



# ASCENDUM

## OIL ANALYSIS REPORT

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



Area  
**Ascendum Machinery/500 Hour CSA**  
Machine Id  
**VOLVO EC250E 2012 (S/N 310483)**  
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		<b>ASC0000558</b>	ASC0000395	VCP0006140
Sample Date		Client Info		<b>04 Jan 2024</b>	26 Apr 2023	16 Jan 2023
Machine Age	hrs	Client Info		<b>6454</b>	5502	5016
Oil Age	hrs	Client Info		<b>500</b>	486	493
Filter Age	hrs	Client Info		<b>500</b>	486	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>9</b>	6	8
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>10	<b>2</b>	2	4
Lead	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>15	<b>2</b>	<1	2
Tin	ppm	ASTM D5185m	>10	<b>1</b>	0	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

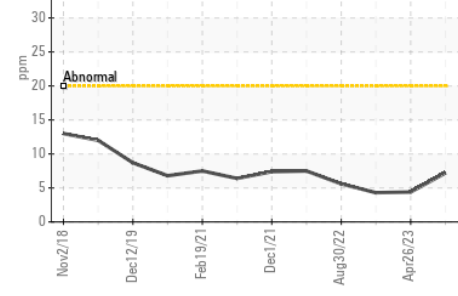
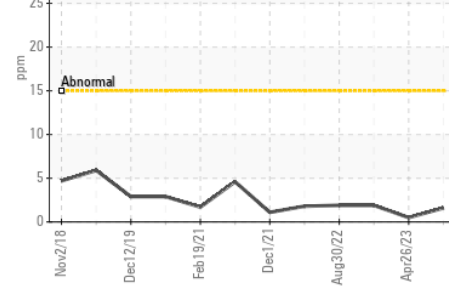
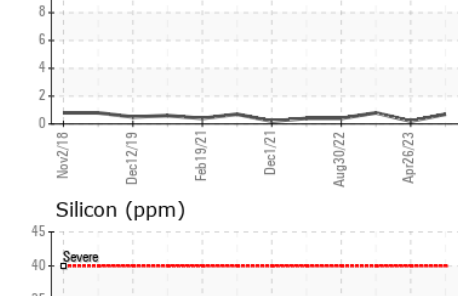
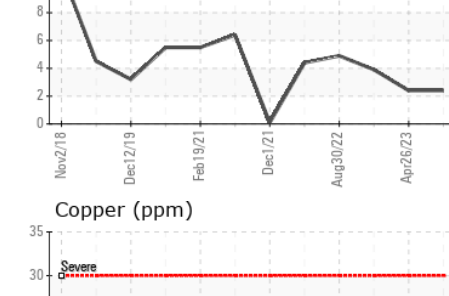
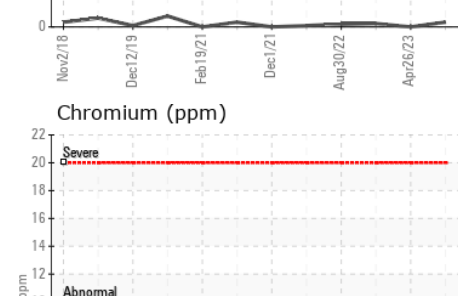
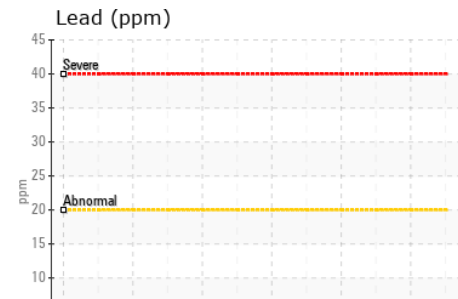
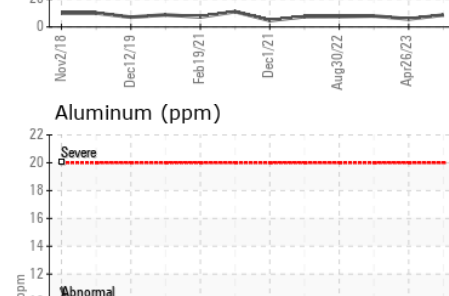
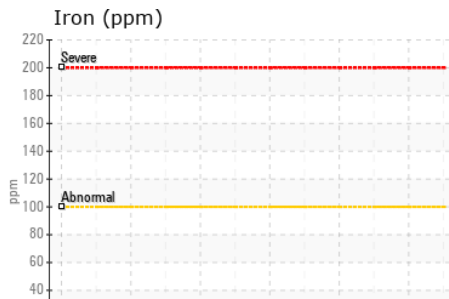
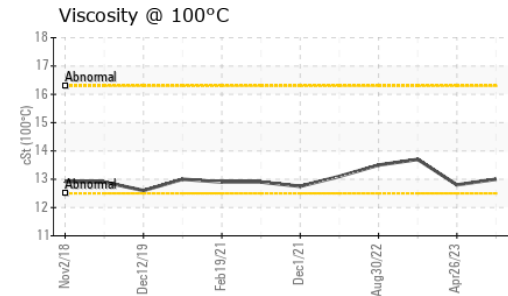
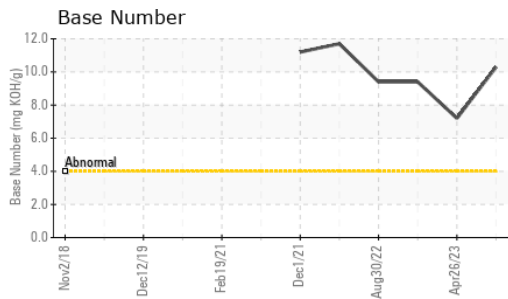
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>7</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	<1	4
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.9</b>	7.7	6.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>22.2</b>	18.0	18.7
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	>0.1	<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>0</b>	2	2
Boron	ppm	ASTM D5185m		<b>50</b>	39	42
Barium	ppm	ASTM D5185m		<b>0</b>	0	1
Molybdenum	ppm	ASTM D5185m		<b>48</b>	74	67
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>610</b>	415	875
Calcium	ppm	ASTM D5185m		<b>1960</b>	1654	1170
Phosphorus	ppm	ASTM D5185m		<b>1010</b>	972	1007
Zinc	ppm	ASTM D5185m		<b>1320</b>	1181	1219
Sulfur	ppm	ASTM D5185m		<b>3747</b>	3637	3323
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.8</b>	14.0	14.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.3</b>	7.2	9.4
Visc @ 100°C	cSt	ASTM D445		<b>13.0</b>	12.8	13.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0000558 **Received** : 09 Jan 2024  
**Lab Number** : 06055164 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10821113 **Diagnostician** : Wes Davis  
**Test Package** : MOBCE ( Additional Tests: TBN )

**TRIANGLE GRADING AND PAVING INC**  
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 BURLINGTON, NC  
 US 27216  
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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)