



CONSTRUCTION EQUIPMENT

VOLVO EC380EL 310195 - DIESEL ENGINE



Sample No: VCP433670
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP433670 | VCP382955 | VCP383275 | VCP358379 |
| Sample Date | 14 Jun 2024 | 04 Jan 2024 | 18 Jul 2023 | 09 Jan 2023 |
| Machine Hours | 6300 | 5715 | 5200 | 4735 |
| Oil Hours | 500 | 0 | 0 | 500 |
| Oil Changed | Changed | N/A | Changed | Changed |
| Sample Status | ATTENTION | NORMAL | NORMAL | NORMAL |

LEONARDS CONTRACTING
 30850 STEPHENSON HWY
 MADISON HEIGHTS, MI
 US 48071
 Contact: LARRY SCHRADE
 larry.schrade@sdevelop.com
 T: (810)499-1953
 F: x:



OIL CONDITION

| | | | | | |
|------------------|----------|-------------|------|------|------|
| Visc @ 100°C | cSt | 12.2 | 12.3 | 12.6 | 12.6 |
| Base Number (BN) | mg KOH/g | 9.4 | 9.9 | 9.9 | 10.0 |
| Oxidation (PA) | % | 83 | 83 | 81 | 80 |

Diagnosis

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

| | | | | | |
|----------------|-----|----------------|-----|------|------|
| Water | % | NEG | NEG | NEG | NEG |
| Soot % | % | 0.1 | 0.1 | 0.1 | 0.1 |
| Nitration (PA) | % | 63 | 63 | 62 | 59 |
| Sulfation (PA) | % | 61 | 61 | 60 | 61 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | <1.0 | 0.9 | <1.0 | <1.0 |
| Silicon | ppm | 4 | 4 | 5 | 7 |
| Sodium | ppm | 2 | 0 | 2 | <1 |
| Potassium | ppm | <1 | 0 | 0 | <1 |



WEAR METALS

| | | | | | |
|------------|-----|--------------|----|----|----|
| Iron | ppm | 5 | 0 | 5 | 4 |
| Copper | ppm | 0 | 0 | <1 | <1 |
| Lead | ppm | 0 | <1 | 0 | <1 |
| Tin | ppm | 0 | <1 | <1 | <1 |
| Aluminum | ppm | <1 | 1 | 2 | <1 |
| Chromium | ppm | 0 | <1 | 0 | <1 |
| Molybdenum | ppm | 36 | 38 | 41 | 41 |
| Nickel | ppm | 0 | <1 | <1 | 0 |
| Titanium | ppm | 0 | 0 | 0 | 0 |
| Silver | ppm | 0 | 0 | 0 | 0 |
| Manganese | ppm | 0 | <1 | <1 | <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |



ADDITIVES

| | | | | | |
|------------|-----|-------------|------|------|------|
| Calcium | ppm | 1649 | 1589 | 1829 | 1657 |
| Magnesium | ppm | 467 | 500 | 554 | 466 |
| Zinc | ppm | 1000 | 1082 | 1220 | 1044 |
| Phosphorus | ppm | 893 | 911 | 1014 | 880 |
| Barium | ppm | 0 | 0 | <1 | 1 |
| Boron | ppm | 33 | 41 | 51 | 44 |

Depot: LEOMAD
Unique No: 11087197
Signed: Don Baldrige
Report Date: 21 Jun 2024



CONSTRUCTION EQUIPMENT



GRAPHS

