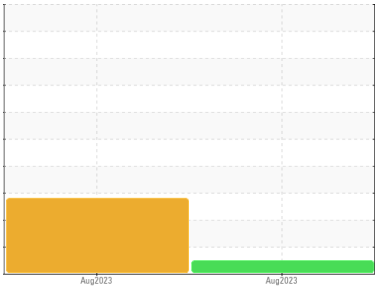
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
**Building 12**
Machine Id
**Roll Crusher 1**
Component
**Northwest Bearing**
Fluid
**MOBIL MOBILGEAR 600 XP ISO 68 (3 GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

**Wear**
All component wear rates are normal.

**Contamination**
The amount and size of particulates present in the system are acceptable. 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 | | **WC0820059** | WC0820057 | --- |
| Sample Date | | Client Info | | **21 Aug 2023** | 20 Aug 2023 | --- |
| Machine Age | hrs | Client Info | | **0** | 0 | --- |
| Oil Age | hrs | Client Info | | **0** | 226 | --- |
| Oil Changed | | Client Info | | **Changed** | Not Changd | --- |
| Sample Status | | | | **NORMAL** | ABNORMAL | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >20 | **2** | ▲ 63 | --- |
| Chromium | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Nickel | ppm | ASTM D5185m | >20 | **0** | <1 | --- |
| Titanium | ppm | ASTM D5185m | | **<1** | 2 | --- |
| Silver | ppm | ASTM D5185m | | **0** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | **0** | 9 | --- |
| Lead | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Copper | ppm | ASTM D5185m | >20 | **<1** | 1 | --- |
| Tin | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **<1** | <1 | --- |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **37** | 22 | --- |
| Barium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | 1 | --- |
| Magnesium | ppm | ASTM D5185m | | **2** | 5 | --- |
| Calcium | ppm | ASTM D5185m | | **<1** | 7 | --- |
| Phosphorus | ppm | ASTM D5185m | | **351** | 352 | --- |
| Zinc | ppm | ASTM D5185m | | **0** | 15 | --- |
| Sulfur | ppm | ASTM D5185m | | **10090** | 9858 | --- |

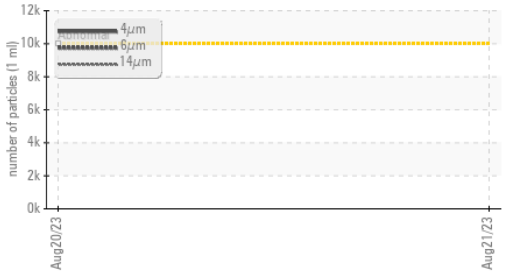
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **3** | ▲ 29 | --- |
| Sodium | ppm | ASTM D5185m | | **<1** | 4 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >10000 | **7582** | --- | --- |
| Particles >6µm | | ASTM D7647 | >2500 | **1876** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | **42** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | **12** | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | **0** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >20/18/14 | **20/18/13** | --- | --- |

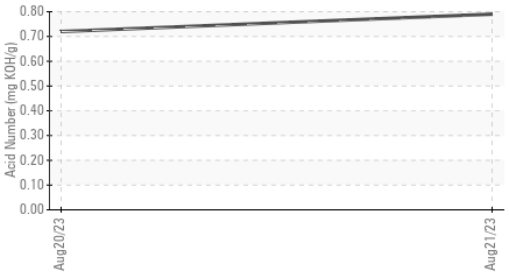
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.79** | 0.72 | --- |

# OIL ANALYSIS REPORT

Particle Trend

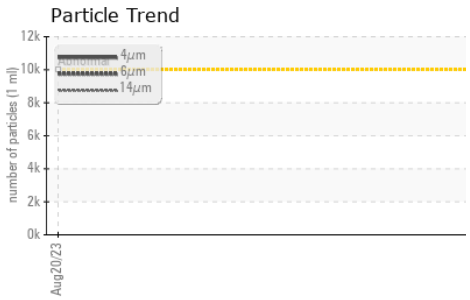



Acid Number




Viscosity @ 40°C


Particle Trend



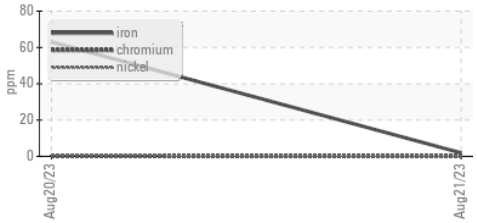

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Debris | scalar | *Visual | NONE | **NONE** | ▲ MODER | --- |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | --- |
| Emulsified Water | scalar | *Visual | >2 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 68 | **71.7** | 66.1 | --- |

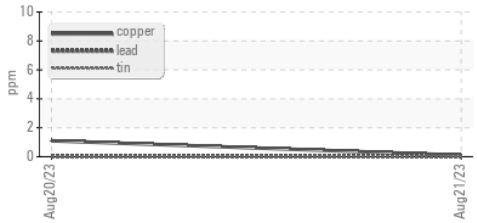
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | *no image* |
| Bottom | | |  | | *no image* |

## GRAPHS

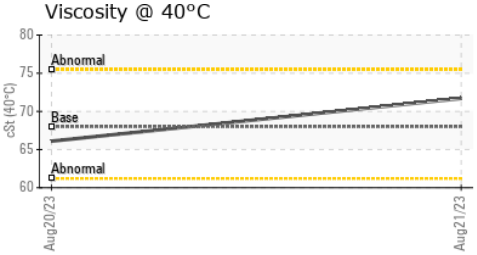
Ferrous Alloys



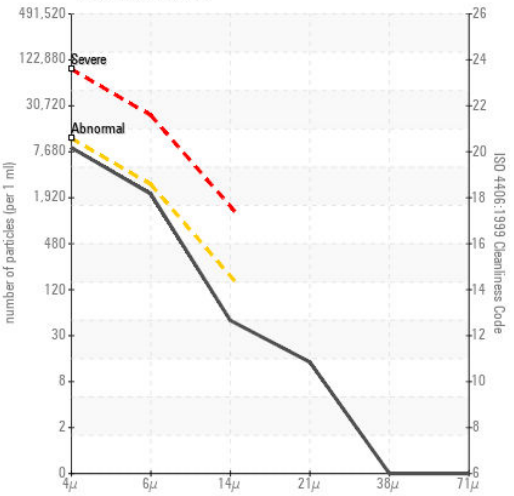

Non-ferrous Metals



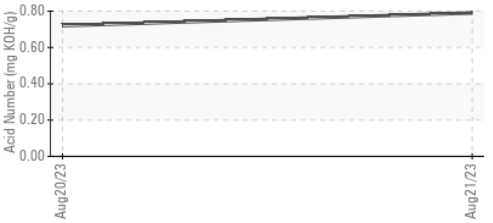

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0820059 **Received** : 22 Aug 2023
**Lab Number** : 05930824 **Diagnosed** : 23 Aug 2023
**Unique Number** : 10616095 **Diagnostician** : Don Baldridge
**Test Package** : IND 2 ( Additional Tests: PrtCount )

*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)*

**3M - PITTSBORO**
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Contact: CHARLES JARRELL
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T:
F:

Report Id: THRPIT [WUSCAR] 05930824 (Generated: 08/23/2023 17:06:15) Rev: 1

Submitted By: JORDAN TUTEN