



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR **NORMAL**

CONTAMINATION **ABNORMAL**

FLUID CONDITION **NORMAL**



Area

**Ascendum Machinery**

Machine Id

**VOLVO A40G ED-04 (S/N 352697)**

Component

**Hydraulic System**

Fluid

**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

### RECOMMENDATION

The filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0007046</b>	ASC0009896	ASC0007384
Sample Date		Client Info		<b>06 Jun 2024</b>	13 May 2024	16 Feb 2024
Machine Age	hrs	Client Info		<b>4405</b>	4405	3985
Oil Age	hrs	Client Info		<b>3985</b>	420	3985
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>ABNORMAL</b>	SEVERE	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>5</b>	7	7
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	4	2
Lead	ppm	ASTM D5185m	>20	<b>2</b>	1	2
Copper	ppm	ASTM D5185m	>150	<b>1</b>	2	2
Tin	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

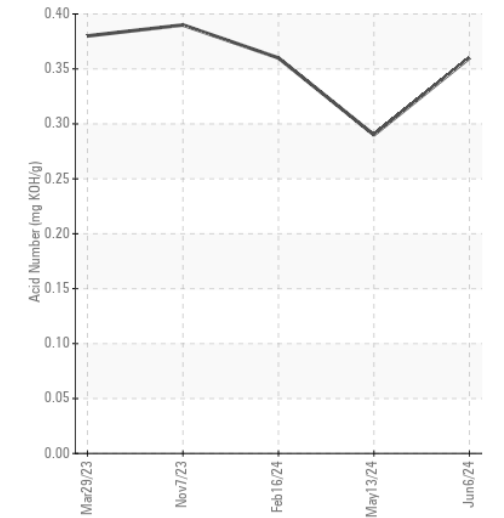
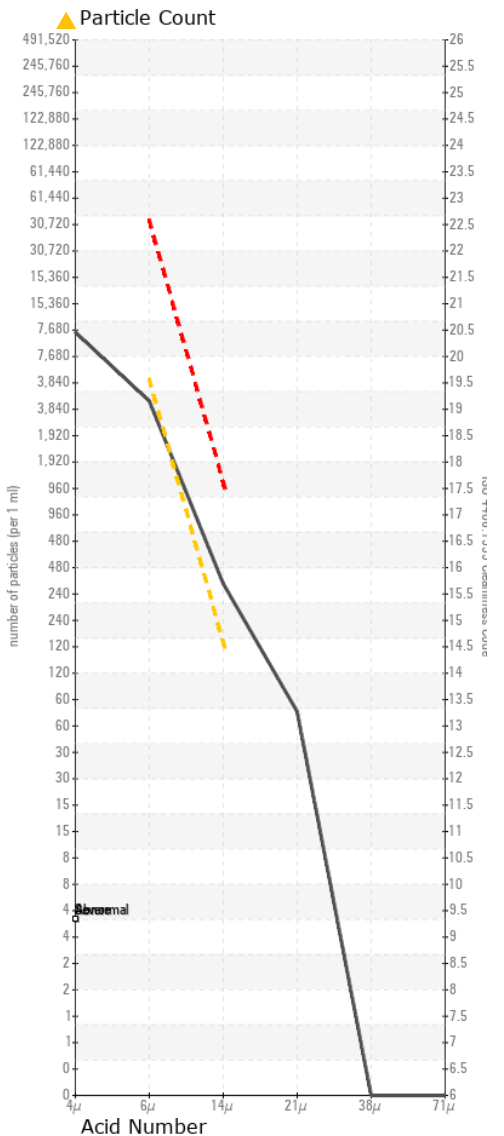
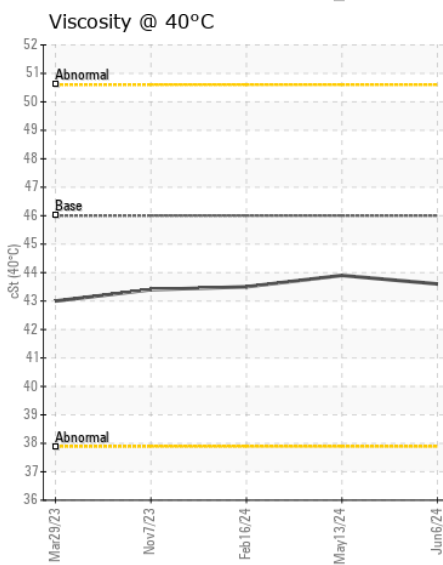
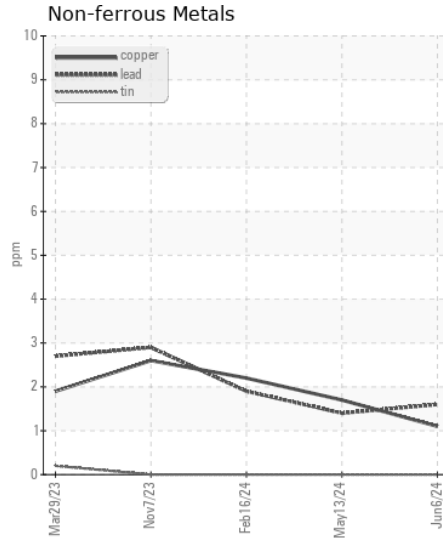
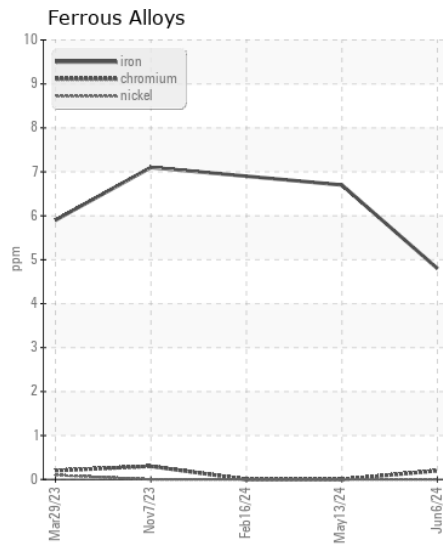
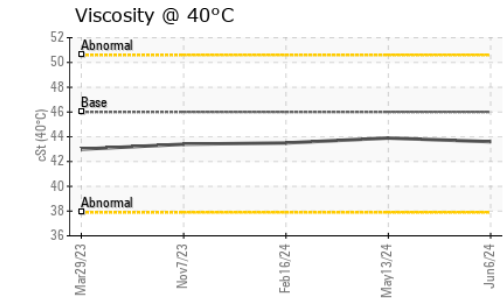
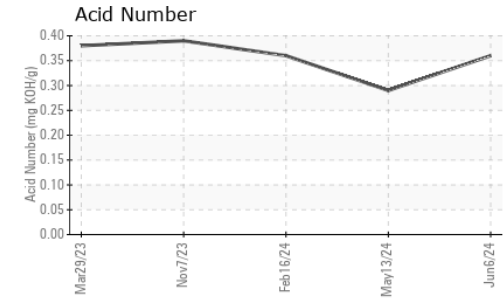
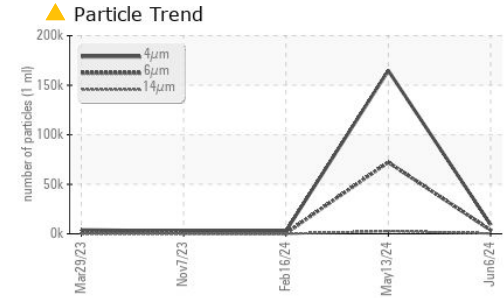
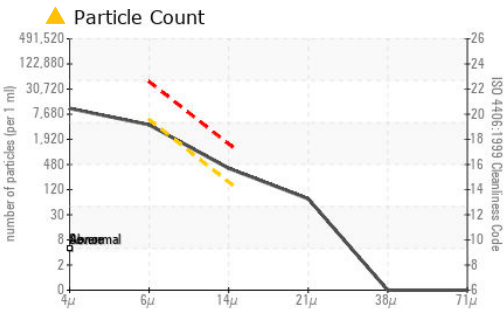
There is a moderate amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>5</b>	9	8
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	0	0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647		<b>9187</b>	164793	2815
Particles >6µm		ASTM D7647	>5000	<b>3735</b>	▲ 72227	520
