

# OIL ANALYSIS REPORT

# VOLVO PENTA

**PHIL HOLT DANIEL/502085 VOLVO PENTA A217746 - STARBOARD DIESEL ENGINE**

**Sample No:** VPA050653

**Oil Type:** VOLVO VDS-4.5 Premium Motor Oil 15W40

## SAMPLE INFORMATION

Sample Number	VPA050653	---	---	---
Sample Date	19 Jul 2023	---	---	---
Machine Hours	5106	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ABNORMAL	---	---	---

**Endor Marine LLC - Coastal Marine - 152124**  
4300 11th Ave. NW  
SEATTLE, WA  
US 98107  
Contact: WILLOW YANARELLA  
service@coastalmarineengine.com  
T: (206)784-3703  
F: (206)784-8823

## OIL CONDITION

Visc @ 100°C	cSt	█ 13.4	---	---	---
Base Number (BN)	mg KOH/g	█ 9.9	---	---	---
Oxidation (PA)	%	█ 65	---	---	---

## CONTAMINATION

Soot %	%	█ 0.2	---	---	---
Nitration (PA)	%	█ 66	---	---	---
Sulfation (PA)	%	█ 55	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	< 1.0	---	---	---
Silicon	ppm	█ 9	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ < 1	---	---	---

## Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level is abnormal. All other 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.

## WEAR METALS

Iron	ppm	█ 13	---	---	---
Copper	ppm	█ 4	---	---	---
Lead	ppm	█ 2	---	---	---
Tin	ppm	█ < 1	---	---	---
Aluminum	ppm	▲ 62	---	---	---
Chromium	ppm	█ 3	---	---	---
Molybdenum	ppm	█ 62	---	---	---
Nickel	ppm	█ < 1	---	---	---
Titanium	ppm	█ 0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ < 1	---	---	---
Vanadium	ppm	0	---	---	---

## ADDITIVES

Calcium	ppm	█ 1164	---	---	---
Magnesium	ppm	█ 1040	---	---	---
Zinc	ppm	█ 1355	---	---	---
Phosphorus	ppm	█ 1112	---	---	---
Barium	ppm	█ < 1	---	---	---
Boron	ppm	█ 5	---	---	---

**Depot:** VP794951  
**Unique No:** 10566558  
**Signed:** Angela Borella  
**Report Date:** 25 Jul 2023

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## GRAPHS

