

Machine Id
VOLVO VNL UNIT 13 (S/N 176765A)
Component
Diesel Engine
Fluid
LUCAS SYNTHETIC BLEND 10W30 (38 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LF509799	LF1501606	LF1501598
Sample Date		Client Info		28 Feb 2023	28 Feb 2023	01 Feb 2023
Machine Age	mls	Client Info		0	0	905596
Oil Age	mls	Client Info		0	8545	35470
Filter Age	mls	Client Info		0	8545	35470
Oil Changed		Client Info		N/A	Not Changed	Changed
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	2	14	43
Chromium	ppm	ASTM D5185m	>20	<1	<1	1
Nickel	ppm	ASTM D5185m	>2	<1	0	2
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	1	0	0
Aluminum	ppm	ASTM D5185m	>25	3	8	19
Lead	ppm	ASTM D5185m	>40	0	<1	5
Copper	ppm	ASTM D5185m	>330	<1	2	4
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

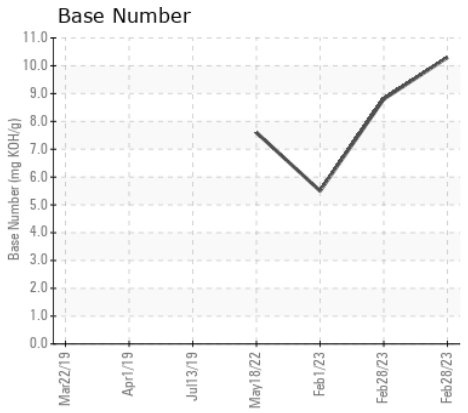
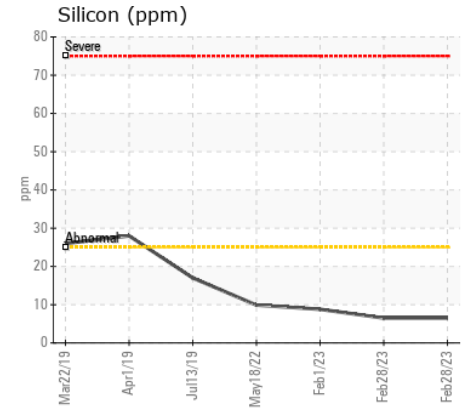
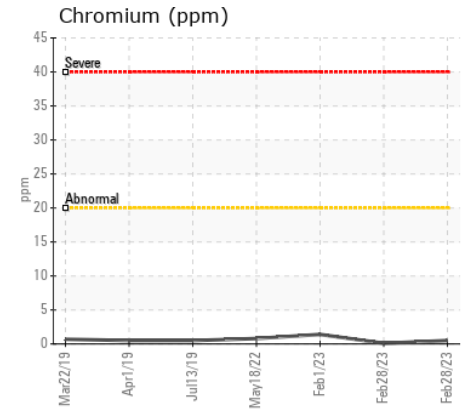
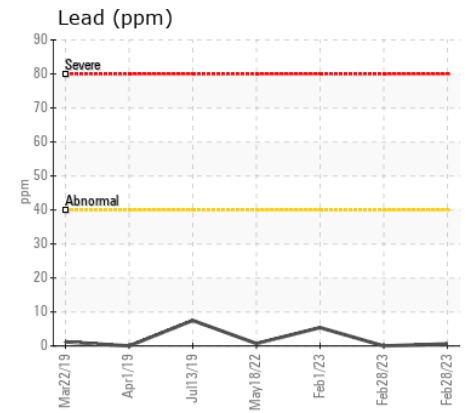
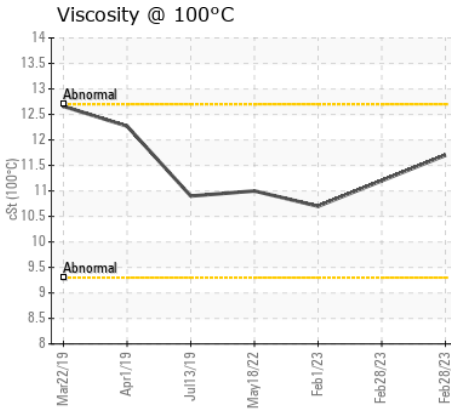
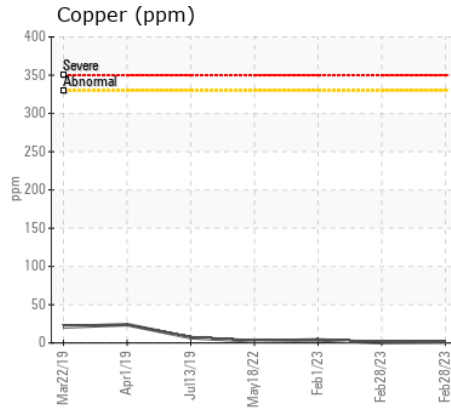
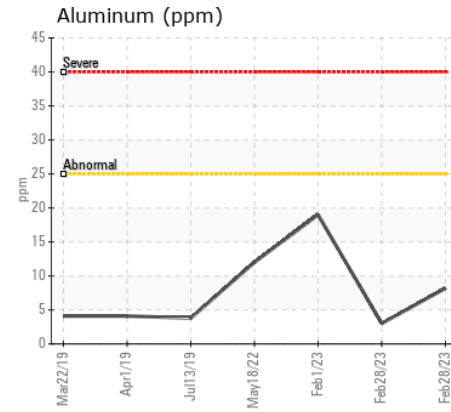
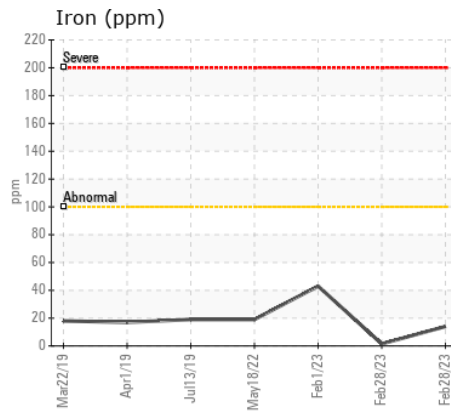
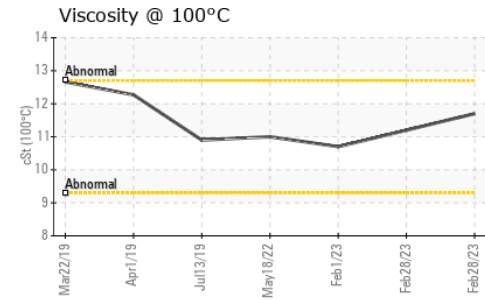
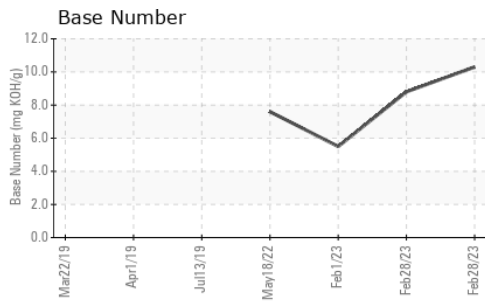
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	9
Potassium	ppm	ASTM D5185m	>20	2	<1	2
Fuel		WC Method	>5	<1.0	<1.0	1.8
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.4	1.2
Nitration	Abs/cm	*ASTM D7624	>20	4.8	7.4	10.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.0	22.0	26.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	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		0	2	5
Boron	ppm	ASTM D5185m		382	263	35
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		117	122	115
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		483	543	515
Calcium	ppm	ASTM D5185m		1304	1385	1335
Phosphorus	ppm	ASTM D5185m		908	836	758
Zinc	ppm	ASTM D5185m		988	1062	1002
Sulfur	ppm	ASTM D5185m		2644	3379	2894
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.9	16.5	21.3
Base Number (BN)	mg KOH/g	ASTM D2896		10.3	8.8	5.5
Visc @ 100°C	cSt	ASTM D445		11.7	11.2	10.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LF509799 **Received** : 21 Mar 2023
Lab Number : 05798367 **Tested** : 27 Mar 2023
Unique Number : 10388051 **Diagnosed** : 27 Mar 2023 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

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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