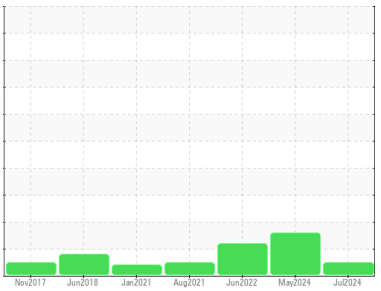
# OIL ANALYSIS REPORT

Sample Rating Trend




**NORMAL**

Area
**KANSAS/44/EG - TRUCK-OFF-HWY-HEAVY HAUL**
Machine Id
**69.98L [KANSAS^44^EG - TRUCK-OFF-HWY-HEAVY HAUL]**
Component
**Steering**
Fluid
**MOBIL MOBILTRANS AST 30 (--- GAL)**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor. ( Customer Sample Comment: 7900 hours )

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

**Contamination**
There is no indication of any contamination in the fluid. 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 fluid is suitable for further service.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0925173** | WC0908879 | WC0702219 |
| Sample Date | | Client Info | | **08 Jul 2024** | 29 May 2024 | 08 Jun 2022 |
| Machine Age | hrs | Client Info | | **7900** | 7742 | 6600 |
| Oil Age | hrs | Client Info | | **6120** | 1622 | 500 |
| Oil Changed | | Client Info | | **N/A** | Not Changd | Not Changd |
| Sample Status | | | | **NORMAL** | ABNORMAL | ATTENTION |

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

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | >60 | **29** | 26 | 3 |
| Chromium | ppm | ASTM D5185m | >12 | **<1** | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >6 | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Aluminum | ppm | ASTM D5185m | >4 | **3** | <1 | 1 |
| Lead | ppm | ASTM D5185m | >12 | **4** | 4 | <1 |
| Copper | ppm | ASTM D5185m | >30 | **21** | ▲ 21 | <1 |
| Tin | ppm | ASTM D5185m | | **<1** | 2 | 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 | | **36** | 41 | 38 |
| Barium | ppm | ASTM D5185m | | **0** | <1 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **<1** | <1 | 1 |
| Manganese | ppm | ASTM D5185m | | **0** | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | | **16** | 19 | 26 |
| Calcium | ppm | ASTM D5185m | | **3056** | 3235 | 2879 |
| Phosphorus | ppm | ASTM D5185m | | **997** | 1134 | 957 |
| Zinc | ppm | ASTM D5185m | | **1293** | 1323 | 1192 |
| Sulfur | ppm | ASTM D5185m | | **5151** | 6079 | 4819 |

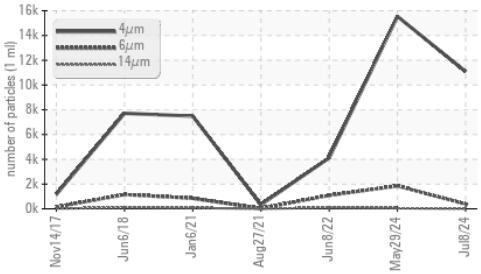
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | >10 | **8** | 8 | 6 |
| Sodium | ppm | ASTM D5185m | | **0** | 2 | 2 |
| Potassium | ppm | ASTM D5185m | >20 | **2** | <1 | 0 |

| FLUID CLEANLINESS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Particles >4µm | | ASTM D7647 | | **11081** | 15544 | 4116 |
| Particles >6µm | | ASTM D7647 | >640 | **387** | ▲ 1846 | ● 1084 |
| Particles >14µm | | ASTM D7647 | >80 | **9** | 47 | ● 93 |
| Particles >21µm | | ASTM D7647 | >20 | **3** | 10 | 18 |
| Particles >38µm | | ASTM D7647 | >4 | **1** | 0 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | **1** | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >--/16/13 | **21/16/10** | ▲ 21/18/13 | ● 19/17/14 |

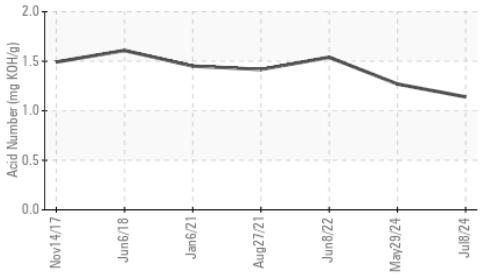
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | **1.14** | 1.27 | 1.54 |

