

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

**NADINE URUIOLI LEE 2300548 VOLVO PENTA A997285 - STARBOARD DIESEL ENGINE**

**Sample No:** VPA059228

**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

## SAMPLE INFORMATION

Sample Number	<b>VPA059228</b>	VPA055108	VPA029724	---
Sample Date	<b>01 Nov 2023</b>	02 Aug 2023	22 Mar 2021	---
Machine Hours	<b>256</b>	352	193	---
Oil Hours	<b>256</b>	352	0	---
Oil Changed	<b>Changed</b>	Not Changd	N/A	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

### Helmut's Marine Service

619 Canal Street  
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Contact: NADINE URUIOLI  
SERVICE@HELMUTSMARINE.COM

T: x:

F: x:

## OIL CONDITION

Visc @ 100°C	cSt	<b>13.6</b>	14.1	13.4	---
Base Number (BN)	mg KOH/g	<b>10.4</b>	8.3	---	---
Oxidation (PA)	%	<b>56</b>	47	62	---

## CONTAMINATION

Soot %	%	<b>0.1</b>	0.1	0.1	---
Nitration (PA)	%	<b>43</b>	53	50	---
Sulfation (PA)	%	<b>52</b>	48	58	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>5</b>	4	7	---
Sodium	ppm	<b>1</b>	2	1	---
Potassium	ppm	<b>2</b>	4	0	---

## 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 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	<b>10</b>	5	8	---
Copper	ppm	<b>2</b>	<1	3	---
Lead	ppm	<b>0</b>	<1	<1	---
Tin	ppm	<b>0</b>	0	<1	---
Aluminum	ppm	<b>2</b>	<1	2	---
Chromium	ppm	<b>&lt;1</b>	0	<1	---
Molybdenum	ppm	<b>57</b>	5	59	---
Nickel	ppm	<b>0</b>	0	<1	---
Titanium	ppm	<b>0</b>	<1	<1	---
Silver	ppm	<b>0</b>	0	<1	---
Manganese	ppm	<b>0</b>	<1	<1	---
Vanadium	ppm	<b>0</b>	<1	0	---

## ADDITIVES

Calcium	ppm	<b>983</b>	1276	1155	---
Magnesium	ppm	<b>898</b>	721	926	---
Zinc	ppm	<b>1180</b>	830	1252	---
Phosphorus	ppm	<b>1006</b>	680	1087	---
Barium	ppm	<b>5</b>	0	0	---
Boron	ppm	<b>&lt;1</b>	89	8	---

**Depot:** VP152741

**Unique No:** 10729260

**Signed:** Doug Bogart

**Report Date:** 08 Nov 2023

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## GRAPHS

