



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
VOLVO A45G 342399
Component
Diesel Engine
Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ML0001892	VCP434913	VCP368490
Sample Date		Client Info		09 May 2024	05 Sep 2023	29 Nov 2022
Machine Age	hrs	Client Info		8339	7362	6131
Oil Age	hrs	Client Info		977	500	500
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	ABNORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	20	19	14
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	2	▲ 5	▲ 8
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	4	4	2
Lead	ppm	ASTM D5185m	>40	1	3	<1
Copper	ppm	ASTM D5185m	>330	7	14	85
Tin	ppm	ASTM D5185m	>15	0	2	2
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

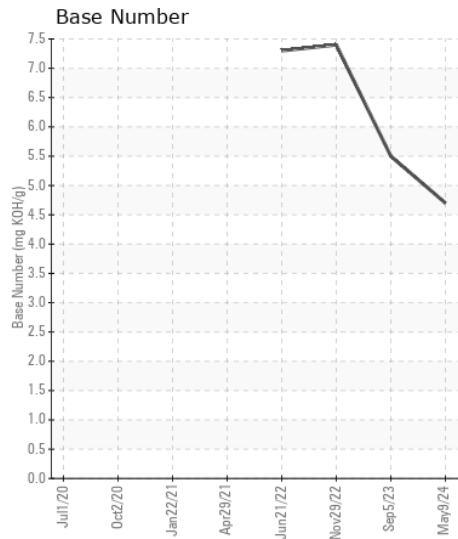
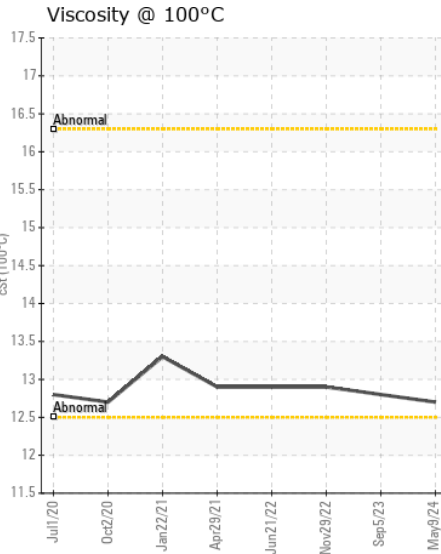
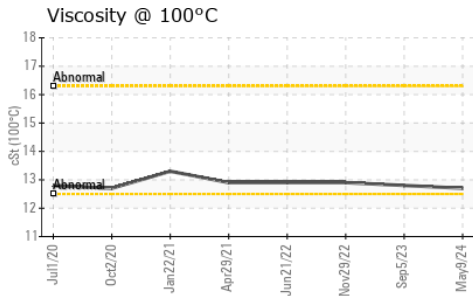
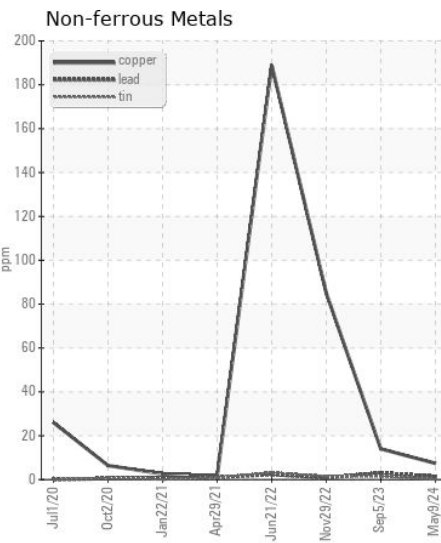
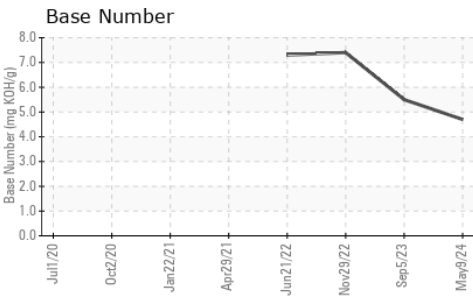
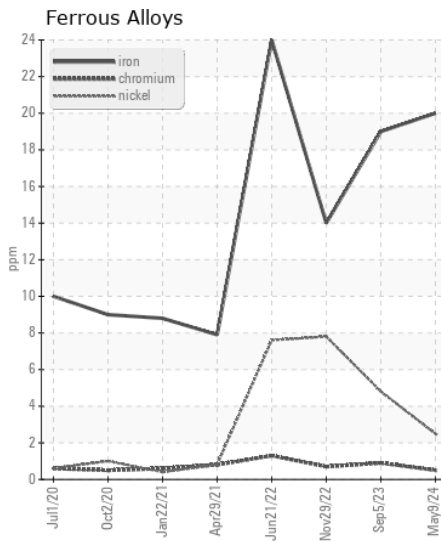
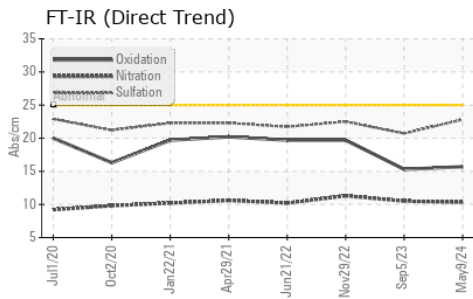
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	7	10
Potassium	ppm	ASTM D5185m	>20	0	1	0
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.9	0.8	0.5
Nitration	Abs/cm	*ASTM D7624	>20	10.3	10.5	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.8	20.7	22.5
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	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	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		5	3	3
Boron	ppm	ASTM D5185m		0	13	25
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		81	85	53
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		50	145	785
Calcium	ppm	ASTM D5185m		2309	2197	1246
Phosphorus	ppm	ASTM D5185m		897	898	723
Zinc	ppm	ASTM D5185m		1079	1173	839
Sulfur	ppm	ASTM D5185m		3956	3998	2594
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.7	15.3	19.7
Base Number (BN)	mg KOH/g	ASTM D2896		4.7	5.5	7.4
Visc @ 100°C	cSt	ASTM D445		12.7	12.8	12.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001892 **Received** : 14 May 2024
Lab Number : 06178312 **Tested** : 14 May 2024
Unique Number : 11029638 **Diagnosed** : 16 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: TBN)

MCCLEUNG-LOGAN EQUIPMENT CO - RICHMOND
 1345 MOUNTAIN ROAD
 GLEN ALLEN, VA
 US 23060
 Contact: KYLE RATLIFFE
 KRATLIFFE@MCCLEUNG-LOGAN.COM
 T:
 F: (804)266-1611

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)