MOB II WEAR CHECK

# OIL ANALYSIS REPORT

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

Machine Id
## AUTOCAR 27239
Component
## Diesel Engine
Fluid
## DIESEL ENGINE OIL SAE 15W40 (--- GAL)

## RECOMMENDATION

Resample at the next service interval to monitor.

## WEAR

All component wear rates are normal.

## CONTAMINATION

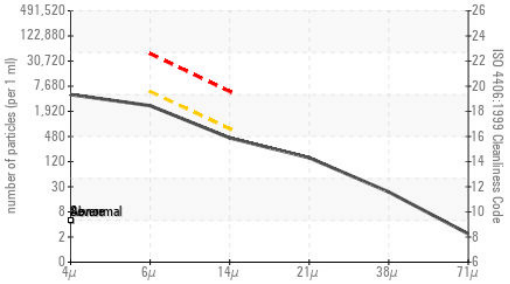
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

## FLUID CONDITION

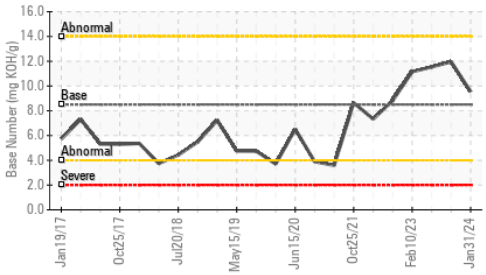
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | KL0012019 | KL0012109 | KLM2339399 |
| Sample Date | | Client Info | | 31 Jan 2024 | 31 Oct 2023 | 10 Apr 2023 |
| Machine Age | mls | Client Info | | 72701 | 70459 | 68670 |
| Oil Age | mls | Client Info | | 52939 | 0 | 0 |
| Filter Age | mls | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | N/A | N/A | N/A |
| Filter Changed | | Client Info | | N/A | N/A | N/A |
| Sample Status | | | | NORMAL | NORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185m | >100 | 13 | 8 | 5 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >4 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 2 | 2 | 0 |
| Lead | ppm | ASTM D5185m | >40 | 0 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >330 | 1 | 1 | <1 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | 5 | 4 | 4 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 3 | 1 |
| 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 | 0.3 | 0.2 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 10.9 | 9.0 | 7.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 23.1 | 21.6 | 20.1 |
| Particles >4µm | | ASTM D7647 | | 4211 | 5403 | 16869 |
| Particles >6µm | | ASTM D7647 | >5000 | 2294 | 2943 | ▲ 9189 |
| Particles >14µm | | ASTM D7647 | >640 | 390 | 501 | ▲ 1564 |
| Particles >21µm | | ASTM D7647 | >160 | 131 | 169 | ▲ 527 |
| Particles >38µm | | ASTM D7647 | >40 | 20 | 26 | ▲ 81 |
| Particles >71µm | | ASTM D7647 | >10 | 2 | 3 | 8 |
| Oil Cleanliness | | ISO 4406 (c) | >19/16 | 18/16 | 19/16 | ▲ 20/18 |
| 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 | >158 | 2 | 3 | 2 |
| Boron | ppm | ASTM D5185m | 250 | 32 | 60 | 102 |
| Barium | ppm | ASTM D5185m | 10 | 11 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 60 | 61 | 58 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | 982 | 1137 | 1103 |
| Calcium | ppm | ASTM D5185m | 3000 | 877 | 979 | 1007 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 970 | 1149 | 1075 |
| Zinc | ppm | ASTM D5185m | 1350 | 1162 | 1380 | 1343 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3453 | 3738 | 4279 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 23.0 | 19.6 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | 9.54 | 11.96 | 11.54 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.7 | 14.0 | 14.2 |

