



# PROBLEM SUMMARY

Sample Rating Trend

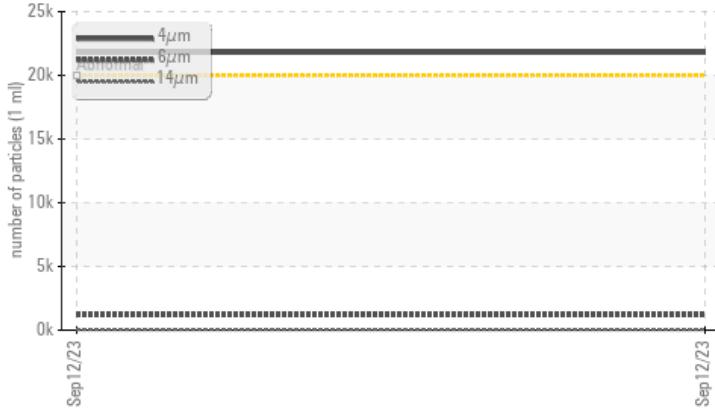
ISO



Machine Id  
**AF12-250-M82376 COOLING WHEEL 2 TURNING MOTOR 2**  
 Component  
**Gear Drive**  
 Fluid  
**MOBIL MOBILGEAR SHC 220 (--- GAL)**

## COMPONENT CONDITION SUMMARY

### ▲ Particle Trend



## RECOMMENDATION

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

## PROBLEMATIC TEST RESULTS

| Sample Status   | ATTENTION                                | --- | --- |
|-----------------|--|-----|-----|
| Particles >4µm  | ASTM D7647 >20000 ▲ <b>21790</b>         | --- | --- |
| Oil Cleanliness | ISO 4406 (c) >21/19/16 ▲ <b>22/17/13</b> | --- | --- |

Customer Id: ARAGRAUS  
 Sample No.: WC0848196  
 Lab Number: 05963563  
 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



Machine Id  
**AF12-250-M82376 COOLING WHEEL 2 TURNING MOTOR 2**  
 Component  
**Gear Drive**  
 Fluid  
**MOBIL MOBILGEAR SHC 220 (--- GAL)**

## DIAGNOSIS

### Recommendation

The oil change at the time of sampling has been noted. 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 moderate 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>WC0848196</b>   | ---      | ---      |
| Sample Date   | Client Info      | <b>12 Sep 2023</b> | ---      | ---      |
| Machine Age   | mths Client Info | <b>60</b>          | ---      | ---      |
| Oil Age       | mths Client Info | <b>12</b>          | ---      | ---      |
| Oil Changed   | Client Info      | <b>Changed</b>     | ---      | ---      |
| Sample Status |                  | <b>ATTENTION</b>   | ---      | ---      |

## WEAR METALS

| method   | limit/base           | current      | history1 | history2 |
|----------|----------------------|--------------|----------|----------|
| PQ       | ASTM D8184           | <b>14</b>    | ---      | ---      |
| Iron     | ppm ASTM D5185m >150 | <b>7</b>     | ---      | ---      |
| Chromium | ppm ASTM D5185m >10  | <b>0</b>     | ---      | ---      |
| Nickel   | ppm ASTM D5185m >10  | <b>0</b>     | ---      | ---      |
| Titanium | ppm ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Silver   | ppm ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Aluminum | ppm ASTM D5185m >25  | <b>&lt;1</b> | ---      | ---      |
| Lead     | ppm ASTM D5185m >100 | <b>0</b>     | ---      | ---      |
| Copper   | ppm ASTM D5185m >50  | <b>&lt;1</b> | ---      | ---      |
| Tin      | ppm ASTM D5185m >10  | <b>0</b>     | ---      | ---      |
| Vanadium | ppm ASTM D5185m      | <b>0</b>     | ---      | ---      |
| Cadmium  | ppm ASTM D5185m      | <b>0</b>     | ---      | ---      |

## ADDITIVES

| method     | limit/base      | current      | history1 | history2 |
|------------|-----------------|--------------|----------|----------|
| Boron      | ppm ASTM D5185m | <b>6</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>0</b>     | ---      | ---      |
| Calcium    | ppm ASTM D5185m | <b>0</b>     | ---      | ---      |
| Phosphorus | ppm ASTM D5185m | <b>494</b>   | ---      | ---      |
| Zinc       | ppm ASTM D5185m | <b>0</b>     | ---      | ---      |
| Sulfur     | ppm ASTM D5185m | <b>3598</b>  | ---      | ---      |

## CONTAMINANTS

| method    | limit/base           | current      | history1 | history2 |
|-----------|----------------------|--------------|----------|----------|
| Silicon   | ppm ASTM D5185m >50  | <b>15</b>    | ---      | ---      |
| Sodium    | ppm ASTM D5185m      | <b>&lt;1</b> | ---      | ---      |
| Potassium | ppm ASTM D5185m >20  | <b>0</b>     | ---      | ---      |
| Water     | % ASTM D6304 >0.1    | <b>0.004</b> | ---      | ---      |
| ppm Water | ppm ASTM D6304 >1000 | <b>47.0</b>  | ---      | ---      |

