



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[SWA532686 LIBERTY LF]

Machine Id
VOLVO A40G 352020

Component
Diesel Engine

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

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP423818	VCP322895	VCP385859
Sample Date		Client Info		16 Apr 2024	02 Apr 2024	28 Oct 2022
Machine Age	hrs	Client Info		6476	6397	6287
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	Changed
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	31	27	8
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	2	3	2
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	5	4	2
Lead	ppm	ASTM D5185m	>40	0	1	<1
Copper	ppm	ASTM D5185m	>330	17	15	4
Tin	ppm	ASTM D5185m	>15	<1	<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

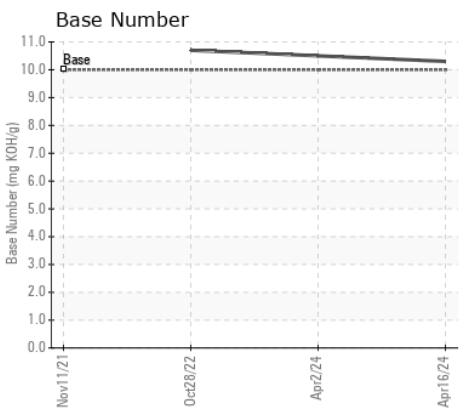
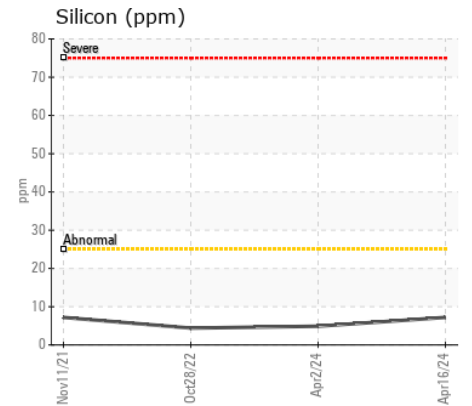
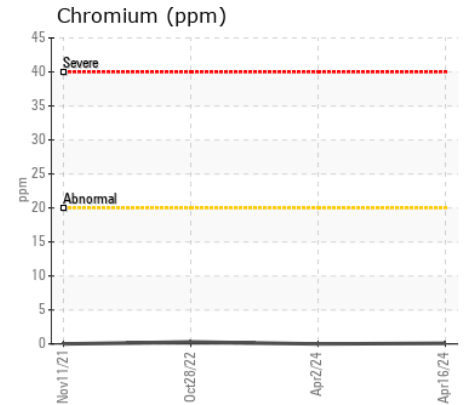
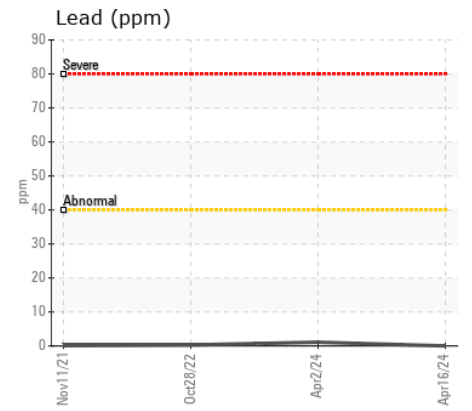
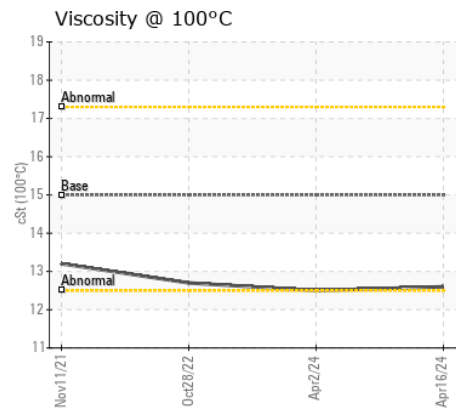
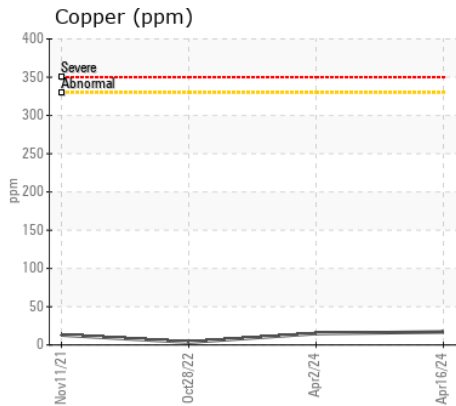
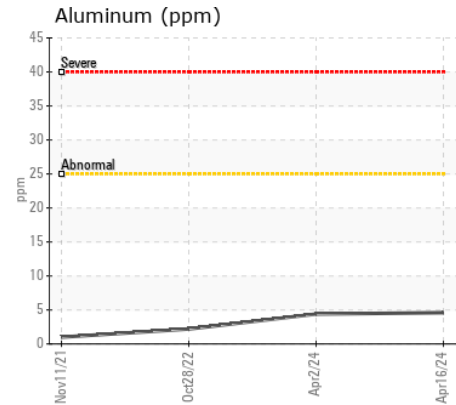
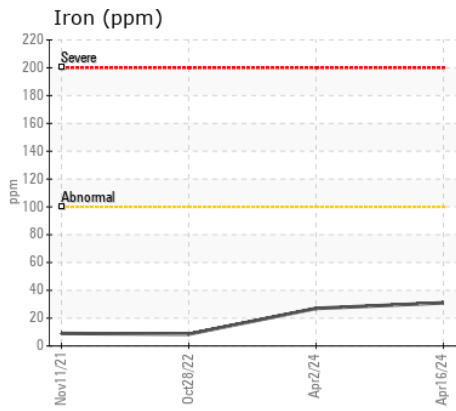
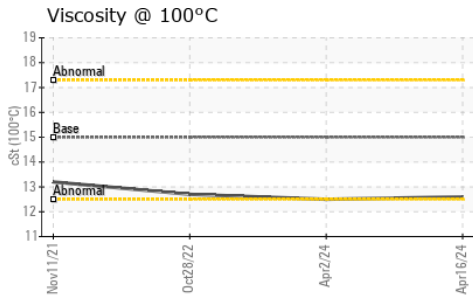
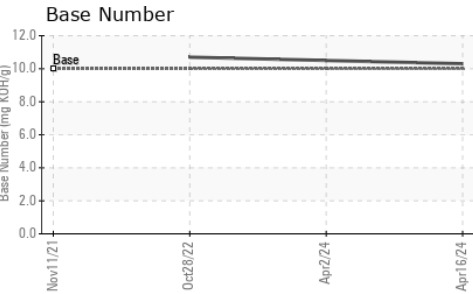
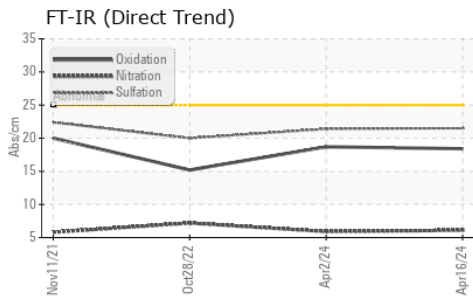
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	7	5	4
Potassium	ppm	ASTM D5185m	>20	3	4	1
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.1	5.9	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	21.4	20.0
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		8	9	5
Boron	ppm	ASTM D5185m	2.5	45	44	4
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	46	42	57
Manganese	ppm	ASTM D5185m	0.0	1	1	<1
Magnesium	ppm	ASTM D5185m	256	606	536	842
Calcium	ppm	ASTM D5185m	2057	1582	1466	1119
Phosphorus	ppm	ASTM D5185m	935	985	951	989
Zinc	ppm	ASTM D5185m	1223	1153	1096	1177
Sulfur	ppm	ASTM D5185m	4079	3477	3499	3292
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.4	18.7	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.3	10.5	10.7
Visc @ 100°C	cSt	ASTM D445	15.0	12.6	12.5	12.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP423818 **Received** : 23 Apr 2024
Lab Number : 06158263 **Tested** : 24 Apr 2024
Unique Number : 10993686 **Diagnosed** : 24 Apr 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

LIBERTY ENVIRONMENTALIST INC
 7900 S MERIDIAN
 CLARKLAKE, MI
 US 49234
 Contact: SERVICE MANAGER

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)

T: (517)787-1177

F: