



ASCENDUM

OIL ANALYSIS REPORT



Area

Ascendum Machinery

Machine Id

VOLVO EC220E EX-4 (S/N 310878)

Component

Hydraulic System

Fluid

VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

WEAR

NORMAL

CONTAMINATION

ABNORMAL

FLUID CONDITION

NORMAL

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0007330	ASC0000967	VCP0004028
Sample Date		Client Info		22 Apr 2024	13 Dec 2023	10 Oct 2022
Machine Age	hrs	Client Info		5981	5519	4047
Oil Age	hrs	Client Info		4509	1472	2028
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Chngd	Changed
Filter Changed		Client Info		Changed	Not Chngd	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	13	7	8
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	0
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m		0	0	0
Aluminum	ppm	ASTM D5185m	>20	5	2	3
Lead	ppm	ASTM D5185m	>20	0	0	<1
Copper	ppm	ASTM D5185m	>150	24	14	24
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

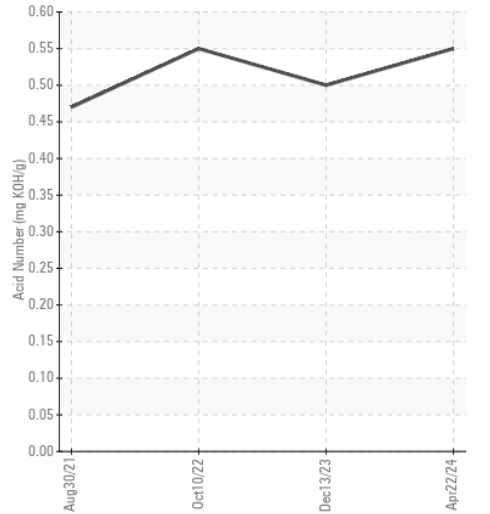
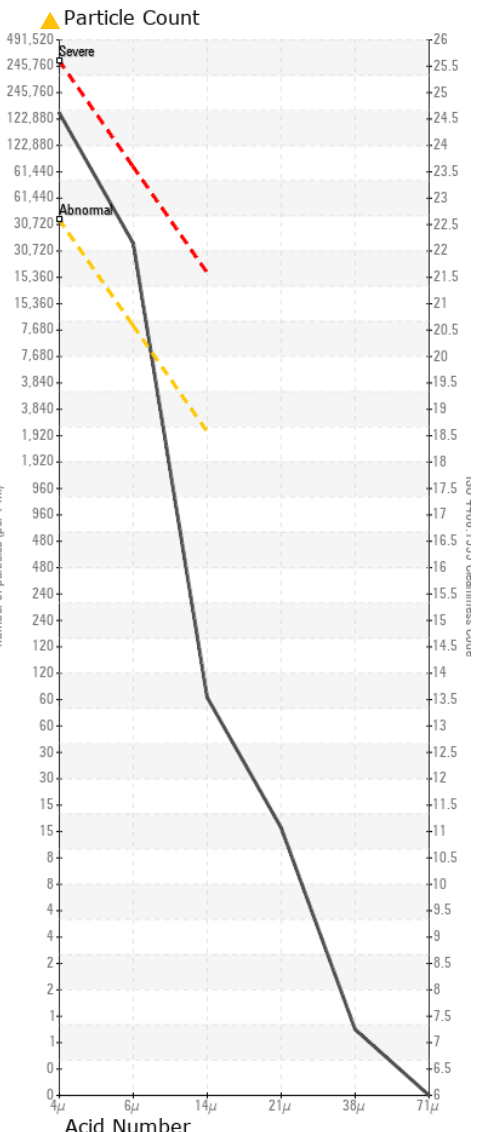
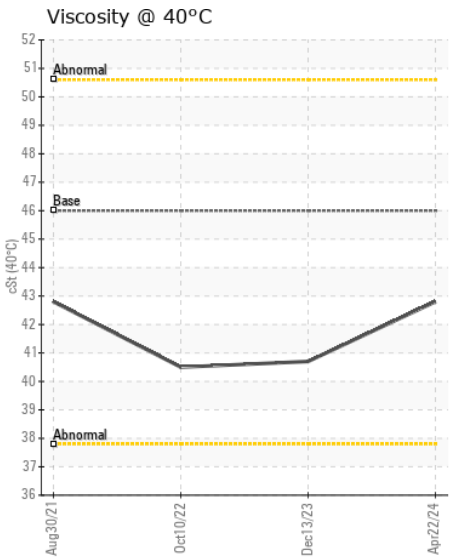
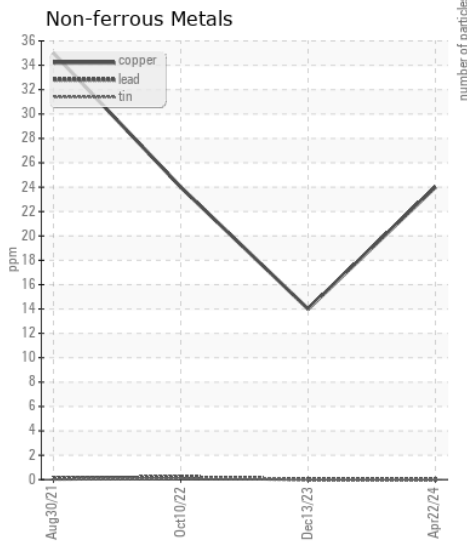
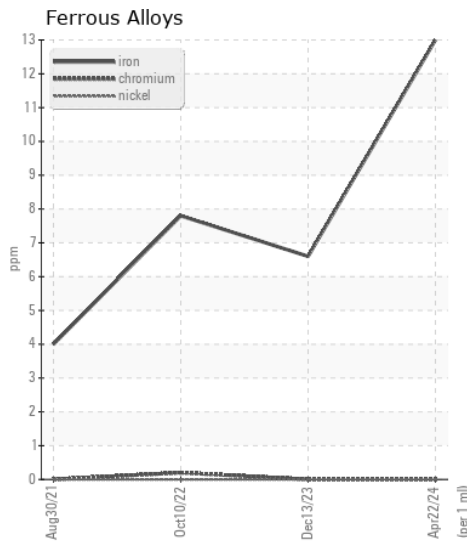
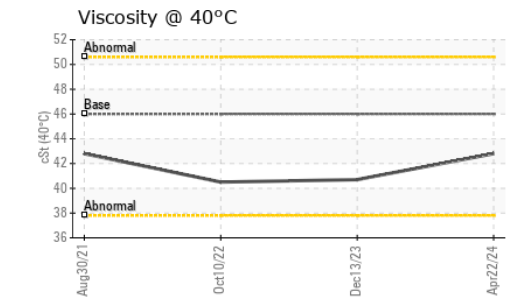
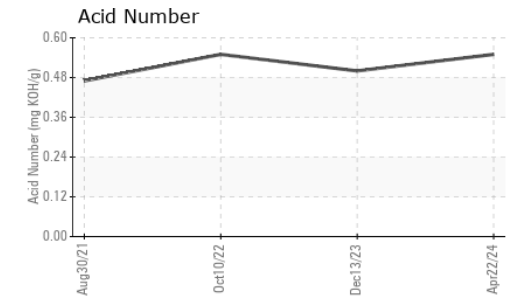
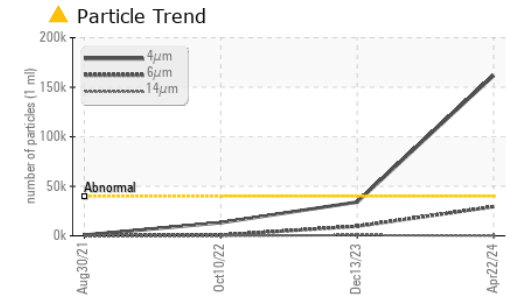
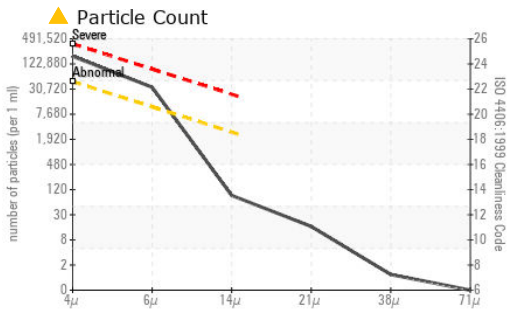
There is a high amount of silt (particulates < 14 microns in size) present in the oil.

