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VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL

Area
TMR-Rockledge [75200]
Machine Id
94142 VOLVO L90G 3184
Component
Diesel Engine
Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

WEAR

All component wear rates are normal.

CONTAMINATION

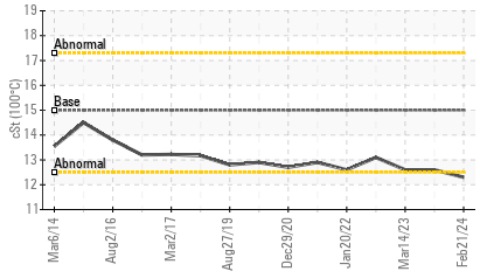
Sodium and/or potassium levels are high. Light fuel dilution occurring.

FLUID CONDITION

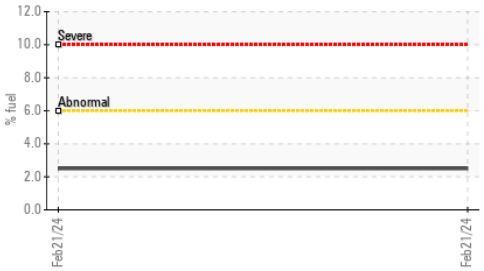
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP445682	VCP411576	VCP403515
Sample Date		Client Info		21 Feb 2024	31 May 2023	14 Mar 2023
Machine Age	hrs	Client Info		10646	10091	9896
Oil Age	hrs	Client Info		0	0	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				ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185m	>200	30	9	11
Chromium	ppm	ASTM D5185m	>20	2	<1	<1
Nickel	ppm	ASTM D5185m	>5	1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>30	21	6	6
Lead	ppm	ASTM D5185m	>40	1	0	<1
Copper	ppm	ASTM D5185m	>20	3	5	<1
Tin	ppm	ASTM D5185m	>20	<1	0	<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	12	6	2
Potassium	ppm	ASTM D5185m	>20	▲ 37	2	2
Fuel	%	ASTM D3524	>6.0	2.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.6	6.7	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.0	21.2	21.7
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	>0.2	NEG	NEG	NEG
Sodium	ppm	ASTM D5185m		▲ 246	27	4
Boron	ppm	ASTM D5185m	2.5	22	52	46
Barium	ppm	ASTM D5185m	0.0	1	0	2
Molybdenum	ppm	ASTM D5185m	0.7	41	45	43
Manganese	ppm	ASTM D5185m	0.0	1	<1	<1
Magnesium	ppm	ASTM D5185m	256	444	535	503
Calcium	ppm	ASTM D5185m	2057	1485	1745	1734
Phosphorus	ppm	ASTM D5185m	935	852	933	946
Zinc	ppm	ASTM D5185m	1223	998	1119	1129
Sulfur	ppm	ASTM D5185m	4079	2918	3475	2817
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.4	19.0	19.9
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.7	10.2	10.2
Visc @ 100°C	cSt	ASTM D445	15.0	▲ 12.3	12.6	12.6

