



VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL



Area
[SPM645360]
 Machine Id
VOLVO EC380EL 311492
 Component
Left Final Drive
 Fluid
GEAR OIL SAE 80W90 (--- GAL)

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. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP433393	VCP414195	VCP403439
Sample Date		Client Info		01 Dec 2023	21 Jul 2023	28 Feb 2023
Machine Age	hrs	Client Info		3109	7780	6944
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changd	Changed
Filter Changed		Client Info		Not Changed	Not Changed	Not Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Gear wear is indicated.

Iron	ppm	ASTM D5185m	>500	▲ 588	400	▲ 1330
Chromium	ppm	ASTM D5185m	>10	8	6	▲ 23
Nickel	ppm	ASTM D5185m	>10	<1	<1	1
Titanium	ppm	ASTM D5185m		2	3	6
Silver	ppm	ASTM D5185m		0	0	<1
Aluminum	ppm	ASTM D5185m	>25	▲ 45	▲ 32	▲ 56
Lead	ppm	ASTM D5185m	>25	0	3	5
Copper	ppm	ASTM D5185m	>50	3	2	6
Tin	ppm	ASTM D5185m	>10	0	<1	2
Vanadium	ppm	ASTM D5185m		0	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	MODER
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

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

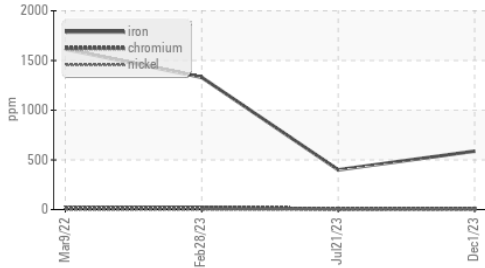
Silicon	ppm	ASTM D5185m	>75	▲ 223	▲ 109	▲ 210
Potassium	ppm	ASTM D5185m	>20	17	6	10
Water		WC Method	>0.2	NEG	NEG	NEG
Silt	scalar	*Visual	NONE	NONE	MODER	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	0.2%	0.2%

FLUID CONDITION

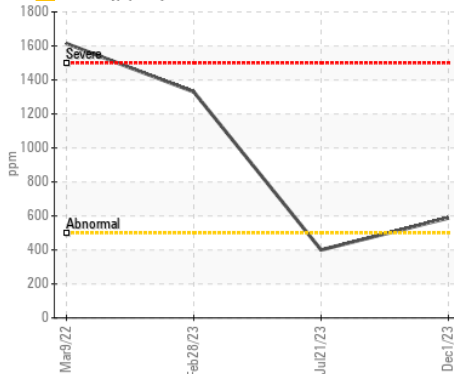
The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m	>170	5	4	8
Boron	ppm	ASTM D5185m	400	48	69	7
Barium	ppm	ASTM D5185m	200	3	0	3
Molybdenum	ppm	ASTM D5185m	12	3	<1	4
Manganese	ppm	ASTM D5185m		8	14	32
Magnesium	ppm	ASTM D5185m	12	113	42	129
Calcium	ppm	ASTM D5185m	150	2336	377	2784
Phosphorus	ppm	ASTM D5185m	1650	996	1371	799
Zinc	ppm	ASTM D5185m	125	935	147	885
Sulfur	ppm	ASTM D5185m	22500	12277	16585	10224
Visc @ 40°C	cSt	ASTM D445	143	182	149	164

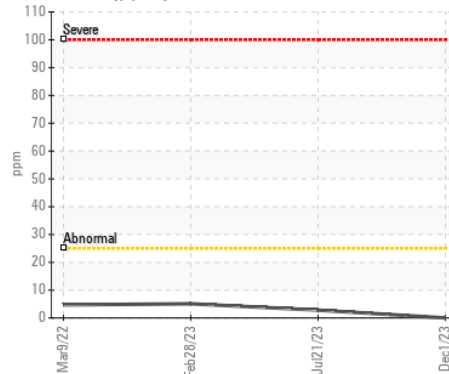
▲ Ferrous Alloys



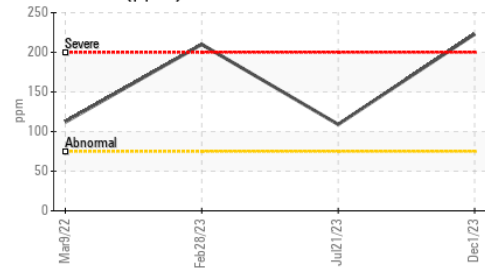
▲ Iron (ppm)



