



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



Machine Id
VOLVO L150H 5363
Component
Hydraulic System
Fluid
ESSO NUTO H ISO 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|--------------------|-------------|-------------|
| Sample Number | | Client Info | | ML0001309 | ML0000193 | ML0000159 |
| Sample Date | | Client Info | | 12 Jun 2024 | 10 Apr 2024 | 13 Feb 2024 |
| Machine Age | hrs | Client Info | | 10228 | 9968 | 9727 |
| Oil Age | hrs | Client Info | | 250 | 1957 | 1716 |
| Filter Age | hrs | Client Info | | 250 | 477 | 236 |
| Oil Changed | | Client Info | | Not Changed | Changed | Not Changed |
| Filter Changed | | Client Info | | Not Changed | Changed | Not Changed |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|--------------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 2 | 8 | 6 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | 2 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | <1 | 0 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | <1 | 1 | 2 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 2 | <1 |
| Copper | ppm | ASTM D5185m | >20 | 2 | 5 | 4 |
| Tin | ppm | ASTM D5185m | >20 | 0 | 1 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | <1 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

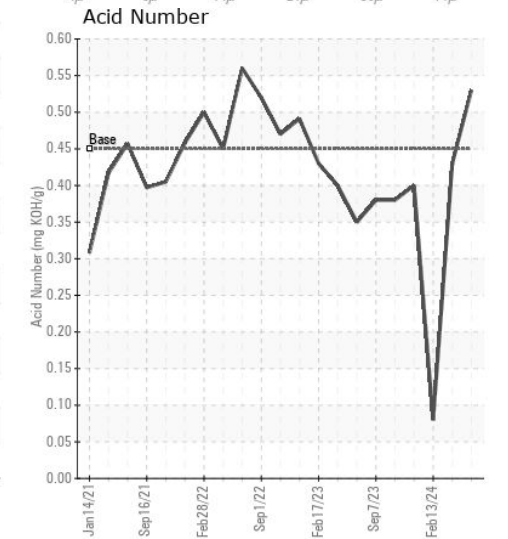
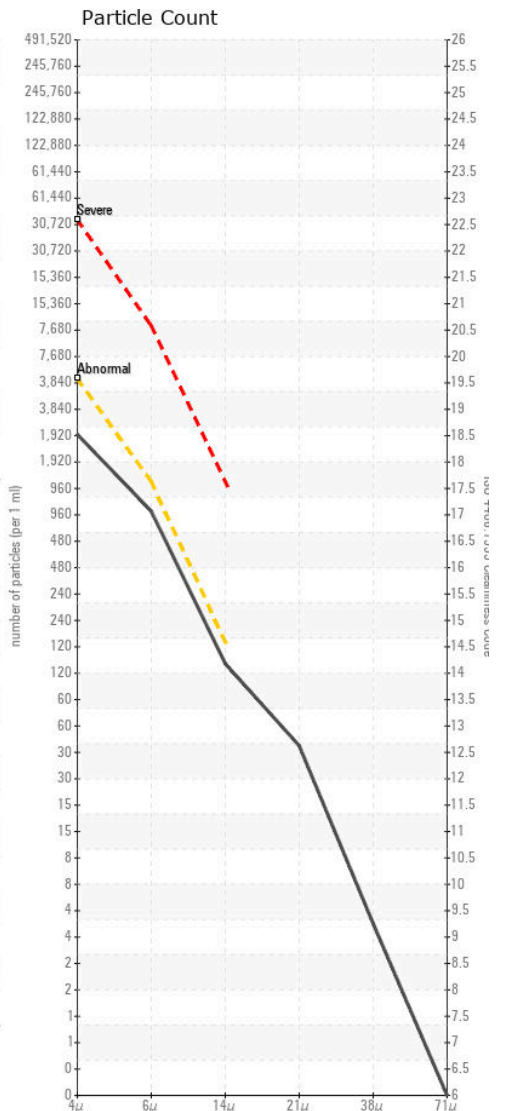
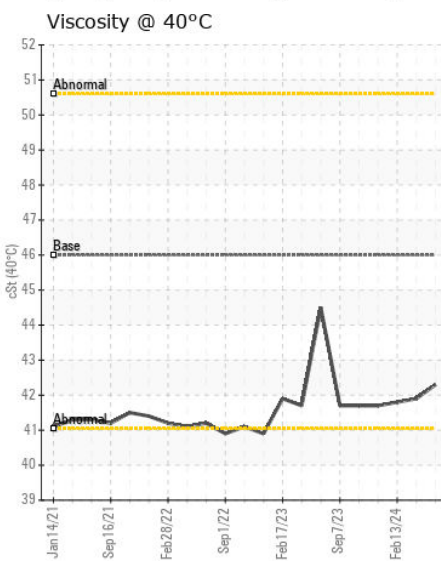
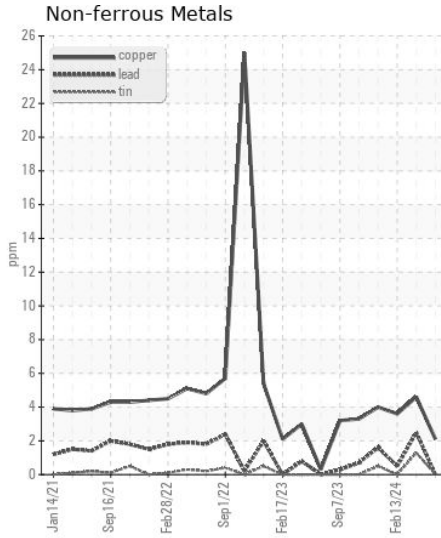
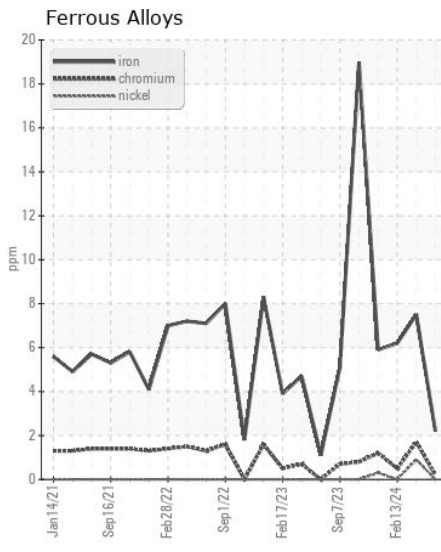
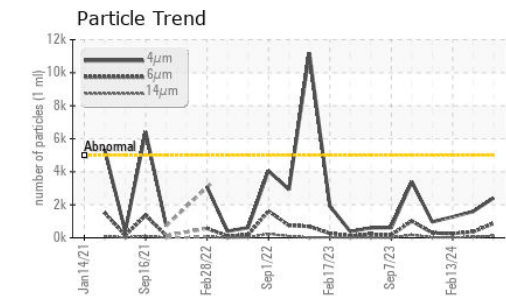
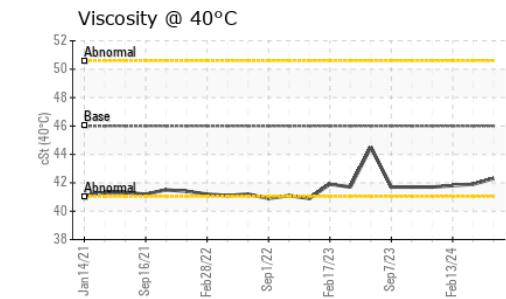
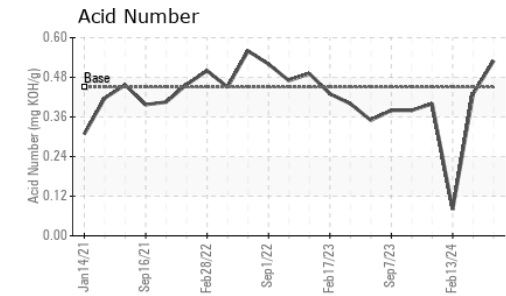
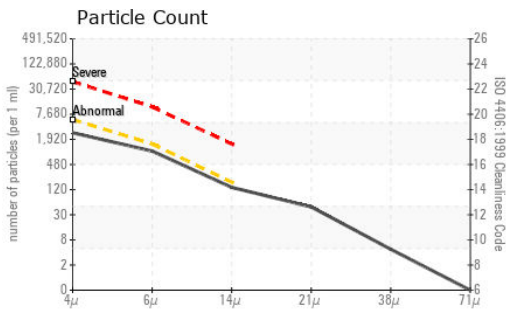
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|--------------|-----------|-----------------|----------|----------|
| Silicon | ppm | ASTM D5185m | >20 | 1 | 2 | 1 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 3 | 2 |
| Water | | WC Method | >0.2 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | >5000 | 2410 | 1596 | 1270 |
| Particles >6µm | | ASTM D7647 | >1300 | 882 | 364 | 252 |
| Particles >14µm | | ASTM D7647 | >160 | 120 | 43 | 27 |
| Particles >21µm | | ASTM D7647 | >40 | 41 | 15 | 7 |
| Particles >38µm | | ASTM D7647 | >10 | 4 | 1 | 0 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >19/17/14 | 18/17/14 | 18/16/13 | 17/15/12 |
| Silt | scalar | *Visual | NONE | NONE | NONE | NONE |
| Debris | scalar | *Visual | NONE | LIGHT | 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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

