



CONSTRUCTION EQUIPMENT

237401 ACTION ENVIRO VOLVO L110E 60073 - DIESEL ENGINE



Sample No: VCP410394
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 237401 ACTION ENVIRO



SAMPLE INFORMATION

Sample Number	VCP410394	VCP338545	VCP119206	VCP026112
Sample Date	20 Apr 2023	14 Feb 2022	30 May 2013	13 Sep 2007
Machine Hours	8487	8081	5171	2967
Oil Hours	500	0	0	2967
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	ABNORMAL	NORMAL	NORMAL

ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC
 8418 PALM RIVER ROAD
 TAMPA, FL
 US 33619
 Contact: JOHN FARDELLA
 john.fardella@altg.com
 T: (813)630-0077
 F: (813)630-2233



OIL CONDITION

Visc @ 100°C	cSt	▲ 11.7	▲ 12.4	■ 13.61	■ 13.6
Base Number (BN)	mg KOH/g	■ 9.3	■ 10.9	---	---
Oxidation (PA)	%	89	84	■ 52	■ 46



CONTAMINATION

Soot %	%	■ 0.3	■ 0.2	■ 0.1	■ 0.1
Nitration (PA)	%	80	65	■ 67	■ 55
Sulfation (PA)	%	61	64	■ 50	■ 53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	▲ 6.5	▲ 5.0	<1.0	<1.0
Silicon	ppm	▲ 31	▲ 49	■ 7	■ 12
Sodium	ppm	■ 3	■ 4	■ 6	■ 6
Potassium	ppm	■ 3	■ 4	■ 2	■ 0



WEAR METALS

Iron	ppm	■ 8	■ 6	■ 15	■ 20
Copper	ppm	■ <1	■ <1	■ <1	■ 18
Lead	ppm	■ <1	■ <1	■ 0	■ 2
Tin	ppm	■ 1	■ <1	■ <1	■ 0
Aluminum	ppm	■ <1	■ 6	■ 3	■ 6
Chromium	ppm	■ <1	■ <1	■ 1	■ 4
Molybdenum	ppm	■ 42	■ 42	■ 46	■ 21
Nickel	ppm	■ <1	■ 0	■ <1	■ 0
Titanium	ppm	<1	<1	<1	■ <1
Silver	ppm	■ 0	0	0	■ 0
Manganese	ppm	■ <1	■ <1	■ <1	<1
Vanadium	ppm	<1	0	0	0



ADDITIVES

Calcium	ppm	■ 1578	■ 1834	■ 1396	■ 2093
Magnesium	ppm	■ 484	■ 447	■ 642	■ 751
Zinc	ppm	■ 1064	■ 1078	■ 1033	■ 1309
Phosphorus	ppm	■ 867	■ 982	■ 918	■ 1164
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 38	■ 72	■ 22	■ 14

Diagnosis

We advise that you check the fuel injection system. 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. There is a moderate amount of fuel present in the oil. Elemental level of silicon (Si) above normal. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.

Depot: VOLVO0093
Unique No: 10467135
Signed: Don Baldrige
Report Date: 12 May 2023



CONSTRUCTION EQUIPMENT



GRAPHS

