



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	ABNORMAL



Area

[562094 COVANTA]

Machine Id

VOLVO L220H 3339

Component

Diesel Engine

Fluid

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

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP450707	---	---
Sample Date		Client Info		21 May 2024	---	---
Machine Age	hrs	Client Info		9447	---	---
Oil Age	hrs	Client Info		0	---	---
Filter Age	hrs	Client Info		0	---	---
Oil Changed		Client Info		Changed	---	---
Filter Changed		Client Info		Changed	---	---
Sample Status				SEVERE	---	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	59	---	---
Chromium	ppm	ASTM D5185m	>20	2	---	---
Nickel	ppm	ASTM D5185m	>5	2	---	---
Titanium	ppm	ASTM D5185m		<1	---	---
Silver	ppm	ASTM D5185m	>2	0	---	---
Aluminum	ppm	ASTM D5185m	>30	4	---	---
Lead	ppm	ASTM D5185m	>40	4	---	---
Copper	ppm	ASTM D5185m	>20	21	---	---
Tin	ppm	ASTM D5185m	>20	3	---	---
Vanadium	ppm	ASTM D5185m		0	---	---
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---

CONTAMINATION

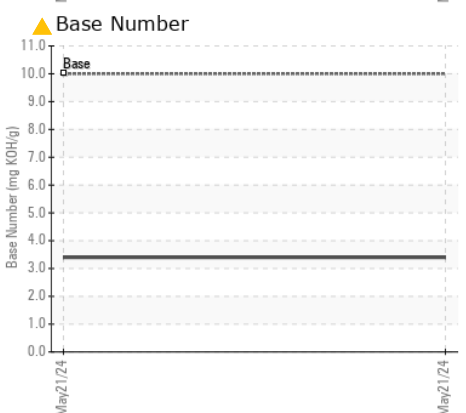
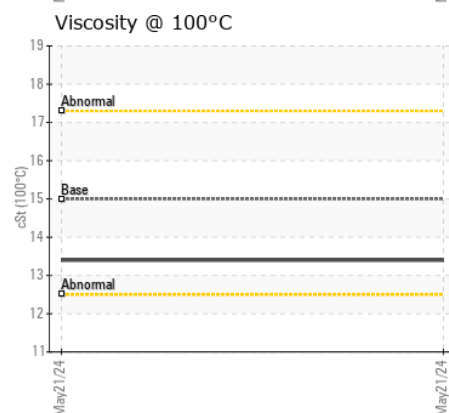
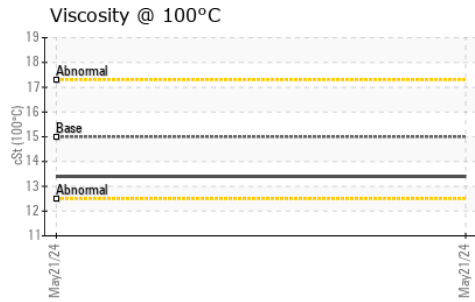
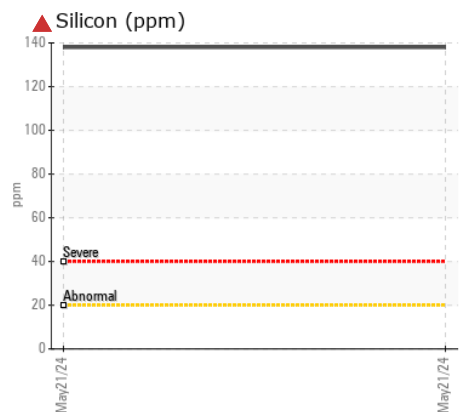
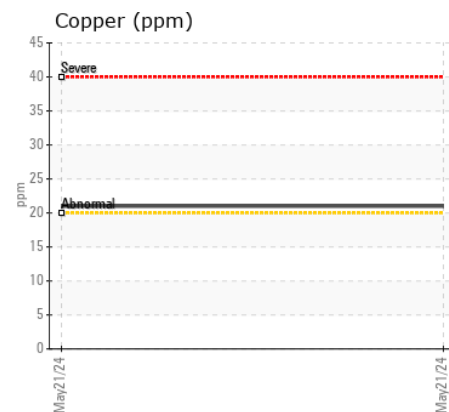
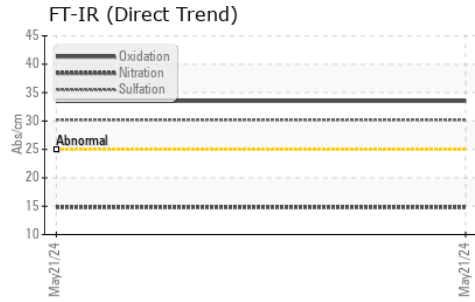
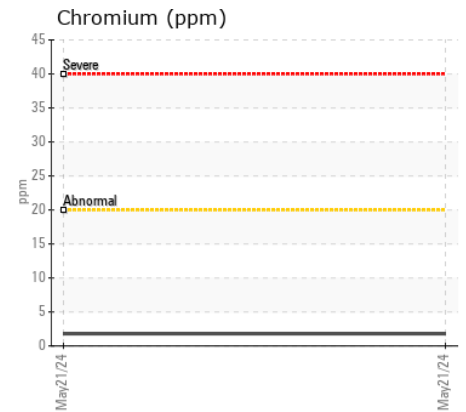
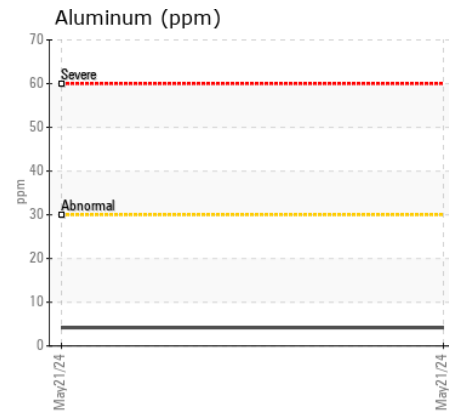
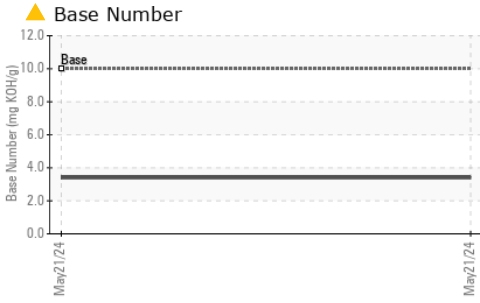
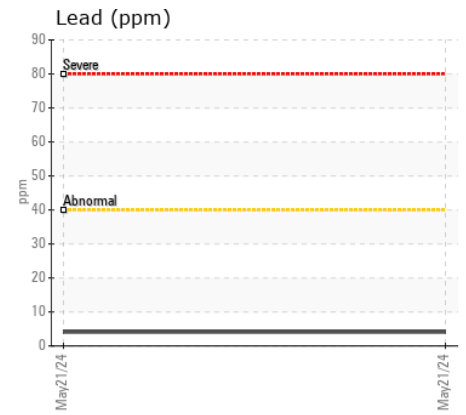
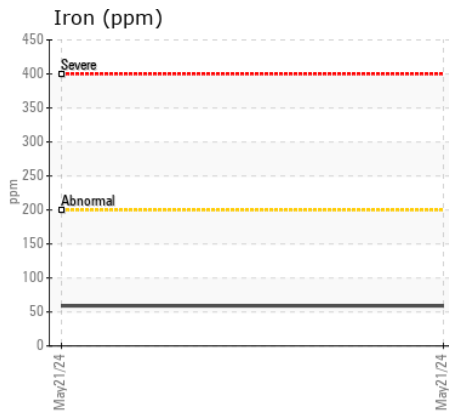
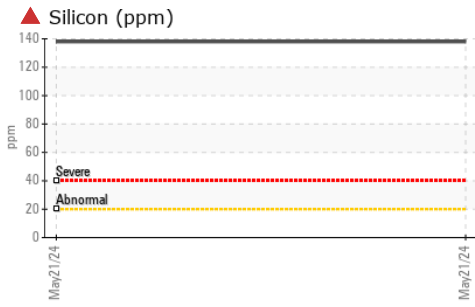
Elemental level of silicon (Si) above normal.

