



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area  
**TOM MAXWELL [7714429]**

Machine Id  
**VOLVO PENTA A1113731**

Component  
**Center Diesel Engine**

Fluid  
**VOLVO VDS-4.5 Premium Motor Oil 15W40 (3 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>VPA045032</b>	VPA025563	---
Sample Date		Client Info		<b>11 Aug 2022</b>	23 Feb 2022	---
Machine Age	hrs	Client Info		<b>239</b>	186	---
Oil Age	hrs	Client Info		<b>55</b>	186	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Not Chngd</b>	Changed	---
Filter Changed		Client Info		<b>Not Chngd</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

**WEAR**

All component wear rates are normal. The wear metal levels do not reflect the reported problems.

Iron	ppm	ASTM D5185m	>80	<b>18</b>	38	---
Chromium	ppm	ASTM D5185m	>6	<b>2</b>	4	---
Nickel	ppm	ASTM D5185m	>2	<b>3</b>	5	---
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	7	---
Aluminum	ppm	ASTM D5185m	>20	<b>8</b>	25	---
Lead	ppm	ASTM D5185m	>95	<b>3</b>	9	---
Copper	ppm	ASTM D5185m	>85	<b>8</b>	18	---
Tin	ppm	ASTM D5185m	>9	<b>&lt;1</b>	4	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

