MOB I

VOLVO

OIL ANALYSIS REPORT

WEAR	MARGINAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
VOLVO EC480EL 315166
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

The copper level has decreased, but is still abnormal.

CONTAMINATION

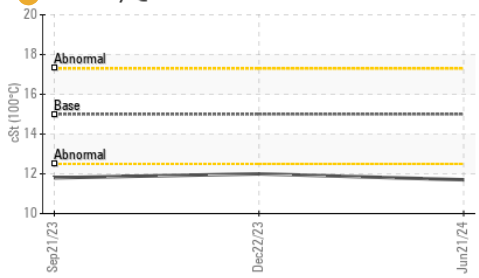
There is no indication of any contamination in the oil.

FLUID CONDITION

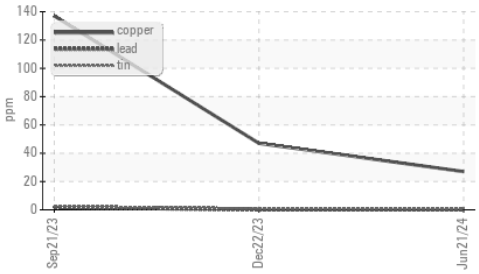
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP450778	VCP449246	VCP415830
Sample Date		Client Info		21 Jun 2024	22 Dec 2023	21 Sep 2023
Machine Age	hrs	Client Info		2104	1242	2223
Oil Age	hrs	Client Info		0	0	2223
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				ATTENTION	ATTENTION	ABNORMAL
Iron	ppm	ASTM D5185m	>100	6	8	18
Chromium	ppm	ASTM D5185m	>10	<1	<1	0
Nickel	ppm	ASTM D5185m	>10	2	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	2	3
Lead	ppm	ASTM D5185m	>20	0	0	2
Copper	ppm	ASTM D5185m	>15	▲ 27	▲ 47	▲ 137
Tin	ppm	ASTM D5185m	>10	<1	<1	3
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	11	12	▲ 27
Potassium	ppm	ASTM D5185m	>20	2	2	2
Fuel	%	ASTM D3524	>6.0	<1.0	<1.0	0.8
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	9.2	8.0	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.6	22.2	21.6
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	0	1
Boron	ppm	ASTM D5185m	2.5	9	17	0
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	47	45	27
Manganese	ppm	ASTM D5185m	0.0	0	<1	2
Magnesium	ppm	ASTM D5185m	256	497	411	82
Calcium	ppm	ASTM D5185m	2057	1667	1702	2132
Phosphorus	ppm	ASTM D5185m	935	869	895	898
Zinc	ppm	ASTM D5185m	1223	1183	1059	1101
Sulfur	ppm	ASTM D5185m	4079	2774	3002	3263
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	19.7	14.1
Base Number (BN)	mg KOH/g	ASTM D2896	10	6.7	7.4	4.6
Visc @ 100°C	cSt	ASTM D445	15.0	11.7	12.0	11.8

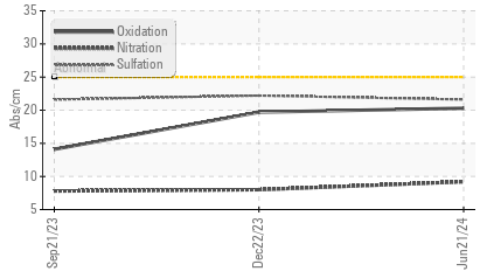
Viscosity @ 100°C



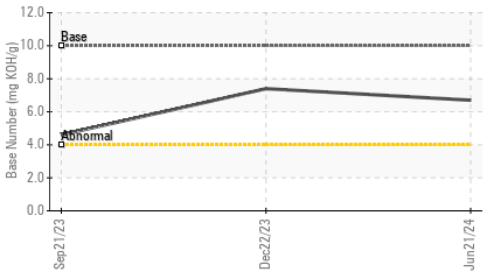
Non-ferrous Metals



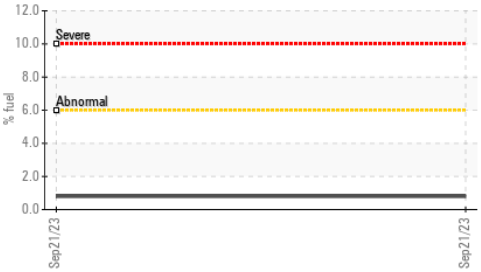
FT-IR (Direct Trend)



