



# VOLVO

## OIL ANALYSIS REPORT

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



Machine Id  
**VOLVO L110H 631978**

Component  
**Hydraulic System**

Fluid  
**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP446022</b>	VCP414756	VCP381365
Sample Date		Client Info		<b>19 Mar 2024</b>	31 Aug 2023	08 Dec 2022
Machine Age	hrs	Client Info		<b>5374</b>	4344	3188
Oil Age	hrs	Client Info		<b>0</b>	4344	500
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Filter Changed		Client Info		<b>Not Changed</b>	Changed	Not Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>4</b>	8	9
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Lead	ppm	ASTM D5185m	>20	<b>1</b>	2	2
Copper	ppm	ASTM D5185m	>150	<b>2</b>	2	4
Tin	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

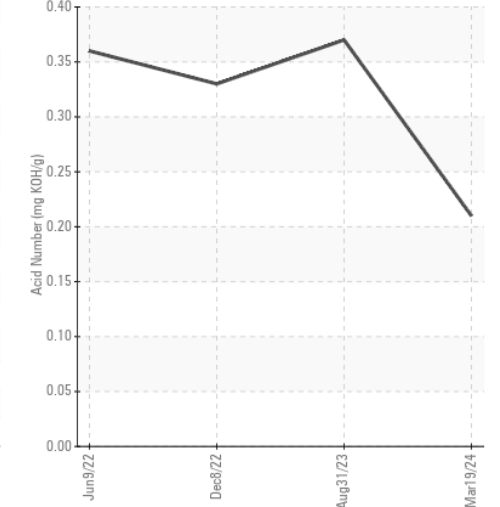
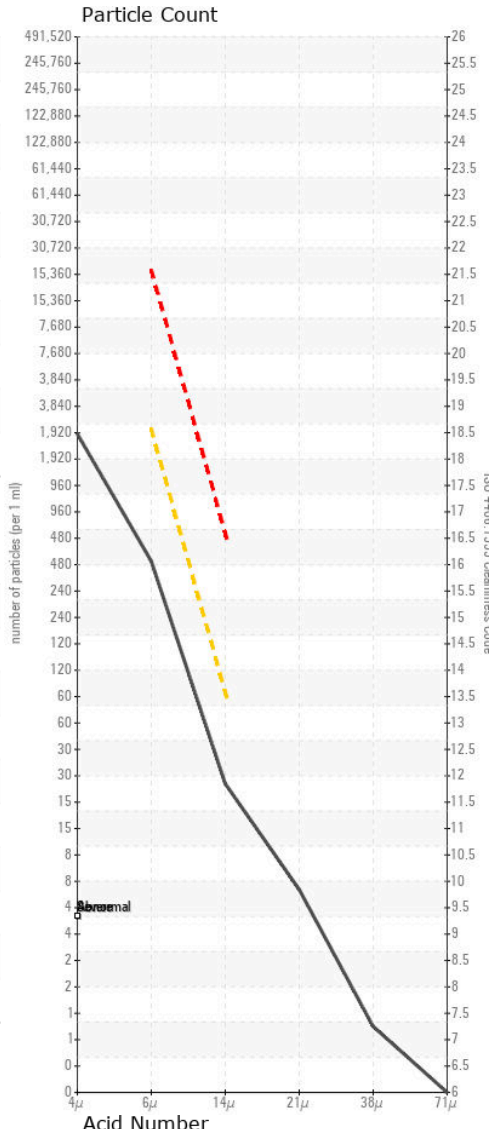
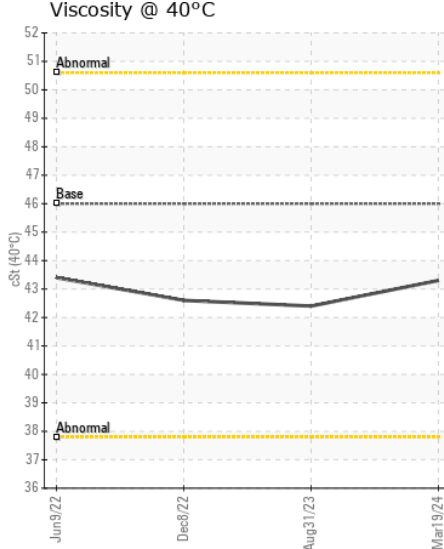
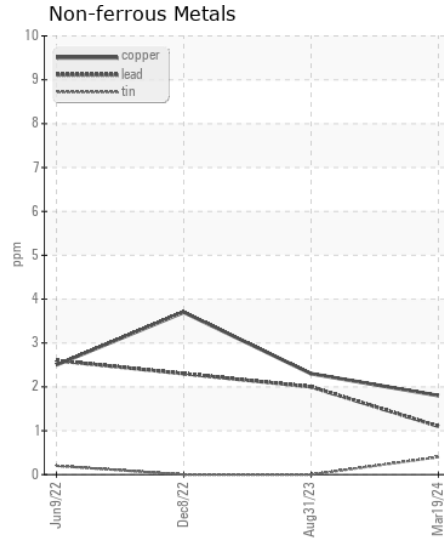
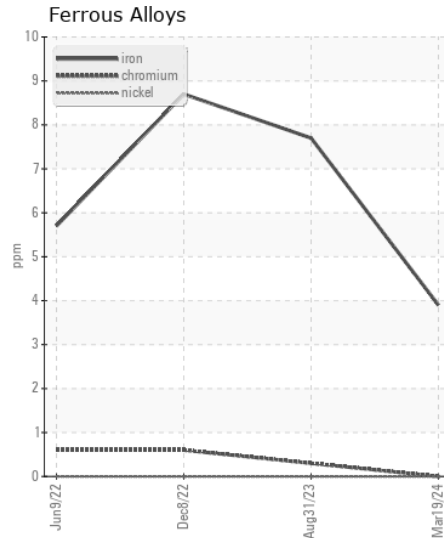
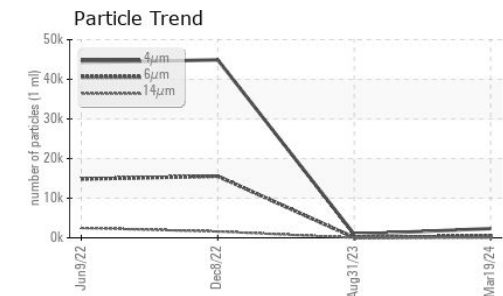
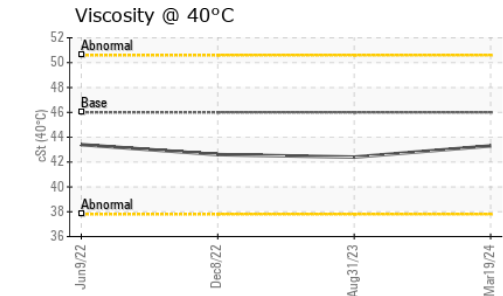
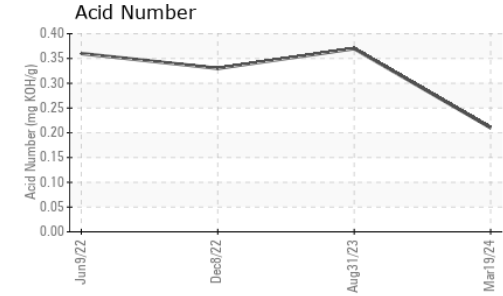
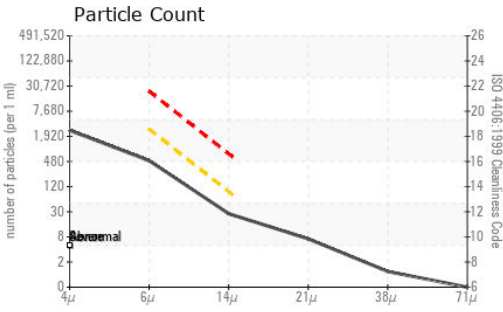
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>20	<b>3</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	<1	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647		<b>2337</b>	898	44916
