



# ASCENDUM

## OIL ANALYSIS REPORT



Area  
**Ascendum Machinery**  
Machine Id  
**VOLVO EC220E EX-6 (S/N 314304)**  
Component  
**Hydraulic System**  
Fluid  
**VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)**

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

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0007779</b>	ASC0001075	VCP0006369
Sample Date		Client Info		<b>19 Mar 2024</b>	15 Aug 2023	28 Mar 2023
Machine Age	hrs	Client Info		<b>4992</b>	4492	4024
Oil Age	hrs	Client Info		<b>4524</b>	468	2503
Filter Age	hrs	Client Info		<b>0</b>	0	2503
Oil Changed		Client Info		<b>Not Changed</b>	Not Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Not Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ABNORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	<b>6</b>	5	10
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m		<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	5
Lead	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>150	<b>21</b>	23	50
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

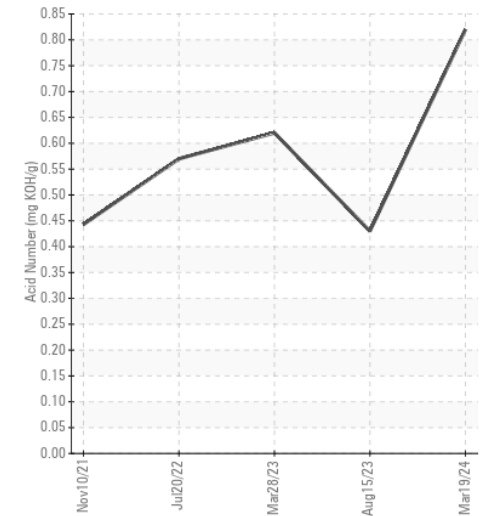
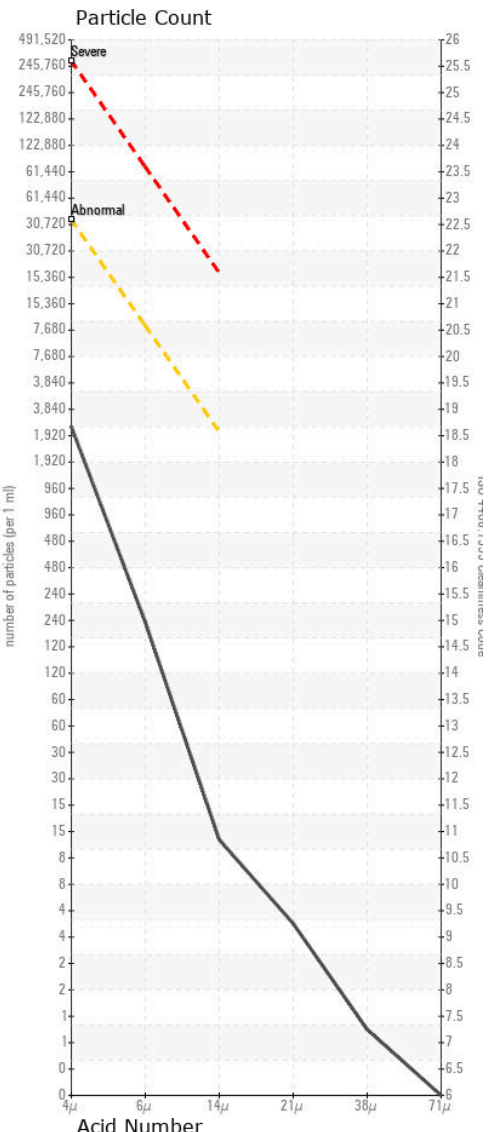
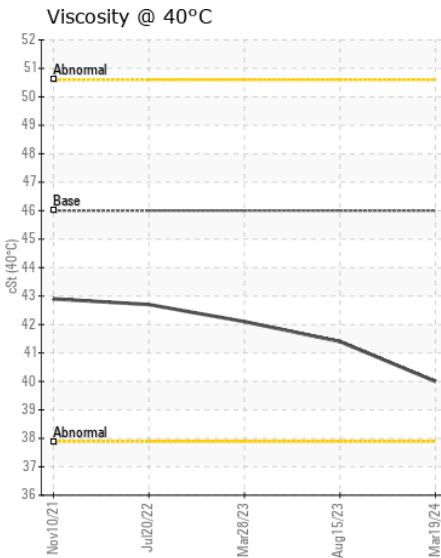
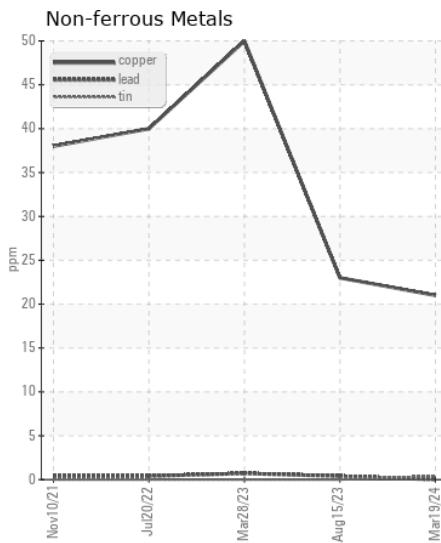
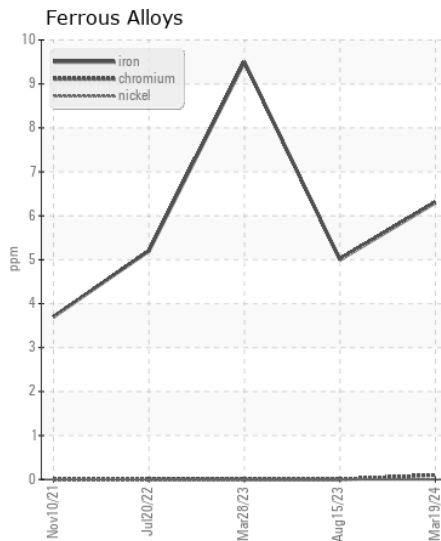
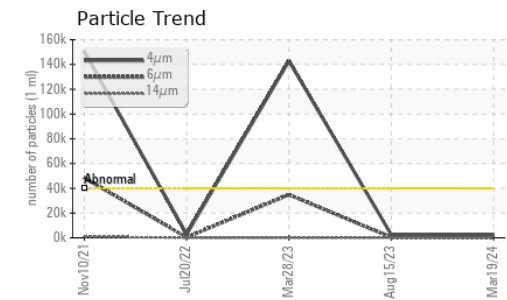
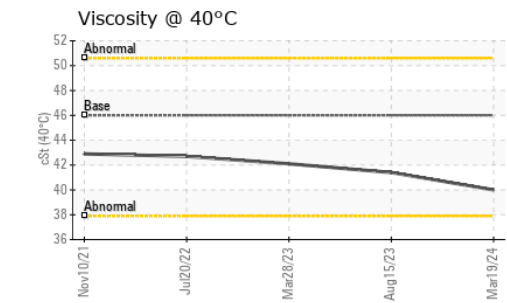
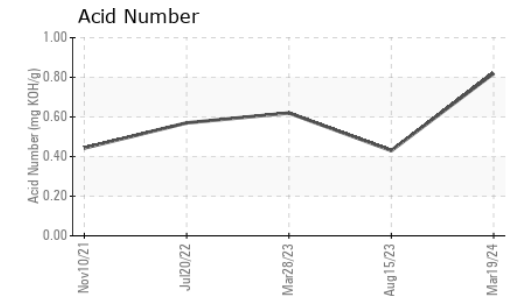
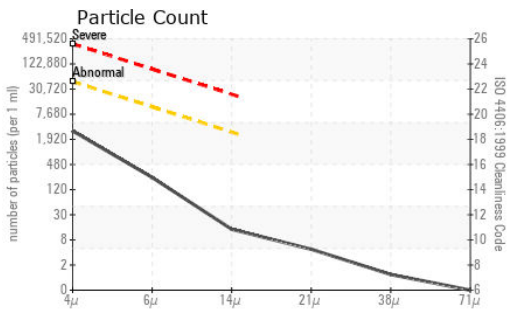
The system cleanliness is acceptable for your target ISO 4406 cleanliness code. The system and fluid cleanliness is acceptable.

