



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area  
**BRIAN SCHWALBACH [PATRICK 501765-5250]**

Machine Id  
**VOLVO PENTA A583170**

Component  
**Starboard Diesel Engine**

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

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA055428	---	---
Sample Date		Client Info		05 Jun 2023	---	---
Machine Age	hrs	Client Info		238	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				NORMAL	---	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	19	---	---
Chromium	ppm	ASTM D5185m	>6	<1	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m	>2	0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>20	4	---	---
Lead	ppm	ASTM D5185m	>95	<1	---	---
Copper	ppm	ASTM D5185m	>85	8	---	---
Tin	ppm	ASTM D5185m	>9	1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

**CONTAMINATION**

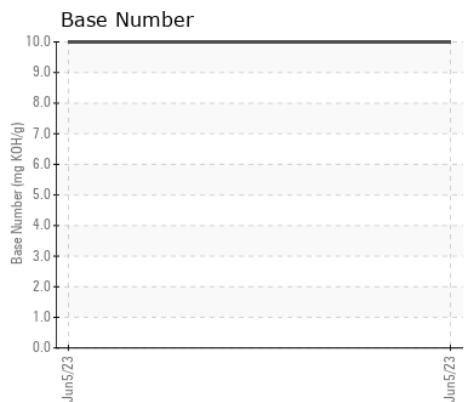
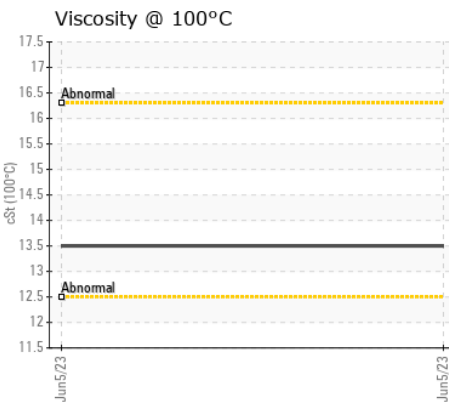
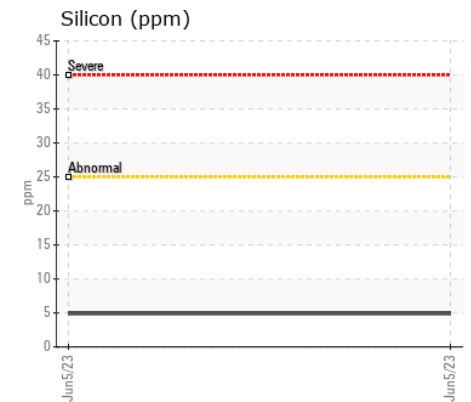
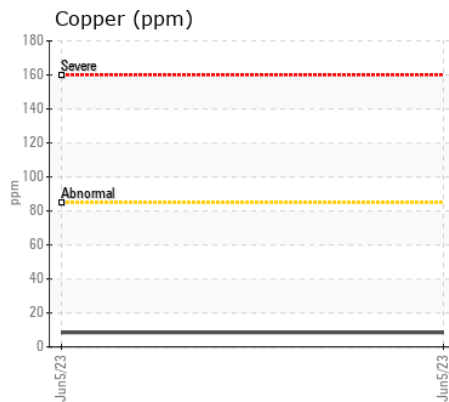
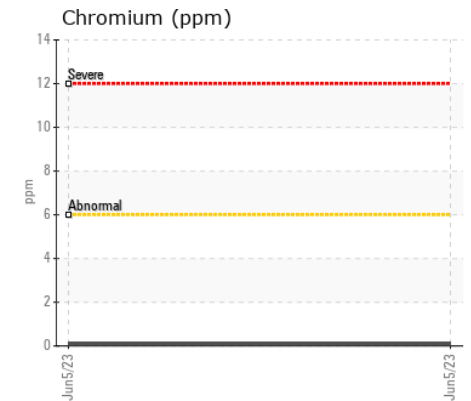
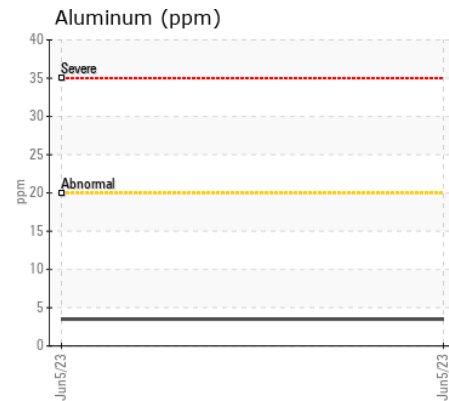
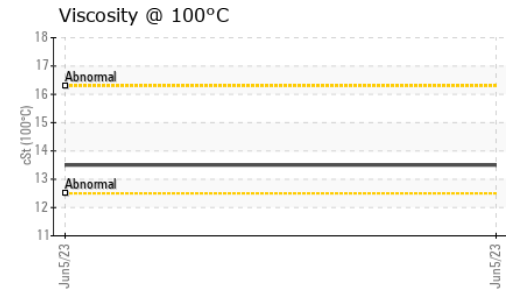
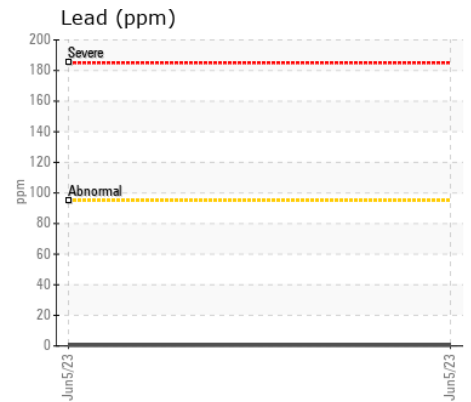
