MOB I

WEAR CHECK

# OIL ANALYSIS REPORT

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

Machine Id
**8845**
Component
**Diesel Engine**
Fluid
**DIESEL ENGINE OIL SAE 15W40 (--- QTS)**

## RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

## WEAR

Metal levels are typical for a new component breaking in.

## CONTAMINATION

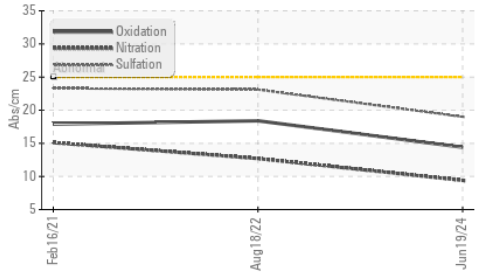
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

## FLUID CONDITION

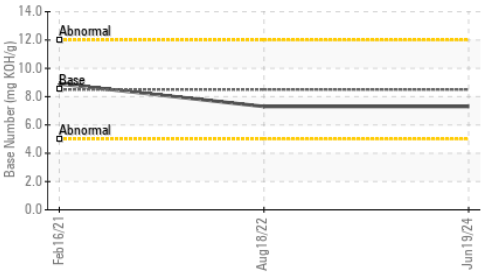
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | **WC0948830** | WC0729875 | WC0527394 |
| Sample Date | | Client Info | | **19 Jun 2024** | 18 Aug 2022 | 16 Feb 2021 |
| Machine Age | mls | Client Info | | **49587** | 39368 | 33863 |
| Oil Age | mls | Client Info | | **0** | 0 | 0 |
| Filter Age | mls | Client Info | | **0** | 0 | 0 |
| Oil Changed | | Client Info | | **Not Changd** | Not Changd | Not Changd |
| Filter Changed | | Client Info | | **N/A** | Not Changd | Not Changd |
| Sample Status | | | | **NORMAL** | NORMAL | ABNORMAL |
| Iron | ppm | ASTM D5185m | >100 | **34** | 76 | 73 |
| Chromium | ppm | ASTM D5185m | >20 | **<1** | 1 | 2 |
| Nickel | ppm | ASTM D5185m | >4 | **0** | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | **0** | <1 | <1 |
| Silver | ppm | ASTM D5185m | >3 | **0** | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | **14** | 31 | 8 |
| Lead | ppm | ASTM D5185m | >40 | **0** | 0 | 2 |
| Copper | ppm | ASTM D5185m | >330 | **4** | 20 | 16 |
| Tin | ppm | ASTM D5185m | >15 | **0** | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | **0** | 0 | <1 |
| White Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | **NONE** | NONE | NONE |
| Silicon | ppm | ASTM D5185m | >25 | **6** | 10 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | **21** | 64 | ▲ 51 |
| 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 | **0.4** | 1 | 1.5 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | **9.4** | 12.7 | 15.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | **19.0** | 23.1 | 23.3 |
| 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** | 7 | ▲ 758 |
| Boron | ppm | ASTM D5185m | 250 | **32** | 34 | 44 |
| Barium | ppm | ASTM D5185m | 10 | **0** | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | **84** | 81 | 163 |
| Manganese | ppm | ASTM D5185m | | **0** | 1 | 2 |
| Magnesium | ppm | ASTM D5185m | 450 | **121** | 42 | 42 |
| Calcium | ppm | ASTM D5185m | 3000 | **2085** | 2168 | 2124 |
| Phosphorus | ppm | ASTM D5185m | 1150 | **960** | 992 | 992 |
| Zinc | ppm | ASTM D5185m | 1350 | **1260** | 1179 | 1175 |
| Sulfur | ppm | ASTM D5185m | 4250 | **3505** | 3678 | 4479 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | **14.4** | 18.4 | 17.9 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 8.5 | **7.3** | 7.3 | 8.9 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | **13.1** | 13.4 | 14.5 |

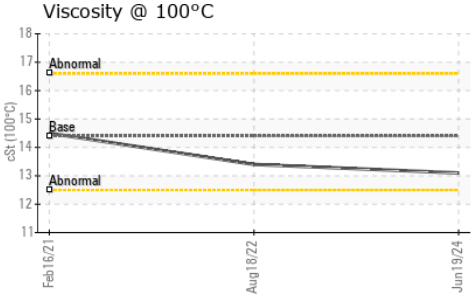
FT-IR (Direct Trend)



