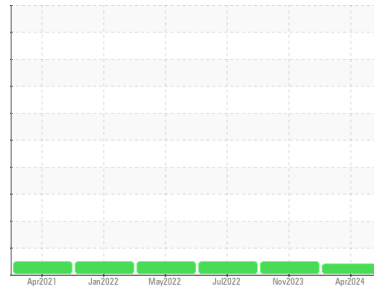


OIL ANALYSIS REPORT



Machine Id
VOLVO EC350E 310647
 Component
Diesel Engine
 Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

Sample Rating Trend



VISCOSITY



DIAGNOSIS

Recommendation
 Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Wear
 All component wear rates are normal.

Contamination
 Fuel content negligible. No other contaminants were detected in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		ML0000693	VCP411813	VCP338140
Sample Date	Client Info		18 Apr 2024	17 Nov 2023	30 Jul 2022
Machine Age	hrs	Client Info	4946	4390	3873
Oil Age	hrs	Client Info	500	0	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			ATTENTION	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.1	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	4	6	2
Chromium	ppm	ASTM D5185m >10	0	0	0
Nickel	ppm	ASTM D5185m >10	0	<1	0
Titanium	ppm	ASTM D5185m	0	<1	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >10	<1	1	1
Lead	ppm	ASTM D5185m >20	0	0	<1
Copper	ppm	ASTM D5185m >15	1	5	5
Tin	ppm	ASTM D5185m >10	0	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2.5	55	29	67
Barium	ppm	ASTM D5185m 0.0	2	0	0
Molybdenum	ppm	ASTM D5185m 0.7	77	51	36
Manganese	ppm	ASTM D5185m 0.0	0	<1	<1
Magnesium	ppm	ASTM D5185m 256	862	683	455
Calcium	ppm	ASTM D5185m 2057	1275	1277	1550
Phosphorus	ppm	ASTM D5185m 935	1028	651	881
Zinc	ppm	ASTM D5185m 1223	1233	888	1081
Sulfur	ppm	ASTM D5185m 4079	3724	2474	2806

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	4	5	5
Sodium	ppm	ASTM D5185m	<1	<1	3
Potassium	ppm	ASTM D5185m >20	0	2	2
Fuel	%	ASTM D3524 >6.0	1.6	<1.0	<1.0

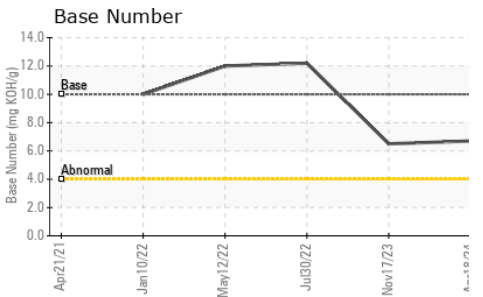
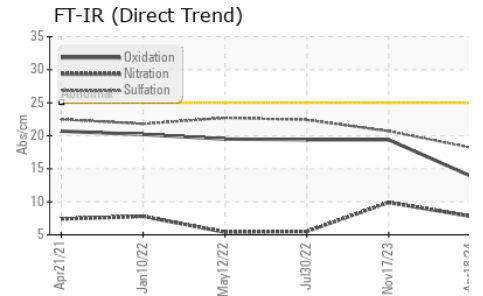
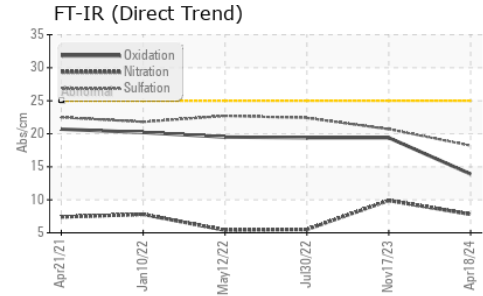
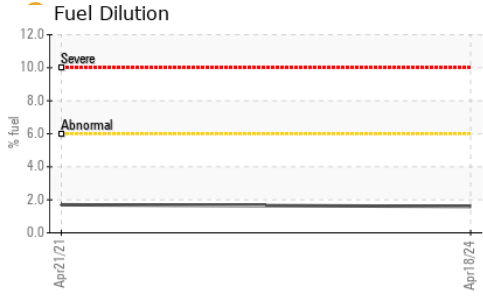
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624 >20	7.8	9.9	5.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.2	20.7	22.4

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.9	19.4	19.4
Base Number (BN)	mg KOH/g	ASTM D2896 10	6.7	6.5	12.2

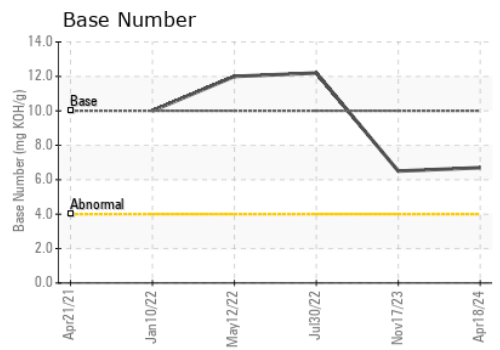
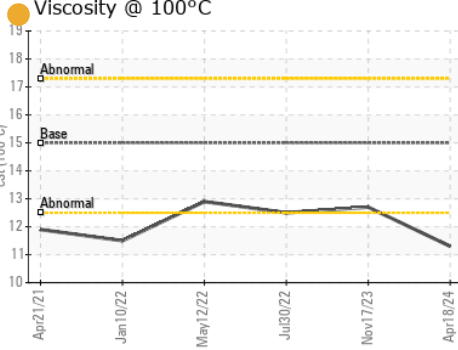
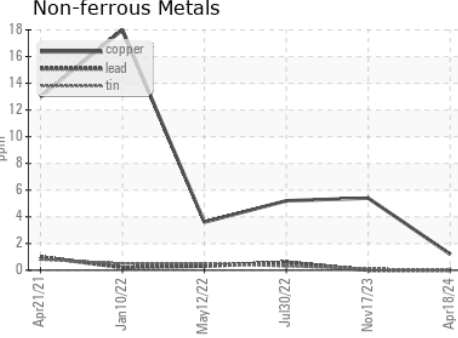
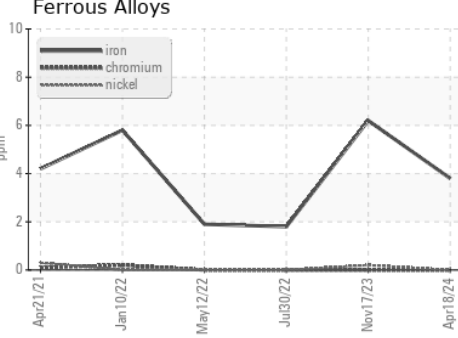
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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	>0.1	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.0	● 11.3	12.7	12.5

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0000693
Lab Number : 06160056
Unique Number : 10995479
Test Package : CONST (Additional Tests : FuelDilution, PercentFuel, TBN)

MCCLUNG-LOGAN EQUIPMENT CO - WISE
 PO BOX 1158
 WISE, VA
 US 24293
 Contact: DANNY BARRINGTON
 dbarrington@mcclung-logan.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)