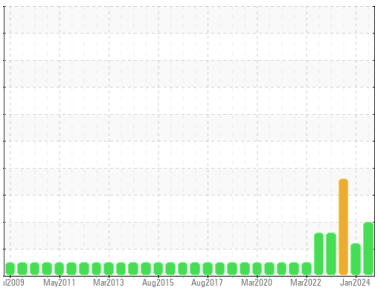
# PROBLEM SUMMARY

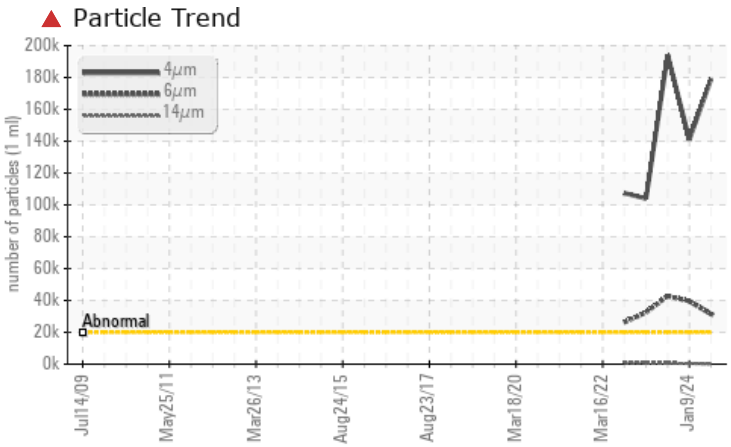
Sample Rating Trend



ISO

Area
**OPK/CL04**
Machine Id
**101802 Plastifier**
Component
**Gearbox**
Fluid
**MOBIL MOBILGEAR 600 XP 460 (375 LTR)**

## COMPONENT CONDITION SUMMARY




## RECOMMENDATION

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

## PROBLEMATIC TEST RESULTS

| Sample Status | | | | SEVERE | ABNORMAL | SEVERE |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | ▲ **178985** | ▲ 140991 | ▲ 194097 |
| Particles >6µm | | ASTM D7647 | >5000 | ▲ **31494** | ▲ 39590 | ▲ 42755 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | ▲ **25/22/14** | ▲ 24/22/16 | ▲ 25/23/16 |


**Customer Id:** MITWAT
**Sample No.:** WC0889280
**Lab Number:** 02628279
**Test Package:** IND 2

*To manage this report scan the QR code*

*To discuss the diagnosis or test data:*
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wesd@wearcheck.ca

*To change component or sample information:*
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gloria.gonzalez@wearcheck.com

## RECOMMENDED ACTIONS

| Action | Status | Date | Done By | Description |
|---|---|---|---|---|
| Change Filter | --- | --- | ? | We recommend you service the filters on this component. |
| Resample | --- | --- | ? | Resample in 30-45 days to monitor this situation. |
| Check Breathers | --- | --- | ? | The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. |
| Check Seals | --- | --- | ? | Check seals and/or filters for points of contaminant entry. |

## HISTORICAL DIAGNOSIS

ISO

**09 Jan 2024 Diag: Wes Davis**

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

ISO

**26 Sep 2023 Diag: Kevin Marson**

Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.An increase in the iron level is noted. All other component wear rates are normal. There is a high amount of silt (particulates < 14 microns in size) present in the oil. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

ISO

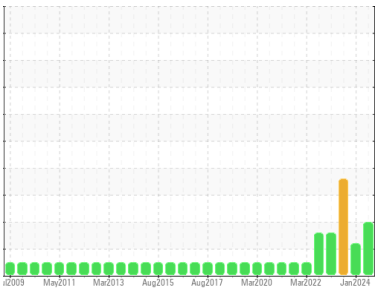
**14 Mar 2023 Diag: Wes Davis**

We recommend you service the filters on this component. We recommend an early resample to monitor this condition.All component wear rates are normal. Oil Cleanliness are abnormally high. Particles >4µm are abnormally high. Particles >6µm are abnormally high. Particles >14µm are notably high. The AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

view report

# OIL ANALYSIS REPORT

Sample Rating Trend



ISO

Area
**OPK/CL04**
Machine Id
**101802 Plastifier**
Component
**Gearbox**
Fluid
**MOBIL MOBILGEAR 600 XP 460 (375 LTR)**

## DIAGNOSIS

**▲ Recommendation**
Check seals and/or filters for points of contaminant entry. The air breather requires service. If unrated, we recommend that you replace with a suitable micron rated and/or desiccant air breather. If rated, we recommend that you service/replace the breather. We recommend you service the filters on this component. Resample in 30-45 days to monitor this situation.

