



# CONSTRUCTION EQUIPMENT

SW1026785 VOLVO EC220EL 314457 - DIESEL ENGINE



**Sample No:** VCP434530  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SW1026785



## SAMPLE INFORMATION

Sample Number	<b>VCP434530</b>	VCP406298	VCP396302	VCP340884
Sample Date	<b>16 Nov 2023</b>	13 Apr 2023	16 Nov 2022	14 Dec 2021
Machine Hours	<b>2067</b>	1595	1118	497
Oil Hours	<b>0</b>	500	250	497
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>13.6</b>	14.2	12.9	13.6
Base Number (BN)	mg KOH/g	<b>9.1</b>	5.9	11.8	7.1
Oxidation (PA)	%	<b>69</b>	69	82	48

## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.2</b>	0.1	0.1	0.1
Nitration (PA)	%	<b>72</b>	68	58	64
Sulfation (PA)	%	<b>57</b>	53	63	54
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>5</b>	4	5	11
Sodium	ppm	<b>3</b>	2	1	5
Potassium	ppm	<b>4</b>	7	2	3

## WEAR METALS

Iron	ppm	<b>9</b>	8	6	20
Copper	ppm	<b>2</b>	<1	<1	8
Lead	ppm	<b>1</b>	0	<1	<1
Tin	ppm	<b>1</b>	<1	<1	2
Aluminum	ppm	<b>3</b>	0	3	1
Chromium	ppm	<b>2</b>	<1	<1	1
Molybdenum	ppm	<b>56</b>	4	48	4
Nickel	ppm	<b>1</b>	0	0	6
Titanium	ppm	<b>&lt;1</b>	0	0	0
Silver	ppm	<b>&lt;1</b>	0	<1	0
Manganese	ppm	<b>1</b>	<1	<1	3
Vanadium	ppm	<b>&lt;1</b>	0	<1	0

## ADDITIVES

Calcium	ppm	<b>1272</b>	2162	1652	2595
Magnesium	ppm	<b>879</b>	59	572	69
Zinc	ppm	<b>1335</b>	1178	1164	1093
Phosphorus	ppm	<b>1037</b>	971	977	996
Barium	ppm	<b>0</b>	0	2	0
Boron	ppm	<b>11</b>	128	46	24

## 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:** 10753998  
**Signed:** Angela Borella  
**Report Date:** 28 Nov 2023



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## GRAPHS

