



# CONSTRUCTION EQUIPMENT

## A12259 VOLVO L110H 632555 - DIESEL ENGINE



**Sample No:** VCP407248  
**Oil Type:** MOBIL 15W40  
**Job No:** A12259



### SAMPLE INFORMATION

Sample Number	<b>VCP407248</b>	VCP428733	VCP430367	VCP399908
Sample Date	<b>06 Mar 2024</b>	21 Dec 2023	03 Oct 2023	26 Jun 2023
Machine Hours	<b>3345</b>	2515	1760	885
Oil Hours	<b>500</b>	500	500	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	ABNORMAL	NORMAL

**HMR ASSOCIATES**  
 PO BOX 485  
 TOUGHKENAMON, PA  
 US 19374  
 Contact: SERVICE MANAGER

### OIL CONDITION

Visc @ 100°C	cSt	<b>13.1</b>	13.0	13.1	12.3
Base Number (BN)	mg KOH/g	<b>6.4</b>	6.6	6.7	9.7
Oxidation (PA)	%	<b>44</b>	43	50	76

T:  
 F: (610)268-2225

### 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>0.2</b>	0.1	0.2	0.2
Nitration (PA)	%	<b>58</b>	53	59	58
Sulfation (PA)	%	<b>50</b>	48	49	61
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	0.2
Silicon	ppm	<b>5</b>	4	5	11
Sodium	ppm	<b>2</b>	<1	<1	6
Potassium	ppm	<b>2</b>	<1	2	3

### WEAR METALS

Iron	ppm	<b>12</b>	9	16	23
Copper	ppm	<b>2</b>	5	21	12
Lead	ppm	<b>&lt;1</b>	0	<1	1
Tin	ppm	<b>1</b>	<1	1	2
Aluminum	ppm	<b>7</b>	5	5	32
Chromium	ppm	<b>1</b>	<1	<1	2
Molybdenum	ppm	<b>9</b>	12	23	43
Nickel	ppm	<b>&lt;1</b>	0	<1	0
Titanium	ppm	<b>1</b>	<1	<1	0
Silver	ppm	<b>0</b>	<1	<1	<1
Manganese	ppm	<b>&lt;1</b>	<1	<1	2
Vanadium	ppm	<b>&lt;1</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>2192</b>	2008	1821	1574
Magnesium	ppm	<b>100</b>	174	270	645
Zinc	ppm	<b>1086</b>	1081	1051	1161
Phosphorus	ppm	<b>916</b>	893	856	962
Barium	ppm	<b>0</b>	0	3	0
Boron	ppm	<b>6</b>	6	7	49

**Depot:** HMRTOU  
**Unique No:** 10937573  
**Signed:** Wes Davis  
**Report Date:** 21 Mar 2024



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## GRAPHS

