

OIL ANALYSIS REPORT



STEVE MALONE PATRICK/502333-5250 VOLVO PENTA 2013565632 - PORT DIESEL ENGINE

Sample No: VPA043303
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA043303	VPA056419	VPA042077	---
Sample Date	11 Sep 2023	14 Jun 2023	26 Sep 2022	---
Machine Hours	1457	1449	1435	---
Oil Hours	69	67	55	---
Oil Changed	Changed	Not Changd	N/A	---
Sample Status	NORMAL	NORMAL	NORMAL	---

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OIL CONDITION

Visc @ 100°C	cSt	13.3	13.2	13.7	---
Base Number (BN)	mg KOH/g	9.3	9.4	10.9	---
Oxidation (PA)	%	53	60	58	---

CONTAMINATION

Soot %	%	0.1	0.1	0.1	---
Nitration (PA)	%	43	43	47	---
Sulfation (PA)	%	51	54	56	---
Glycol	%	NEG	NEG	NEG	---
Fuel	%	<1.0	<1.0	<1.0	---
Silicon	ppm	6	6	4	---
Sodium	ppm	2	<1	0	---
Potassium	ppm	<1	2	1	---

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.

WEAR METALS

Iron	ppm	2	0	2	---
Copper	ppm	34	32	36	---
Lead	ppm	0	<1	<1	---
Tin	ppm	<1	1	<1	---
Aluminum	ppm	2	2	<1	---
Chromium	ppm	0	<1	<1	---
Molybdenum	ppm	49	52	53	---
Nickel	ppm	0	<1	0	---
Titanium	ppm	<1	0	0	---
Silver	ppm	0	0	0	---
Manganese	ppm	<1	<1	<1	---
Vanadium	ppm	0	<1	0	---

ADDITIVES

Calcium	ppm	1029	1138	1128	---
Magnesium	ppm	880	994	911	---
Zinc	ppm	1132	1336	1202	---
Phosphorus	ppm	965	1081	1042	---
Barium	ppm	0	0	0	---
Boron	ppm	4	10	7	---

Depot: VP794951
Unique No: 10648345
Signed: Sean Felton
Report Date: 19 Sep 2023

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**VOLVO
PENTA**

GRAPHS

