



# OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

Machine Id  
**VOLVO EC235EL 314086**  
Component  
**Diesel Engine**  
Fluid  
**VALVOLINE 15W40 (--- GAL)**

## RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP437108</b>	VCP434058	VCP406550
Sample Date		Client Info		<b>10 Apr 2024</b>	21 Dec 2023	24 May 2023
Machine Age	hrs	Client Info		<b>5092</b>	4629	4006
Oil Age	hrs	Client Info		<b>232</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

## WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>3</b>	4	4
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>&lt;1</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	1
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	<1	4
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

## CONTAMINATION

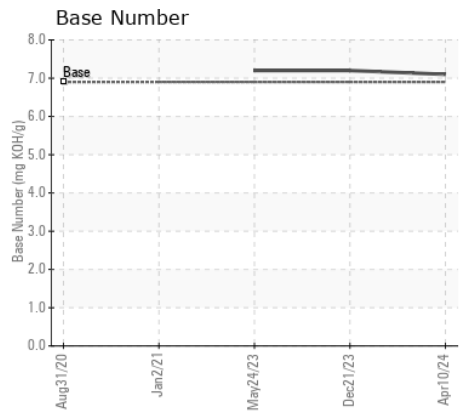
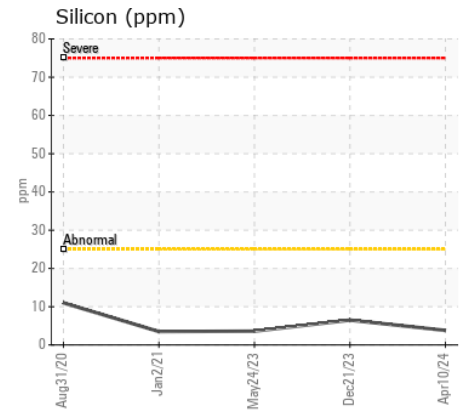
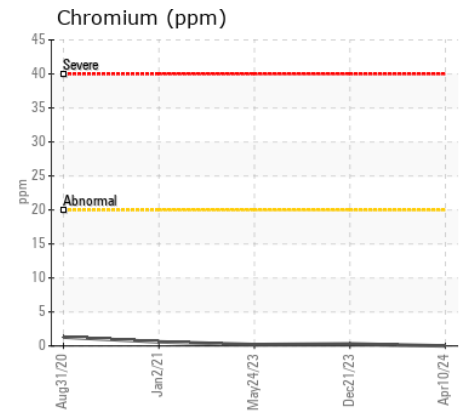
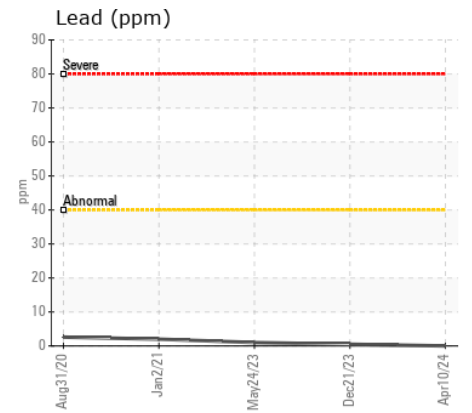
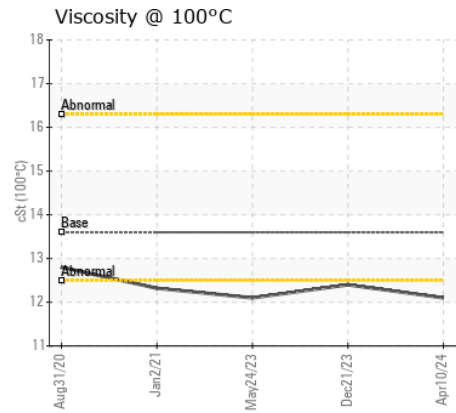
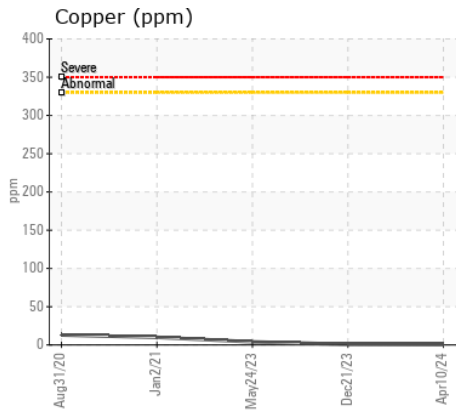
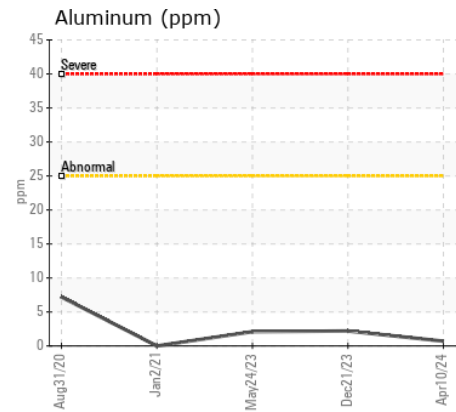
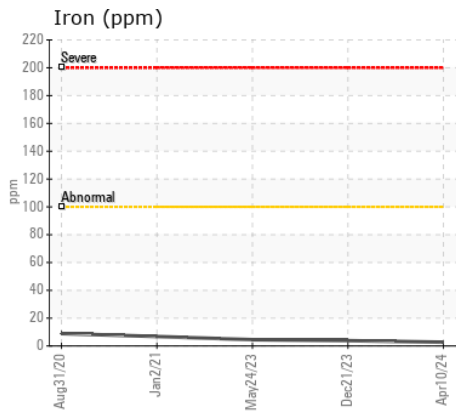
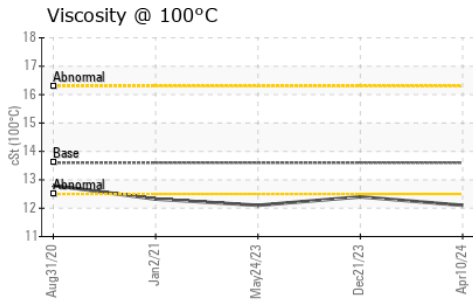
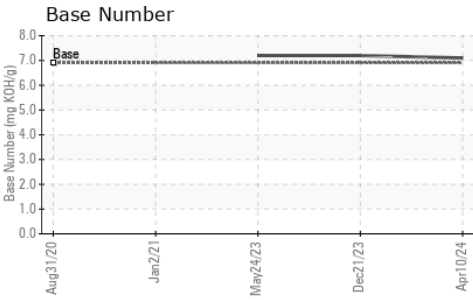
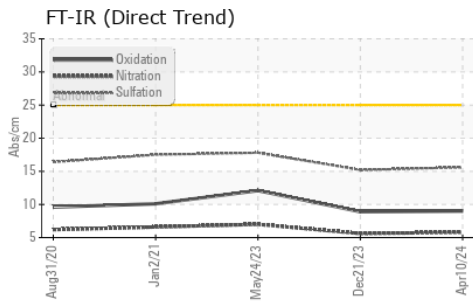
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	5	5
Fuel	%	ASTM D3524	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.8</b>	5.6	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>15.6</b>	15.2	17.8
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	>0.2	<b>NEG</b>	NEG	NEG

