

# OIL ANALYSIS REPORT



## RUSSELL RUSSELL VOLVO PENTA 2013657573 - STARBOARD DIESEL ENGINE

**Sample No:** VPA057284  
**Oil Type:** VOLVO PENTA SAE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA057284</b>	VPA037952	VPA031913	---
Sample Date	<b>28 Jun 2024</b>	27 Jan 2022	28 Sep 2020	---
Machine Hours	<b>928</b>	473	347	---
Oil Hours	<b>0</b>	473	0	---
Oil Changed	<b>Changed</b>	Changed	Changed	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>12.5</b>	13.1	13.1	---
Base Number (BN)	mg KOH/g	<b>7.3</b>	10.6	---	---
Oxidation (PA)	%	<b>56</b>	61	65	---

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.5</b>	0.3	0.2	---
Nitration (PA)	%	<b>56</b>	52	52	---
Sulfation (PA)	%	<b>57</b>	57	63	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>5</b>	6	8	---
Sodium	ppm	<b>1</b>	3	1	---
Potassium	ppm	<b>&lt;1</b>	<1	4	---

### 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.

### WEAR METALS

Iron	ppm	<b>7</b>	6	6	---
Copper	ppm	<b>1</b>	2	2	---
Lead	ppm	<b>&lt;1</b>	<1	0	---
Tin	ppm	<b>&lt;1</b>	<1	0	---
Aluminum	ppm	<b>1</b>	2	4	---
Chromium	ppm	<b>0</b>	<1	<1	---
Molybdenum	ppm	<b>84</b>	64	106	---
Nickel	ppm	<b>0</b>	0	<1	---
Titanium	ppm	<b>1</b>	0	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	<1	<1	---
Vanadium	ppm	<b>0</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>1428</b>	1099	1527	---
Magnesium	ppm	<b>552</b>	950	600	---
Zinc	ppm	<b>1270</b>	1051	826	---
Phosphorus	ppm	<b>1015</b>	1042	731	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>214</b>	34	293	---

**Depot:** VP945077  
**Unique No:** 11112861  
**Signed:** Jonathan Hester  
**Report Date:** 09 Jul 2024

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# VOLVO PENTA

## GRAPHS