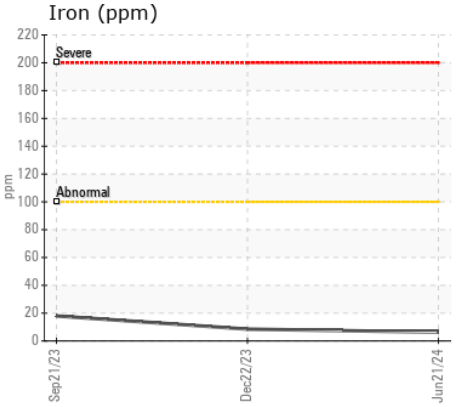
Base Number



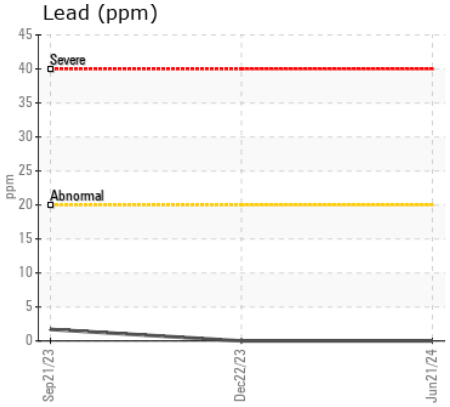
Fuel Dilution



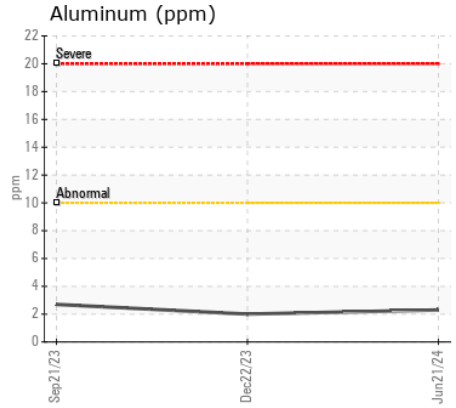
Iron (ppm)



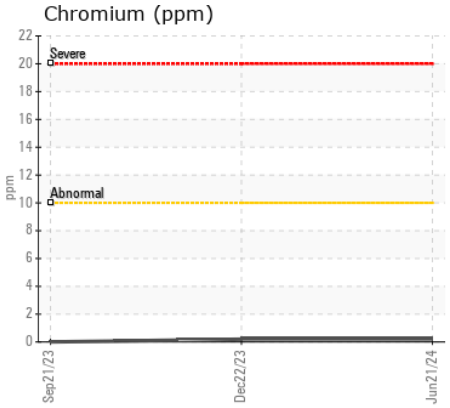
Lead (ppm)



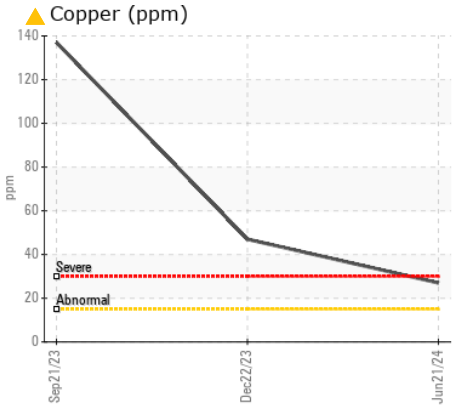
Aluminum (ppm)



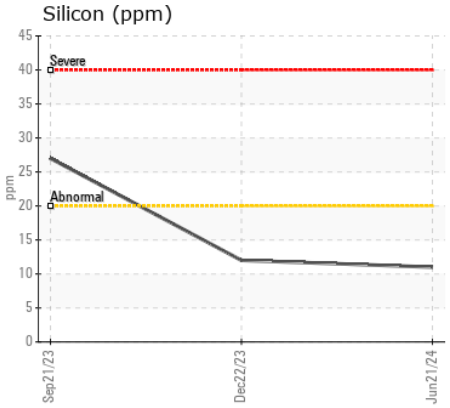
Chromium (ppm)



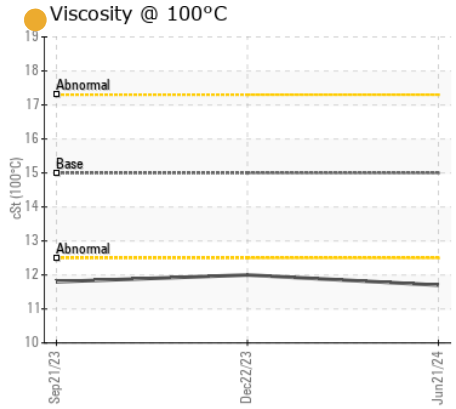
Copper (ppm)



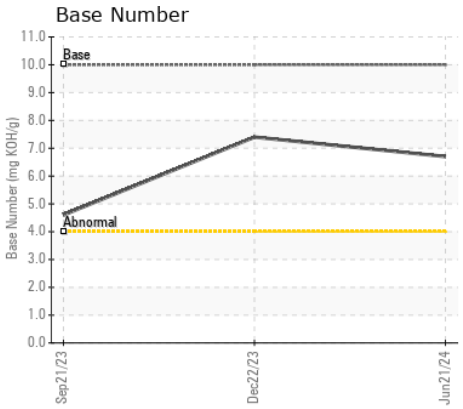
Silicon (ppm)



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP450778
Lab Number : 06220777
Unique Number : 11098974
Test Package : MOB 1 (Additional Tests: FuelDilution, TBN)

Received : 26 Jun 2024
Tested : 27 Jun 2024
Diagnosed : 27 Jun 2024 - Angela Borella

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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