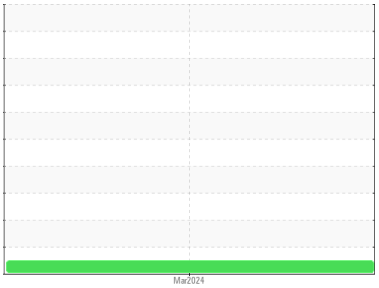
# OIL ANALYSIS REPORT

Sample Rating Trend




NORMAL

Machine Id
**21-091S5-2**
Component
**New (Unused) Oil**
Fluid
**{not provided} (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

**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 | | **WC0881562** | --- | --- |
| Sample Date | | Client Info | | **18 Mar 2024** | --- | --- |
| Machine Age | mls | Client Info | | **0** | --- | --- |
| Oil Age | mls | Client Info | | **0** | --- | --- |
| Oil Changed | | Client Info | | **N/A** | --- | --- |
| Sample Status | | | | **NORMAL** | --- | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >5 | **0** | --- | --- |
| Chromium | ppm | ASTM D5185m | >5 | **<1** | --- | --- |
| Nickel | ppm | ASTM D5185m | >5 | **<1** | --- | --- |
| Titanium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Silver | ppm | ASTM D5185m | >5 | **0** | --- | --- |
| Aluminum | ppm | ASTM D5185m | >5 | **2** | --- | --- |
| Lead | ppm | ASTM D5185m | >5 | **<1** | --- | --- |
| Copper | ppm | ASTM D5185m | >5 | **<1** | --- | --- |
| Tin | ppm | ASTM D5185m | >5 | **<1** | --- | --- |
| Vanadium | ppm | ASTM D5185m | | **<1** | --- | --- |
| Cadmium | ppm | ASTM D5185m | | **<1** | --- | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **66** | --- | --- |
| Barium | ppm | ASTM D5185m | | **0** | --- | --- |
| Molybdenum | ppm | ASTM D5185m | | **2** | --- | --- |
| Manganese | ppm | ASTM D5185m | | **<1** | --- | --- |
| Magnesium | ppm | ASTM D5185m | | **31** | --- | --- |
| Calcium | ppm | ASTM D5185m | | **163** | --- | --- |
| Phosphorus | ppm | ASTM D5185m | | **402** | --- | --- |
| Zinc | ppm | ASTM D5185m | | **22** | --- | --- |
| Sulfur | ppm | ASTM D5185m | | **125** | --- | --- |

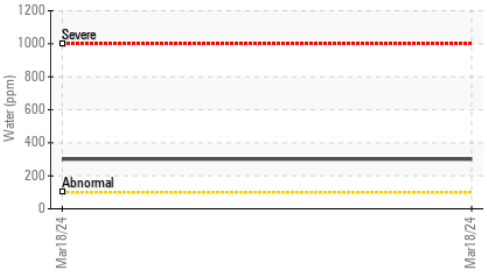
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **2** | --- | --- |
| Sodium | ppm | ASTM D5185m | | **0** | --- | --- |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | --- | --- |
| Water | % | ASTM D6304 | | **0.030** | --- | --- |
| ppm Water | ppm | ASTM D6304 | | **301** | --- | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **1921** | --- | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **501** | --- | --- |
| Particles >14µm | | ASTM D7647 | >160 | **43** | --- | --- |
| Particles >21µm | | ASTM D7647 | >40 | **12** | --- | --- |
| Particles >38µm | | ASTM D7647 | >10 | **1** | --- | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | --- | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | **18/16/13** | --- | --- |

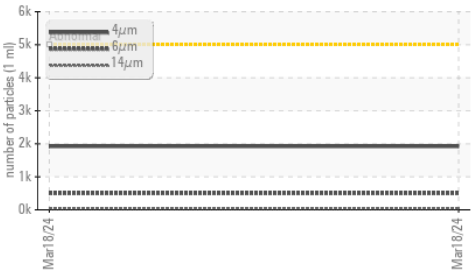
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **1.58** | --- | --- |

