



# VOLVO

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Machine Id  
**VOLVO L110H 631231**

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		<b>VCP428553</b>	VCP392684	VCP399674
Sample Date		Client Info		<b>02 Oct 2023</b>	28 Apr 2023	03 Jan 2023
Machine Age	hrs	Client Info		<b>6272</b>	10851	10292
Oil Age	hrs	Client Info		<b>0</b>	600	500
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>17</b>	10	29
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	2
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	8
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>6</b>	4	6
Lead	ppm	ASTM D5185m	>20	<b>1</b>	<1	<1
Copper	ppm	ASTM D5185m	>15	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	2
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

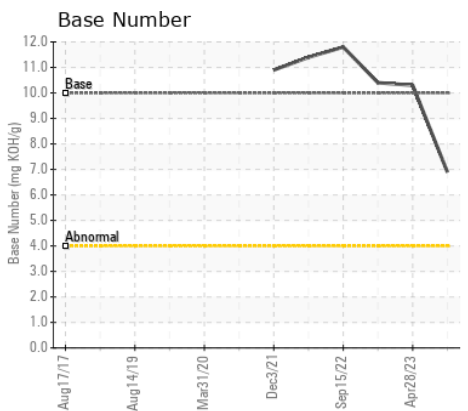
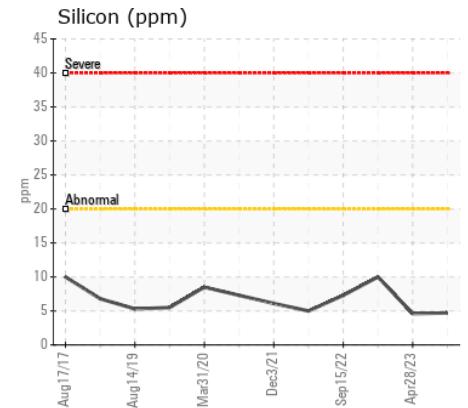
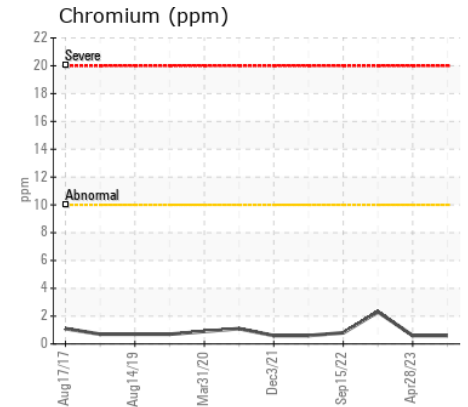
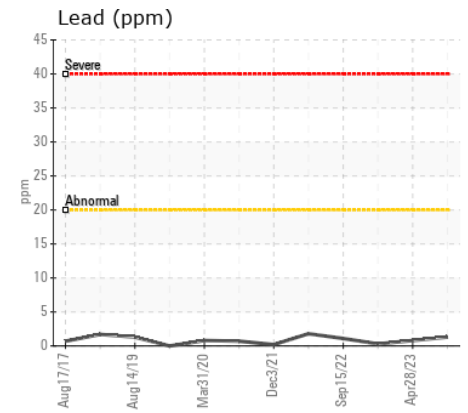
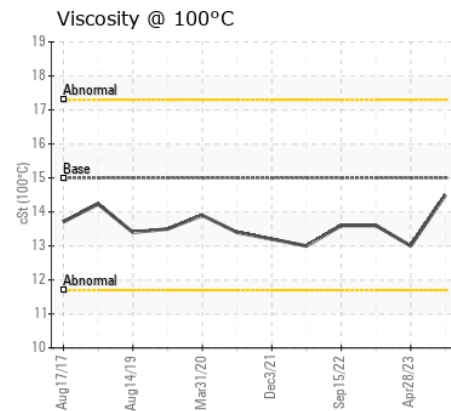
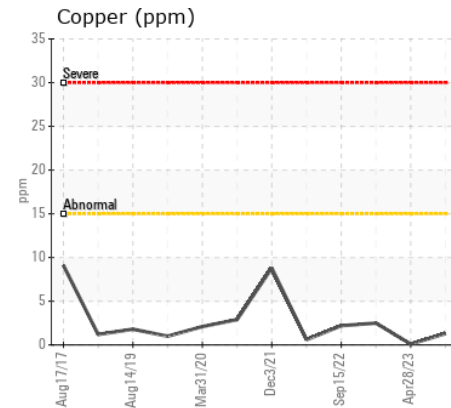
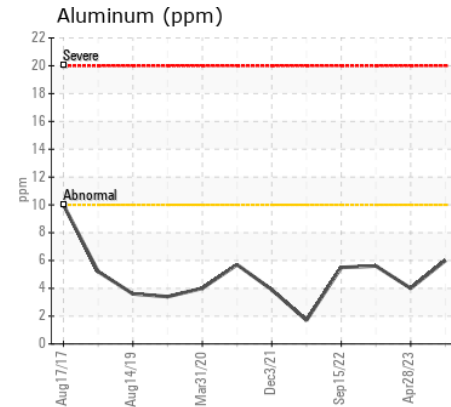
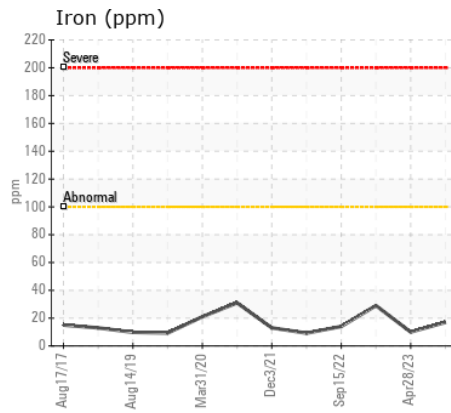
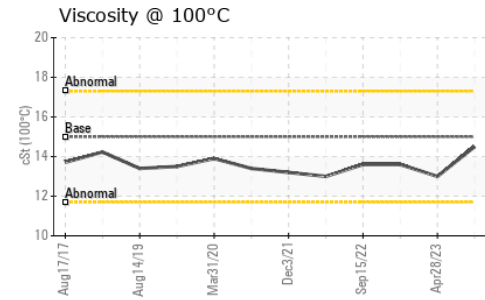
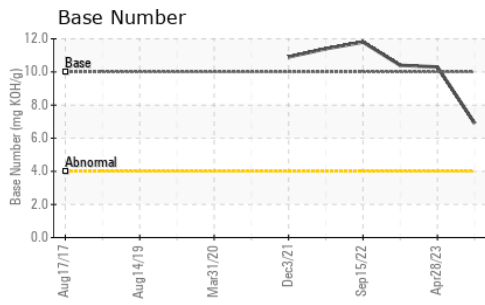
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	5	10
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	2	1