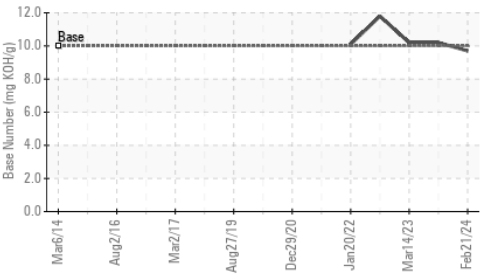
Viscosity @ 100°C



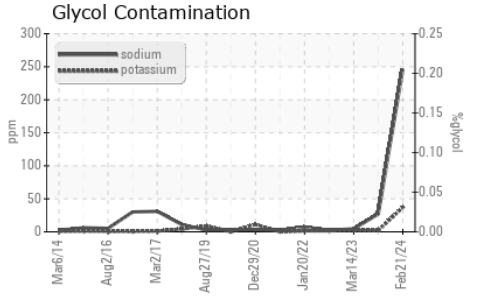
Fuel Dilution



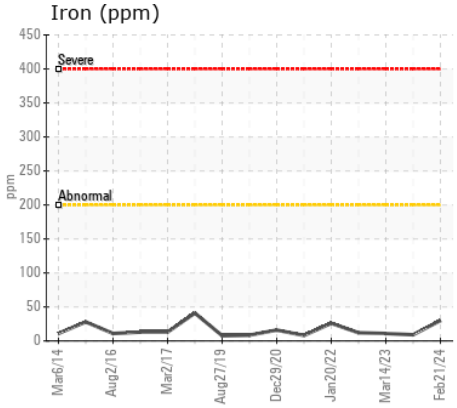
Base Number



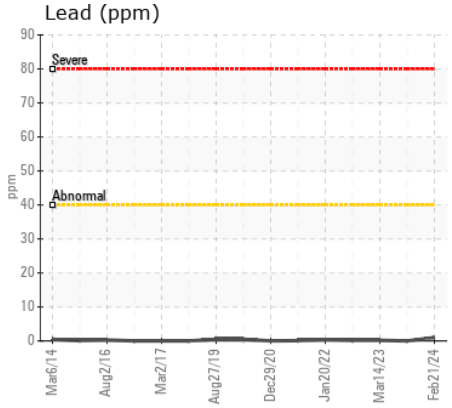
Glycol Contamination



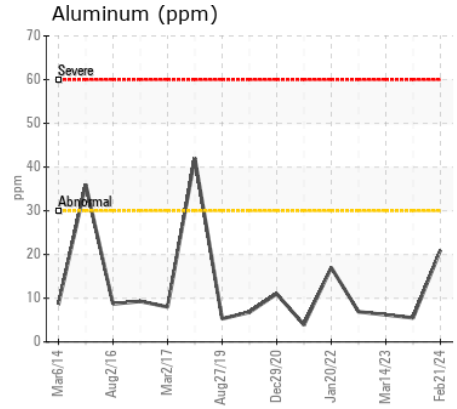
Iron (ppm)



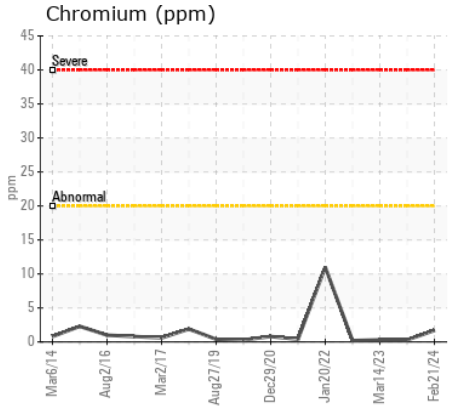
Lead (ppm)



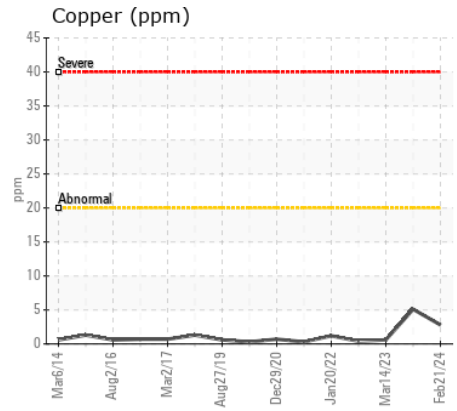
Aluminum (ppm)



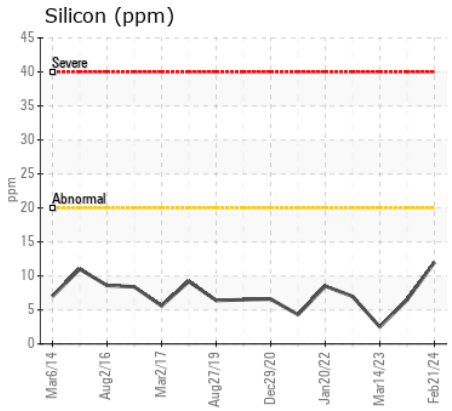
Chromium (ppm)



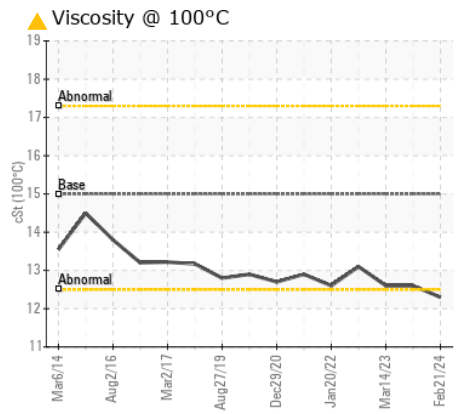
Copper (ppm)



Silicon (ppm)



Viscosity @ 100°C



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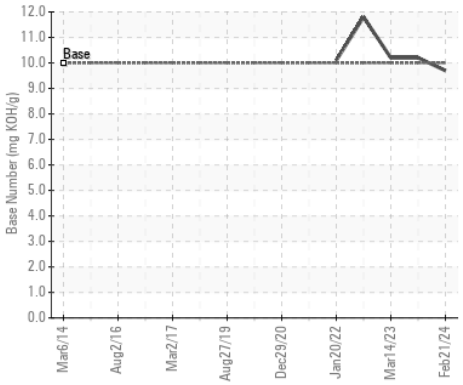

Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP445682
Lab Number : 06102672
Unique Number : 10900902
Test Package : MOB 1 (Additional Tests: FuelDilution, Glycol, PercentFuel, TBN)

Received : 28 Feb 2024
Tested : 04 Mar 2024
Diagnosed : 04 Mar 2024 - Jonathan Hester

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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