

# OIL ANALYSIS REPORT



## ALASKA LUXURY TOURS APEX-PORT VOLVO PENTA 2006040392 - PORT DIESEL ENGINE

**Sample No:** VPA060130  
**Oil Type:** KIRKLAND 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA060130</b>	VPA060121	VPA036548	VPA056362
Sample Date	<b>17 Oct 2023</b>	14 Sep 2023	07 Aug 2023	03 Jul 2023
Machine Hours	<b>2737</b>	2655	2440	2210
Oil Hours	<b>83</b>	215	230	67
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

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### OIL CONDITION

Visc @ 100°C	cSt	<b>14.7</b>	13.8	15.0	14.9
Base Number (BN)	mg KOH/g	<b>9.3</b>	9.2	9.1	10.2
Oxidation (PA)	%	<b>67</b>	81	75	66

### CONTAMINATION

Soot %	%	<b>0.2</b>	0.5	0.4	0.2
Nitration (PA)	%	<b>70</b>	93	83	69
Sulfation (PA)	%	<b>54</b>	61	59	56
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>3</b>	6	3	3
Sodium	ppm	<b>2</b>	4	3	10
Potassium	ppm	<b>4</b>	4	<1	3

### 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.

### WEAR METALS

Iron	ppm	<b>4</b>	12	8	6
Copper	ppm	<b>8</b>	10	9	4
Lead	ppm	<b>1</b>	<1	4	2
Tin	ppm	<b>0</b>	<1	<1	<1
Aluminum	ppm	<b>&lt;1</b>	2	0	2
Chromium	ppm	<b>0</b>	1	<1	<1
Molybdenum	ppm	<b>59</b>	63	64	59
Nickel	ppm	<b>1</b>	0	<1	<1
Titanium	ppm	<b>0</b>	0	<1	<1
Silver	ppm	<b>0</b>	0	0	0
Manganese	ppm	<b>0</b>	1	<1	<1
Vanadium	ppm	<b>0</b>	0	<1	<1

### ADDITIVES

Calcium	ppm	<b>1033</b>	1144	1163	1086
Magnesium	ppm	<b>1002</b>	1054	1049	965
Zinc	ppm	<b>1320</b>	1366	1341	1267
Phosphorus	ppm	<b>1066</b>	1076	1093	994
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>1</b>	3	<1	2

**Depot:** VP154394  
**Unique No:** 10709776  
**Signed:** Jonathan Hester  
**Report Date:** 25 Oct 2023

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# VOLVO PENTA

## GRAPHS

