



VOLVO

OIL ANALYSIS REPORT

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



Machine Id
VOLVO L110H 632271

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 | | VCP451154 | VCP398078 | VCP386635 |
| Sample Date | | Client Info | | 06 May 2024 | 03 Mar 2023 | 18 Nov 2022 |
| Machine Age | hrs | Client Info | | 3861 | 1542 | 984 |
| Oil Age | hrs | Client Info | | 0 | 1542 | 500 |
| 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 | 7 | 14 | 16 |
| Chromium | ppm | ASTM D5185m | >10 | <1 | 1 | 2 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | >2 | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >10 | 3 | 7 | 19 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 0 | 2 |
| Copper | ppm | ASTM D5185m | >15 | <1 | 3 | 5 |
| Tin | ppm | ASTM D5185m | >10 | 0 | 1 | 1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

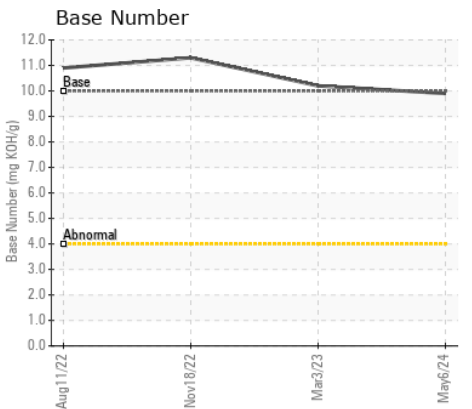
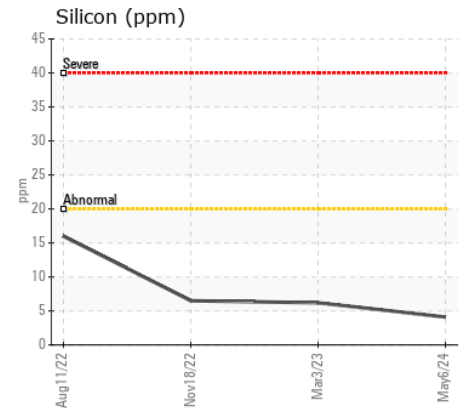
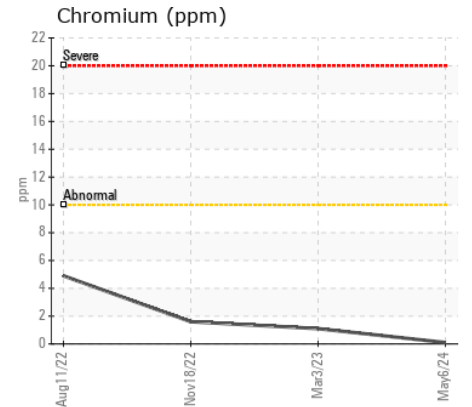
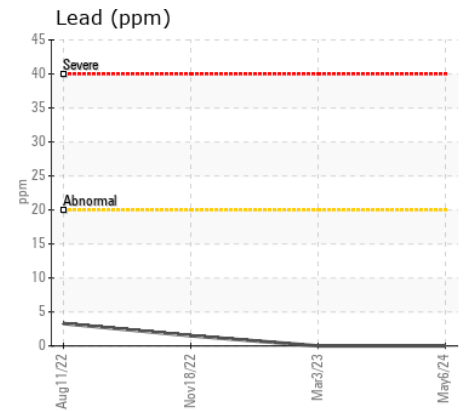
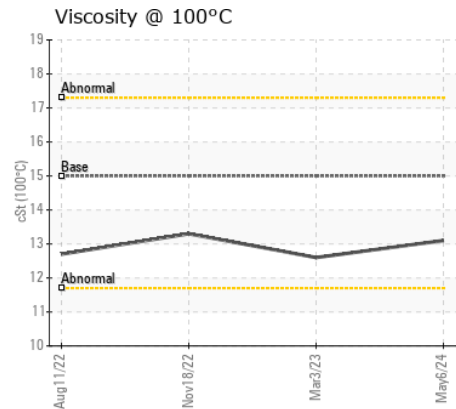
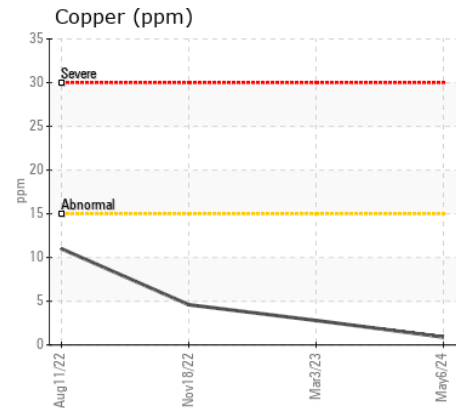
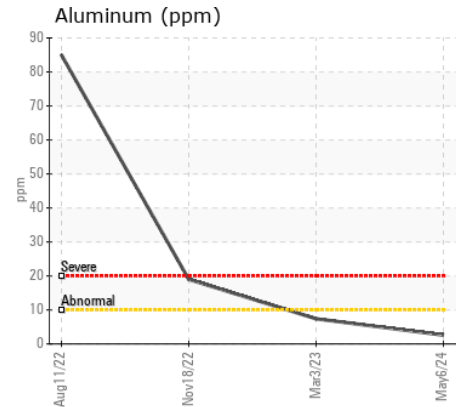
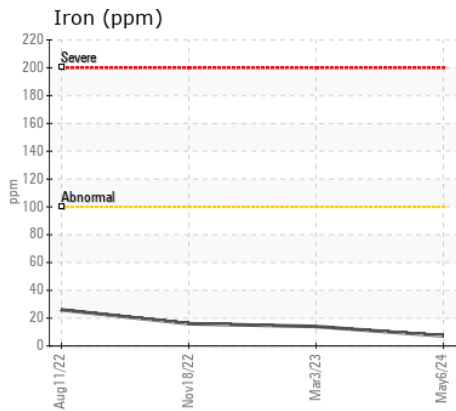
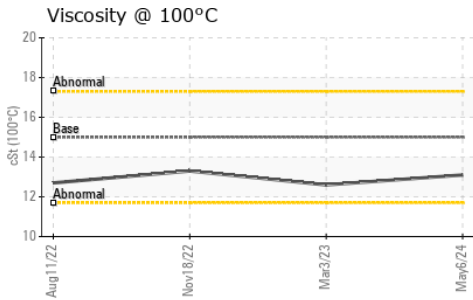
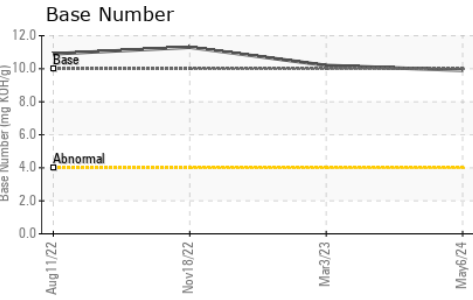
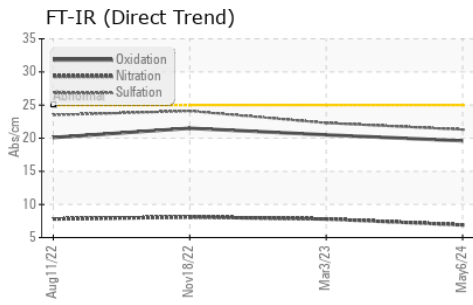
