



# CONSTRUCTION EQUIPMENT

## VOLVO L110H 05632247 - DIESEL ENGINE



**Sample No:** VCP438764  
**Oil Type:** VALVOLINE 15W40  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP438764</b>	VCP436454	VCP436562	VCP430925
Sample Date	<b>10 May 2024</b>	09 Apr 2024	12 Mar 2024	12 Feb 2024
Machine Hours	<b>7201</b>	6919	6669	0
Oil Hours	<b>0</b>	250	258	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	NORMAL

**CITY CARTING**  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>▲ 11.9</b>	■ 12.6	■ 12.4	■ 12.0
Base Number (BN)	mg KOH/g	■ <b>6.5</b>	■ 6.9	■ 7.0	■ 6.8
Oxidation (PA)	%	<b>36</b>	36	37	42

### Diagnosis

We advise that you check the fuel injection system. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. All component wear rates are normal. There is a moderate amount of fuel present in the oil. Fuel is present in the oil and is lowering the viscosity. The BN result indicates that there is suitable alkalinity remaining in the oil.



### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	■ <b>0.1</b>	■ 0.1	■ 0.1	■ 0.1
Nitration (PA)	%	<b>48</b>	48	51	48
Sulfation (PA)	%	<b>43</b>	43	43	45
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>▲ 6.7</b>	<1.0	<1.0	<1.0
Silicon	ppm	■ <b>8</b>	■ 4	■ 4	■ 5
Sodium	ppm	■ <b>3</b>	■ <1	■ <1	■ <1
Potassium	ppm	■ <b>4</b>	■ <1	■ <1	■ <1



### WEAR METALS

Iron	ppm	■ <b>6</b>	■ 4	■ 3	■ 1
Copper	ppm	■ <b>3</b>	■ <1	■ <1	■ 0
Lead	ppm	■ <b>3</b>	■ 0	■ 0	■ 0
Tin	ppm	■ <b>3</b>	■ 1	■ 0	■ 0
Aluminum	ppm	■ <b>6</b>	■ 2	■ 2	■ 3
Chromium	ppm	■ <b>3</b>	■ 0	■ <1	■ 0
Molybdenum	ppm	■ <b>47</b>	■ 22	■ 25	■ 55
Nickel	ppm	■ <b>3</b>	■ 0	■ 0	■ 0
Titanium	ppm	■ <b>2</b>	■ 0	■ 0	■ <1
Silver	ppm	■ <b>3</b>	■ 0	■ 0	■ 0
Manganese	ppm	■ <b>2</b>	■ 0	■ <1	■ 0
Vanadium	ppm	<b>2</b>	0	0	<1



### ADDITIVES

Calcium	ppm	■ <b>1879</b>	■ 2069	1997	■ 2033
Magnesium	ppm	<b>167</b>	■ 150	179	137
Zinc	ppm	■ <b>922</b>	■ 944	■ 976	■ 1055
Phosphorus	ppm	■ <b>788</b>	■ 792	■ 840	■ 878
Barium	ppm	■ <b>2</b>	■ 0	■ 0	■ 0
Boron	ppm	■ <b>36</b>	■ 31	■ 26	■ 48

**Depot:** CITMILCON  
**Unique No:** 11033699  
**Signed:** Don Baldrige  
**Report Date:** 22 May 2024



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## VOLVO GRAPHS