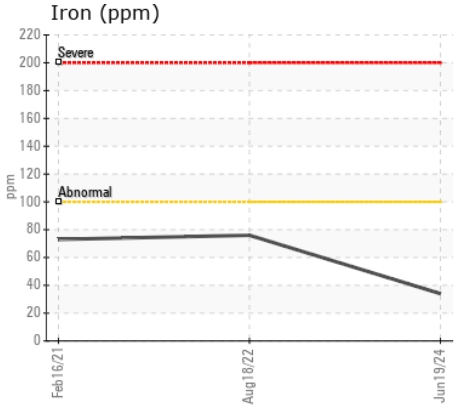

Base Number



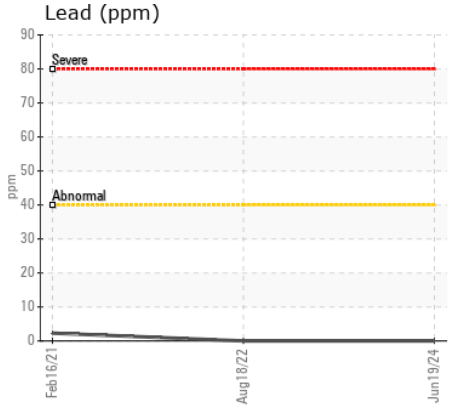

Viscosity @ 100°C



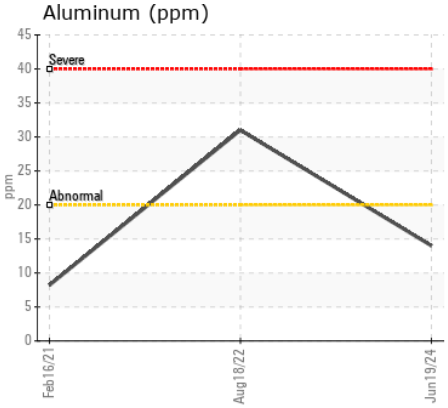

Iron (ppm)



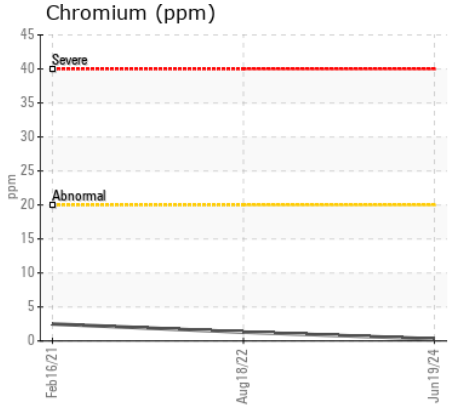

Lead (ppm)



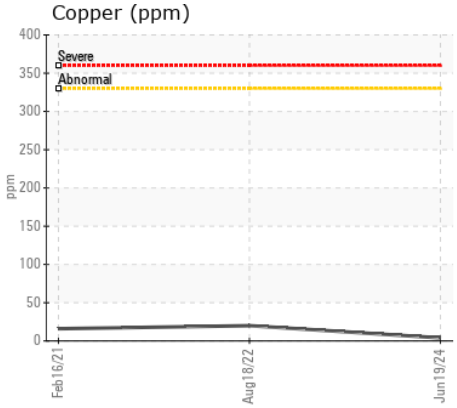

Aluminum (ppm)



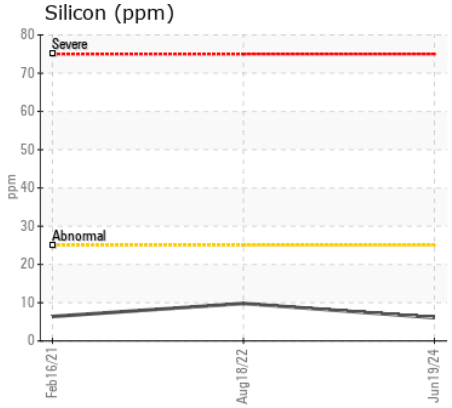

Chromium (ppm)



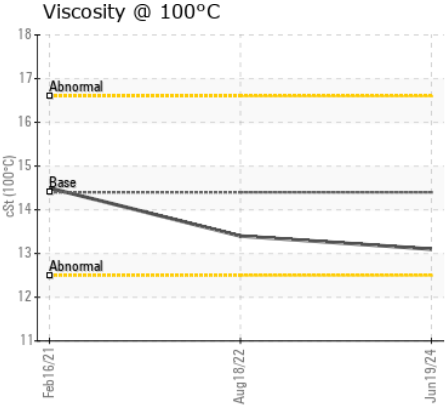

Copper (ppm)



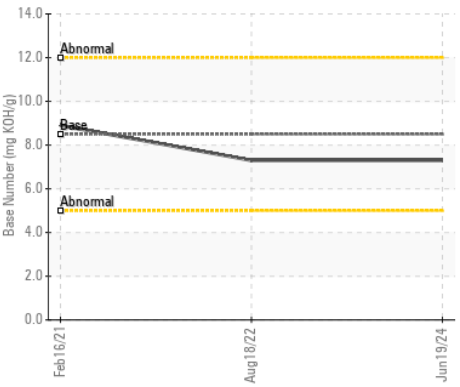

Silicon (ppm)




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : WC0948830 **Received** : 26 Jun 2024
**Lab Number** : 06220924 **Tested** : 27 Jun 2024
**Unique Number** : 11099121 **Diagnosed** : 27 Jun 2024 - Wes Davis
**Test Package** : MOB 1 ( 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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