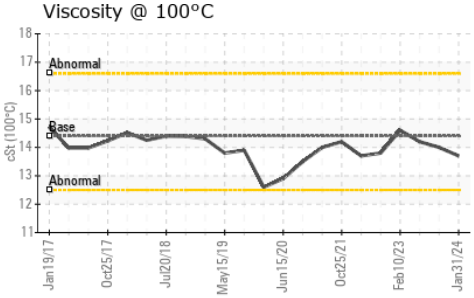
Particle Count



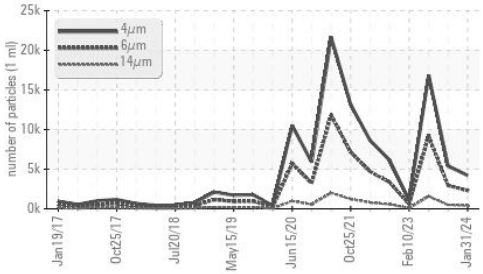

Base Number



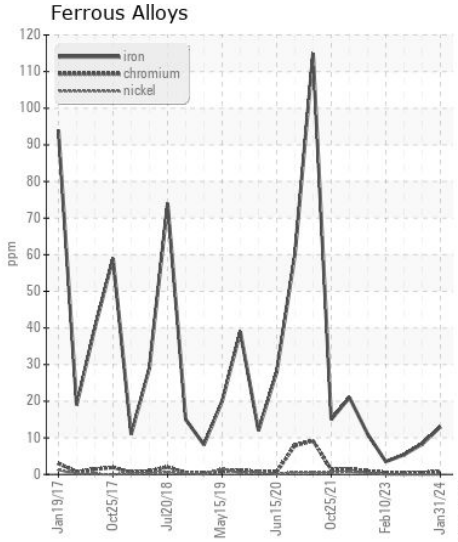

Viscosity @ 100°C



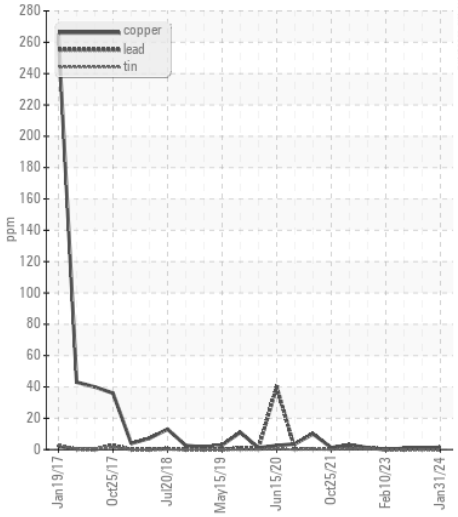

Particle Trend



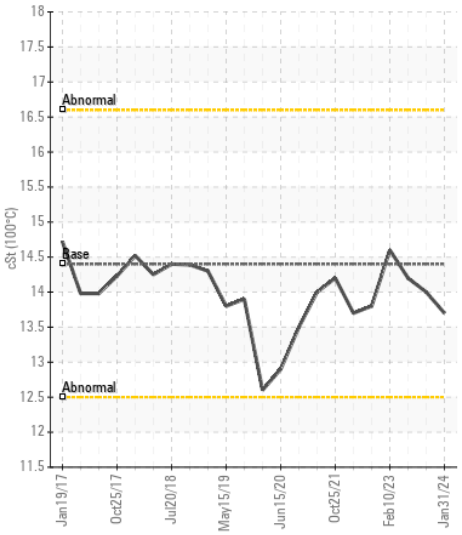

Ferrous Alloys



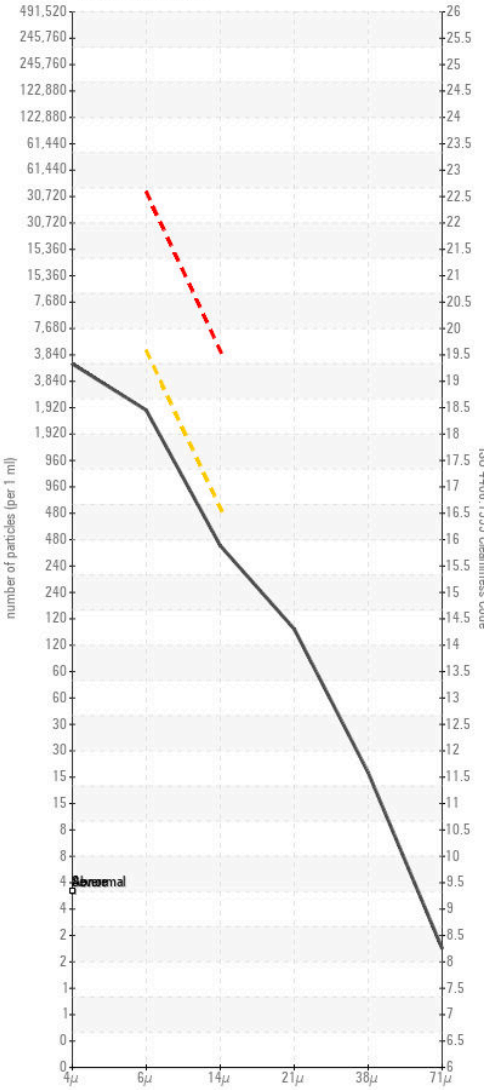

Non-ferrous Metals



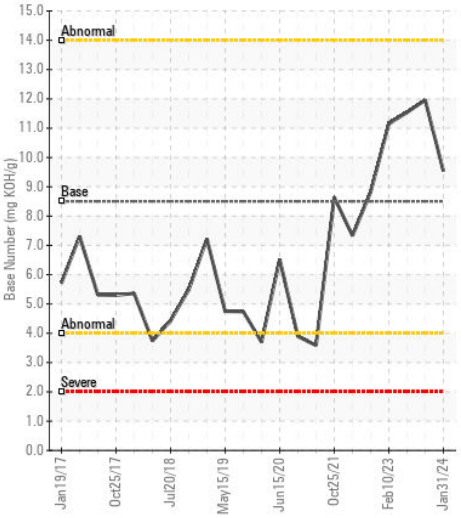

Viscosity @ 100°C




Particle Count




Base Number




**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : KL0012019
**Lab Number** : 06089645
**Unique Number** : 10877090
**Test Package** : MOB 2 ( Additional Tests: PrtCount )

**Received** : 14 Feb 2024
**Tested** : 16 Feb 2024
**Diagnosed** : 16 Feb 2024 - Jonathan Hester

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)*

**CITY & COUNTY HONOLULU**
99-999 IWAENA RD
AIEA, HI
US 96701
Contact: CLYDE OMIJA
comija@honolulu.gov
T: (575)623-9952
F:

Report Id: CITAIE [WUSCAR] 06089645 (Generated: 02/16/2024 13:38:46) Rev: 1

Submitted By: Mike Richardson