



ASCENDUM

OIL ANALYSIS REPORT



Area

Ascendum Machinery

Machine Id

VOLVO EC220D EX-1 (S/N 210294)

Component

Left Travel

Fluid

VOLVO PREMIUM GEAR OIL 85W-140 GL-5 (--- GAL)

WEAR

ATTENTION

CONTAMINATION

SEVERE

FLUID CONDITION

NORMAL

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. The oil 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		ASC0000940	VCP0004473	VCP356639
Sample Date		Client Info		13 Dec 2023	31 Oct 2022	06 Apr 2022
Machine Age	hrs	Client Info		9894	9436	9045
Oil Age	hrs	Client Info		458	391	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	Not Changed
Sample Status				SEVERE	SEVERE	SEVERE

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>1200	1087	▲ 3342	▲ 10000
Chromium	ppm	ASTM D5185m	>20	6	▲ 13	▲ 72
Nickel	ppm	ASTM D5185m	>5	<1	3	9
Titanium	ppm	ASTM D5185m		5	17	100
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>100	71	● 236	● 120
Lead	ppm	ASTM D5185m	>50	0	<1	3
Copper	ppm	ASTM D5185m	>50	3	9	44
Tin	ppm	ASTM D5185m	>5	0	<1	2
Vanadium	ppm	ASTM D5185m		<1	<1	5
White Metal	scalar	*Visual	NONE	LIGHT	NONE	LIGHT
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

