



# CONSTRUCTION EQUIPMENT

SPM595020 ROEBUCK CO VOLVO ECR145E 310615 - DIESEL ENGINE



**Sample No:** VCP432642  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3  
**Job No:** SPM595020 ROEBUCK CO



## SAMPLE INFORMATION

Sample Number	<b>VCP432642</b>	VCP356917	VCP335537	---
Sample Date	<b>22 Aug 2023</b>	14 Apr 2022	29 Sep 2021	---
Machine Hours	<b>4306</b>	3078	2494	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	Changed	Changed	---
Sample Status	<b>NORMAL</b>	MARGINAL	ABNORMAL	---

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## OIL CONDITION

Visc @ 100°C	cSt	<b>13.3</b>	13.3	13.1	---
Base Number (BN)	mg KOH/g	<b>9.8</b>	11.5	---	---
Oxidation (PA)	%	<b>57</b>	91	79	---



## CONTAMINATION

Soot %	%	<b>0.2</b>	0.3	0.2	---
Nitration (PA)	%	<b>57</b>	77	66	---
Sulfation (PA)	%	<b>50</b>	66	60	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>5</b>	7	6	---
Sodium	ppm	<b>2</b>	2	3	---
Potassium	ppm	<b>&lt;1</b>	1	1	---

## Diagnosis

Oil and filter change at the time of sampling has been noted. 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.



## WEAR METALS

Iron	ppm	<b>23</b>	33	54	---
Copper	ppm	<b>4</b>	3	3	---
Lead	ppm	<b>0</b>	<1	<1	---
Tin	ppm	<b>&lt;1</b>	<1	<1	---
Aluminum	ppm	<b>8</b>	▲ 13	▲ 27	---
Chromium	ppm	<b>&lt;1</b>	2	3	---
Molybdenum	ppm	<b>61</b>	40	31	---
Nickel	ppm	<b>0</b>	0	0	---
Titanium	ppm	<b>&lt;1</b>	<1	0	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	<1	<1	---
Vanadium	ppm	<b>&lt;1</b>	0	0	---



## ADDITIVES

Calcium	ppm	<b>1275</b>	1813	1830	---
Magnesium	ppm	<b>992</b>	542	493	---
Zinc	ppm	<b>1302</b>	1222	1102	---
Phosphorus	ppm	<b>1083</b>	1011	936	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>2</b>	40	63	---

**Depot:** VOLVO0093  
**Unique No:** 10621103  
**Signed:** Don Baldrige  
**Report Date:** 28 Aug 2023



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## GRAPHS

