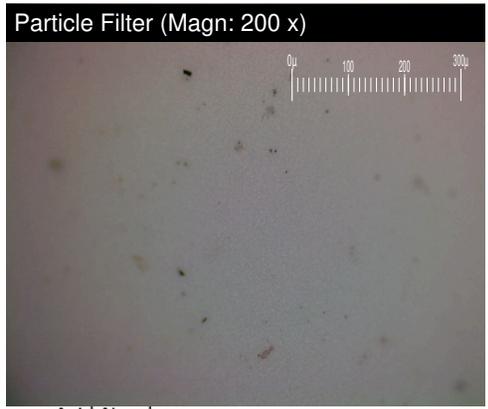
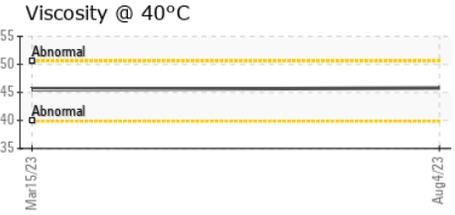
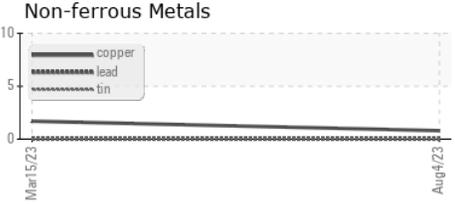
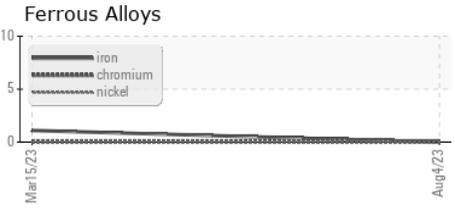
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | NONE | --- |
| Precipitate | scalar | *Visual | NONE | NONE | ---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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 45.8 | 45.5 | --- |

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

| | | | |
|-----------|--|----------|----------|
| Color | | | no image |
| Bottom | | | no image |
| PrtFilter | | no image | no image |

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : PH0001964 **Received** : 14 Aug 2023
Lab Number : 05923412 **Diagnosed** : 15 Aug 2023
Unique Number : 10603359 **Diagnostician** : Angela Borella
Test Package : PLANT (Additional Tests: KF, PrtFilter)

SMC LTD
 3250 BRICKWAY BLVD
 SANTA ROSA, CA
 US 95403
 Contact: SUSAN BENNETT
 susan.bennett@smcltd.com
 T:
 F:

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)