



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
VOLVO A60H 350341

Component
Front Diesel Engine

Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (14 GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ML0001996	ML0000429	---
Sample Date		Client Info		20 May 2024	09 Feb 2024	---
Machine Age	hrs	Client Info		1374	749	---
Oil Age	hrs	Client Info		874	749	---
Filter Age	hrs	Client Info		874	749	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ATTENTION	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	18	27	---
Chromium	ppm	ASTM D5185m	>20	2	2	---
Nickel	ppm	ASTM D5185m	>2	5	6	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>2	2	0	---
Aluminum	ppm	ASTM D5185m	>25	6	4	---
Lead	ppm	ASTM D5185m	>40	1	0	---
Copper	ppm	ASTM D5185m	>330	100	▲ 352	---
Tin	ppm	ASTM D5185m	>15	3	6	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

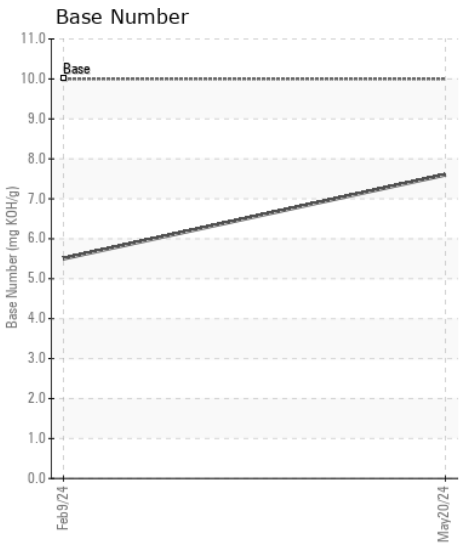
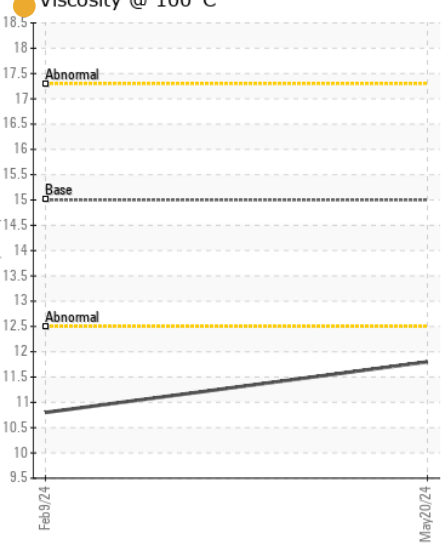
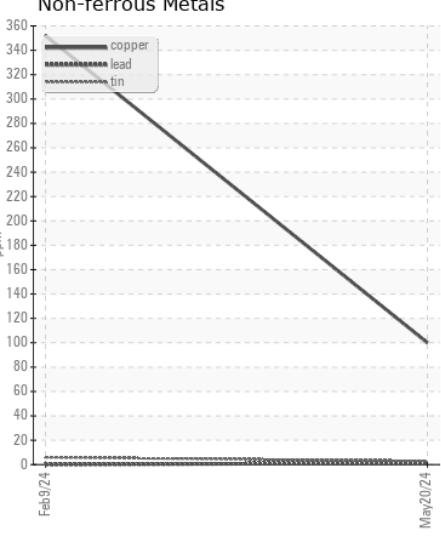
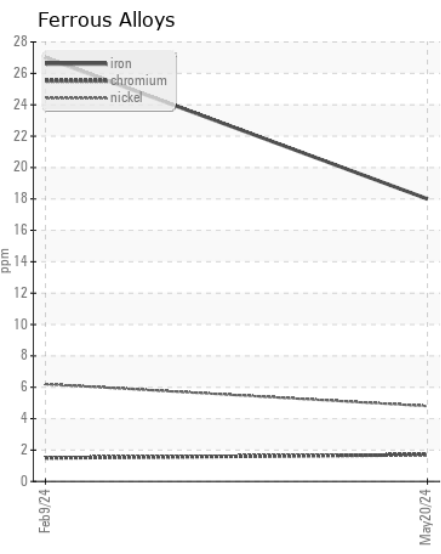
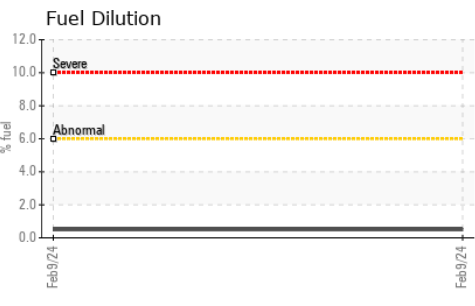
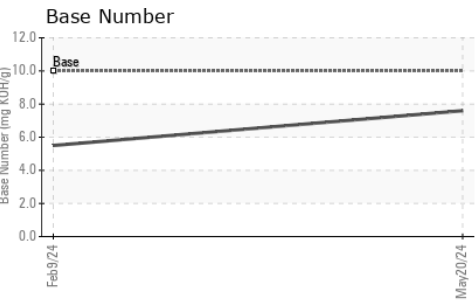
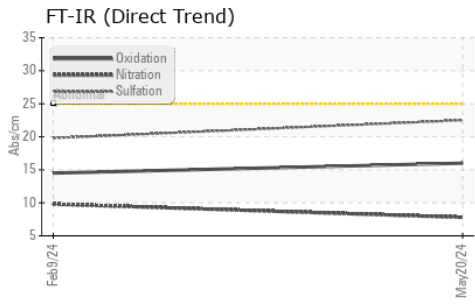
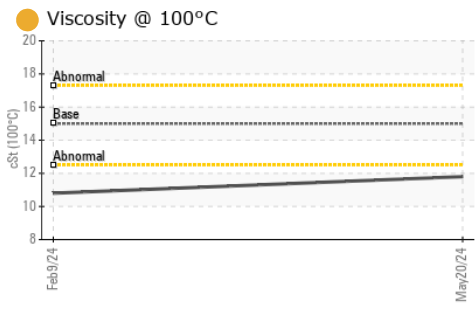
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	12	▲ 27	---
Potassium	ppm	ASTM D5185m	>20	3	<1	---
Fuel	%	ASTM D3524	>6.0	<1.0	0.5	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.4	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	7.8	9.8	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.5	19.8	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	---

FLUID CONDITION

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m		4	2	---
Boron	ppm	ASTM D5185m	2.5	195	44	---
Barium	ppm	ASTM D5185m	0.0	0	<1	---
Molybdenum	ppm	ASTM D5185m	0.7	117	87	---
Manganese	ppm	ASTM D5185m	0.0	1	2	---
Magnesium	ppm	ASTM D5185m	256	696	28	---
Calcium	ppm	ASTM D5185m	2057	1657	2239	---
Phosphorus	ppm	ASTM D5185m	935	828	1047	---
Zinc	ppm	ASTM D5185m	1223	1107	1231	---
Sulfur	ppm	ASTM D5185m	4079	3255	3742	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.0	14.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	7.6	5.5	---
Visc @ 100°C	cSt	ASTM D445	15.0	● 11.8	● 10.8	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001996 **Received** : 24 May 2024
Lab Number : 06190305 **Tested** : 29 May 2024
Unique Number : 11047057 **Diagnosed** : 29 May 2024 - Don Baldrige
Test Package : CONST (Additional Tests: FuelDilution, TBN)

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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)