



CONSTRUCTION EQUIPMENT

SVC46748 VOLVO ECR235EL 311165 - DIESEL ENGINE



Sample No: VCP344882
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: SVC46748



SAMPLE INFORMATION

Sample Number	VCP344882	VCP311611	VCP281588	VCP282966
Sample Date	30 Jan 2023	26 Jan 2023	14 Nov 2020	02 Sep 2020
Machine Hours	8302	0	5831	5352
Oil Hours	500	0	0	0
Oil Changed	N/A	Not Chngd	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	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	▲ 8.4	▲ 8.4	■ 13.0	■ 13.5
Base Number (BN)	mg KOH/g	▲ 2.8	▲ 3.3	---	---
Oxidation (PA)	%	57	58	61	78

Diagnosis

The oil is near the end of it's useful service life, recommend schedule an oil change. Resample at the next service interval to monitor. Piston and ring wear is indicated. Fuel content negligible. No other contaminants were detected in the oil. The oil viscosity is lower than normal. The BN level is low. Confirm oil type.



CONTAMINATION

Soot %	%	■ 0.5	■ 0.5	■ 0.2	■ 0.2
Nitration (PA)	%	49	52	75	85
Sulfation (PA)	%	53	54	58	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 1.3	■ 1.3	<1.0	<1.0
Silicon	ppm	■ 17	■ 17	■ 9	■ 21
Sodium	ppm	■ <1	■ 2	■ 2	■ 3
Potassium	ppm	■ 2	■ 2	■ <1	■ 0



WEAR METALS

Iron	ppm	■ 28	■ 28	■ 9	■ 22
Copper	ppm	■ 6	■ 6	■ 1	■ 4
Lead	ppm	■ <1	■ <1	■ <1	■ 2
Tin	ppm	■ 1	■ 2	■ <1	■ 0
Aluminum	ppm	▲ 19	▲ 19	■ 3	■ 11
Chromium	ppm	▲ 15	▲ 15	■ <1	■ 2
Molybdenum	ppm	■ 20	■ 20	■ 24	■ 28
Nickel	ppm	■ <1	■ <1	■ 0	■ <1
Titanium	ppm	<1	■ <1	■ <1	■ <1
Silver	ppm	■ 0	■ 0	0	0
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 711	■ 727	■ 2479	■ 2487
Magnesium	ppm	■ 169	■ 173	154	■ 241
Zinc	ppm	■ 730	■ 750	■ 1124	■ 1191
Phosphorus	ppm	■ 563	■ 566	■ 995	■ 981
Barium	ppm	■ 0	■ 0	■ 0	■ 1
Boron	ppm	■ 11	■ 11	■ 14	■ 13

Depot: CITMILCON
Unique No: 10320598
Signed: Doug Bogart
Report Date: 04 Feb 2023



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VOLVO GRAPHS

