



# VOLVO PENTA

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**D. BOMAR**  
Machine Id  
**CATERPILLAR 8NM03726**  
Component  
**Starboard Diesel Engine**  
Fluid  
**SHELL ROTELLA T 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VPA045595</b>	---	---
Sample Date		Client Info		<b>11 Apr 2024</b>	---	---
Machine Age	hrs	Client Info		<b>0</b>	---	---
Oil Age	hrs	Client Info		<b>0</b>	---	---
Filter Age	hrs	Client Info		<b>0</b>	---	---
Oil Changed		Client Info		<b>N/A</b>	---	---
Filter Changed		Client Info		<b>N/A</b>	---	---
Sample Status				<b>NORMAL</b>	---	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>32</b>	---	---
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	---	---
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	---	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	---	---
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	---	---
Lead	ppm	ASTM D5185m	>40	<b>0</b>	---	---
Copper	ppm	ASTM D5185m	>330	<b>8</b>	---	---
Tin	ppm	ASTM D5185m	>15	<b>1</b>	---	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	---	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	---	---

### CONTAMINATION

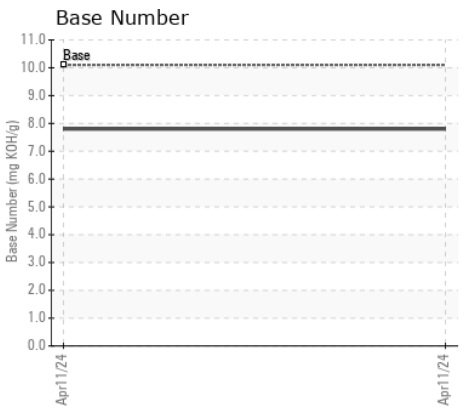
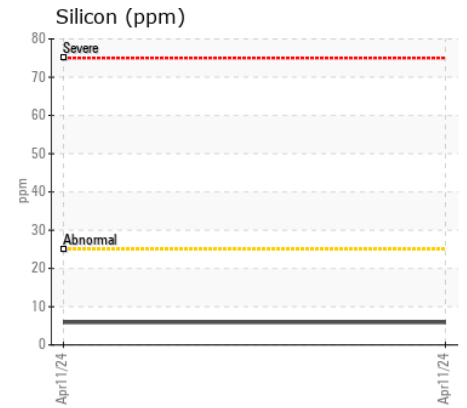
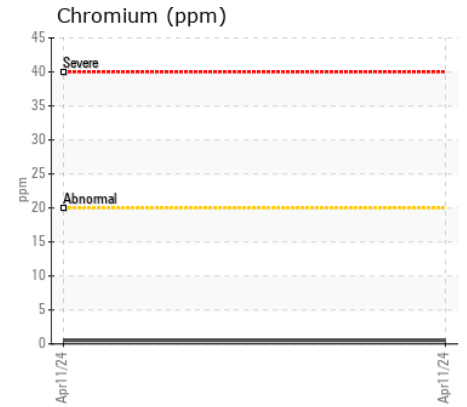
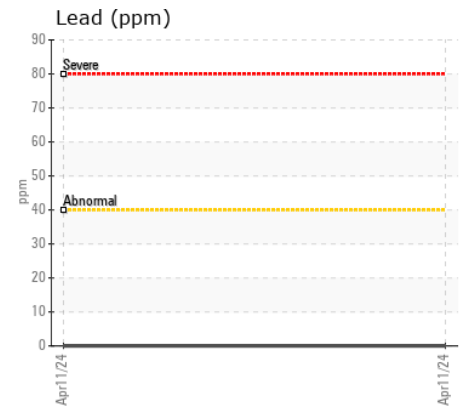
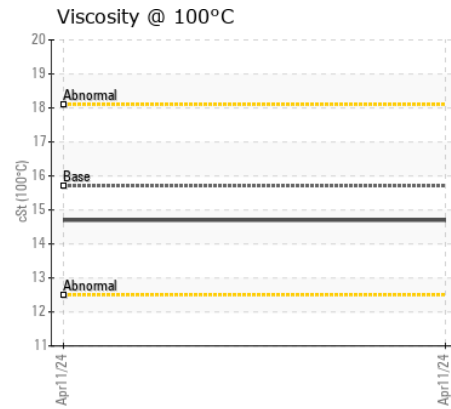
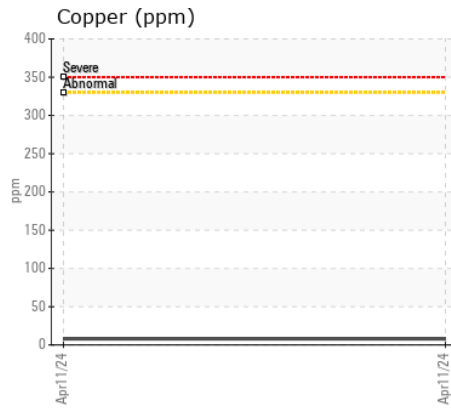
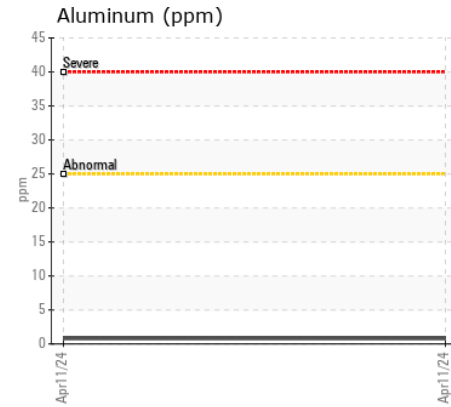
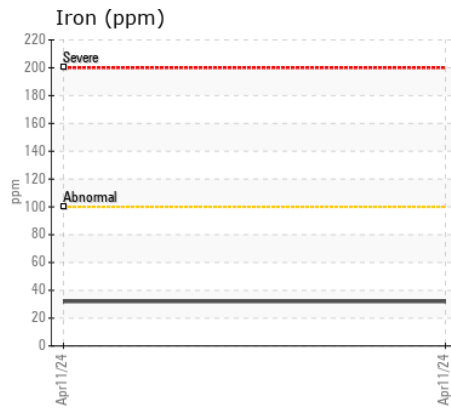
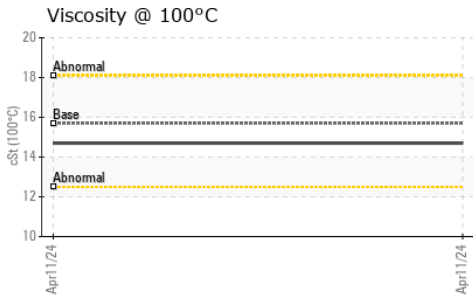
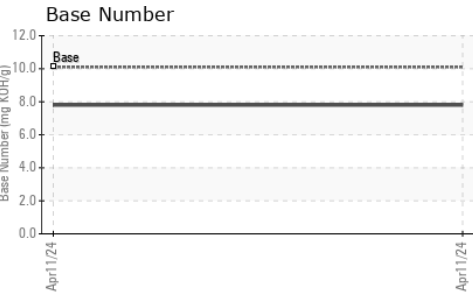
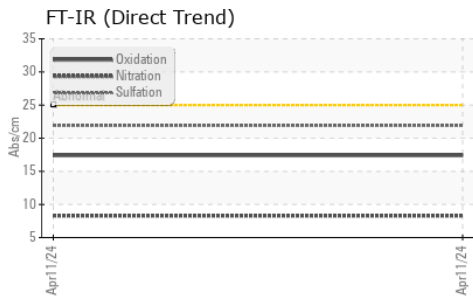
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>6</b>	---	---
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	---	---
Fuel		WC Method	>5	<b>&lt;1.0</b>	---	---
