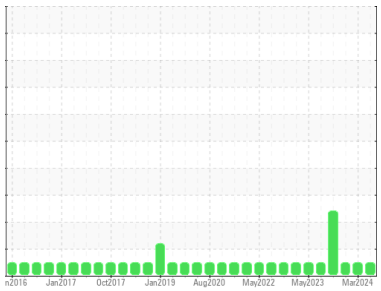
# OIL ANALYSIS REPORT

Area
**OKLAHOMA/102/EG - DOZER**
Machine Id
**36.33L [OKLAHOMA^102^EG - DOZER]**
Component
**Diesel Engine**
Fluid
**MOBIL DELVAC 1300 SUPER15W40 (--- GAL)**

Sample Rating Trend




**NORMAL**

## DIAGNOSIS

**Recommendation**
Resample at the next service interval to monitor.

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

**Contamination**
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.

| SAMPLE INFORMATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0908858** | WC0887019 | WC0873937 |
| Sample Date | | Client Info | | **28 May 2024** | 05 Mar 2024 | 10 Nov 2023 |
| Machine Age | hrs | Client Info | | **9229** | 8933 | 8610 |
| Oil Age | hrs | Client Info | | **8933** | 323 | 250 |
| Oil Changed | | Client Info | | **Changed** | Changed | Changed |
| Sample Status | | | | **NORMAL** | NORMAL | NORMAL |

| CONTAMINATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Fuel | | WC Method | | **<1.0** | <1.0 | <1.0 |
| Water | | WC Method | | **NEG** | NEG | NEG |
| Glycol | | WC Method | | **NEG** | NEG | NEG |

| WEAR METALS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Iron | ppm | ASTM D5185m | | **26** | 20 | 16 |
| Chromium | ppm | ASTM D5185m | | **<1** | <1 | 2 |
| Nickel | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Silver | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | | **2** | 3 | 4 |
| Lead | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Copper | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Tin | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| Cadmium | ppm | ASTM D5185m | | **0** | 0 | 0 |

| ADDITIVES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Boron | ppm | ASTM D5185m | | **49** | 43 | 50 |
| Barium | ppm | ASTM D5185m | | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | **39** | 41 | 41 |
| Manganese | ppm | ASTM D5185m | | **<1** | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | | **493** | 494 | 528 |
| Calcium | ppm | ASTM D5185m | | **1737** | 1658 | 1827 |
| Phosphorus | ppm | ASTM D5185m | | **757** | 742 | 812 |
| Zinc | ppm | ASTM D5185m | | **919** | 925 | 994 |
| Sulfur | ppm | ASTM D5185m | | **2901** | 2619 | 2691 |

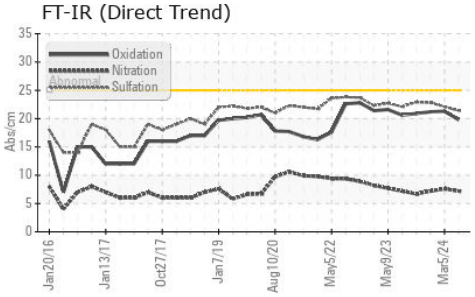
| CONTAMINANTS | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Silicon | ppm | ASTM D5185m | | **6** | 8 | 14 |
| Sodium | ppm | ASTM D5185m | | **3** | 1 | 4 |
| Potassium | ppm | ASTM D5185m | | **0** | 2 | 2 |

| INFRA-RED | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Soot % | % | *ASTM D7844 | | **0.2** | 0.3 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | | **7.2** | 7.6 | 7.2 |
| Sulfation | Abs/.1mm | *ASTM D7415 | | **21.4** | 22.1 | 22.8 |

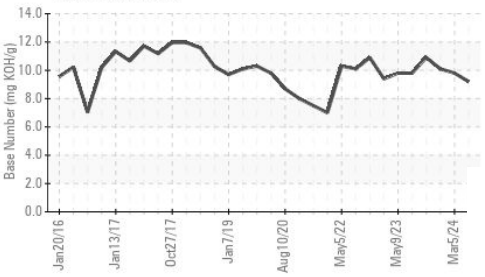
| FLUID DEGRADATION | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Oxidation | Abs/.1mm | *ASTM D7414 | | **19.8** | 21.3 | 21.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | **9.2** | 9.8 | 10.1 |

# OIL ANALYSIS REPORT

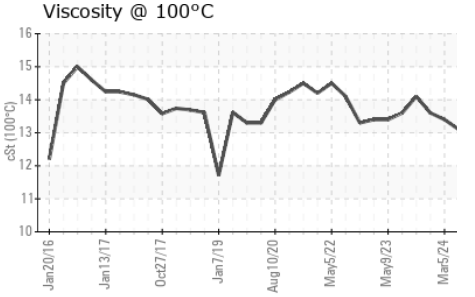
FT-IR (Direct Trend)




Base Number




Viscosity @ 100°C

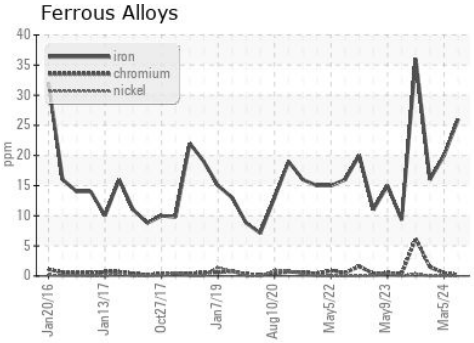



| VISUAL | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Precipitate | scalar | *Visual | NONE | **NONE** | NONE | NONE |
|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

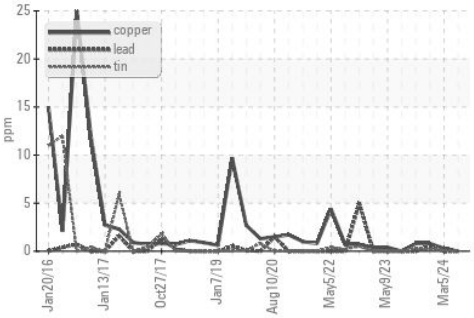
| FLUID PROPERTIES | | method | limit/base | current | history1 | history2 |
|---|---|---|---|---|---|---|
| Visc @ 100°C | cSt | ASTM D445 | | **13.1** | 13.4 | 13.6 |

## GRAPHS

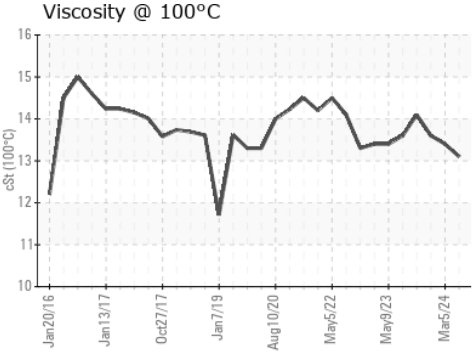
Ferrous Alloys



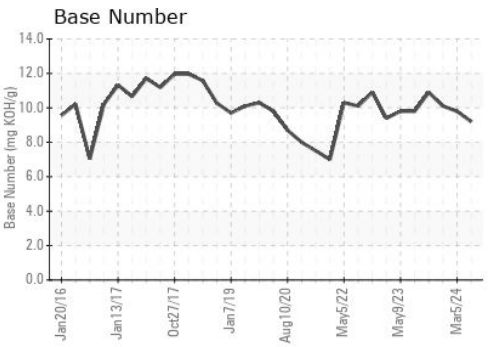

Non-ferrous Metals




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0908858 **Received** : 05 Jun 2024
**Lab Number** : 06199953 **Tested** : 06 Jun 2024
**Unique Number** : 11062076 **Diagnosed** : 06 Jun 2024 - Wes Davis
**Test Package** : CONST ( Additional Tests: 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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