



# CONSTRUCTION EQUIPMENT

W07013940-1 VESS VOLVO EC220EL 310297 - DIESEL ENGINE



**Sample No:** VCP350702  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** W07013940-1 VESS



## SAMPLE INFORMATION

Sample Number	<b>VCP350702</b>	VCP393384	VCP351065	VCP321338
Sample Date	<b>13 Dec 2023</b>	13 Feb 2023	19 Apr 2022	28 Jul 2021
Machine Hours	<b>5969</b>	5536	5032	4501
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>14.8</b>	15.0	16.0	16.3
Base Number (BN)	mg KOH/g	<b>5.5</b>	4.4	8.6	---
Oxidation (PA)	%	<b>90</b>	75	110	148

## 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.



## CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.4</b>	0.1	0.3	0.5
Nitration (PA)	%	<b>105</b>	94	117	151
Sulfation (PA)	%	<b>70</b>	61	74	89
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>9</b>	9	9	8
Sodium	ppm	<b>2</b>	3	4	5
Potassium	ppm	<b>2</b>	2	<1	1



## WEAR METALS

Iron	ppm	<b>72</b>	42	38	47
Copper	ppm	<b>1</b>	1	1	2
Lead	ppm	<b>0</b>	<1	<1	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>7</b>	2	4	4
Chromium	ppm	<b>1</b>	1	1	2
Molybdenum	ppm	<b>36</b>	35	33	64
Nickel	ppm	<b>&lt;1</b>	<1	<1	<1
Titanium	ppm	<b>&lt;1</b>	<1	<1	<1
Silver	ppm	<b>0</b>	0	<1	0
Manganese	ppm	<b>1</b>	<1	<1	1
Vanadium	ppm	<b>&lt;1</b>	0	0	<1



## ADDITIVES

Calcium	ppm	<b>2186</b>	2507	1538	1812
Magnesium	ppm	<b>328</b>	168	704	819
Zinc	ppm	<b>1345</b>	1307	971	1096
Phosphorus	ppm	<b>1111</b>	1036	817	930
Barium	ppm	<b>0</b>	0	0	<1
Boron	ppm	<b>15</b>	36	70	26

**Depot:** VOLVO8882  
**Unique No:** 10794197  
**Signed:** Wes Davis  
**Report Date:** 20 Dec 2023

**VOLVO** GRAPHS

