



CONSTRUCTION EQUIPMENT

24557 VOLVO L110H 632055 - DIESEL ENGINE



Sample No: VCP429019
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 24557



SAMPLE INFORMATION

Sample Number	VCP429019	VCP411047	VCP404415	VCP376769
Sample Date	05 Dec 2023	03 May 2023	10 Jan 2023	28 Feb 2022
Machine Hours	2622	2054	1679	1221
Oil Hours	0	1000	500	0
Oil Changed	Changed	Changed	Changed	N/A
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL

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 NORTH CHARLESTON, SC
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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.3	■ 13.2	■ 13.3	■ 12.7
Base Number (BN)	mg KOH/g	■ 10.5	■ 9.3	■ 10.8	■ 11.1
Oxidation (PA)	%	63	77	81	84



CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	■ 0.2	■ 0.1	■ 0.2	■ 0.2
Nitration (PA)	%	54	48	58	63
Sulfation (PA)	%	55	56	61	64
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 2.0	<1.0	<1.0	<1.0
Silicon	ppm	■ 7	■ 4	■ 6	■ 7
Sodium	ppm	■ 0	■ 1	■ <1	■ 1
Potassium	ppm	■ 2	■ <1	■ <1	■ 0



WEAR METALS

Iron	ppm	■ 13	■ 6	■ 11	■ 11
Copper	ppm	■ 2	■ <1	■ 3	■ 4
Lead	ppm	■ <1	■ 0	■ 1	■ 1
Tin	ppm	■ 1	■ 0	■ 1	■ 1
Aluminum	ppm	■ 5	■ 4	■ 6	■ 13
Chromium	ppm	■ 1	■ <1	■ 1	■ 1
Molybdenum	ppm	■ 27	■ 42	■ 43	■ 44
Nickel	ppm	■ <1	■ 0	■ <1	■ 0
Titanium	ppm	<1	0	<1	■ 0
Silver	ppm	■ 0	■ 0	■ <1	■ 1
Manganese	ppm	■ <1	■ <1	■ <1	■ <1
Vanadium	ppm	0	0	0	0



ADDITIVES

Calcium	ppm	■ 2192	■ 1742	■ 1772	■ 1540
Magnesium	ppm	■ 321	■ 561	■ 519	■ 512
Zinc	ppm	■ 1101	■ 1242	■ 1213	■ 1072
Phosphorus	ppm	■ 848	■ 992	■ 940	■ 852
Barium	ppm	■ 11	■ 0	■ 0	■ 0
Boron	ppm	■ 50	■ 54	■ 38	■ 42

Diagnosis

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. Fuel content negligible. There is no indication of any contamination in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Depot: VOLVO3387
Unique No: 10782874
Signed: Jonathan Hester
Report Date: 21 Dec 2023



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GRAPHS