| | | | | | | |
|------------------|----------|-------------|------|--------------|------|------|
| Sodium | ppm | ASTM D5185m | | 3 | 3 | 0 |
| Boron | ppm | ASTM D5185m | 0 | 1 | 1 | 2 |
| Barium | ppm | ASTM D5185m | 0 | 0 | 0 | 0 |
| Molybdenum | ppm | ASTM D5185m | 0 | 0 | 2 | 1 |
| Manganese | ppm | ASTM D5185m | | <1 | <1 | 0 |
| Magnesium | ppm | ASTM D5185m | 5 | 6 | 12 | 13 |
| Calcium | ppm | ASTM D5185m | 50 | 130 | 170 | 154 |
| Phosphorus | ppm | ASTM D5185m | 330 | 382 | 400 | 340 |
| Zinc | ppm | ASTM D5185m | 410 | 476 | 453 | 474 |
| Sulfur | ppm | ASTM D5185m | 2700 | 6360 | 5072 | 4761 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | 0.45 | 0.53 | 0.43 | 0.08 |
| Visc @ 40°C | cSt | ASTM D445 | 46 | 42.3 | 41.9 | 41.8 |



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001309
Lab Number : 06221115
Unique Number : 11099312
Test Package : CONST
Received : 26 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 27 Jun 2024 - Don Baldrige

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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)