

OIL ANALYSIS REPORT

**VOLVO
PENTA**

ROBERT ARNING ONAN1179236015 - GENSET

Sample No: VPA043889

Oil Type: SHELL ROTELLA T 15W40

SAMPLE INFORMATION

Sample Number	VPA043889	VPA044000	VPA043641	VPA033933
Sample Date	17 Nov 2023	09 Nov 2022	06 Nov 2021	30 Oct 2020
Machine Hours	807	749	666	604
Oil Hours	807	749	666	0
Oil Changed	Changed	Changed	Changed	Changed
Sample Status	NORMAL	NORMAL	NORMAL	NORMAL

Larry's Lighthouse Marina

1250

AQUEBOGUE, NY

US 11931

Contact: MAX FUHLBRUGGE

info@lighthousemarina.com

T: x:

F: x:

OIL CONDITION

Visc @ 100°C	cSt	13.7	13.9	13.8	13.6
Base Number (BN)	mg KOH/g	8.4	9.5	---	---
Oxidation (PA)	%	65	71	69	61

CONTAMINATION

Water	%	NEG	NEG	NEG	NEG
Soot %	%	0	0.1	0.1	0.1
Nitration (PA)	%	46	53	50	58
Sulfation (PA)	%	55	60	57	54
Glycol	%	NEG	NEG	NEG	NEG
Fuel	%	<1.0	<1.0	<1.0	<1.0
Silicon	ppm	4	5	4	8
Sodium	ppm	2	<1	2	4
Potassium	ppm	5	9	6	<1

WEAR METALS

Iron	ppm	<1	3	3	6
Copper	ppm	0	<1	<1	2
Lead	ppm	0	0	<1	0
Tin	ppm	0	<1	<1	<1
Aluminum	ppm	<1	1	0	0
Chromium	ppm	0	0	<1	<1
Molybdenum	ppm	<1	3	12	51
Nickel	ppm	0	0	0	0
Titanium	ppm	0	0	<1	<1
Silver	ppm	0	0	<1	0
Manganese	ppm	0	0	<1	<1
Vanadium	ppm	0	0	0	0

ADDITIVES

Calcium	ppm	2178	2239	2053	1339
Magnesium	ppm	26	36	149	676
Zinc	ppm	1309	1173	1083	1158
Phosphorus	ppm	1047	1002	976	990
Barium	ppm	0	0	0	<1
Boron	ppm	202	195	164	52

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: VP610438

Unique No: 10767937

Signed: Don Baldrige

Report Date: 05 Dec 2023

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GRAPHS

