



VOLVO

OIL ANALYSIS REPORT

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



Area
[SWO-069917 APAC AL]
 Machine Id
VOLVO L150H 5908
 Component
Hydraulic System
 Fluid
AW HYDRAULIC OIL ISO 32 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | VCP416172 | VCP297127 | VCP290608 |
| Sample Date | | Client Info | | 22 Feb 2024 | 05 Feb 2021 | 18 Nov 2020 |
| Machine Age | hrs | Client Info | | 7119 | 4059 | 3253 |
| Oil Age | hrs | Client Info | | 0 | 0 | 0 |
| Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| Oil Changed | | Client Info | | Not Changed | Changed | Not Changed |
| Filter Changed | | Client Info | | Not Changed | Changed | Not Changed |
| Sample Status | | | | ATTENTION | ABNORMAL | ABNORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|-------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 1 | <1 | 5 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 0 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | 0 | <1 | <1 |
| Lead | ppm | ASTM D5185m | >20 | <1 | <1 | 2 |
| Copper | ppm | ASTM D5185m | >150 | <1 | 0 | 8 |
| Tin | ppm | ASTM D5185m | >20 | 0 | <1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | LIGHT | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

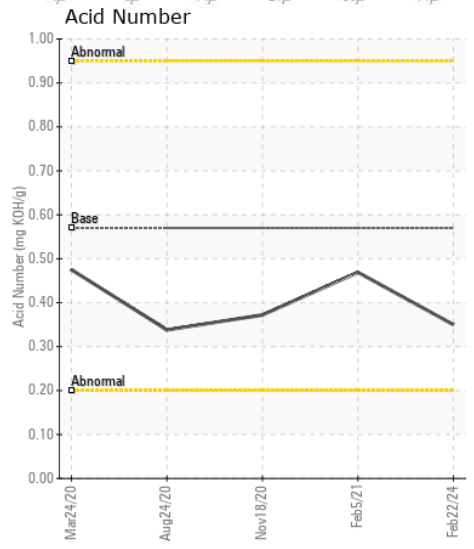
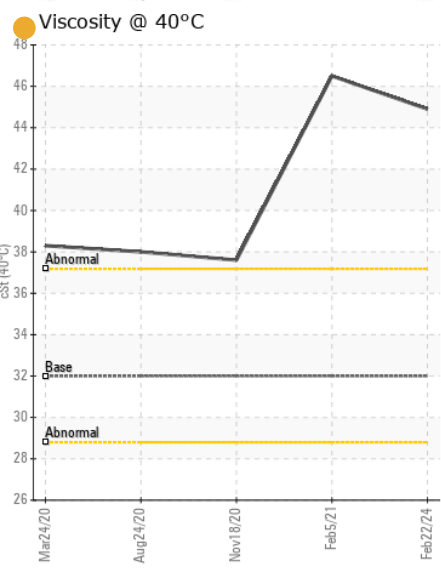
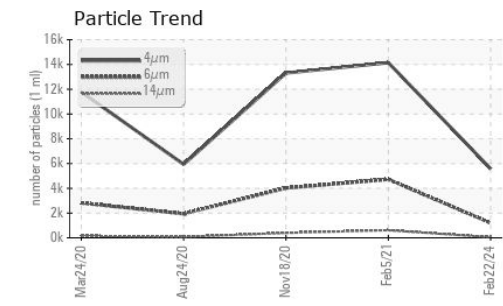
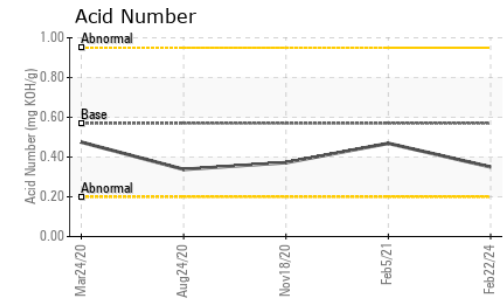
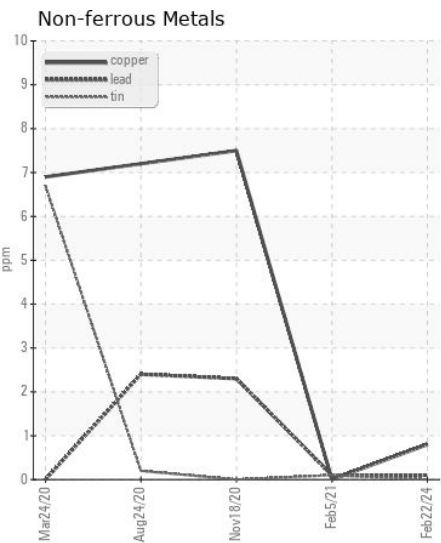
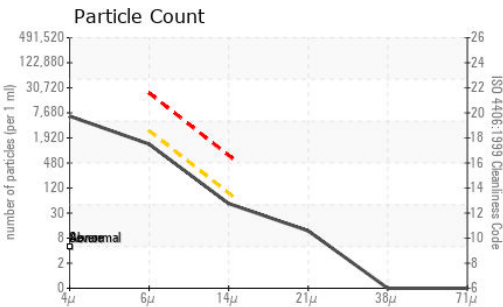
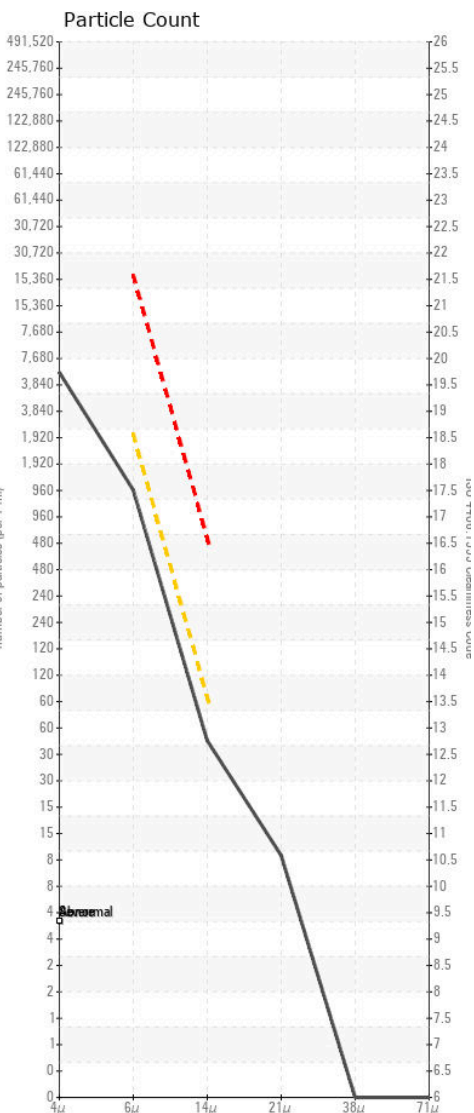
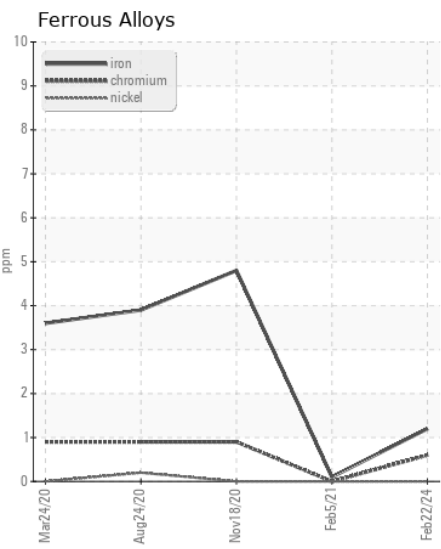
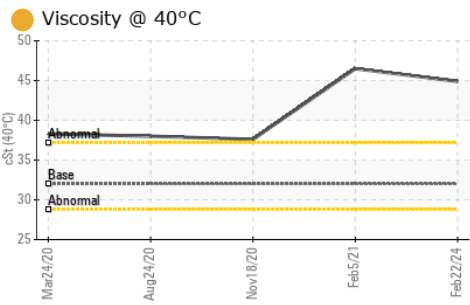
The amount and size of particulates present in the system are acceptable. There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|--------|--------------|----------|----------|------------|------------|
| Silicon | ppm | ASTM D5185m | >20 | 1 | <1 | 0 |
| Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | <1 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | | 5579 | 14146 | 13308 |
| Particles >6µm | | ASTM D7647 | >2500 | 1194 | ▲ 4724 | 4026 |
| Particles >14µm | | ASTM D7647 | >80 | 45 | ▲ 614 | ▲ 394 |
| Particles >21µm | | ASTM D7647 | >20 | 10 | ▲ 165 | ▲ 109 |
| Particles >38µm | | ASTM D7647 | >4 | 0 | 4 | 2 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >-/18/13 | 20/17/13 | ▲ 21/19/16 | ▲ 21/19/16 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | MODER | 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