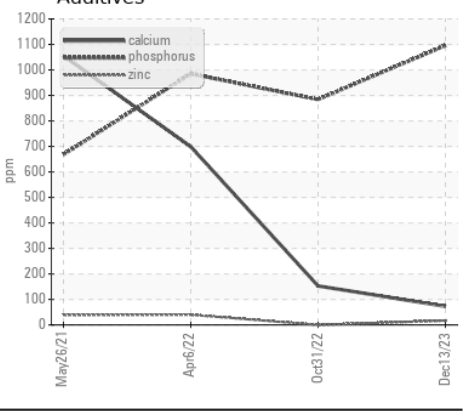
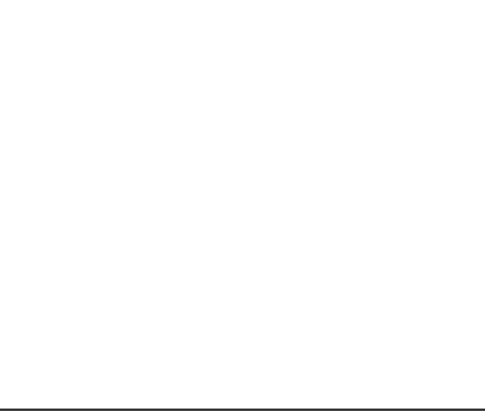
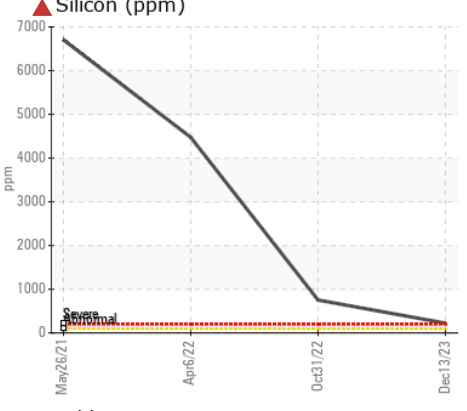
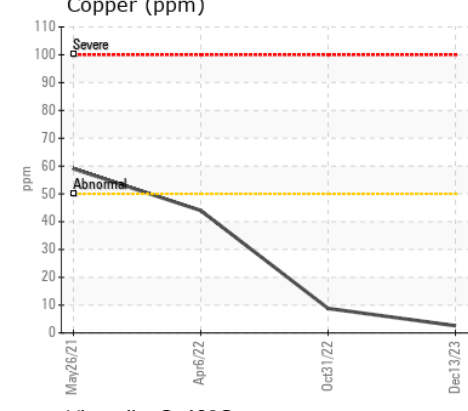
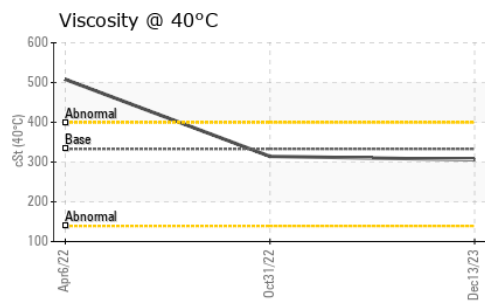
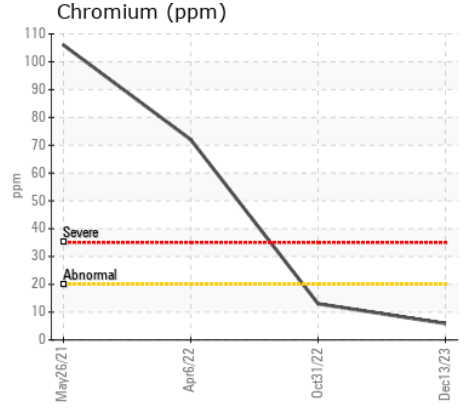
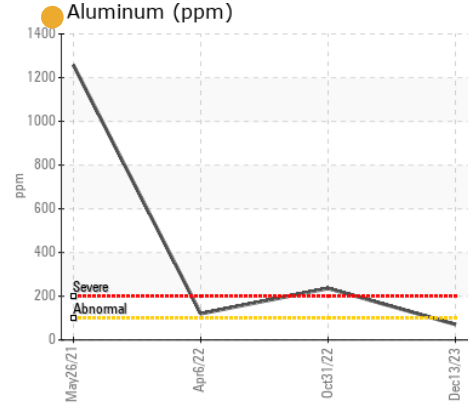
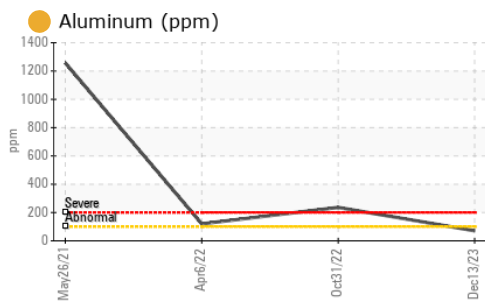
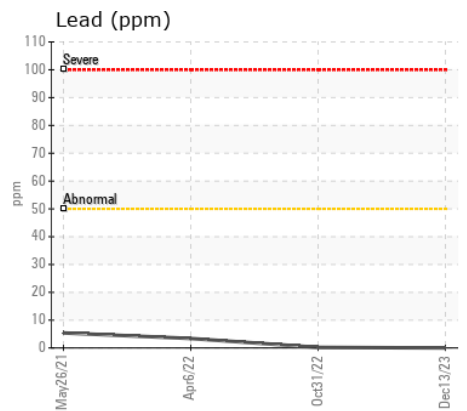
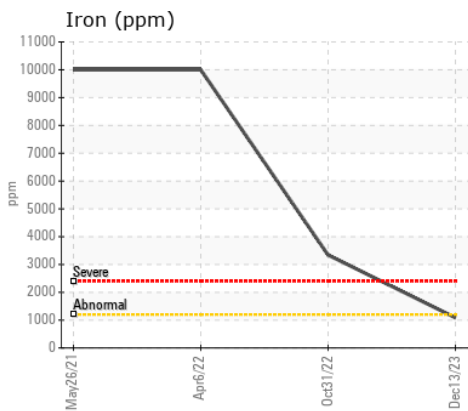
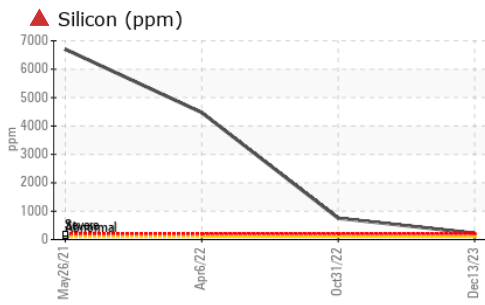
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

Silicon	ppm	ASTM D5185m	>100	▲ 224	▲ 752	▲ 4473
Potassium	ppm	ASTM D5185m	>20	9	20	135
Water		WC Method	>0.25	NEG	NEG	NEG
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	>0.25	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		11	46	314
Boron	ppm	ASTM D5185m	111	152	146	161
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.9	0	2	11
Manganese	ppm	ASTM D5185m	0.0	7	16	80
Magnesium	ppm	ASTM D5185m	39	17	53	342
Calcium	ppm	ASTM D5185m	93	73	153	699
Phosphorus	ppm	ASTM D5185m	920	1096	884	985
Zinc	ppm	ASTM D5185m	104	17	0	40
Sulfur	ppm	ASTM D5185m	20179	30373	25056	25056
Visc @ 40°C	cSt	ASTM D445	333	306	314.3	508



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ASC0000940
Lab Number : 06034911
Unique Number : 10790140
Test Package : MOBCE

Received : 14 Dec 2023
Tested : 15 Dec 2023
Diagnosed : 18 Dec 2023 - Don Baldrige

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: