



OIL ANALYSIS REPORT

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



Area
[W/O 10854]
Machine Id
VOLVO L90H 626130
Component
Diesel Engine
Fluid
CHEVRON 15W40 (5 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | ML0001343 | ML0000143 | VCP413842 |
| Sample Date | | Client Info | | 20 May 2024 | 08 Feb 2024 | 13 Sep 2023 |
| Machine Age | hrs | Client Info | | 2004 | 1513 | 1078 |
| Oil Age | hrs | Client Info | | 491 | 435 | 0 |
| Filter Age | hrs | Client Info | | 491 | 435 | 0 |
| Oil Changed | | Client Info | | Changed | Changed | Changed |
| Filter Changed | | Client Info | | Changed | Changed | Changed |
| Sample Status | | | | NORMAL | NORMAL | SEVERE |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >200 | 47 | 71 | 73 |
| Chromium | ppm | ASTM D5185m | >20 | 2 | 2 | 4 |
| Nickel | ppm | ASTM D5185m | >5 | <1 | 0 | <1 |
| Titanium | ppm | ASTM D5185m | | <1 | 2 | <1 |
| Silver | ppm | ASTM D5185m | >2 | <1 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >30 | 6 | 4 | 4 |
| Lead | ppm | ASTM D5185m | >40 | <1 | 0 | <1 |
| Copper | ppm | ASTM D5185m | >20 | 2 | 2 | 4 |
| Tin | ppm | ASTM D5185m | >20 | 1 | 0 | 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

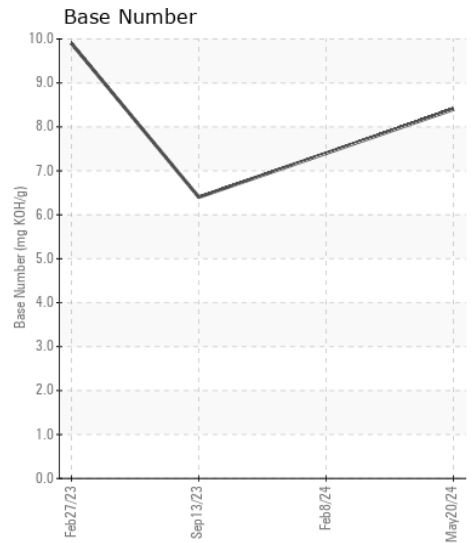
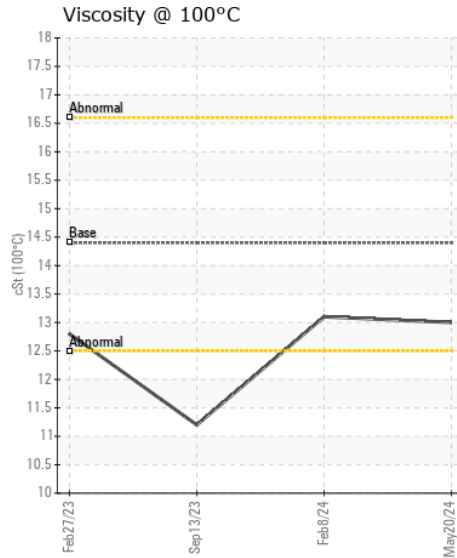
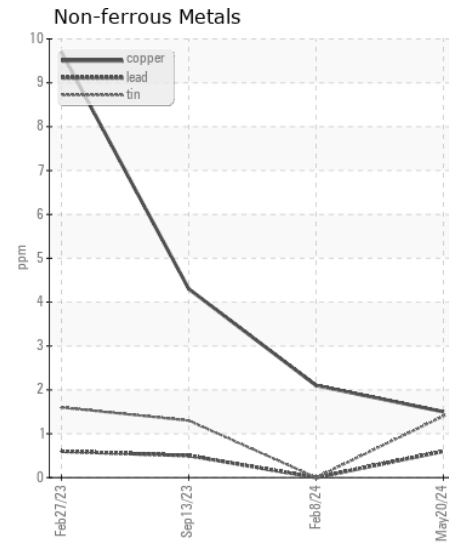
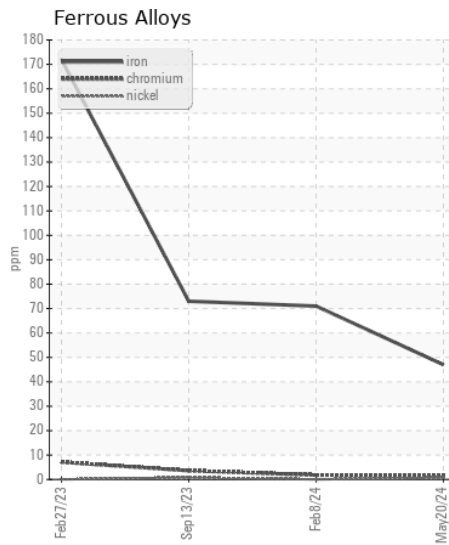
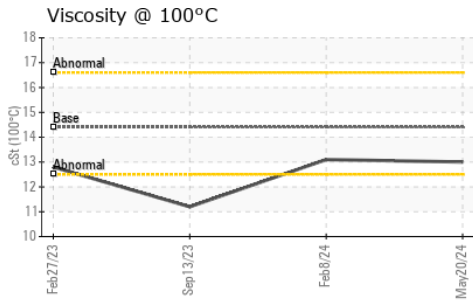
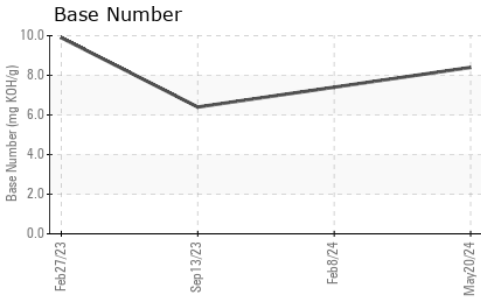
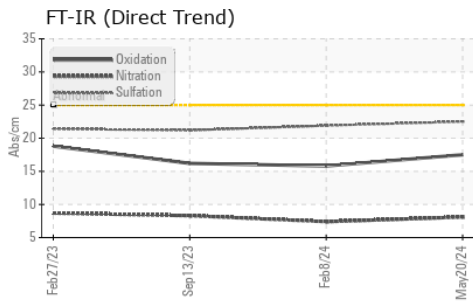
There is no indication of any contamination in the oil.

