



OIL ANALYSIS REPORT

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



Area
[SWO069350]
 Machine Id
VOLVO EC300ELR 311843
 Component
Diesel Engine
 Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | VCP431839 | VCP421725 | VCP421873 |
| Sample Date | | Client Info | | 09 Feb 2024 | 22 Sep 2023 | 21 Apr 2023 |
| Machine Age | hrs | Client Info | | 5843 | 5320 | 4800 |
| 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 | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >100 | 10 | 10 | 9 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 3 | 5 | 4 |
| Lead | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Copper | ppm | ASTM D5185m | >15 | 8 | 3 | 1 |
| Tin | ppm | ASTM D5185m | >10 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

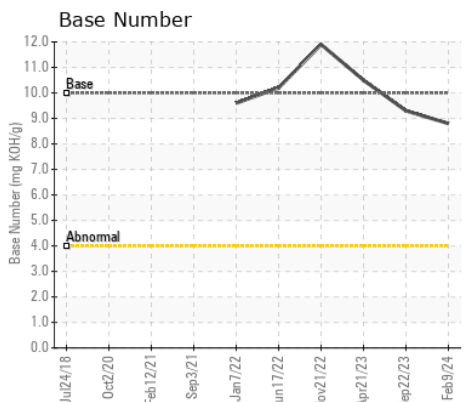
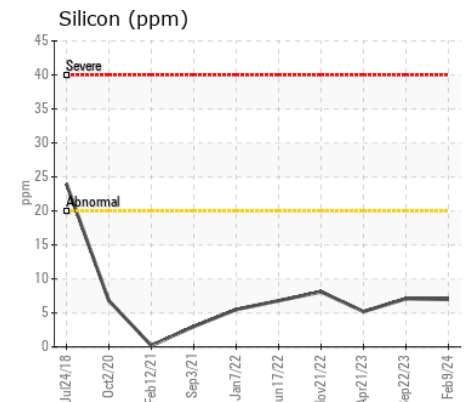
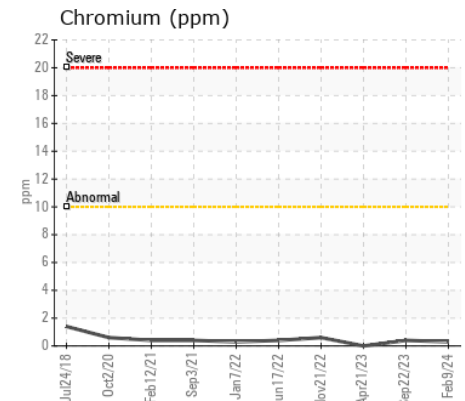
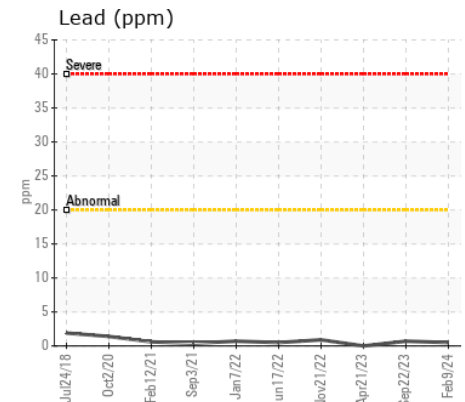
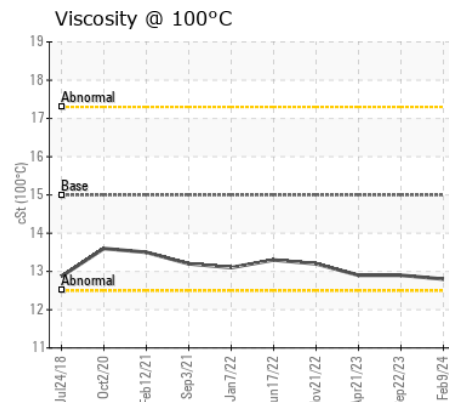
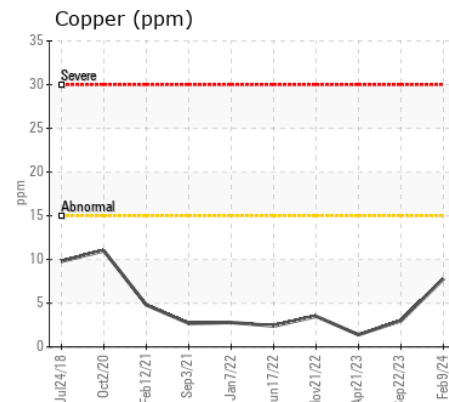
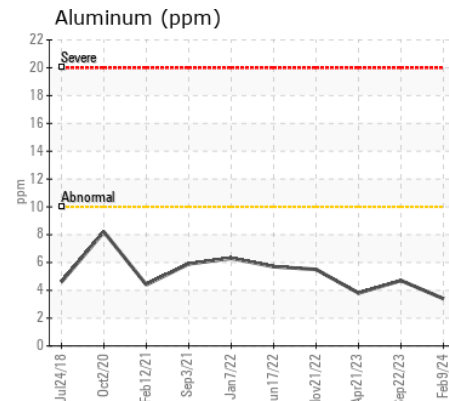
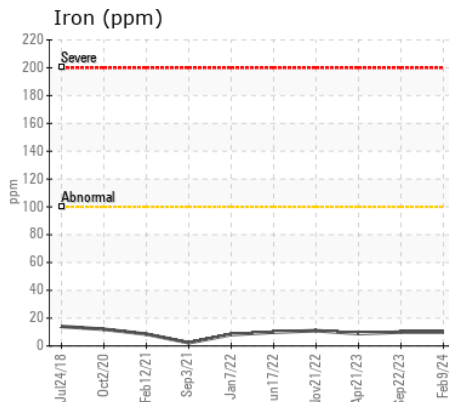
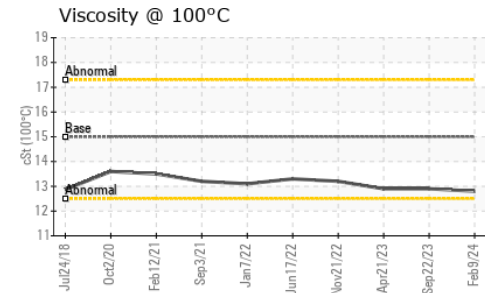
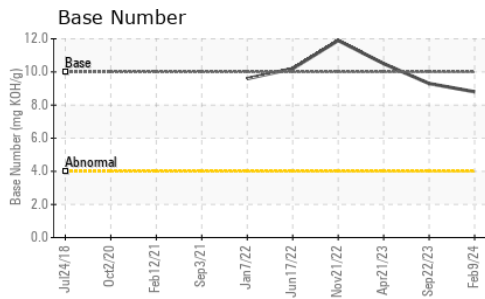
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 7 | 7 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 3 | 6 | 1 |
| Fuel | | WC Method | >6.0 | <1.0 | <1.0 | <1.0 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.1 | 0.1 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 7.8 | 6.8 | 6.8 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 20.2 | 21.1 | 21.9 |
| 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 | >0.1 | NEG | NEG | NEG |

