



# OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area

## Effluent Treatment Plant

Machine Id

### Meadows Water Clarifier Top Gearbox 21-265-009.02

Component

#### Top Gearbox

Fluid

MOBIL SHC 636 (--- GAL)

#### DIAGNOSIS

##### Recommendation

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

##### Wear

All component wear rates are normal.

##### Contamination

There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The water content is negligible.

##### Fluid Condition

The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

#### SAMPLE INFORMATION

| method        | limit/base  | current     | history1 | history2 |
|---------------|-------------|-------------|----------|----------|
| Sample Number | Client Info | WC0776455   | ---      | ---      |
| Sample Date   | Client Info | 04 Jun 2024 | ---      | ---      |
| Machine Age   | hrs         | Client Info | 0        | ---      |
| Oil Age       | hrs         | Client Info | 0        | ---      |
| Oil Changed   | Client Info | N/A         | ---      | ---      |
| Sample Status |             | ABNORMAL    | ---      | ---      |

#### WEAR METALS

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

#### ADDITIVES

| method     | limit/base | current     | history1 | history2 |
|------------|------------|-------------|----------|----------|
| Boron      | ppm        | ASTM D5185m | 0        | ---      |
| Barium     | ppm        | ASTM D5185m | 0        | ---      |
| Molybdenum | ppm        | ASTM D5185m | 0        | ---      |
| Manganese  | ppm        | ASTM D5185m | <1       | ---      |
| Magnesium  | ppm        | ASTM D5185m | 0        | ---      |
| Calcium    | ppm        | ASTM D5185m | 2        | ---      |
| Phosphorus | ppm        | ASTM D5185m | 490      | ---      |
| Zinc       | ppm        | ASTM D5185m | 0        | ---      |
| Sulfur     | ppm        | ASTM D5185m | 33       | ---      |

#### CONTAMINANTS

| method    | limit/base | current          | history1 | history2 |
|-----------|------------|------------------|----------|----------|
| Silicon   | ppm        | ASTM D5185m >50  | 11       | ---      |
| Sodium    | ppm        | ASTM D5185m      | 0        | ---      |
| Potassium | ppm        | ASTM D5185m >20  | <1       | ---      |
| Water     | %          | ASTM D6304 >0.2  | 0.003    | ---      |
| ppm Water | ppm        | ASTM D6304 >2000 | 37       | ---      |

#### FLUID CLEANLINESS

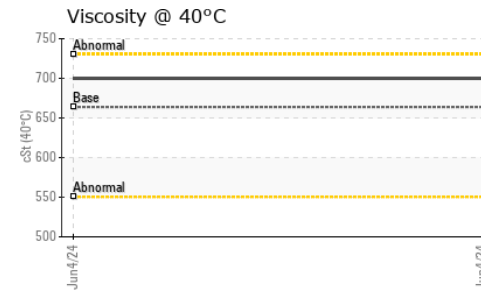
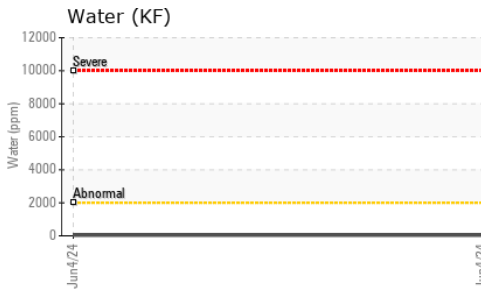
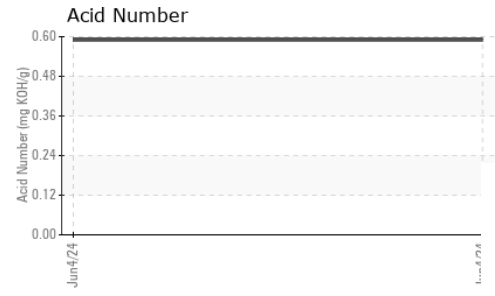
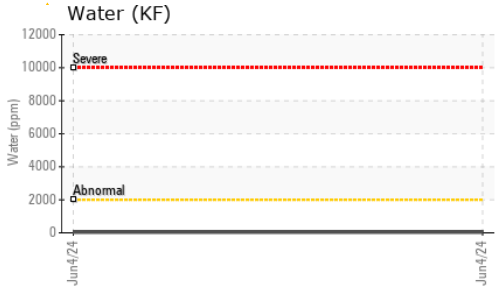
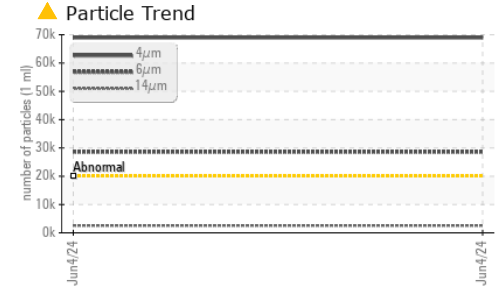
| method          | limit/base             | current    | history1 | history2 |
|-----------------|------------------------|------------|----------|----------|
| Particles >4µm  | ASTM D7647 >20000      | ▲ 68945    | ---      | ---      |
| Particles >6µm  | ASTM D7647 >5000       | ▲ 28616    | ---      | ---      |
| Particles >14µm | ASTM D7647 >640        | ▲ 2553     | ---      | ---      |
| Particles >21µm | ASTM D7647 >160        | ▲ 495      | ---      | ---      |
| Particles >38µm | ASTM D7647 >40         | 6          | ---      | ---      |
| Particles >71µm | ASTM D7647 >10         | 3          | ---      | ---      |
| Oil Cleanliness | ISO 4406 (c) >21/19/16 | ▲ 23/22/19 | ---      | ---      |

