



# CONSTRUCTION EQUIPMENT

A12263 VOLVO L110H 632378 - DIESEL ENGINE



**Sample No:** VCP446019  
**Oil Type:** MOBIL 15W40  
**Job No:** A12263



## SAMPLE INFORMATION

Sample Number	<b>VCP446019</b>	VCP439488	VCP414301	VCP406366
Sample Date	<b>05 Mar 2024</b>	22 Dec 2023	31 Jul 2023	06 Apr 2023
Machine Hours	<b>2555</b>	2310	1895	1375
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>13.1</b>	13.2	13.1	13.2
Base Number (BN)	mg KOH/g	<b>7.3</b>	7.3	6.1	7.8
Oxidation (PA)	%	<b>39</b>	50	51	48

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>0.1</b>	0.2	0.2	0.2
Nitration (PA)	%	<b>54</b>	58	62	58
Sulfation (PA)	%	<b>44</b>	50	51	49
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>4</b>	4	4	4
Sodium	ppm	<b>2</b>	<1	<1	1
Potassium	ppm	<b>2</b>	<1	2	0

## WEAR METALS

Iron	ppm	<b>6</b>	6	11	8
Copper	ppm	<b>1</b>	2	7	3
Lead	ppm	<b>&lt;1</b>	<1	<1	0
Tin	ppm	<b>&lt;1</b>	<1	1	<1
Aluminum	ppm	<b>5</b>	6	4	2
Chromium	ppm	<b>&lt;1</b>	<1	<1	0
Molybdenum	ppm	<b>10</b>	30	15	31
Nickel	ppm	<b>&lt;1</b>	0	0	0
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	<1	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	<1	0

## ADDITIVES

Calcium	ppm	<b>2131</b>	1706	2184	1708
Magnesium	ppm	<b>118</b>	436	176	431
Zinc	ppm	<b>1075</b>	1138	1180	1082
Phosphorus	ppm	<b>926</b>	970	893	910
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>7</b>	12	2	4

**Depot:** HMRTOU  
**Unique No:** 10937574  
**Signed:** Wes Davis  
**Report Date:** 21 Mar 2024



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## VOLVO GRAPHS

