

Machine Id

VOLVO A40G 352355

Diesel Engine

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

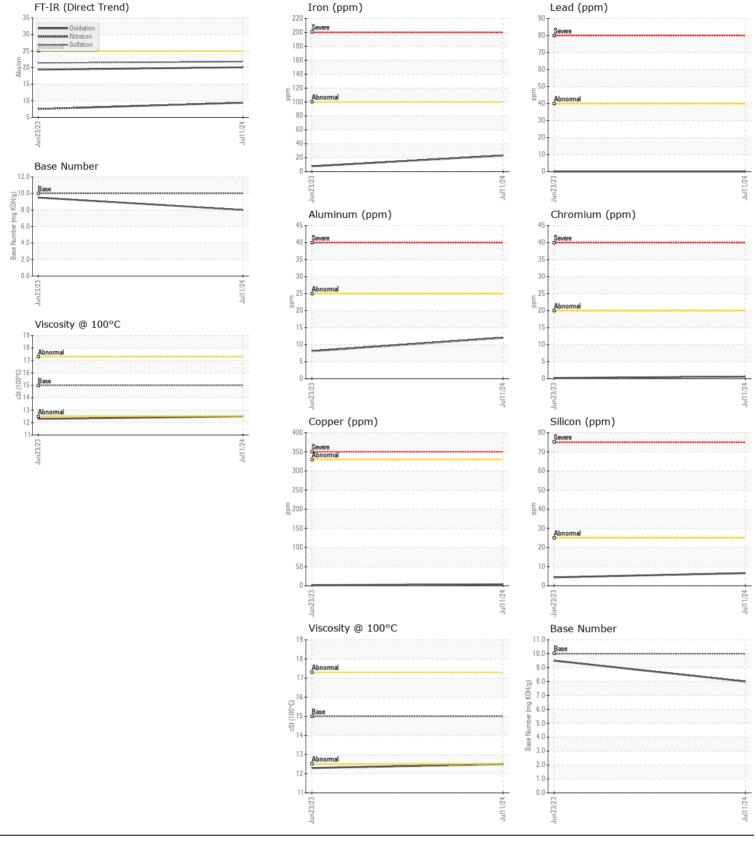
| VOLVO DETRA DIESEL ENGINE DIE 15W40 VDS-5 (GAL) | | | | | | | |
|---|------------------|------------|-------------|-----------|-------------|-------------|----------|
| RECOMMENDATION | Test | UOM | Method | Limit/Abn | Current | History1 | History2 |
| | Sample Number | | Client Info | | VCP442809 | VCP417341 | |
| Resample at the next service interval to monitor. | Sample Date | | Client Info | | 11 Jul 2024 | 23 Jun 2023 | |
| | Machine Age | hrs | Client Info | | 4971 | 7528 | |
| | 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 | | | | NORMAL | NORMAL | |
| | lron | | ASTM D5185m | . 100 | 00 | 0 | |
| WEAR All component wear rates are normal. | Iron Chromium | ppm | ASTM D5185m | | 23 <1 | 8 <1 | |
| | Nickel | ppm ppm | ASTM D5185m | | <1 | 5 | |
| | Titanium | ppm | ASTM D5185m | >2 | 0 | <1 | |
| | Silver | ppm | ASTM D5185m | >2 | 0 | 0 | |
| | Aluminum | ppm | ASTM D5185m | | 12 | 8 | |
| | Lead | ppm | ASTM D5185m | | 0 | 0 | |
| | Copper | ppm | ASTM D5185m | | 4 | 2 | |
| | Tin | ppm | ASTM D5185m | | 0 | 0 | |
| | Vanadium | ppm | ASTM D5185m | 210 | 0 | <1 | |
| | White Metal | scalar | *Visual | NONE | NONE | NONE | |
| | Yellow Metal | scalar | *Visual | NONE | NONE | NONE | |
| | | | | | | | |
| CONTAMINATION | Silicon | ppm | ASTM D5185m | >25 | 7 | 4 | |
| There is no indication of any contamination in the oil | Potassium | ppm | ASTM D5185m | >20 | 0 | 0 | |
| There is no indication of any contamination in the oil. | Fuel | | WC Method | >6.0 | <1.0 | 0.6 | |
| | Water | | WC Method | >0.2 | NEG | NEG | |
| | Glycol | | WC Method | | NEG | NEG | |
| | Soot % | % | *ASTM D7844 | | 0.3 | 0.2 | |
| | Nitration | Abs/cm | *ASTM D7624 | >20 | 9.4 | 7.5 | |
| | Sulfation | Abs/.1mm | *ASTM D7415 | | 21.8 | 21.4 | |
| | 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 | >0.2 | NEG | NEG | |
| FLUID CONDITION | Sodium | ppm | ASTM D5185m | | 14 | 4 | |
| | Boron | ppm | ASTM D5185m | 2.5 | 29 | 41 | |
| The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service. | Barium | ppm | ASTM D5185m | 0.0 | 0 | 0 | |
| | Molybdenum | ppm | ASTM D5185m | 0.7 | 44 | 48 | |
| | Manganese | ppm | ASTM D5185m | | <1 | <1 | |
| | Magnesium | ppm | ASTM D5185m | 256 | 495 | 529 | |
| | Calcium | ppm | ASTM D5185m | 2057 | 1709 | 1723 | |
| | Phosphorus | ppm | ASTM D5185m | 935 | 914 | 937 | |
| | Zinc | ppm | ASTM D5185m | 1223 | 1049 | 1105 | |
| | Sulfur | ppm | ASTM D5185m | 4079 | 3304 | 3412 | |
| | Oxidation | Abs/.1mm | *ASTM D7414 | >25 | 20.1 | 19.4 | |
| | Base Number (BN) | mg KOH/g | ASTM D2896 | 10 | 8.0 | 9.5 | |
| | 1/1 | ~ | AOTH DAAF | 15.0 | 10 5 | 10.0 | |

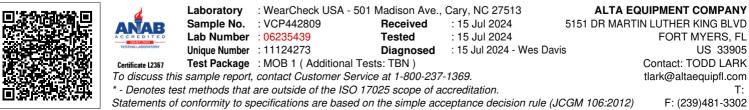
Visc @ 100°C cSt

ASTM D445 15.0

12.3

12.5





Contact/Location: TODD LARK - VOLVO0090 Page 2 of 2