

# OIL ANALYSIS REPORT

# VOLVO PENTA

## STEPHEN WANCZYK MATTHEW DOW VOLVO PENTA A911965 - STARBOARD DIESEL ENGINE

Sample No: VPA060427

Oil Type: VALVOLINE PREMIUM BLUE

### SAMPLE INFORMATION

Sample Number	<b>VPA060427</b>	VPA042842	VPA035402	VPA026853
Sample Date	<b>04 Oct 2023</b>	11 Oct 2022	11 Nov 2021	18 Oct 2020
Machine Hours	<b>229</b>	210	180	154
Oil Hours	<b>20</b>	0	26	44
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**Mobile Marine Services Inc**  
01032 Advance Rd South  
EAST JORDAN, MI  
US 49727  
Contact: Duane Kujat  
mobilemarine@twin-valley.net  
T: Phone  
F:

### OIL CONDITION

Visc @ 100°C	cSt	<b>14.2</b>	14.2	14.3	14.2
Base Number (BN)	mg KOH/g	<b>9.3</b>	11.0	10.2	---
Oxidation (PA)	%	<b>70</b>	71	67	69

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.1</b>	0.1	0.1	0.2
Nitration (PA)	%	<b>60</b>	63	58	62
Sulfation (PA)	%	<b>56</b>	58	55	57
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>3</b>	4	2	5
Sodium	ppm	<b>2</b>	3	5	4
Potassium	ppm	<b>0</b>	0	0	<1

### WEAR METALS

Iron	ppm	<b>3</b>	8	5	7
Copper	ppm	<b>&lt;1</b>	1	2	3
Lead	ppm	<b>0</b>	<1	<1	1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>1</b>	<1	0	0
Chromium	ppm	<b>0</b>	<1	<1	<1
Molybdenum	ppm	<b>42</b>	45	45	46
Nickel	ppm	<b>0</b>	0	0	<1
Titanium	ppm	<b>0</b>	0	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>1121</b>	1460	1527	1619
Magnesium	ppm	<b>767</b>	601	606	622
Zinc	ppm	<b>899</b>	1116	1052	1114
Phosphorus	ppm	<b>694</b>	963	972	1078
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>49</b>	81	69	75

### 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:** VP443016  
**Unique No:** 10742654  
**Signed:** Sean Felton  
**Report Date:** 16 Nov 2023

# OIL ANALYSIS REPORT

# VOLVO PENTA

## GRAPHS

