



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Machine Id
VOLVO L110H 631332
Component
Hydraulic System
Fluid
VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

RECOMMENDATION

We advise that you perform a filter service, and use off-line filtration to improve the cleanliness of the system fluid. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP446089	VCP414721	VCP400141
Sample Date		Client Info		17 Apr 2024	06 Sep 2023	01 Dec 2022
Machine Age	hrs	Client Info		10389	9270	8127
Oil Age	hrs	Client Info		0	3270	4000
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	Changed
Filter Changed		Client Info		Changed	Not Changd	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	9	7	13
Chromium	ppm	ASTM D5185m	>20	3	2	4
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m		<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	2
Lead	ppm	ASTM D5185m	>20	2	0	2
Copper	ppm	ASTM D5185m	>150	2	2	4
Tin	ppm	ASTM D5185m	>20	<1	0	<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

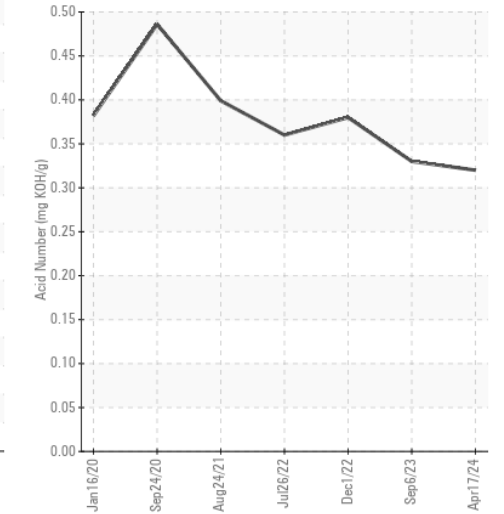
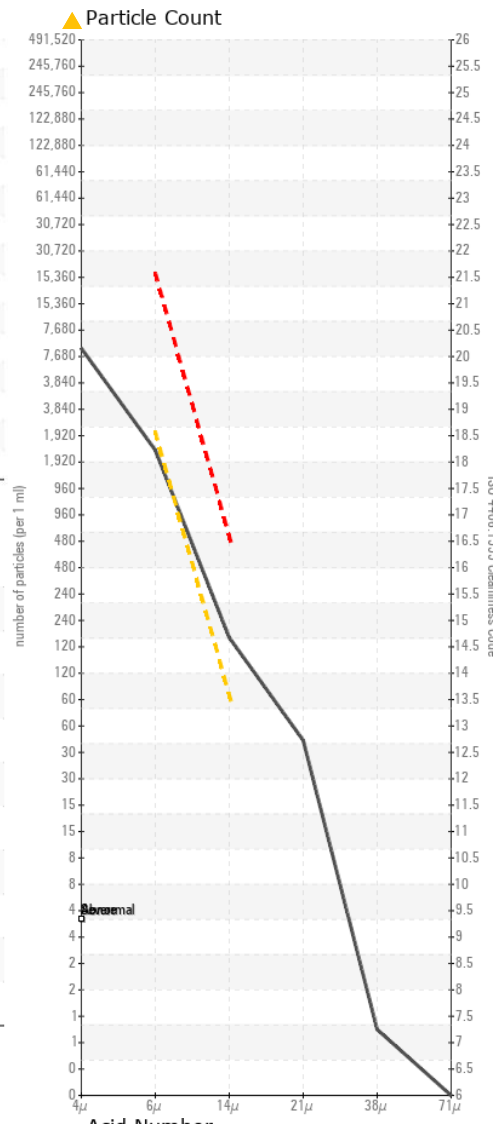
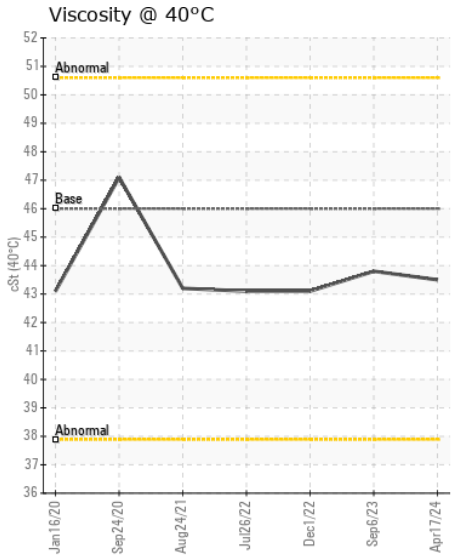
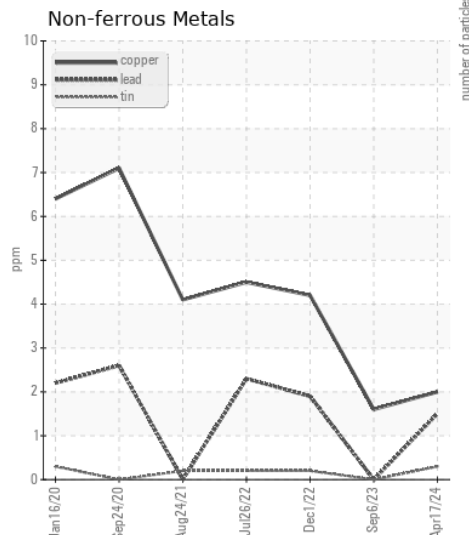
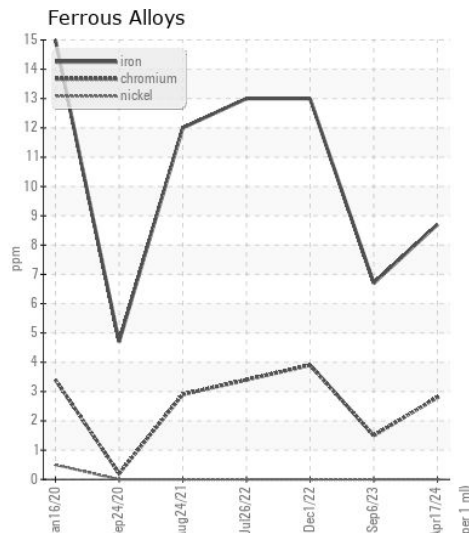
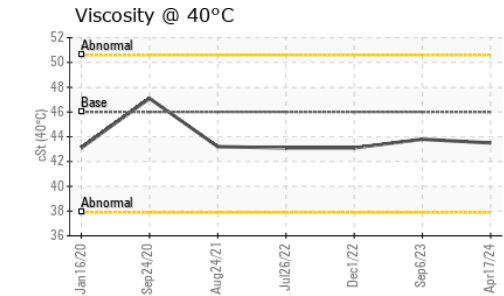
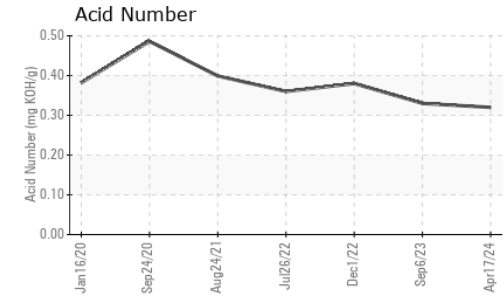
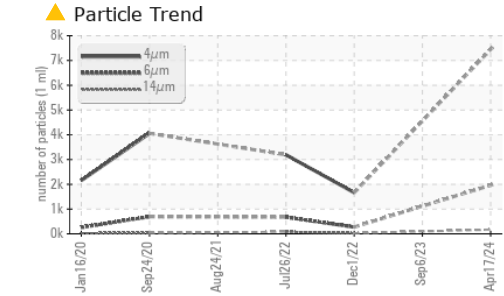
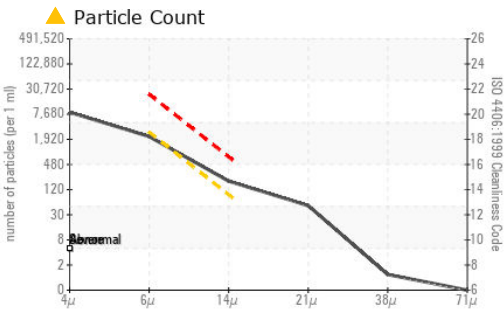
