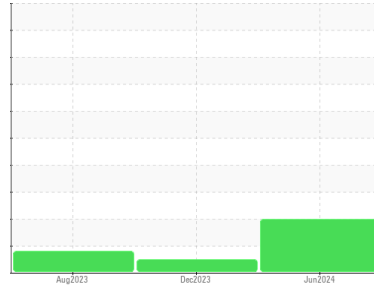




OIL ANALYSIS REPORT

Sample Rating Trend



ISO



Area

Paper Machine

Machine Id

Vacuum Pump #6 Gearbox

Component

Gearbox

Fluid

MOBIL MOBILGEAR SHC 220 (35 GAL)

DIAGNOSIS

Recommendation

We recommend you service the filters on this component if applicable. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is a high amount of particulates present 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 | WC0776486 | WC0776496 | WC0776544 |
| Sample Date | Client Info | 06 Jun 2024 | 27 Dec 2023 | 11 Aug 2023 |
| Machine Age | hrs | 0 | 0 | 0 |
| Oil Age | hrs | 0 | 0 | 0 |
| Oil Changed | Client Info | N/A | N/A | N/A |
| Sample Status | | ABNORMAL | NORMAL | ABNORMAL |

WEAR METALS

| method | limit/base | current | history1 | history2 | |
|----------|------------|------------------|--------------|----------|----|
| Iron | ppm | ASTM D5185m >200 | 8 | 5 | 7 |
| Chromium | ppm | ASTM D5185m >15 | 0 | 0 | 0 |
| Nickel | ppm | ASTM D5185m >15 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 0 | 0 | <1 |
| Lead | ppm | ASTM D5185m >100 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m >200 | 0 | 0 | <1 |
| Tin | ppm | ASTM D5185m >25 | <1 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | 0 | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | 0 | 0 | 0 |

ADDITIVES

| method | limit/base | current | history1 | history2 | |
|------------|------------|-------------|--------------|----------|------|
| Boron | ppm | ASTM D5185m | 28 | 20 | 19 |
| Barium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 0 |
| Manganese | ppm | ASTM D5185m | <1 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 1 | 0 | 3 |
| Calcium | ppm | ASTM D5185m | 5 | 4 | 4 |
| Phosphorus | ppm | ASTM D5185m | 417 | 402 | 463 |
| Zinc | ppm | ASTM D5185m | 8 | 0 | 0 |
| Sulfur | ppm | ASTM D5185m | 2769 | 2062 | 2546 |

CONTAMINANTS

| method | limit/base | current | history1 | history2 | |
|-----------|------------|------------------|--------------|----------|-------|
| Silicon | ppm | ASTM D5185m >50 | 21 | 20 | 19 |
| Sodium | ppm | ASTM D5185m | 11 | 5 | 9 |
| Potassium | ppm | ASTM D5185m >20 | 2 | 0 | 2 |
| Water | % | ASTM D6304 >0.2 | 0.005 | 0.025 | 0.008 |
| ppm Water | ppm | ASTM D6304 >2000 | 51 | 253 | 80.6 |

FLUID CLEANLINESS

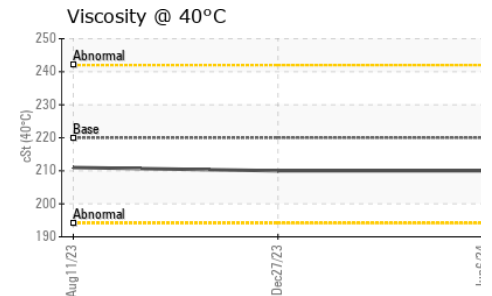
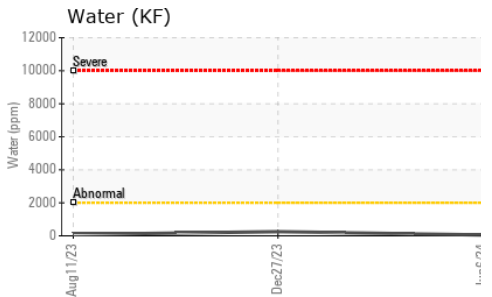
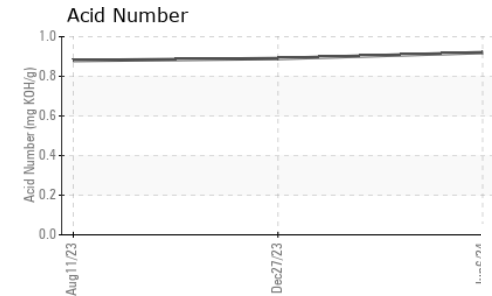
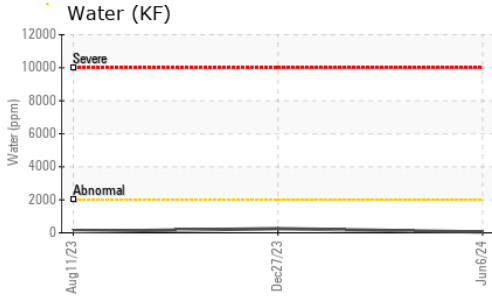
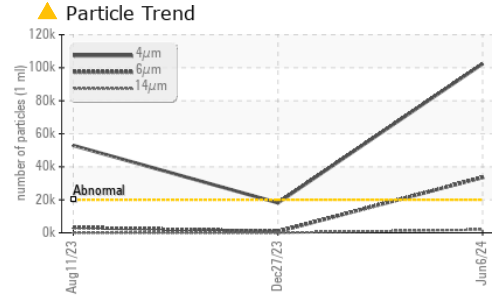
| method | limit/base | current | history1 | history2 |
|-----------------|------------------------|-------------------|----------|------------|
| Particles >4µm | ASTM D7647 >20000 | ▲ 102406 | 18169 | ▲ 52918 |
| Particles >6µm | ASTM D7647 >5000 | ▲ 33545 | 746 | 3215 |
| Particles >14µm | ASTM D7647 >640 | ▲ 1915 | 20 | 100 |
| Particles >21µm | ASTM D7647 >160 | ● 269 | 6 | 28 |
| Particles >38µm | ASTM D7647 >40 | 4 | 2 | 4 |
| Particles >71µm | ASTM D7647 >10 | 1 | 1 | 1 |
| Oil Cleanliness | ISO 4406 (c) >21/19/16 | ▲ 24/22/18 | 21/17/11 | ▲ 23/19/14 |

