



CONSTRUCTION EQUIPMENT

W14529 VOLVO L110H 632072 - DIESEL ENGINE



Sample No: VCP404667
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: W14529



SAMPLE INFORMATION

Sample Number	VCP404667	VCP426783	VCP382877	VCP384237
Sample Date	07 Aug 2023	02 May 2023	10 Feb 2023	08 Nov 2022
Machine Hours	4539	4013	3531	3030
Oil Hours	500	500	500	500
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ABNORMAL	NORMAL	NORMAL	ABNORMAL

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OIL CONDITION

Visc @ 100°C	cSt	13.0	12.6	13.4	13.5
Base Number (BN)	mg KOH/g	8.7	9.0	7.9	10.7
Oxidation (PA)	%	90	79	82	89

CONTAMINATION

Soot %	%	0.5	0.5	0.9	0.5
Nitration (PA)	%	64	58	88	72
Sulfation (PA)	%	63	57	60	66
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	▲ 21	15	17	▲ 21
Sodium	ppm	3	2	3	2
Potassium	ppm	<1	<1	<1	2

Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. All component wear rates are normal. Elemental level of silicon (Si) above normal. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

WEAR METALS

Iron	ppm	11	6	12	12
Copper	ppm	<1	4	2	1
Lead	ppm	1	0	<1	<1
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	9	1	11	10
Chromium	ppm	<1	0	1	<1
Molybdenum	ppm	45	44	43	41
Nickel	ppm	0	0	<1	0
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	0	2
Manganese	ppm	<1	1	<1	<1
Vanadium	ppm	0	0	0	<1

ADDITIVES

Calcium	ppm	1797	1747	1699	1657
Magnesium	ppm	556	524	512	492
Zinc	ppm	1051	1022	1013	919
Phosphorus	ppm	836	806	836	727
Barium	ppm	0	0	0	0
Boron	ppm	24	63	36	27

Depot: VOLVO0080
Unique No: 10603842
Signed: Don Baldrige
Report Date: 15 Aug 2023



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GRAPHS

