

# OIL ANALYSIS REPORT



**TED HANNIG TED HANNIG VOLVO PENTA 2204404067 - DIESEL ENGINE**

**Sample No:** VPA051913

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

## SAMPLE INFORMATION

Sample Number	VPA051913	---	---	---
Sample Date	08 Apr 2024	---	---	---
Machine Hours	0	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	SEVERE	---	---	---

### 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	█ 13.49	---	---	---
Oxidation (PA)	%	█ 87	---	---	---

## CONTAMINATION

Water	%	▲ 0.500	---	---	---
Soot %	%	█ 1	---	---	---
Nitration (PA)	%	█ 98	---	---	---
Sulfation (PA)	%	█ 63	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	< 1.0	---	---	---
Silicon	ppm	▲ 111	---	---	---
Sodium	ppm	● 406	---	---	---
Potassium	ppm	█ 28	---	---	---

## Diagnosis

We advise that you check for the source of the water. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend that you inspect the component for an overhaul determination. We recommend an early resample to monitor this condition. Generally an abnormal to severe rate of wear throughout the component. The high sodium (Na) level indicates the possible presence of salt water. There is a moderate concentration of water present in the oil. The oil is no longer serviceable due to the presence of contaminants and wear.

## WEAR METALS

Iron	ppm	▲ 956	---	---	---
Copper	ppm	▲ 170	---	---	---
Lead	ppm	█ 28	---	---	---
Tin	ppm	█ 7	---	---	---
Aluminum	ppm	▲ 3437	---	---	---
Chromium	ppm	▲ 59	---	---	---
Molybdenum	ppm	█ 289	---	---	---
Nickel	ppm	▲ 76	---	---	---
Titanium	ppm	█ 2	---	---	---
Silver	ppm	█ <1	---	---	---
Manganese	ppm	█ 10	---	---	---
Vanadium	ppm	< 1	---	---	---

## ADDITIVES

Calcium	ppm	█ 1691	---	---	---
Magnesium	ppm	█ 1200	---	---	---
Zinc	ppm	█ 1705	---	---	---
Phosphorus	ppm	█ 1468	---	---	---
Barium	ppm	█ 2	---	---	---
Boron	ppm	█ 39	---	---	---

**Depot:** VP152741

**Unique No:** 10968319

**Signed:** Doug Bogart

**Report Date:** 09 Apr 2024

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# VOLVO PENTA

## GRAPHS

