

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## DYMENT-SUMMER SALT DYMENT VOLVO PENTA A217805 - PORT DIESEL ENGINE

Sample No: VPA058721

Oil Type: SHELL ROTELLA T 15W40

### SAMPLE INFORMATION

Sample Number	VPA058721	VPA044138	VPA040848	VPA029546
Sample Date	28 Nov 2023	29 Nov 2022	30 Nov 2021	03 Dec 2019
Machine Hours	860	839	800	638
Oil Hours	21	39	52	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	14.5	14.6	14.7	13.7
Base Number (BN)	mg KOH/g	8.5	10.0	7.9	---
Oxidation (PA)	%	64	68	68	55

### CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0.1	0.3	0.3	0.6
Nitration (PA)	%	46	58	54	52
Sulfation (PA)	%	55	60	58	53
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	2	3	9
Sodium	ppm	0	2	4	2
Potassium	ppm	9	8	7	3

### WEAR METALS

Iron	ppm	16	14	18	79
Copper	ppm	1	2	3	5
Lead	ppm	0	2	<1	2
Tin	ppm	0	<1	<1	0
Aluminum	ppm	2	1	0	2
Chromium	ppm	<1	<1	<1	2
Molybdenum	ppm	0	<1	3	59
Nickel	ppm	0	<1	<1	1
Titanium	ppm	<1	0	0	<1
Silver	ppm	0	<1	0	0
Manganese	ppm	0	<1	<1	<1
Vanadium	ppm	0	<1	0	<1

### ADDITIVES

Calcium	ppm	2083	2172	2369	1088
Magnesium	ppm	12	18	51	1041
Zinc	ppm	1072	1232	1121	1172
Phosphorus	ppm	950	969	1015	1018
Barium	ppm	6	0	0	0
Boron	ppm	214	193	183	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.

Depot: VP153367  
Unique No: 10778207  
Signed: Don Baldrige  
Report Date: 10 Dec 2023

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## GRAPHS

