

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## PETER GENATT CUMMINS/ONAN F150844396 - GENSET

Sample No: VPA036155

Oil Type: SHELL ROTELLA T 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA036155</b>	VPA043988	VPA033099	VPA032422
Sample Date	<b>18 Nov 2023</b>	08 Oct 2022	29 Sep 2021	17 Oct 2020
Machine Hours	<b>1160</b>	1028	935	767
Oil Hours	<b>1160</b>	1028	935	767
Oil Changed	<b>Changed</b>	Changed	Changed	Changed
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

Larry's Lighthouse Marina

1250

AQUEBOGUE, NY

US 11931

Contact: MAX FUHLBRUGGE

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T: x:

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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.6</b>	13.5	13.5	13.1
Base Number (BN)	mg KOH/g	<b>8.3</b>	8.7	---	---
Oxidation (PA)	%	<b>67</b>	73	73	68

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.1</b>	0.2	0.2	0.2
Nitration (PA)	%	<b>49</b>	58	58	56
Sulfation (PA)	%	<b>56</b>	61	60	58
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>4</b>	4	5	7
Sodium	ppm	<b>&lt;1</b>	2	1	2
Potassium	ppm	<b>6</b>	8	7	5

### 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	<b>1</b>	4	7	8
Copper	ppm	<b>&lt;1</b>	<1	<1	<1
Lead	ppm	<b>0</b>	0	<1	<1
Tin	ppm	<b>&lt;1</b>	<1	<1	<1
Aluminum	ppm	<b>&lt;1</b>	2	1	1
Chromium	ppm	<b>0</b>	<1	<1	<1
Molybdenum	ppm	<b>0</b>	1	6	27
Nickel	ppm	<b>0</b>	0	0	0
Titanium	ppm	<b>0</b>	0	<1	<1
Silver	ppm	<b>0</b>	0	<1	0
Manganese	ppm	<b>&lt;1</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	<1	0

### ADDITIVES

Calcium	ppm	<b>2050</b>	2152	2268	2245
Magnesium	ppm	<b>15</b>	16	50	194
Zinc	ppm	<b>1165</b>	1128	1177	1174
Phosphorus	ppm	<b>917</b>	933	961	1006
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>188</b>	177	192	142

Depot: VP610438

Unique No: 10792812

Signed: Don Baldrige

Report Date: 20 Dec 2023

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## GRAPHS

