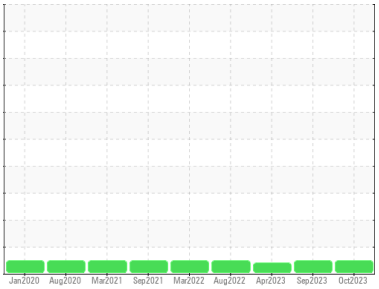
# OIL ANALYSIS REPORT

Sample Rating Trend




**NORMAL**

Area
**MILLING**
Machine Id
**E-130**
Component
**Gearbox**
Fluid
**MOBIL SHC 630 (3 LTR)**

## DIAGNOSIS

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

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

**Contamination**
There is no indication of any contamination in the oil. The amount and size of particulates present in the system are acceptable.

**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 | | **WC0866664** | WC0854677 | WC0809594 |
| Sample Date | | Client Info | | **11 Oct 2023** | 06 Sep 2023 | 17 Apr 2023 |
| Machine Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Age | hrs | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | ATTENTION |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >200 | **14** | 18 | 17 |
| Chromium | ppm | ASTM D5185m | >15 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >15 | **0** | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **<1** | 2 | 2 |
| Lead | ppm | ASTM D5185m | >100 | **0** | <1 | 0 |
| Copper | ppm | ASTM D5185m | >200 | **0** | <1 | 0 |
| Tin | ppm | ASTM D5185m | >25 | **0** | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **0** | <1 | 1 |
| Calcium | ppm | ASTM D5185m | | **2** | 7 | 11 |
| Phosphorus | ppm | ASTM D5185m | | **446** | 476 | 455 |
| Zinc | ppm | ASTM D5185m | | **0** | 0 | 17 |
| Sulfur | ppm | ASTM D5185m | | **61** | 63 | 110 |

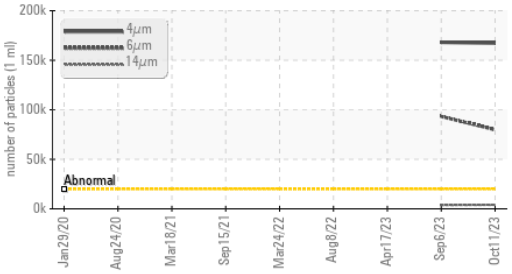
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **31** | 28 | 31 |
| Sodium | ppm | ASTM D5185m | | **2** | 1 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | <1 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | **167144** | 168008 | --- |
| Particles >6µm | | ASTM D7647 | >5000 | **79846** | 93231 | --- |
| Particles >14µm | | ASTM D7647 | >640 | **4028** | 3758 | --- |
| Particles >21µm | | ASTM D7647 | >160 | **752** | 944 | --- |
| Particles >38µm | | ASTM D7647 | >40 | **26** | 64 | --- |
| Particles >71µm | | ASTM D7647 | >10 | **2** | 3 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | **25/23/19** | 25/24/19 | --- |

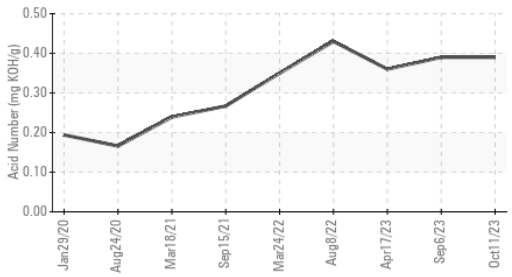
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.39** | 0.39 | 0.36 |

