



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[A12803]
Machine Id
VOLVO EC220D 210876
Component
Diesel Engine
Fluid
MOBIL 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP439536	VCP444363	VCP430666
Sample Date		Client Info		14 Jun 2024	20 Mar 2024	16 Oct 2023
Machine Age	hrs	Client Info		14465	13980	13460
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	11	6
Chromium	ppm	ASTM D5185m	>10	0	<1	0
Nickel	ppm	ASTM D5185m	>10	<1	0	0
Titanium	ppm	ASTM D5185m		25	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	2	3	2
Lead	ppm	ASTM D5185m	>20	0	0	0
Copper	ppm	ASTM D5185m	>15	0	<1	0
Tin	ppm	ASTM D5185m	>10	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

There is no indication of any contamination in the oil.

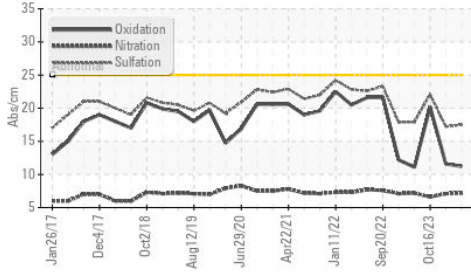
Silicon	ppm	ASTM D5185m	>20	9	12	17
Potassium	ppm	ASTM D5185m	>20	4	2	0
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.1	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.2	7.1	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.5	17.2	22.1
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

FLUID CONDITION

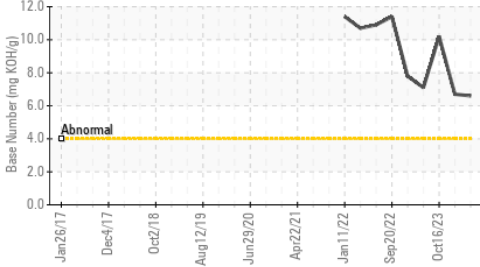
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m	>118	2	2	3
Boron	ppm	ASTM D5185m		32	7	33
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		5	12	37
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		207	169	508
Calcium	ppm	ASTM D5185m		2106	2153	1704
Phosphorus	ppm	ASTM D5185m		994	761	841
Zinc	ppm	ASTM D5185m		1163	1119	1179
Sulfur	ppm	ASTM D5185m		4316	3897	2973
Oxidation	Abs/.1mm	*ASTM D7414	>25	11.2	11.6	20.2
Base Number (BN)	mg KOH/g	ASTM D2896		6.6	6.7	10.2
Visc @ 100°C	cSt	ASTM D445		13.1	12.9	13.1

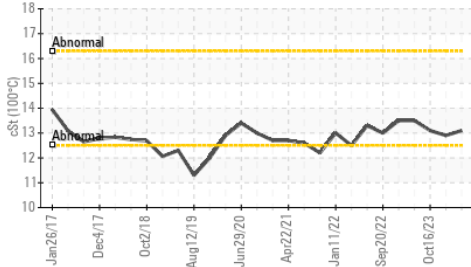
FT-IR (Direct Trend)



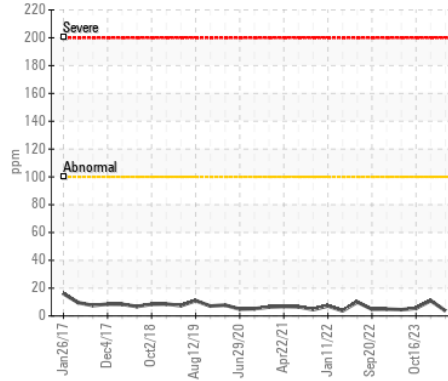
Base Number



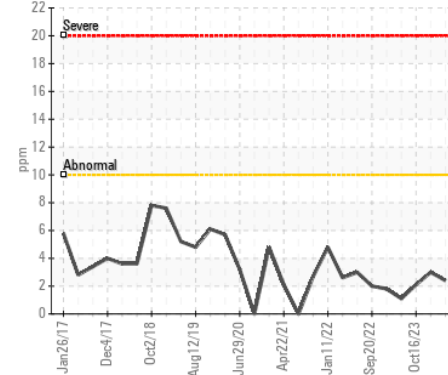
Viscosity @ 100°C



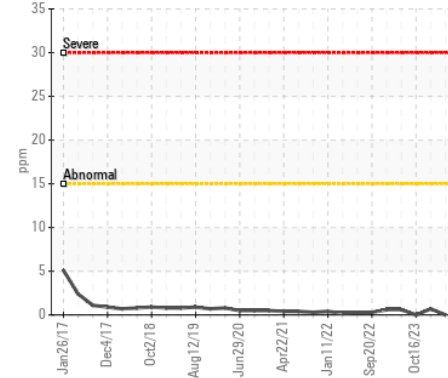
Iron (ppm)



