

OIL ANALYSIS REPORT

Sample Rating Trend



WEAR



Machine Id
VOLVO EC350E 314739
 Component
Diesel Engine
 Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (13 GAL)

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

The copper level is abnormal. In the absence of other significant wear metals, suspect copper due to sources other than wear (i.e. cooling core). All other component wear rates are normal.

Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination 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		ML0001235	---	---
Sample Date	Client Info		01 May 2024	---	---
Machine Age	hrs	Client Info	1006	---	---
Oil Age	hrs	Client Info	1006	---	---
Oil Changed	Client Info		Changed	---	---
Sample Status			ABNORMAL	---	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	8	---	---
Chromium	ppm	ASTM D5185m >10	<1	---	---
Nickel	ppm	ASTM D5185m >10	<1	---	---
Titanium	ppm	ASTM D5185m	<1	---	---
Silver	ppm	ASTM D5185m >2	0	---	---
Aluminum	ppm	ASTM D5185m >10	3	---	---
Lead	ppm	ASTM D5185m >20	<1	---	---
Copper	ppm	ASTM D5185m >15	▲ 96	---	---
Tin	ppm	ASTM D5185m >10	2	---	---
Vanadium	ppm	ASTM D5185m	<1	---	---
Cadmium	ppm	ASTM D5185m	<1	---	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 2.5	269	---	---
Barium	ppm	ASTM D5185m 0.0	2	---	---
Molybdenum	ppm	ASTM D5185m 0.7	120	---	---
Manganese	ppm	ASTM D5185m 0.0	<1	---	---
Magnesium	ppm	ASTM D5185m 256	491	---	---
Calcium	ppm	ASTM D5185m 2057	1535	---	---
Phosphorus	ppm	ASTM D5185m 935	809	---	---
Zinc	ppm	ASTM D5185m 1223	944	---	---
Sulfur	ppm	ASTM D5185m 4079	2715	---	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >20	15	---	---
Sodium	ppm	ASTM D5185m	0	---	---
Potassium	ppm	ASTM D5185m >20	3	---	---
Fuel	%	ASTM D3524 >6.0	0.4	---	---
Glycol	%	*ASTM D2982	NEG	---	---

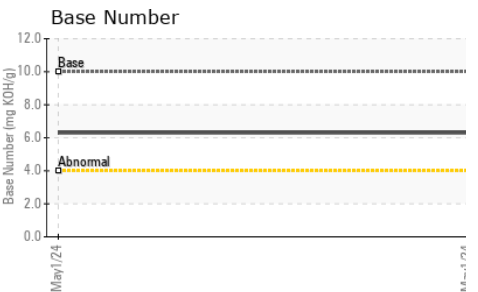
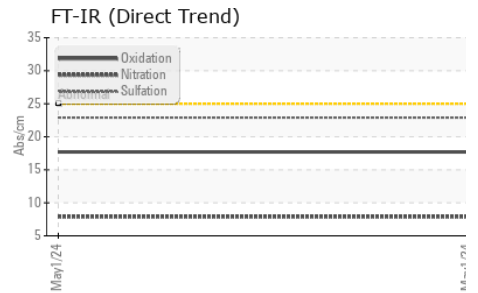
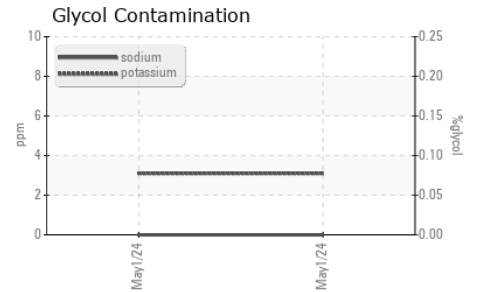
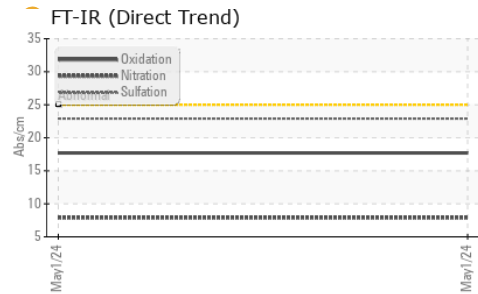
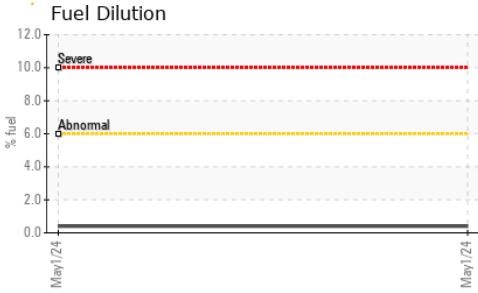
INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.1	---	---
Nitration	Abs/cm	*ASTM D7624 >20	7.9	---	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.9	---	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	17.7	---	---
Base Number (BN)	mg KOH/g	ASTM D2896 10	6.3	---	---

