



# VOLVO

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ATTENTION
FLUID CONDITION	NORMAL

Machine Id  
**VOLVO EC145EL 314052**

Component  
**Hydraulic System**

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

### RECOMMENDATION

We recommend you service the filters on this component. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP443010</b>	VCP411632	VCP359403
Sample Date		Client Info		<b>08 Jun 2024</b>	01 Jun 2023	03 May 2022
Machine Age	hrs	Client Info		<b>3495</b>	2501	1470
Oil Age	hrs	Client Info		<b>0</b>	0	1470
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	Not Changd
Sample Status				<b>ATTENTION</b>	ATTENTION	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>20	<b>5</b>	3	1
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	0	0
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	<1
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Lead	ppm	ASTM D5185m	>10	<b>0</b>	0	1
Copper	ppm	ASTM D5185m	>75	<b>32</b>	36	54
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

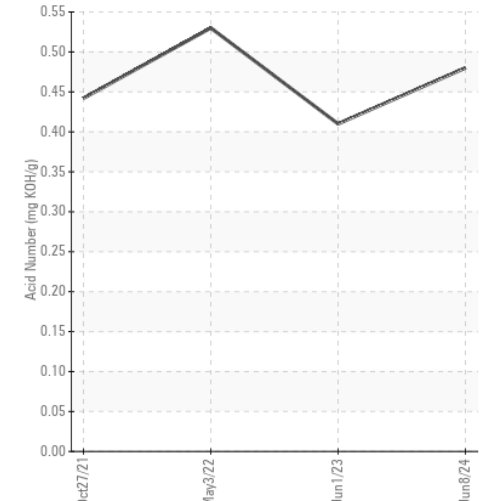
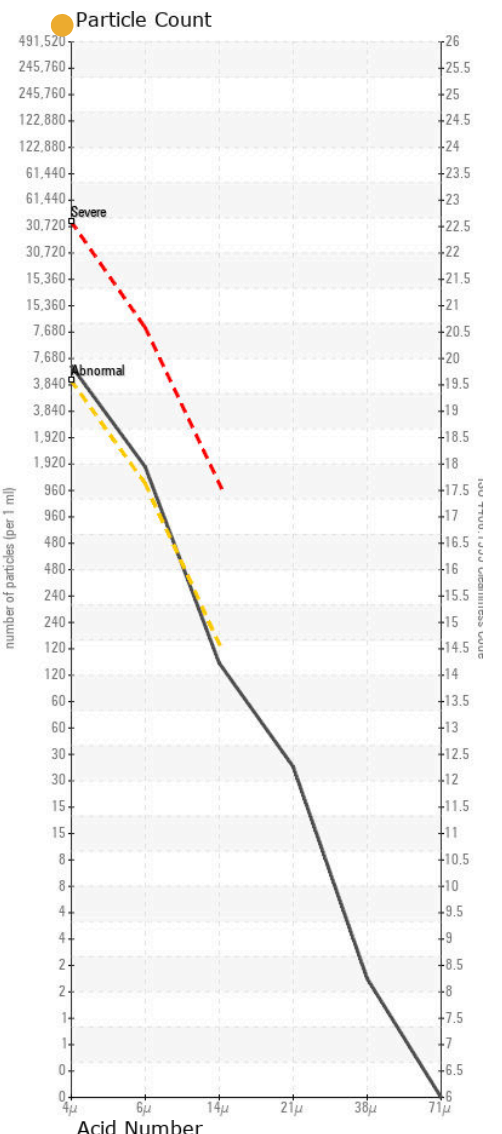
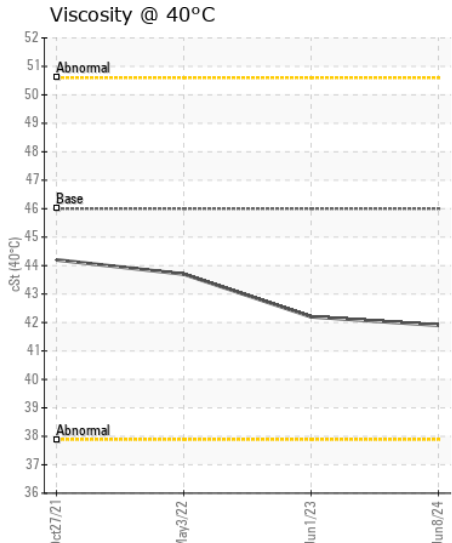
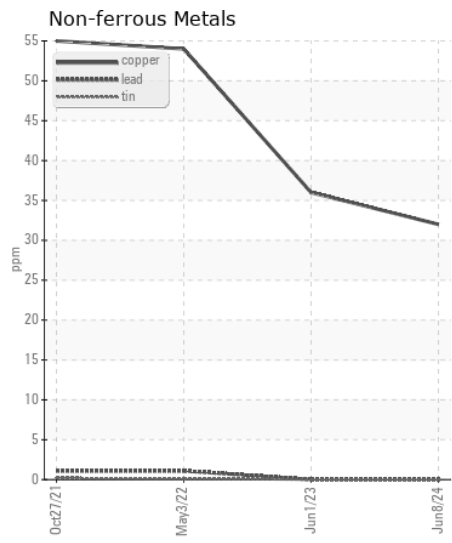
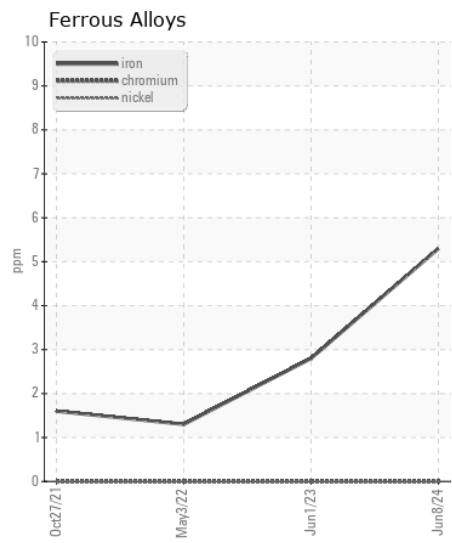
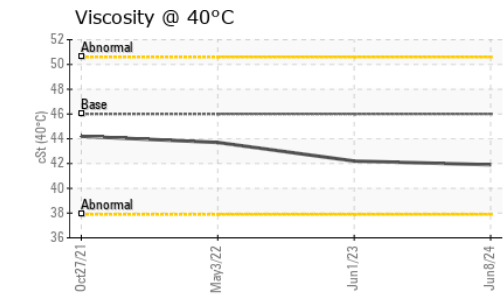
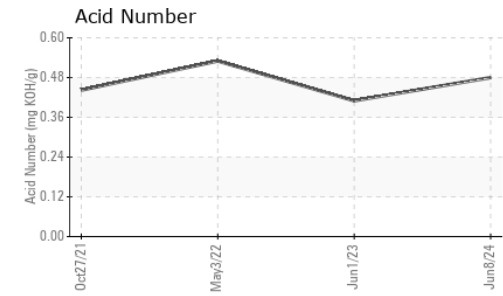
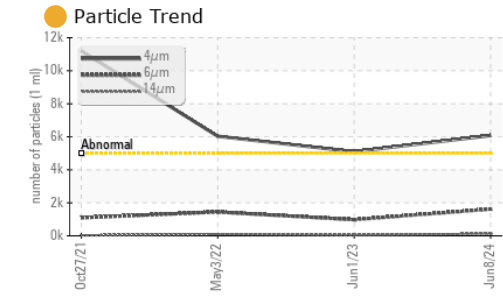
