



CONSTRUCTION EQUIPMENT

SWA355023-2 VOLVO DD140C 290076 - DIESEL ENGINE



Sample No: VCP389688
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SWA355023-2



SAMPLE INFORMATION

Sample Number	VCP389688	VCP404850	---	---
Sample Date	06 Sep 2023	21 Apr 2023	---	---
Machine Hours	847	443	---	---
Oil Hours	0	0	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ABNORMAL	ABNORMAL	---	---

ALTA EQUIPMENT

5985 COURT STREET ROAD
 SYRACUSE, NY
 US 13206
 Contact: JIM STRIGLE
 JIM.STRIGLE@ALTG.COM
 T: (315)437-2611
 F: (315)434-9471



OIL CONDITION

Visc @ 100°C	cSt	▲ 12.0	▲ 11.7	---	---
Base Number (BN)	mg KOH/g	■ 9.8	■ 9.6	---	---
Oxidation (PA)	%	■ 69	■ 68	---	---

Diagnosis

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.



CONTAMINATION

Soot %	%	■ 0.1	■ 0.1	---	---
Nitration (PA)	%	■ 57	■ 60	---	---
Sulfation (PA)	%	■ 56	■ 57	---	---
Glycol	%	■ NEG	■ NEG	---	---
Fuel	%	■ <1.0	■ 0.3	---	---
Silicon	ppm	▲ 62	▲ 130	---	---
Sodium	ppm	■ 5	■ 9	---	---
Potassium	ppm	■ 8	■ 17	---	---



WEAR METALS

Iron	ppm	■ 66	▲ 114	---	---
Copper	ppm	■ 9	■ 59	---	---
Lead	ppm	■ 1	■ 0	---	---
Tin	ppm	■ 2	■ 4	---	---
Aluminum	ppm	▲ 26	▲ 61	---	---
Chromium	ppm	■ 11	▲ 23	---	---
Molybdenum	ppm	■ 47	■ 30	---	---
Nickel	ppm	■ 1	■ 2	---	---
Titanium	ppm	<1	2	---	---
Silver	ppm	■ 0	■ <1	---	---
Manganese	ppm	■ 2	■ 8	---	---
Vanadium	ppm	<1	<1	---	---



ADDITIVES

Calcium	ppm	■ 1772	■ 1587	---	---
Magnesium	ppm	■ 579	722	---	---
Zinc	ppm	■ 1201	■ 1152	---	---
Phosphorus	ppm	■ 949	■ 1004	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 50	■ 43	---	---

Depot: VOLV00142
Unique No: 10643001
Signed: Don Baldrige
Report Date: 13 Sep 2023



CONSTRUCTION EQUIPMENT



GRAPHS