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	5	4	5
Potassium	ppm	ASTM D5185m	>20	2	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647		7446	---	1663
Particles >6µm		ASTM D7647	>2500	1963	---	274
Particles >14µm		ASTM D7647	>80	▲ 169	---	22
Particles >21µm		ASTM D7647	>20	▲ 44	---	6
Particles >38µm		ASTM D7647	>4	1	---	2
Particles >71µm		ASTM D7647	>3	0	---	1
Oil Cleanliness		ISO 4406 (c)	>-/18/13	▲ 20/18/15	---	18/15/12
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ HEAVY	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 AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		3	1	3
Boron	ppm	ASTM D5185m	14	0	0	2
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<1	0	<1
Manganese	ppm	ASTM D5185m	0.0	<1	0	0
Magnesium	ppm	ASTM D5185m	2.6	6	8	21
Calcium	ppm	ASTM D5185m	49	77	69	94
Phosphorus	ppm	ASTM D5185m	354	342	338	332
Zinc	ppm	ASTM D5185m	419	430	426	424
Sulfur	ppm	ASTM D5185m	3719	2924	2517	3421
Acid Number (AN)	mg KOH/g	ASTM D8045		0.32	0.33	0.38
Visc @ 40°C	cSt	ASTM D445	46	43.5	43.8	43.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP446089 **Received** : 29 May 2024
Lab Number : 06193928 **Tested** : 30 May 2024
Unique Number : 11056051 **Diagnosed** : 30 May 2024 - Wes Davis
Test Package : MOB 2

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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