

OIL ANALYSIS REPORT

VOLVO PENTA

MICHAEL WIDMER 7716312 VOLVO PENTA A1113759 - STARBOARD DIESEL ENGINE

Sample No: VPA056246

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

SAMPLE INFORMATION

Sample Number	VPA056246	VPA041521	---	---
Sample Date	28 Jul 2023	12 Jul 2022	---	---
Machine Hours	34	30	---	---
Oil Hours	0	30	---	---
Oil Changed	N/A	Changed	---	---
Sample Status	NORMAL	NORMAL	---	---

Pacific Power Group - VP981534

7215 S 228th St

Kent, WA

US 98032

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F:

OIL CONDITION

Visc @ 100°C	cSt	█ 13.5	█ 13.3	---	---
Base Number (BN)	mg KOH/g	█ 10.4	█ 11.3	---	---
Oxidation (PA)	%	57	84	---	---

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.

CONTAMINATION

Soot %	%	█ 0	█ 0.1	---	---
Nitration (PA)	%	38	43	---	---
Sulfation (PA)	%	52	64	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	█ 9	█ 21	---	---
Sodium	ppm	█ 1	█ 3	---	---
Potassium	ppm	█ 2	█ 3	---	---

WEAR METALS

Iron	ppm	█ 6	█ 11	---	---
Copper	ppm	█ <1	█ 5	---	---
Lead	ppm	█ <1	█ 1	---	---
Tin	ppm	█ <1	█ 3	---	---
Aluminum	ppm	█ 4	█ 12	---	---
Chromium	ppm	█ <1	█ 1	---	---
Molybdenum	ppm	█ 56	█ 41	---	---
Nickel	ppm	█ <1	█ <1	---	---
Titanium	ppm	█ 0	█ 0	---	---
Silver	ppm	█ 0	█ 0	---	---
Manganese	ppm	█ <1	█ <1	---	---
Vanadium	ppm	0	0	---	---

ADDITIVES

Calcium	ppm	█ 1122	█ 1668	---	---
Magnesium	ppm	951	█ 500	---	---
Zinc	ppm	█ 1351	█ 1114	---	---
Phosphorus	ppm	█ 1085	█ 950	---	---
Barium	ppm	█ 0	█ 0	---	---
Boron	ppm	█ 9	█ 81	---	---

Depot: VP99031103

Unique No: 10605781

Signed: Don Baldrige

Report Date: 17 Aug 2023

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GRAPHS

