



# CONSTRUCTION EQUIPMENT

## VOLVO L110H 05632247 - DIESEL ENGINE



**Sample No:** VCP407933  
**Oil Type:** VALVOLINE 15W40  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP407933</b>	VCP407178	VCP407672	VCP306594
Sample Date	<b>09 Aug 2023</b>	30 Jun 2023	17 May 2023	01 Feb 2023
Machine Hours	<b>4793</b>	4437	4033	3086
Oil Hours	<b>356</b>	0	947	1044
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	ABNORMAL	ABNORMAL

**CITY CARTING**  
 221 OLD GATE LN  
 MILFORD, CT  
 US 06460  
 Contact: TAVINS BANKS  
 tavins@citycart.net  
 T: (203)223-3885  
 F:



### OIL CONDITION

Visc @ 100°C	cSt	<b>12.5</b>	12.8	12.9	▲ 12.3
Base Number (BN)	mg KOH/g	<b>6.6</b>	7.7	8.9	6.1
Oxidation (PA)	%	<b>42</b>	52	90	73

### Diagnosis

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 BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



### CONTAMINATION

Soot %	%	<b>0.2</b>	0.2	0.3	0.3
Nitration (PA)	%	<b>55</b>	61	71	78
Sulfation (PA)	%	<b>47</b>	50	64	58
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	1.1
Silicon	ppm	<b>6</b>	5	9	10
Sodium	ppm	<b>0</b>	2	3	2
Potassium	ppm	<b>1</b>	5	1	0



### WEAR METALS

Iron	ppm	<b>6</b>	7	19	25
Copper	ppm	<b>0</b>	2	5	▲ 18
Lead	ppm	<b>&lt;1</b>	<1	1	4
Tin	ppm	<b>&lt;1</b>	<1	1	2
Aluminum	ppm	<b>3</b>	6	▲ 12	▲ 16
Chromium	ppm	<b>&lt;1</b>	<1	1	2
Molybdenum	ppm	<b>46</b>	33	50	80
Nickel	ppm	<b>0</b>	0	<1	0
Titanium	ppm	<b>0</b>	<1	<1	0
Silver	ppm	<b>0</b>	0	0	<1
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	<1	0	0



### ADDITIVES

Calcium	ppm	<b>2107</b>	2053	1910	1946
Magnesium	ppm	<b>164</b>	162	461	193
Zinc	ppm	<b>1069</b>	1048	1203	1087
Phosphorus	ppm	<b>844</b>	862	939	868
Barium	ppm	<b>0</b>	0	0	2
Boron	ppm	<b>21</b>	19	32	33

**Depot:** CITMILCON  
**Unique No:** 10604670  
**Signed:** Wes Davis  
**Report Date:** 15 Aug 2023



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## GRAPHS

