CONST

WEAR CHECK

OIL ANALYSIS REPORT

| | |
|---|---|
| WEAR | NORMAL |
| CONTAMINATION | ABNORMAL |
| FLUID CONDITION | NORMAL |

Area
**Mobile Fleet**
Machine Id
**5000 5000**
Component
**Diesel Engine**
Fluid
**MOBIL DELVAC 1300 SUPER15W40 (17 GAL)**

## RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

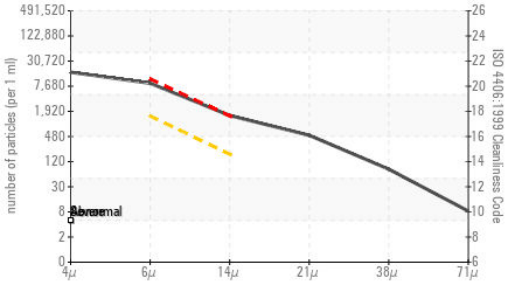
There is a high amount of particulates present in the oil.

## FLUID CONDITION

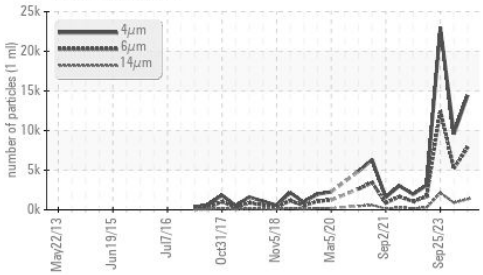
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0918683** | WC0885967 | WC0862117 |
| Sample Date | | Client Info | | **18 Apr 2024** | 24 Jan 2024 | 25 Sep 2023 |
| Machine Age | hrs | Client Info | | **22497** | 21922 | 21338 |
| Oil Age | hrs | Client Info | | **575** | 584 | 643 |
| Filter Age | hrs | Client Info | | **575** | 584 | 643 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Filter Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **ABNORMAL** | ABNORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185m | >100 | **24** | 43 | 62 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | **0** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Silver | ppm | ASTM D5185m | >2 | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | **1** | <1 | 2 |
| Lead | ppm | ASTM D5185m | >40 | **0** | 0 | 1 |
| Copper | ppm | ASTM D5185m | >330 | **3** | 9 | 24 |
| Tin | ppm | ASTM D5185m | >15 | **<1** | <1 | 1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | **4** | 4 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | **<1** | 0 | 2 |
| Fuel | | WC Method | >5 | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | **0.7** | 0.9 | 1.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **7.7** | 8.9 | 8.9 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **22.9** | 23.7 | 24.4 |
| Particles >4µm | | ASTM D7647 | | **14433** | 9570 | 22993 |
| Particles >6µm | | ASTM D7647 | >1300 | ▲ **7862** | ▲ 5213 | ▲ 12526 |
| Particles >14µm | | ASTM D7647 | >160 | ▲ **1338** | ▲ 887 | ▲ 2132 |
| Particles >21µm | | ASTM D7647 | >40 | ▲ **451** | ▲ 299 | ▲ 718 |
| Particles >38µm | | ASTM D7647 | >10 | ▲ **70** | ▲ 46 | ▲ 111 |
| Particles >71µm | | ASTM D7647 | >3 | ▲ **7** | ▲ 5 | ▲ 11 |
| Oil Cleanliness | | ISO 4406 (c) | >--/17/14 | ▲ **21/20/18** | ▲ 20/20/17 | ▲ 22/21/18 |
| 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 |
| Sodium | ppm | ASTM D5185m | | **2** | 3 | 2 |
| Boron | ppm | ASTM D5185m | 0 | **41** | 27 | 23 |
| Barium | ppm | ASTM D5185m | 0 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | **45** | 46 | 43 |
| Manganese | ppm | ASTM D5185m | | **<1** | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 0 | **497** | 470 | 475 |
| Calcium | ppm | ASTM D5185m | | **1591** | 1658 | 1600 |
| Phosphorus | ppm | ASTM D5185m | | **779** | 759 | 747 |
| Zinc | ppm | ASTM D5185m | | **876** | 897 | 944 |
| Sulfur | ppm | ASTM D5185m | | **2863** | 2564 | 2590 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **19.8** | 20.7 | 21.1 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 9.4 | **9.1** | 8.3 | 8.0 |
| Visc @ 100°C | cSt | ASTM D445 | 14 | **12.6** | 12.3 | 12.5 |

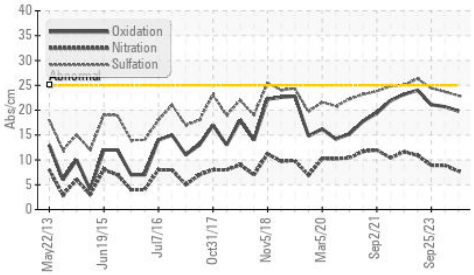
Particle Count



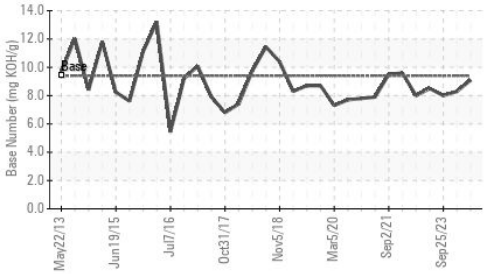

Particle Trend



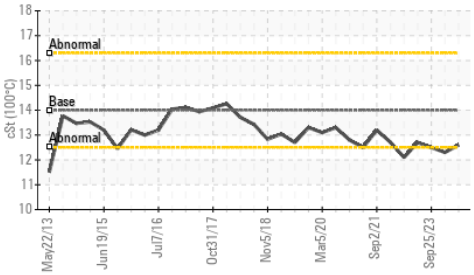

FT-IR (Direct Trend)