# OIL ANALYSIS REPORT

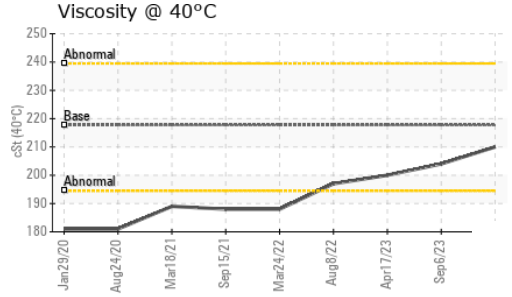
Particle Trend



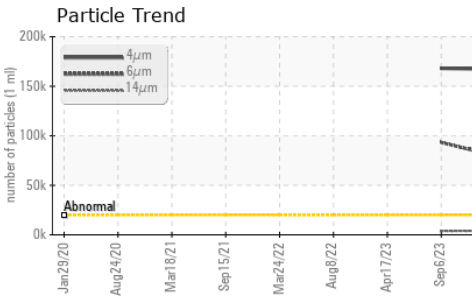

Acid Number




Viscosity @ 40°C




Particle Trend



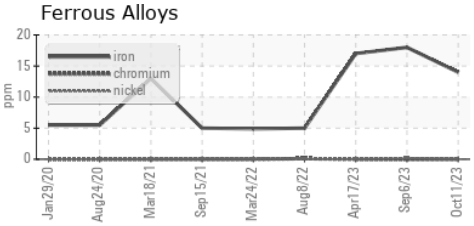

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | LIGHT |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Debris | scalar | *Visual | NONE | **NONE** | NONE | ▲ MODER |
| Sand/Dirt | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Appearance | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Odor | scalar | *Visual | NORML | **NORML** | NORML | NORML |
| Emulsified Water | scalar | *Visual | >0.2 | **NEG** | NEG | NEG |
| Free Water | scalar | *Visual | | **NEG** | NEG | NEG |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 217.7 | **210** | 204 | 200 |

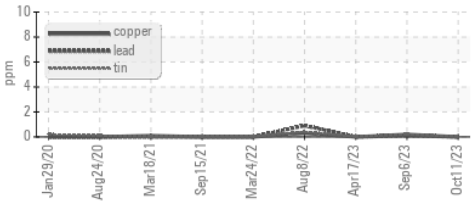
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  | | |
| Bottom | | |  | | |

## GRAPHS

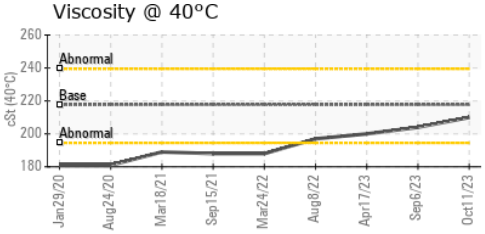
Ferrous Alloys



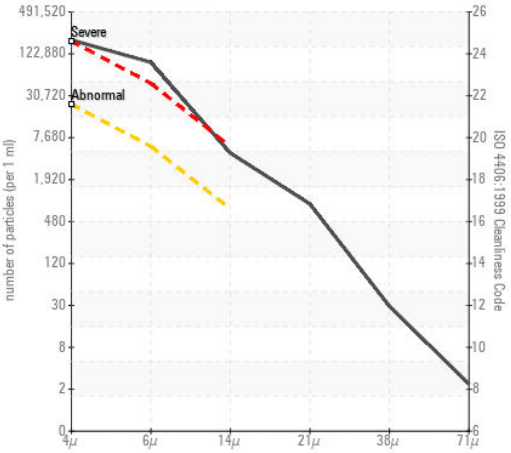

Non-ferrous Metals



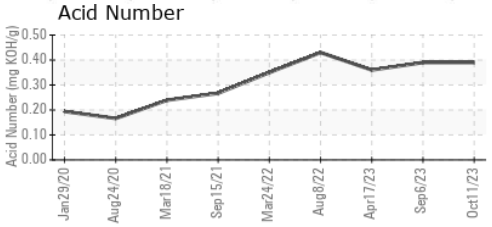

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0866664 **Received** : 13 Oct 2023
**Lab Number** : 05978871 **Diagnosed** : 19 Oct 2023
**Unique Number** : 10696166 **Diagnostician** : Jonathan Hester
**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)*

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Report Id: POEGRO [WUSCAR] 05978871 (Generated: 10/20/2023 15:42:40) Rev: 1

Submitted By: GAVIN KRUEGER