Silicon	ppm	ASTM D5185m	>50	<b>7</b>	4	5
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	1	2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Particles >4µm		ASTM D7647	>40000	<b>2673</b>	2438	▲ 142725
Particles >6µm		ASTM D7647	>10000	<b>207</b>	373	▲ 34862
Particles >14µm		ASTM D7647	>2500	<b>12</b>	31	27
Particles >21µm		ASTM D7647	>640	<b>4</b>	10	6
Particles >38µm		ASTM D7647	>160	<b>1</b>	0	0
Particles >71µm		ASTM D7647	>40	<b>0</b>	0	0
Oil Cleanliness		ISO 4406 (c)	>22/20/18	<b>19/15/11</b>	18/16/12	▲ 24/22/12
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	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>1</b>	0	0
Boron	ppm	ASTM D5185m	14	<b>0</b>	0	0
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	<1	<1
Molybdenum	ppm	ASTM D5185m	0.0	<b>6</b>	4	9
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m	2.6	<b>7</b>	3	4
Calcium	ppm	ASTM D5185m	49	<b>830</b>	144	248
Phosphorus	ppm	ASTM D5185m	354	<b>547</b>	366	400
Zinc	ppm	ASTM D5185m	419	<b>649</b>	472	509
Sulfur	ppm	ASTM D5185m	3719	<b>2690</b>	2049	1138
Acid Number (AN)	mg KOH/g	ASTM D8045		<b>0.82</b>	0.43	0.62
Visc @ 40°C	cSt	ASTM D445	46	<b>40.0</b>	41.4	42.1



Certificate L2367

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

**Sample No.** : ASC0007779

**Lab Number** : 06124820

**Unique Number** : 10938971

**Test Package** : CONST

**Received** : 21 Mar 2024

**Tested** : 22 Mar 2024

**Diagnosed** : 24 Mar 2024 - Don Baldrige

**CAROLINA EXCAVATING**

1036 BRANCHVIEW DR, SUITE 106

CONCORD, NC

US 28025

Contact: KEVIN LADGERWOOD

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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)