

# OIL ANALYSIS REPORT

# VOLVO PENTA

## RICHMOND/D-13 STRB 10132087419 - STARBOARD DIESEL ENGINE

**Sample No:** VPA036317  
**Oil Type:** MOBIL DELVAC 1300 SUPER15W40

### SAMPLE INFORMATION

Sample Number	VPA036317	VPA046090	---	---
Sample Date	12 Jan 2024	11 Aug 2023	---	---
Machine Hours	1261	193	---	---
Oil Hours	569	193	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

### OIL CONDITION

Visc @ 100°C	cSt	█ 13.1	█ 12.4	---	---
Base Number (BN)	mg KOH/g	█ 7.4	█ 8.6	---	---
Oxidation (PA)	%	104	63	---	---

### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.3	█ 0.2	---	---
Nitration (PA)	%	79	55	---	---
Sulfation (PA)	%	73	57	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	█ 1.8	---	---
Silicon	ppm	█ 7	█ 29	---	---
Sodium	ppm	█ 2	█ 0	---	---
Potassium	ppm	█ 0	█ 26	---	---

### WEAR METALS

Iron	ppm	█ 11	█ 12	---	---
Copper	ppm	█ 50	█ 2	---	---
Lead	ppm	█ <1	█ 0	---	---
Tin	ppm	█ 2	█ <1	---	---
Aluminum	ppm	█ 2	█ 13	---	---
Chromium	ppm	█ <1	█ <1	---	---
Molybdenum	ppm	█ 41	█ 60	---	---
Nickel	ppm	█ 0	█ <1	---	---
Titanium	ppm	█ 0	█ 0	---	---
Silver	ppm	█ 0	█ <1	---	---
Manganese	ppm	█ <1	█ <1	---	---
Vanadium	ppm	0	0	---	---

### ADDITIVES

Calcium	ppm	█ 1662	█ 1374	---	---
Magnesium	ppm	█ 536	█ 941	---	---
Zinc	ppm	█ 938	█ 1455	---	---
Phosphorus	ppm	█ 693	█ 1150	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 39	█ 10	---	---

### VIRGINIA PILOT ASSOCIATION

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### 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.

**Depot:** VPVIRVIR  
**Unique No:** 10843964  
**Signed:** Angela Borella  
**Report Date:** 23 Jan 2024

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## GRAPHS

