

OIL ANALYSIS REPORT



GREENBERG 500-87 VOLVO PENTA A225627 - PORT DIESEL ENGINE

Sample No: VPA021799
Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA021799	VPA026758	---	---
Sample Date	21 Nov 2023	18 Nov 2020	---	---
Machine Hours	1129	808	---	---
Oil Hours	0	0	---	---
Oil Changed	N/A	N/A	---	---
Sample Status	NORMAL	ABNORMAL	---	---

Outstanding Marine
 PO Box 274
 GALENA, MD
 US 21635
 Contact: Ronda Bolinger
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 T:
 F:

OIL CONDITION

Visc @ 100°C	cSt	14.0	14.0	---	---
Base Number (BN)	mg KOH/g	8.5	---	---	---
Oxidation (PA)	%	63	26	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.3	0	---	---
Nitration (PA)	%	53	32	---	---
Sulfation (PA)	%	55	66	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	4	37	---	---
Sodium	ppm	1	7	---	---
Potassium	ppm	4	8	---	---

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 suitable for further service.

WEAR METALS

Iron	ppm	8	299	---	---
Copper	ppm	4	28	---	---
Lead	ppm	<1	0	---	---
Tin	ppm	<1	0	---	---
Aluminum	ppm	1	3	---	---
Chromium	ppm	<1	2	---	---
Molybdenum	ppm	12	<1	---	---
Nickel	ppm	<1	4	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	<1	4	---	---
Vanadium	ppm	<1	0	---	---

ADDITIVES

Calcium	ppm	1864	6	---	---
Magnesium	ppm	177	17	---	---
Zinc	ppm	1143	28	---	---
Phosphorus	ppm	952	1267	---	---
Barium	ppm	0	0	---	---
Boron	ppm	132	207	---	---

Depot: VP153685
Unique No: 10816332
Signed: Don Baldrige
Report Date: 04 Jan 2024

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**VOLVO
PENTA**

GRAPHS

