

# OIL ANALYSIS REPORT

# VOLVO PENTA

**BOB RYLANDER PATRICK/502643-5750 VOLVO PENTA 2006035464 - STARBOARD DIESEL ENGINE**

**Sample No:** VPA059284

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

## SAMPLE INFORMATION

Sample Number	VPA059284	---	---	---
Sample Date	23 Jan 2024	---	---	---
Machine Hours	1632	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

**Endor Marine LLC - Coastal Marine - 152124**  
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SEATTLE, WA  
US 98107  
Contact: WILLOW YANARELLA  
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T: (206)784-3703  
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## OIL CONDITION

Visc @ 100°C	cSt	█ 13.9	---	---	---
Base Number (BN)	mg KOH/g	█ 8.2	---	---	---
Oxidation (PA)	%	84	---	---	---

## Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. The nickel 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.

## CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 0.2	---	---	---
Nitration (PA)	%	91	---	---	---
Sulfation (PA)	%	63	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	█ 6	---	---	---
Sodium	ppm	█ 2	---	---	---
Potassium	ppm	█ 8	---	---	---

## WEAR METALS

Iron	ppm	█ 26	---	---	---
Copper	ppm	█ 24	---	---	---
Lead	ppm	█ 5	---	---	---
Tin	ppm	█ 1	---	---	---
Aluminum	ppm	█ 15	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 68	---	---	---
Nickel	ppm	▲ 4	---	---	---
Titanium	ppm	█ 0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 1	---	---	---
Vanadium	ppm	<1	---	---	---

## ADDITIVES

Calcium	ppm	█ 1359	---	---	---
Magnesium	ppm	█ 755	---	---	---
Zinc	ppm	█ 937	---	---	---
Phosphorus	ppm	█ 816	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	201	---	---	---

**Depot:** VP794951  
**Unique No:** 10849225  
**Signed:** Don Baldrige  
**Report Date:** 30 Jan 2024

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## GRAPHS