Particles >14µm		ASTM D7647	>160	▲ <b>342</b>	▲ 2704	33
Particles >21µm		ASTM D7647	>40	● <b>64</b>	▲ 290	7
Particles >38µm		ASTM D7647	>10	<b>0</b>	2	0
Particles >71µm		ASTM D7647	>3	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>-/19/14	▲ <b>20/19/16</b>	▲ 25/23/19	19/16/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	LIGHT	LIGHT
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 AN level is acceptable for this fluid. The oil is still serviceable provided that the contaminant(s) can be reduced to acceptable levels.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	1
Boron	ppm	ASTM D5185m	14	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>5</b>	4	7
Manganese	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Magnesium	ppm	ASTM D5185m	2.6	<b>1</b>	2	<1
Calcium	ppm	ASTM D5185m	49	<b>119</b>	115	134
Phosphorus	ppm	ASTM D5185m	354	<b>374</b>	349	375
Zinc	ppm	ASTM D5185m	419	<b>500</b>	447	474
Sulfur	ppm	ASTM D5185m	3719	<b>1932</b>	1772	1447
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.36</b>	0.29	0.36
Visc @ 40°C	cSt	ASTM D445	46	<b>43.6</b>	43.9	43.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0007046  
**Lab Number** : 06210018  
**Unique Number** : 11082882  
**Test Package** : CONST

**Received** : 14 Jun 2024  
**Tested** : 17 Jun 2024  
**Diagnosed** : 17 Jun 2024 - Wes Davis

**CAROLINA EXCAVATING**  
 1036 BRANCHVIEW DR, SUITE 106  
 CONCORD, NC  
 US 28025  
 Contact: KEVIN LADGERWOOD  
 kevin@carlinaexcavation.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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F: