



# 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 EC300E 1848 (S/N 311167)**

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>ASC0010426</b>	VCP421415	VCP420284
Sample Date		Client Info		<b>23 May 2024</b>	15 Aug 2023	24 May 2023
Machine Age	hrs	Client Info		<b>8414</b>	7957	7563
Oil Age	hrs	Client Info		<b>457</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>N/A</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>6</b>	6	6
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>5</b>	3	2
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>15	<b>2</b>	<1	1
Tin	ppm	ASTM D5185m	>10	<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.

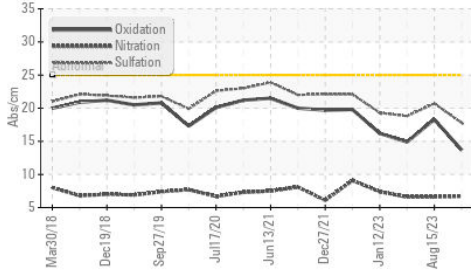
Silicon	ppm	ASTM D5185m	>20	<b>5</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	3	2
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.7</b>	6.6	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.8</b>	20.7	18.8
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	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

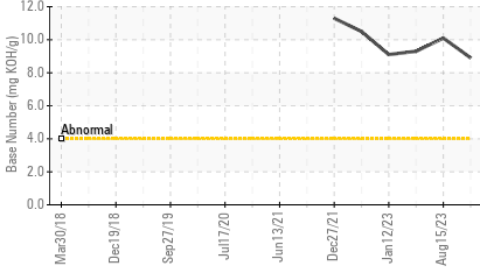
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	0	<1
Boron	ppm	ASTM D5185m		<b>15</b>	24	6
Barium	ppm	ASTM D5185m		<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m		<b>61</b>	48	59
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>948</b>	628	971
Calcium	ppm	ASTM D5185m		<b>1174</b>	1426	1189
Phosphorus	ppm	ASTM D5185m		<b>1071</b>	944	1007
Zinc	ppm	ASTM D5185m		<b>1296</b>	1111	1264
Sulfur	ppm	ASTM D5185m		<b>3697</b>	2905	3745
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	18.3	14.9
Base Number (BN)	mg KOH/g	ASTM D2896		<b>8.9</b>	10.1	9.3
Visc @ 100°C	cSt	ASTM D445		<b>13.3</b>	13.2	13.9

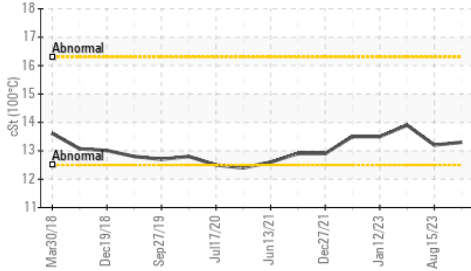
**FT-IR (Direct Trend)**



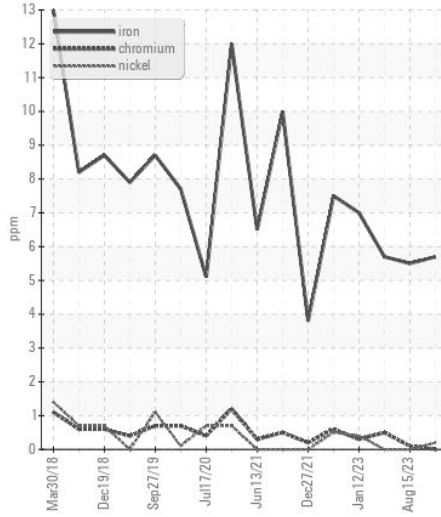
**Base Number**



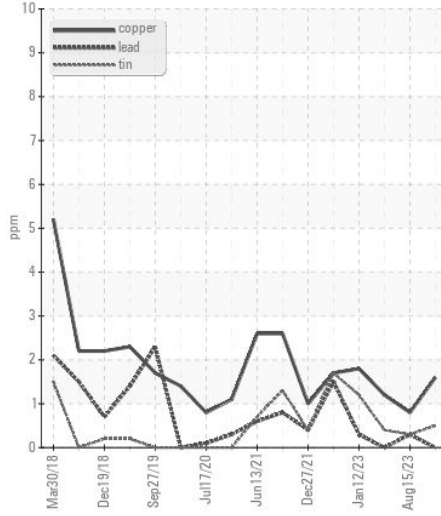
**Viscosity @ 100°C**



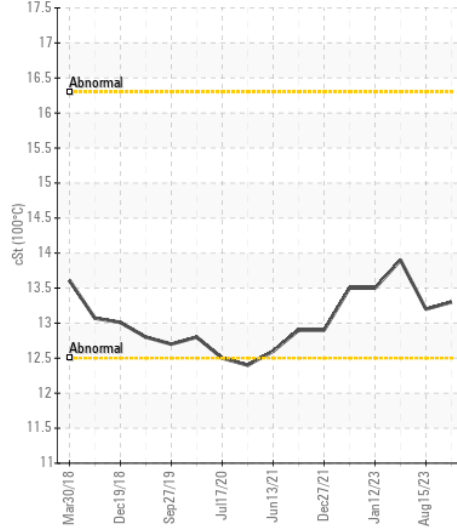
**Ferrous Alloys**



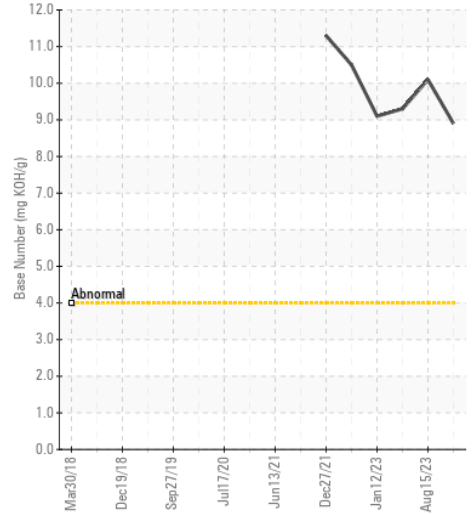
**Non-ferrous Metals**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0010426 **Received** : 17 Jun 2024  
**Lab Number** : 06212745 **Tested** : 19 Jun 2024  
**Unique Number** : 11085609 **Diagnosed** : 19 Jun 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: TBN )

**TRIANGLE GRADING AND PAVING INC**  
 1521 Huffman Mill Rd  
 BURLINGTON, NC  
 US 27216  
 Contact: KAREN HILLIARD  
 khilliard@trianglegradingpaving.com  
 T: (336)584-1745  
 F: (336)584-0145

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)