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

**▲ Contamination**
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

**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 | | **WC0889280** | WC0855089 | WC0790671 |
| Sample Date | | Client Info | | **26 Mar 2024** | 09 Jan 2024 | 26 Sep 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 | | | | **SEVERE** | ABNORMAL | SEVERE |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185(m) | >200 | **25** | 23 | 20 |
| Chromium | ppm | ASTM D5185(m) | >15 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185(m) | >15 | **<1** | <1 | <1 |
| Titanium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185(m) | >25 | **0** | <1 | 0 |
| Lead | ppm | ASTM D5185(m) | >100 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185(m) | >200 | **1** | 2 | 1 |
| Tin | ppm | ASTM D5185(m) | >25 | **0** | 0 | 0 |
| Antimony | ppm | ASTM D5185(m) | >5 | **0** | 0 | 0 |
| Vanadium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Beryllium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Cadmium | ppm | ASTM D5185(m) | | **0** | 0 | 0 |

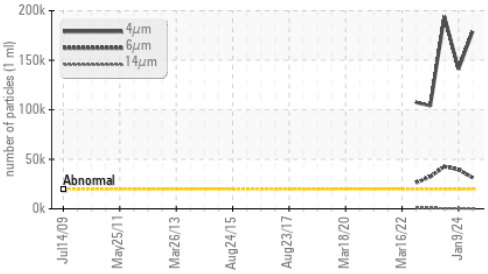
| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185(m) | | **21** | 20 | 24 |
| Barium | ppm | ASTM D5185(m) | | **0** | 0 | <1 |
| Molybdenum | ppm | ASTM D5185(m) | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185(m) | | **<1** | 0 | 0 |
| Magnesium | ppm | ASTM D5185(m) | | **<1** | <1 | 0 |
| Calcium | ppm | ASTM D5185(m) | | **2** | 2 | 2 |
| Phosphorus | ppm | ASTM D5185(m) | | **309** | 317 | 320 |
| Zinc | ppm | ASTM D5185(m) | | **4** | 3 | 4 |
| Sulfur | ppm | ASTM D5185(m) | | **11982** | 12473 | 12395 |
| Lithium | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |

| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185(m) | >50 | **0** | 1 | 1 |
| Sodium | ppm | ASTM D5185(m) | | **<1** | <1 | <1 |
| Potassium | ppm | ASTM D5185(m) | >20 | **<1** | 1 | 0 |

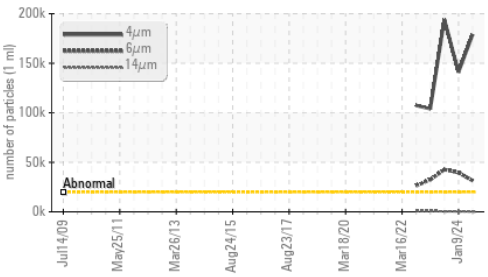
| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | ▲ **178985** | ▲ 140991 | ▲ 194097 |
| Particles >6µm | | ASTM D7647 | >5000 | ▲ **31494** | ▲ 39590 | ▲ 42755 |
| Particles >14µm | | ASTM D7647 | >640 | **140** | 425 | 516 |
| Particles >21µm | | ASTM D7647 | >160 | **10** | 62 | 67 |
| Particles >38µm | | ASTM D7647 | >40 | **1** | 4 | 3 |
| Particles >71µm | | ASTM D7647 | >10 | **1** | 1 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | ▲ **25/22/14** | ▲ 24/22/16 | ▲ 25/23/16 |

# OIL ANALYSIS REPORT

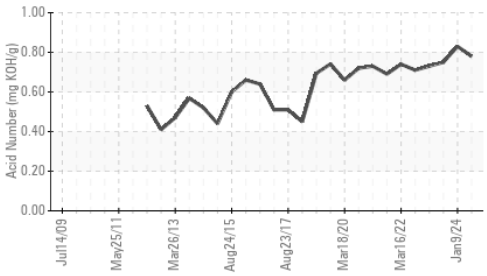
Particle Trend



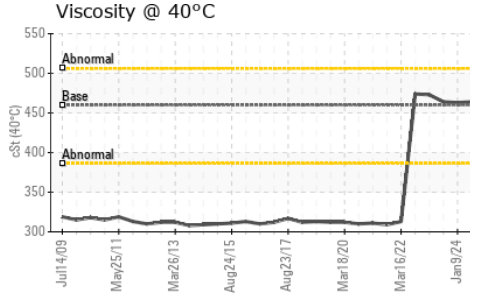

Particle Trend




Acid Number




Viscosity @ 40°C

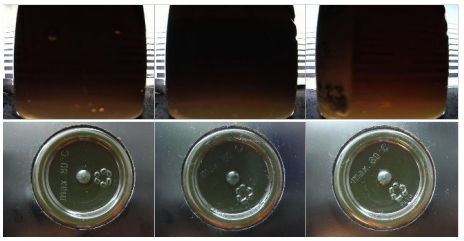



| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D974* | | **0.78** | 0.83 | 0.75 |

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | Visual* | NONE | **NONE** | NONE | NONE |
| 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 | NONE |
| 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 |

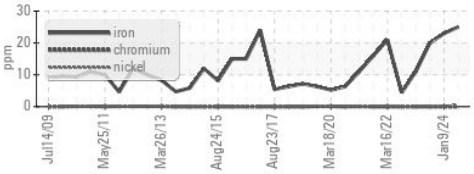
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D7279(m) | 460 | **464** | 463 | 464 |

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

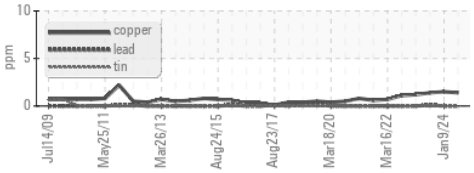


## GRAPHS

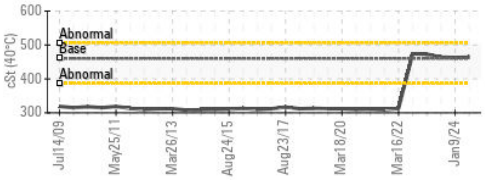
Ferrous Alloys



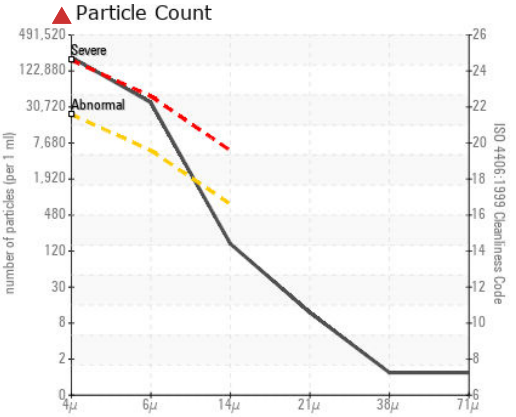

Non-ferrous Metals



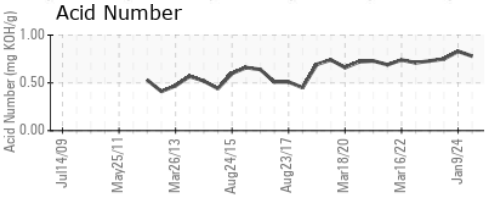

Viscosity @ 40°C




Particle Count




Acid Number




ISO 17025:2017 Accredited Laboratory

**Laboratory** : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
**Sample No.** : WC0889280 **Received** : 11 Apr 2024
**Lab Number** : 02628279 **Tested** : 12 Apr 2024
**Unique Number** : 5761411 **Diagnosed** : 12 Apr 2024 - Wes Davis
**Test Package** : IND 2 ( Additional Tests: TAN Man )

*To discuss this sample report, contact Customer Service at 1-800-268-2131.*
*Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.*
*Validity of results and interpretation are based on the sample and information as supplied.*

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