



# CONSTRUCTION EQUIPMENT

## VOLVO L110E 60396 - DIESEL ENGINE



**Sample No:** VCP395412  
**Oil Type:** LUBRIGUARD 10W30  
**Job No:**



### SAMPLE INFORMATION

Sample Number	<b>VCP395412</b>	VCP395417	VCP373507	VCP373519
Sample Date	<b>22 Sep 2023</b>	27 May 2023	23 Mar 2023	09 Oct 2022
Machine Hours	<b>5860</b>	5388	5215	4905
Oil Hours	<b>0</b>	0	0	0
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.6</b>	11.4	11.3	11.6
Base Number (BN)	mg KOH/g	<b>8.4</b>	8.2	8.2	7.5
Oxidation (PA)	%	<b>61</b>	62	63	79



### CONTAMINATION

Soot %	%	<b>0.2</b>	0.2	0.2	0.2
Nitration (PA)	%	<b>59</b>	67	68	78
Sulfation (PA)	%	<b>52</b>	52	53	65
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	1.8	<1.0
Silicon	ppm	<b>2</b>	3	4	3
Sodium	ppm	<b>&lt;1</b>	<1	2	2
Potassium	ppm	<b>1</b>	<1	3	7



### WEAR METALS

Iron	ppm	<b>4</b>	5	5	4
Copper	ppm	<b>&lt;1</b>	<1	<1	<1
Lead	ppm	<b>0</b>	0	0	0
Tin	ppm	<b>&lt;1</b>	<1	<1	0
Aluminum	ppm	<b>2</b>	<1	2	1
Chromium	ppm	<b>&lt;1</b>	<1	<1	<1
Molybdenum	ppm	<b>60</b>	53	56	8
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>0</b>	0	<1	0
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	1	<1
Vanadium	ppm	<b>0</b>	0	0	0



### ADDITIVES

Calcium	ppm	<b>1061</b>	1144	1331	2023
Magnesium	ppm	<b>862</b>	901	846	72
Zinc	ppm	<b>1212</b>	1274	1319	1071
Phosphorus	ppm	<b>991</b>	1021	1020	897
Barium	ppm	<b>0</b>	0	0	2
Boron	ppm	<b>8</b>	22	42	127

### 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.

**Depot:** WOOSTM  
**Unique No:** 10671658  
**Signed:** Wes Davis  
**Report Date:** 02 Oct 2023



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## GRAPHS