## FLUID CONDITION

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

Sodium	ppm	ASTM D5185m		<b>4</b>	0	0
Boron	ppm	ASTM D5185m	39	<b>26</b>	39	52
Barium	ppm	ASTM D5185m	1	<b>0</b>	8	0
Molybdenum	ppm	ASTM D5185m	49	<b>23</b>	37	86
Manganese	ppm	ASTM D5185m	1	<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	616	<b>122</b>	170	168
Calcium	ppm	ASTM D5185m	1554	<b>2086</b>	2349	2083
Phosphorus	ppm	ASTM D5185m	899	<b>778</b>	913	918
Zinc	ppm	ASTM D5185m	1069	<b>931</b>	1124	1094
Sulfur	ppm	ASTM D5185m	2624	<b>3900</b>	4075	3997
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>9.0</b>	8.9	12.1
Base Number (BN)	mg KOH/g	ASTM D2896	6.9	<b>7.1</b>	7.2	7.2
Visc @ 100°C	cSt	ASTM D445	13.6	<b>12.1</b>	12.4	12.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP437108 **Received** : 16 Apr 2024  
**Lab Number** : 06150143 **Tested** : 18 Apr 2024  
**Unique Number** : 10980221 **Diagnosed** : 18 Apr 2024 - Jonathan Hester  
**Test Package** : MOB 1 ( Additional Tests: FuelDilution, 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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