Silicon	ppm	ASTM D5185m	>20	▲ 138	---	---
Potassium	ppm	ASTM D5185m	>20	6	---	---
Fuel		WC Method	>6.0	<1.0	---	---
Water		WC Method	>0.2	NEG	---	---
Glycol		WC Method		NEG	---	---
Soot %	%	*ASTM D7844	>3	0.5	---	---
Nitration	Abs/cm	*ASTM D7624	>20	14.8	---	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	30.2	---	---
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	>0.2	NEG	---	---

FLUID CONDITION

The BN level is low. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		7	---	---
Boron	ppm	ASTM D5185m	2.5	16	---	---
Barium	ppm	ASTM D5185m	0.0	2	---	---
Molybdenum	ppm	ASTM D5185m	0.7	64	---	---
Manganese	ppm	ASTM D5185m	0.0	2	---	---
Magnesium	ppm	ASTM D5185m	256	478	---	---
Calcium	ppm	ASTM D5185m	2057	1417	---	---
Phosphorus	ppm	ASTM D5185m	935	910	---	---
Zinc	ppm	ASTM D5185m	1223	1200	---	---
Sulfur	ppm	ASTM D5185m	4079	2352	---	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	33.5	---	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	▲ 3.4	---	---
Visc @ 100°C	cSt	ASTM D445	15.0	13.4	---	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP450707 **Received** : 30 May 2024
Lab Number : 06194964 **Tested** : 31 May 2024
Unique Number : 11057087 **Diagnosed** : 31 May 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

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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)