Silicon	ppm	ASTM D5185m	>50	7	5	6
Potassium	ppm	ASTM D5185m	>20	<1	0	0
Water		WC Method	>0.1	NEG	NEG	NEG
Particles >4µm		ASTM D7647	>40000	▲ 161742	34026	13255
Particles >6µm		ASTM D7647	>10000	▲ 29384	9627	668
Particles >14µm		ASTM D7647	>2500	77	714	5
Particles >21µm		ASTM D7647	>640	14	138	2
Particles >38µm		ASTM D7647	>160	1	4	0
Particles >71µm		ASTM D7647	>40	0	0	0
Oil Cleanliness		ISO 4406 (c)	>22/20/18	▲ 25/22/13	22/20/17	21/17/10
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	>0.1	NEG	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		2	0	1
Boron	ppm	ASTM D5185m	14	4	2	13
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.0	<1	<1	<1
Manganese	ppm	ASTM D5185m	0.0	0	0	<1
Magnesium	ppm	ASTM D5185m	2.6	40	0	6
Calcium	ppm	ASTM D5185m	49	272	176	488
Phosphorus	ppm	ASTM D5185m	354	357	273	457
Zinc	ppm	ASTM D5185m	419	433	348	552
Sulfur	ppm	ASTM D5185m	3719	1427	484	2043
Acid Number (AN)	mg KOH/g	ASTM D8045		0.55	0.50	0.55
Visc @ 40°C	cSt	ASTM D445	46	42.8	40.7	40.5



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0007330 **Received** : 25 Apr 2024
Lab Number : 06160274 **Tested** : 26 Apr 2024
Unique Number : 10995697 **Diagnosed** : 26 Apr 2024 - Don Baldrige
Test Package : CONST

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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)