# OIL ANALYSIS REPORT

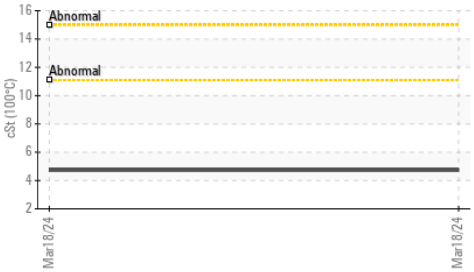
Water (KF)



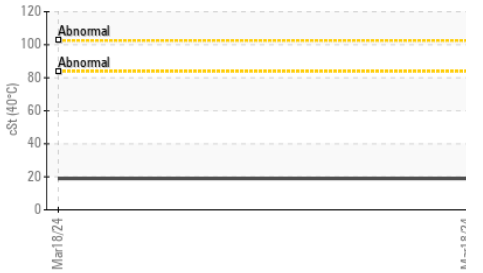

Particle Trend



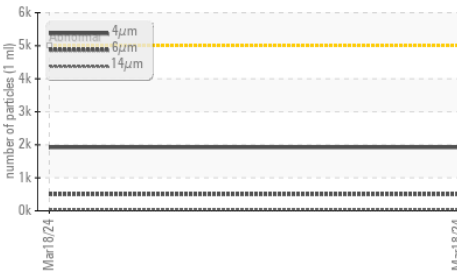

Viscosity @ 100°C




Viscosity @ 40°C

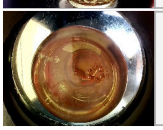



Particle Trend



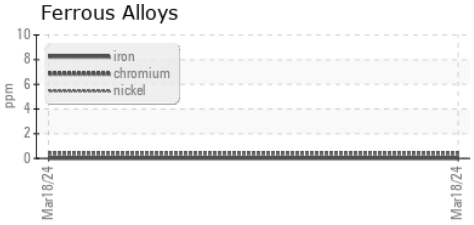

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | --- | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | --- | --- |
| Silt |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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | | **18.96** | --- | --- |
| Visc @ 100°C | cSt | ASTM D445 | | **4.73** | --- | --- |
| Viscosity Index (VI) | Scale | ASTM D2270 | | **182** | --- | --- |

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

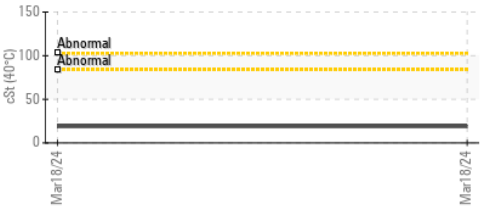
GRAPHS

Ferrous Alloys

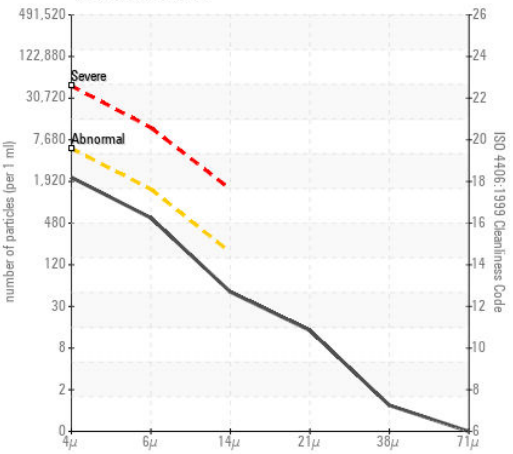



Non-ferrous Metals

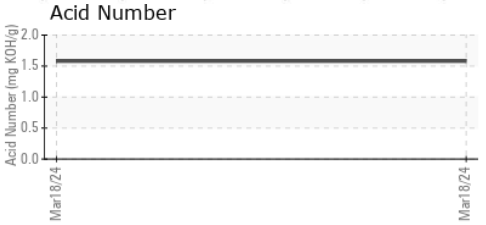

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0881562
**Lab Number** : 06124454
**Unique Number** : 10938605
**Test Package** : MOB 2 ( Additional Tests: FT-IR, ICP-NewOil, KF, KV100, PrtCount, VI)

**Received** : 20 Mar 2024
**Tested** : 27 Mar 2024
**Diagnosed** : 27 Mar 2024 - Jonathan Hester

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F:

*To discuss this sample report, contact Customer Service at 1-800-237-1369.*
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*Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)*