

# OIL ANALYSIS REPORT



## SAM VOLVO PENTA 2061153892 - STARBOARD DIESEL ENGINE

**Sample No:** VPA060777  
**Oil Type:** DIESEL ENGINE OIL SAE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA060777</b>	VPA047673	VPA003518	---
Sample Date	<b>14 Feb 2024</b>	16 Jan 2023	13 May 2015	---
Machine Hours	<b>980</b>	828	0	---
Oil Hours	<b>0</b>	133	4	---
Oil Changed	<b>Changed</b>	Not Changd	Changed	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.4</b>	13.1	15.45	---
Base Number (BN)	mg KOH/g	<b>9.4</b>	10.2	---	---
Oxidation (PA)	%	<b>62</b>	63	56	---

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.3</b>	0.3	0	---
Nitration (PA)	%	<b>60</b>	62	42	---
Sulfation (PA)	%	<b>54</b>	56	50	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>4</b>	3	7	---
Sodium	ppm	<b>0</b>	0	2	---
Potassium	ppm	<b>2</b>	0	2	---

### 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.

### WEAR METALS

Iron	ppm	<b>14</b>	12	6	---
Copper	ppm	<b>18</b>	18	2	---
Lead	ppm	<b>4</b>	4	1	---
Tin	ppm	<b>&lt;1</b>	0	0	---
Aluminum	ppm	<b>2</b>	10	2	---
Chromium	ppm	<b>&lt;1</b>	<1	<1	---
Molybdenum	ppm	<b>60</b>	61	85	---
Nickel	ppm	<b>2</b>	2	1	---
Titanium	ppm	<b>&lt;1</b>	0	<1	---
Silver	ppm	<b>&lt;1</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	<1	<1	---
Vanadium	ppm	<b>0</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>929</b>	1004	1576	---
Magnesium	ppm	<b>786</b>	893	398	---
Zinc	ppm	<b>1039</b>	1126	1206	---
Phosphorus	ppm	<b>885</b>	941	1120	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>44</b>	1	467	---

**Depot:** VP794951  
**Unique No:** 10889472  
**Signed:** Sean Felton  
**Report Date:** 23 Feb 2024

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**VOLVO  
PENTA**

## GRAPHS

