



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area

[701481]

Machine Id

VOLVO A45G 352411

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		VCP446360	VCP431263	VCP427062
Sample Date		Client Info		10 Apr 2024	22 Nov 2023	19 Jun 2023
Machine Age	hrs	Client Info		6878	6275	5591
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changed	Not Changed	Changed
Filter Changed		Client Info		Not Changed	Not Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

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

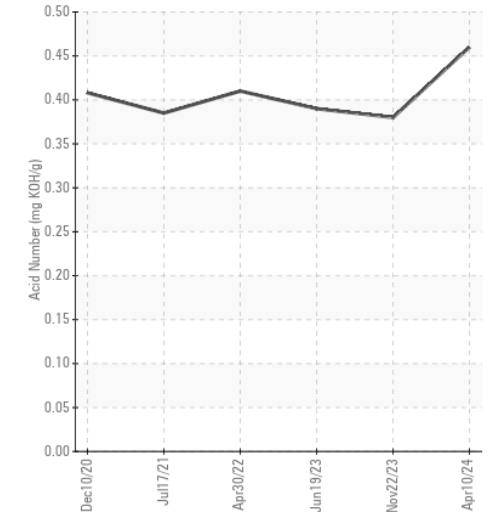
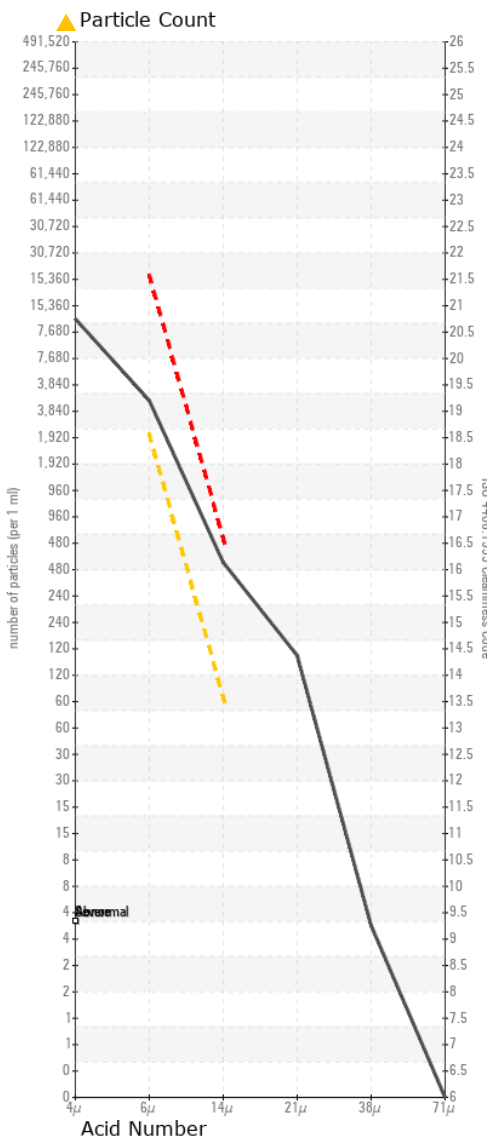
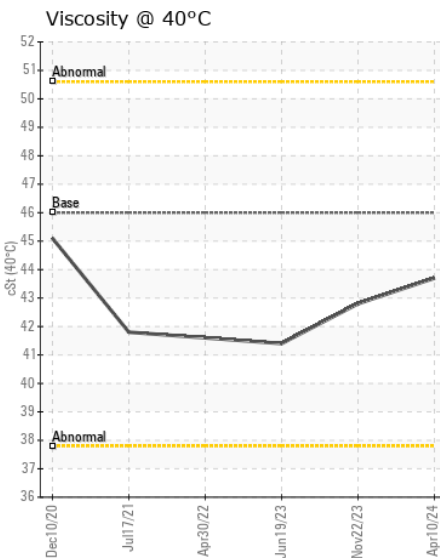
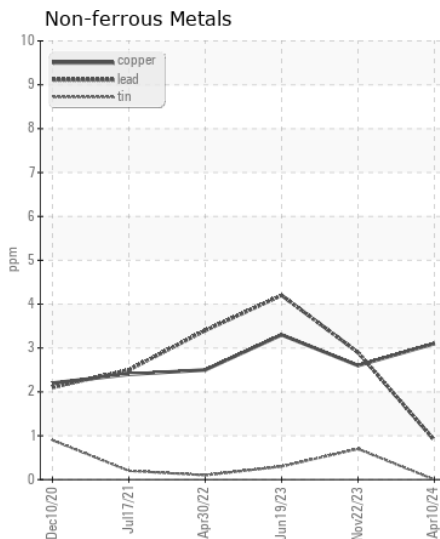
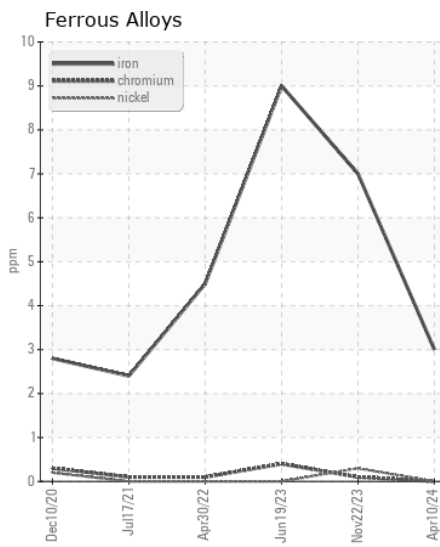
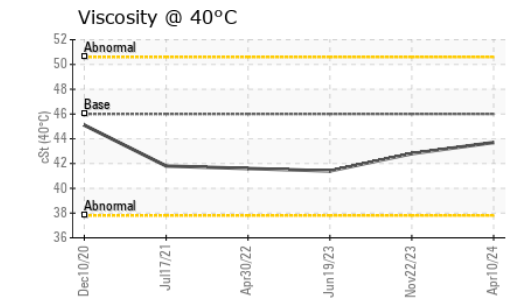
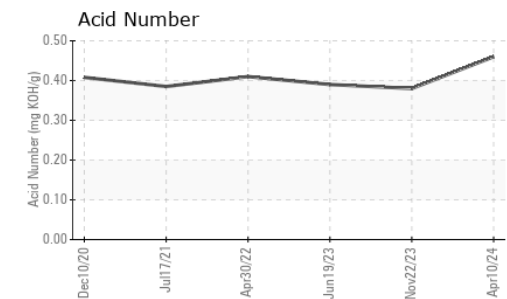
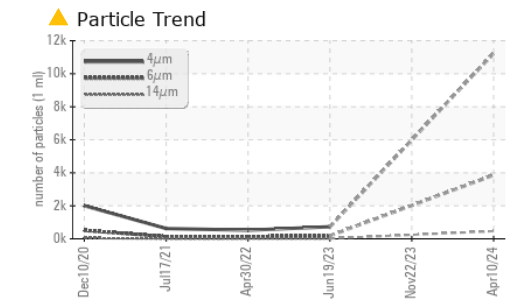
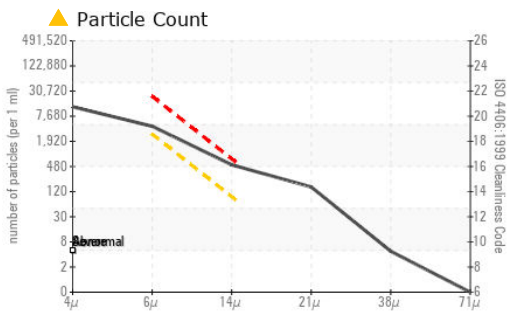
There is a moderate amount of particulates (2 to 100 microns in size) present in the oil. The system cleanliness is above the acceptable limit for the target ISO 4406 cleanliness code.

Silicon	ppm	ASTM D5185m	>20	3	4	6
Potassium	ppm	ASTM D5185m	>20	0	2	2
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647		11234	---	730
Particles >6µm		ASTM D7647	>2500	3856	---	185
Particles >14µm		ASTM D7647	>80	463	---	15
Particles >21µm		ASTM D7647	>20	137	---	3
Particles >38µm		ASTM D7647	>4	4	---	1
Particles >71µm		ASTM D7647	>3	0	---	1
Oil Cleanliness		ISO 4406 (c)	>-/18/13	21/19/16	---	17/15/11
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	LIGHT	MODER	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		<1	0	4
Boron	ppm	ASTM D5185m	14	10	<1	0
Barium	ppm	ASTM D5185m	0.0	0	0	<1
Molybdenum	ppm	ASTM D5185m	0.0	2	2	1
Manganese	ppm	ASTM D5185m	0.0	0	<1	<1
Magnesium	ppm	ASTM D5185m	2.6	17	7	11
Calcium	ppm	ASTM D5185m	49	263	90	94
Phosphorus	ppm	ASTM D5185m	354	386	294	317
Zinc	ppm	ASTM D5185m	419	495	428	402
Sulfur	ppm	ASTM D5185m	3719	2325	1625	1003
Acid Number (AN)	mg KOH/g	ASTM D8045		0.46	0.38	0.39
Visc @ 40°C	cSt	ASTM D445	46	43.7	42.8	41.4



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP446360
Lab Number : 06155819
Unique Number : 10991242
Test Package : MOB 2

Received : 22 Apr 2024
Tested : 23 Apr 2024
Diagnosed : 23 Apr 2024 - Wes Davis

ORANGE COUNTY SOLID WASTE
 5901 YOUNG PINE ROAD
 ORLANDO, FL
 US 32829
 Contact: MICHAEL BEEBE
 michael.beebe@ocfl.net
 T: (407)836-6652
 F: (407)836-6650

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)