

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## DENNIS GROUL CUMMINS 73707080 - PORT DIESEL ENGINE

**Sample No:** VPA056014  
**Oil Type:** VALVOLINE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA056014</b>	VPA037682	VPA031276	---
Sample Date	<b>02 Oct 2023</b>	14 Jan 2022	26 May 2021	---
Machine Hours	<b>910</b>	855	757	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>N/A</b>	Changed	N/A	---
Sample Status	<b>ABNORMAL</b>	NORMAL	NORMAL	---

### OIL CONDITION

Visc @ 100°C	cSt	<b>14.09</b>	14.6	14.4	---
Base Number (BN)	mg KOH/g	---	10.8	---	---
Oxidation (PA)	%	<b>240</b>	78	68	---

### CONTAMINATION

Soot %	%	<b>0.1</b>	0.8	0.1	---
Nitration (PA)	%	<b>43</b>	89	58	---
Sulfation (PA)	%	<b>103</b>	64	55	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>4</b>	8	2	---
Sodium	ppm	<b>3</b>	2	4	---
Potassium	ppm	<b>4</b>	0	0	---

### WEAR METALS

Iron	ppm	<b>27</b>	23	4	---
Copper	ppm	<b>23</b>	69	5	---
Lead	ppm	<b>&lt;1</b>	<1	0	---
Tin	ppm	<b>&lt;1</b>	<1	<1	---
Aluminum	ppm	<b>▲ 44</b>	3	0	---
Chromium	ppm	<b>1</b>	<1	<1	---
Molybdenum	ppm	<b>10</b>	55	47	---
Nickel	ppm	<b>2</b>	2	<1	---
Titanium	ppm	<b>&lt;1</b>	4	3	---
Silver	ppm	<b>&lt;1</b>	<1	0	---
Manganese	ppm	<b>&lt;1</b>	<1	<1	---
Vanadium	ppm	<b>&lt;1</b>	0	<1	---

### ADDITIVES

Calcium	ppm	<b>2132</b>	1466	1457	---
Magnesium	ppm	<b>79</b>	671	649	---
Zinc	ppm	<b>1271</b>	1247	1131	---
Phosphorus	ppm	<b>1022</b>	983	988	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>166</b>	26	53	---

**COASTAL CAROLINA YACHT SALES**  
145 LOCKWOOD BLVD  
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### Diagnosis

No corrective action is recommended at this time. Resample at the next service interval to monitor. The aluminum level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The condition of the oil is acceptable for the time in service.

**Depot:** VP568144  
**Unique No:** 10675992  
**Signed:** Doug Bogart  
**Report Date:** 04 Oct 2023

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## GRAPHS

