

OIL ANALYSIS REPORT

VOLVO PENTA

SF BAR PILOTS BAR PILOTS VOLVO PENTA A314796 - PORT DIESEL ENGINE

Sample No: VPA051518

Oil Type: VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3

SAMPLE INFORMATION

Sample Number	VPA051518	VPA042323	VPA037631	VPA032396
Sample Date	01 Aug 2023	27 Sep 2022	04 Aug 2021	07 Jan 2021
Machine Hours	2769	2582	2390	2177
Oil Hours	2769	2582	213	202
Oil Changed	Not Changd	Not Changd	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

Helmut's Marine Service

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T: x:

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OIL CONDITION

Visc @ 100°C	cSt	█ 13.3	█ 13.0	█ 13.2	█ 13.2
Base Number (BN)	mg KOH/g	█ 7.9	█ 10.7	---	---
Oxidation (PA)	%	50	63	63	61

CONTAMINATION

Soot %	%	█ 0.1	█ 0.2	█ 0.2	█ 0.2
Nitration (PA)	%	63	62	59	54
Sulfation (PA)	%	48	58	58	56
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	█ 4	█ 6	█ 14	█ 4
Sodium	ppm	█ 0	█ 2	█ 2	█ 3
Potassium	ppm	█ 29	█ 7	█ 0	█ 0

WEAR METALS

Iron	ppm	█ 8	█ 8	█ 19	█ 7
Copper	ppm	█ 6	█ 4	█ 4	█ 3
Lead	ppm	█ <1	█ 3	█ 1	█ <1
Tin	ppm	█ <1	█ 1	█ <1	█ <1
Aluminum	ppm	█ 2	█ <1	█ 0	█ 1
Chromium	ppm	█ <1	█ <1	█ 1	█ 2
Molybdenum	ppm	█ 13	█ 57	█ 64	█ 59
Nickel	ppm	█ 2	█ 2	█ 3	█ 4
Titanium	ppm	█ 0	█ <1	█ <1	█ <1
Silver	ppm	█ <1	█ <1	█ 0	█ <1
Manganese	ppm	█ <1	█ 1	<1	█ <1
Vanadium	ppm	0	2	0	0

ADDITIVES

Calcium	ppm	█ 1304	█ 1039	█ 1113	█ 1136
Magnesium	ppm	740	█ 967	█ 1048	█ 931
Zinc	ppm	█ 890	█ 1190	█ 1361	█ 1314
Phosphorus	ppm	█ 765	█ 1006	█ 1097	█ 1071
Barium	ppm	█ 0	█ 0	█ 0	█ 0
Boron	ppm	█ 65	█ 0	█ 7	█ 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.

Depot: VP152741

Unique No: 10589077

Signed: Don Baldrige

Report Date: 08 Aug 2023

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GRAPHS

