



# VOLVO PENTA

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area  
**LISA MCCONNACHIE [PATRICK/503056-5250]**

Machine Id  
**VOLVO PENTA A493576**

Component  
**Diesel Engine**

Fluid  
**VOLVO VDS-4.5 Premium Motor Oil 15W40 (4 GAL)**

### RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VPA061849</b>	VPA048681	---
Sample Date		Client Info		<b>21 May 2024</b>	15 May 2023	---
Machine Age	hrs	Client Info		<b>483</b>	414	---
Oil Age	hrs	Client Info		<b>0</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	N/A	---
Filter Changed		Client Info		<b>Changed</b>	N/A	---
Sample Status				<b>NORMAL</b>	NORMAL	---

### WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>80	<b>9</b>	8	---
Chromium	ppm	ASTM D5185m	>6	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>2	<b>1</b>	1	---
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	---
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	---
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	<1	---
Lead	ppm	ASTM D5185m	>95	<b>&lt;1</b>	<1	---
Copper	ppm	ASTM D5185m	>85	<b>3</b>	3	---
Tin	ppm	ASTM D5185m	>9	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

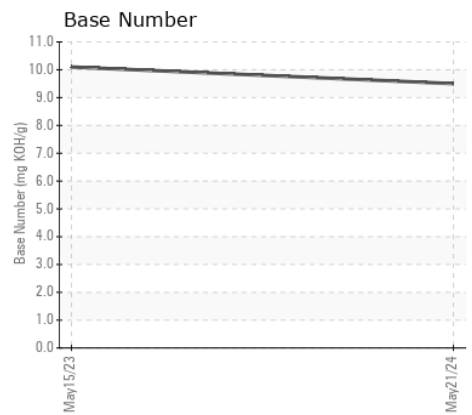
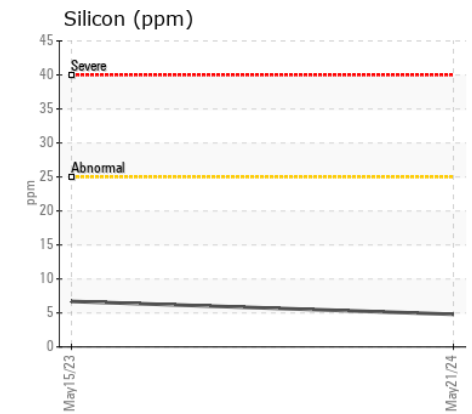
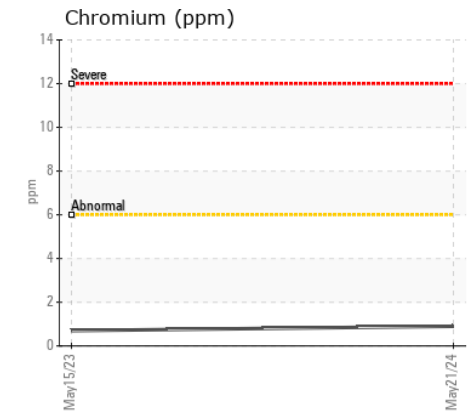
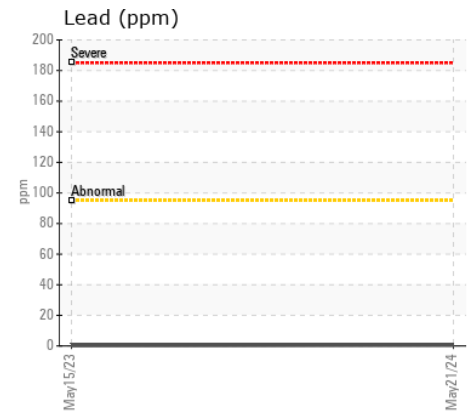
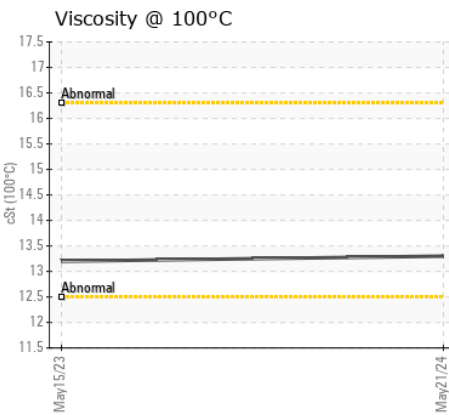
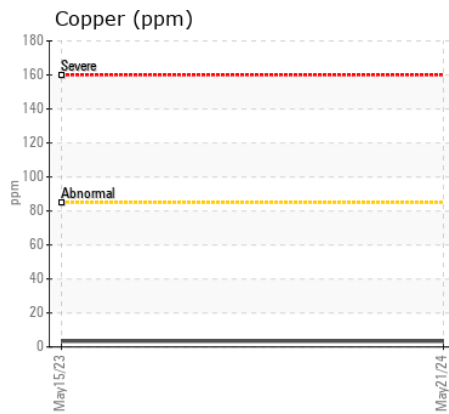
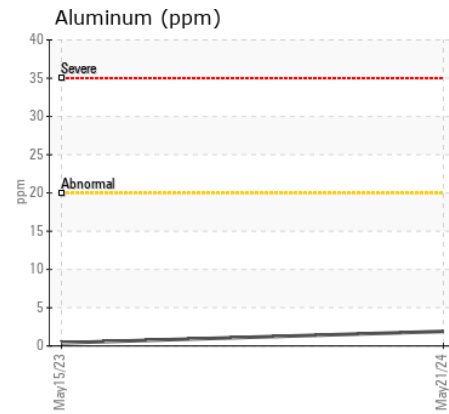
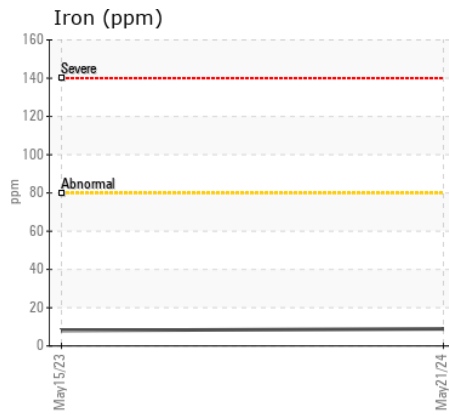
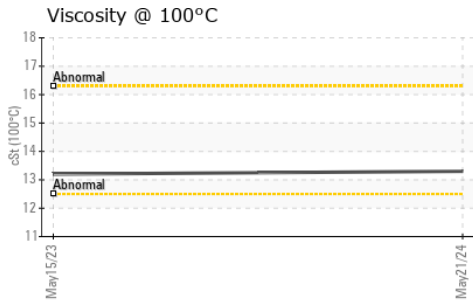
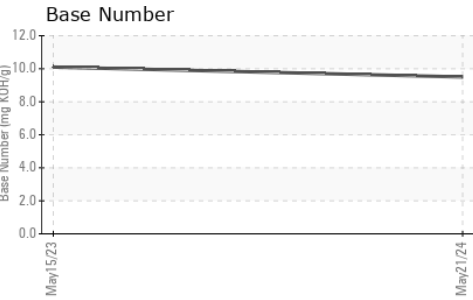
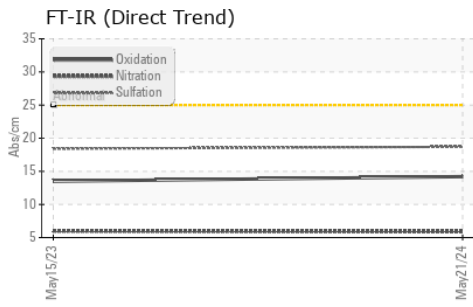
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>5</b>	7	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	---
Fuel		WC Method	>4.0	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.1	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844		<b>0.1</b>	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.9</b>	6.0	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.7</b>	18.4	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	---

### FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	2	---
Boron	ppm	ASTM D5185m		<b>3</b>	3	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>58</b>	62	---
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	---
Magnesium	ppm	ASTM D5185m		<b>944</b>	1033	---
Calcium	ppm	ASTM D5185m		<b>1031</b>	1080	---
Phosphorus	ppm	ASTM D5185m		<b>979</b>	1102	---
Zinc	ppm	ASTM D5185m		<b>1186</b>	1328	---
Sulfur	ppm	ASTM D5185m		<b>3396</b>	4170	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>14.2</b>	13.5	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.5</b>	10.1	---
Visc @ 100°C	cSt	ASTM D445		<b>13.3</b>	13.2	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA061849 **Received** : 23 May 2024  
**Lab Number** : 06188743 **Tested** : 24 May 2024  
**Unique Number** : 11045495 **Diagnosed** : 28 May 2024 - Sean Felton  
**Test Package** : MOB 1 ( Additional Tests: TBN )

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To discuss this sample report, contact Customer Service at 1-800-237-1369.

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation.

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)