

OIL ANALYSIS REPORT

VOLVO PENTA

WERRLEIR 22-2783 VOLVO PENTA 7011381413 - STARBOARD DIESEL ENGINE

Sample No: VPA045838

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

SAMPLE INFORMATION

Sample Number	VPA045838	VPA031136	---	---
Sample Date	06 Dec 2023	14 Dec 2022	---	---
Machine Hours	973	867	---	---
Oil Hours	130	830	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	NORMAL	NORMAL	---	---

Outstanding Marine

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

OIL CONDITION

Visc @ 100°C	cSt	12.8	13.3	---	---
Base Number (BN)	mg KOH/g	9.2	11.0	---	---
Oxidation (PA)	%	59	58	---	---

CONTAMINATION

Water	%	NEG	NEG	---	---
Soot %	%	0.5	0.2	---	---
Nitration (PA)	%	55	50	---	---
Sulfation (PA)	%	55	55	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	6	5	---	---
Sodium	ppm	0	0	---	---
Potassium	ppm	2	2	---	---

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	7	3	---	---
Copper	ppm	33	7	---	---
Lead	ppm	<1	0	---	---
Tin	ppm	1	<1	---	---
Aluminum	ppm	1	1	---	---
Chromium	ppm	<1	0	---	---
Molybdenum	ppm	55	56	---	---
Nickel	ppm	1	0	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	<1	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	1132	1228	---	---
Magnesium	ppm	849	848	---	---
Zinc	ppm	1190	1232	---	---
Phosphorus	ppm	995	1068	---	---
Barium	ppm	11	0	---	---
Boron	ppm	10	17	---	---

Depot: VP153685
Unique No: 10782820
Signed: Don Baldrige
Report Date: 15 Dec 2023

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GRAPHS

