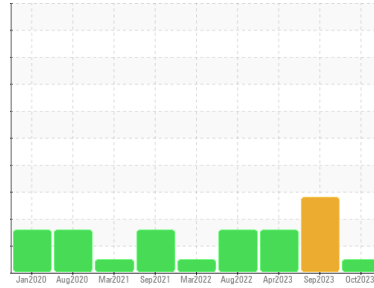




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Area
MILLING
 Machine Id
C-132
 Component
Gearbox
 Fluid
MOBIL SHC 630 (--- 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 | | WC0866663 | WC0854667 | WC0809606 |
| Sample Date | Client Info | | 11 Oct 2023 | 06 Sep 2023 | 12 Apr 2023 |
| Machine Age | mths | Client Info | 12 | 3 | 12 |
| Oil Age | mths | Client Info | 1 | 3 | 12 |
| Oil Changed | Client Info | | Changed | Changed | Not Changed |
| Sample Status | | | NORMAL | ABNORMAL | ABNORMAL |

WEAR METALS

| | method | limit/base | current | history1 | history2 |
|----------|--------|------------------|--------------|----------|----------|
| Iron | ppm | ASTM D5185m >200 | 113 | 85 | 11 |
| Chromium | ppm | ASTM D5185m >15 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m >15 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m >25 | 1 | 3 | 0 |
| Lead | ppm | ASTM D5185m >100 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m >200 | <1 | <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 | 1 | 2 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | 2 | 3 |
| Calcium | ppm | ASTM D5185m | 2 | 6 | <1 |
| Phosphorus | ppm | ASTM D5185m | 478 | 458 | 410 |
| Zinc | ppm | ASTM D5185m | 0 | 6 | 0 |
| Sulfur | ppm | ASTM D5185m | 36 | 164 | 0 |

CONTAMINANTS

| | method | limit/base | current | history1 | history2 |
|-----------|--------|-----------------|--------------|----------|----------|
| Silicon | ppm | ASTM D5185m >50 | 43 | ▲ 116 | ▲ 52 |
| Sodium | ppm | ASTM D5185m | <1 | 0 | 0 |
| Potassium | ppm | ASTM D5185m >20 | <1 | 0 | 0 |

FLUID CLEANLINESS

| | method | limit/base | current | history1 | history2 |
|-----------------|--------------|------------|-----------------|----------|----------|
| Particles >4µm | ASTM D7647 | >20000 | 189109 | --- | 37697 |
| Particles >6µm | ASTM D7647 | >5000 | 126191 | --- | 9413 |
| Particles >14µm | ASTM D7647 | >640 | 1666 | --- | 484 |
| Particles >21µm | ASTM D7647 | >160 | 101 | --- | 83 |
| Particles >38µm | ASTM D7647 | >40 | 3 | --- | 8 |
| Particles >71µm | ASTM D7647 | >10 | 2 | --- | 1 |
| Oil Cleanliness | ISO 4406 (c) | >21/19/16 | 25/24/18 | --- | 22/20/16 |

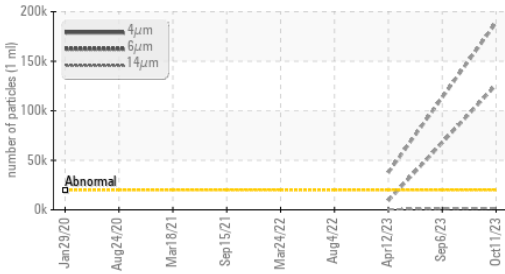
FLUID DEGRADATION

| | method | limit/base | current | history1 | history2 |
|------------------|----------|------------|-------------|----------|----------|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.52 | 0.37 | 0.34 |