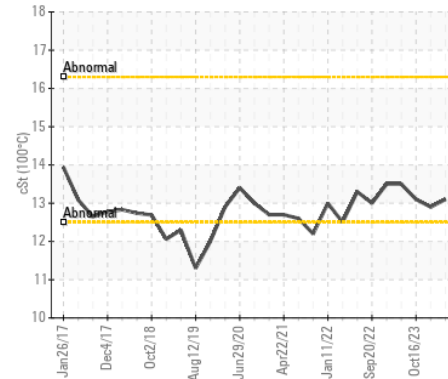
Aluminum (ppm)



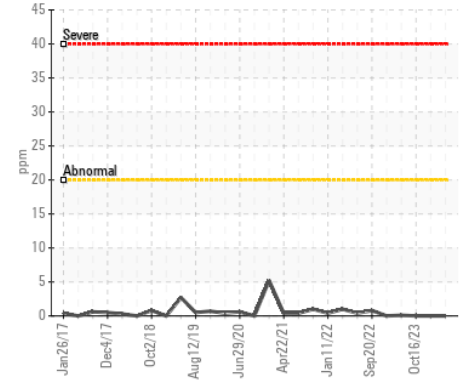
Copper (ppm)



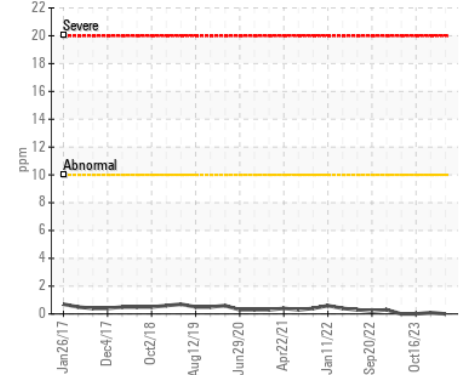
Viscosity @ 100°C



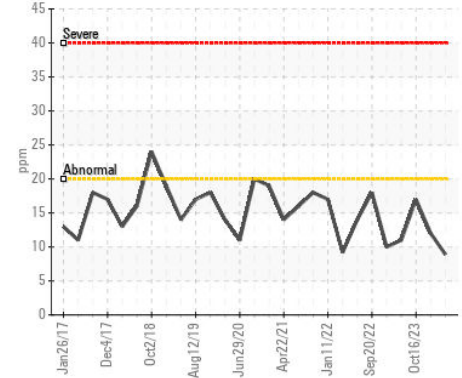
Lead (ppm)



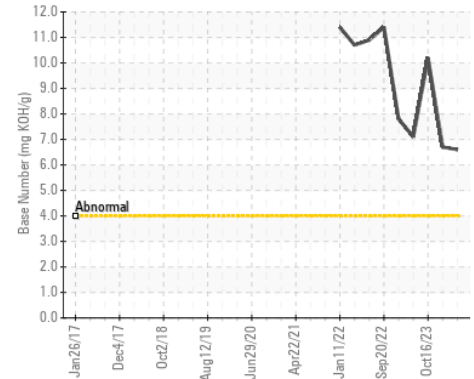
Chromium (ppm)



Silicon (ppm)



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : VCP439536
 Lab Number : 06215394
 Unique Number : 11088258
 Test Package : MOB 1 (Additional Tests: TBN)

Received : 20 Jun 2024
 Tested : 21 Jun 2024
 Diagnosed : 21 Jun 2024 - Wes Davis

WASTE MANAGEMENT - TELFORD
 400 PROGRESS DR
 TELFORD, PA
 US 18969-1191
 Contact: EDWARD ROGENER
 erogener@wm.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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