



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

FANCY

Machine Id

VOLVO PENTA 2013524813

Component

Starboard Diesel Engine

Fluid

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (13 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VPA051114	VPA028928	---
Sample Date		Client Info		13 Mar 2024	02 Apr 2021	---
Machine Age	hrs	Client Info		877	0	---
Oil Age	hrs	Client Info		0	0	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	N/A	---
Filter Changed		Client Info		N/A	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>80	23	6	---
Chromium	ppm	ASTM D5185m	>6	<1	<1	---
Nickel	ppm	ASTM D5185m	>2	0	<1	---
Titanium	ppm	ASTM D5185m	>2	<1	<1	---
Silver	ppm	ASTM D5185m	>2	0	<1	---
Aluminum	ppm	ASTM D5185m	>20	2	8	---
Lead	ppm	ASTM D5185m	>95	0	<1	---
Copper	ppm	ASTM D5185m	>85	6	<1	---
Tin	ppm	ASTM D5185m	>9	0	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

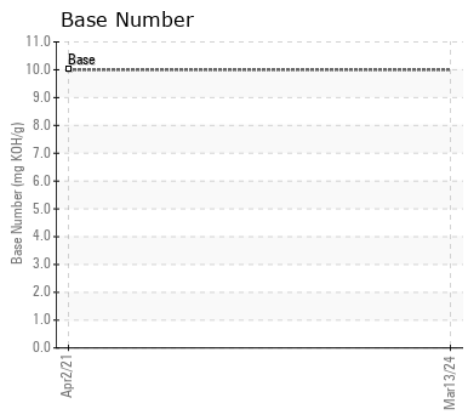
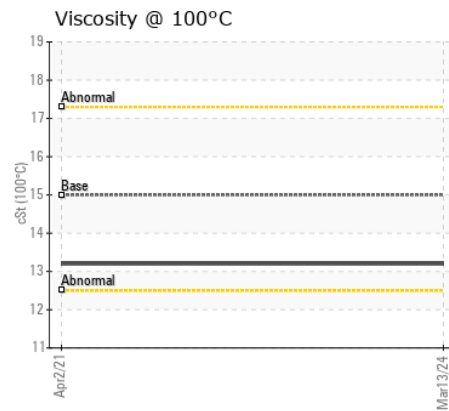
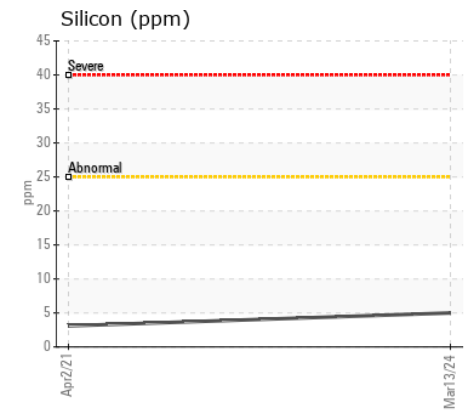
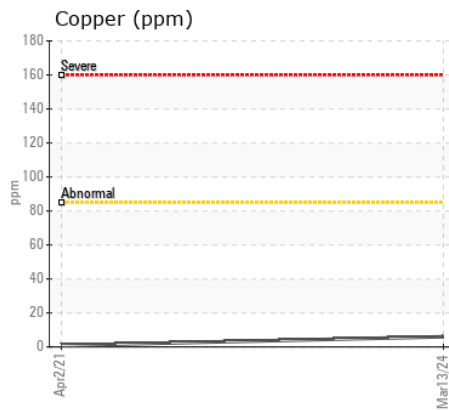
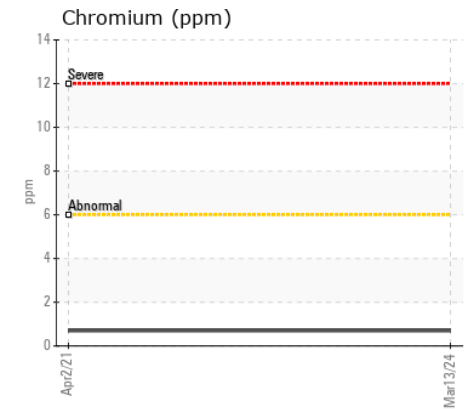
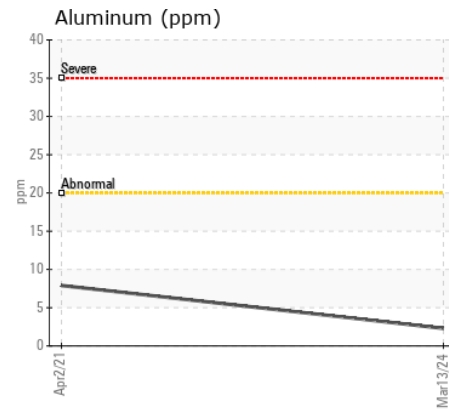
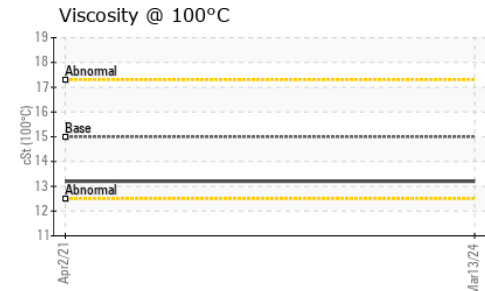
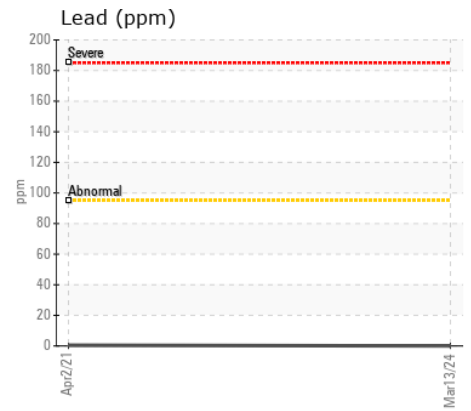
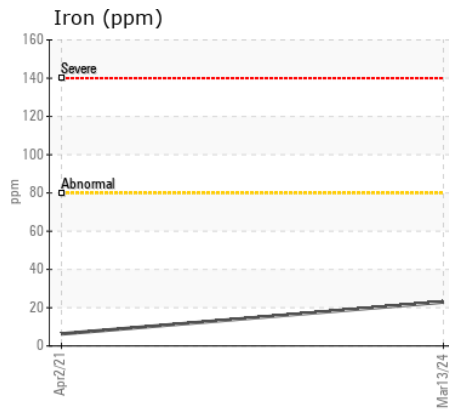
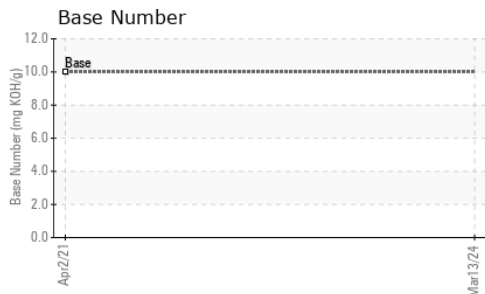
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	5	3	---
Potassium	ppm	ASTM D5185m	>20	2	2	---
Fuel		WC Method	>4.0	<1.0	<1.0	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844		0.5	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.2	5.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.4	20	---
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		19	<1	---
Boron	ppm	ASTM D5185m	2.5	9	4	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	0.7	55	56	---
Manganese	ppm	ASTM D5185m	0.0	<1	<1	---
Magnesium	ppm	ASTM D5185m	256	928	888	---
Calcium	ppm	ASTM D5185m	2057	1193	1004	---
Phosphorus	ppm	ASTM D5185m	935	1109	999	---
Zinc	ppm	ASTM D5185m	1223	1320	1210	---
Sulfur	ppm	ASTM D5185m	4079	4074	2900	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	14.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.1	---	---
Visc @ 100°C	cSt	ASTM D445	15.0	13.2	13.2	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VPA051114 **Received** : 19 Mar 2024  
**Lab Number** : 06122893 **Tested** : 20 Mar 2024  
**Unique Number** : 10937044 **Diagnosed** : 22 Mar 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**Marine International Diesels Inc.**  
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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)