



VOLVO EC480 315121

Diesel Engine

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
|---|------------------|----------|-------------|-----------|-------------|-------------|----------|
| Oil and filter change at the time of sampling has been noted. Resample | Sample Number | | Client Info | | VCP440173 | VCP422915 | |
| | Sample Date | | Client Info | | 17 Jun 2024 | 30 Jun 2023 | |
| at the next service interval to monitor. | Machine Age | hrs | Client Info | | 1782 | 593 | |
| | Oil Age | hrs | Client Info | | 0 | 500 | |
| | Filter Age | hrs | Client Info | | 0 | 0 | |
| | Oil Changed | | Client Info | | Changed | Changed | |
| | Filter Changed | | Client Info | | Changed | Changed | |
| | Sample Status | | | | ABNORMAL | ABNORMAL | |
| | | | 400 | _ | | | |
| WEAR The copper level has decreased, but is still abnormal. All other component wear rates are normal. | Iron | ppm | ASTM D5185m | | 7 | 5 | |
| | Chromium | ppm | ASTM D5185m | | 0 | 0 | |
| | Nickel | ppm | ASTM D5185m | >10 | 0 | 0 | |
| | Titanium | ppm | ASTM D5185m | 0 | 0 | 0 | |
| | Silver | ppm | ASTM D5185m | | 0 | 0 | |
| | Aluminum | ppm | ASTM D5185m | | 1 | 6 | |
| | Lead | ppm | ASTM D5185m | | 0 | 5 | |
| | Copper | ppm | ASTM D5185m | | ▲ 28 | 4 98 | |
| | Tin | ppm | ASTM D5185m | >10 | <1 | 1 | |
| | Vanadium | ppm | ASTM D5185m | | <1 | 0 | |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >20 | 9 | 29 | |
| | Potassium | ppm | ASTM D5185m | | 0 | 4 | |
| There is no indication of any contamination in the oil. | Fuel | % | ASTM D3524 | >6.0 | <1.0 | 0.6 | |
| | Water | | WC Method | | NEG | NEG | |
| | Glycol | | WC Method | | NEG | NEG | |
| | Soot % | % | *ASTM D7844 | >3 | 0.1 | 0.1 | |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 9.9 | 10.1 | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | | 22.6 | 20.8 | |
| | Silt | scalar | *Visual | NONE | NONE | NONE | |
| | Debris | scalar | *Visual | NONE | NONE | NONE | |
| | Sand/Dirt | scalar | *Visual | NONE | NONE | NONE | |
| | Appearance | scalar | *Visual | NORML | NORML | NORML | |
| | Odor | scalar | *Visual | NORML | NORML | NORML | |
| | Emulsified Water | scalar | *Visual | >0.1 | NEG | NEG | |
| | | | | | | | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | 1 | 3 | |
| The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type. | Boron | ppm | ASTM D5185m | | 10 | 41 | |
| | Barium | ppm | ASTM D5185m | | 0 | 13 | |
| | Molybdenum | ppm | ASTM D5185m | | 55 | 96 | |
| | Manganese | ppm | | 0.0 | <1 | 2 | |
| | Magnesium | ppm | ASTM D5185m | | 523 | 272 | |
| | Calcium | ppm | | 2057 | 1780 | 2384 | |
| | Phosphorus | ppm | ASTM D5185m | | 939 | 1229 | |
| | Zinc | ppm | ASTM D5185m | | 1191 | 1429 | |
| | Sulfur | ppm | ASTM D5185m | | 3223 | 4822 | |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 20.0 | 17.0 | |
| | D NI I (DIN | | LOTH DOGO | 10 | | 0.4 | |

6.4

11.0

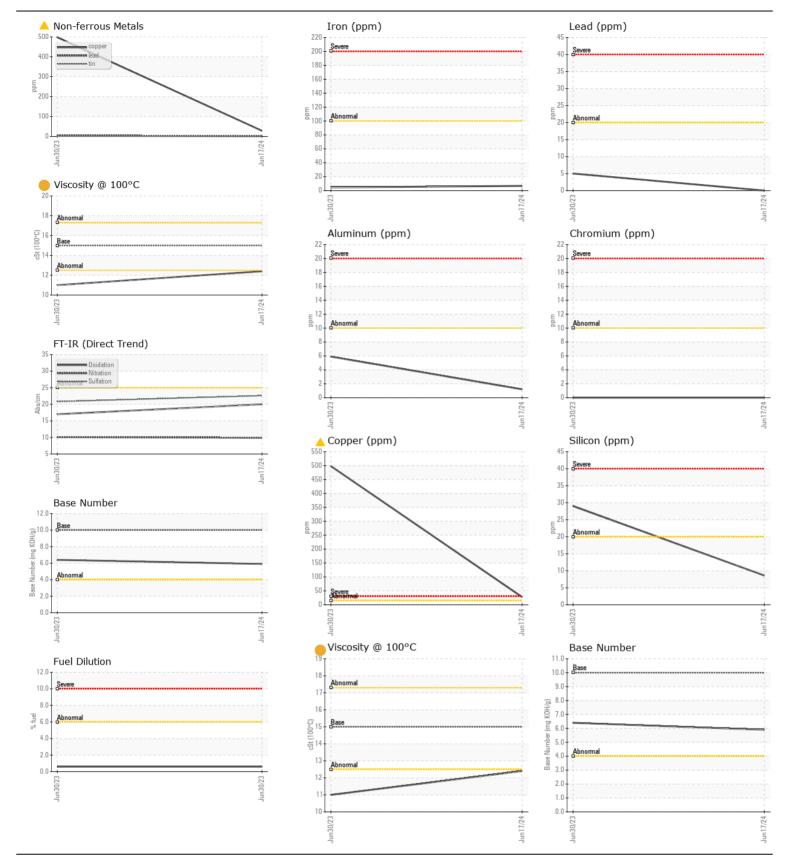
5.9

12.4

Base Number (BN) mg KOH/g ASTM D2896 10

ASTM D445 15.0

Visc @ 100°C cSt



ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : VCP440173 Received 8418 PALM RIVER ROAD : 24 Jun 2024 团 Lab Number : 06217756 Tested TAMPA, FL : 25 Jun 2024 : 25 Jun 2024 - Don Baldridge US 33619 Unique Number : 11090620 Diagnosed Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN) Contact: KENNY HANEY Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. khaney@flaglerce.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (813)630-0077 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (813)630-2233

Contact/Location: KENNY HANEY - VOLVO0093