



# CONSTRUCTION EQUIPMENT

## A12543 VOLVO L180H 4165 - DIESEL ENGINE



**Sample No:** VCP438210  
**Oil Type:** MOBIL 15W40  
**Job No:** A12543



### SAMPLE INFORMATION

Sample Number	<b>VCP438210</b>	VCP408151	VCP399904	VCP377592
Sample Date	<b>02 May 2024</b>	10 Feb 2024	21 Feb 2023	18 May 2022
Machine Hours	<b>14045</b>	13485	10932	9703
Oil Hours	<b>500</b>	500	0	0
Oil Changed	<b>Changed</b>	Not Changd	Changed	Not Changd
Sample Status	<b>ABNORMAL</b>	MARGINAL	NORMAL	ABNORMAL

### WASTE MANAGEMENT - TELFORD

400 PROGRESS DR  
 TELFORD, PA  
 US 18969-1191  
 Contact: EDWARD ROGENER  
 erogener@wm.com

T:  
 F:



### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 11.3</b>	▲ 11.9	■ 12.5	■ 13.7
Base Number (BN)	mg KOH/g	<b>■ 5.1</b>	■ 7.2	■ 7.3	■ 9.7
Oxidation (PA)	%	<b>53</b>	0	46	56

### 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. Light fuel dilution occurring. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>■ 0.2</b>	■ 0	■ 0.2	■ 0.1
Nitration (PA)	%	<b>61</b>	0	58	49
Sulfation (PA)	%	<b>53</b>	0	48	52
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>▲ 4.9</b>	▲ 3.5	<1.0	<1.0
Silicon	ppm	<b>■ 12</b>	■ 13	■ 8	■ 11
Sodium	ppm	<b>■ 2</b>	■ 0	■ 3	■ 0
Potassium	ppm	<b>■ 4</b>	■ 3	■ 4	■ <1



### WEAR METALS

Iron	ppm	<b>■ 13</b>	■ 13	■ 5	■ 8
Copper	ppm	<b>■ 2</b>	■ 1	■ 1	■ 1
Lead	ppm	<b>■ 2</b>	■ 0	■ <1	■ <1
Tin	ppm	<b>■ 1</b>	■ <1	■ <1	■ <1
Aluminum	ppm	<b>■ 2</b>	■ 3	■ 2	■ 2
Chromium	ppm	<b>■ &lt;1</b>	■ <1	■ <1	■ <1
Molybdenum	ppm	<b>■ 19</b>	■ 154	■ 32	■ 58
Nickel	ppm	<b>■ 1</b>	■ <1	■ <1	■ 0
Titanium	ppm	<b>■ 24</b>	1	<1	<1
Silver	ppm	<b>■ &lt;1</b>	■ <1	■ <1	■ <1
Manganese	ppm	<b>■ &lt;1</b>	■ <1	■ <1	■ <1
Vanadium	ppm	<b>&lt;1</b>	<1	<1	0



### ADDITIVES

Calcium	ppm	<b>■ 2272</b>	■ 1614	■ 1661	■ 1090
Magnesium	ppm	<b>■ 244</b>	■ 953	■ 399	■ 1055
Zinc	ppm	<b>■ 1218</b>	■ 1136	■ 1079	■ 1256
Phosphorus	ppm	<b>■ 1060</b>	■ 1030	■ 875	■ 1039
Barium	ppm	<b>■ 0</b>	■ <1	■ 0	■ 0
Boron	ppm	<b>■ 26</b>	■ 156	■ 9	■ 134

**Depot:** WASTEL  
**Unique No:** 11032246  
**Signed:** Jonathan Hester  
**Report Date:** 24 May 2024



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## GRAPHS