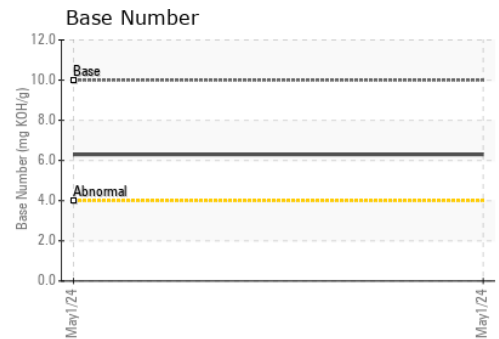
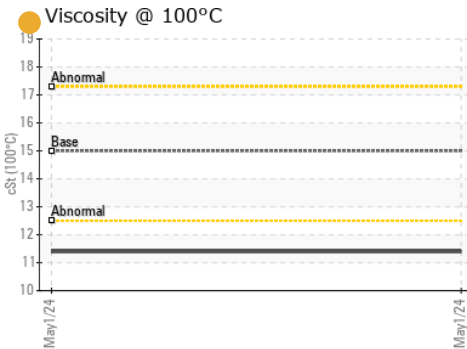
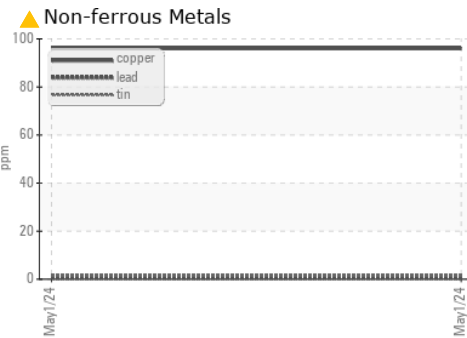
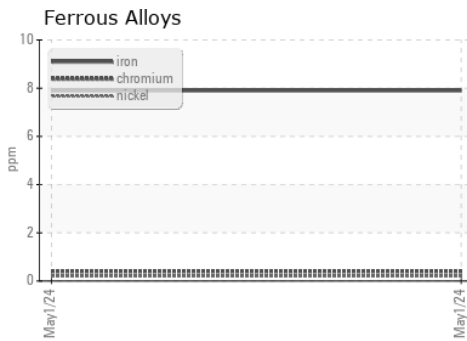
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2	
White Metal	scalar	*Visual	NONE	NONE	---	---
Yellow Metal	scalar	*Visual	NONE	NONE	---	---
Precipitate	scalar	*Visual	NONE	NONE	---	---
Silt	scalar	*Visual	NONE	NONE	---	---
Debris	scalar	*Visual	NONE	NONE	---	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---	---
Appearance	scalar	*Visual	NORML	NORML	---	---
Odor	scalar	*Visual	NORML	NORML	---	---
Emulsified Water	scalar	*Visual	>0.1	NEG	---	---
Free Water	scalar	*Visual		NEG	---	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.0	● 11.4	---	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001235 **Received** : 10 May 2024
Lab Number : 06176450 **Tested** : 15 May 2024
Unique Number : 11022503 **Diagnosed** : 15 May 2024 - Sean Felton
Test Package : CONST (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN)

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)

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