

# OIL ANALYSIS REPORT

# VOLVO PENTA

**TIM CASE 23-2745 VOLVO PENTA 2013386462 - STARBOARD DIESEL ENGINE**

**Sample No:** VPA058506

**Oil Type:** VOLVO PENTA SAE 15W40

## SAMPLE INFORMATION

Sample Number	VPA058506	VPA040733	---	---
Sample Date	20 Nov 2023	12 Sep 2022	---	---
Machine Hours	1693	1490	---	---
Oil Hours	0	50	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	NORMAL	NORMAL	---	---

### Outstanding Marine

PO Box 274  
GALENA, MD  
US 21635  
Contact: Ronda Bolinger  
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F:

## OIL CONDITION

Visc @ 100°C	cSt	█ 13.8	█ 13.3	---	---
Base Number (BN)	mg KOH/g	█ 8.1	█ 11.0	---	---
Oxidation (PA)	%	63	59	---	---

## 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 suitable for further service.

## CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.2	█ 0.2	---	---
Nitration (PA)	%	51	47	---	---
Sulfation (PA)	%	55	56	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 2	█ 4	---	---
Sodium	ppm	█ <1	█ 1	---	---
Potassium	ppm	█ 4	█ 2	---	---

## WEAR METALS

Iron	ppm	█ 2	█ 3	---	---
Copper	ppm	█ <1	█ 1	---	---
Lead	ppm	█ 0	█ <1	---	---
Tin	ppm	█ 0	█ <1	---	---
Aluminum	ppm	█ 1	█ 1	---	---
Chromium	ppm	█ 0	█ <1	---	---
Molybdenum	ppm	█ 9	█ 62	---	---
Nickel	ppm	█ 0	█ <1	---	---
Titanium	ppm	█ 0	█ 0	---	---
Silver	ppm	█ 0	█ <1	---	---
Manganese	ppm	█ 0	█ <1	---	---
Vanadium	ppm	0	0	---	---

## ADDITIVES

Calcium	ppm	█ 2099	█ 1048	---	---
Magnesium	ppm	█ 172	█ 897	---	---
Zinc	ppm	█ 1309	█ 1261	---	---
Phosphorus	ppm	█ 1035	█ 1048	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 142	█ 2	---	---

**Depot:** VP153685  
**Unique No:** 10767881  
**Signed:** Sean Felton  
**Report Date:** 05 Dec 2023

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## GRAPHS