# OIL ANALYSIS REPORT

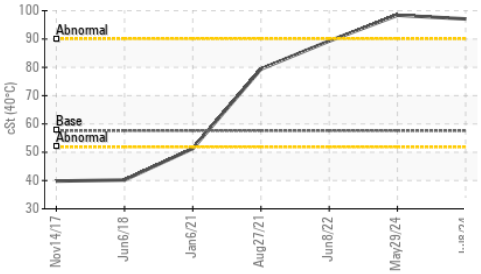
Particle Trend



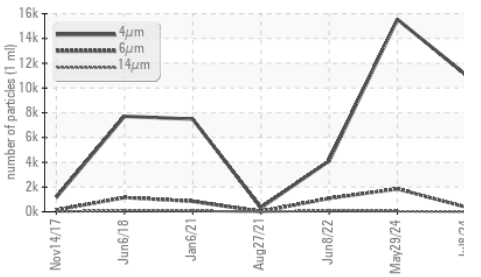

Acid Number




Viscosity @ 40°C




Particle Trend



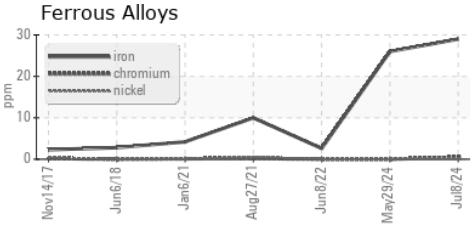

| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 40°C | cSt | ASTM D445 | 57.6 | **97.1** | 98.4 | 89.3 |

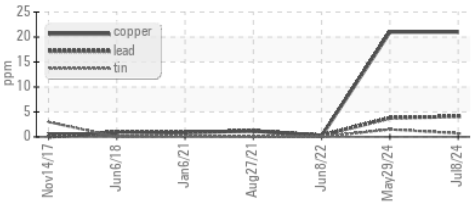
| SAMPLE IMAGES | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|
| Color | | | *no image* |  |  |
| Bottom | | | *no image* |  |  |

GRAPHS

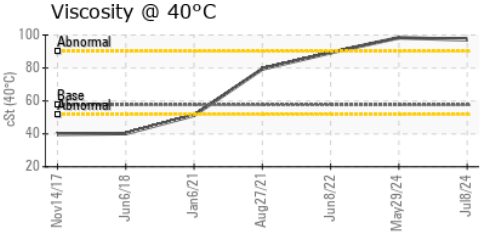
Ferrous Alloys



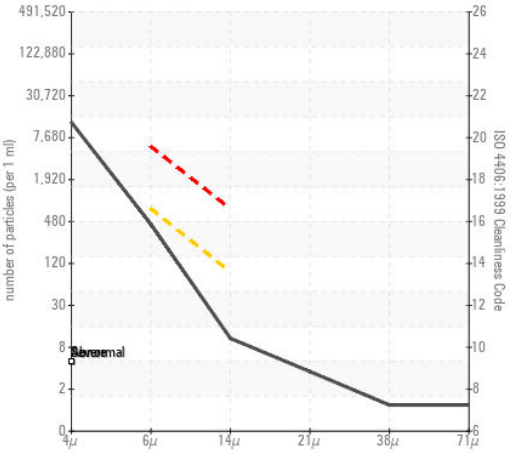

Non-ferrous Metals



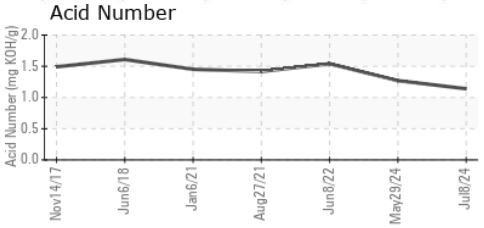

Viscosity @ 40°C




Particle Count




Acid Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0925173
**Lab Number** : 06237143
**Unique Number** : 11125977
**Test Package** : CONST ( Additional Tests: PRTCOUNT )

**Received** : 15 Jul 2024
**Tested** : 19 Jul 2024
**Diagnosed** : 19 Jul 2024 - Jonathan Hester

*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: SHEWIC [WUSCAR] 06237143 (Generated: 07/21/2024 12:45:53) Rev: 1

Submitted By: LOUIS BRESHEARS