

OIL ANALYSIS REPORT



ALASKA LUXURY TOURS OPUS VOLVO PENTA A1202078 - PORT DIESEL ENGINE

Sample No: VPA050924
Oil Type: KIRKLAND 15W40

SAMPLE INFORMATION

Sample Number	VPA050924	VPA060139	VPA060126	VPA056359
Sample Date	28 May 2024	23 Sep 2023	25 Aug 2023	29 Jul 2023
Machine Hours	1201	956	788	598
Oil Hours	205	168	190	200
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
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 F:

OIL CONDITION

Visc @ 100°C	cSt	14.4	13.1	14.5	14.4
Base Number (BN)	mg KOH/g	9.9	10.0	10.2	9.8
Oxidation (PA)	%	55	55	55	54

CONTAMINATION

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

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.

WEAR METALS

Iron	ppm	26	14	16	21
Copper	ppm	6	5	6	8
Lead	ppm	1	2	2	2
Tin	ppm	1	<1	1	2
Aluminum	ppm	3	1	<1	0
Chromium	ppm	1	<1	<1	1
Molybdenum	ppm	64	64	58	63
Nickel	ppm	2	0	2	2
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	0	0
Manganese	ppm	<1	1	<1	<1
Vanadium	ppm	0	0	0	<1

ADDITIVES

Calcium	ppm	1140	1131	977	1167
Magnesium	ppm	1039	1015	884	1049
Zinc	ppm	1280	1303	1124	1317
Phosphorus	ppm	1006	1058	954	1094
Barium	ppm	0	0	<1	0
Boron	ppm	<1	5	0	0

Depot: VP154394
Unique No: 11071183
Signed: Sean Felton
Report Date: 12 Jun 2024

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VOLVO PENTA

GRAPHS

