



CONSTRUCTION EQUIPMENT

SWO-064669 VOLVO A45G 352698 - DIESEL ENGINE



Sample No: VCP406870
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SWO-064669



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP406870 | VCP408686 | VCP367727 | VCP357596 |
| Sample Date | 07 Aug 2023 | 16 May 2023 | 17 Jan 2023 | 12 Oct 2022 |
| Machine Hours | 4553 | 4038 | 3513 | 3026 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | NORMAL | NORMAL | NORMAL | ATTENTION |

SAIIA CONSTRUCTION LLC

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OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|------|--------|
| Visc @ 100°C | cSt | 12.6 | 12.8 | 12.8 | ▲ 12.1 |
| Base Number (BN) | mg KOH/g | 10.3 | 10.0 | 10.0 | 7.1 |
| Oxidation (PA) | % | 80 | 81 | 78 | 73 |

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

| | | | | | |
|----------------|-----|----------------|------|------|------|
| Soot % | % | 0.2 | 0.2 | 0.3 | 0.7 |
| Nitration (PA) | % | 55 | 57 | 64 | 92 |
| Sulfation (PA) | % | 61 | 63 | 62 | 67 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | 4 | 5 | 5 | 7 |
| Sodium | ppm | 0 | <1 | <1 | 4 |
| Potassium | ppm | <1 | <1 | 0 | 3 |



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|-----|
| Iron | ppm | 5 | 7 | 6 | 26 |
| Copper | ppm | 6 | 18 | 53 | 290 |
| Lead | ppm | 1 | <1 | 0 | 2 |
| Tin | ppm | <1 | <1 | 0 | 2 |
| Aluminum | ppm | 1 | <1 | 1 | 3 |
| Chromium | ppm | 0 | <1 | <1 | <1 |
| Molybdenum | ppm | 44 | 41 | 38 | 31 |
| Nickel | ppm | <1 | 1 | <1 | 2 |
| Titanium | ppm | 0 | 0 | 0 | <1 |
| Silver | ppm | <1 | 0 | 0 | 0 |
| Manganese | ppm | <1 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|------|
| Calcium | ppm | 1787 | 1634 | 1572 | 1503 |
| Magnesium | ppm | 492 | 480 | 490 | 594 |
| Zinc | ppm | 1158 | 1056 | 948 | 898 |
| Phosphorus | ppm | 960 | 900 | 811 | 722 |
| Barium | ppm | 2 | 0 | 0 | 2 |
| Boron | ppm | 53 | 51 | 43 | 20 |

Depot: SAIBIR
Unique No: 10603057
Signed: Don Baldrige
Report Date: 15 Aug 2023



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GRAPHS