#### FLUID DEGRADATION

| method           | limit/base | current    | history1 | history2 |
|------------------|------------|------------|----------|----------|
| Acid Number (AN) | mg KOH/g   | ASTM D8045 | 0.59     | ---      |



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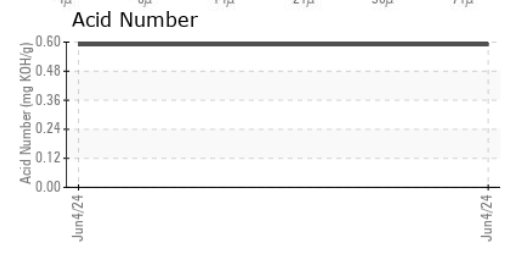
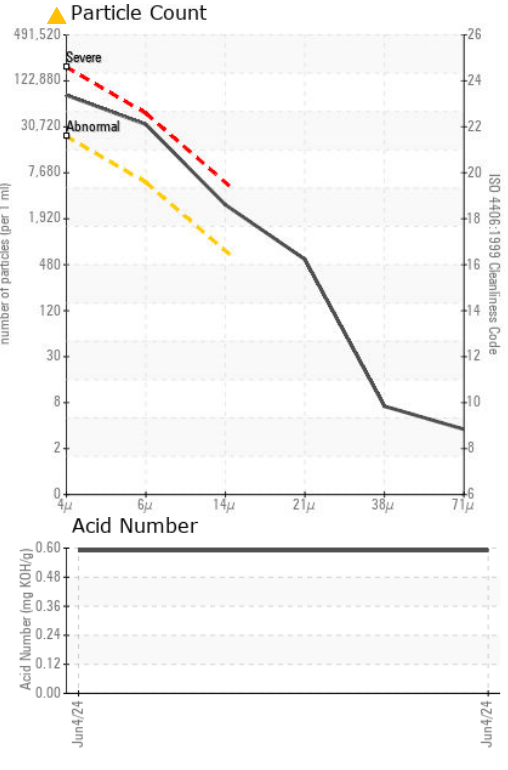
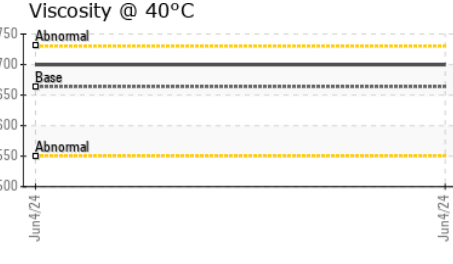
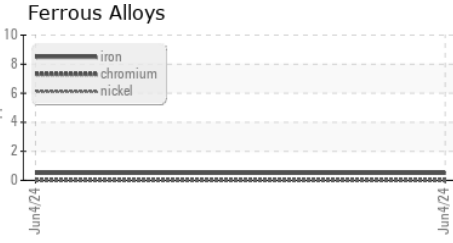
| VISUAL           | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal      | scalar | *Visual    | NONE    | NONE     | ---      |
| Yellow Metal     | scalar | *Visual    | NONE    | NONE     | ---      |
|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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C      | cSt    | ASTM D445  | 663.8   | 700      | ---      |

| 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.** : WC0776455      **Received** : 05 Jun 2024  
**Lab Number** : 06200139      **Tested** : 06 Jun 2024  
**Unique Number** : 11062262      **Diagnosed** : 06 Jun 2024 - Wes Davis  
**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

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)