

OIL ANALYSIS REPORT

VOLVO PENTA

CAMPBELL-ARROW ARROW VOLVO PENTA A527751 - STARBOARD DIESEL ENGINE

Sample No: VPA046096

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA046096	VPA042237	VPA033476	VPA030106
Sample Date	04 Oct 2023	04 Oct 2022	22 Oct 2021	08 Oct 2020
Machine Hours	527	494	452	393
Oil Hours	33	42	59	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

McMichael Yacht Yard No1 Inc

700 Rushmore Ave

MAMARONECK, NY

US 10543

Contact: Patti Hornidge

rushmore@mcmyacht.com

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OIL CONDITION

Visc @ 100°C	cSt	14.3	14.8	14.6	14.8
Base Number (BN)	mg KOH/g	8.8	9.3	---	---
Oxidation (PA)	%	66	71	71	76

CONTAMINATION

Soot %	%	0.1	0.2	0.2	0.2
Nitration (PA)	%	50	59	61	68
Sulfation (PA)	%	56	61	59	62
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	2	2	4
Sodium	ppm	5	2	3	5
Potassium	ppm	8	9	8	8

WEAR METALS

Iron	ppm	10	12	11	20
Copper	ppm	1	2	3	4
Lead	ppm	0	<1	2	2
Tin	ppm	<1	<1	<1	<1
Aluminum	ppm	4	5	11	12
Chromium	ppm	<1	<1	1	1
Molybdenum	ppm	0	<1	<1	1
Nickel	ppm	<1	<1	1	<1
Titanium	ppm	<1	0	<1	0
Silver	ppm	0	<1	<1	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	<1	<1	<1	0

ADDITIVES

Calcium	ppm	1965	2176	2151	2222
Magnesium	ppm	12	10	16	12
Zinc	ppm	1096	1129	1209	1197
Phosphorus	ppm	923	935	934	986
Barium	ppm	0	0	0	0
Boron	ppm	212	176	181	183

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.

Depot: VP153367

Unique No: 10712783

Signed: Sean Felton

Report Date: 27 Oct 2023

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GRAPHS

