



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

[BOLDING]

Machine Id

VOLVO PENTA 7011471209

Component

Starboard Diesel Engine

Fluid

DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA059396	VPA047045	---
Sample Date		Client Info		22 Apr 2024	13 Dec 2023	---
Machine Age	hrs	Client Info		420	332	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Not Chngd	N/A	---
Filter Changed		Client Info		Not Chngd	N/A	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	6	17	---
Chromium	ppm	ASTM D5185m	>6	0	<1	---
Nickel	ppm	ASTM D5185m	>2	0	<1	---
Titanium	ppm	ASTM D5185m	>2	0	0	---
Silver	ppm	ASTM D5185m	>2	0	<1	---
Aluminum	ppm	ASTM D5185m	>20	0	1	---
Lead	ppm	ASTM D5185m	>95	0	<1	---
Copper	ppm	ASTM D5185m	>85	20	34	---
Tin	ppm	ASTM D5185m	>9	0	1	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

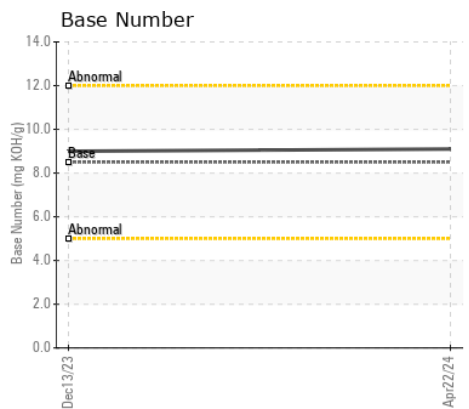
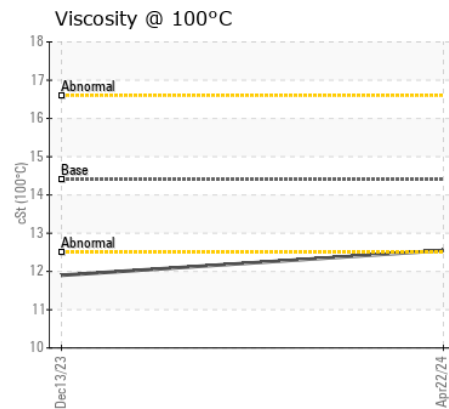
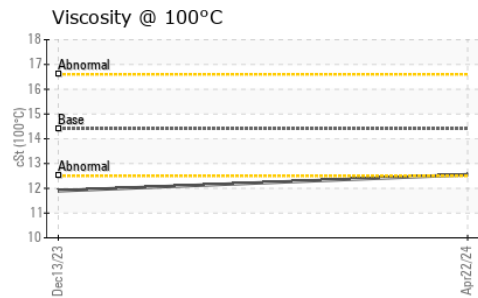
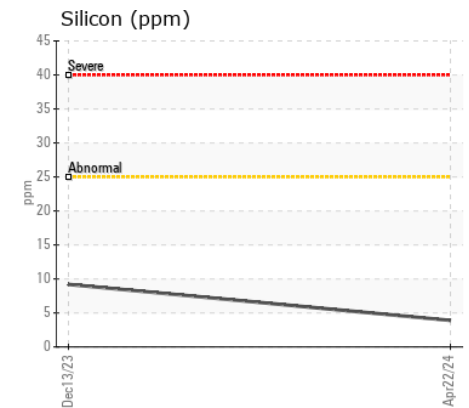
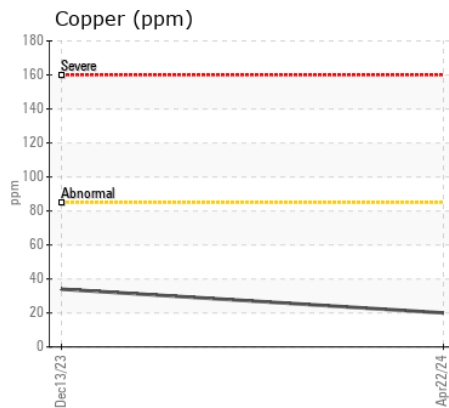
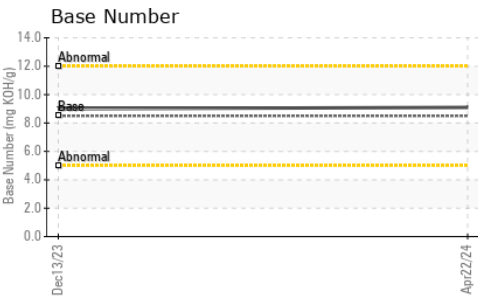
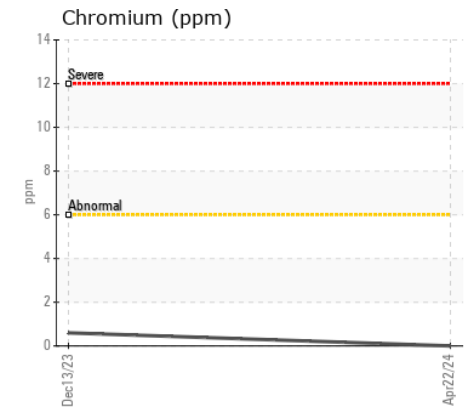
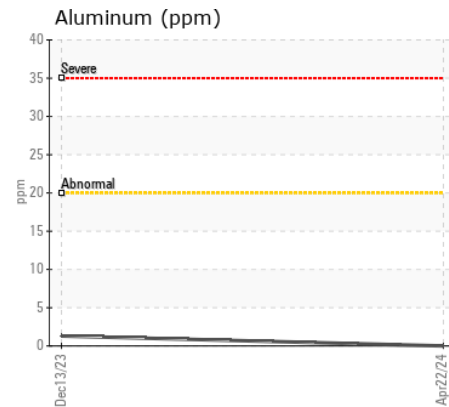
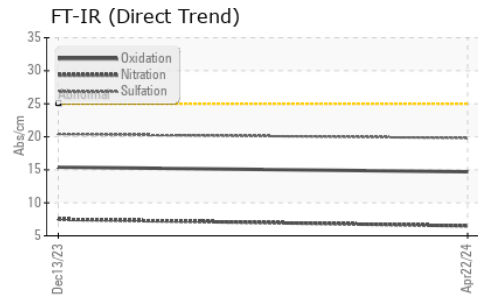
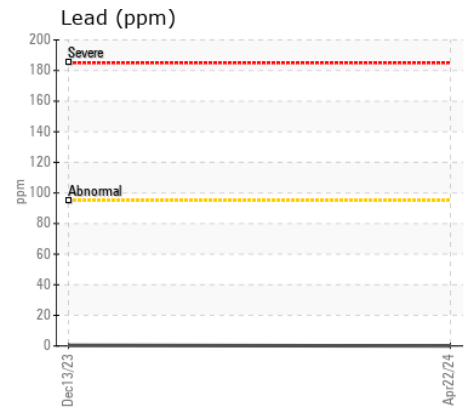
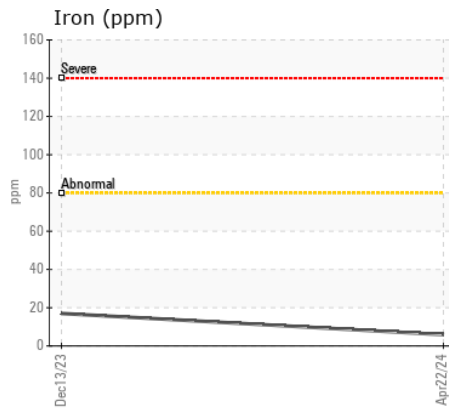
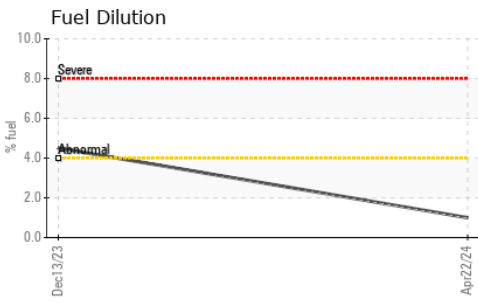
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	4	9	---
Potassium	ppm	ASTM D5185m	>20	0	0	---
Fuel	%	ASTM D3524	>4.0	1.0	▲ 4.5	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844		0.3	0.4	---
Nitration	Abs/cm	*ASTM D7624	>20	6.5	7.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	20.4	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	NEG	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	>158	1	0	---
Boron	ppm	ASTM D5185m	250	0	2	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	65	60	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m	450	1034	943	---
Calcium	ppm	ASTM D5185m	3000	1230	1020	---
Phosphorus	ppm	ASTM D5185m	1150	1153	1070	---
Zinc	ppm	ASTM D5185m	1350	1416	1272	---
Sulfur	ppm	ASTM D5185m	4250	4056	3116	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	15.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.1	9.0	---
Visc @ 100°C	cSt	ASTM D445	14.4	12.55	▲ 11.9	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : VPA059396

Lab Number : 06159611

Unique Number : 10995034

Test Package : MOB 1 (Additional Tests: PERCENTFUEL, TBN)

Received : 24 Apr 2024

Tested : 24 Apr 2024

Diagnosed : 24 Apr 2024 - Jonathan Hester

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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