



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

DEMAURO

Machine Id

VOLVO PENTA A469804

Component

Starboard Diesel Engine

Fluid

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-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		VPA051003	---	---
Sample Date		Client Info		21 Mar 2024	---	---
Machine Age	hrs	Client Info		471	---	---
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	12	---	---
Chromium	ppm	ASTM D5185m	>6	0	---	---
Nickel	ppm	ASTM D5185m	>2	<1	---	---
Titanium	ppm	ASTM D5185m	>2	0	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>20	2	---	---
Lead	ppm	ASTM D5185m	>95	<1	---	---
Copper	ppm	ASTM D5185m	>85	2	---	---
Tin	ppm	ASTM D5185m	>9	<1	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

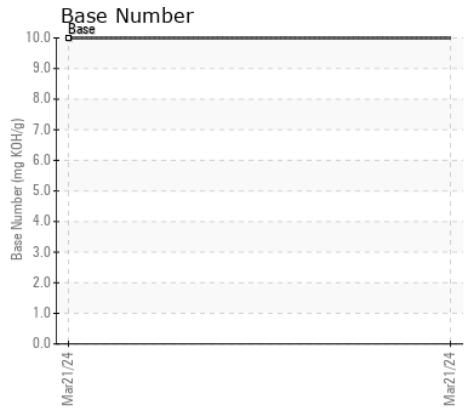
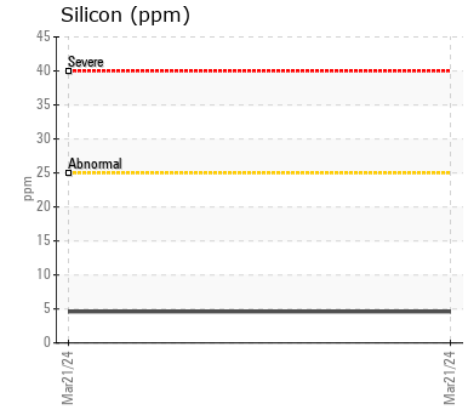
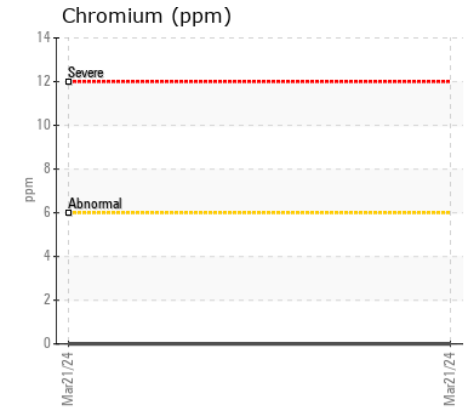
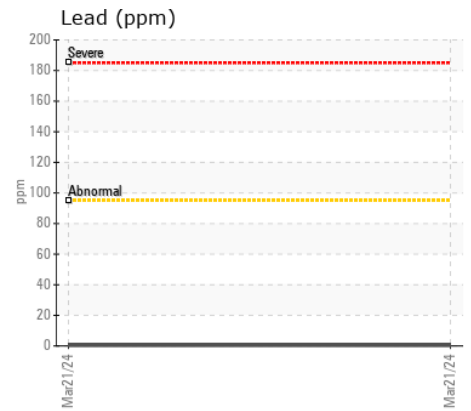
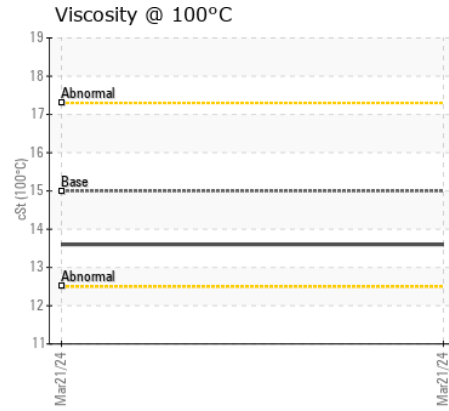
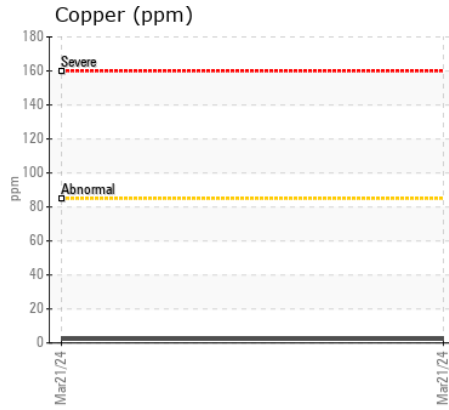
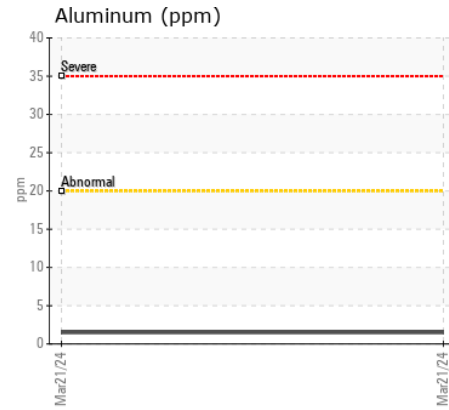
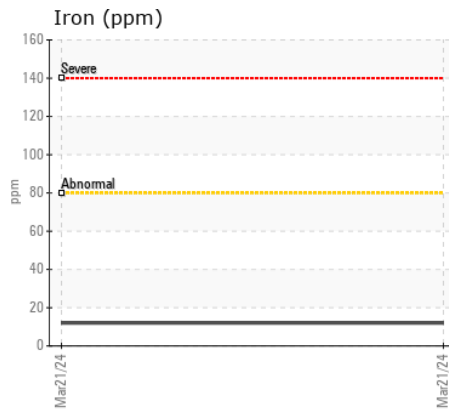
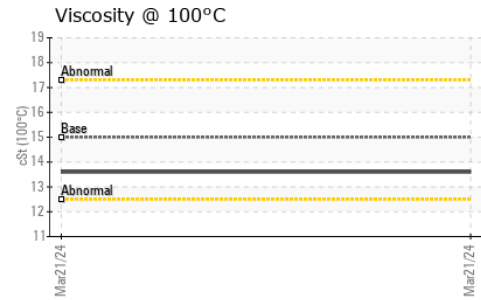
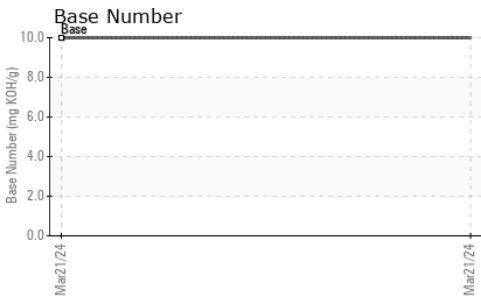
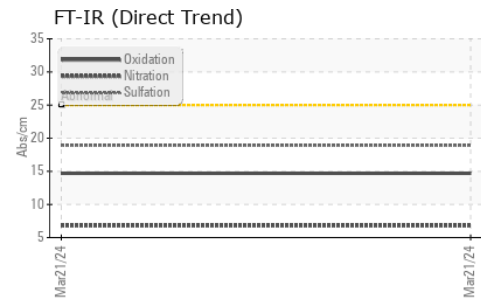
