



# ASCENDUM

## OIL ANALYSIS REPORT

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



Area  
**Ascendum Machinery**  
Machine Id  
**VOLVO A40G ED-1 (S/N 352172)**  
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>ASC0007894</b>	ASC0001482	VCP0006376
Sample Date		Client Info		<b>30 Jan 2024</b>	14 Sep 2023	29 Mar 2023
Machine Age	hrs	Client Info		<b>5497</b>	4994	4495
Oil Age	hrs	Client Info		<b>503</b>	499	498
Filter Age	hrs	Client Info		<b>503</b>	499	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>11</b>	7	8
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>25	<b>1</b>	<1	2
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	5
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

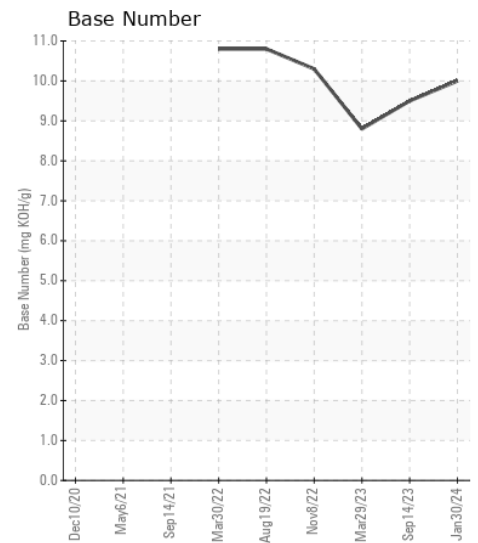
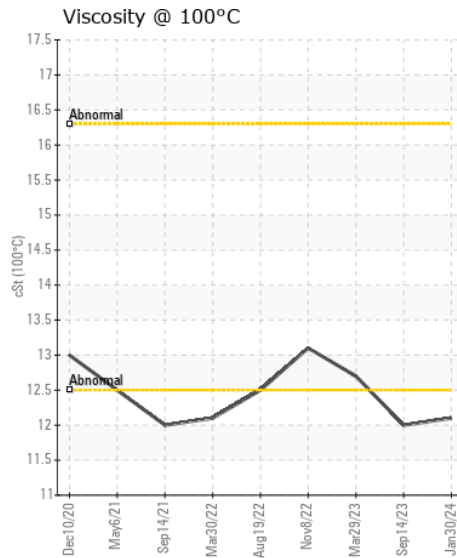
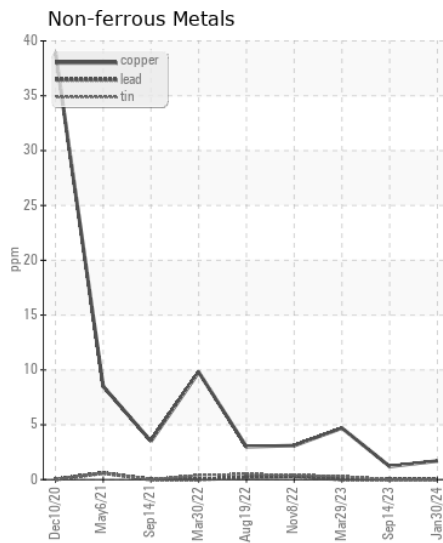
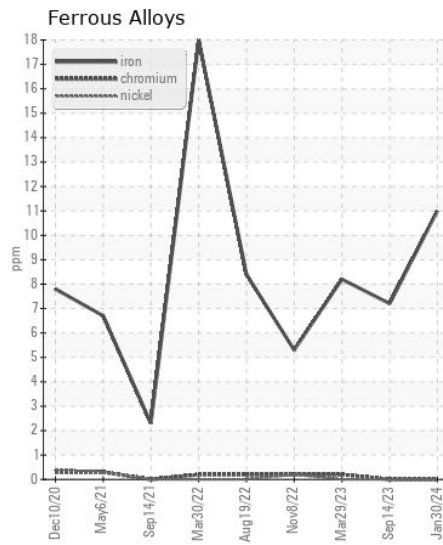
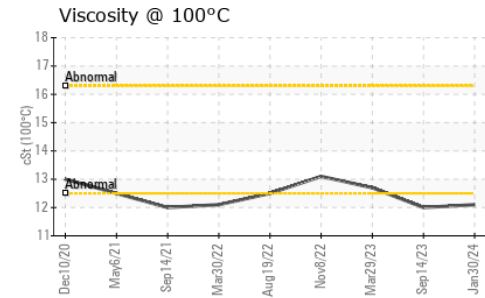
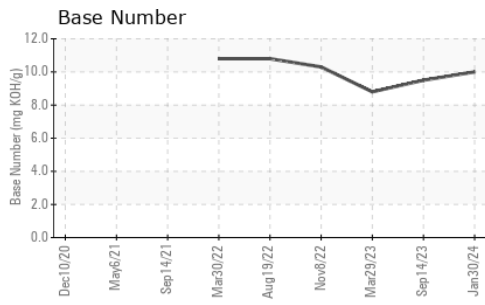
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	4	4
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	2.1	<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>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.2</b>	6.8	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.2</b>	20.5	17.9
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		<b>50</b>	50	4
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>39</b>	41	54
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	0	1
Magnesium	ppm	ASTM D5185m		<b>502</b>	586	829
Calcium	ppm	ASTM D5185m		<b>1724</b>	1601	1117
Phosphorus	ppm	ASTM D5185m		<b>942</b>	939	948
Zinc	ppm	ASTM D5185m		<b>1076</b>	1147	1049
Sulfur	ppm	ASTM D5185m		<b>2986</b>	3116	3075
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.5</b>	18.1	13.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>10.0</b>	9.5	8.8
Visc @ 100°C	cSt	ASTM D445		<b>12.1</b>	12.0	12.7



Certificate L2367

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

Sample No. : ASC0007894

Lab Number : 06101310

Unique Number : 10899540

Test Package : CONST ( Additional Tests: TBN )

Received : 27 Feb 2024

Tested : 28 Feb 2024

Diagnosed : 28 Feb 2024 - Wes Davis

CAROLINA EXCAVATING

1036 BRANCHVIEW DR, SUITE 106

CONCORD, NC

US 28025

Contact: KEVIN LADGERWOOD

kevin@carlinaexcavation.com

T:

F:

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)