MOB I

Dura-Check Fluid Analysis

# OIL ANALYSIS REPORT

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

Machine Id
## VOLVO 110F 132 - 61514
Component
## Diesel Engine
Fluid
## UNITED OIL DURALENE (--- GAL)

## RECOMMENDATION

We advise that you check for possible coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

## WEAR

All component wear rates are normal.

## CONTAMINATION

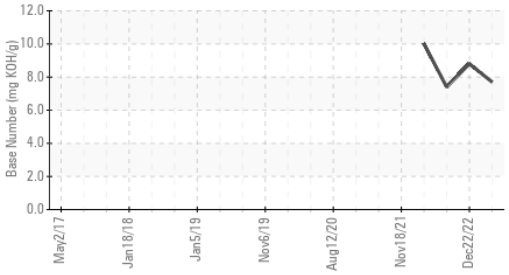
Sodium and/or potassium levels are high.

## FLUID CONDITION

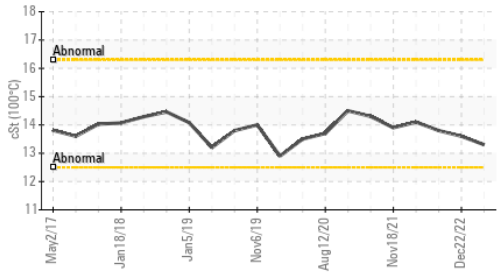
The BN result indicates that there is suitable alkalinity remaining in the oil.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|---|---|---|---|---|---|
| Sample Number | | Client Info | | DC0033376 | DC0023327 | DC0020953 |
| Sample Date | | Client Info | | 17 Jan 2024 | 22 Dec 2022 | 18 Jul 2022 |
| Machine Age | hrs | Client Info | | 250 | 250 | 250 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |
| Iron | ppm | ASTM D5185m | >100 | 1 | 6 | 6 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >2 | <1 | 2 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | 2 | 1 | 2 |
| Lead | ppm | ASTM D5185m | >40 | <1 | <1 | <1 |
| Copper | ppm | ASTM D5185m | >330 | 25 | 4 | 9 |
| Tin | ppm | ASTM D5185m | >15 | 0 | 0 | <1 |
| 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 | 1 | 4 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 8 | 2 | 1 |
| Fuel | | WC Method | >6.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | % | *ASTM D2982 | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.1 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.1 | 6.3 | 11.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 15.5 | 15.6 | 26.8 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | NONE | LIGHT | 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 | | ▲ 143 | 10 | 9 |
| Boron | ppm | ASTM D5185m | | 3 | 6 | 17 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 20 | 6 | 6 |
| Manganese | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | | 47 | 59 | 71 |
| Calcium | ppm | ASTM D5185m | | 2149 | 2628 | 2893 |
| Phosphorus | ppm | ASTM D5185m | | 854 | 911 | 997 |
| Zinc | ppm | ASTM D5185m | | 1028 | 1119 | 1264 |
| Sulfur | ppm | ASTM D5185m | | 3604 | 3784 | 5365 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 8.7 | 8.8 | 21.7 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 7.7 | 8.8 | 7.4 |
| Visc @ 100°C | cSt | ASTM D445 | | 13.3 | 13.6 | 13.8 |

