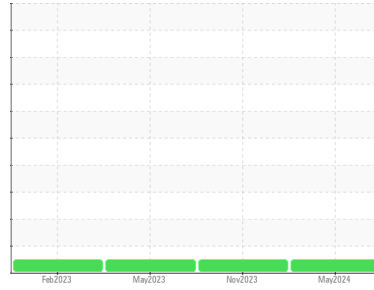




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area

VPSA PLANT

Machine Id

DRESSER/ROOTS VPSAB1 FEED BLOWER SHAFT

Component

Blower

Fluid

SHELL MORLINA S3 BA 220 (2 GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. (Customer Sample Comment: No filter)

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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 | | WC0817420 | WC0817415 | WC0817435 |
| Sample Date | Client Info | | 14 May 2024 | 28 Nov 2023 | 23 May 2023 |
| Machine Age | mths | Client Info | 141 | 141 | 135 |
| Oil Age | mths | Client Info | 6 | 6 | 3 |
| Oil Changed | Client Info | | Changed | Changed | Changed |
| Sample Status | | | NORMAL | NORMAL | NORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|------------|-----------------|--------------|----------|----------|
| PQ | ASTM D8184 | | 12 | 9 | 7 |
| Iron | ppm | ASTM D5185m >20 | 1 | 0 | 0 |
| Chromium | ppm | ASTM D5185m >20 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >20 | <1 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Silver | ppm | ASTM D5185m | 1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >20 | 1 | <1 | 0 |
| Lead | ppm | ASTM D5185m >20 | <1 | 0 | 0 |
| Copper | ppm | ASTM D5185m >20 | 1 | <1 | 0 |
| Tin | ppm | ASTM D5185m >20 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | <1 | 0 | 0 |

ADDITIVES

| | method | limit/base | current | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron | ppm | ASTM D5185m | 0 | 0 | 0 |
| Barium | ppm | ASTM D5185m | 1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | <1 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | <1 | <1 | 0 |
| Calcium | ppm | ASTM D5185m | 46 | 1 | 0 |
| Phosphorus | ppm | ASTM D5185m | 9 | 0 | 0 |
| Zinc | ppm | ASTM D5185m | 13 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 12381 | 8461 | 7754 |

CONTAMINANTS

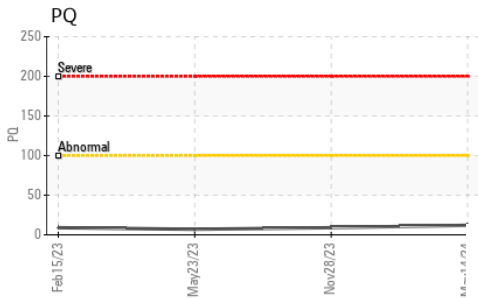
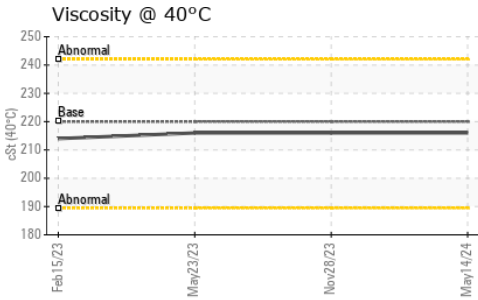
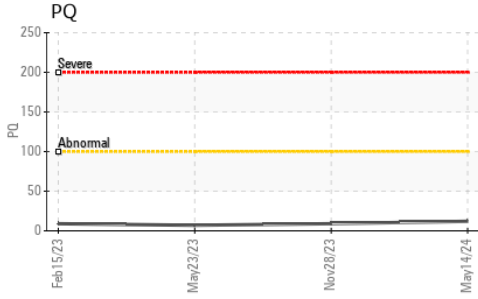
| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|------------|----------|----------|
| Silicon | ppm | ASTM D5185m >15 | 3 | 2 | <1 |
| Sodium | ppm | ASTM D5185m | 2 | 0 | 0 |
| Potassium | ppm | ASTM D5185m >20 | 2 | 2 | <1 |
| Water | % | ASTM D6304 | NEG | NEG | NEG |

FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|-----------------|--------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 0.05 | 0.142 | 0.06 | 0.305 |



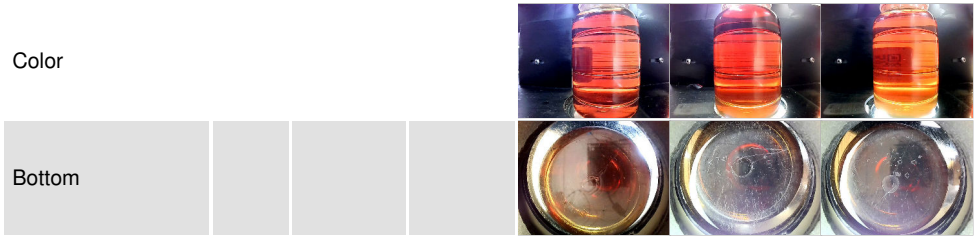
OIL ANALYSIS REPORT



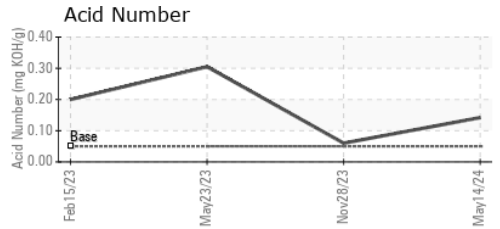
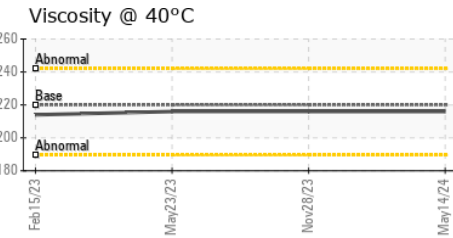
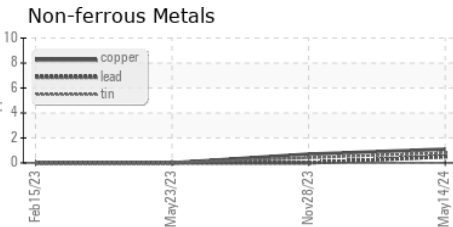
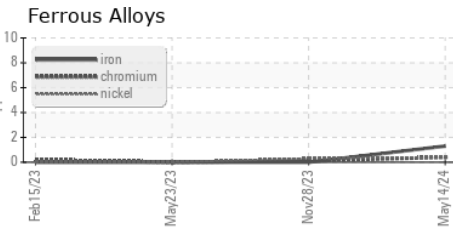
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE |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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|---------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 220 | 216 | 216 | 216 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0817420 **Received** : 17 May 2024
Lab Number : 06183401 **Tested** : 29 May 2024
Unique Number : 11034727 **Diagnosed** : 29 May 2024 - Jonathan Hester
Test Package : PLANT

ROCKY MOUNT WAST WATER TREATMENT PLANT
 331 S FRANKLIN ST
 ROCKY MOUNT, NC
 US 27802
 Contact: BARRY GRIFFIN
 barry.griffin@rockymountnc.gov
 T: (252)972-1402
 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)