

# OIL ANALYSIS REPORT

# VOLVO PENTA

## STEPHEN WANCZYK MATTHEW DOW VOLVO PENTA A910904 - PORT DIESEL ENGINE

Sample No: VPA060436

Oil Type: VALVOLINE PREMIUM BLUE

### SAMPLE INFORMATION

Sample Number	<b>VPA060436</b>	VPA042837	VPA035399	VPA026892
Sample Date	<b>04 Oct 2023</b>	11 Oct 2022	11 Nov 2021	18 Oct 2020
Machine Hours	<b>229</b>	209	179	153
Oil Hours	<b>20</b>	0	26	51
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**Mobile Marine Services Inc**  
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EAST JORDAN, MI  
US 49727  
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T: Phone  
F:

### OIL CONDITION

Visc @ 100°C	cSt	<b>14.3</b>	14.2	14.1	14.3
Base Number (BN)	mg KOH/g	<b>9.1</b>	10.9	10.2	---
Oxidation (PA)	%	<b>69</b>	70	67	69

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.1</b>	0.1	0.1	0.2
Nitration (PA)	%	<b>58</b>	63	56	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>5</b>	4	2	4
Sodium	ppm	<b>2</b>	3	5	4
Potassium	ppm	<b>0</b>	0	<1	<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 acceptable for the time in service.

### WEAR METALS

Iron	ppm	<b>4</b>	8	4	7
Copper	ppm	<b>&lt;1</b>	2	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>43</b>	46	46	44
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	0	<1
Vanadium	ppm	<b>0</b>	0	0	0

### ADDITIVES

Calcium	ppm	<b>1140</b>	1468	1544	1525
Magnesium	ppm	<b>790</b>	606	614	596
Zinc	ppm	<b>923</b>	1132	1072	1036
Phosphorus	ppm	<b>709</b>	970	987	1025
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>53</b>	83	71	73

**Depot:** VP443016  
**Unique No:** 10742636  
**Signed:** Don Baldrige  
**Report Date:** 18 Nov 2023

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## GRAPHS