| | | | | | | |
|------------------|----------|-------------|-------|----------------|-------|--------|
| Silicon | ppm | ASTM D5185m | >20 | 10 | 10 | 22 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 3 | 2 |
| Fuel | | WC Method | >6.0 | <1.0 | 1.1 | ▲ 12.9 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Glycol | | WC Method | | NEG | NEG | NEG |
| Soot % | % | *ASTM D7844 | >3 | 0.3 | 0.3 | 0.3 |
| Nitration | Abs/cm | *ASTM D7624 | >20 | 8.1 | 7.4 | 8.3 |
| Sulfation | Abs/.1mm | *ASTM D7415 | >30 | 22.5 | 21.9 | 21.2 |
| 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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

| | | | | | | |
|------------------|----------|-------------|------|-------------|------|--------|
| Sodium | ppm | ASTM D5185m | >50 | 4 | 0 | 2 |
| Boron | ppm | ASTM D5185m | | 255 | 426 | 228 |
| Barium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | | 103 | 87 | 82 |
| Manganese | ppm | ASTM D5185m | | 1 | <1 | 2 |
| Magnesium | ppm | ASTM D5185m | | 601 | 388 | 413 |
| Calcium | ppm | ASTM D5185m | | 1492 | 1331 | 1281 |
| Phosphorus | ppm | ASTM D5185m | | 714 | 1022 | 881 |
| Zinc | ppm | ASTM D5185m | | 969 | 1170 | 1070 |
| Sulfur | ppm | ASTM D5185m | | 2749 | 3333 | 3159 |
| Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 17.5 | 15.8 | 16.2 |
| Base Number (BN) | mg KOH/g | ASTM D2896 | | 8.4 | 7.4 | 6.4 |
| Visc @ 100°C | cSt | ASTM D445 | 14.4 | 13.0 | 13.1 | ▲ 11.2 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001343 **Received** : 24 May 2024
Lab Number : 06190332 **Tested** : 29 May 2024
Unique Number : 11047084 **Diagnosed** : 29 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: TBN)

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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)

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