

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## CARRUTHERS BOB CUMMINS CARRUTHERS (S/N NOT GIVEN) - STARBOARD DIESEL ENGINE

Sample No: VPA036442

Oil Type: DIESEL ENGINE OIL SAE 40

### SAMPLE INFORMATION

Sample Number	VPA036442	---	---	---
Sample Date	20 Oct 2023	---	---	---
Machine Hours	585	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Not Changd	---	---	---
Sample Status	NORMAL	---	---	---

**Walstrom Marine - 767948**

501 Bay Street  
HARBOR SPRINGS, MI  
US 49740

Contact: MARK LEWIS  
mlewis@walstrom.com

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### OIL CONDITION

Visc @ 100°C	cSt	█ 14.2	---	---	---
Base Number (BN)	mg KOH/g	█ 8.4	---	---	---
Oxidation (PA)	%	67	---	---	---

### 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.

### CONTAMINATION

Soot %	%	█ 0.1	---	---	---
Nitration (PA)	%	54	---	---	---
Sulfation (PA)	%	56	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	< 1.0	---	---	---
Silicon	ppm	█ 5	---	---	---
Sodium	ppm	█ 3	---	---	---
Potassium	ppm	█ 4	---	---	---

### WEAR METALS

Iron	ppm	█ 8	---	---	---
Copper	ppm	█ 10	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ 0	---	---	---
Aluminum	ppm	█ < 1	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ 8	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	█ 0	---	---	---
Silver	ppm	█ 1	---	---	---
Manganese	ppm	█ < 1	---	---	---
Vanadium	ppm	0	---	---	---

### ADDITIVES

Calcium	ppm	█ 2043	---	---	---
Magnesium	ppm	█ 134	---	---	---
Zinc	ppm	█ 1223	---	---	---
Phosphorus	ppm	█ 882	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 157	---	---	---

Depot: VP154879

Unique No: 10711558

Signed: Sean Felton

Report Date: 27 Oct 2023

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## GRAPHS