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	---	---
Potassium	ppm	ASTM D5185m	>20	2	---	---
Fuel		WC Method	>4.0	<1.0	---	---
Water		WC Method	>0.1	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844		0.3	---	---
Nitration	Abs/cm	*ASTM D7624	>20	6.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	---	---
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		<1	---	---
Boron	ppm	ASTM D5185m	2.5	30	---	---
Barium	ppm	ASTM D5185m	0.0	0	---	---
Molybdenum	ppm	ASTM D5185m	0.7	51	---	---
Manganese	ppm	ASTM D5185m	0.0	<1	---	---
Magnesium	ppm	ASTM D5185m	256	863	---	---
Calcium	ppm	ASTM D5185m	2057	1300	---	---
Phosphorus	ppm	ASTM D5185m	935	903	---	---
Zinc	ppm	ASTM D5185m	1223	1278	---	---
Sulfur	ppm	ASTM D5185m	4079	3983	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.0	---	---
Visc @ 100°C	cSt	ASTM D445	15.0	13.6	---	---



Certificate L2367

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

Sample No. : VPA051003

Lab Number : 06222107

Unique Number : 11100304

Test Package : MOB 1 (Additional Tests: TBN)

Received : 27 Jun 2024

Tested : 28 Jun 2024

Diagnosed : 28 Jun 2024 - Sean Felton

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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