FLUID DEGRADATION

| method | limit/base | current | history1 | history2 | |
|------------------|------------|------------|-------------|----------|------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.92 | 0.89 | 0.88 |



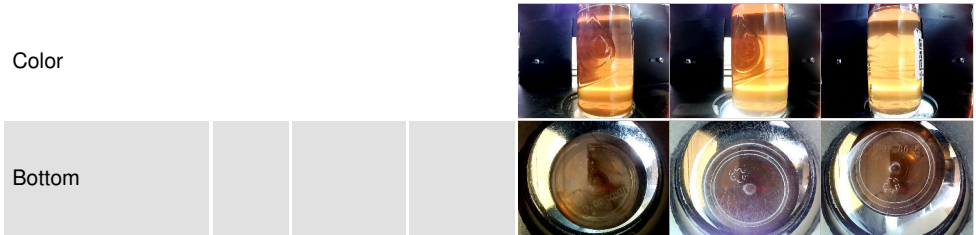
OIL ANALYSIS REPORT



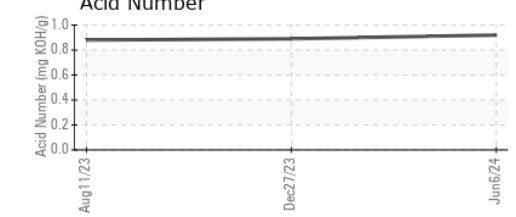
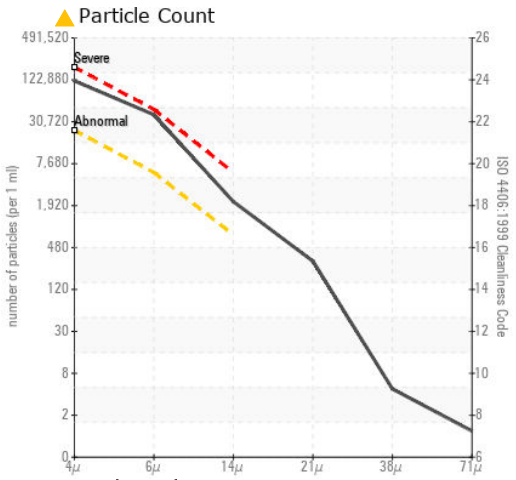
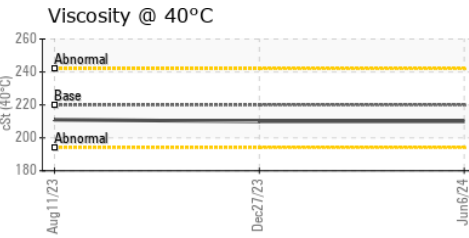
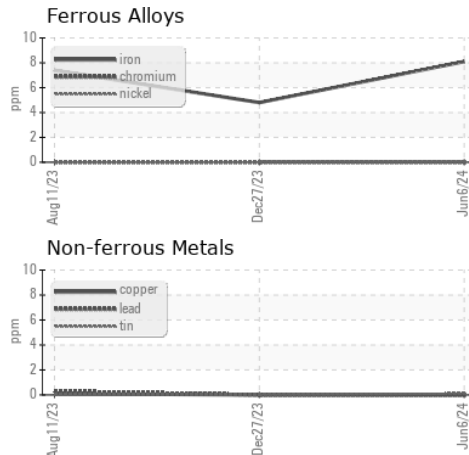
| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE | NONE |
| Silt | scalar | *Visual | NONE | NONE | LIGHT |
| 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 | >0.2 | NEG | NEG |
| Free Water | scalar | *Visual | | NEG | NEG |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 220 | 210 | 211 |

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



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0776486
Lab Number : 06204614
Unique Number : 11072075
Test Package : PLANT

Received : 10 Jun 2024
Tested : 12 Jun 2024
Diagnosed : 12 Jun 2024 - Doug Bogart

CASCADES CONTAINERBOARD PACKAGING - BEARPACK PROJECT
 10026 OLD RIDGE ROAD
 ASHLAND, VA
 US 23005
 Contact: MARC-ANDRE HUBERT
 marc-andre_hubert@cascades.com

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)