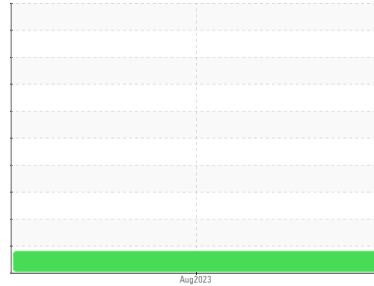




# PROBLEM SUMMARY

Sample Rating Trend

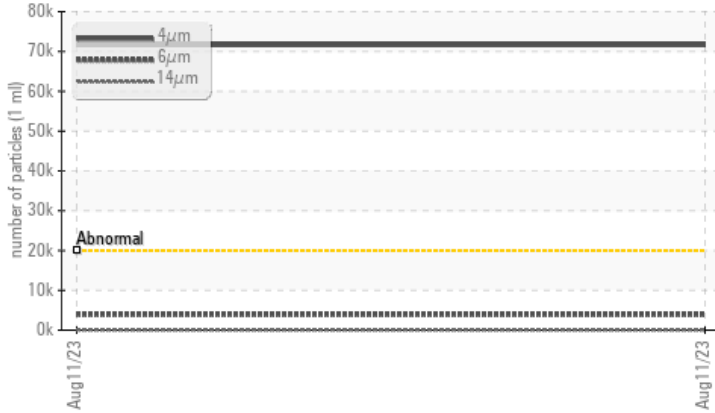
ISO



Area  
**Paper Machine**  
Machine Id  
**Vacuum Pump #10 Gearbox**  
Component  
**Gearbox**  
Fluid  
**MOBIL MOBILGEAR SHC 220 (35 GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

No corrective action is recommended at this time.  
Resample at the next service interval to monitor.

## PROBLEMATIC TEST RESULTS

|                 |              |           |                   |     |     |
|-----------------|--------------|-----------|-------------------|-----|-----|
| Sample Status   |              |           | <b>ABNORMAL</b>   | --- | --- |
| Particles >4µm  | ASTM D7647   | >20000    | ▲ <b>71644</b>    | --- | --- |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | ▲ <b>23/19/13</b> | --- | --- |

Customer Id: CASASH  
Sample No.: WC0776547  
Lab Number: 05927234  
Test Package: PLANT



To manage this report scan the QR code

To discuss the diagnosis or test data:  
Don Baldrige +1  
[don.b505@comcast.net](mailto:don.b505@comcast.net)

To change component or sample information:  
Customer Service +1 1-800-237-1369  
[customerservice@wearcheck.com](mailto:customerservice@wearcheck.com)

## RECOMMENDED ACTIONS

*There are no recommended actions for this sample.*

## HISTORICAL DIAGNOSIS



# OIL ANALYSIS REPORT

Sample Rating Trend

ISO



Area  
**Paper Machine**  
 Machine Id  
**Vacuum Pump #10 Gearbox**  
 Component  
**Gearbox**  
 Fluid  
**MOBIL MOBILGEAR SHC 220 (35 GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

There is a high amount of silt (particulates < 14 microns in size) 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 |             | <b>WC0776547</b>   | ---      | ---      |
| Sample Date        | Client Info |             | <b>11 Aug 2023</b> | ---      | ---      |
| Machine Age        | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Age            | hrs         | Client Info | <b>0</b>           | ---      | ---      |
| Oil Changed        | Client Info |             | <b>N/A</b>         | ---      | ---      |
| Sample Status      |             |             | <b>ABNORMAL</b>    | ---      | ---      |

