

OIL ANALYSIS REPORT

VOLVO PENTA

MARK RAY VOLVO PENTA A394762 - STARBOARD DIESEL ENGINE

Sample No: VPA048821

Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA048821	VPA042468	---	---
Sample Date	06 Mar 2023	20 Sep 2022	---	---
Machine Hours	1107	0	---	---
Oil Hours	180	10	---	---
Oil Changed	Changed	N/A	---	---
Sample Status	NORMAL	NORMAL	---	---

OIL CONDITION

Visc @ 100°C	cSt	█ 13.7	█ 14.0	---	---
Base Number (BN)	mg KOH/g	█ 10.1	█ 11.3	---	---
Oxidation (PA)	%	63	61	---	---

CONTAMINATION

Soot %	%	█ 0.2	█ 0.1	---	---
Nitration (PA)	%	58	48	---	---
Sulfation (PA)	%	56	56	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 7	█ 3	---	---
Sodium	ppm	█ 3	█ 1	---	---
Potassium	ppm	█ 3	█ <1	---	---

WEAR METALS

Iron	ppm	█ 16	█ 8	---	---
Copper	ppm	█ 4	█ <1	---	---
Lead	ppm	█ 2	█ <1	---	---
Tin	ppm	█ <1	█ 0	---	---
Aluminum	ppm	█ 16	█ 10	---	---
Chromium	ppm	█ 3	█ <1	---	---
Molybdenum	ppm	█ 59	█ 59	---	---
Nickel	ppm	█ 2	█ <1	---	---
Titanium	ppm	█ <1	█ 0	---	---
Silver	ppm	█ 0	█ 0	---	---
Manganese	ppm	█ <1	█ <1	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	█ 1153	█ 1099	---	---
Magnesium	ppm	954	█ 840	---	---
Zinc	ppm	█ 1226	█ 1101	---	---
Phosphorus	ppm	█ 974	█ 919	---	---
Barium	ppm	█ <1	█ 0	---	---
Boron	ppm	█ 12	█ 15	---	---

ALL SYSTEMS MARINE

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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.

Depot: VP99220003
Unique No: 10535821
Signed: Don Baldrige
Report Date: 30 Jun 2023

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GRAPHS

