



CONSTRUCTION EQUIPMENT

VOLVO A45G 35323 - DIESEL ENGINE



Sample No: VCP449501
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP449501 | VCP455500 | VCP437754 | VCP435533 |
| Sample Date | 10 Jul 2024 | 03 May 2024 | 12 Apr 2024 | 06 Jan 2024 |
| Machine Hours | 2756 | 2406 | 2288 | 1771 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Not Chngd | Changed | Changed |
| Sample Status | NORMAL | NORMAL | ATTENTION | ATTENTION |

ALTA EQUIPMENT COMPANY
 5151 DR MARTIN LUTHER KING BLVD
 FORT MYERS, FL
 US 33905
 Contact: TODD LARK
 tlark@altaequipfl.com
 T:
 F: (239)481-3302



OIL CONDITION

| | | | | | |
|------------------|----------|--|---|--|--|
| Visc @ 100°C | cSt | ■ 12.6 | ■ 12.8 | ● 12.3 | ● 12.3 |
| Base Number (BN) | mg KOH/g | ■ 10.1 | ■ 9.4 | ■ 10.2 | ■ 10.0 |
| Oxidation (PA) | % | 78 | 76 | 77 | 79 |

Diagnosis

Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



CONTAMINATION

| | | | | | |
|----------------|-----|---|--|--|--|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | ■ 0.2 | ■ 0.2 | ■ 0.2 | ■ 0.2 |
| Nitration (PA) | % | 56 | 56 | 53 | 55 |
| Sulfation (PA) | % | 60 | 59 | 60 | 60 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | ■ 4 | ■ 4 | ■ 6 | ■ 6 |
| Sodium | ppm | ■ 3 | ■ 2 | ■ 2 | ■ 2 |
| Potassium | ppm | ■ <1 | ■ 1 | ■ 2 | ■ 0 |



WEAR METALS

| | | | | | |
|------------|-----|---|---|---|---|
| Iron | ppm | ■ 5 | ■ 3 | ■ 9 | ■ 8 |
| Copper | ppm | ■ <1 | ■ <1 | ■ 7 | ■ 11 |
| Lead | ppm | ■ 0 | ■ 0 | ■ 6 | ■ <1 |
| Tin | ppm | ■ 0 | ■ <1 | ■ 1 | ■ 1 |
| Aluminum | ppm | ■ 1 | ■ 2 | ■ 2 | ■ <1 |
| Chromium | ppm | ■ 0 | ■ <1 | ■ <1 | ■ 0 |
| Molybdenum | ppm | ■ 39 | ■ 39 | ■ 49 | ■ 51 |
| Nickel | ppm | ■ 0 | ■ <1 | ■ 1 | ■ 1 |
| Titanium | ppm | 0 | <1 | <1 | 0 |
| Silver | ppm | ■ 0 | ■ 0 | ■ <1 | ■ 0 |
| Manganese | ppm | ■ <1 | ■ <1 | ■ <1 | ■ <1 |
| Vanadium | ppm | 0 | <1 | <1 | <1 |



ADDITIVES

| | | | | | |
|------------|-----|--|---|---|---|
| Calcium | ppm | ■ 1716 | ■ 1579 | ■ 1662 | ■ 1635 |
| Magnesium | ppm | ■ 517 | ■ 490 | ■ 489 | ■ 484 |
| Zinc | ppm | ■ 1063 | ■ 1059 | ■ 1112 | ■ 1100 |
| Phosphorus | ppm | ■ 941 | ■ 932 | ■ 981 | ■ 929 |
| Barium | ppm | ■ 0 | ■ 0 | ■ 0 | ■ 0 |
| Boron | ppm | ■ 43 | ■ 66 | ■ 55 | ■ 49 |

Depot: VOLVO0090
Unique No: 11124278
Signed: Wes Davis
Report Date: 15 Jul 2024



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GRAPHS

