



# CONSTRUCTION EQUIPMENT

580533 CITRUS CO LF VOLVO L110H 632401 - DIESEL ENGINE



**Sample No:** VCP420930  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** 580533 CITRUS CO LF



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## SAMPLE INFORMATION

Sample Number	<b>VCP420930</b>	VCP406827	VCP379680	VCP388223
Sample Date	<b>26 Jul 2023</b>	17 May 2023	02 Feb 2023	27 Oct 2022
Machine Hours	<b>2194</b>	1620	1092	555
Oil Hours	<b>500</b>	0	500	500
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL



## OIL CONDITION

Visc @ 100°C	cSt	<b>13.1</b>	12.8	12.7	12.7
Base Number (BN)	mg KOH/g	<b>9.9</b>	10.0	10.3	11.2
Oxidation (PA)	%	<b>78</b>	78	80	78



## CONTAMINATION

Soot %	%	<b>0.5</b>	0.3	0.3	0.2
Nitration (PA)	%	<b>59</b>	58	58	62
Sulfation (PA)	%	<b>59</b>	61	61	63
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>6</b>	6	8	16
Sodium	ppm	<b>2</b>	3	1	3
Potassium	ppm	<b>2</b>	1	2	0



## WEAR METALS

Iron	ppm	<b>16</b>	13	20	24
Copper	ppm	<b>3</b>	3	5	10
Lead	ppm	<b>1</b>	<1	1	2
Tin	ppm	<b>2</b>	<1	2	2
Aluminum	ppm	<b>8</b>	6	12	33
Chromium	ppm	<b>&lt;1</b>	<1	1	2
Molybdenum	ppm	<b>43</b>	47	43	37
Nickel	ppm	<b>&lt;1</b>	<1	1	0
Titanium	ppm	<b>&lt;1</b>	0	<1	<1
Silver	ppm	<b>&lt;1</b>	<1	<1	1
Manganese	ppm	<b>&lt;1</b>	<1	<1	3
Vanadium	ppm	<b>0</b>	0	<1	0



## ADDITIVES

Calcium	ppm	<b>1703</b>	1653	1557	1519
Magnesium	ppm	<b>530</b>	546	492	607
Zinc	ppm	<b>1190</b>	1152	1068	1117
Phosphorus	ppm	<b>969</b>	947	880	938
Barium	ppm	<b>0</b>	0	0	8
Boron	ppm	<b>30</b>	39	37	42

## 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:** VOLVO0093  
**Unique No:** 10601864  
**Signed:** Wes Davis  
**Report Date:** 11 Aug 2023



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## GRAPHS

