VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Area
[646971]
Machine Id
VOLVO EC380EL 311542
Component
Diesel Engine
Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

WEAR

All component wear rates are normal.

CONTAMINATION

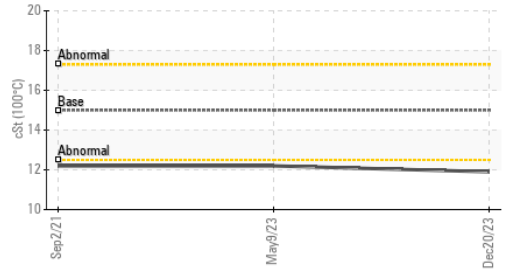
There is no indication of any contamination in the oil.

FLUID CONDITION

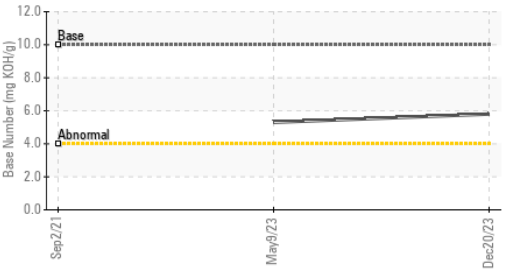
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP452303	VCP407009	VCP334852
Sample Date		Client Info		20 Dec 2023	09 May 2023	02 Sep 2021
Machine Age	hrs	Client Info		3878	3035	1499
Oil Age	hrs	Client Info		700	500	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ATTENTION	ATTENTION	ABNORMAL
Iron	ppm	ASTM D5185m	>100	6	9	8
Chromium	ppm	ASTM D5185m	>10	0	0	<1
Nickel	ppm	ASTM D5185m	>10	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>10	<1	<1	4
Lead	ppm	ASTM D5185m	>20	<1	<1	1
Copper	ppm	ASTM D5185m	>15	3	11	▲ 142
Tin	ppm	ASTM D5185m	>10	<1	<1	2
Vanadium	ppm	ASTM D5185m		<1	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	6	6	6
Potassium	ppm	ASTM D5185m	>20	0	0	2
Fuel	%	ASTM D3524	>6.0	<1.0	<1.0	0.4
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	9.1	10.1	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.4	22.3	21.8
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
Sodium	ppm	ASTM D5185m		2	3	5
Boron	ppm	ASTM D5185m	2.5	0	0	43
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	59	60	29
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	938	952	580
Calcium	ppm	ASTM D5185m	2057	1017	1117	1677
Phosphorus	ppm	ASTM D5185m	935	925	880	841
Zinc	ppm	ASTM D5185m	1223	1225	1241	1018
Sulfur	ppm	ASTM D5185m	4079	2865	3074	2665
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	17.9	18.5
Base Number (BN)	mg KOH/g	ASTM D2896	10	5.8	5.3	---
Visc @ 100°C	cSt	ASTM D445	15.0	▲ 11.9	▲ 12.2	▲ 12.2