Viscosity of sample indicates oil is within ISO 46 range, advise investigate. Confirm oil type. The AN level is acceptable for this fluid.

| | | | | | | |
|------------------|----------|-------------|------|------|-------|-------|
| Sodium | ppm | ASTM D5185m | | 0 | <1 | 1 |
| Boron | ppm | ASTM D5185m | 5 | 0 | 7 | 2 |
| Barium | ppm | ASTM D5185m | 5 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 5 | <1 | 2 | <1 |
| Manganese | ppm | ASTM D5185m | | <1 | 0 | 0 |
| Magnesium | ppm | ASTM D5185m | 25 | 16 | 15 | 2 |
| Calcium | ppm | ASTM D5185m | 200 | 67 | 89 | 54 |
| Phosphorus | ppm | ASTM D5185m | 300 | 305 | 329 | 339 |
| Zinc | ppm | ASTM D5185m | 370 | 421 | 421 | 431 |
| Sulfur | ppm | ASTM D5185m | 2500 | 1310 | 1809 | 3744 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.57 | 0.35 | 0.469 | 0.372 |
| Visc @ 40°C | cSt | ASTM D445 | 32 | 44.9 | 46.5 | 37.6 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP416172
Lab Number : 06101555
Unique Number : 10899785
Test Package : MOB 2
Received : 27 Feb 2024
Tested : 28 Feb 2024
Diagnosed : 29 Feb 2024 - Jonathan Hester

COWIN EQUIPMENT COMPANY
 2238 PINSON VALLEY PARKWAY
 BIRMINGHAM, AL
 US 35217
 Contact: BRANTLY CLAY
 bclay@cowin.com
 T:
 F: (205)856-2106

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)