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>1.1</b>	0.3	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>13.6</b>	7.8	10.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>23.9</b>	21.4	21.9
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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		<b>0</b>	2	4
Boron	ppm	ASTM D5185m	2.5	<b>17</b>	28	25
Barium	ppm	ASTM D5185m	0.0	<b>3</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>72</b>	47	46
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	256	<b>181</b>	587	644
Calcium	ppm	ASTM D5185m	2057	<b>2105</b>	1610	1666
Phosphorus	ppm	ASTM D5185m	935	<b>1011</b>	981	978
Zinc	ppm	ASTM D5185m	1223	<b>1190</b>	1216	1189
Sulfur	ppm	ASTM D5185m	4079	<b>3761</b>	3256	3644
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.3</b>	19.7	20.3
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>6.9</b>	10.3	10.4
Visc @ 100°C	cSt	ASTM D445	15.0	<b>14.5</b>	13.0	13.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP428553 **Received** : 08 Feb 2024  
**Lab Number** : 06083319 **Tested** : 08 Feb 2024  
**Unique Number** : 10870764 **Diagnosed** : 08 Feb 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**RIPA AND ASSOCIATES**  
 10149 FISHER AVENUE  
 TAMPA, FL  
 US 33619

Contact: PM Services  
 PMServices@ripaconstruction.com

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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 F: