



# CONSTRUCTION EQUIPMENT

A12267 VOLVO L110H 632441 - DIESEL ENGINE



**Sample No:** VCP444364  
**Oil Type:** MOBIL 15W40  
**Job No:** A12267



## SAMPLE INFORMATION

Sample Number	<b>VCP444364</b>	VCP439450	VCP412601	VCP404459
Sample Date	<b>05 Mar 2024</b>	21 Dec 2023	02 Oct 2023	23 Jun 2023
Machine Hours	<b>3590</b>	0	2450	1800
Oil Hours	<b>500</b>	500	500	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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

## OIL CONDITION

Visc @ 100°C	cSt	<b>13.3</b>	13.1	13.5	13.5
Base Number (BN)	mg KOH/g	<b>6.5</b>	6.5	7.1	7.1
Oxidation (PA)	%	<b>44</b>	47	50	47

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>	0.2	0.3	0.2
Nitration (PA)	%	<b>63</b>	58	58	63
Sulfation (PA)	%	<b>50</b>	51	51	51
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>5</b>	4	4	4
Sodium	ppm	<b>2</b>	1	0	2
Potassium	ppm	<b>2</b>	<1	2	2

## WEAR METALS

Iron	ppm	<b>11</b>	11	13	12
Copper	ppm	<b>1</b>	1	2	4
Lead	ppm	<b>&lt;1</b>	0	<1	0
Tin	ppm	<b>1</b>	<1	<1	<1
Aluminum	ppm	<b>5</b>	4	1	3
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>9</b>	15	29	15
Nickel	ppm	<b>&lt;1</b>	0	<1	0
Titanium	ppm	<b>1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	0
Vanadium	ppm	<b>&lt;1</b>	0	0	0

## ADDITIVES

Calcium	ppm	<b>2272</b>	2036	1790	2246
Magnesium	ppm	<b>98</b>	216	332	177
Zinc	ppm	<b>1108</b>	1125	1096	1168
Phosphorus	ppm	<b>932</b>	943	900	939
Barium	ppm	<b>0</b>	0	1	0
Boron	ppm	<b>5</b>	7	6	4

**Depot:** HMRTOU  
**Unique No:** 10937576  
**Signed:** Wes Davis  
**Report Date:** 21 Mar 2024



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## GRAPHS

