



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

**Ascendum Machinery/500 Hour CSA**

Machine Id

**VOLVO A40G 2306 (S/N 353318)**

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		ASC0010217	ASC0006252	VCP435488
Sample Date		Client Info		22 Apr 2024	04 Jan 2024	01 Aug 2023
Machine Age	hrs	Client Info		1498	1077	514
Oil Age	hrs	Client Info		500	515	514
Filter Age	hrs	Client Info		500	515	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	3	9	97
Chromium	ppm	ASTM D5185m	>20	0	<1	1
Nickel	ppm	ASTM D5185m	>2	0	2	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	0	2	3
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	4	33	<1
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

### CONTAMINATION

There is no indication of any contamination in the oil.

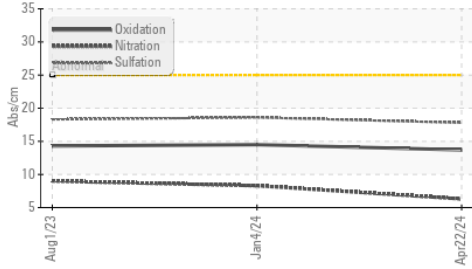
Silicon	ppm	ASTM D5185m	>25	2	7	17
Potassium	ppm	ASTM D5185m	>20	0	1	1
Fuel		WC Method	>6.0	<1.0	<1.0	0.4
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	6.3	8.3	9.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.8	18.6	18.3
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

### FLUID CONDITION

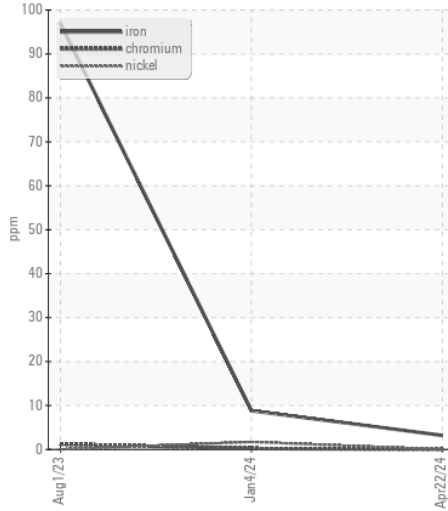
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		0	<1	2
Boron	ppm	ASTM D5185m	2.5	3	5	20
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	64	62	<1
Manganese	ppm	ASTM D5185m	0.0	0	0	2
Magnesium	ppm	ASTM D5185m	256	989	845	12
Calcium	ppm	ASTM D5185m	2057	1283	1198	1548
Phosphorus	ppm	ASTM D5185m	935	1154	1024	672
Zinc	ppm	ASTM D5185m	1223	1396	1224	631
Sulfur	ppm	ASTM D5185m	4079	4066	3384	17058
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	14.5	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.7	7.0	5.9
Visc @ 100°C	cSt	ASTM D445	15.0	13.1	12.6	11.2

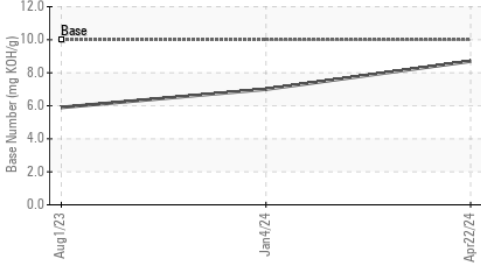
**FT-IR (Direct Trend)**



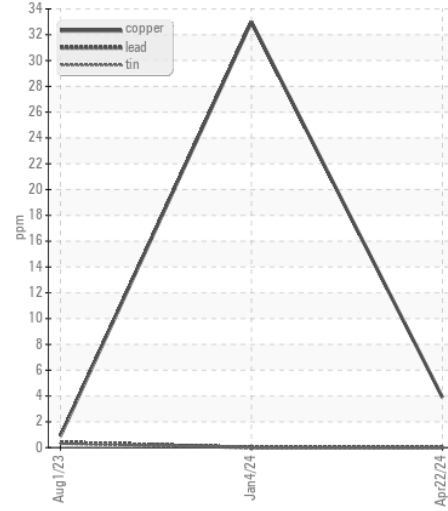
**Ferrous Alloys**



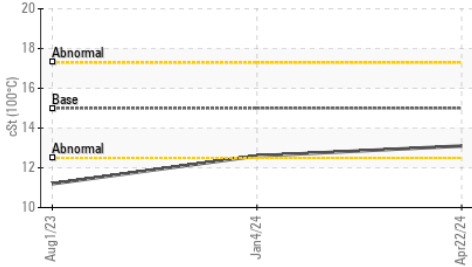
**Base Number**



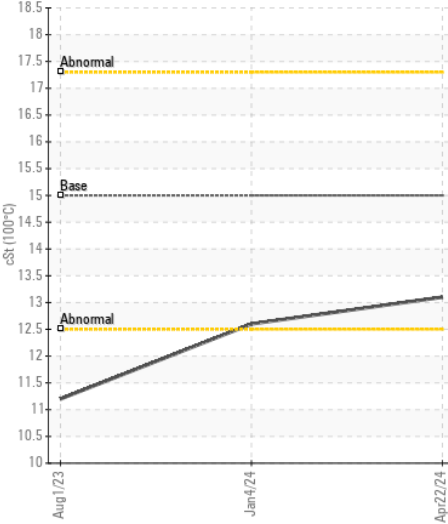
**Non-ferrous Metals**



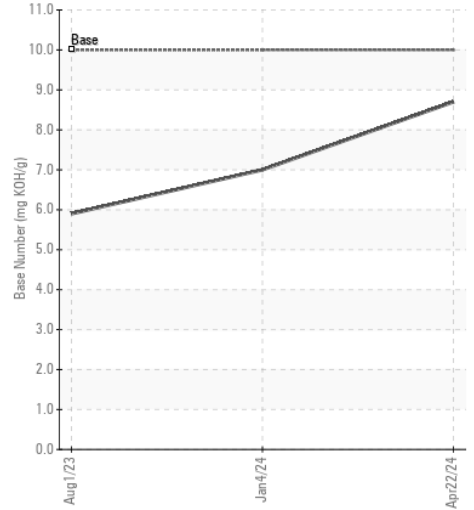
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0010217 **Received** : 24 Apr 2024  
**Lab Number** : 06158722 **Tested** : 25 Apr 2024  
**Unique Number** : 10994145 **Diagnosed** : 25 Apr 2024 - Angela Borella  
**Test Package** : CONST ( Additional Tests: TBN )

**TRIANGLE GRADING AND PAVING INC**  
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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)