

# OIL ANALYSIS REPORT



## PATRICK WELCH DILLON VOLVO PENTA A707043 - STARBOARD DIESEL ENGINE

**Sample No:** VPA053004  
**Oil Type:** VOLVO PENTA SAE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA053004</b>	VPA048509	VPA045524	---
Sample Date	<b>17 Apr 2024</b>	23 Aug 2023	28 Mar 2023	---
Machine Hours	<b>370</b>	358	329	---
Oil Hours	<b>0</b>	27	0	---
Oil Changed	<b>Changed</b>	Not Changd	N/A	---
Sample Status	<b>NORMAL</b>	NORMAL	ABNORMAL	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.5</b>	13.3	13.6	---
Base Number (BN)	mg KOH/g	<b>9.9</b>	9.6	10.1	---
Oxidation (PA)	%	<b>65</b>	58	63	---

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.2</b>	0.3	0.4	---
Nitration (PA)	%	<b>54</b>	53	63	---
Sulfation (PA)	%	<b>56</b>	53	57	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>9</b>	8	12	---
Sodium	ppm	<b>7</b>	5	17	---
Potassium	ppm	<b>2</b>	1	6	---

### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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>85</b>	67	125	---
Copper	ppm	<b>14</b>	12	26	---
Lead	ppm	<b>2</b>	2	6	---
Tin	ppm	<b>&lt;1</b>	<1	1	---
Aluminum	ppm	<b>24</b>	30	81	---
Chromium	ppm	<b>6</b>	5	9	---
Molybdenum	ppm	<b>53</b>	55	63	---
Nickel	ppm	<b>1</b>	2	3	---
Titanium	ppm	<b>&lt;1</b>	<1	<1	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	<1	2	---
Vanadium	ppm	<b>&lt;1</b>	<1	0	---

### ADDITIVES

Calcium	ppm	<b>1240</b>	1084	1185	---
Magnesium	ppm	<b>803</b>	935	1051	---
Zinc	ppm	<b>1094</b>	1213	1355	---
Phosphorus	ppm	<b>946</b>	985	1101	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>15</b>	2	<1	---

**Depot:** VP794951  
**Unique No:** 10990935  
**Signed:** Sean Felton  
**Report Date:** 24 Apr 2024

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**VOLVO  
PENTA**

## GRAPHS

