

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## VOLVO PENTA 701 1449657 - STARBOARD DIESEL ENGINE

**Sample No:** VPA047199

**Oil Type:** DIESEL ENGINE OIL SAE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA047199</b>	VPA048375	VPA257719	---
Sample Date	<b>27 Sep 2023</b>	13 Jul 2022	09 Jun 2020	---
Machine Hours	<b>678</b>	448	116	---
Oil Hours	<b>0</b>	0	0	---
Oil Changed	<b>N/A</b>	N/A	Not Changd	---
Sample Status	<b>NORMAL</b>	ATTENTION	ATTENTION	---

### SUNCOAST DIESEL MARINE

6341 PORTER ROAD, SUITE 6  
SARASOTA, FL  
US 34240  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>14.0</b>	11.9	10.5	---
Base Number (BN)	mg KOH/g	<b>9.8</b>	10.8	---	---
Oxidation (PA)	%	<b>57</b>	128	61	---

### CONTAMINATION

Soot %	%	<b>0.2</b>	0.7	0.2	---
Nitration (PA)	%	<b>51</b>	164	48	---
Sulfation (PA)	%	<b>52</b>	99	53	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	2.9	---
Silicon	ppm	<b>4</b>	6	36	---
Sodium	ppm	<b>15</b>	<1	3	---
Potassium	ppm	<b>17</b>	0	8	---

### WEAR METALS

Iron	ppm	<b>8</b>	9	14	---
Copper	ppm	<b>4</b>	36	90	---
Lead	ppm	<b>&lt;1</b>	1	7	---
Tin	ppm	<b>&lt;1</b>	<1	0	---
Aluminum	ppm	<b>2</b>	1	3	---
Chromium	ppm	<b>&lt;1</b>	<1	3	---
Molybdenum	ppm	<b>61</b>	62	6	---
Nickel	ppm	<b>0</b>	0	1	---
Titanium	ppm	<b>0</b>	0	<1	---
Silver	ppm	<b>0</b>	<1	1	---
Manganese	ppm	<b>1</b>	<1	2	---
Vanadium	ppm	<b>0</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>1223</b>	1099	2551	---
Magnesium	ppm	<b>958</b>	864	10	---
Zinc	ppm	<b>1319</b>	1243	1142	---
Phosphorus	ppm	<b>1058</b>	1020	1048	---
Barium	ppm	<b>0</b>	4	2	---
Boron	ppm	<b>7</b>	0	36	---

### 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:** VP705283  
**Unique No:** 10670476  
**Signed:** Don Baldrige  
**Report Date:** 01 Oct 2023

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## GRAPHS