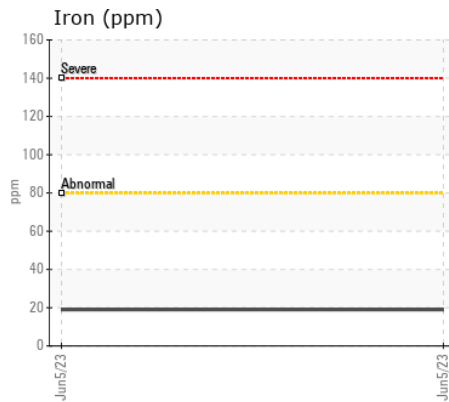
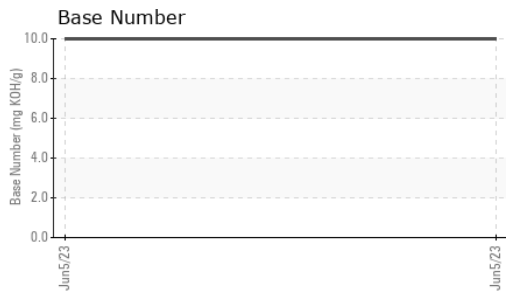
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	---	---
Potassium	ppm	ASTM D5185m	>20	0	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.2	---	---
Nitration	Abs/cm	*ASTM D7624	>20	5.7	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.1	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	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		2	---	---
Boron	ppm	ASTM D5185m		14	---	---
Barium	ppm	ASTM D5185m		0	---	---
Molybdenum	ppm	ASTM D5185m		50	---	---
Manganese	ppm	ASTM D5185m		<1	---	---
Magnesium	ppm	ASTM D5185m		934	---	---
Calcium	ppm	ASTM D5185m		1215	---	---
Phosphorus	ppm	ASTM D5185m		1007	---	---
Zinc	ppm	ASTM D5185m		1206	---	---
Sulfur	ppm	ASTM D5185m		3701	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.6	---	---
Base Number (BN)	mg KOH/g	ASTM D2896		10.0	---	---
Visc @ 100°C	cSt	ASTM D445		13.5	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA055428 **Received** : 12 Jun 2023  
**Lab Number** : 05870700 **Diagnosed** : 14 Jun 2023  
**Unique Number** : 10510484 **Diagnostician** : Don Baldrige  
**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)