



CONSTRUCTION EQUIPMENT

23842 VOLVO L220H 3130 - DIESEL ENGINE



Sample No: VCP405645
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3
Job No: 23842



SAMPLE INFORMATION

Sample Number	VCP405645	VCP425747	VCP401778	VCP371883
Sample Date	07 Aug 2023	19 May 2023	16 Feb 2023	06 Jan 2023
Machine Hours	10822	10086	8984	8527
Oil Hours	1000	1000	1000	1000
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	ATTENTION	NORMAL	NORMAL	NORMAL

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 7235 CROSS COUNTRY RD.
 NORTH CHARLESTON, SC
 US 29418
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OIL CONDITION

Visc @ 100°C	cSt	▲ 11.6	■ 12.9	■ 13.1	■ 13.3
Base Number (BN)	mg KOH/g	■ 9.2	■ 8.9	■ 6.4	■ 10.4
Oxidation (PA)	%	63	82	94	82



CONTAMINATION

Soot %	%	■ 0.2	■ 0.3	■ 0.9	■ 0.2
Nitration (PA)	%	60	73	93	61
Sulfation (PA)	%	53	60	67	61
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	■ 0.3	<1.0	<1.0	<1.0
Silicon	ppm	■ 4	■ 4	■ 4	■ 5
Sodium	ppm	■ 0	■ 2	■ 3	■ 2
Potassium	ppm	■ 0	■ 3	■ 0	■ <1



WEAR METALS

Iron	ppm	■ 5	■ 7	■ 4	■ 8
Copper	ppm	■ 0	■ 2	■ <1	■ 2
Lead	ppm	■ 0	■ 2	■ <1	■ 1
Tin	ppm	■ 0	■ 1	■ <1	■ <1
Aluminum	ppm	■ <1	■ 3	■ 0	■ 2
Chromium	ppm	■ <1	■ <1	■ <1	■ <1
Molybdenum	ppm	■ 24	■ 38	■ 42	■ 46
Nickel	ppm	■ 0	■ <1	■ <1	■ <1
Titanium	ppm	1	<1	0	<1
Silver	ppm	■ 0	■ 0	■ 0	■ <1
Manganese	ppm	■ 0	■ <1	■ <1	■ <1
Vanadium	ppm	0	<1	0	<1



ADDITIVES

Calcium	ppm	■ 2254	■ 1794	■ 1628	■ 1800
Magnesium	ppm	■ 429	■ 531	■ 521	■ 552
Zinc	ppm	■ 1317	■ 1165	■ 1144	■ 1253
Phosphorus	ppm	■ 1031	■ 890	■ 935	■ 991
Barium	ppm	■ 0	■ 0	■ 0	■ 0
Boron	ppm	■ 35	■ 27	■ 49	■ 40

Diagnosis

No corrective action is recommended at this time. 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. Tests indicate that there is no fuel present in the oil. 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: 10605184
Signed: Sean Felton
Report Date: 17 Aug 2023



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GRAPHS

