

# OIL ANALYSIS REPORT



## ALASKA LUXURY TOURS VOLVO PENTA A1202078 - PORT DIESEL ENGINE

**Sample No:** VPA036731  
**Oil Type:** 15W40 CK-4

### SAMPLE INFORMATION

Sample Number	<b>VPA036731</b>	VPA050924	VPA060139	VPA060126
Sample Date	<b>30 Jun 2024</b>	28 May 2024	23 Sep 2023	25 Aug 2023
Machine Hours	<b>1449</b>	1201	956	788
Oil Hours	<b>248</b>	205	168	190
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

**Sundance Mfg Inc**  
 570 N.E. Tomahawk Isl. Dr.  
 Portland, OR  
 US 97217  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>14.2</b>	14.4	13.1	14.5
Base Number (BN)	mg KOH/g	<b>9.9</b>	9.9	10.0	10.2
Oxidation (PA)	%	<b>57</b>	55	55	55

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.5</b>	0.3	0.5	0.6
Nitration (PA)	%	<b>55</b>	48	51	53
Sulfation (PA)	%	<b>53</b>	51	52	52
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>3</b>	5	5	3
Sodium	ppm	<b>2</b>	2	4	0
Potassium	ppm	<b>&lt;1</b>	2	4	<1

### Diagnosis

No corrective action is recommended at this time. 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>26</b>	26	14	16
Copper	ppm	<b>6</b>	6	5	6
Lead	ppm	<b>1</b>	1	2	2
Tin	ppm	<b>0</b>	1	<1	1
Aluminum	ppm	<b>2</b>	3	1	<1
Chromium	ppm	<b>&lt;1</b>	1	<1	<1
Molybdenum	ppm	<b>63</b>	64	64	58
Nickel	ppm	<b>1</b>	2	0	2
Titanium	ppm	<b>0</b>	<1	0	0
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>1238</b>	1140	1131	977
Magnesium	ppm	<b>1063</b>	1039	1015	884
Zinc	ppm	<b>1407</b>	1280	1303	1124
Phosphorus	ppm	<b>1167</b>	1006	1058	954
Barium	ppm	<b>0</b>	0	0	<1
Boron	ppm	<b>1</b>	<1	5	0

**Depot:** VP154394  
**Unique No:** 11114468  
**Signed:** Sean Felton  
**Report Date:** 10 Jul 2024

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# VOLVO PENTA

## GRAPHS

