



VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[1753 I PULL U PULL]

Machine Id
VOLVO L90H 624459

Component
Diesel Engine

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

RECOMMENDATION

The oil change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP437825	VCP368426	VCP379835
Sample Date		Client Info		13 Mar 2024	27 Sep 2023	03 Feb 2023
Machine Age	hrs	Client Info		7597	6700	5434
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		N/A	N/A	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	42	30	18
Chromium	ppm	ASTM D5185m	>10	3	2	1
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	▲ 15	7	6
Lead	ppm	ASTM D5185m	>20	6	3	<1
Copper	ppm	ASTM D5185m	>15	5	1	1
Tin	ppm	ASTM D5185m	>10	2	1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

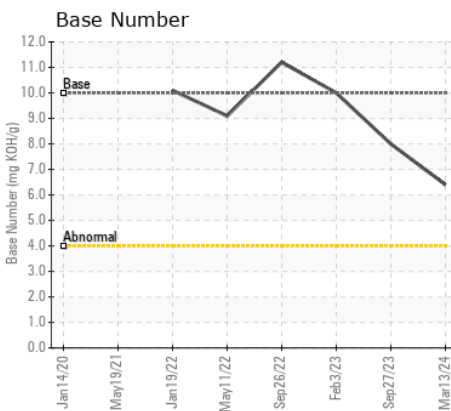
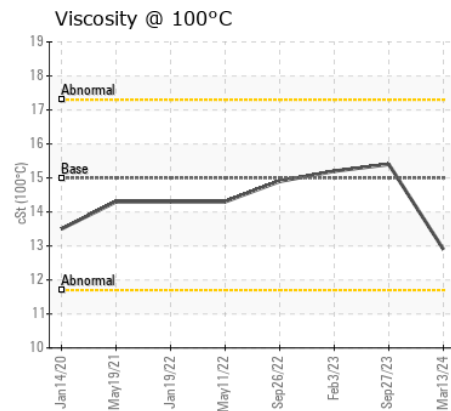
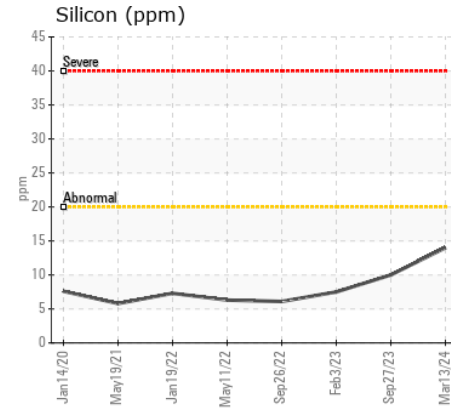
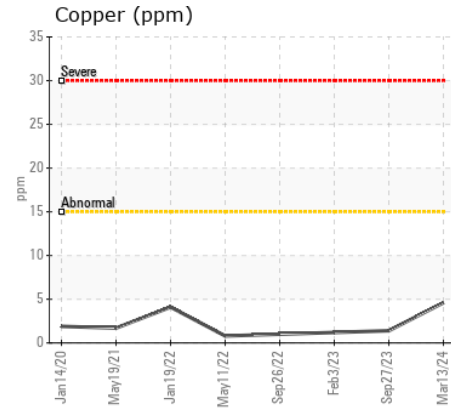
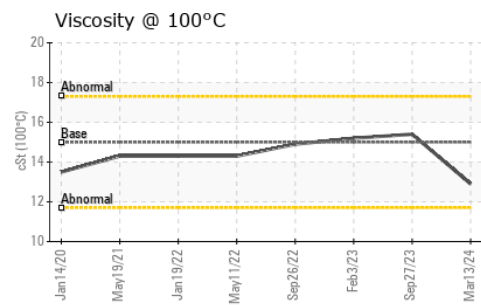
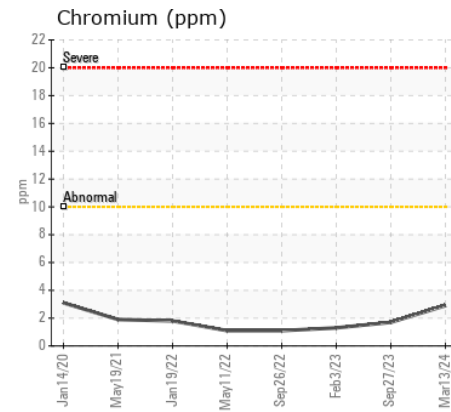
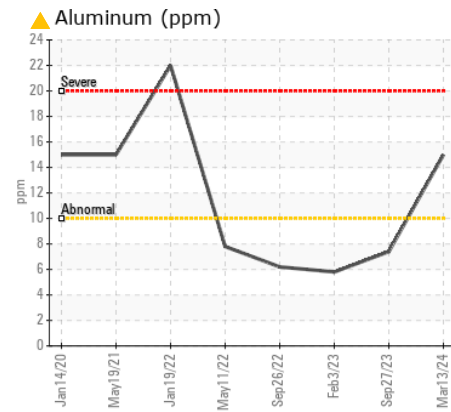
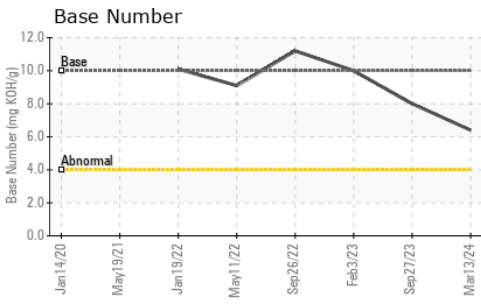
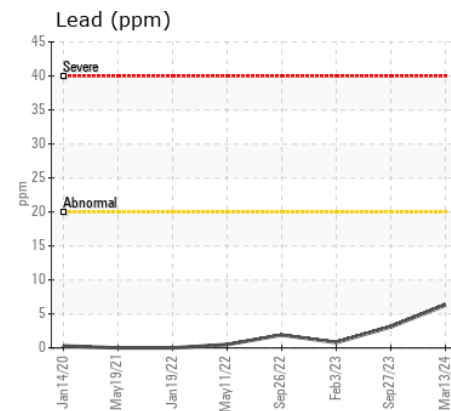
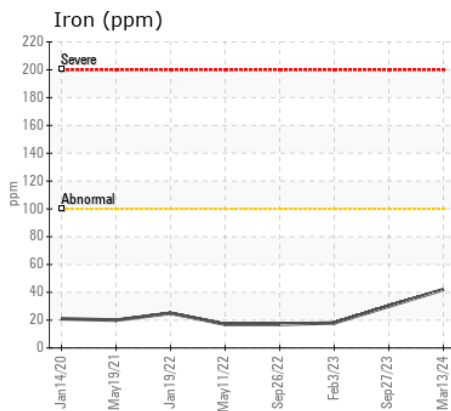
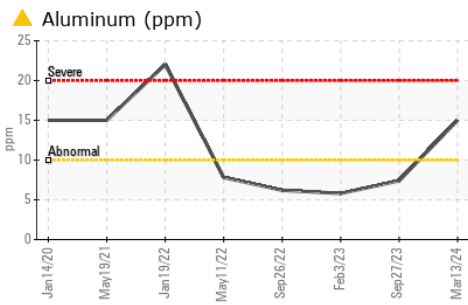
