



# ASCENDUM

## OIL ANALYSIS REPORT

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



Machine Id  
**VOLVO EC220E 314194**  
Component  
**Diesel Engine**  
Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0003331</b>	VCP424743	---
Sample Date		Client Info		<b>25 Jun 2024</b>	30 Aug 2023	---
Machine Age	hrs	Client Info		<b>3044</b>	2340	---
Oil Age	hrs	Client Info		<b>3044</b>	0	---
Filter Age	hrs	Client Info		<b>0</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>10</b>	41	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	2	---
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	---
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>10	<b>5</b>	6	---
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	---
Copper	ppm	ASTM D5185m	>15	<b>2</b>	2	---
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

### CONTAMINATION

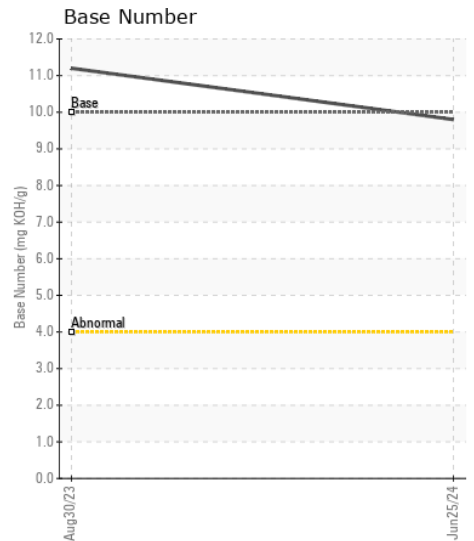
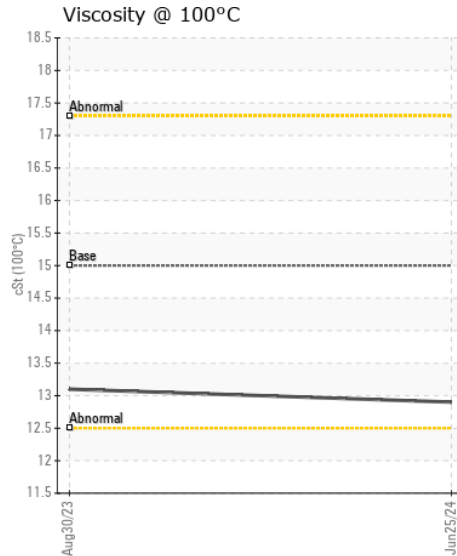
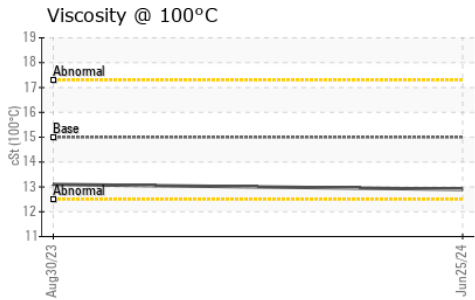
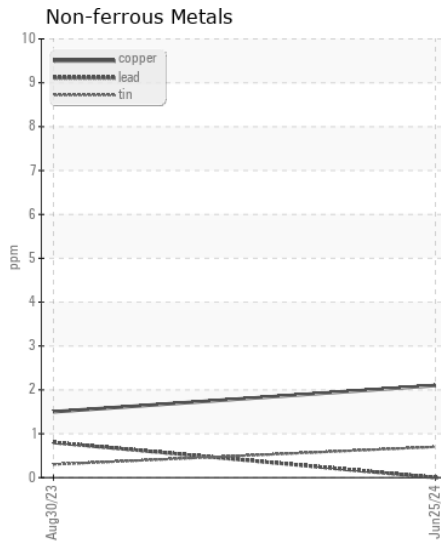
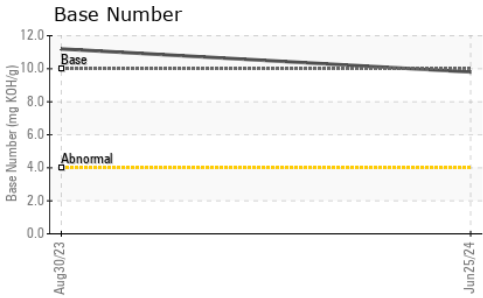
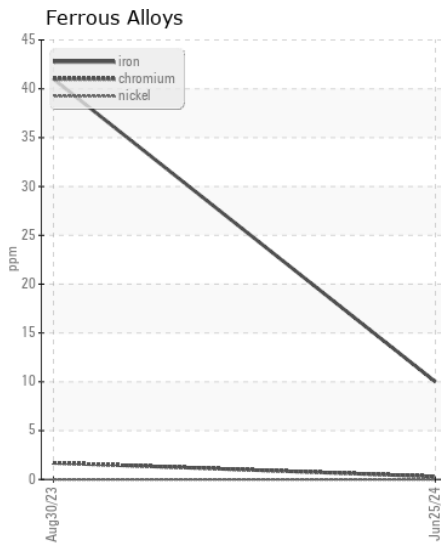
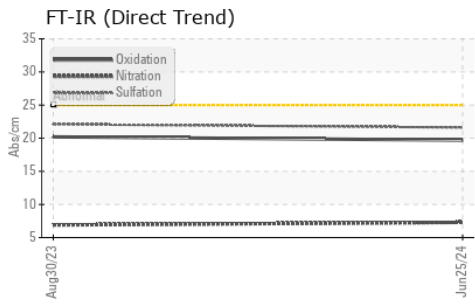
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	8	---
Potassium	ppm	ASTM D5185m	>20	<b>3</b>	4	---
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.1	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.3</b>	6.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.6</b>	22.1	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	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>2</b>	3	---
Boron	ppm	ASTM D5185m	2.5	<b>25</b>	63	---
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	0.7	<b>43</b>	45	---
Manganese	ppm	ASTM D5185m	0.0	<b>0</b>	1	---
Magnesium	ppm	ASTM D5185m	256	<b>482</b>	569	---
Calcium	ppm	ASTM D5185m	2057	<b>1699</b>	1861	---
Phosphorus	ppm	ASTM D5185m	935	<b>935</b>	1050	---
Zinc	ppm	ASTM D5185m	1223	<b>1225</b>	1282	---
Sulfur	ppm	ASTM D5185m	4079	<b>3074</b>	3820	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.7</b>	20.2	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>9.8</b>	11.2	---
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.9</b>	13.1	---



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0003331 **Received** : 26 Jun 2024  
**Lab Number** : 06220801 **Tested** : 26 Jun 2024  
**Unique Number** : 11098998 **Diagnosed** : 26 Jun 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**160 - ASCENDUM MACHINERY INC - MILLS RIVER**  
 215 FANNING FIELDS RD  
 MILLS RIVER, NC  
 US 28759  
 Contact: BRANDON DRAKE  
 brandon.drake@ascendummachinery.com  
 T: 8(286)687-0620  
 F: (828)687-0622

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)