



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area

DISCOVERY

Machine Id

VOLVO PENTA 70112014593

Component

Port Diesel Engine

Fluid

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

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA055070	VPA035922	---
Sample Date		Client Info		11 Jun 2024	18 Jan 2022	---
Machine Age	hrs	Client Info		0	0	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	N/A	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				ATTENTION	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	4	8	---
Chromium	ppm	ASTM D5185m	>6	0	1	---
Nickel	ppm	ASTM D5185m	>2	<1	<1	---
Titanium	ppm	ASTM D5185m	>2	0	0	---
Silver	ppm	ASTM D5185m	>2	0	<1	---
Aluminum	ppm	ASTM D5185m	>20	1	2	---
Lead	ppm	ASTM D5185m	>95	0	1	---
Copper	ppm	ASTM D5185m	>85	10	33	---
Tin	ppm	ASTM D5185m	>9	<1	2	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

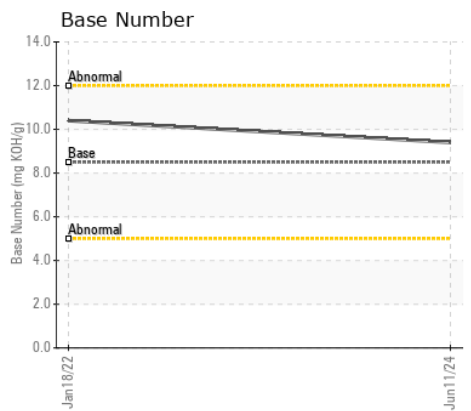
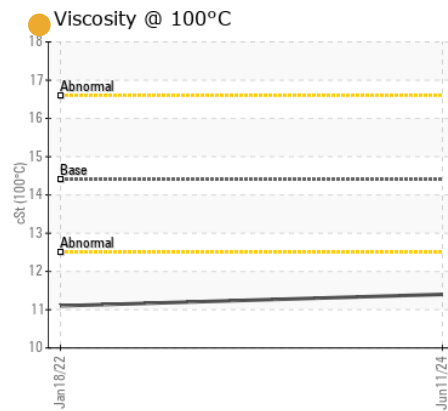
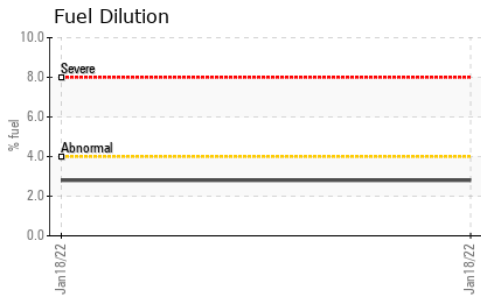
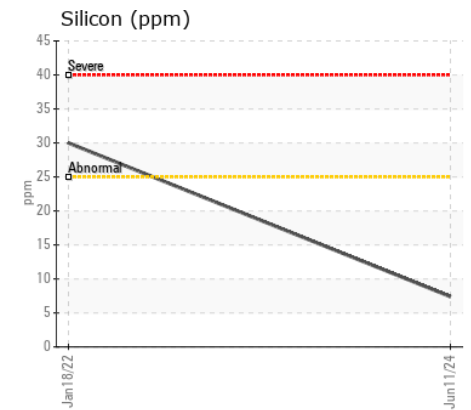
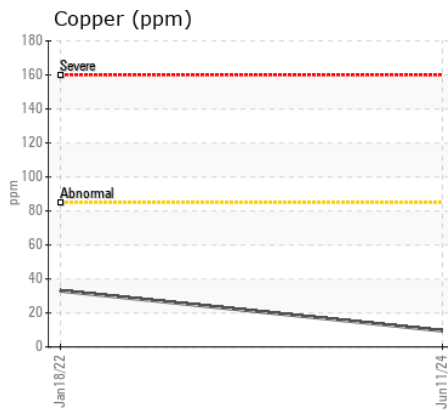
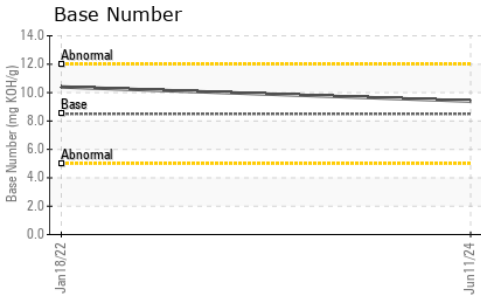
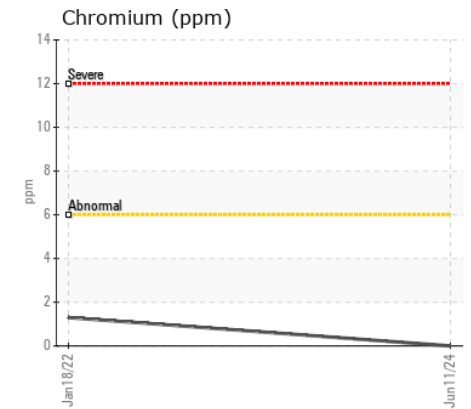
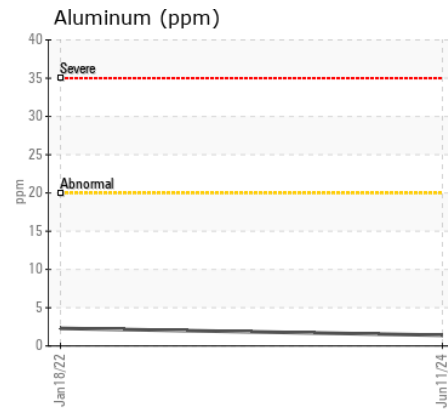
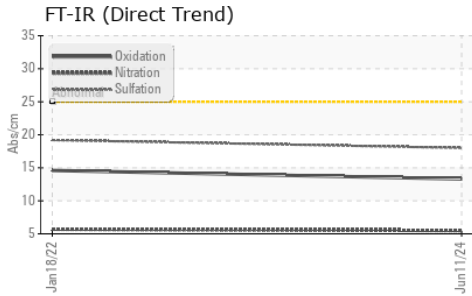
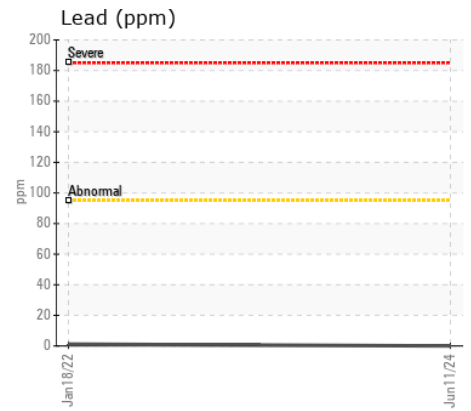
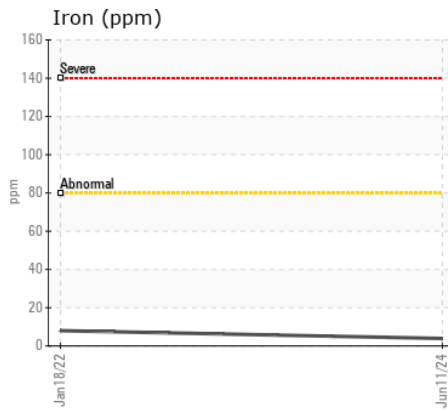
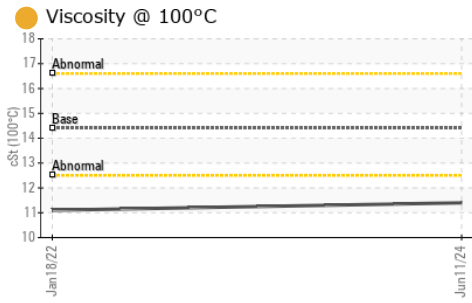