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >20 | 4 | 6 | 6 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| 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 | 0.2 | 0.3 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 6.9 | 7.8 | 8.1 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 21.3 | 22.3 | 24.1 |
| 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 | | 3 | 2 | 2 |
| Boron | ppm | ASTM D5185m | 2.5 | 33 | 36 | 32 |
| Barium | ppm | ASTM D5185m | 0.0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0.7 | 41 | 66 | 42 |
| Manganese | ppm | ASTM D5185m | 0.0 | 0 | 1 | <1 |
| Magnesium | ppm | ASTM D5185m | 256 | 519 | 506 | 578 |
| Calcium | ppm | ASTM D5185m | 2057 | 1836 | 1578 | 1578 |
| Phosphorus | ppm | ASTM D5185m | 935 | 970 | 850 | 900 |
| Zinc | ppm | ASTM D5185m | 1223 | 1131 | 1063 | 1157 |
| Sulfur | ppm | ASTM D5185m | 4079 | 3511 | 2885 | 3379 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 19.6 | 20.5 | 21.5 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | 10 | 9.9 | 10.2 | 11.3 |
| Visc @ 100°C | cSt | ASTM D445 | 15.0 | 13.1 | 12.6 | 13.3 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP451154 **Received** : 14 May 2024
Lab Number : 06178302 **Tested** : 14 May 2024
Unique Number : 11029628 **Diagnosed** : 14 May 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)

RIPA AND ASSOCIATES
 10149 FISHER AVENUE
 TAMPA, FL
 US 33619

Contact: PM Services
 PMServices@ripaconstruction.com

T:
 F: