

OIL ANALYSIS REPORT



ALASKA LUXURY TOURS FARGO VOLVO PENTA 2006016955 - STARBOARD DIESEL ENGINE

Sample No: VPA056361
Oil Type: KIRKLAND 15W40

SAMPLE INFORMATION

Sample Number	VPA056361	VPA055124	VPA035047	VPA027297
Sample Date	04 Jul 2023	07 Jun 2023	12 Aug 2022	23 Jun 2022
Machine Hours	2510	2326	1936	1560
Oil Hours	184	207	201	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
 david@sundanceyachts.com
 T:
 F:

OIL CONDITION

Visc @ 100°C	cSt	14.8	14.9	15.2	14.4
Base Number (BN)	mg KOH/g	10.1	10.0	10.6	9.6
Oxidation (PA)	%	65	65	65	62

CONTAMINATION

Soot %	%	0.5	0.4	0.6	0.2
Nitration (PA)	%	70	68	75	59
Sulfation (PA)	%	57	56	58	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	3	4	4	18
Sodium	ppm	<1	1	2	4
Potassium	ppm	2	2	2	9

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	13	19	17	17
Copper	ppm	6	6	8	8
Lead	ppm	1	<1	2	3
Tin	ppm	<1	<1	1	2
Aluminum	ppm	3	3	3	9
Chromium	ppm	<1	2	1	2
Molybdenum	ppm	58	60	65	62
Nickel	ppm	2	1	1	2
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	0	0	2
Manganese	ppm	<1	<1	<1	<1
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1074	1155	1081	1144
Magnesium	ppm	952	1031	947	945
Zinc	ppm	1233	1300	1232	1295
Phosphorus	ppm	966	1038	1020	1044
Barium	ppm	0	0	0	0
Boron	ppm	0	0	4	8

Depot: VP154394
Unique No: 10550587
Signed: Don Baldrige
Report Date: 12 Jul 2023

OIL ANALYSIS REPORT

**VOLVO
PENTA**

GRAPHS