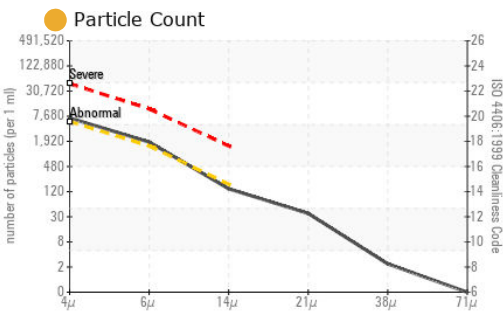
There is a light amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	2	2
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>5000	<b>6079</b>	5096	6031
Particles >6µm		ASTM D7647	>1300	<b>1616</b>	977	1445
Particles >14µm		ASTM D7647	>160	<b>124</b>	39	100
Particles >21µm		ASTM D7647	>40	<b>32</b>	7	22
Particles >38µm		ASTM D7647	>10	<b>2</b>	0	2
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>19/17/14	<b>20/18/14</b>	20/17/12	20/18/14
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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	<1	<1
Boron	ppm	ASTM D5185m	14	<b>0</b>	0	<1
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>2</b>	3	0
Manganese	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	2.6	<b>5</b>	9	<1
Calcium	ppm	ASTM D5185m	49	<b>84</b>	100	59
Phosphorus	ppm	ASTM D5185m	354	<b>371</b>	373	383
Zinc	ppm	ASTM D5185m	419	<b>454</b>	411	432
Sulfur	ppm	ASTM D5185m	3719	<b>1937</b>	1713	851
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.48</b>	0.41	0.53
Visc @ 40°C	cSt	ASTM D445	46	<b>41.9</b>	42.2	43.7



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP443010 **Received** : 14 Jun 2024  
**Lab Number** : 06210005 **Tested** : 17 Jun 2024  
**Unique Number** : 11082869 **Diagnosed** : 17 Jun 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)