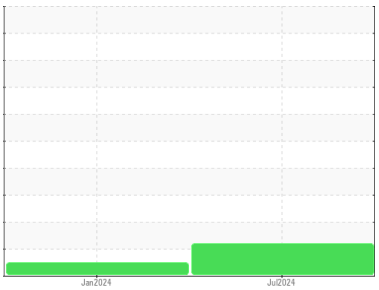
# OIL ANALYSIS REPORT

Sample Rating Trend




ISO

Machine Id
## AF12-511-1750-2100 AF12-511-1750-2100
Component
**Hydraulic System**
Fluid
**MOBIL DTE 10 EXCEL 46 (--- GAL)**

## DIAGNOSIS

**Recommendation**
We recommend you service the filters on this component. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample.

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

**Contamination**
There is a light amount of silt (particulates < 14 microns in size) present in the oil. The water content is negligible.

**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 | | **WC0936653** | WC0859325 | --- |
| Sample Date | | Client Info | | **11 Jul 2024** | 05 Jan 2024 | --- |
| Machine Age | yrs | Client Info | | **0** | 5 | --- |
| Oil Age | yrs | Client Info | | **0** | 0 | --- |
| Oil Changed | | Client Info | | **N/A** | N/A | --- |
| Sample Status | | | | **ATTENTION** | NORMAL | --- |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| PQ | | ASTM D8184 | | **15** | 11 | --- |
| Iron | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | 0 | --- |
| Nickel | ppm | ASTM D5185m | >20 | **0** | 0 | --- |
| Titanium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Silver | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Aluminum | ppm | ASTM D5185m | >20 | **4** | 0 | --- |
| Lead | ppm | ASTM D5185m | >20 | **<1** | 0 | --- |
| Copper | ppm | ASTM D5185m | >20 | **<1** | <1 | --- |
| Tin | ppm | ASTM D5185m | >20 | **<1** | 0 | --- |
| Vanadium | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Cadmium | ppm | ASTM D5185m | | **<1** | 0 | --- |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **0** | 0 | --- |
| Barium | ppm | ASTM D5185m | | **0** | 0 | --- |
| Molybdenum | ppm | ASTM D5185m | | **<1** | 0 | --- |
| Manganese | ppm | ASTM D5185m | | **0** | <1 | --- |
| Magnesium | ppm | ASTM D5185m | | **1** | 1 | --- |
| Calcium | ppm | ASTM D5185m | | **86** | 82 | --- |
| Phosphorus | ppm | ASTM D5185m | | **314** | 240 | --- |
| Zinc | ppm | ASTM D5185m | | **209** | 192 | --- |
| Sulfur | ppm | ASTM D5185m | | **1095** | 1011 | --- |

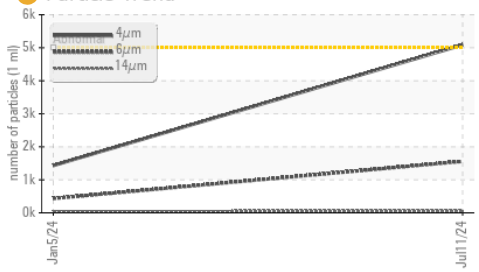
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >15 | **0** | 0 | --- |
| Sodium | ppm | ASTM D5185m | | **0** | <1 | --- |
| Potassium | ppm | ASTM D5185m | >20 | **2** | 0 | --- |
| Water | % | ASTM D6304 | >0.05 | **0.013** | 0.006 | --- |
| ppm Water | ppm | ASTM D6304 | >500 | **139** | 67 | --- |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | >5000 | **5090** | 1433 | --- |
| Particles >6µm | | ASTM D7647 | >1300 | **1558** | 433 | --- |
| Particles >14µm | | ASTM D7647 | >160 | **58** | 49 | --- |
| Particles >21µm | | ASTM D7647 | >40 | **5** | 15 | --- |
| Particles >38µm | | ASTM D7647 | >10 | **0** | 1 | --- |
| Particles >71µm | | ASTM D7647 | >3 | **0** | 0 | --- |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | **20/18/13** | 18/16/13 | --- |

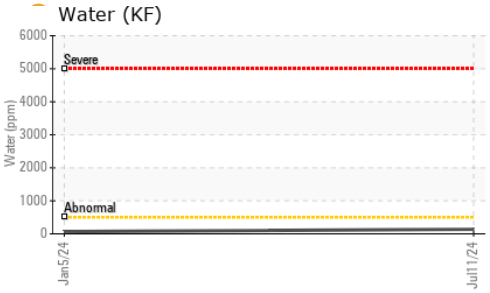
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **0.32** | 0.24 | --- |

