



# VOLVO

## OIL ANALYSIS REPORT

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



Area

[578187]

Machine Id

**VOLVO L220H 3197**

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>VCP430300</b>	VCP405636	VCP359860
Sample Date		Client Info		<b>20 Jun 2024</b>	28 Mar 2023	20 Jun 2022
Machine Age	hrs	Client Info		<b>9053</b>	6366	4933
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>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>15</b>	17	16
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	4
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>1</b>	2	2
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m	>15	<b>&lt;1</b>	2	4
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

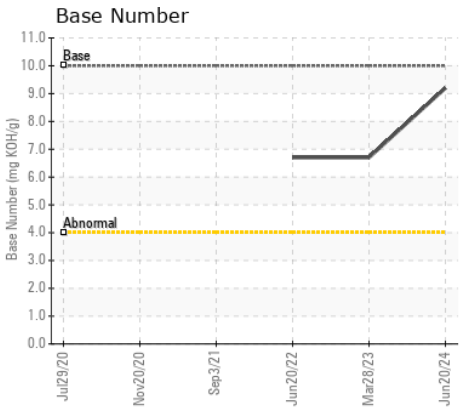
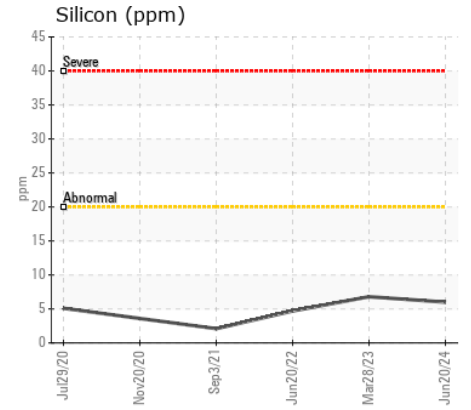
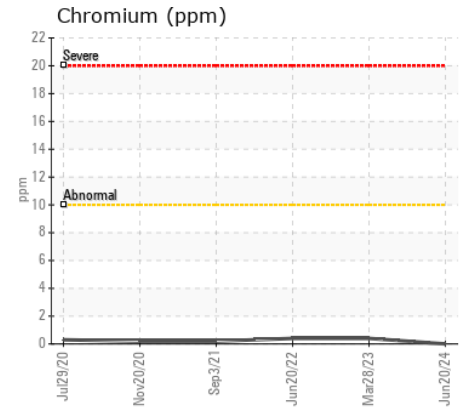
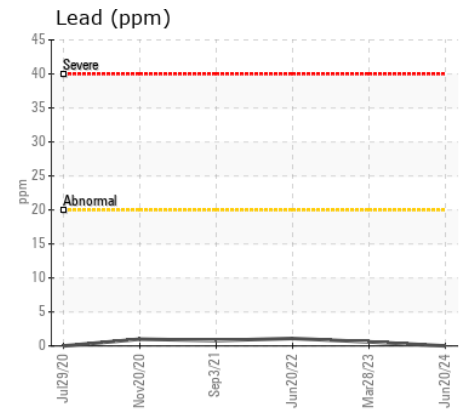
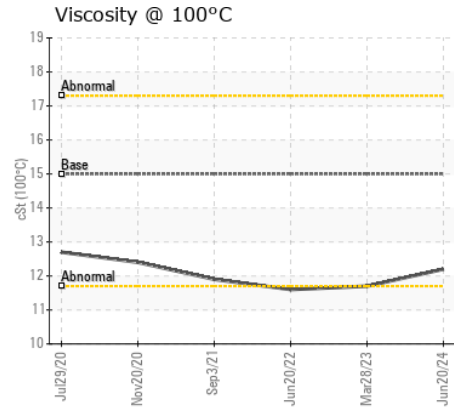
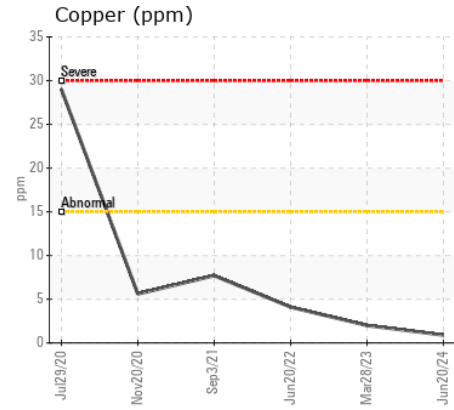
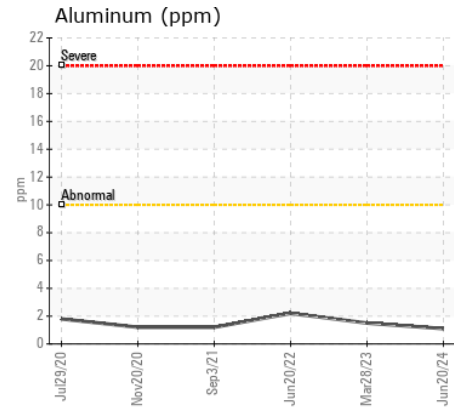
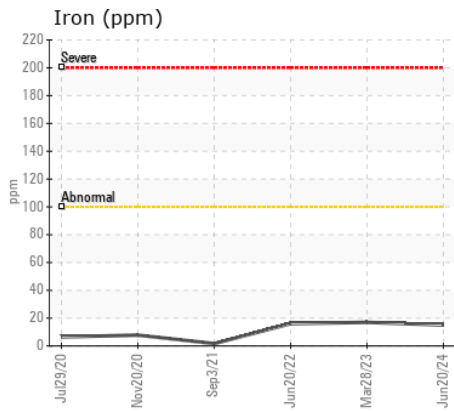
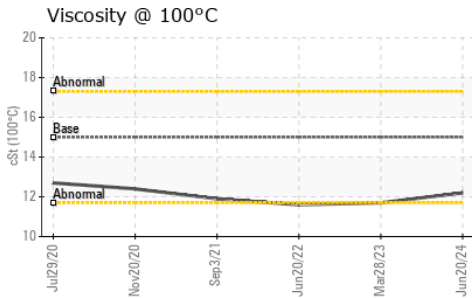
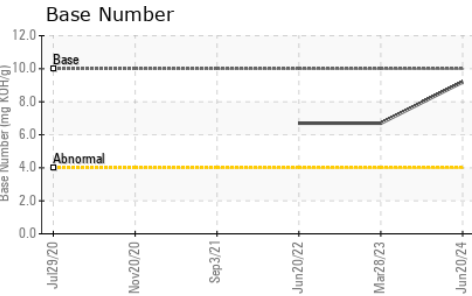
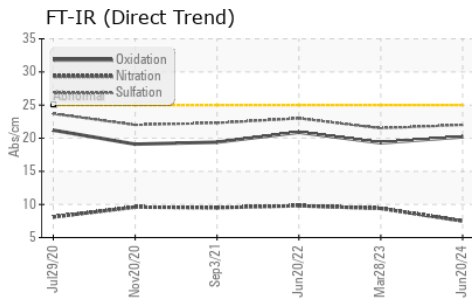
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>6</b>	7	5
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	2	3
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	2.2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	9.4	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.0</b>	21.5	23.0
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	<1
Boron	ppm	ASTM D5185m	2.5	<b>37</b>	25	22
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>44</b>	54	40
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	256	<b>531</b>	480	451
Calcium	ppm	ASTM D5185m	2057	<b>1764</b>	1544	1441
Phosphorus	ppm	ASTM D5185m	935	<b>1004</b>	887	806
Zinc	ppm	ASTM D5185m	1223	<b>1174</b>	1059	1036
Sulfur	ppm	ASTM D5185m	4079	<b>3412</b>	2846	2749
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.2</b>	19.3	20.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.2</b>	6.7	6.7
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.2</b>	11.7	11.6



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP430300 **Received** : 24 Jun 2024  
**Lab Number** : 06217742 **Tested** : 25 Jun 2024  
**Unique Number** : 11090606 **Diagnosed** : 25 Jun 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**CALLANAN**  
 RT 32 677 FLATBUSH RD  
 EAST KINGSTON, NY  
 US 12401  
 Contact:

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: