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VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Area
[716824 SYNERGY]
Machine Id
VOLVO ECR235 314203
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. No corrective action is recommended at this time. Resample at the next service interval to monitor.

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

CONTAMINATION

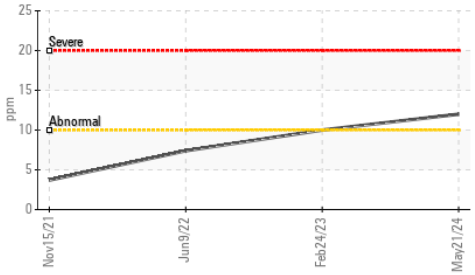
There is no indication of any contamination in the oil.

FLUID CONDITION

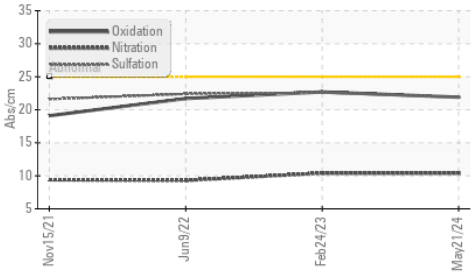
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP450727	VCP402865	VCP375851
Sample Date		Client Info		21 May 2024	24 Feb 2023	09 Jun 2022
Machine Age	hrs	Client Info		4253	3136	2375
Oil Age	hrs	Client Info		0	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				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>100	58	33	25
Chromium	ppm	ASTM D5185m	>10	2	1	1
Nickel	ppm	ASTM D5185m	>10	1	1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	1	0	<1
Aluminum	ppm	ASTM D5185m	>10	▲ 12	10	7
Lead	ppm	ASTM D5185m	>20	1	<1	<1
Copper	ppm	ASTM D5185m	>15	3	2	1
Tin	ppm	ASTM D5185m	>10	2	1	1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	13	8	8
Potassium	ppm	ASTM D5185m	>20	2	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	0.3	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	10.4	10.4	9.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.9	22.6	22.4
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		3	<1	3
Boron	ppm	ASTM D5185m	2.5	20	19	41
Barium	ppm	ASTM D5185m	0.0	2	3	0
Molybdenum	ppm	ASTM D5185m	0.7	50	44	39
Manganese	ppm	ASTM D5185m	0.0	1	<1	<1
Magnesium	ppm	ASTM D5185m	256	552	507	508
Calcium	ppm	ASTM D5185m	2057	1701	1812	1713
Phosphorus	ppm	ASTM D5185m	935	999	952	881
Zinc	ppm	ASTM D5185m	1223	1210	1159	1062
Sulfur	ppm	ASTM D5185m	4079	3235	2857	3353
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.9	22.7	21.7
Base Number (BN)	mg KOH/g	ASTM D2896	10	8.1	10.2	10.8
Visc @ 100°C	cSt	ASTM D445	15.0	13.6	13.6	13.3

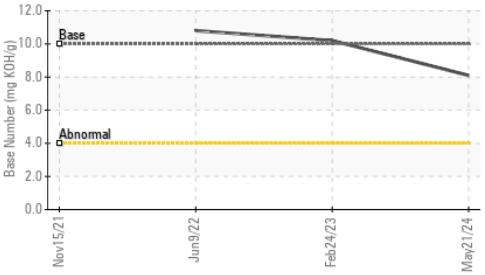
Aluminum (ppm)



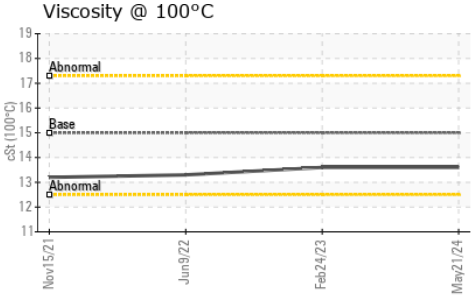
FT-IR (Direct Trend)



