

OIL ANALYSIS REPORT



ALASKA LUXURY TOURS OPUS VOLVO PENTA A1202077 - STARBOARD DIESEL ENGINE

Sample No: VPA056366
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA056366	VPA055295	---	---
Sample Date	02 Jul 2023	03 Jun 2023	---	---
Machine Hours	393	182	---	---
Oil Hours	211	182	---	---
Oil Changed	Changed	Changed	---	---
Sample Status	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	14.2	14.1	---	---
Base Number (BN)	mg KOH/g	10.4	10.2	---	---
Oxidation (PA)	%	58	58	---	---

CONTAMINATION

Soot %	%	0.4	0.2	---	---
Nitration (PA)	%	52	49	---	---
Sulfation (PA)	%	53	53	---	---
Glycol	%	NEG	NEG	---	---
Fuel	%	<1.0	<1.0	---	---
Silicon	ppm	6	16	---	---
Sodium	ppm	1	3	---	---
Potassium	ppm	3	4	---	---

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	18	17	---	---
Copper	ppm	9	12	---	---
Lead	ppm	3	3	---	---
Tin	ppm	2	3	---	---
Aluminum	ppm	4	4	---	---
Chromium	ppm	1	2	---	---
Molybdenum	ppm	58	58	---	---
Nickel	ppm	3	2	---	---
Titanium	ppm	<1	0	---	---
Silver	ppm	0	0	---	---
Manganese	ppm	<1	<1	---	---
Vanadium	ppm	<1	0	---	---

ADDITIVES

Calcium	ppm	1100	1253	---	---
Magnesium	ppm	945	939	---	---
Zinc	ppm	1241	1288	---	---
Phosphorus	ppm	984	1043	---	---
Barium	ppm	0	0	---	---
Boron	ppm	<1	9	---	---

Depot: VP154394
Unique No: 10550590
Signed: Don Baldrige
Report Date: 12 Jul 2023

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VOLVO PENTA

GRAPHS