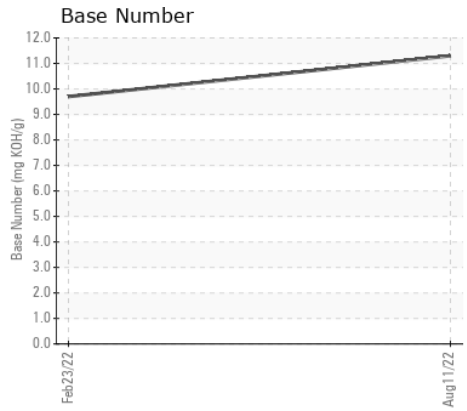
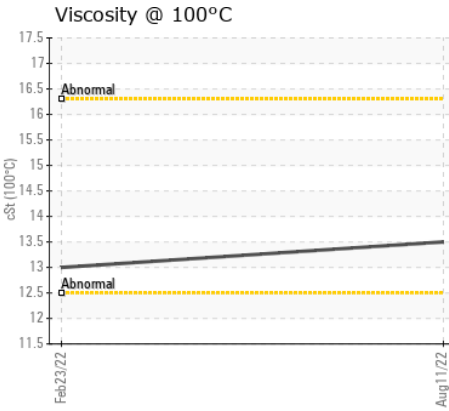
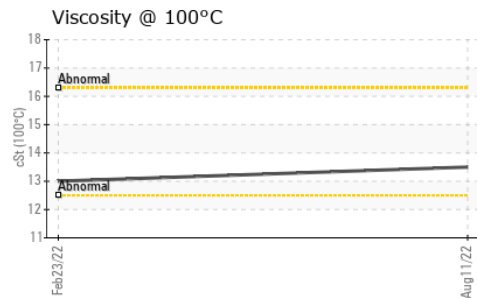
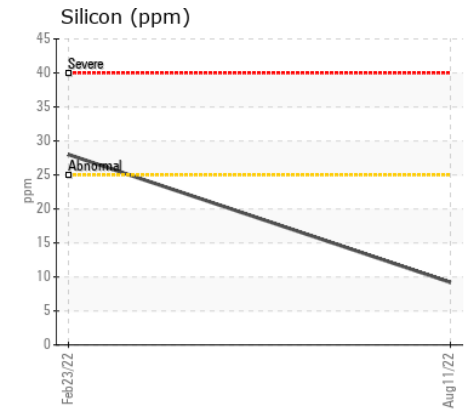
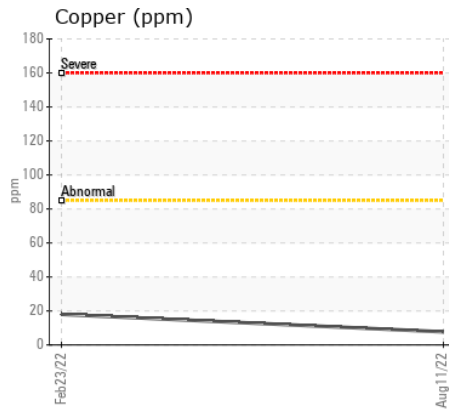
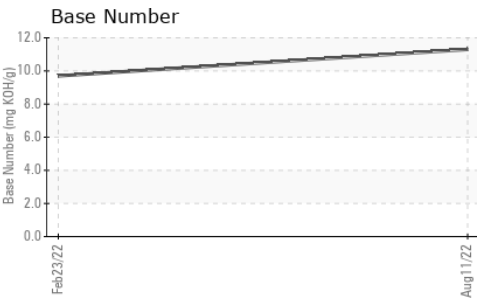
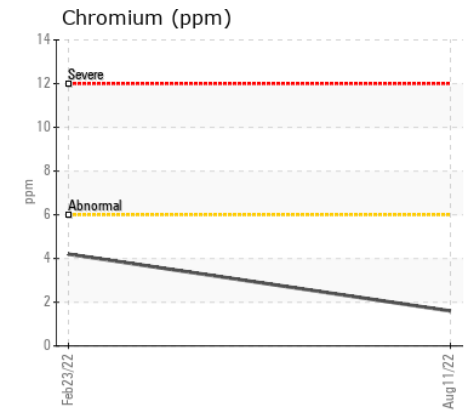
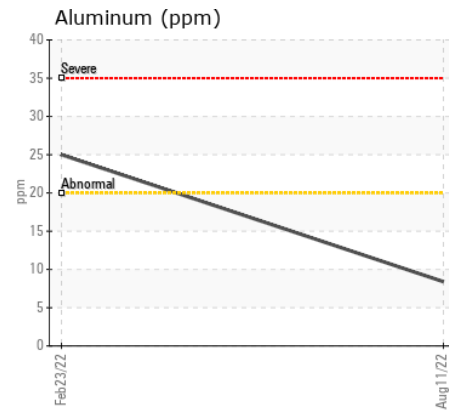
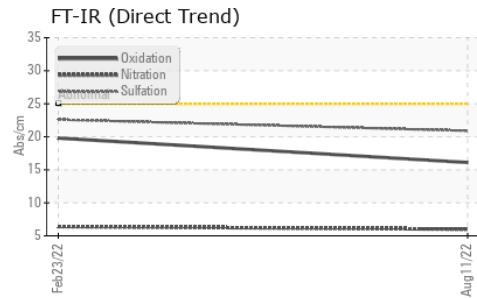
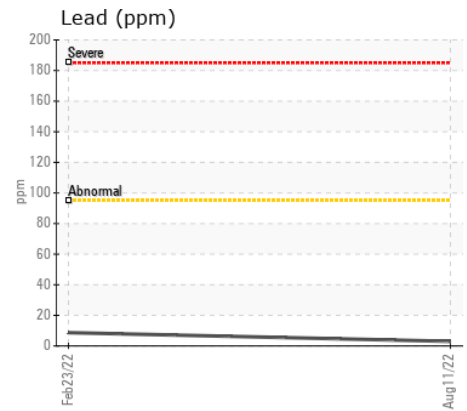
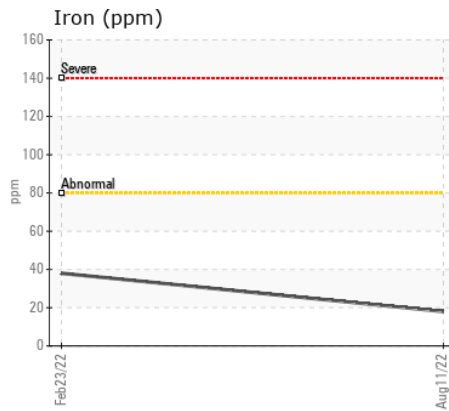
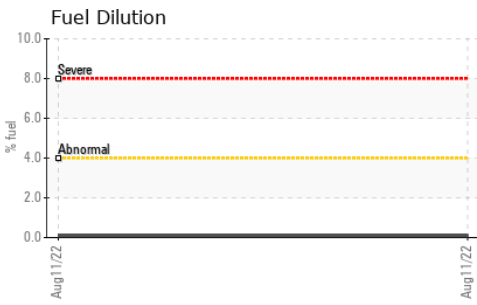
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>9</b>	28	---
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	4	---
Fuel	%	ASTM D3524	>4.0	<b>0.1</b>	<1.0	---
Water		WC Method	>0.1	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844		<b>0.3</b>	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.0</b>	6.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.9</b>	22.6	---
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>2</b>	5	---
Boron	ppm	ASTM D5185m		<b>12</b>	56	---
Barium	ppm	ASTM D5185m		<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m		<b>58</b>	41	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	2	---
Magnesium	ppm	ASTM D5185m		<b>827</b>	547	---
Calcium	ppm	ASTM D5185m		<b>1167</b>	1759	---
Phosphorus	ppm	ASTM D5185m		<b>1016</b>	1004	---
Zinc	ppm	ASTM D5185m		<b>1198</b>	1192	---
Sulfur	ppm	ASTM D5185m		<b>3226</b>	2816	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.1</b>	19.8	---
Base Number (BN)	mg KOH/g	ASTM D2896		<b>11.3</b>	9.7	---
Visc @ 100°C	cSt	ASTM D445		<b>13.5</b>	13.0	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA045032  
**Lab Number** : 05622854  
**Unique Number** : 10102361  
**Test Package** : MOB 1 ( Additional Tests: FUELDILUTION, PercentFuel, TBN )

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 Kent, WA  
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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)