WEAR CONTAMINATION FLUID CONDITION

NORMAL
ATTENTION
NORMAL



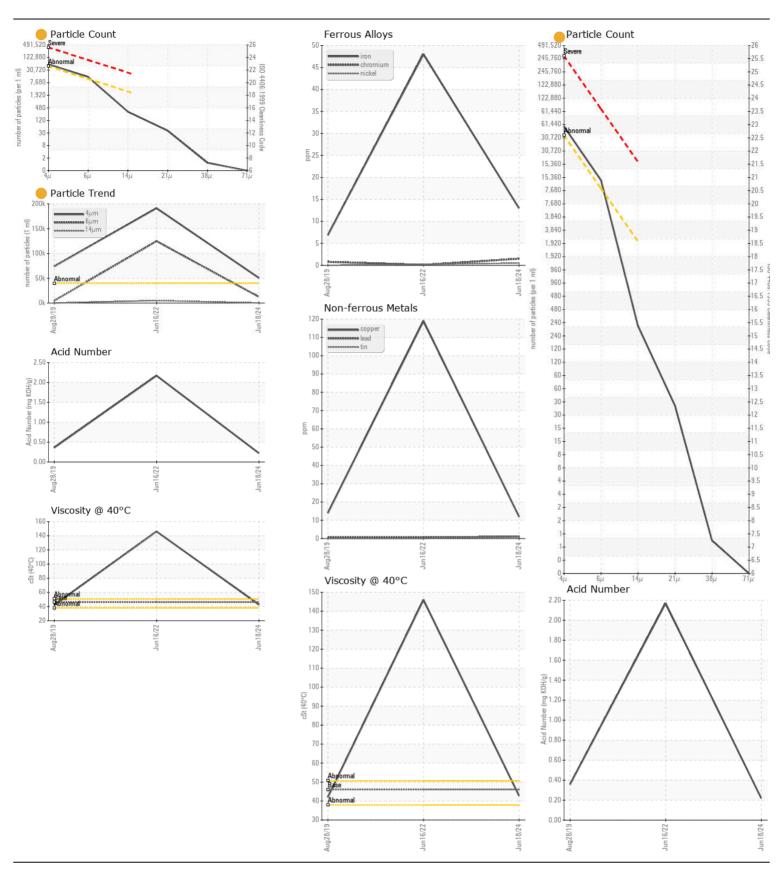
[730276]

VOLVO ECR88D 212899

Hydraulic System

VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

| VOLVO SUPER HYDRAULIC OIL 46 (GAL) | | | | | | | |
|---|------------------|----------|--------------|--------------|-----------------|-----------------------------------|-------------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| HEOOWINIENDATION | Sample Number | OOW | Client Info | LIIII(/ toll | VCP453540 | VCP341112 | , |
| Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. | Sample Date | | Client Info | | 18 Jun 2024 | 16 Jun 2022 | 28 Aug 2019 |
| | Machine Age | hrs | Client Info | | 5977 | 3980 | 1897 |
| | Oil Age | hrs | Client Info | | 2000 | 0 | 0 |
| | Filter Age | hrs | Client Info | | 0 | 0 | 0 |
| | Oil Changed | 0 | Client Info | | Changed | Changed | N/A |
| | Filter Changed | | Client Info | | Changed | Changed | N/A |
| | Sample Status | | | | ATTENTION | | ATTENTION |
| WEAR | Iron | ppm | ASTM D5185m | >25 | 13 | 48 | 7 |
| WEAR | Chromium | ppm | ASTM D5185m | | 2 | <1 | <1 |
| All component wear rates are normal. | Nickel | ppm | ASTM D5185m | | - <1 | <1 | 0 |
| | Titanium | ppm | ASTM D5185m | 7.0 | <1 | 0 | 0 |
| | Silver | ppm | ASTM D5185m | | <1 | <1 | 0 |
| | Aluminum | ppm | ASTM D5185m | >20 | 3 | <1 | <1 |
| | Lead | ppm | ASTM D5185m | | 1 | <1 | <1 |
| | Copper | ppm | ASTM D5185m | | 12 | 119 | 14 |
| | Tin | ppm | | >10 | <1 | 0 | 0 |
| | Vanadium | ppm | ASTM D5185m | 7.0 | <1 | 0 | 0 |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | NONE |
| | | | | | | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >50 | 6 | 4 | 4 |
| | Potassium | ppm | ASTM D5185m | >20 | 2 | 0 | <1 |
| There is a moderate amount of silt (particulates < 14 microns in size) present in the oil. | Water | | WC Method | >0.1 | NEG | NEG | NEG |
| | Particles >4µm | | ASTM D7647 | >40000 | 50549 | <u> </u> | 73994 |
| | Particles >6µm | | ASTM D7647 | >10000 | 12399 | <u> </u> | 4581 |
| | Particles >14μm | | ASTM D7647 | >2500 | 274 | <u>▲</u> 4959 | 19 |
| | Particles >21µm | | ASTM D7647 | >640 | 34 | 127 | 4 |
| | Particles >38µm | | ASTM D7647 | >160 | 1 | 1 | 2 |
| | Particles >71μm | | ASTM D7647 | >40 | 0 | 1 | 2 |
| | Oil Cleanliness | | ISO 4406 (c) | | 23/21/15 | <u>\$\text{\Delta}\$ 25/24/19</u> | 23/19/11 |
| | 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 | Sodium | ppm | ASTM D5185m | | 0 | <1 | <1 |
| TEOID CONDITION | Boron | ppm | ASTM D5185m | 14 | 5 | 151 | 1 |
| The AN level is acceptable for this fluid. The condition of the oil is suitable for further service. | Barium | ppm | ASTM D5185m | | 2 | 0 | <1 |
| | Molybdenum | ppm | ASTM D5185m | | 4 | 0 | <1 |
| | Manganese | ppm | ASTM D5185m | | 1 | 1 | <1 |
| | Magnesium | ppm | ASTM D5185m | | 36 | <1 | 11 |
| | Calcium | ppm | ASTM D5185m | | 502 | 17 | 115 |
| | Phosphorus | ppm | ASTM D5185m | | 482 | 1844 | 348 |
| | Zinc | ppm | ASTM D5185m | | 575 | 98 | 442 |
| | Sulfur | ppm | ASTM D5185m | | 1930 | 20735 | 1056 |
| | Acid Number (AN) | mg KOH/g | ASTM D8045 | | 0.22 | 2.17 | 0.358 |
| | Visc @ 40°C | cSt | ASTM D445 | 46 | 42.8 | 146 | 42.0 |





Certificate L2367

Laboratory Sample No. Lab Number

: VCP453540 : 06216792 Unique Number: 11089656 Test Package : MOB 2

To discuss this sample report, contact Customer Service at 1-800-237-1369.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 21 Jun 2024 **Tested** : 24 Jun 2024

Diagnosed

: 24 Jun 2024 - Don Baldridge

US 48213 Contact: DAVE WARD dward@blazecontracting.net T: (248)632-2317

BLAZE CONSTRUCTION

5640 ST JEAN ST

DETROIT, MI

* - 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)