



VOLVO

OIL ANALYSIS REPORT

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



Machine Id
VOLVO L110H 631231
Component
Front Axle
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. NOTE: one of two samples received with same ID and sampling date.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | VCP440168 | VCP432009 | VCP435650 |
| Sample Date | | Client Info | | 20 Feb 2024 | 20 Feb 2024 | 08 Nov 2023 |
| Machine Age | hrs | Client Info | | 12527 | 12827 | 12029 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Changed | N/A | Not Changd |
| Filter Changed | | Client Info | | N/A | Changed | Not Changd |
| Sample Status | | | | ABNORMAL | NORMAL | NORMAL |

WEAR

Gear wear is indicated.

| | | | | | | |
|--------------|--------|-------------|------|--------------|-------|------|
| Iron | ppm | ASTM D5185m | >500 | ▲ 465 | 57 | 24 |
| Chromium | ppm | ASTM D5185m | >20 | 3 | 0 | 0 |
| Nickel | ppm | ASTM D5185m | >10 | 2 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | 5 | <1 | <1 |
| Lead | ppm | ASTM D5185m | >50 | 2 | 2 | 0 |
| Copper | ppm | ASTM D5185m | >120 | <1 | 0 | <1 |
| Tin | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | MODER | MODER | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

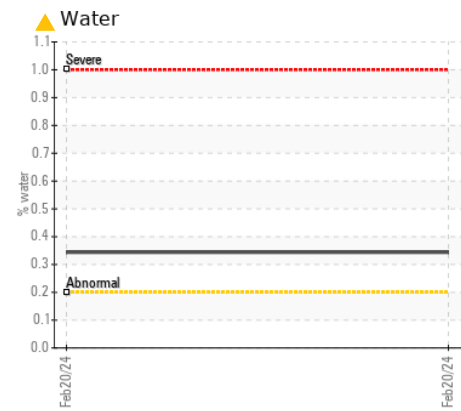
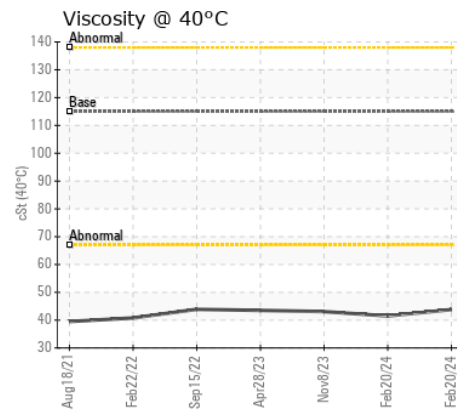
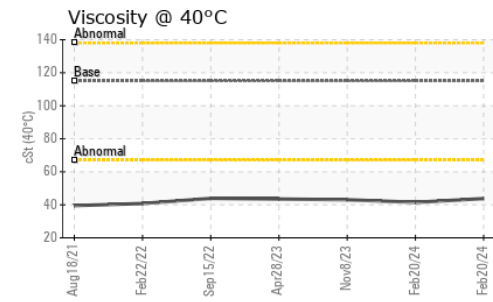
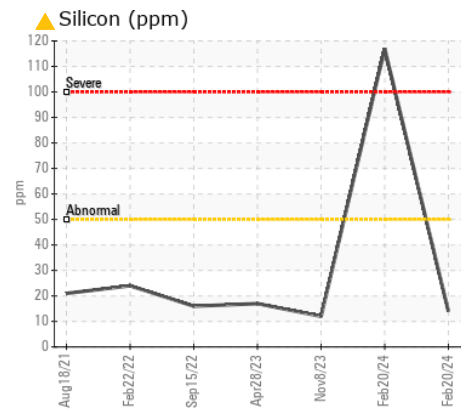
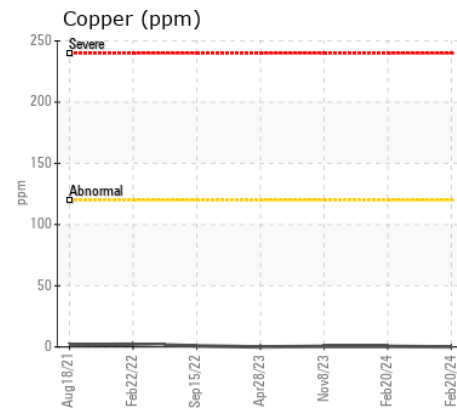
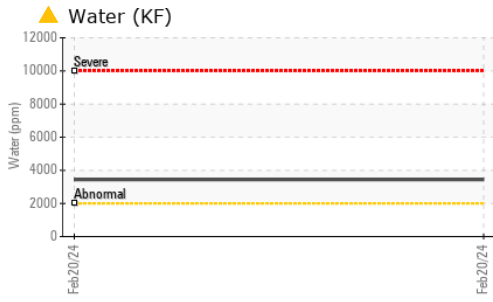
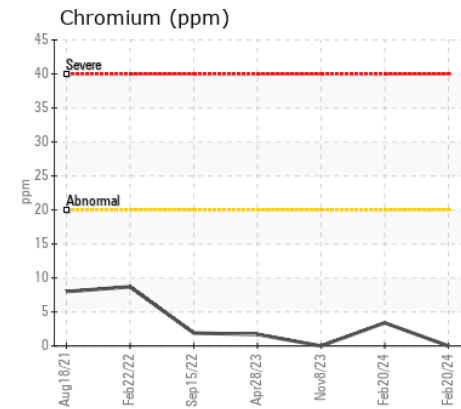
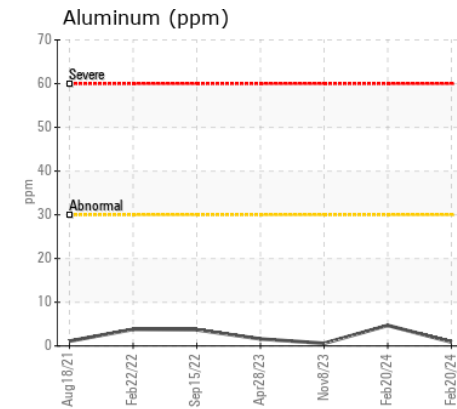
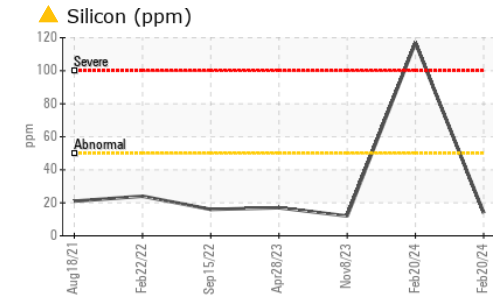
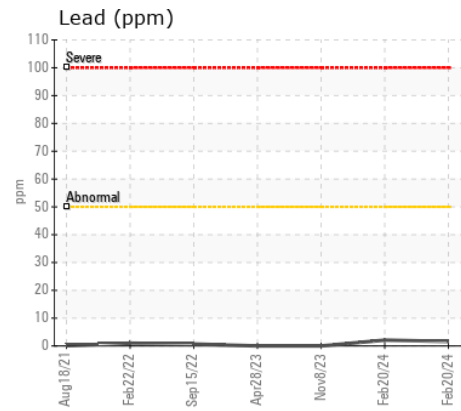
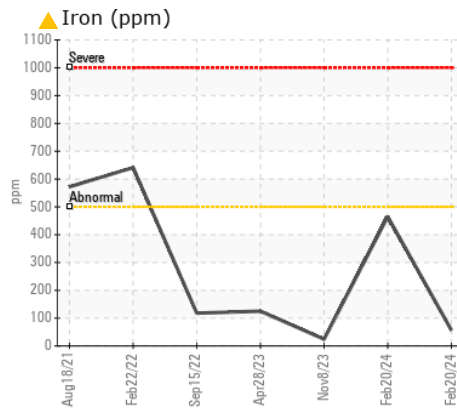
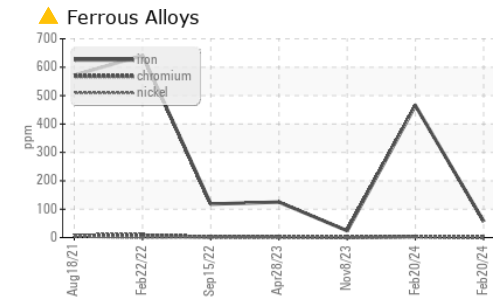
There is a light concentration of water present in the oil. Elemental level of silicon (Si) above normal.

| | | | | | | |
|------------------|--------|-------------|-------|----------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >50 | ▲ 117 | 14 | 12 |
| Potassium | ppm | ASTM D5185m | >20 | <1 | <1 | 0 |
| Water | % | ASTM D6304 | >0.2 | ▲ 0.344 | --- | --- |
| ppm Water | ppm | ASTM D6304 | >2000 | ▲ 3440 | --- | --- |
| 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 | 0.2% | NEG | NEG |

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

| | | | | | | |
|-------------|-----|-------------|------|-------------|------|-------|
| Sodium | ppm | ASTM D5185m | >158 | 2 | 1 | 3 |
| Boron | ppm | ASTM D5185m | 250 | 128 | 137 | 132 |
| Barium | ppm | ASTM D5185m | 10 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 100 | 2 | <1 | <1 |
| Manganese | ppm | ASTM D5185m | | 3 | <1 | <1 |
| Magnesium | ppm | ASTM D5185m | 450 | 17 | 25 | 21 |
| Calcium | ppm | ASTM D5185m | 3000 | 4002 | 4622 | 4060 |
| Phosphorus | ppm | ASTM D5185m | 1150 | 1316 | 1558 | 1246 |
| Zinc | ppm | ASTM D5185m | 1350 | 1539 | 1972 | 1550 |
| Sulfur | ppm | ASTM D5185m | 4250 | 3955 | 4382 | 3750 |
| Visc @ 40°C | cSt | ASTM D445 | 115 | 43.8 | 41.5 | 43.08 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP440168 **Received** : 27 Feb 2024
Lab Number : 06102600 **Tested** : 29 Feb 2024
Unique Number : 10900830 **Diagnosed** : 29 Feb 2024 - Don Baldrige
Test Package : MOBCE (Additional Tests: KF)

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: