



ASCENDUM

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area

Ascendum Machinery

Machine Id

VOLVO EC220D EX-01 (S/N 210294)

Component

Hydraulic System

Fluid

VOLVO SUPER HYDRAULIC OIL 46 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0000941	VCP309896	---
Sample Date		Client Info		13 Dec 2023	26 May 2021	---
Machine Age		Client Info		9894	8252	---
Oil Age		Client Info		1642	0	---
Filter Age		Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	SEVERE	---

WEAR

A decrease in the iron level is noted. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>25	▲ 96	▲ 426	---
Chromium	ppm	ASTM D5185m	>10	3	▲ 11	---
Nickel	ppm	ASTM D5185m	>10	0	<1	---
Titanium	ppm	ASTM D5185m		<1	6	---
Silver	ppm	ASTM D5185m		0	0	---
Aluminum	ppm	ASTM D5185m	>20	13	● 115	---
Lead	ppm	ASTM D5185m	>20	<1	2	---
Copper	ppm	ASTM D5185m	>150	14	34	---
Tin	ppm	ASTM D5185m	>10	0	0	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

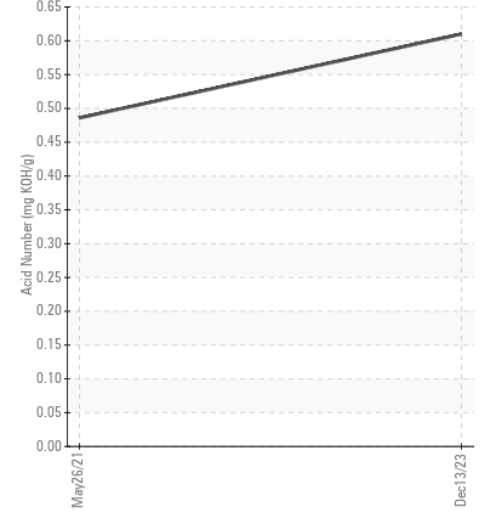
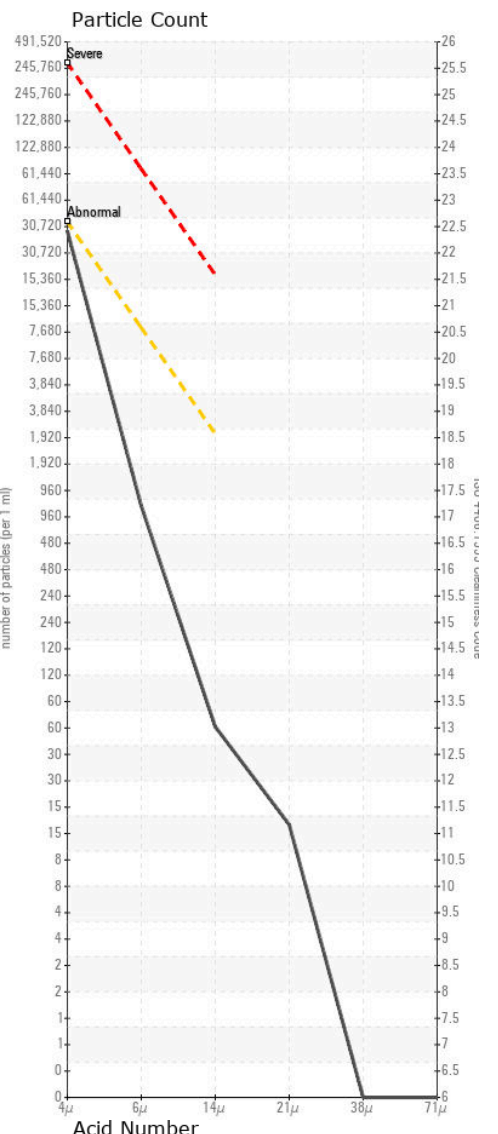
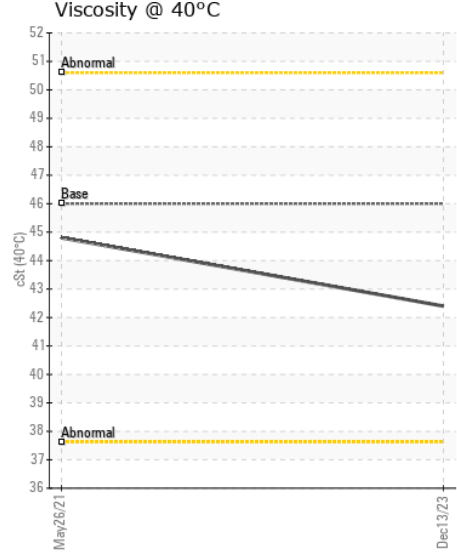
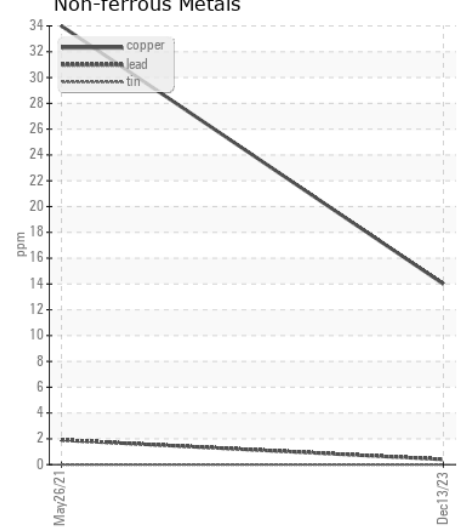
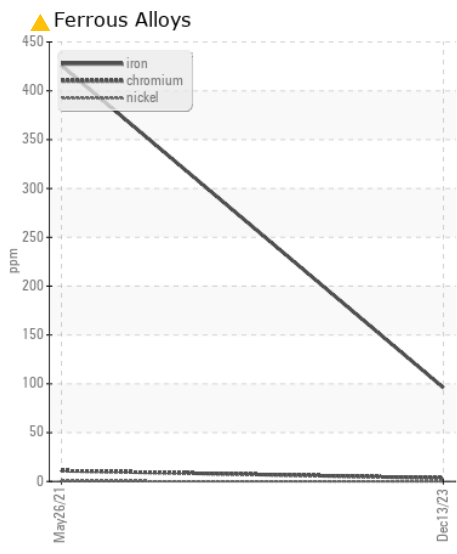
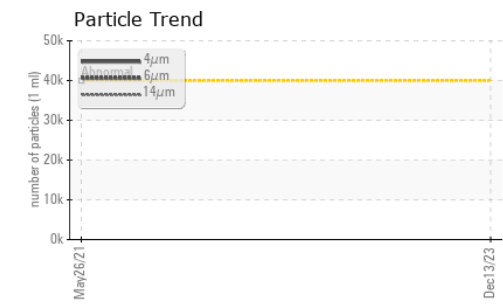
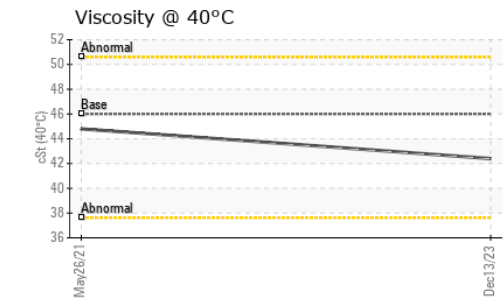
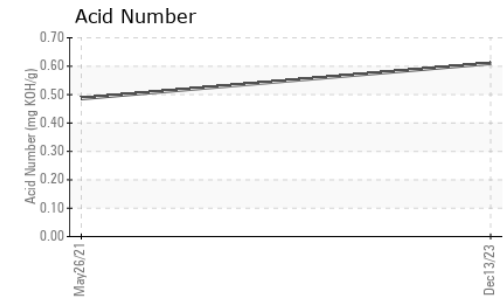
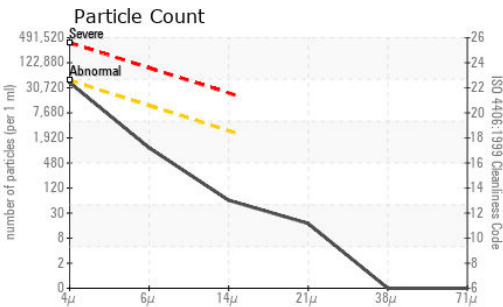
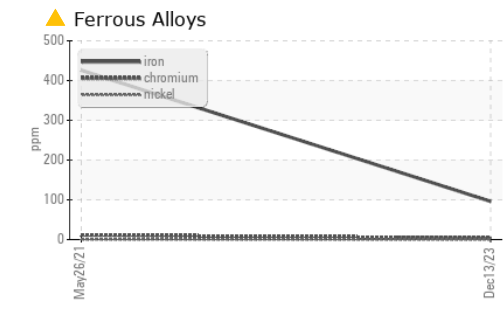
The amount and size of particulates present in the system are acceptable.

Silicon	ppm	ASTM D5185m	>50	35	▲ 371	---
Potassium	ppm	ASTM D5185m	>20	<1	25	---
Water		WC Method	>0.1	NEG	NEG	---
Particles >4µm		ASTM D7647	>40000	35564	---	---
Particles >6µm		ASTM D7647	>10000	972	---	---
Particles >14µm		ASTM D7647	>2500	54	---	---
Particles >21µm		ASTM D7647	>640	15	---	---
Particles >38µm		ASTM D7647	>160	0	---	---
Particles >71µm		ASTM D7647	>40	0	---	---
Oil Cleanliness		ISO 4406 (c)	>22/20/18	22/17/13	---	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	▲ MODER	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	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		3	19	---
Boron	ppm	ASTM D5185m	14	15	28	---
Barium	ppm	ASTM D5185m	0.0	0	0	---
Molybdenum	ppm	ASTM D5185m	0.0	6	14	---
Manganese	ppm	ASTM D5185m	0.0	<1	3	---
Magnesium	ppm	ASTM D5185m	2.6	0	37	---
Calcium	ppm	ASTM D5185m	49	1103	1022	---
Phosphorus	ppm	ASTM D5185m	354	569	549	---
Zinc	ppm	ASTM D5185m	419	649	669	---
Sulfur	ppm	ASTM D5185m	3719	2172	2580	---
Acid Number (AN)	mg KOH/g	ASTM D8045		0.61	0.486	---
Visc @ 40°C	cSt	ASTM D445	46	42.4	44.8	---



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0000941 **Received** : 14 Dec 2023
Lab Number : 06034574 **Tested** : 15 Dec 2023
Unique Number : 10789803 **Diagnosed** : 18 Dec 2023 - Angela Borella
Test Package : MOBCE

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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)