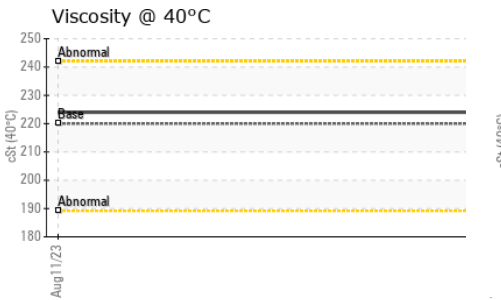
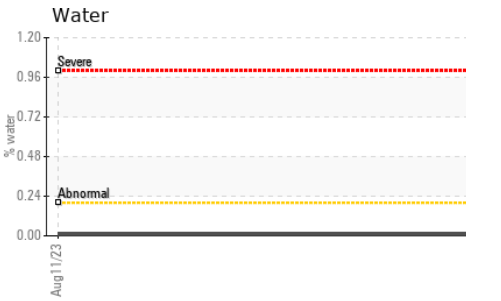
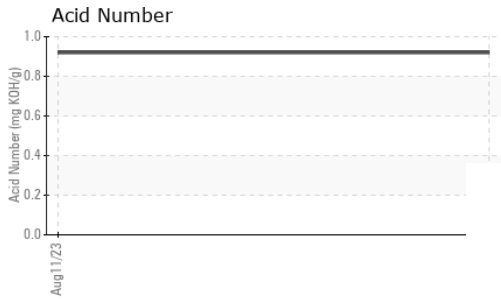
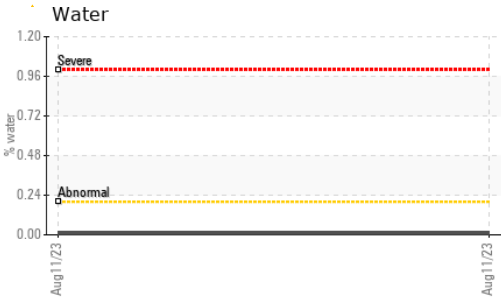
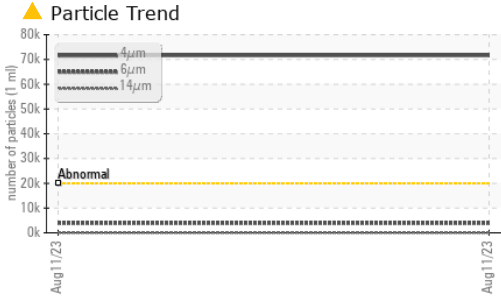
| WEAR METALS | method | limit/base       | current      | history1 | history2 |
|-------------|--------|------------------|--------------|----------|----------|
| Iron        | ppm    | ASTM D5185m >200 | <b>22</b>    | ---      | ---      |
| Chromium    | ppm    | ASTM D5185m >15  | <b>&lt;1</b> | ---      | ---      |
| Nickel      | ppm    | ASTM D5185m >15  | <b>0</b>     | ---      | ---      |
| Titanium    | ppm    | ASTM D5185m      | <b>&lt;1</b> | ---      | ---      |
| Silver      | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Aluminum    | ppm    | ASTM D5185m >25  | <b>&lt;1</b> | ---      | ---      |
| Lead        | ppm    | ASTM D5185m >100 | <b>&lt;1</b> | ---      | ---      |
| Copper      | ppm    | ASTM D5185m >200 | <b>&lt;1</b> | ---      | ---      |
| Tin         | ppm    | ASTM D5185m >25  | <b>0</b>     | ---      | ---      |
| Vanadium    | ppm    | ASTM D5185m      | <b>&lt;1</b> | ---      | ---      |
| Cadmium     | ppm    | ASTM D5185m      | <b>0</b>     | ---      | ---      |

| ADDITIVES  | method | limit/base  | current      | history1 | history2 |
|------------|--------|-------------|--------------|----------|----------|
| Boron      | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Barium     | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Molybdenum | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Manganese  | ppm    | ASTM D5185m | <b>&lt;1</b> | ---      | ---      |
| Magnesium  | ppm    | ASTM D5185m | <b>2</b>     | ---      | ---      |
| Calcium    | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Phosphorus | ppm    | ASTM D5185m | <b>485</b>   | ---      | ---      |
| Zinc       | ppm    | ASTM D5185m | <b>0</b>     | ---      | ---      |
| Sulfur     | ppm    | ASTM D5185m | <b>2478</b>  | ---      | ---      |

| CONTAMINANTS | method | limit/base       | current      | history1 | history2 |
|--------------|--------|------------------|--------------|----------|----------|
| Silicon      | ppm    | ASTM D5185m >50  | <b>19</b>    | ---      | ---      |
| Sodium       | ppm    | ASTM D5185m      | <b>2</b>     | ---      | ---      |
| Potassium    | ppm    | ASTM D5185m >20  | <b>2</b>     | ---      | ---      |
| Water        | %      | ASTM D6304 >0.2  | <b>0.009</b> | ---      | ---      |
| ppm Water    | ppm    | ASTM D6304 >2000 | <b>97.9</b>  | ---      | ---      |

