

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## SIX VOLVO PENTA 2006021367 - STARBOARD DIESEL ENGINE

**Sample No:** VPA059110  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

### SAMPLE INFORMATION

Sample Number	<b>VPA059110</b>	VPA047927	VPA037646	---
Sample Date	<b>30 Nov 2023</b>	09 Nov 2022	21 Apr 2021	---
Machine Hours	<b>1110</b>	1111	1005	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>N/A</b>	N/A	Not Changd	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

**W J Clark Inc**  
4517 Dunning Road  
NORFOLK, VA  
US 23518  
Contact: WALTER CLARK  
ychtfixer@aol.com  
T:  
F:

### OIL CONDITION

Visc @ 100°C	cSt	<b>13.5</b>	13.8	14.6	---
Base Number (BN)	mg KOH/g	<b>9.0</b>	10.7	---	---
Oxidation (PA)	%	<b>63</b>	67	73	---

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.1</b>	0.1	0	---
Nitration (PA)	%	<b>47</b>	60	48	---
Sulfation (PA)	%	<b>55</b>	59	62	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>4</b>	3	3	---
Sodium	ppm	<b>0</b>	0	2	---
Potassium	ppm	<b>7</b>	2	10	---

### WEAR METALS

Iron	ppm	<b>4</b>	7	3	---
Copper	ppm	<b>1</b>	2	1	---
Lead	ppm	<b>0</b>	<1	2	---
Tin	ppm	<b>0</b>	<1	<1	---
Aluminum	ppm	<b>2</b>	1	<1	---
Chromium	ppm	<b>0</b>	0	<1	---
Molybdenum	ppm	<b>22</b>	54	1	---
Nickel	ppm	<b>0</b>	0	1	---
Titanium	ppm	<b>&lt;1</b>	0	<1	---
Silver	ppm	<b>0</b>	<1	<1	---
Manganese	ppm	<b>0</b>	<1	<1	---
Vanadium	ppm	<b>0</b>	0	<1	---

### ADDITIVES

Calcium	ppm	<b>1908</b>	1231	2176	---
Magnesium	ppm	<b>323</b>	788	25	---
Zinc	ppm	<b>1216</b>	1262	1205	---
Phosphorus	ppm	<b>1057</b>	1048	1005	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>143</b>	20	199	---

### 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.

**Depot:** VP151520  
**Unique No:** 10766835  
**Signed:** Jonathan Hester  
**Report Date:** 04 Dec 2023

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## GRAPHS

