



ASCENDUM

OIL ANALYSIS REPORT

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



Area
Ascendum Machinery
 Machine Id
625463 VOLVO L90H 625463
 Component
Hydraulic System
 Fluid
VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. (Customer Sample Comment:
 Top Up Amount: 6 GAL)

| Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|----------------|-----|-------------|-----------|-------------|-------------|-------------|
| Sample Number | | Client Info | | ASC0001790 | ASC0005085 | VCP0005493 |
| Sample Date | | Client Info | | 04 Jan 2024 | 21 Nov 2023 | 27 Mar 2023 |
| Machine Age | hrs | Client Info | | 8430 | 8137 | 6532 |
| Oil Age | hrs | Client Info | | 293 | 3941 | 4795 |
| Filter Age | hrs | Client Info | | 0 | 3941 | 0 |
| Oil Changed | | Client Info | | Oil Added | Changed | Oil Added |
| Filter Changed | | Client Info | | Not Chngd | Changed | Not Chngd |
| Sample Status | | | | NORMAL | NORMAL | NORMAL |

WEAR

All component wear rates are normal.

| | | | | | | |
|--------------|--------|-------------|------|------|------|------|
| Iron | ppm | ASTM D5185m | >50 | 4 | 7 | 9 |
| Chromium | ppm | ASTM D5185m | >20 | <1 | <1 | <1 |
| Nickel | ppm | ASTM D5185m | >10 | 0 | <1 | <1 |
| Titanium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| Silver | ppm | ASTM D5185m | | 0 | 0 | 0 |
| Aluminum | ppm | ASTM D5185m | >20 | <1 | 2 | 2 |
| Lead | ppm | ASTM D5185m | >20 | 0 | 1 | <1 |
| Copper | ppm | ASTM D5185m | >150 | <1 | 2 | 2 |
| Tin | ppm | ASTM D5185m | >20 | 0 | 0 | 0 |
| Vanadium | ppm | ASTM D5185m | | 0 | 0 | 0 |
| White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |