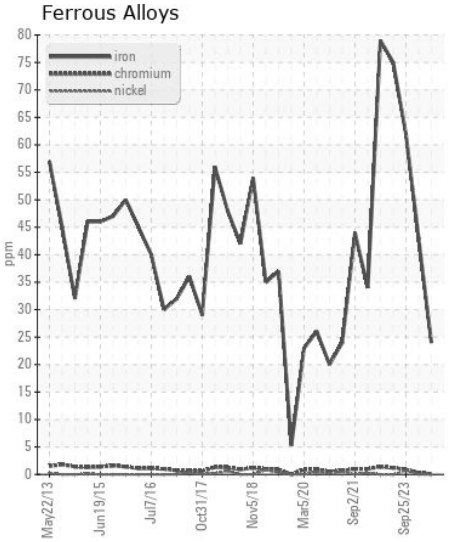

Base Number



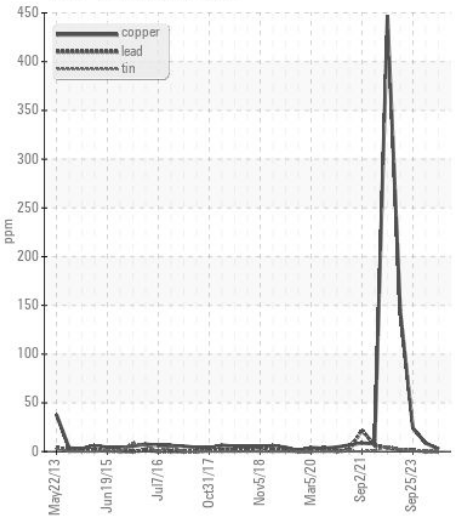

Viscosity @ 100°C



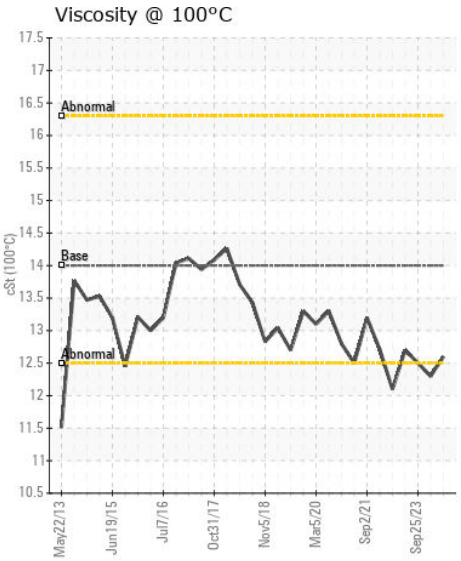

Ferrous Alloys



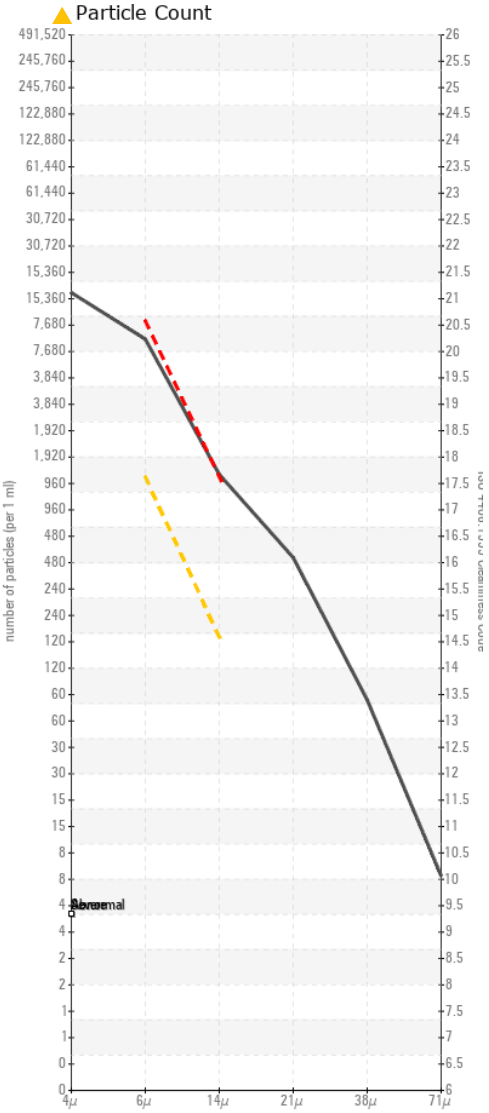

Non-ferrous Metals



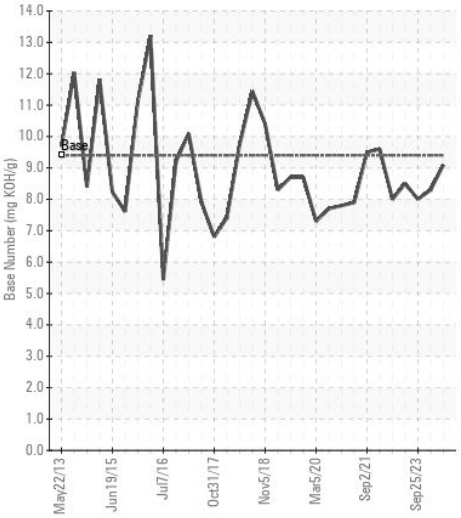

Viscosity @ 100°C




Particle Count




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0918683 **Received** : 22 Apr 2024
**Lab Number** : 06156810 **Tested** : 24 Apr 2024
**Unique Number** : 10992233 **Diagnosed** : 24 Apr 2024 - Jonathan Hester
**Test Package** : CONST ( Additional Tests: PrtCount, TBN )

*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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