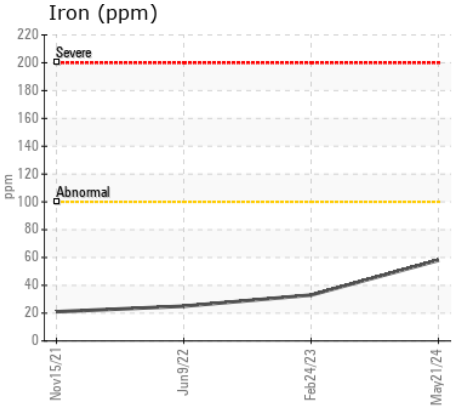
Base Number



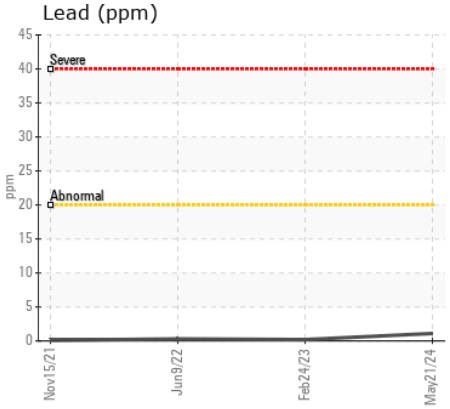
Viscosity @ 100°C



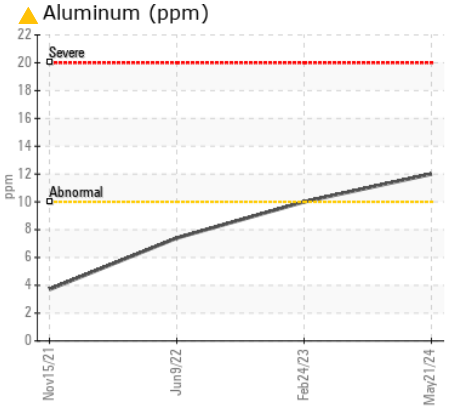
Iron (ppm)



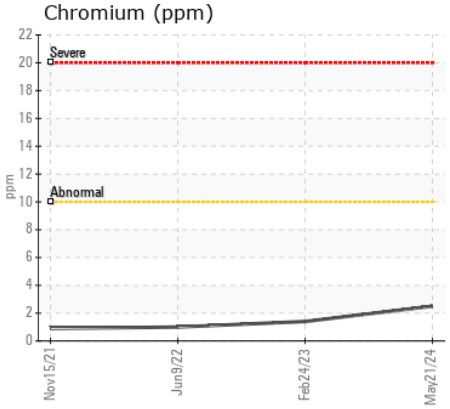
Lead (ppm)



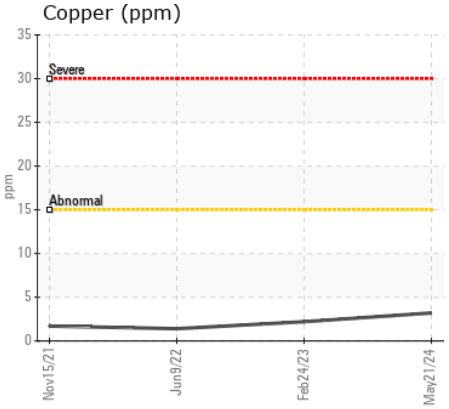
Aluminum (ppm)



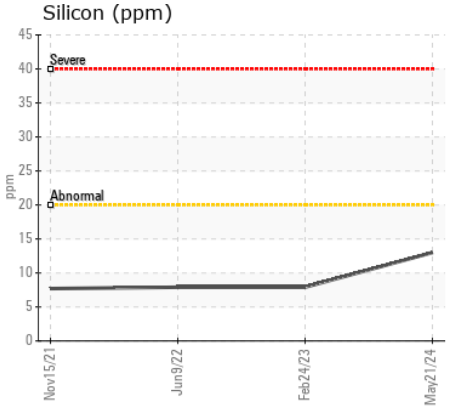
Chromium (ppm)



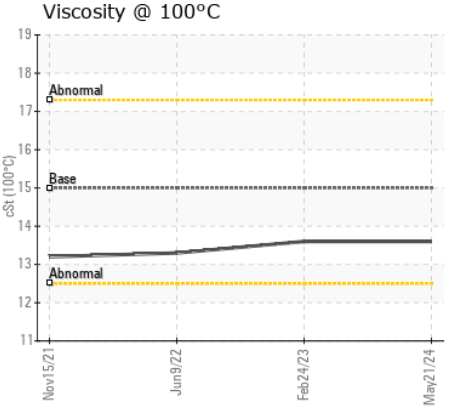
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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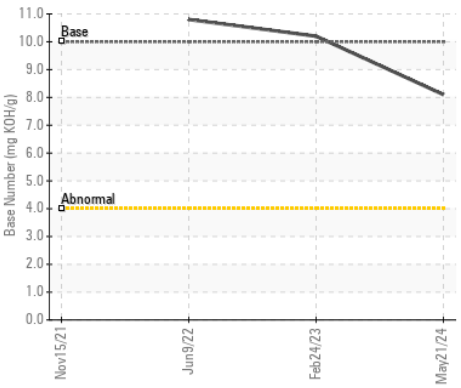

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP450727
Lab Number : 06191825
Unique Number : 11048577
Test Package : MOB 1 (Additional Tests: TBN)

Received : 28 May 2024
Tested : 29 May 2024
Diagnosed : 30 May 2024 - Sean Felton

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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