



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

**Ascendum Machinery/500 Hour CSA**

Machine Id

**VOLVO EC300E 1741 (S/N 311070)**

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>ASC0009702</b>	ASC0000719	VCP408578
Sample Date		Client Info		<b>29 Jun 2024</b>	02 Oct 2023	26 Apr 2023
Machine Age	hrs	Client Info		<b>8434</b>	7994	7509
Oil Age	hrs	Client Info		<b>440</b>	485	551
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>8</b>	10	12
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	2
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>3</b>	<1	4
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	0
Copper	ppm	ASTM D5185m	>15	<b>0</b>	1	1
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	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.

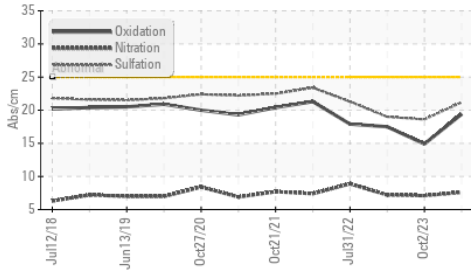
Silicon	ppm	ASTM D5185m	>20	<b>7</b>	4	6
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	2	6
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.6</b>	7.1	7.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.2</b>	18.6	19.0
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

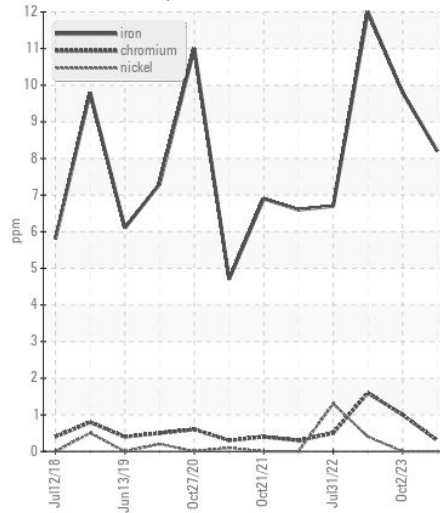
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	<1	2
Boron	ppm	ASTM D5185m		<b>35</b>	5	32
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>43</b>	60	51
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>626</b>	962	671
Calcium	ppm	ASTM D5185m		<b>1634</b>	1138	1693
Phosphorus	ppm	ASTM D5185m		<b>1035</b>	1015	992
Zinc	ppm	ASTM D5185m		<b>1209</b>	1264	1237
Sulfur	ppm	ASTM D5185m		<b>3507</b>	3122	3261
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.4</b>	14.9	17.5
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.0</b>	8.7	8.4
Visc @ 100°C	cSt	ASTM D445		<b>12.9</b>	13.8	13.1

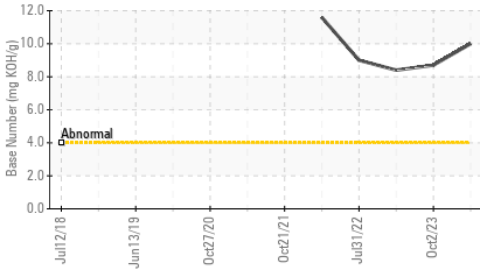
**FT-IR (Direct Trend)**



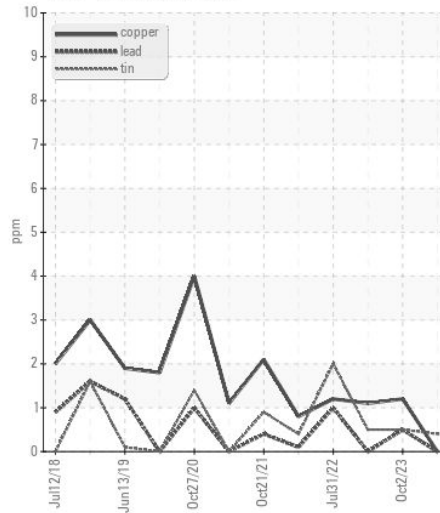
**Ferrous Alloys**



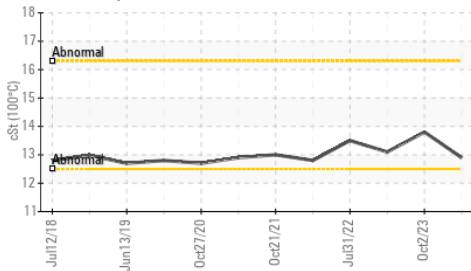
**Base Number**



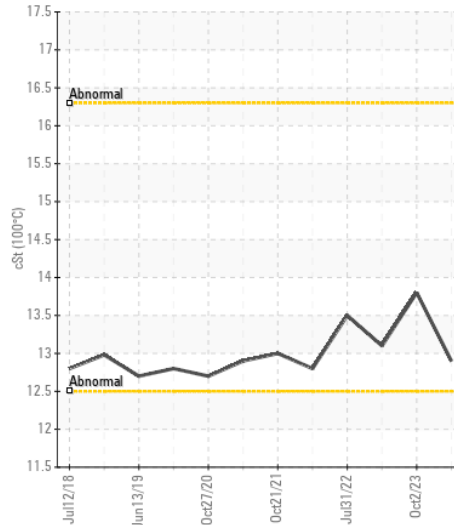
**Non-ferrous Metals**



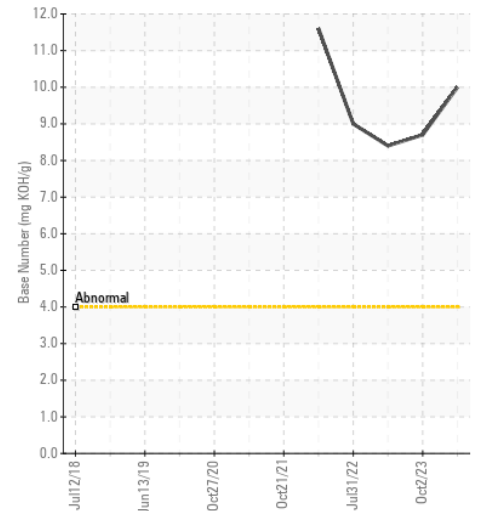
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513

**Sample No.** : ASC0009702

**Lab Number** : 06228230

**Unique Number** : 11111723

**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 05 Jul 2024

**Tested** : 05 Jul 2024

**Diagnosed** : 05 Jul 2024 - Wes Davis

**TRIANGLE GRADING AND PAVING INC**

1521 Huffman Mill Rd

BURLINGTON, NC

US 27216

Contact: ADAM CORBETT

wacorbett@trianglegradingpaving.com

T:

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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