

OIL ANALYSIS REPORT



ALASKA LUXURY TOURS CLIF/APEX PORT VOLVO PENTA 2006040392 - PORT DIESEL ENGINE

Sample No: VPA036548
Oil Type: KIRKLAND 15W40

SAMPLE INFORMATION

Sample Number	VPA036548	VPA056362	VPA056547	VPA035214
Sample Date	07 Aug 2023	03 Jul 2023	05 Jun 2023	05 Oct 2022
Machine Hours	2440	2210	2008	1821
Oil Hours	230	67	187	177
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

Sundance Mfg Inc
 570 N.E. Tomahawk Isl. Dr.
 Portland, OR
 US 97217
 Contact: DAVID TAYLOR
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 T:
 F:

OIL CONDITION

Visc @ 100°C	cSt	15.0	14.9	15.3	15.5
Base Number (BN)	mg KOH/g	9.1	10.2	9.4	10.3
Oxidation (PA)	%	75	66	85	82

CONTAMINATION

Soot %	%	0.4	0.2	0.3	0.5
Nitration (PA)	%	83	69	95	93
Sulfation (PA)	%	59	56	61	65
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	3	3	4
Sodium	ppm	3	10	1	<1
Potassium	ppm	<1	3	2	2

WEAR METALS

Iron	ppm	8	6	11	9
Copper	ppm	9	4	11	8
Lead	ppm	4	2	5	6
Tin	ppm	<1	<1	<1	1
Aluminum	ppm	0	2	<1	2
Chromium	ppm	<1	<1	<1	1
Molybdenum	ppm	64	59	64	61
Nickel	ppm	<1	<1	1	2
Titanium	ppm	<1	<1	0	0
Silver	ppm	0	0	0	0
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	<1	0	0

ADDITIVES

Calcium	ppm	1163	1086	1135	1189
Magnesium	ppm	1049	965	1056	1034
Zinc	ppm	1341	1267	1304	1315
Phosphorus	ppm	1093	994	1031	1091
Barium	ppm	0	0	0	0
Boron	ppm	<1	2	0	6

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. Confirm oil type. The condition of the oil is acceptable for the time in service.

Depot: VP154394
Unique No: 10609095
Signed: Sean Felton
Report Date: 22 Aug 2023

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VOLVO PENTA

GRAPHS

