

# OIL ANALYSIS REPORT

**VOLVO  
PENTA**

## PAUL PITTMAN VOLVO MD2040-C PAUL PITTMAN - DIESEL ENGINE

**Sample No:** VPA045809  
**Oil Type:** VOLVO PENTA SAE 15W40

### SAMPLE INFORMATION

Sample Number	<b>VPA045809</b>	VPA047767	VPA027611	---
Sample Date	<b>23 May 2024</b>	23 Mar 2023	14 Jul 2020	---
Machine Hours	<b>0</b>	2500	1576	---
Oil Hours	<b>50</b>	120	150	---
Oil Changed	<b>Changed</b>	Changed	Changed	---
Sample Status	<b>NORMAL</b>	NORMAL	NORMAL	---

**Northwest Diesel Power**  
1325 ROEDER AVE SUITE 103  
BELLINGHAM, WA  
US 98225  
Contact: BRANDON ROBERTSON  
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T:  
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### OIL CONDITION

Visc @ 100°C	cSt	<b>13.8</b>	13.5	13.7	---
Base Number (BN)	mg KOH/g	<b>10.7</b>	9.7	---	---
Oxidation (PA)	%	<b>51</b>	57	56	---

### CONTAMINATION

Water	%	<b>NEG</b>	NEG	NEG	---
Soot %	%	<b>0.1</b>	0.2	0.2	---
Nitration (PA)	%	<b>48</b>	48	61	---
Sulfation (PA)	%	<b>49</b>	52	53	---
Glycol	%	<b>NEG</b>	NEG	NEG	---
Fuel	%	<b>&lt;1.0</b>	<1.0	<1.0	---
Silicon	ppm	<b>6</b>	3	4	---
Sodium	ppm	<b>3</b>	0	2	---
Potassium	ppm	<b>2</b>	<1	4	---

### Diagnosis

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Light concentration of visible metal present. 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 suitable for further service.

### WEAR METALS

Iron	ppm	<b>4</b>	0	11	---
Copper	ppm	<b>2</b>	1	2	---
Lead	ppm	<b>&lt;1</b>	<1	<1	---
Tin	ppm	<b>1</b>	<1	0	---
Aluminum	ppm	<b>2</b>	0	2	---
Chromium	ppm	<b>&lt;1</b>	<1	<1	---
Molybdenum	ppm	<b>49</b>	59	30	---
Nickel	ppm	<b>&lt;1</b>	0	<1	---
Titanium	ppm	<b>&lt;1</b>	0	<1	---
Silver	ppm	<b>&lt;1</b>	0	0	---
Manganese	ppm	<b>&lt;1</b>	0	<1	---
Vanadium	ppm	<b>&lt;1</b>	0	0	---

### ADDITIVES

Calcium	ppm	<b>1234</b>	1103	1230	---
Magnesium	ppm	<b>942</b>	899	790	---
Zinc	ppm	<b>1181</b>	1168	931	---
Phosphorus	ppm	<b>1021</b>	995	813	---
Barium	ppm	<b>0</b>	0	0	---
Boron	ppm	<b>33</b>	10	82	---

**Depot:** VP759009  
**Unique No:** 11046631  
**Signed:** Sean Felton  
**Report Date:** 29 May 2024

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## GRAPHS