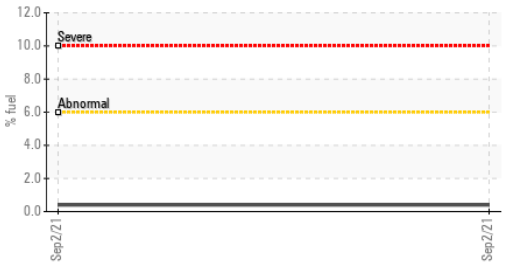
Viscosity @ 100°C



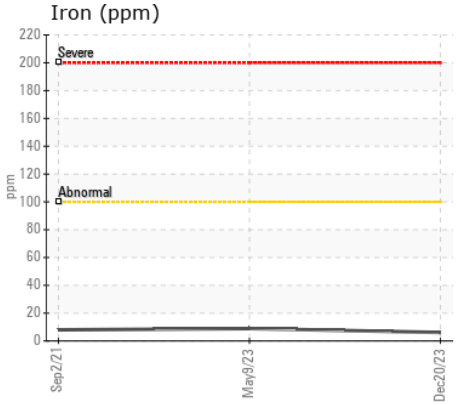
Base Number



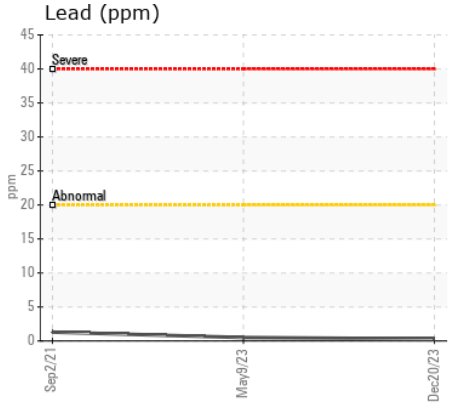
Fuel Dilution



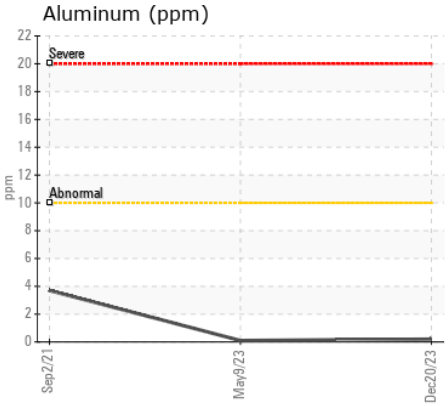
Iron (ppm)



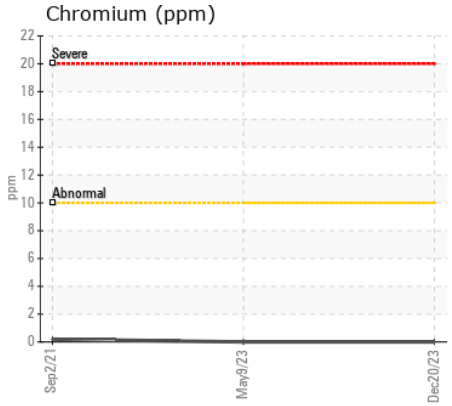
Lead (ppm)



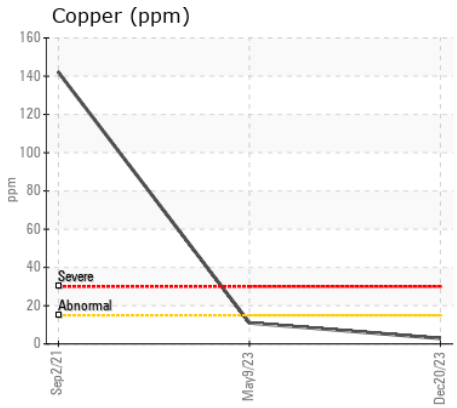
Aluminum (ppm)



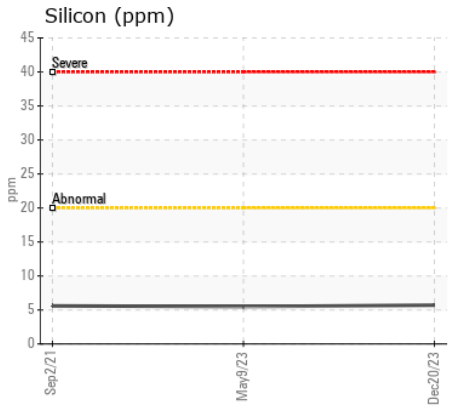
Chromium (ppm)



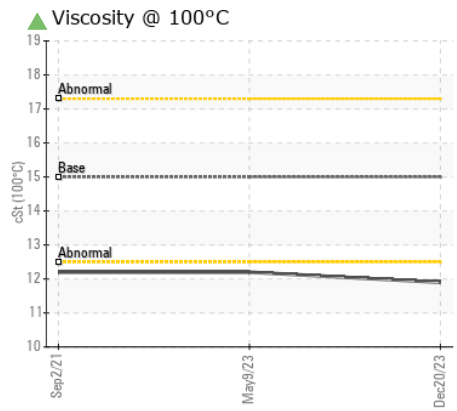
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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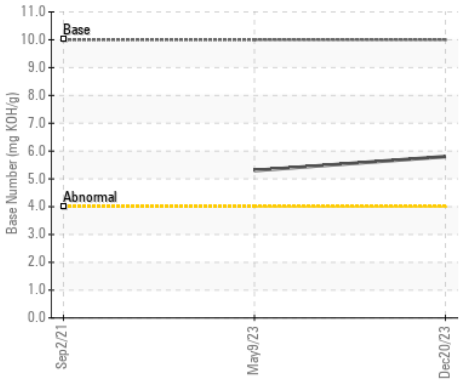

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP452303 **Recieved** : 10 Jan 2024
Lab Number : 06056454 **Diagnosed** : 11 Jan 2024
Unique Number : 10822403 **Diagnostician** : Don Baldridge
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

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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