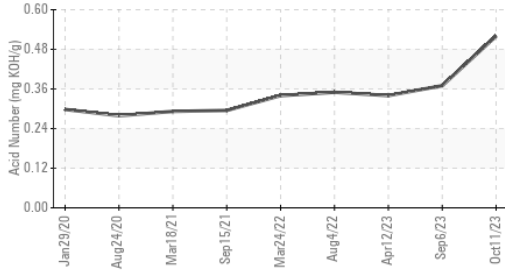


OIL ANALYSIS REPORT

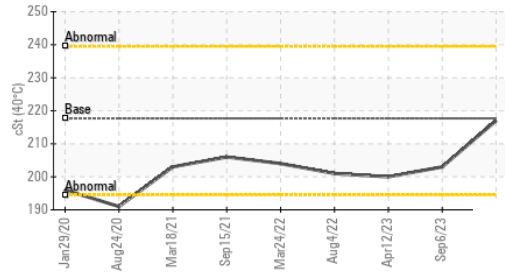
Particle Trend



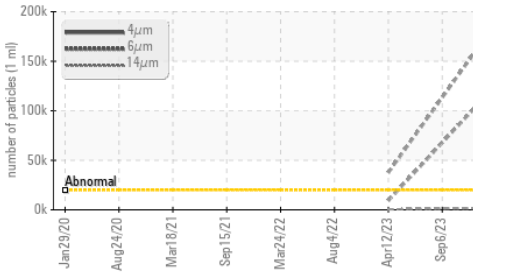
Acid Number



Viscosity @ 40°C



Particle Trend

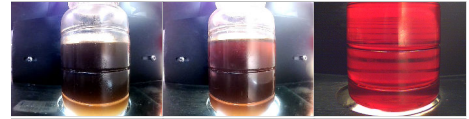


| VISUAL | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| White Metal | scalar | *Visual | NONE | ▲ MODER | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | NONE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

| FLUID PROPERTIES | method | limit/base | current | history1 | history2 |
|------------------|--------|------------|---------|----------|----------|
| Visc @ 40°C | cSt | ASTM D445 | 217 | 203 | 200 |

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

Color

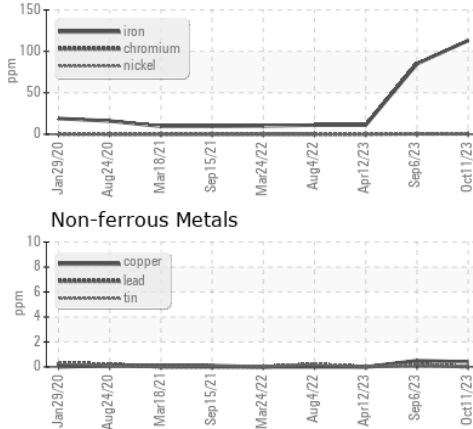


Bottom

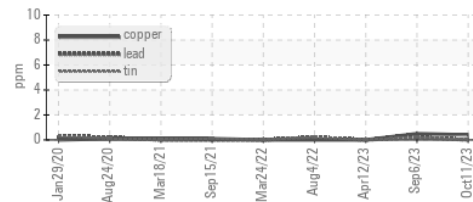


GRAPHS

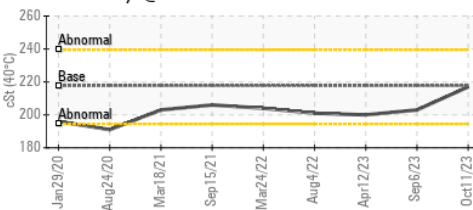
Ferrous Alloys



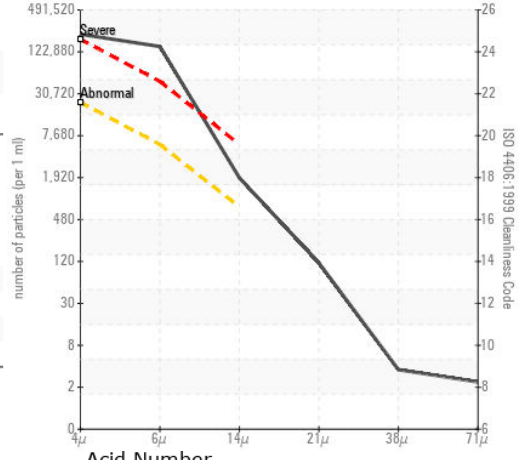
Non-ferrous Metals



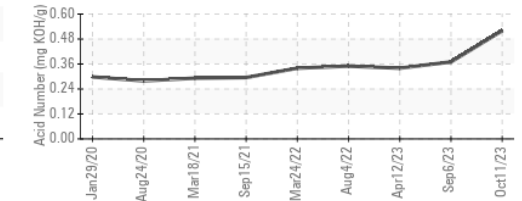
Viscosity @ 40°C



Particle Count



Acid Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : WC0866663 Received : 13 Oct 2023
 Lab Number : 05978872 Diagnosed : 19 Oct 2023
 Unique Number : 10696167 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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