Particles >6µm		ASTM D7647	>2500	<b>441</b>	61	▲ 15554
Particles >14µm		ASTM D7647	>80	<b>24</b>	5	▲ 1592
Particles >21µm		ASTM D7647	>20	<b>6</b>	2	▲ 298
Particles >38µm		ASTM D7647	>4	<b>1</b>	0	▲ 10
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>-/18/13	<b>18/16/12</b>	17/13/10	▲ 23/21/18
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	LIGHT
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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	1	2
Boron	ppm	ASTM D5185m	14	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	<1
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	0	0
Magnesium	ppm	ASTM D5185m	2.6	<b>5</b>	4	3
Calcium	ppm	ASTM D5185m	49	<b>72</b>	63	65
Phosphorus	ppm	ASTM D5185m	354	<b>332</b>	341	317
Zinc	ppm	ASTM D5185m	419	<b>437</b>	432	391
Sulfur	ppm	ASTM D5185m	3719	<b>2531</b>	2155	2256
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.21</b>	0.37	0.33
Visc @ 40°C	cSt	ASTM D445	46	<b>43.3</b>	42.4	42.6



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP446022 **Received** : 22 May 2024  
**Lab Number** : 06187579 **Tested** : 23 May 2024  
**Unique Number** : 11044331 **Diagnosed** : 23 May 2024 - Wes Davis  
**Test Package** : MOB 2

**RIPA AND ASSOCIATES**  
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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)