



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR **NORMAL**

CONTAMINATION **ABNORMAL**

FLUID CONDITION **NORMAL**

Area

### Ascendum Machinery

Machine Id

**310511 VOLVO EC220E 310511**

Component

### Hydraulic System

Fluid

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

### RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. We were unable to perform a particle count due to a high concentration of particles present in this sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0000624</b>	ASC0005457	VCP0006600
Sample Date		Client Info		<b>07 Jun 2024</b>	05 Oct 2023	23 May 2023
Machine Age	hrs	Client Info		<b>5967</b>	4852	4852
Oil Age	hrs	Client Info		<b>4948</b>	3833	1019
Filter Age	hrs	Client Info		<b>0</b>	3833	0
Oil Changed		Client Info		<b>Changed</b>	Oil Added	Not Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Not Changed
Sample Status				<b>ABNORMAL</b>	ABNORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	<b>21</b>	13	12
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>5</b>	0	0
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>150	<b>13</b>	13	13
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	▲ MODER	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

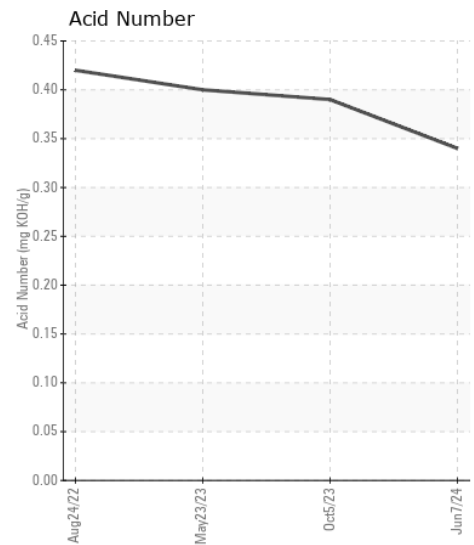
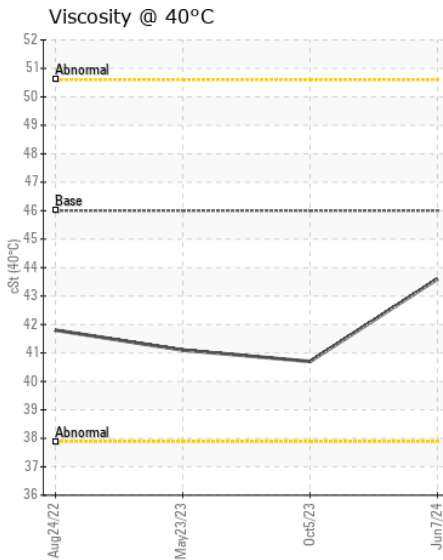
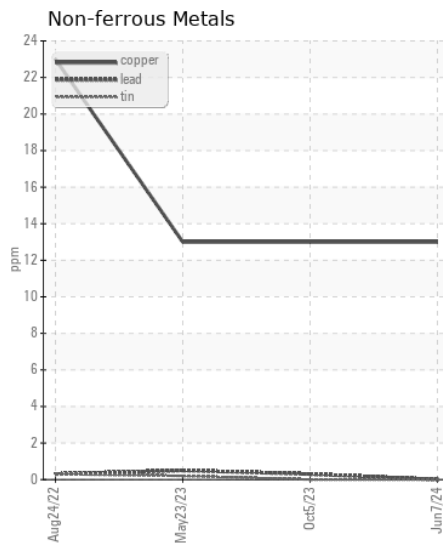
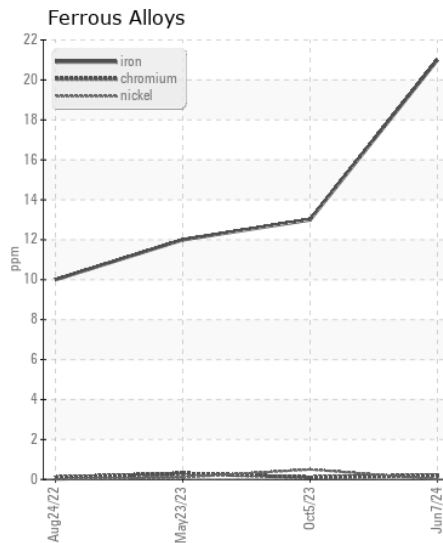
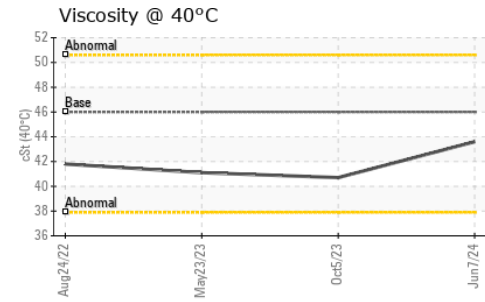
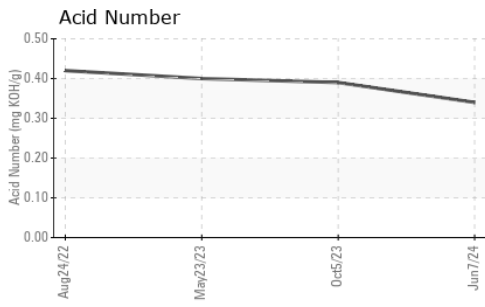
Moderate concentration of visible dirt/debris present in the oil.

Silicon	ppm	ASTM D5185m	>50	<b>14</b>	5	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	1	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>40000	<b>---</b>	---	▲ 82613
Particles >6µm		ASTM D7647	>10000	<b>---</b>	---	6347
Particles >14µm		ASTM D7647	>2500	<b>---</b>	---	27
Particles >21µm		ASTM D7647	>640	<b>---</b>	---	6
Particles >38µm		ASTM D7647	>160	<b>---</b>	---	1
Particles >71µm		ASTM D7647	>40	<b>---</b>	---	0
Oil Cleanliness		ISO 4406 (c)	>22/20/18	<b>---</b>	---	▲ 24/20/12
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	▲ <b>MODER</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 AN level is acceptable for this fluid. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>1</b>	0	1
Boron	ppm	ASTM D5185m	14	<b>0</b>	1	2
Barium	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<b>1</b>	1	2
Manganese	ppm	ASTM D5185m	0.0	<b>0</b>	0	<1
Magnesium	ppm	ASTM D5185m	2.6	<b>5</b>	7	9
Calcium	ppm	ASTM D5185m	49	<b>92</b>	85	99
Phosphorus	ppm	ASTM D5185m	354	<b>272</b>	290	303
Zinc	ppm	ASTM D5185m	419	<b>340</b>	366	351
Sulfur	ppm	ASTM D5185m	3719	<b>1454</b>	1371	1058
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.34</b>	0.39	0.40
Visc @ 40°C	cSt	ASTM D445	46	<b>43.6</b>	40.7	41.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0000624  
**Lab Number** : 06210015  
**Unique Number** : 11082879  
**Test Package** : MOBCE

**Received** : 14 Jun 2024  
**Tested** : 17 Jun 2024  
**Diagnosed** : 17 Jun 2024 - Angela Borella

**METAL RECYCLING SERVICES - GASTONIA**  
 5401 S YORK HWY  
 GASTONIA, NC  
 US 28052  
 Contact: RYAN BOWDEN

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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