



VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
[768]
Machine Id
VOLVO L120H 14332
Component
Diesel Engine
Fluid
MOBIL 15W40 (--- 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		VCP437493	VCP349807	VCP330950
Sample Date		Client Info		11 Mar 2024	18 Oct 2022	20 Jul 2022
Machine Age	hrs	Client Info		23137	20512	19935
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	SEVERE

WEAR

The aluminum level is abnormal. Piston wear is indicated.

Iron	ppm	ASTM D5185m	>100	30	37	84
Chromium	ppm	ASTM D5185m	>10	2	2	3
Nickel	ppm	ASTM D5185m	>10	0	<1	2
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>2	<1	0	<1
Aluminum	ppm	ASTM D5185m	>10	▲ 41	● 17	● 29
Lead	ppm	ASTM D5185m	>20	1	4	14
Copper	ppm	ASTM D5185m	>15	13	2	6
Tin	ppm	ASTM D5185m	>10	1	1	7
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

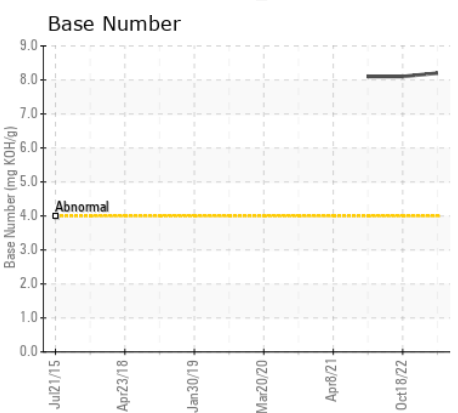
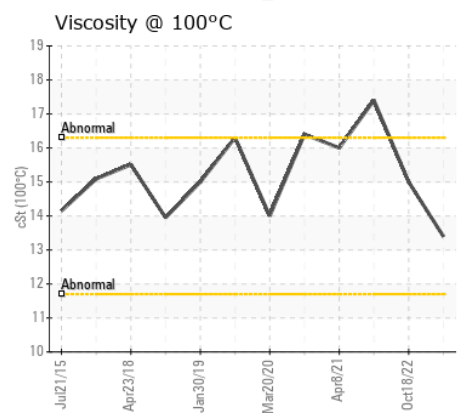
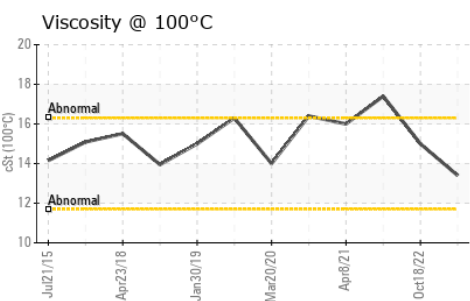
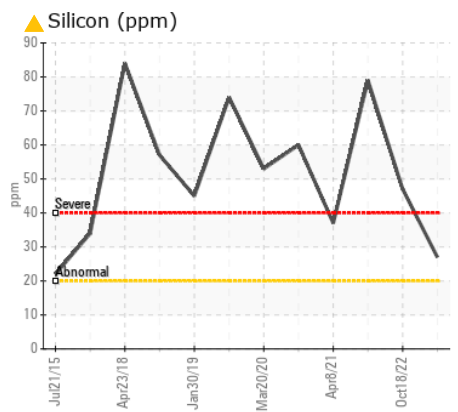
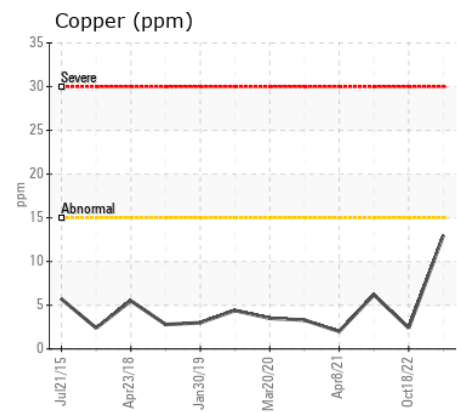
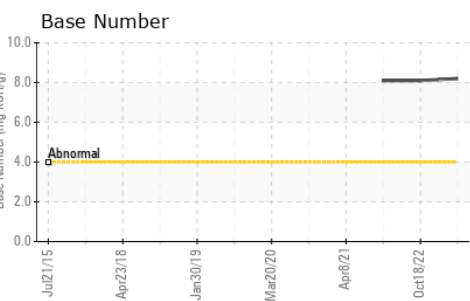
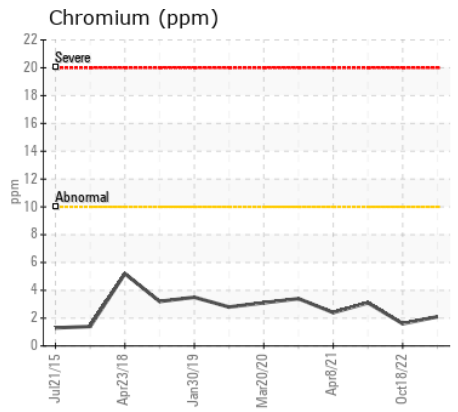
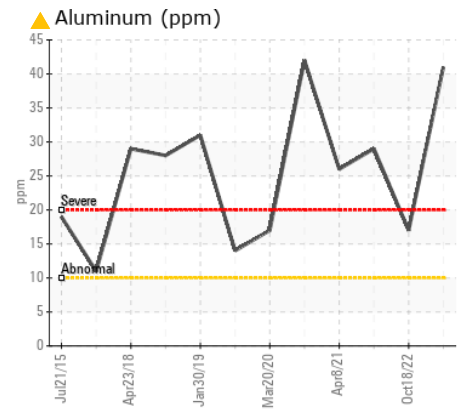
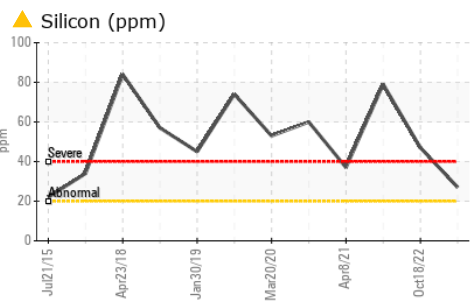
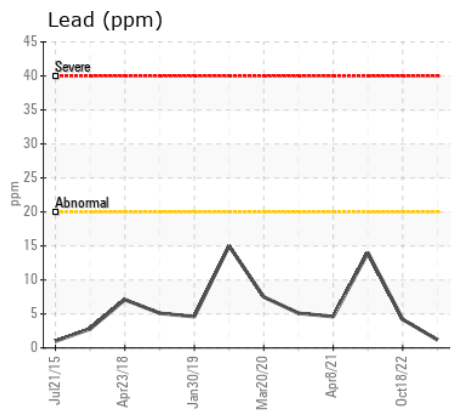
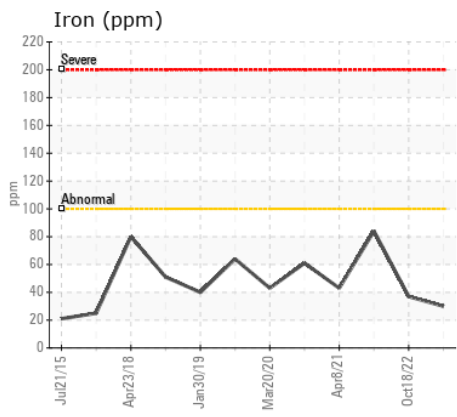
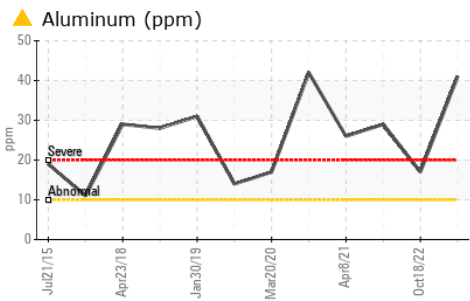
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>20	▲ 27	▲ 47	▲ 79
Potassium	ppm	ASTM D5185m	>20	<1	2	3
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.5	0.7
Nitration	Abs/cm	*ASTM D7624	>20	8.0	14.6	18.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.8	31.0	38.0
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	>0.1	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil.

Sodium	ppm	ASTM D5185m	>118	25	31	42
Boron	ppm	ASTM D5185m		4	48	72
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		59	22	13
Manganese	ppm	ASTM D5185m		<1	1	1
Magnesium	ppm	ASTM D5185m		1026	739	973
Calcium	ppm	ASTM D5185m		1199	1902	2453
Phosphorus	ppm	ASTM D5185m		1114	952	1091
Zinc	ppm	ASTM D5185m		1333	1253	1386
Sulfur	ppm	ASTM D5185m		3751	3709	4216
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.7	32.1	39.9
Base Number (BN)	mg KOH/g	ASTM D2896		8.2	8.1	8.1
Visc @ 100°C	cSt	ASTM D445		13.4	15.0	● 17.4



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP437493 **Received** : 19 Mar 2024
Lab Number : 06122898 **Tested** : 20 Mar 2024
Unique Number : 10937049 **Diagnosed** : 22 Mar 2024 - Jonathan Hester
Test Package : MOB 1 (Additional Tests: TBN)

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Certificate L2367
 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)