



VOLVO

OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

ABNORMAL

SEVERE

NORMAL



Area

[8260]

Machine Id

VOLVO ECR355E 310109 - ECR355E

Component

Rear Left Final Drive

Fluid

CHEVRON DELO GEAR ESI OIL 85W140 (--- 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.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | VCP387995 | VCE142792 | VCP312838 |
| Sample Date | | Client Info | | 05 Dec 2022 | 13 Apr 2022 | 08 Dec 2021 |
| Machine Age | hrs | Client Info | | 2888 | 2598 | 2266 |
| 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 | | Not Changed | Not Changed | N/A |
| Sample Status | | | | SEVERE | ABNORMAL | ABNORMAL |

WEAR

Gear wear is indicated.

| | | | | | | |
|--------------|--------|-------------|------|---------------|-------|--------|
| Iron | ppm | ASTM D5185m | >500 | ▲ 1448 | ▲ 939 | ▲ 1196 |
| Chromium | ppm | ASTM D5185m | >10 | ▲ 16 | ▲ 12 | ▲ 20 |
| Nickel | ppm | ASTM D5185m | | <1 | 1 | 1 |
| Titanium | ppm | ASTM D5185m | | 18 | 4 | 3 |
| Silver | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >25 | ▲ 133 | ▲ 33 | ▲ 27 |
| Lead | ppm | ASTM D5185m | >25 | 0 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >50 | 2 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Vanadium | ppm | ASTM D5185m | | <1 | <1 | <1 |
| White Metal | scalar | *Visual | NONE | MODER | NONE | LIGHT |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

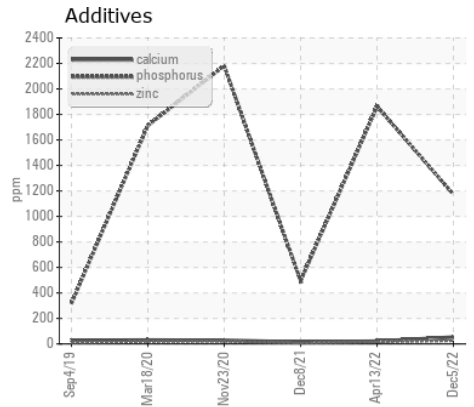
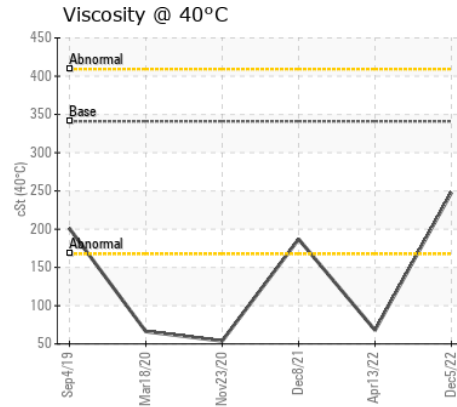
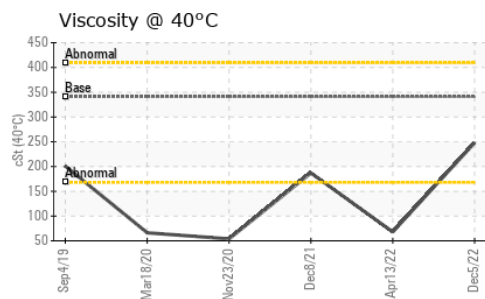
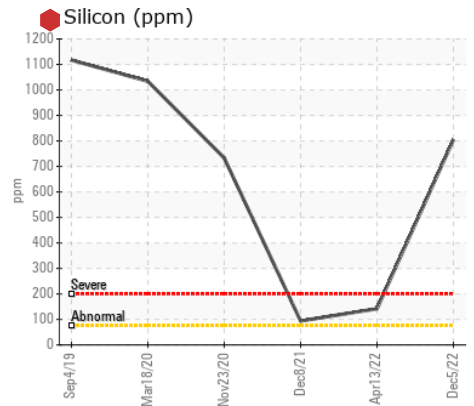
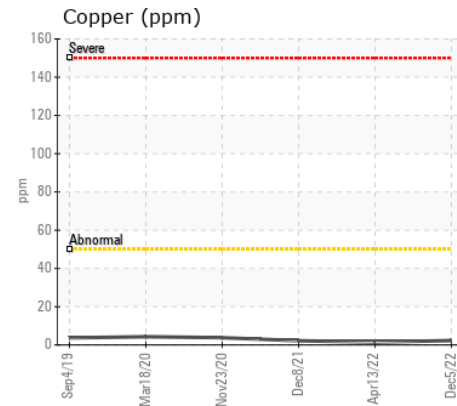
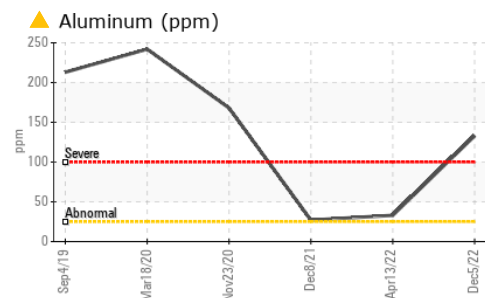
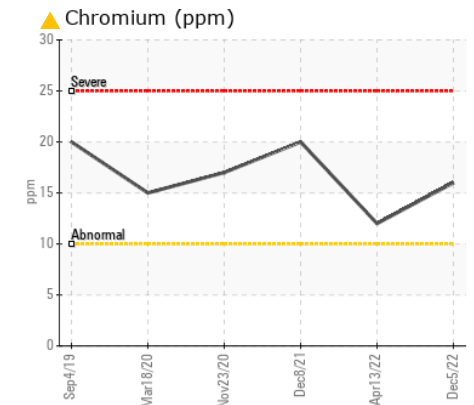
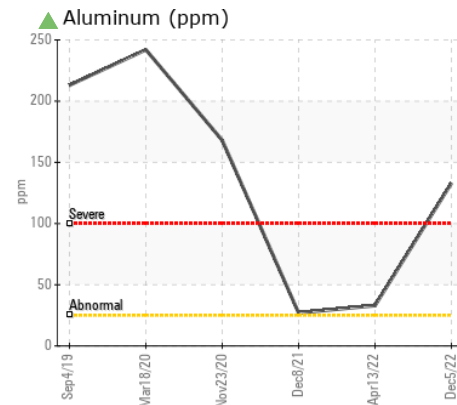
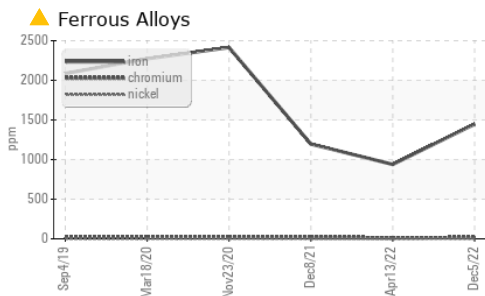
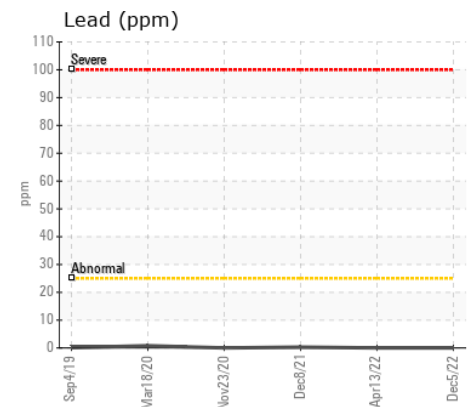
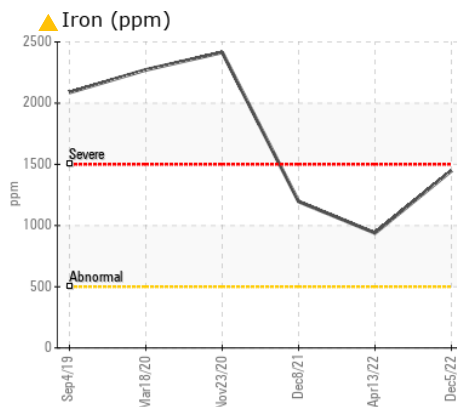
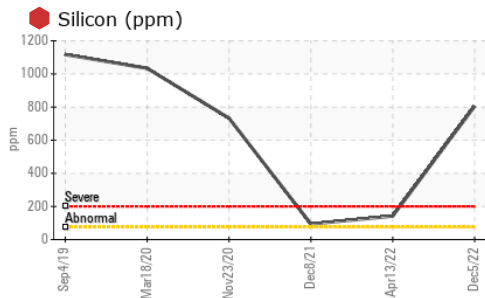
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

