

OIL ANALYSIS REPORT

VOLVO PENTA

ANDREW SONGER 7717005 VOLVO PENTA 7011381533 - STARBOARD DIESEL ENGINE

Sample No: VPA036237

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

SAMPLE INFORMATION

Sample Number	VPA036237	VPA043355	VPA037699	---
Sample Date	11 Oct 2023	12 Oct 2022	09 Sep 2021	---
Machine Hours	839	811	746	---
Oil Hours	11	0	0	---
Oil Changed	Changed	Changed	Changed	---
Sample Status	NORMAL	NORMAL	NORMAL	---

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OIL CONDITION

Visc @ 100°C	cSt	13.8	12.9	12.8	---
Base Number (BN)	mg KOH/g	9.3	11.1	---	---
Oxidation (PA)	%	53	60	56	---

CONTAMINATION

Soot %	%	0.1	0.1	0.2	---
Nitration (PA)	%	49	49	50	---
Sulfation (PA)	%	52	57	52	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	6	5	4	---
Sodium	ppm	2	<1	5	---
Potassium	ppm	2	0	<1	---

WEAR METALS

Iron	ppm	<1	2	4	---
Copper	ppm	<1	6	13	---
Lead	ppm	<1	<1	<1	---
Tin	ppm	<1	<1	<1	---
Aluminum	ppm	2	<1	0	---
Chromium	ppm	0	0	<1	---
Molybdenum	ppm	41	61	59	---
Nickel	ppm	<1	0	<1	---
Titanium	ppm	0	0	0	---
Silver	ppm	0	0	<1	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	<1	0	0	---

ADDITIVES

Calcium	ppm	1311	1066	1027	---
Magnesium	ppm	814	936	937	---
Zinc	ppm	1005	1204	1163	---
Phosphorus	ppm	834	1079	1028	---
Barium	ppm	0	0	0	---
Boron	ppm	136	0	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 suitable for further service.

Depot: VP99031103
Unique No: 10708787
Signed: Don Baldrige
Report Date: 25 Oct 2023

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GRAPHS

