



# CONSTRUCTION EQUIPMENT

## 13900 AM HARDWOOD VOLVO L110H 631365 - DIESEL ENGINE



**Sample No:** VCP411507  
**Oil Type:** SHELL 15W40  
**Job No:** 13900 AM HARDWOOD



### SAMPLE INFORMATION

Sample Number	<b>VCP411507</b>	VCP401364	VCP362341	VCP375949
Sample Date	<b>01 Dec 2023</b>	08 Mar 2023	13 Oct 2022	11 Jul 2022
Machine Hours	<b>15261</b>	13613	12275	11760
Oil Hours	<b>1750</b>	1338	0	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**MCCLUNG-LOGAN EQUIPMENT CO - RICHMOND**  
 1345 MOUNTAIN ROAD  
 GLEN ALLEN, VA  
 US 23060  
 Contact: KYLE RATLIFF  
 KRATLIFFE@MCCLUNG-LOGAN.COM  
 T:  
 F: (804)266-1611



### OIL CONDITION

Visc @ 100°C	cSt	<b>13.8</b>	13.7	13.6	13.7
Base Number (BN)	mg KOH/g	<b>5.4</b>	9.0	12.0	11.5
Oxidation (PA)	%	<b>80</b>	87	89	90

### 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

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.6</b>	0.6	0.4	0.5
Nitration (PA)	%	<b>92</b>	89	71	73
Sulfation (PA)	%	<b>67</b>	62	67	68
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>10</b>	7	7	16
Sodium	ppm	<b>&lt;1</b>	1	0	0
Potassium	ppm	<b>2</b>	1	0	2



### WEAR METALS

Iron	ppm	<b>51</b>	26	15	25
Copper	ppm	<b>6</b>	2	<1	1
Lead	ppm	<b>7</b>	2	<1	<1
Tin	ppm	<b>&lt;1</b>	1	<1	<1
Aluminum	ppm	<b>7</b>	8	4	7
Chromium	ppm	<b>1</b>	1	1	3
Molybdenum	ppm	<b>86</b>	55	41	43
Nickel	ppm	<b>&lt;1</b>	<1	0	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>2123</b>	1841	1699	1643
Magnesium	ppm	<b>141</b>	458	521	506
Zinc	ppm	<b>1189</b>	1164	1144	1138
Phosphorus	ppm	<b>995</b>	954	945	949
Barium	ppm	<b>3</b>	0	0	0
Boron	ppm	<b>20</b>	28	31	32

**Depot:** VOLVO8882  
**Unique No:** 10778855  
**Signed:** Wes Davis  
**Report Date:** 09 Dec 2023



# CONSTRUCTION EQUIPMENT



## GRAPHS