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.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|------|
| Sodium | ppm | ASTM D5185m | | 0 | 5 | 2 |
| Boron | ppm | ASTM D5185m | 2.5 | 72 | 41 | 52 |
| Barium | ppm | ASTM D5185m | 0.0 | 12 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0.7 | 76 | 45 | 45 |
| Manganese | ppm | ASTM D5185m | 0.0 | 0 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | 256 | 561 | 550 | 553 |
| Calcium | ppm | ASTM D5185m | 2057 | 1481 | 1778 | 1693 |
| Phosphorus | ppm | ASTM D5185m | 935 | 849 | 847 | 833 |
| Zinc | ppm | ASTM D5185m | 1223 | 911 | 1020 | 1038 |
| Sulfur | ppm | ASTM D5185m | 4079 | 3326 | 3204 | 2855 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 18.3 | 19.6 | 20.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10 | 8.8 | 9.3 | 10.5 |
| Visc @ 100°C | cSt | ASTM D445 | 15.0 | 12.8 | 12.9 | 12.9 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP431839 **Received** : 14 Feb 2024
Lab Number : 06088600 **Tested** : 15 Feb 2024
Unique Number : 10876045 **Diagnosed** : 15 Feb 2024 - Sean Felton
Test Package : MOB 1 (Additional Tests: TBN)

SAIIA CONSTRUCTION LLC
 4400 LEWISBURG RD
 BIRMINGHAM, AL
 US 35207

Contact: STEPHANI BRITTON
 sbritton@saiia.com; doug.bogart@wearcheck.com
 T: (205)943-2268
 F: (205)943-2269

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)