



# ASCENDUM

## OIL ANALYSIS REPORT

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



Machine Id  
**VOLVO A45G FS A45G352226**  
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>ASC0011088</b>	ASC0008600	VCP443122
Sample Date		Client Info		<b>29 May 2024</b>	19 Feb 2024	17 Oct 2023
Machine Age	hrs	Client Info		<b>5424</b>	5007	4254
Oil Age	hrs	Client Info		<b>417</b>	753	0
Filter Age	hrs	Client Info		<b>417</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>4</b>	10	10
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>2</b>	2	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	<1	2
Tin	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<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.

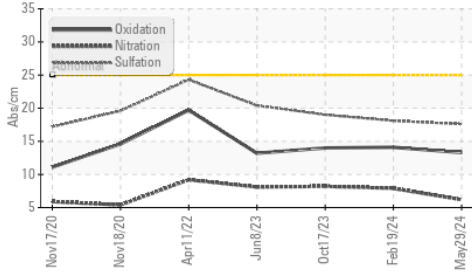
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	0
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.4	0.5
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	7.9	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.6</b>	18.1	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	>0.2	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

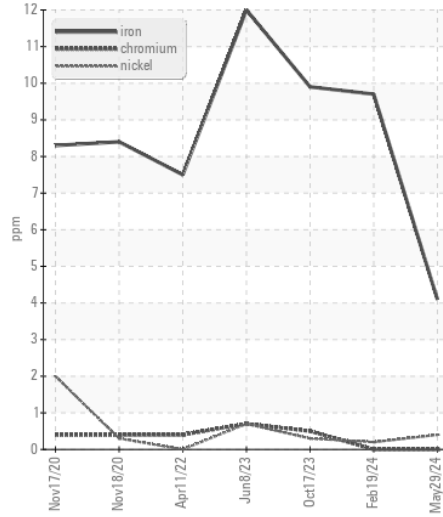
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	2	1
Boron	ppm	ASTM D5185m	2.5	<b>4</b>	6	1
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>58</b>	55	56
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	256	<b>951</b>	1028	918
Calcium	ppm	ASTM D5185m	2057	<b>1084</b>	1207	1165
Phosphorus	ppm	ASTM D5185m	935	<b>1088</b>	1111	975
Zinc	ppm	ASTM D5185m	1223	<b>1276</b>	1263	1289
Sulfur	ppm	ASTM D5185m	4079	<b>3731</b>	3330	3131
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.3</b>	14.1	14.0
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>8.9</b>	7.5	7.6
Visc @ 100°C	cSt	ASTM D445	15.0	<b>13.4</b>	13.0	12.8

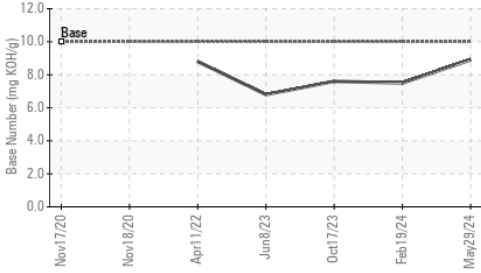
**FT-IR (Direct Trend)**



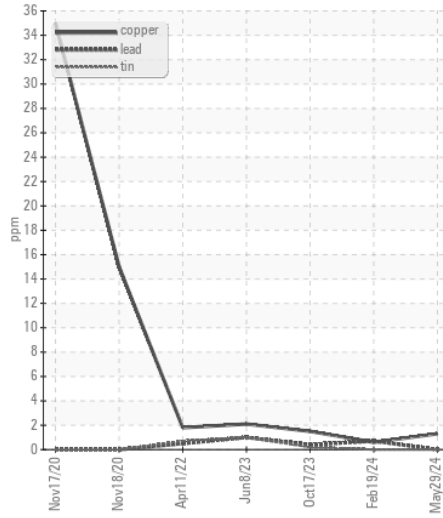
**Ferrous Alloys**



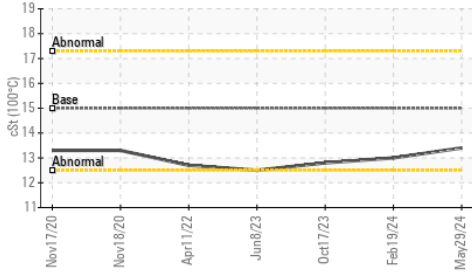
**Base Number**



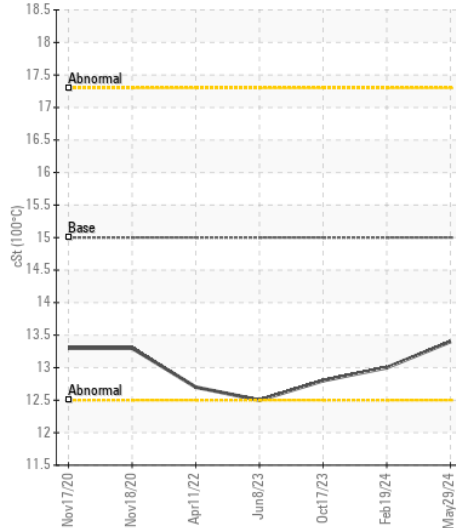
**Non-ferrous Metals**



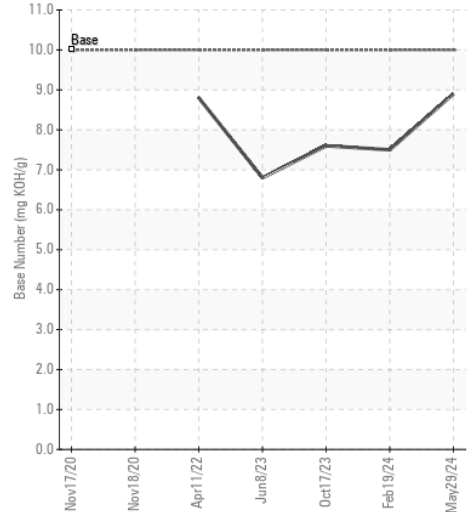
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0011088 **Received** : 17 Jun 2024  
**Lab Number** : 06212747 **Tested** : 19 Jun 2024  
**Unique Number** : 11085611 **Diagnosed** : 19 Jun 2024 - Angela Borella  
**Test Package** : CONST ( Additional Tests: TBN )

**117 - ASCENDUM MACHINERY INC - GREENVILLE**  
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 GREENVILLE, NC  
 US 27834  
 Contact: ALLEN WILLIAMS  
 allen.williams@ascendummachinery.com

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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