



# CONSTRUCTION EQUIPMENT

SW-26434-2 CASTLE VA VOLVO L110H 631019 - DIESEL ENGINE



**Sample No:** VCP412563  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SW-26434-2 CASTLE VA



## SAMPLE INFORMATION

Sample Number	<b>VCP412563</b>	VCP412188	VCP406785	VCP383481
Sample Date	<b>14 Nov 2023</b>	07 Sep 2023	24 Apr 2023	05 Jan 2023
Machine Hours	<b>10666</b>	10094	9485	8988
Oil Hours	<b>513</b>	600	500	550
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>13.9</b>	13.4	13.6	13.9
Base Number (BN)	mg KOH/g	<b>9.2</b>	9.0	8.1	10.1
Oxidation (PA)	%	<b>61</b>	63	58	68



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.4</b>	0.2	0.2	0.2
Nitration (PA)	%	<b>63</b>	63	57	59
Sulfation (PA)	%	<b>53</b>	54	48	55
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>4</b>	3	2	3
Sodium	ppm	<b>2</b>	2	2	2
Potassium	ppm	<b>4</b>	0	0	0



## WEAR METALS

Iron	ppm	<b>10</b>	7	8	8
Copper	ppm	<b>8</b>	1	1	<1
Lead	ppm	<b>2</b>	0	0	<1
Tin	ppm	<b>1</b>	<1	0	<1
Aluminum	ppm	<b>3</b>	4	3	2
Chromium	ppm	<b>1</b>	0	<1	<1
Molybdenum	ppm	<b>58</b>	58	62	54
Nickel	ppm	<b>1</b>	0	0	0
Titanium	ppm	<b>1</b>	<1	0	0
Silver	ppm	<b>&lt;1</b>	0	0	0
Manganese	ppm	<b>1</b>	<1	<1	<1
Vanadium	ppm	<b>&lt;1</b>	0	0	0



## ADDITIVES

Calcium	ppm	<b>1106</b>	1071	1122	1394
Magnesium	ppm	<b>890</b>	890	957	830
Zinc	ppm	<b>1331</b>	1125	1242	1204
Phosphorus	ppm	<b>988</b>	971	1024	960
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>7</b>	7	13	19

## 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 acceptable for the time in service.

**Depot:** VOLVO8770  
**Unique No:** 10753997  
**Signed:** Angela Borella  
**Report Date:** 28 Nov 2023



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## GRAPHS

