

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## SHANNANDOAH 822 - PORT DIESEL ENGINE

**Sample No:** VPA058429  
**Oil Type:** SHELL ROTELLA T 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA058429</b>	VPA044226	VPA043548	VPA028786
Sample Date	<b>27 Nov 2023</b>	14 Dec 2022	10 Dec 2021	19 Jan 2021
Machine Hours	<b>728</b>	659	0	529
Oil Hours	<b>68</b>	48	81	89
Oil Changed	<b>Changed</b>	Changed	Not Changd	N/A
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	NORMAL

### The Talaria Company

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### OIL CONDITION

Visc @ 100°C	cSt	<b>14.5</b>	14.8	14.7	14.8
Base Number (BN)	mg KOH/g	<b>8.8</b>	8.2	7.9	---
Oxidation (PA)	%	<b>67</b>	67	70	71

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	NEG
Soot %	%	<b>0.6</b>	0.6	0.4	0.4
Nitration (PA)	%	<b>64</b>	62	62	60
Sulfation (PA)	%	<b>57</b>	58	59	60
Glycol	%	<b>NEG</b>	NEG	NEG	NEG
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	<1.0
Silicon	ppm	<b>8</b>	7	6	7
Sodium	ppm	<b>3</b>	4	2	4
Potassium	ppm	<b>&lt;1</b>	7	7	10

### WEAR METALS

Iron	ppm	<b>55</b>	51	45	44
Copper	ppm	<b>16</b>	19	17	16
Lead	ppm	<b>0</b>	<1	2	0
Tin	ppm	<b>0</b>	<1	<1	0
Aluminum	ppm	<b>4</b>	5	8	12
Chromium	ppm	<b>3</b>	3	3	3
Molybdenum	ppm	<b>39</b>	<1	2	1
Nickel	ppm	<b>0</b>	0	<1	1
Titanium	ppm	<b>0</b>	0	<1	<1
Silver	ppm	<b>0</b>	0	<1	0
Manganese	ppm	<b>0</b>	<1	<1	<1
Vanadium	ppm	<b>0</b>	0	<1	0

### ADDITIVES

Calcium	ppm	<b>1794</b>	2329	2299	2329
Magnesium	ppm	<b>445</b>	12	17	12
Zinc	ppm	<b>1356</b>	1140	1203	1120
Phosphorus	ppm	<b>1060</b>	957	1003	1037
Barium	ppm	<b>0</b>	0	0	0
Boron	ppm	<b>52</b>	171	197	159

### Diagnosis

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. Metal levels are typical for a new component breaking in. 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 suitable for further service.

**Depot:** VP592286  
**Unique No:** 10767889  
**Signed:** Sean Felton  
**Report Date:** 05 Dec 2023

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## GRAPHS

