

OIL ANALYSIS REPORT



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

Sample No: VPA055379
Oil Type: VOLVO VDS-4.5 Premium Motor Oil 15W40

SAMPLE INFORMATION

Sample Number	VPA055379	VPA041135	VPA042469	VPA042466
Sample Date	21 Oct 2023	20 May 2023	03 Nov 2022	16 Aug 2022
Machine Hours	654	451	250	210
Oil Hours	203	201	199	160
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	13.0	13.1	13.1
Base Number (BN)	mg KOH/g	9.9	10.2	10.7	10.9
Oxidation (PA)	%	57	60	63	63

CONTAMINATION

Soot %	%	0.1	0.1	0.1	0.1
Nitration (PA)	%	46	50	53	51
Sulfation (PA)	%	52	55	58	58
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	65	10	14	13
Sodium	ppm	<1	2	<1	0
Potassium	ppm	2	1	0	<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 acceptable for the time in service.

WEAR METALS

Iron	ppm	<1	3	4	4
Copper	ppm	2	5	5	3
Lead	ppm	<1	0	0	<1
Tin	ppm	0	0	<1	0
Aluminum	ppm	1	<1	1	<1
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	56	62	60	56
Nickel	ppm	<1	0	0	0
Titanium	ppm	0	0	0	0
Silver	ppm	<1	0	<1	<1
Manganese	ppm	<1	0	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	963	1155	1088	1017
Magnesium	ppm	895	977	940	894
Zinc	ppm	1207	1314	1236	1147
Phosphorus	ppm	1015	1060	1047	972
Barium	ppm	0	0	0	0
Boron	ppm	4	<1	0	2

Depot: VP99220003
Unique No: 10724518
Signed: Sean Felton
Report Date: 03 Nov 2023

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GRAPHS