| FLUID CLEANLINESS | method       | limit/base | current           | history1 | history2 |
|-------------------|--------------|------------|-------------------|----------|----------|
| Particles >4µm    | ASTM D7647   | >20000     | <b>▲ 71644</b>    | ---      | ---      |
| Particles >6µm    | ASTM D7647   | >5000      | <b>3924</b>       | ---      | ---      |
| Particles >14µm   | ASTM D7647   | >640       | <b>55</b>         | ---      | ---      |
| Particles >21µm   | ASTM D7647   | >160       | <b>12</b>         | ---      | ---      |
| Particles >38µm   | ASTM D7647   | >40        | <b>0</b>          | ---      | ---      |
| Particles >71µm   | ASTM D7647   | >10        | <b>0</b>          | ---      | ---      |
| Oil Cleanliness   | ISO 4406 (c) | >21/19/16  | <b>▲ 23/19/13</b> | ---      | ---      |

| FLUID DEGRADATION | method   | limit/base | current     | history1 | history2 |
|-------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN)  | mg KOH/g | ASTM D8045 | <b>0.92</b> | ---      | ---      |



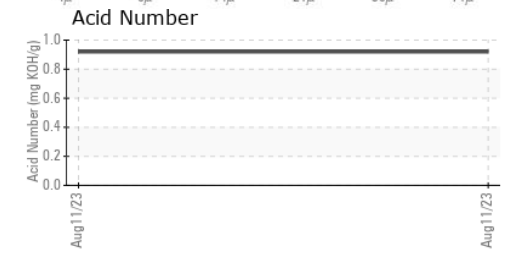
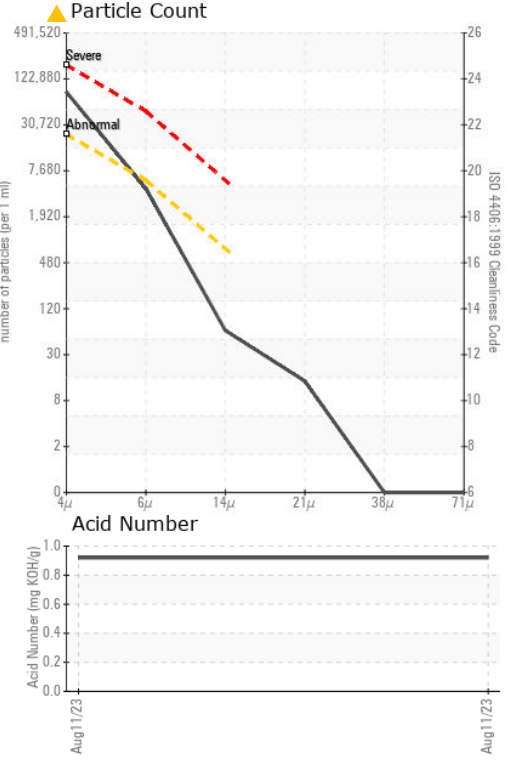
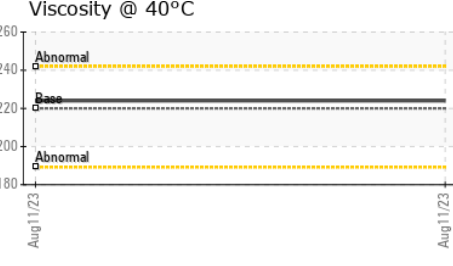
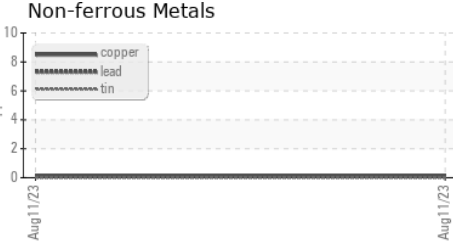
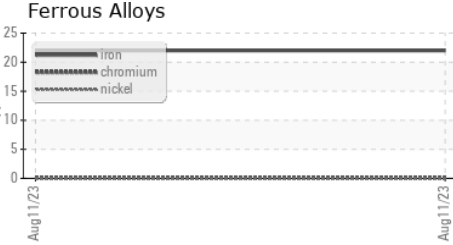
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
|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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 220     | 224      | ---      |

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

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

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0776547 **Received** : 17 Aug 2023  
**Lab Number** : 05927234 **Diagnosed** : 18 Aug 2023  
**Unique Number** : 10607181 **Diagnostician** : Don Baldrige  
**Test Package** : PLANT

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