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	▲ 30	---
Potassium	ppm	ASTM D5185m	>20	2	3	---
Fuel	%	ASTM D3524	>4.0	<1.0	▲ 2.8	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844		0.2	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	5.5	5.7	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.0	19.2	---
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 oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>158	1	3	---
Boron	ppm	ASTM D5185m	250	13	8	---
Barium	ppm	ASTM D5185m	10	0	<1	---
Molybdenum	ppm	ASTM D5185m	100	55	58	---
Manganese	ppm	ASTM D5185m		<1	2	---
Magnesium	ppm	ASTM D5185m	450	964	977	---
Calcium	ppm	ASTM D5185m	3000	1076	1068	---
Phosphorus	ppm	ASTM D5185m	1150	1055	1065	---
Zinc	ppm	ASTM D5185m	1350	1256	1138	---
Sulfur	ppm	ASTM D5185m	4250	3750	2978	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.3	14.6	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.4	10.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	● 11.4	11.1	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VPA055070 **Received** : 05 Jul 2024
Lab Number : 06228223 **Tested** : 08 Jul 2024
Unique Number : 11111716 **Diagnosed** : 08 Jul 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

Outstanding Marine
 PO Box 274
 GALENA, MD
 US 21635
 Contact: Ronda Bolinger
 rlwb@verizon.net

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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