

# OIL ANALYSIS REPORT



## IMMRAMA 23-2794 VOLVO PENTA A409493 - STARBOARD DIESEL ENGINE

**Sample No:** VPA057498  
**Oil Type:** VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

### SAMPLE INFORMATION

Sample Number	VPA057498	---	---	---
Sample Date	14 Dec 2023	---	---	---
Machine Hours	1147	---	---	---
Oil Hours	0	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

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

### OIL CONDITION

Visc @ 100°C	cSt	█ 13.6	---	---	---
Base Number (BN)	mg KOH/g	█ 9.7	---	---	---
Oxidation (PA)	%	65	---	---	---

### CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 0.1	---	---	---
Nitration (PA)	%	63	---	---	---
Sulfation (PA)	%	55	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	█ 3	---	---	---
Sodium	ppm	█ 0	---	---	---
Potassium	ppm	█ <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	█ 5	---	---	---
Copper	ppm	█ 2	---	---	---
Lead	ppm	█ 0	---	---	---
Tin	ppm	█ <1	---	---	---
Aluminum	ppm	█ <1	---	---	---
Chromium	ppm	█ 0	---	---	---
Molybdenum	ppm	█ 52	---	---	---
Nickel	ppm	█ 0	---	---	---
Titanium	ppm	█ 0	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ <1	---	---	---
Vanadium	ppm	0	---	---	---

### ADDITIVES

Calcium	ppm	█ 1121	---	---	---
Magnesium	ppm	█ 886	---	---	---
Zinc	ppm	█ 1281	---	---	---
Phosphorus	ppm	█ 989	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 15	---	---	---

**Depot:** VP153685  
**Unique No:** 10792784  
**Signed:** Don Baldrige  
**Report Date:** 20 Dec 2023

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# VOLVO PENTA

## GRAPHS