| | | | | | | |
|------------------|--------|-------------|-------|--------------|-------|-------|
| Silicon | ppm | ASTM D5185m | >75 | ◆ 805 | ▲ 142 | ▲ 94 |
| Potassium | ppm | ASTM D5185m | >20 | 26 | 5 | 6 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| 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 |

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

| | | | | | | |
|-------------|-----|-------------|-----|--------------|--------|-------|
| Sodium | ppm | ASTM D5185m | | 6 | 4 | 0 |
| Boron | ppm | ASTM D5185m | | 159 | 158 | 0 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | | 2 | 1 | 2 |
| Manganese | ppm | ASTM D5185m | | 11 | 8 | 13 |
| Magnesium | ppm | ASTM D5185m | | 8 | 4 | 2 |
| Calcium | ppm | ASTM D5185m | | 54 | 22 | 15 |
| Phosphorus | ppm | ASTM D5185m | | 1174 | 1862 | 496 |
| Zinc | ppm | ASTM D5185m | | 24 | 16 | 5 |
| Sulfur | ppm | ASTM D5185m | | 22912 | 21787 | 14731 |
| Visc @ 40°C | cSt | ASTM D445 | 341 | 248 | ▲ 68.0 | ▲ 187 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP387995
Lab Number : 05711862
Unique Number : 10246437
Test Package : MOBCE

Received : 07 Dec 2022
Tested : 09 Dec 2022
Diagnosed : 11 Dec 2022 - Don Baldrige

MCCLUNG-LOGAN EQUIPMENT CO - SALEM
 2025 COOK DRIVE
 SALEM, VA
 US 24153
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 F:

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)