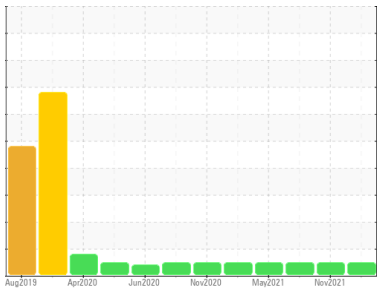
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Area
**P2**
Machine Id
## 3521-A EVAPORATOR
Component
**Gearbox**
Fluid
**MOBIL MOBILGEAR 600 XP ISO 150 (15 QTS)**

## DIAGNOSIS

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

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

**Contamination**
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The water content is negligible. The system and fluid cleanliness is 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 | | **WC0681505** | WC0614181 | WC0584818 |
| Sample Date | | Client Info | | **29 Mar 2022** | 30 Nov 2021 | 12 Aug 2021 |
| Machine Age | hrs | Client Info | | **150** | 150 | 0 |
| Oil Age | hrs | Client Info | | **150** | 150 | 0 |
| Oil Changed | | Client Info | | **N/A** | N/A | N/A |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >200 | **2** | 2 | 2 |
| Chromium | ppm | ASTM D5185m | >15 | **0** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >15 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | | **<1** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >25 | **<1** | 0 | 0 |
| Lead | ppm | ASTM D5185m | >100 | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | >200 | **1** | 1 | 1 |
| Tin | ppm | ASTM D5185m | >25 | **<1** | 0 | 0 |
| Antimony | ppm | ASTM D5185m | | **---** | 2 | 2 |
| 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 | | **16** | 13 | 10 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Calcium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Phosphorus | ppm | ASTM D5185m | | **374** | 348 | 329 |
| Zinc | ppm | ASTM D5185m | | **<1** | <1 | 0 |
| Sulfur | ppm | ASTM D5185m | | **14396** | 15295 | 14423 |

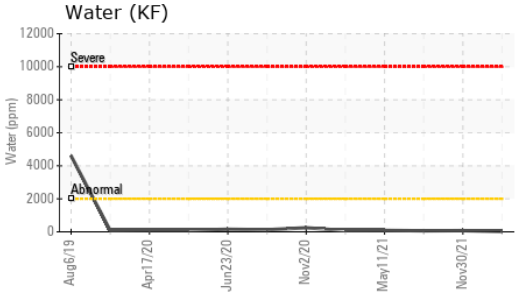
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >50 | **0** | 0 | <1 |
| Sodium | ppm | ASTM D5185m | | **3** | 2 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **0** | 0 | <1 |
| Water | % | ASTM D6304 | >0.2 | **0.002** | 0.007 | 0.006 |
| ppm Water | ppm | ASTM D6304 | >2000 | **22.5** | 73.3 | 63.1 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >20000 | **3935** | 0 | 7111 |
| Particles >6µm | | ASTM D7647 | >5000 | **524** | 0 | 1120 |
| Particles >14µm | | ASTM D7647 | >640 | **25** | 4 | 37 |
| Particles >21µm | | ASTM D7647 | >160 | **7** | 5 | 10 |
| Particles >38µm | | ASTM D7647 | >40 | **0** | 5 | 0 |
| Particles >71µm | | ASTM D7647 | >10 | **0** | 5 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >21/19/16 | **19/16/12** | 7/7/9 | 20/17/12 |

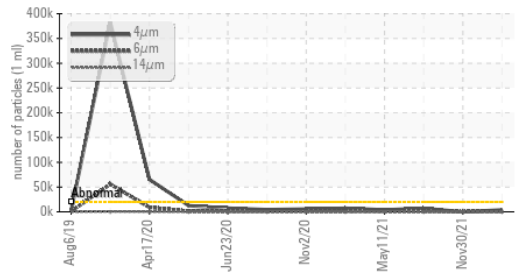
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.766** | 0.795 | 0.733 |

# OIL ANALYSIS REPORT

Water (KF)

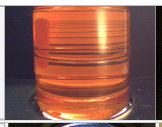
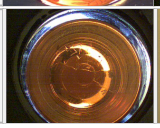



Particle Trend

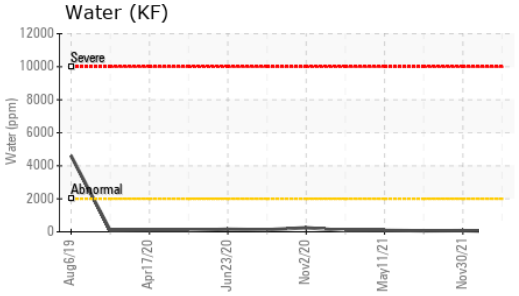



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

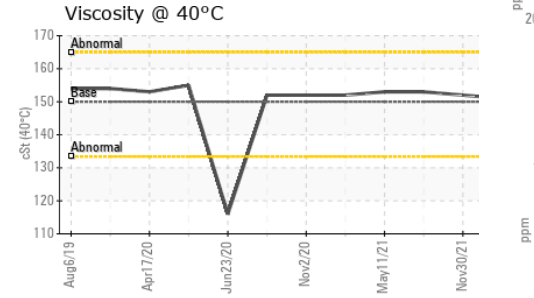
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 150 | **151** | 152 | 153 |

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

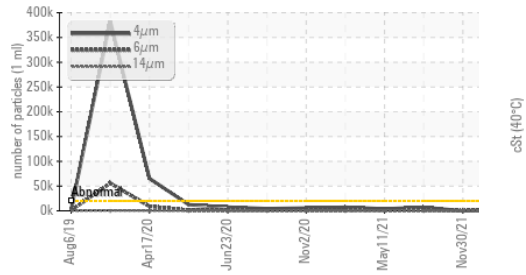
Water (KF)




Viscosity @ 40°C

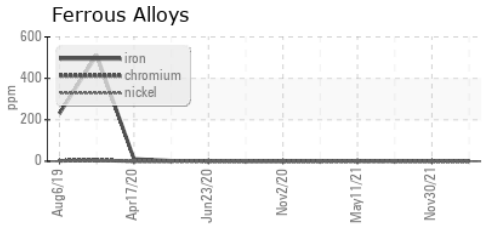



Particle Trend

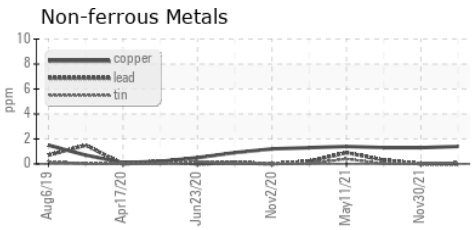



## GRAPHS

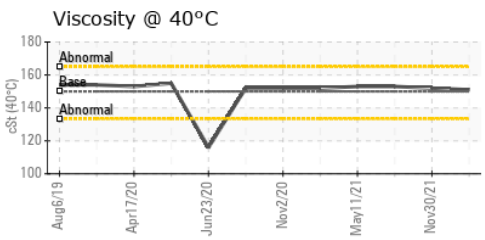
Ferrous Alloys



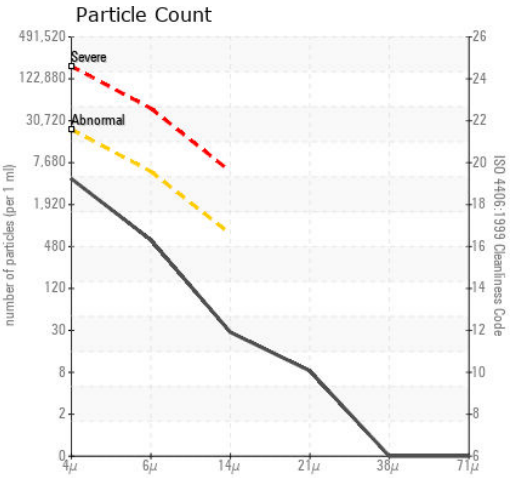

Non-ferrous Metals



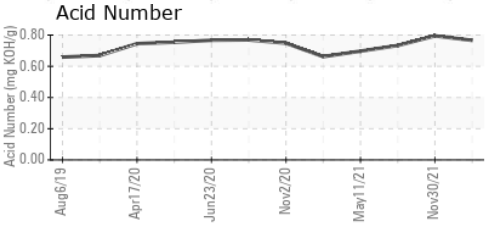

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0681505 **Recieved** : 01 Apr 2022
**Lab Number** : 05508972 **Diagnosed** : 04 Apr 2022
**Unique Number** : 9918246 **Diagnostician** : Wes Davis
**Test Package** : IND 2 ( Additional Tests: KF, 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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