

OIL ANALYSIS REPORT

VOLVO PENTA

NADINE URUIOLI TRANS BAY CABLE VOLVO PENTA A 1166292 - STARBOARD DIESEL ENGINE

Sample No: VPA053163

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

SAMPLE INFORMATION

Sample Number	VPA053163	---	---	---
Sample Date	29 Apr 2024	---	---	---
Machine Hours	50	---	---	---
Oil Hours	50	---	---	---
Oil Changed	Changed	---	---	---
Sample Status	NORMAL	---	---	---

Helmuts Marine Service

619 Canal Street
SAN RAFAEL, CA
US 94901-3545
Contact: NADINE URUIOLI
SERVICE@HELMUTSMARINE.COM
T: x:
F: x:

OIL CONDITION

Visc @ 100°C	cSt	█ 13.48	---	---	---
Base Number (BN)	mg KOH/g	█ 9.9	---	---	---
Oxidation (PA)	%	56	---	---	---

CONTAMINATION

Water	%	NEG	---	---	---
Soot %	%	█ 0.1	---	---	---
Nitration (PA)	%	42	---	---	---
Sulfation (PA)	%	52	---	---	---
Glycol	%	NEG	---	---	---
Fuel	%	<1.0	---	---	---
Silicon	ppm	█ 19	---	---	---
Sodium	ppm	█ 4	---	---	---
Potassium	ppm	█ 3	---	---	---

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	█ 9	---	---	---
Copper	ppm	█ 13	---	---	---
Lead	ppm	█ 3	---	---	---
Tin	ppm	█ 2	---	---	---
Aluminum	ppm	█ 3	---	---	---
Chromium	ppm	█ <1	---	---	---
Molybdenum	ppm	█ 56	---	---	---
Nickel	ppm	█ 1	---	---	---
Titanium	ppm	█ <1	---	---	---
Silver	ppm	█ 0	---	---	---
Manganese	ppm	█ 1	---	---	---
Vanadium	ppm	0	---	---	---

ADDITIVES

Calcium	ppm	█ 1152	---	---	---
Magnesium	ppm	█ 863	---	---	---
Zinc	ppm	█ 1140	---	---	---
Phosphorus	ppm	█ 902	---	---	---
Barium	ppm	█ 0	---	---	---
Boron	ppm	█ 17	---	---	---

Depot: VP152741
Unique No: 11019152
Signed: Doug Bogart
Report Date: 08 May 2024

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GRAPHS

