

# OIL ANALYSIS REPORT



## MAX BACHARA VOLVO PENTA 7011399043 - STARBOARD DIESEL ENGINE

**Sample No:** VPA059814  
**Oil Type:** VALVOLINE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA059814</b>	VPA059816	VPA044505	---
Sample Date	<b>29 Oct 2023</b>	29 Oct 2023	07 Nov 2022	---
Machine Hours	<b>0</b>	0	0	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>Changed</b>	N/A	Changed	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.5</b>	13.4	13.3	---
Base Number (BN)	mg KOH/g	<b>8.9</b>	8.7	10.4	---
Oxidation (PA)	%	<b>65</b>	65	73	---

### 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.

### CONTAMINATION

Soot %	%	<b>0.2</b>	0.2	0.2	---
Nitration (PA)	%	<b>58</b>	59	68	---
Sulfation (PA)	%	<b>53</b>	53	59	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>4</b>	4	4	---
Sodium	ppm	<b>3</b>	2	2	---
Potassium	ppm	<b>0</b>	0	0	---

### WEAR METALS

Iron	ppm	<b>&lt;1</b>	<1	3	---
Copper	ppm	<b>11</b>	11	8	---
Lead	ppm	<b>0</b>	0	<1	---
Tin	ppm	<b>0</b>	0	<1	---
Aluminum	ppm	<b>&lt;1</b>	<1	<1	---
Chromium	ppm	<b>0</b>	0	<1	---
Molybdenum	ppm	<b>44</b>	44	45	---
Nickel	ppm	<b>0</b>	0	<1	---
Titanium	ppm	<b>0</b>	0	0	---
Silver	ppm	<b>0</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	<1	<1	---
Vanadium	ppm	<b>0</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>1015</b>	1027	1190	---
Magnesium	ppm	<b>733</b>	716	750	---
Zinc	ppm	<b>802</b>	807	881	---
Phosphorus	ppm	<b>740</b>	740	709	---
Barium	ppm	<b>4</b>	3	0	---
Boron	ppm	<b>43</b>	43	47	---

**Depot:** VP1174336  
**Unique No:** 10715303  
**Signed:** Don Baldrige  
**Report Date:** 31 Oct 2023

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**VOLVO  
PENTA**

## GRAPHS

