



# CONSTRUCTION EQUIPMENT

## 24415 VOLVO L220H 3130 - DIESEL ENGINE



**Sample No:** VCP420550  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 24415



### SAMPLE INFORMATION

Sample Number	<b>VCP420550</b>	VCP405645	VCP425747	VCP401778
Sample Date	<b>10 Nov 2023</b>	07 Aug 2023	19 May 2023	16 Feb 2023
Machine Hours	<b>11602</b>	10822	10086	8984
Oil Hours	<b>1000</b>	1000	1000	1000
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ATTENTION</b>	ATTENTION	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 12.4</b>	▲ 11.6	■ 12.9	■ 13.1
Base Number (BN)	mg KOH/g	<b>■ 9.5</b>	■ 9.2	■ 8.9	■ 6.4
Oxidation (PA)	%	<b>76</b>	63	82	94



### CONTAMINATION

Soot %	%	<b>■ 0.2</b>	■ 0.2	■ 0.3	■ 0.9
Nitration (PA)	%	<b>60</b>	60	73	93
Sulfation (PA)	%	<b>58</b>	53	60	67
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	■ 0.3	<1.0	<1.0
Silicon	ppm	<b>■ 5</b>	■ 4	■ 4	■ 4
Sodium	ppm	<b>■ 4</b>	■ 0	■ 2	■ 3
Potassium	ppm	<b>■ 2</b>	■ 0	■ 3	■ 0

### 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. 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.



### WEAR METALS

Iron	ppm	<b>■ 5</b>	■ 5	■ 7	■ 4
Copper	ppm	<b>■ 1</b>	■ 0	■ 2	■ <1
Lead	ppm	<b>■ &lt;1</b>	■ 0	■ 2	■ <1
Tin	ppm	<b>■ &lt;1</b>	■ 0	■ 1	■ <1
Aluminum	ppm	<b>■ 2</b>	■ <1	■ 3	■ 0
Chromium	ppm	<b>■ &lt;1</b>	■ <1	■ <1	■ <1
Molybdenum	ppm	<b>■ 34</b>	■ 24	■ 38	■ 42
Nickel	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ <1
Titanium	ppm	<b>&lt;1</b>	1	<1	0
Silver	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Manganese	ppm	<b>■ &lt;1</b>	■ 0	■ <1	■ <1
Vanadium	ppm	<b>0</b>	0	<1	0



### ADDITIVES

Calcium	ppm	<b>■ 1629</b>	■ 2254	■ 1794	■ 1628
Magnesium	ppm	<b>■ 476</b>	■ 429	■ 531	■ 521
Zinc	ppm	<b>■ 1075</b>	■ 1317	■ 1165	■ 1144
Phosphorus	ppm	<b>■ 900</b>	■ 1031	■ 890	■ 935
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	■ 0
Boron	ppm	<b>■ 31</b>	■ 35	■ 27	■ 49

**Depot:** VOLVO3387  
**Unique No:** 10743048  
**Signed:** Don Baldrige  
**Report Date:** 19 Nov 2023



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## GRAPHS