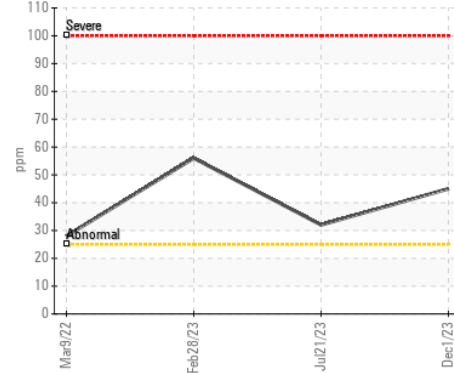
Lead (ppm)



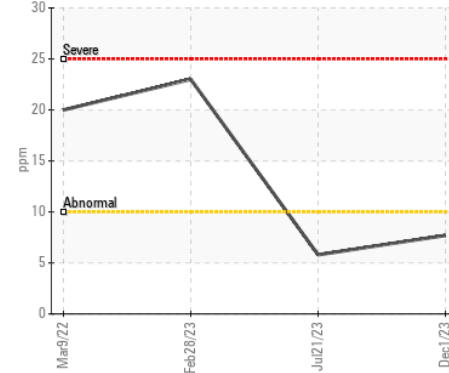
▲ Silicon (ppm)



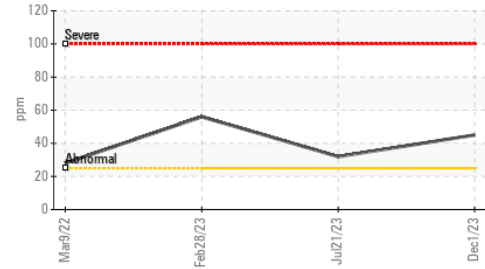
▲ Aluminum (ppm)



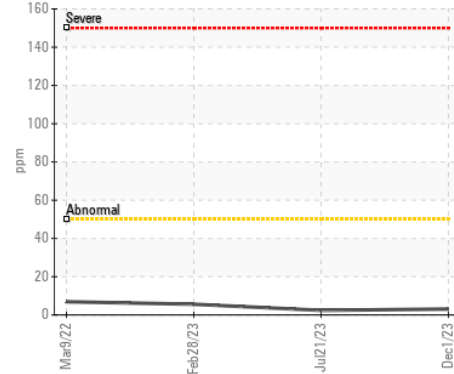
Chromium (ppm)



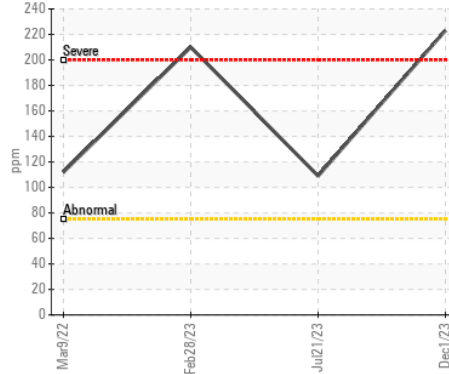
▲ Aluminum (ppm)



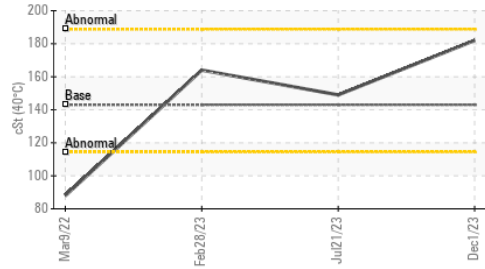
Copper (ppm)



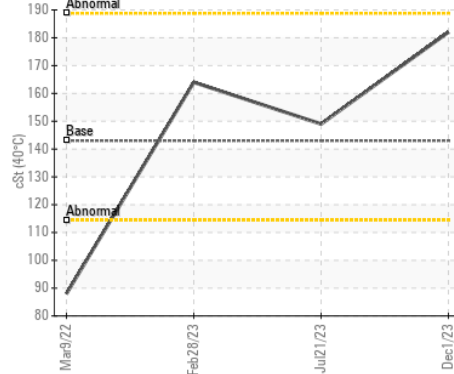
▲ Silicon (ppm)



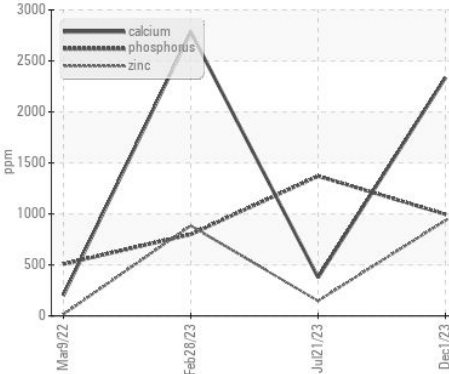
Viscosity @ 40°C



Viscosity @ 40°C



Additives



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : VCP433393
 Lab Number : 06086307
 Unique Number : 10873752
 Test Package : MOB 1
 Received : 12 Feb 2024
 Tested : 13 Feb 2024
 Diagnosed : 13 Feb 2024 - Sean Felton

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 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)