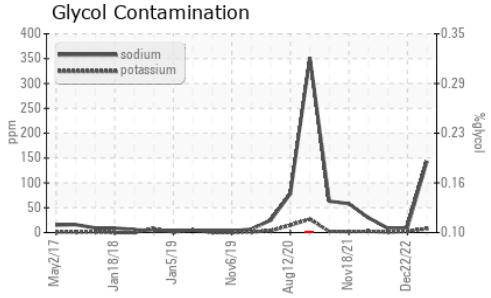
Base Number



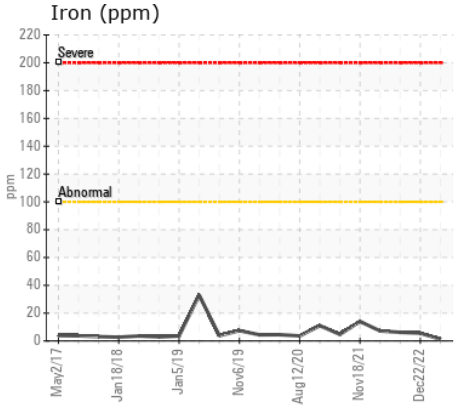

Viscosity @ 100°C



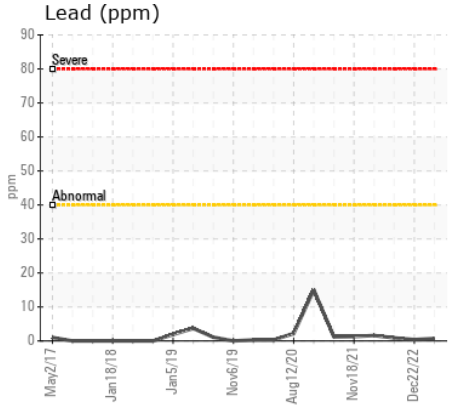

Glycol Contamination



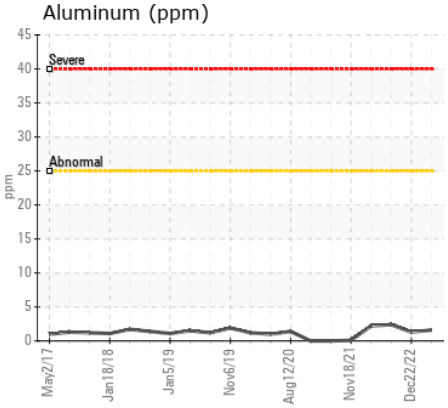

Iron (ppm)



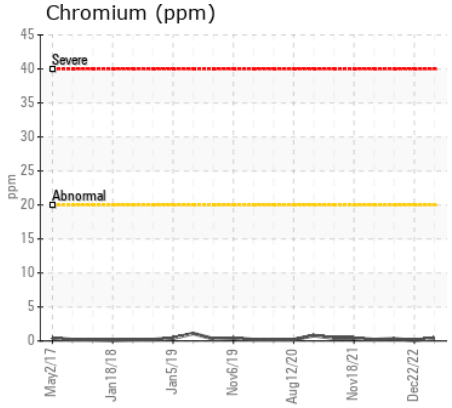

Lead (ppm)



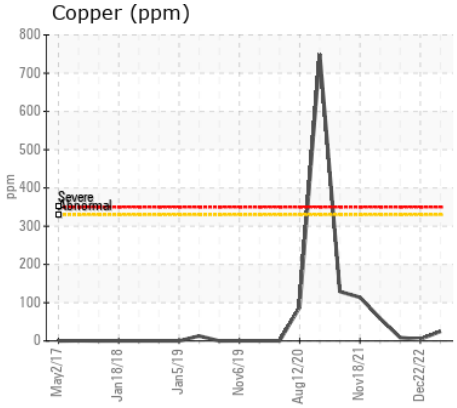

Aluminum (ppm)



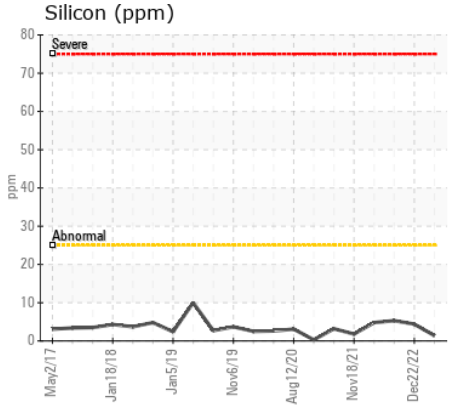

Chromium (ppm)



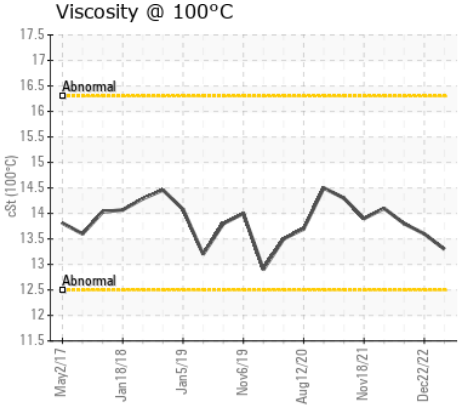

Copper (ppm)



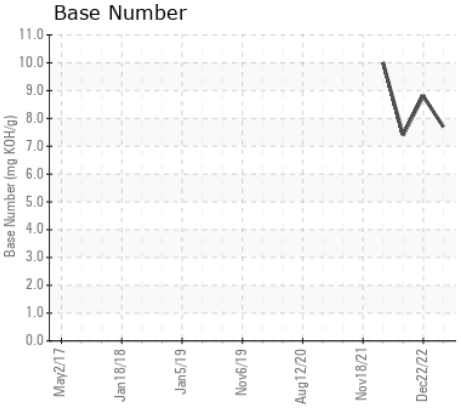

Silicon (ppm)




Viscosity @ 100°C




Base Number




Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513
**Sample No.** : DC0033376 **Recieved** : 01 Feb 2024
**Lab Number** : 06076692 **Diagnosed** : 05 Feb 2024
**Unique Number** : 10858783 **Diagnostician** : Jonathan Hester
**Test Package** : MOB 1 ( Additional Tests: Glycol, 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)*

**SIMS ARG**
3100 WEEDON STREET
BALTIMORE, MD
US 21226
Contact: MARK NUZZO
mark.nuzzo@simsmm.com
T: (410)355-1488
F: (410)355-5423