CONTAMINATION

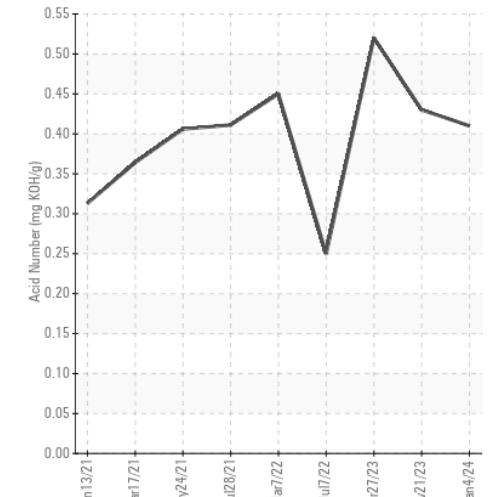
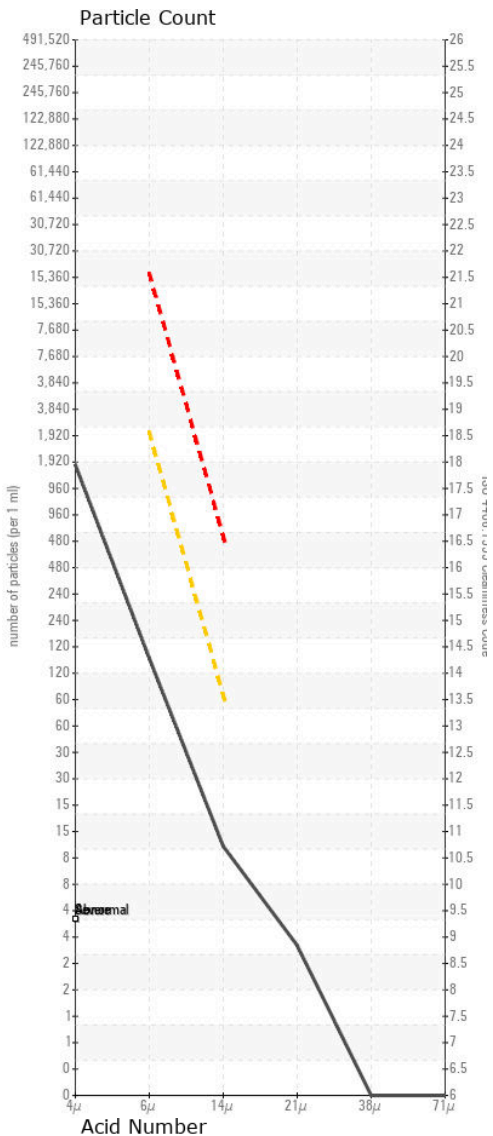
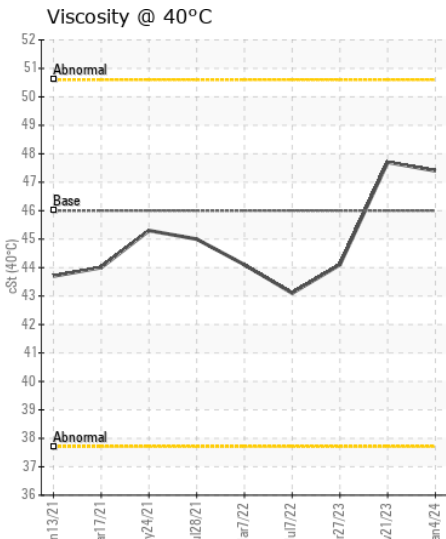
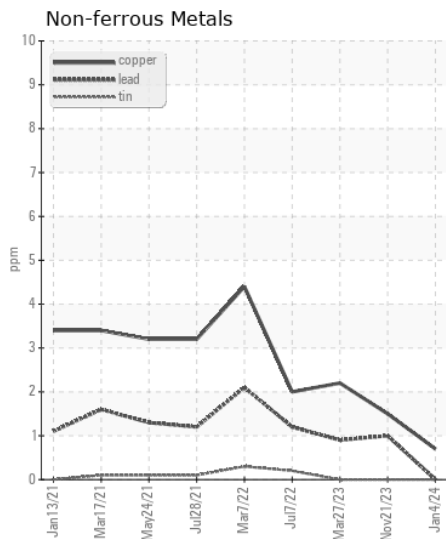
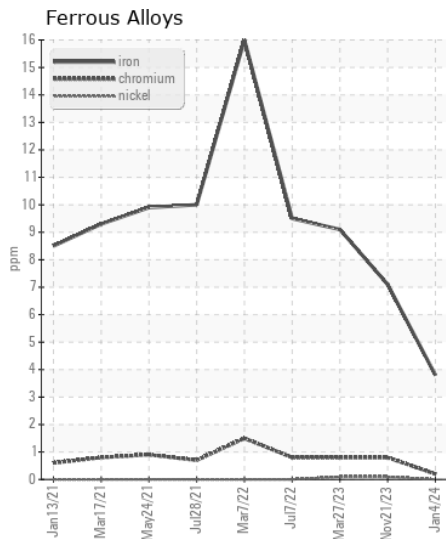
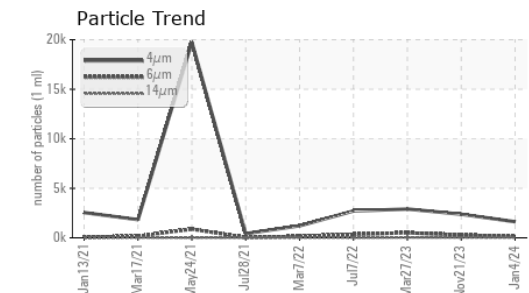
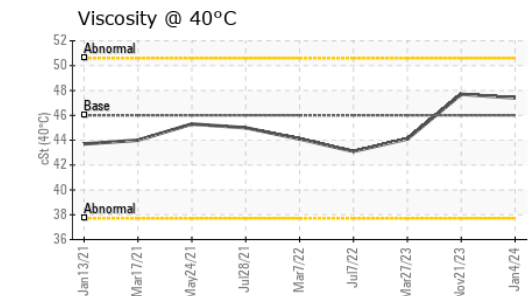
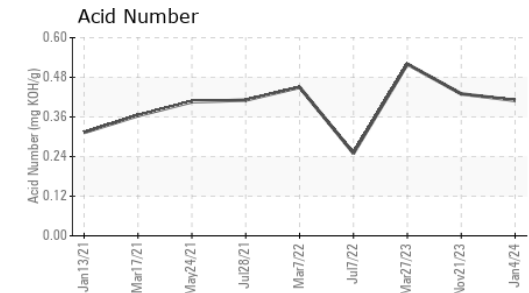
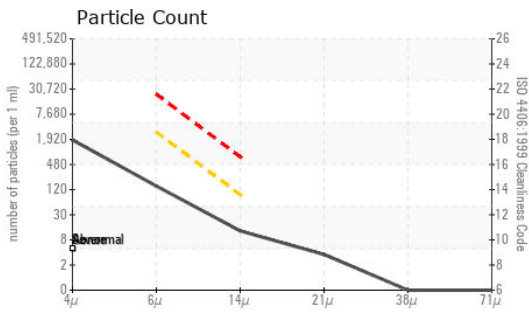
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