# OIL ANALYSIS REPORT

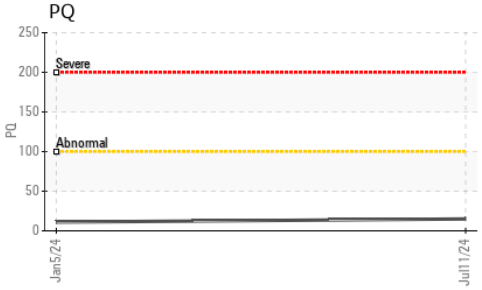
Particle Trend



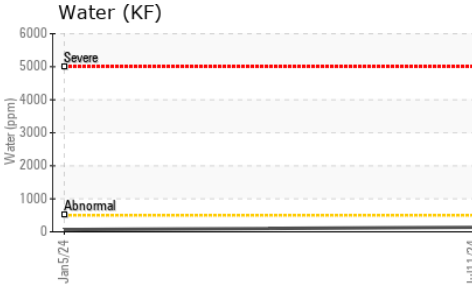

Water (KF)



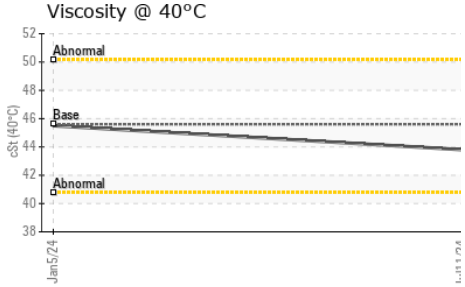

PQ




Water (KF)

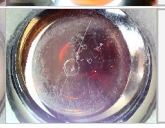



Viscosity @ 40°C



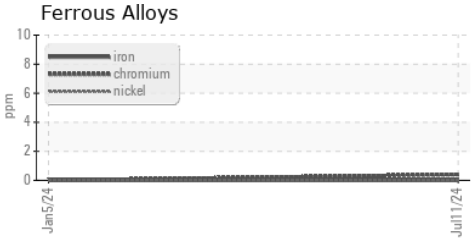

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | --- |
| Silt | 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 | >0.05 | **NEG** | NEG | --- |
| Free Water | scalar | *Visual | | **NEG** | NEG | --- |

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 45.6 | **43.8** | 45.5 | --- |

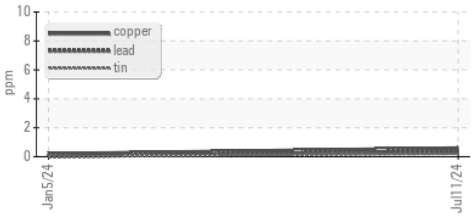
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | |  |  | *no image* |
| Bottom | | |  |  | *no image* |

## GRAPHS

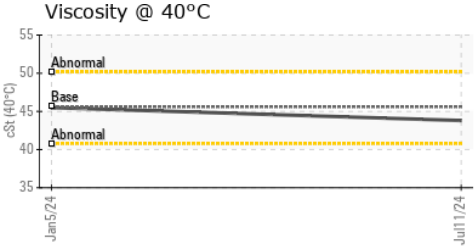
Ferrous Alloys



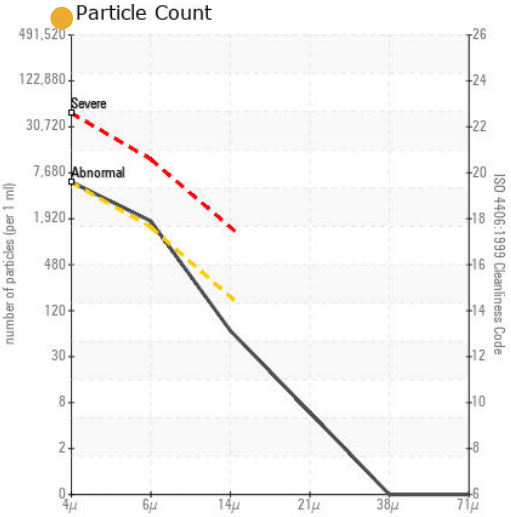

Non-ferrous Metals



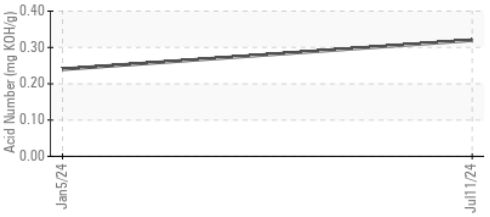

Viscosity @ 40°C




Particle Count




Acid Number




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0936653
**Lab Number** : 06240313
**Unique Number** : 11129147
**Test Package** : PLANT

**Received** : 18 Jul 2024
**Tested** : 19 Jul 2024
**Diagnosed** : 19 Jul 2024 - Wes Davis

Certificate L2367

*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: ARAGRAUS [WUSCAR] 06240313 (Generated: 07/19/2024 11:28:21) Rev: 1

Submitted By: CAIDEN ASHMUN