

OIL ANALYSIS REPORT



MARK & SUE RINGHAM MSR VOLVO PENTA 7008496978 - STARBOARD DIESEL ENGINE

Sample No: VPA059421
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA059421	VPA059972	VPA055379	VPA041135
Sample Date	19 Jun 2024	24 Apr 2024	21 Oct 2023	20 May 2023
Machine Hours	1048	849	654	451
Oil Hours	199	195	203	201
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

ALL SYSTEMS MARINE

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OIL CONDITION

Visc @ 100°C	cSt	13.1	13.1	13.1	13.0
Base Number (BN)	mg KOH/g	10.0	9.6	9.9	10.2
Oxidation (PA)	%	59	57	57	60

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.4	0.1	0.1	0.1
Nitration (PA)	%	53	46	46	50
Sulfation (PA)	%	54	53	52	55
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	11	10	65	10
Sodium	ppm	2	<1	<1	2
Potassium	ppm	3	0	2	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.

WEAR METALS

Iron	ppm	9	3	<1	3
Copper	ppm	46	8	2	5
Lead	ppm	2	0	<1	0
Tin	ppm	<1	0	0	0
Aluminum	ppm	2	<1	1	<1
Chromium	ppm	<1	0	0	0
Molybdenum	ppm	59	64	56	62
Nickel	ppm	<1	0	<1	0
Titanium	ppm	<1	0	0	0
Silver	ppm	<1	0	<1	0
Manganese	ppm	<1	2	<1	0
Vanadium	ppm	<1	0	0	0

ADDITIVES

Calcium	ppm	1272	1119	963	1155
Magnesium	ppm	974	977	895	977
Zinc	ppm	1353	1261	1207	1314
Phosphorus	ppm	1106	1094	1015	1060
Barium	ppm	0	<1	0	0
Boron	ppm	9	6	4	<1

Depot: VP99220003
Unique No: 11097248
Signed: Don Baldrige
Report Date: 26 Jun 2024

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VOLVO PENTA

GRAPHS

