

# OIL ANALYSIS REPORT

# VOLVO PENTA

## NADINE URUIOLI MICHAEL PAPAY VOLVO PENTA A1114661 - PORT DIESEL ENGINE

Sample No: VPA021849

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

### SAMPLE INFORMATION

Sample Number	VPA021849	VPA034203	---	---
Sample Date	13 Dec 2023	11 Apr 2022	---	---
Machine Hours	373	189	---	---
Oil Hours	373	189	---	---
Oil Changed	Changed	Not Changd	---	---
Sample Status	NORMAL	NORMAL	---	---

#### Helmut's Marine Service

619 Canal Street  
SAN RAFAEL, CA  
US 94901-3545  
Contact: NADINE URUIOLI  
SERVICE@HELMUTSMARINE.COM

T: x:

F: x:

### OIL CONDITION

Visc @ 100°C	cSt	█ 13.0	█ 13.0	---	---
Base Number (BN)	mg KOH/g	█ 10.0	█ 11.5	---	---
Oxidation (PA)	%	56	64	---	---

### CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	█ 0.1	█ 0.1	---	---
Nitration (PA)	%	43	49	---	---
Sulfation (PA)	%	52	58	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 9	█ 23	---	---
Sodium	ppm	█ 1	█ 2	---	---
Potassium	ppm	█ 2	█ 1	---	---

### 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.

### WEAR METALS

Iron	ppm	█ 21	█ 14	---	---
Copper	ppm	█ 6	█ 13	---	---
Lead	ppm	█ 3	█ 8	---	---
Tin	ppm	█ 1	█ 3	---	---
Aluminum	ppm	█ 8	█ 11	---	---
Chromium	ppm	█ 2	█ 2	---	---
Molybdenum	ppm	█ 58	█ 60	---	---
Nickel	ppm	█ 3	█ 2	---	---
Titanium	ppm	█ 0	█ 0	---	---
Silver	ppm	█ 0	█ <1	---	---
Manganese	ppm	█ <1	█ <1	---	---
Vanadium	ppm	0	0	---	---

### ADDITIVES

Calcium	ppm	█ 1031	█ 1271	---	---
Magnesium	ppm	█ 923	974	---	---
Zinc	ppm	█ 1240	█ 1263	---	---
Phosphorus	ppm	█ 1025	█ 1143	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 4	█ 10	---	---

Depot: VP152741

Unique No: 10795639

Signed: Don Baldrige

Report Date: 21 Dec 2023

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## GRAPHS

