



# CONSTRUCTION EQUIPMENT

## VOLVO L180H 5717 - DIESEL ENGINE



**Sample No:** VCP420011  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP420011</b>	VCP424760	VCP415985	---
Sample Date	<b>22 Sep 2023</b>	02 Aug 2023	14 Jun 2023	---
Machine Hours	<b>1225</b>	880	511	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	Changed	Changed	---
Sample Status	<b>ATTENTION</b>	ATTENTION	ABNORMAL	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 12.3</b>	▲ 12.2	▲ 11.4	---
Base Number (BN)	mg KOH/g	<b>■ 10.3</b>	■ 8.9	■ 6.5	---
Oxidation (PA)	%	<b>77</b>	75	55	---

### 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. 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.

### CONTAMINATION

Soot %	%	<b>■ 0.1</b>	■ 0.2	■ 0.1	---
Nitration (PA)	%	<b>48</b>	58	77	---
Sulfation (PA)	%	<b>59</b>	58	50	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	■ 0.6	---
Silicon	ppm	<b>■ 5</b>	■ 8	■ 22	---
Sodium	ppm	<b>■ 2</b>	■ 2	■ 5	---
Potassium	ppm	<b>■ 0</b>	■ <1	■ 2	---

### WEAR METALS

Iron	ppm	<b>■ 2</b>	■ 4	■ 11	---
Copper	ppm	<b>■ 6</b>	■ 52	▲ 399	---
Lead	ppm	<b>■ 0</b>	■ <1	■ 4	---
Tin	ppm	<b>■ &lt;1</b>	■ <1	■ 2	---
Aluminum	ppm	<b>■ 2</b>	■ <1	■ 2	---
Chromium	ppm	<b>■ &lt;1</b>	■ <1	■ 0	---
Molybdenum	ppm	<b>■ 61</b>	■ 67	■ 90	---
Nickel	ppm	<b>■ 0</b>	■ 0	■ <1	---
Titanium	ppm	<b>0</b>	<1	<1	---
Silver	ppm	<b>■ 0</b>	■ <1	■ 0	---
Manganese	ppm	<b>■ &lt;1</b>	■ <1	■ 3	---
Vanadium	ppm	<b>0</b>	<1	<1	---

### ADDITIVES

Calcium	ppm	<b>■ 1643</b>	■ 1730	■ 2281	---
Magnesium	ppm	<b>■ 524</b>	■ 453	38	---
Zinc	ppm	<b>■ 1098</b>	■ 1093	■ 1216	---
Phosphorus	ppm	<b>■ 909</b>	■ 902	■ 1016	---
Barium	ppm	<b>■ 0</b>	■ 0	■ 0	---
Boron	ppm	<b>■ 59</b>	■ 46	■ 75	---

**Depot:** VOLVO0090  
**Unique No:** 10669212  
**Signed:** Don Baldrige  
**Report Date:** 28 Sep 2023



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## GRAPHS