| | | | | | | |
|------------------|--------|--------------|----------|----------|----------|----------|
| Silicon | ppm | ASTM D5185m | >20 | 4 | 7 | 5 |
| Potassium | ppm | ASTM D5185m | >20 | 2 | 6 | 6 |
| Water | | WC Method | >0.1 | NEG | NEG | NEG |
| Particles >4µm | | ASTM D7647 | | 1623 | 2381 | 2907 |
| Particles >6µm | | ASTM D7647 | >2500 | 129 | 287 | 507 |
| Particles >14µm | | ASTM D7647 | >80 | 11 | 24 | 38 |
| Particles >21µm | | ASTM D7647 | >20 | 3 | 8 | 11 |
| Particles >38µm | | ASTM D7647 | >4 | 0 | 1 | 1 |
| Particles >71µm | | ASTM D7647 | >3 | 0 | 0 | 0 |
| Oil Cleanliness | | ISO 4406 (c) | >-/18/13 | 18/14/11 | 18/15/12 | 19/16/12 |
| 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 | >0.1 | 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 | 2 |
| Boron | ppm | ASTM D5185m | 14 | 8 | 19 | 12 |
| Barium | ppm | ASTM D5185m | 0.0 | 0 | 0 | <1 |
| Molybdenum | ppm | ASTM D5185m | 0.0 | 6 | 13 | 10 |
| Manganese | ppm | ASTM D5185m | 0.0 | 0 | 0 | <1 |
| Magnesium | ppm | ASTM D5185m | 2.6 | 30 | 53 | 26 |
| Calcium | ppm | ASTM D5185m | 49 | 196 | 281 | 194 |
| Phosphorus | ppm | ASTM D5185m | 354 | 325 | 402 | 346 |
| Zinc | ppm | ASTM D5185m | 419 | 427 | 451 | 443 |
| Sulfur | ppm | ASTM D5185m | 3719 | 1847 | 2173 | 2165 |
| Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.41 | 0.43 | 0.52 |
| Visc @ 40°C | cSt | ASTM D445 | 46 | 47.4 | 47.7 | 44.1 |



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0001790 **Received** : 09 Jan 2024
Lab Number : 06055345 **Diagnosed** : 10 Jan 2024
Unique Number : 10821294 **Diagnostician** : Don Baldrige
Test Package : MOBCE

METAL RECYCLING SERVICES - GASTONIA
 5401 S YORK HWY
 GASTONIA, NC
 US 28052
 Contact: RYAN BOWDEN

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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