

# OIL ANALYSIS REPORT

# VOLVO PENTA

## ZACH MAY VOLVO PENTA A1104471 - PORT GASOLINE ENGINE

**Sample No:** VPA036934  
**Oil Type:** VOLVO 10W40 SYNTHETIC

### SAMPLE INFORMATION

Sample Number	VPA036934	VPA044771	---	---
Sample Date	18 Oct 2023	15 Nov 2022	---	---
Machine Hours	80	75	---	---
Oil Hours	10	25	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	ATTENTION	ATTENTION	---	---

**CHICAGO YACHT WORKS**  
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### OIL CONDITION

Visc @ 100°C	cSt	▲ 12.0	▲ 11.6	---	---
Base Number (BN)	mg KOH/g	■ 7.4	■ 8.1	---	---
Oxidation (PA)	%	■ 9	■ 11	---	---

### CONTAMINATION

Soot %	%	■ 0	■ 0.1	---	---
Nitration (PA)	%	■ 7	■ 8	---	---
Sulfation (PA)	%	■ 10	■ 10	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	▲ 2.0	---	---
Silicon	ppm	■ 15	■ 27	---	---
Sodium	ppm	■ <1	■ 0	---	---
Potassium	ppm	■ 1	■ 2	---	---

### Diagnosis

Oil and filter change at the time of sampling has been noted. 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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

### WEAR METALS

Iron	ppm	■ 3	■ 10	---	---
Copper	ppm	■ 42	■ 61	---	---
Lead	ppm	■ 0	■ 0	---	---
Tin	ppm	■ <1	■ <1	---	---
Aluminum	ppm	■ <1	■ 1	---	---
Chromium	ppm	■ <1	■ <1	---	---
Molybdenum	ppm	■ 34	■ 39	---	---
Nickel	ppm	■ 0	■ 0	---	---
Titanium	ppm	■ 0	■ 0	---	---
Silver	ppm	■ 0	■ 0	---	---
Manganese	ppm	■ 4	■ 6	---	---
Vanadium	ppm	■ 0	■ 0	---	---

### ADDITIVES

Calcium	ppm	■ 1583	■ 1817	---	---
Magnesium	ppm	■ 22	■ 11	---	---
Zinc	ppm	■ 712	■ 798	---	---
Phosphorus	ppm	■ 639	■ 679	---	---
Barium	ppm	■ 0	■ 0	---	---
Boron	ppm	■ 1	■ 3	---	---

**Depot:** VP1080862  
**Unique No:** 10714089  
**Signed:** Don Baldrige  
**Report Date:** 30 Oct 2023

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## GRAPHS

