

# OIL ANALYSIS REPORT

# VOLVO PENTA

## JACK BROWN 505697 VOLVO PENTA 2013355962 - STARBOARD DIESEL ENGINE

Sample No: VPA048817

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

### SAMPLE INFORMATION

Sample Number	VPA048817	VPA042440	VPA037100	---
Sample Date	29 Sep 2023	16 Sep 2022	04 Oct 2021	---
Machine Hours	760	718	462	---
Oil Hours	44	75	0	---
Oil Changed	Not Changed	Changed	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

Jefferson Beach Yacht Sales Inc

24400 Jefferson Ave.

SAINT CLAIR SHORES, MI

US 48080

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### OIL CONDITION

Visc @ 100°C	cSt	█ 13.76	█ 13.4	█ 14.2	---
Base Number (BN)	mg KOH/g	█ 9.5	█ 10.7	---	---
Oxidation (PA)	%	█ 51	█ 61	█ 63	---

### CONTAMINATION

Soot %	%	█ 0.1	█ 0.3	█ 0.2	---
Nitration (PA)	%	█ 41	█ 53	█ 54	---
Sulfation (PA)	%	█ 48	█ 57	█ 55	---
Glycol	%	█ NEG	█ NEG	█ NEG	---
Fuel	%	█ <1.0	█ <1.0	█ <1.0	---
Silicon	ppm	█ 2	█ 4	█ 1	---
Sodium	ppm	█ <1	█ 1	█ 2	---
Potassium	ppm	█ 0	█ <1	█ 6	---

### Diagnosis

No corrective action is recommended at this time. 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	█ 2	█ 3	█ 2	---
Copper	ppm	█ <1	█ <1	█ 1	---
Lead	ppm	█ 0	█ 0	█ <1	---
Tin	ppm	█ 0	█ <1	█ <1	---
Aluminum	ppm	█ 5	█ 0	█ <1	---
Chromium	ppm	█ 0	█ <1	█ <1	---
Molybdenum	ppm	█ 57	█ 46	█ 3	---
Nickel	ppm	█ 0	█ 0	█ 0	---
Titanium	ppm	█ 0	█ 0	█ 0	---
Silver	ppm	█ 0	█ 0	█ <1	---
Manganese	ppm	█ 0	█ <1	█ <1	---
Vanadium	ppm	█ 0	█ 0	█ 0	---

### ADDITIVES

Calcium	ppm	█ 1080	█ 1325	█ 2289	---
Magnesium	ppm	█ 961	█ 796	█ 52	---
Zinc	ppm	█ 1266	█ 1259	█ 1201	---
Phosphorus	ppm	█ 1032	█ 1009	█ 1005	---
Barium	ppm	█ 0	█ 0	█ 0	---
Boron	ppm	█ 7	█ 21	█ 147	---

Depot: VP297371

Unique No: 10673363

Signed: Doug Bogart

Report Date: 02 Oct 2023

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## GRAPHS

