



# VOLVO

## OIL ANALYSIS REPORT

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



Area  
**[SPM660416-10]**  
 Machine Id  
**VOLVO L180H 5035**  
 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>VCP442669</b>	VCP422082	VCP402835
Sample Date		Client Info		<b>22 Jan 2024</b>	05 Dec 2023	24 Oct 2023
Machine Age	hrs	Client Info		<b>12634</b>	12241	11898
Oil Age	hrs	Client Info		<b>0</b>	0	0
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>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>3</b>	1	4
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	<1	3
Lead	ppm	ASTM D5185m	>20	<b>1</b>	0	<1
Copper	ppm	ASTM D5185m	>15	<b>2</b>	<1	<1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

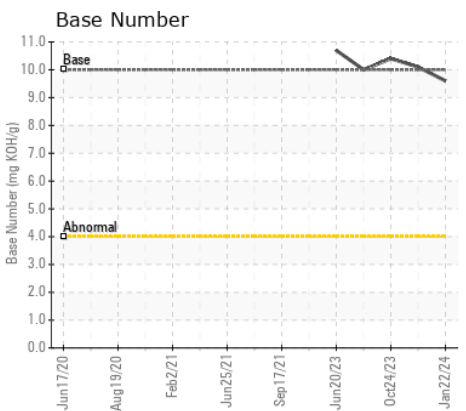
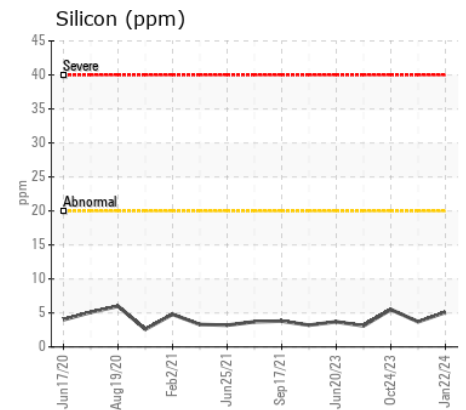
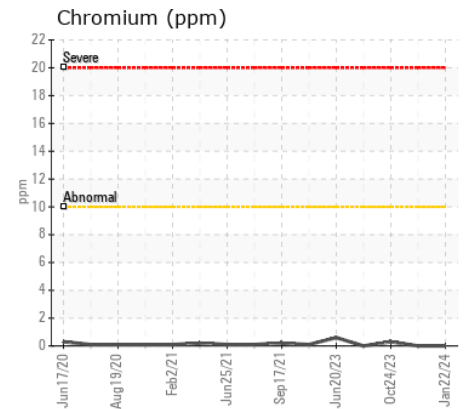
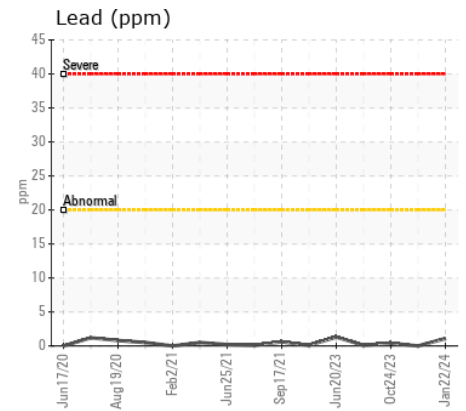
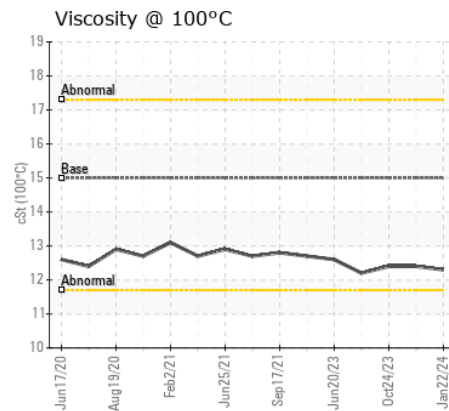
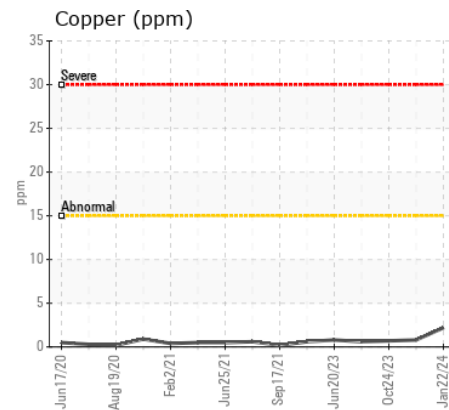
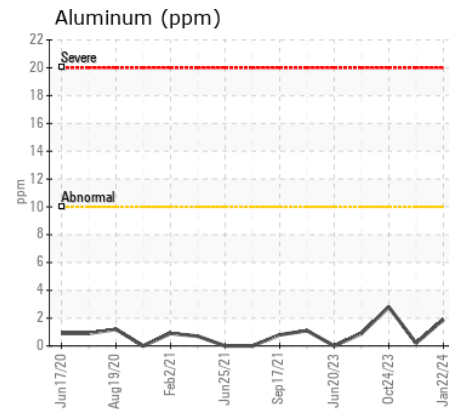
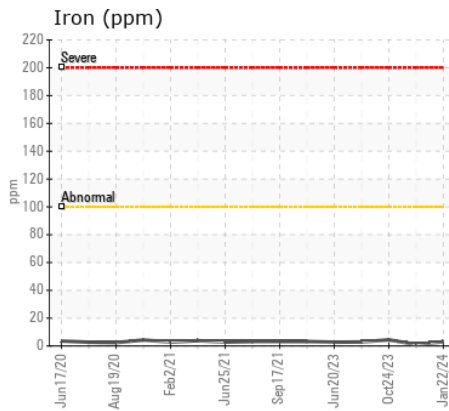
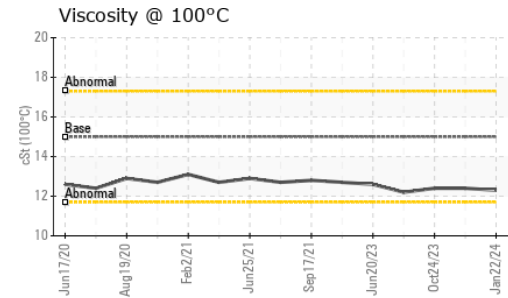
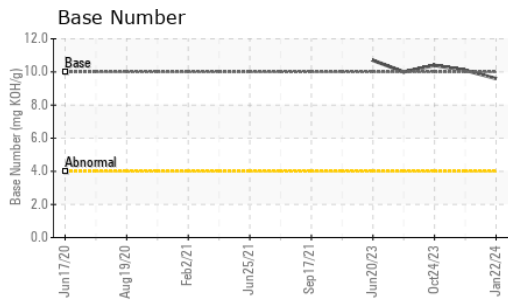
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	3
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>0.2</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.0</b>	5.7	6.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.3</b>	21.1	21.6
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>2</b>	<1	3
Boron	ppm	ASTM D5185m	2.5	<b>36</b>	55	48
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>43</b>	42	49
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	256	<b>478</b>	473	493
Calcium	ppm	ASTM D5185m	2057	<b>1523</b>	1604	1546
Phosphorus	ppm	ASTM D5185m	935	<b>908</b>	885	954
Zinc	ppm	ASTM D5185m	1223	<b>1074</b>	1049	1054
Sulfur	ppm	ASTM D5185m	4079	<b>2872</b>	3316	3355
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	19.1	19.6
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.6</b>	10.1	10.4
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.3</b>	12.4	12.4



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP442669 **Received** : 31 Jan 2024  
**Lab Number** : 06075468 **Diagnosed** : 01 Feb 2024  
**Unique Number** : 10857559 **Diagnostician** : Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**ALTA EQUIPMENT COMPANY**  
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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)