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	14	10	8
Potassium	ppm	ASTM D5185m	>20	4	0	2
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	1.6	1.5	0.8
Nitration	Abs/cm	*ASTM D7624	>20	14.1	14.1	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	27.6	27.4	25.1
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		15	2	3
Boron	ppm	ASTM D5185m	2.5	17	23	31
Barium	ppm	ASTM D5185m	0.0	0	<1	<1
Molybdenum	ppm	ASTM D5185m	0.7	43	49	48
Manganese	ppm	ASTM D5185m	0.0	1	<1	<1
Magnesium	ppm	ASTM D5185m	256	503	657	564
Calcium	ppm	ASTM D5185m	2057	1770	1907	1926
Phosphorus	ppm	ASTM D5185m	935	934	1038	1080
Zinc	ppm	ASTM D5185m	1223	1146	1286	1328
Sulfur	ppm	ASTM D5185m	4079	2951	2764	3399
Oxidation	Abs/.1mm	*ASTM D7414	>25	29.6	28.5	24.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	6.4	8.0	10.0
Visc @ 100°C	cSt	ASTM D445	15.0	12.9	15.4	15.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP437825 **Received** : 20 Mar 2024
Lab Number : 06123463 **Tested** : 21 Mar 2024
Unique Number : 10937614 **Diagnosed** : 22 Mar 2024 - Don Baldrige
Test Package : MOB 1 (Additional Tests: TBN)

VCES- VOLVO CONSTRUCTION EQUIPMENT
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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)