



# CONSTRUCTION EQUIPMENT

## A11843 VOLVO L220H 2992 - DIESEL ENGINE



**Sample No:** VCP442533  
**Oil Type:** MOBIL 15W40  
**Job No:** A11843



### SAMPLE INFORMATION

Sample Number	<b>VCP442533</b>	VCP416708	VCP421959	VCP404462
Sample Date	<b>08 Jan 2024</b>	10 Aug 2023	04 May 2023	11 Apr 2023
Machine Hours	<b>16170</b>	14860	13949	13730
Oil Hours	<b>500</b>	500	0	500
Oil Changed	<b>Changed</b>	Changed	N/A	Changed
Sample Status	<b>ABNORMAL</b>	ABNORMAL	NORMAL	SEVERE

**WHEELABRATOR**  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.2</b>	12.7	13.1	12.5
Base Number (BN)	mg KOH/g	<b>4.4</b>	5.0	7.1	5.7
Oxidation (PA)	%	<b>52</b>	47	38	45

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.2	0.1	0.1
Nitration (PA)	%	<b>66</b>	61	51	58
Sulfation (PA)	%	<b>60</b>	57	44	46
Glycol	%	<b>NEG</b>	NEG	NEG	0.10
Fuel	%	<b>0.3</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>29</b>	21	11	11
Sodium	ppm	<b>&lt;1</b>	0	0	568
Potassium	ppm	<b>2</b>	3	3	268

### 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. Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

### WEAR METALS

Iron	ppm	<b>6</b>	6	2	13
Copper	ppm	<b>&lt;1</b>	1	0	2
Lead	ppm	<b>1</b>	<1	<1	0
Tin	ppm	<b>&lt;1</b>	<1	<1	0
Aluminum	ppm	<b>2</b>	6	0	6
Chromium	ppm	<b>0</b>	<1	<1	<1
Molybdenum	ppm	<b>26</b>	14	14	99
Nickel	ppm	<b>&lt;1</b>	2	<1	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	0
Silver	ppm	<b>0</b>	2	0	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	<1	<1	0

### ADDITIVES

Calcium	ppm	<b>1687</b>	2111	2074	1128
Magnesium	ppm	<b>369</b>	135	143	876
Zinc	ppm	<b>1107</b>	1078	1098	1216
Phosphorus	ppm	<b>900</b>	871	913	1022
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>7</b>	2	6	53

**Depot:** WHEMOR  
**Unique No:** 10836330  
**Signed:** Doug Bogart  
**Report Date:** 24 Jan 2024



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## GRAPHS

