

# OIL ANALYSIS REPORT

# VOLVO PENTA

## SIRENA VOLVO PENTA 70112032191 - STARBOARD DIESEL ENGINE

Sample No: VPA057491

Oil Type: DIESEL ENGINE OIL SAE 15W40

### SAMPLE INFORMATION

Sample Number	VPA057491	---	---	---
Sample Date	16 Nov 2023	---	---	---
Machine Hours	113	---	---	---
Oil Hours	113	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	ATTENTION	---	---	---

### Outstanding Marine

PO Box 274  
GALENA, MD  
US 21635  
Contact: Ronda Bolinger  
rlwb@verizon.net  
T:  
F:

### OIL CONDITION

Visc @ 100°C	cSt	▲ 11.8	---	---	---
Base Number (BN)	mg KOH/g	■ 7.2	---	---	---
Oxidation (PA)	%	■ 37	---	---	---

### CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	■ 0.2	---	---	---
Nitration (PA)	%	■ 53	---	---	---
Sulfation (PA)	%	■ 42	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	▲ 3.1	---	---	---
Silicon	ppm	■ 29	---	---	---
Sodium	ppm	■ 0	---	---	---
Potassium	ppm	■ 1	---	---	---

### 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. Light fuel dilution occurring. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

### WEAR METALS

Iron	ppm	■ 9	---	---	---
Copper	ppm	■ 48	---	---	---
Lead	ppm	■ 1	---	---	---
Tin	ppm	■ 2	---	---	---
Aluminum	ppm	■ 1	---	---	---
Chromium	ppm	■ <1	---	---	---
Molybdenum	ppm	■ 15	---	---	---
Nickel	ppm	■ <1	---	---	---
Titanium	ppm	■ 0	---	---	---
Silver	ppm	■ <1	---	---	---
Manganese	ppm	■ 1	---	---	---
Vanadium	ppm	■ 0	---	---	---

### ADDITIVES

Calcium	ppm	■ 1225	---	---	---
Magnesium	ppm	■ 820	---	---	---
Zinc	ppm	■ 1252	---	---	---
Phosphorus	ppm	■ 1073	---	---	---
Barium	ppm	■ 0	---	---	---
Boron	ppm	■ 9	---	---	---

Depot: VP153685  
Unique No: 10749762  
Signed: Jonathan Hester  
Report Date: 22 Nov 2023

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## GRAPHS