Water		WC Method	>0.2	<b>NEG</b>	---	---
Glycol		WC Method		<b>NEG</b>	---	---
Soot %	%	*ASTM D7844	>3	<b>0.8</b>	---	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>8.3</b>	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.9</b>	---	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	---	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	---	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	---	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	---	---
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	---	---

### 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>	---	---
Boron	ppm	ASTM D5185m	316	<b>169</b>	---	---
Barium	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185m	1.2	<b>6</b>	---	---
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	---	---
Magnesium	ppm	ASTM D5185m	24	<b>50</b>	---	---
Calcium	ppm	ASTM D5185m	2292	<b>2332</b>	---	---
Phosphorus	ppm	ASTM D5185m	1064	<b>973</b>	---	---
Zinc	ppm	ASTM D5185m	1160	<b>1257</b>	---	---
Sulfur	ppm	ASTM D5185m	4996	<b>4402</b>	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.4</b>	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	<b>7.8</b>	---	---
Visc @ 100°C	cSt	ASTM D445	15.7	<b>14.7</b>	---	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA045595 **Received** : 16 Apr 2024  
**Lab Number** : 06150132 **Tested** : 17 Apr 2024  
**Unique Number** : 10980210 **Diagnosed** : 18 Apr 2024 - Don Baldrige  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Aqua Yacht Harbor Marina**  
 3832 Hwy. 25 North, 3832 Hwy. 25 North  
 IUKA, MS  
 US 38852  
 Contact: DENNIS KANIZAI  
 dkanizai@shmarinas.com

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)

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F: