



CONSTRUCTION EQUIPMENT

VOLVO EC300EL 313148 - DIESEL ENGINE



Sample No: VCP294682
Oil Type: VALVOLINE 15W40
Job No:



SAMPLE INFORMATION

| | | | | |
|---------------|--------------------|-------------|-------------|-------------|
| Sample Number | VCP294682 | VCP294659 | VCP281597 | VCP292969 |
| Sample Date | 15 Feb 2021 | 23 Dec 2020 | 11 Nov 2020 | 10 Oct 2020 |
| Machine Hours | 1909 | 1445 | 1161 | 916 |
| Oil Hours | 0 | 0 | 0 | 0 |
| Oil Changed | Changed | Changed | Changed | Changed |
| Sample Status | ATTENTION | NORMAL | NORMAL | NORMAL |

CITY CARTING
 221 OLD GATE LN
 MILFORD, CT
 US 06460
 Contact: TAVINS BANKS
 tavins@citycart.net
 T: (203)223-3885
 F:

OIL CONDITION

| | | | | | |
|----------------|-----|---------------|--------|--------|--------|
| Visc @ 100°C | cSt | ▲ 11.2 | ■ 12.6 | ■ 12.5 | ■ 12.3 |
| Oxidation (PA) | % | 45 | 43 | 39 | 39 |

CONTAMINATION

| | | | | | |
|----------------|-----|--------------|-------|-------|-------|
| Soot % | % | ■ 0.1 | ■ 0.1 | ■ 0.1 | ■ 0.1 |
| Nitration (PA) | % | 62 | 59 | 53 | 55 |
| Sulfation (PA) | % | 51 | 50 | 48 | 47 |
| Glycol | % | NEG | NEG | NEG | NEG |
| Fuel | % | ■ 0.3 | <1.0 | <1.0 | <1.0 |
| Silicon | ppm | ■ 10 | ■ 11 | ■ 13 | ■ 13 |
| Sodium | ppm | ■ 2 | ■ 2 | ■ 2 | ■ 3 |
| Potassium | ppm | ■ 3 | ■ 6 | ■ 0 | ■ 14 |

Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. Confirm oil type.

WEAR METALS

| | | | | | |
|------------|-----|----------------|------|------|------|
| Iron | ppm | ■ 9 | ■ 11 | ■ 6 | ■ 11 |
| Copper | ppm | ■ 1 | ■ 1 | ■ 1 | ■ 3 |
| Lead | ppm | ■ <1 | ■ <1 | ■ 0 | ■ 0 |
| Tin | ppm | ■ <1 | ■ 1 | ■ 0 | ■ 0 |
| Aluminum | ppm | ■ 5 | ■ 7 | ■ 4 | ■ 6 |
| Chromium | ppm | ■ <1 | ■ 1 | ■ <1 | ■ <1 |
| Molybdenum | ppm | ■ 46 | ■ 23 | ■ 20 | ■ 18 |
| Nickel | ppm | ■ <1 | ■ <1 | ■ <1 | ■ <1 |
| Titanium | ppm | ■ 0 | ■ <1 | ■ <1 | ■ <1 |
| Silver | ppm | 0 | <1 | <1 | <1 |
| Manganese | ppm | ■ 0 | ■ <1 | ■ <1 | ■ <1 |
| Vanadium | ppm | 0 | 0 | 0 | 0 |

ADDITIVES

| | | | | | |
|------------|-----|---------------|--------|--------|--------|
| Calcium | ppm | ■ 2131 | ■ 2294 | ■ 2315 | ■ 2343 |
| Magnesium | ppm | 163 | 157 | 149 | 141 |
| Zinc | ppm | ■ 1048 | ■ 1113 | ■ 1026 | ■ 1014 |
| Phosphorus | ppm | ■ 893 | ■ 936 | ■ 925 | ■ 828 |
| Barium | ppm | ■ 0 | ■ 0 | ■ 0 | ■ 0 |
| Boron | ppm | ■ 28 | ■ 20 | ■ 18 | ■ 18 |

Depot: CITMILCON
Unique No: 9377360
Signed: Jonathan Hester
Report Date: 24 Feb 2021

VOLVO **GRAPHS**