## FLUID CLEANLINESS

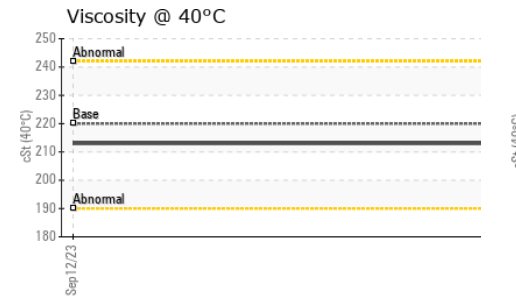
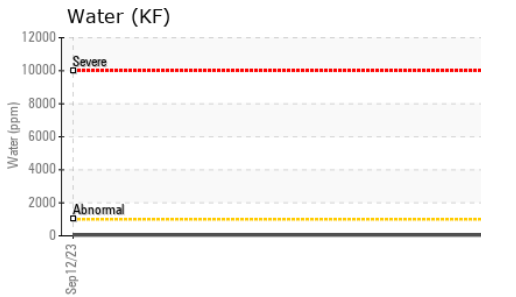
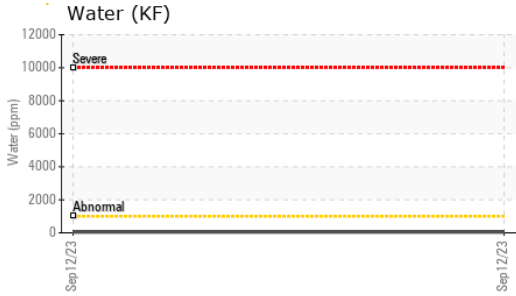
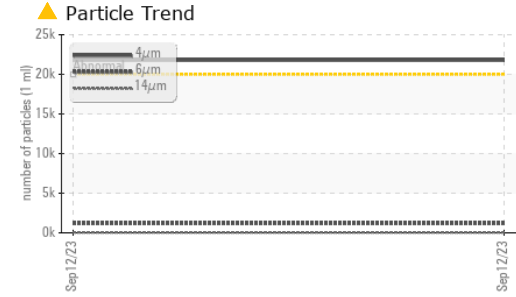
| method          | limit/base             | current           | history1 | history2 |
|-----------------|------------------------|-------------------|----------|----------|
| Particles >4µm  | ASTM D7647 >20000      | <b>▲ 21790</b>    | ---      | ---      |
| Particles >6µm  | ASTM D7647 >5000       | <b>1196</b>       | ---      | ---      |
| Particles >14µm | ASTM D7647 >640        | <b>44</b>         | ---      | ---      |
| Particles >21µm | ASTM D7647 >160        | <b>12</b>         | ---      | ---      |
| Particles >38µm | ASTM D7647 >40         | <b>1</b>          | ---      | ---      |
| Particles >71µm | ASTM D7647 >10         | <b>1</b>          | ---      | ---      |
| Oil Cleanliness | ISO 4406 (c) >21/19/16 | <b>▲ 22/17/13</b> | ---      | ---      |

## FLUID DEGRADATION

| method           | limit/base          | current     | history1 | history2 |
|------------------|---------------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g ASTM D8045 | <b>0.91</b> | ---      | ---      |



# OIL ANALYSIS REPORT



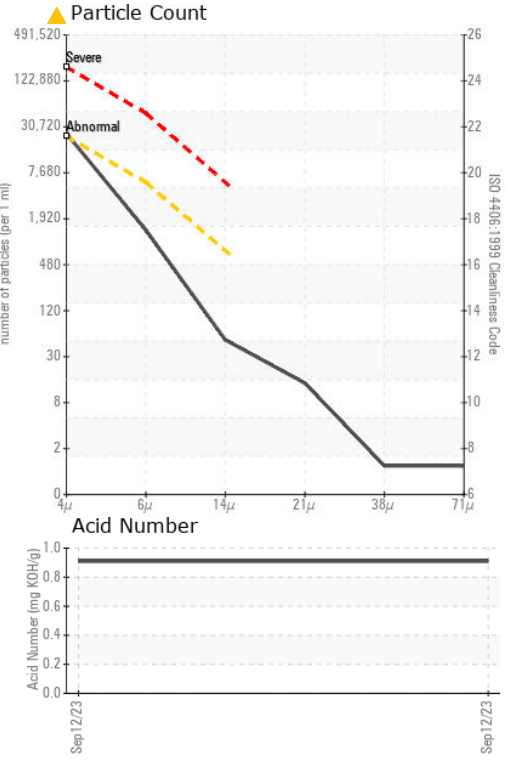
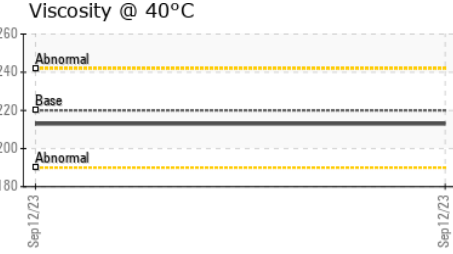
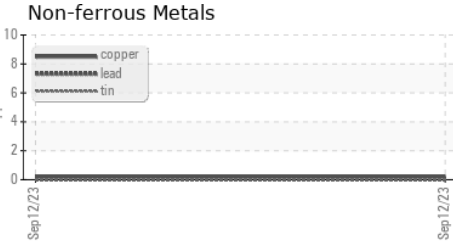
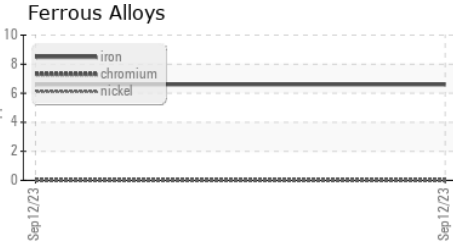
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
| 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    | >0.1    | NEG      | ---      |
| Free Water       | scalar | *Visual    |         | NEG      | ---      |

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 220     | 213      | ---      |

| 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.** : WC0848196 **Received** : 28 Sep 2023  
**Lab Number** : 05963563 **Diagnosed** : 29 Sep 2023  
**Unique Number** : 10670114 **Diagnostician** : Don Baldrige  
**Test Package** : PLANT

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Certificate L2367  
 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)