

OIL ANALYSIS REPORT



ALASKA LUXURY TOURS APOX VOLVO PENTA 2006040393 - STARBOARD DIESEL ENGINE

Sample No: VPA036725
Oil Type: KIRKLAND 15W40 CK-4/SN

SAMPLE INFORMATION

Sample Number	VPA036725	VPA060141	VPA060120	VPA036543
Sample Date	02 Jun 2024	17 Oct 2023	14 Sep 2023	07 Aug 2023
Machine Hours	2904	2737	2654	2440
Oil Hours	167	83	214	230
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: CLARK HOLMES
 clark@sundanceyachts.com
 T:
 F:

OIL CONDITION

Visc @ 100°C	cSt	15.0	14.8	13.8	15.1
Base Number (BN)	mg KOH/g	9.5	9.3	9.3	9.0
Oxidation (PA)	%	81	68	80	77

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.2	0.2	0.4	0.4
Nitration (PA)	%	84	72	89	84
Sulfation (PA)	%	60	55	61	60
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	3	4	3
Sodium	ppm	2	2	6	2
Potassium	ppm	1	4	5	0

WEAR METALS

Iron	ppm	11	5	9	8
Copper	ppm	11	7	5	10
Lead	ppm	3	1	<1	4
Tin	ppm	<1	0	<1	<1
Aluminum	ppm	3	<1	1	0
Chromium	ppm	<1	0	<1	<1
Molybdenum	ppm	63	59	30	64
Nickel	ppm	2	<1	0	1
Titanium	ppm	<1	0	15	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	0	1	<1
Vanadium	ppm	0	0	<1	<1

ADDITIVES

Calcium	ppm	1121	1041	1572	1193
Magnesium	ppm	1032	1003	794	1063
Zinc	ppm	1301	1325	831	1383
Phosphorus	ppm	1022	1077	722	1121
Barium	ppm	0	0	0	0
Boron	ppm	<1	2	91	<1

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.

Depot: VP154394
Unique No: 11071180
Signed: Sean Felton
Report Date: 12 Jun 2024

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VOLVO PENTA

GRAPHS

