

OIL ANALYSIS REPORT



DOUG ZALK 7715233 VOLVO PENTA A1053533 - PORT DIESEL ENGINE

Sample No: VPA050503

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

SAMPLE INFORMATION

Sample Number	VPA050503	VPA025756	VPA023644	VPA025789
Sample Date	03 Jul 2023	20 Jun 2022	23 Jun 2021	18 May 2020
Machine Hours	258	220	150	66
Oil Hours	0	70	82	66
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

Pacific Power Group - VP981534

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US 98032

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OIL CONDITION

Visc @ 100°C	cSt	13.6	13.5	13.5	13.2
Base Number (BN)	mg KOH/g	10.0	10.4	---	---
Oxidation (PA)	%	63	67	69	61

CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	58	63	63	53
Sulfation (PA)	%	53	56	58	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	6	5	7	16
Sodium	ppm	<1	<1	3	4
Potassium	ppm	<1	0	1	0

WEAR METALS

Iron	ppm	14	19	17	18
Copper	ppm	2	4	4	6
Lead	ppm	0	<1	1	0
Tin	ppm	0	<1	<1	0
Aluminum	ppm	6	6	10	18
Chromium	ppm	<1	1	1	2
Molybdenum	ppm	63	58	60	56
Nickel	ppm	<1	2	1	2
Titanium	ppm	0	0	0	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	1117	1007	1065	1069
Magnesium	ppm	1064	914	954	992
Zinc	ppm	1389	1232	1257	1117
Phosphorus	ppm	1126	962	1065	1042
Barium	ppm	0	0	0	<1
Boron	ppm	<1	2	5	<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.

Depot: VP99031103

Unique No: 10564919

Signed: Don Baldrige

Report Date: 24 Jul 2023

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**VOLVO
PENTA**

GRAPHS

