MOB I VOLVO

OIL ANALYSIS REPORT

WEAR	ATTENTION
CONTAMINATION	ABNORMAL
FLUID CONDITION	NORMAL

Machine Id
VOLVO L110H 632644
Component
Diesel Engine
Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. 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

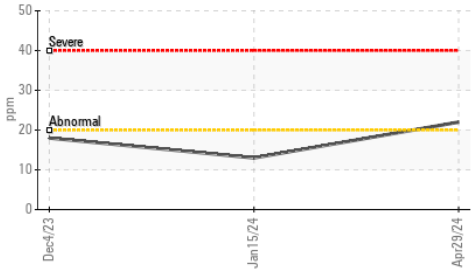
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

FLUID CONDITION

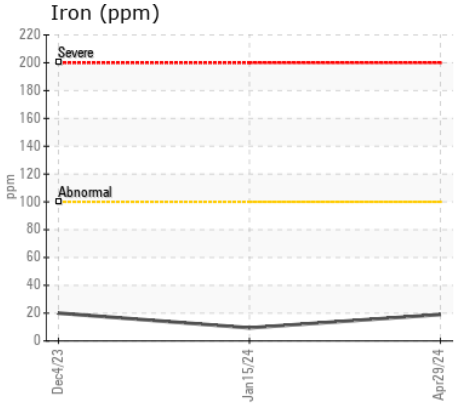
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP449548	VCP441891	VCP431798
Sample Date		Client Info		29 Apr 2024	15 Jan 2024	04 Dec 2023
Machine Age	hrs	Client Info		3827	2464	1860
Oil Age	hrs	Client Info		0	500	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	ABNORMAL
Iron	ppm	ASTM D5185m	>100	19	9	20
Chromium	ppm	ASTM D5185m	>10	1	<1	1
Nickel	ppm	ASTM D5185m	>10	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>10	● 12	7	▲ 21
Lead	ppm	ASTM D5185m	>20	1	<1	2
Copper	ppm	ASTM D5185m	>15	4	3	10
Tin	ppm	ASTM D5185m	>10	2	<1	2
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Silicon	ppm	ASTM D5185m	>20	▲ 22	13	18
Potassium	ppm	ASTM D5185m	>20	2	0	3
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	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.9	7.0	8.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	20.9	22.0
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		<1	1	0
Boron	ppm	ASTM D5185m	2.5	7	33	27
Barium	ppm	ASTM D5185m	0.0	2	0	4
Molybdenum	ppm	ASTM D5185m	0.7	52	39	39
Manganese	ppm	ASTM D5185m	0.0	<1	0	<1
Magnesium	ppm	ASTM D5185m	256	758	562	491
Calcium	ppm	ASTM D5185m	2057	1238	1624	1625
Phosphorus	ppm	ASTM D5185m	935	1027	911	937
Zinc	ppm	ASTM D5185m	1223	1145	1135	1120
Sulfur	ppm	ASTM D5185m	4079	2858	2997	3179
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.0	19.0	21.0
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.2	9.4	9.5
Visc @ 100°C	cSt	ASTM D445	15.0	13.7	13.3	13.1

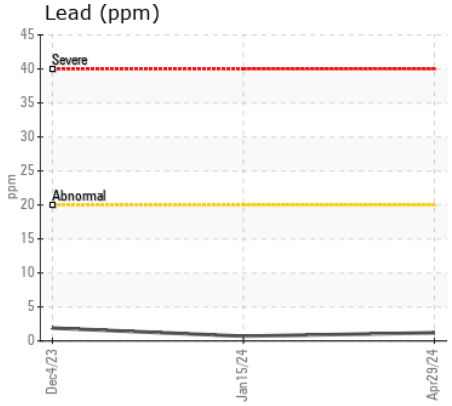
Silicon (ppm)



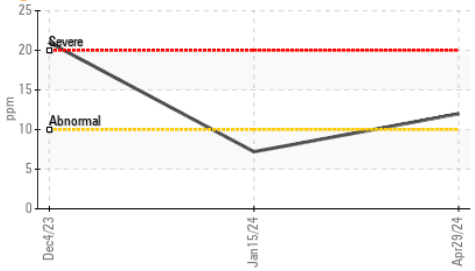
Iron (ppm)



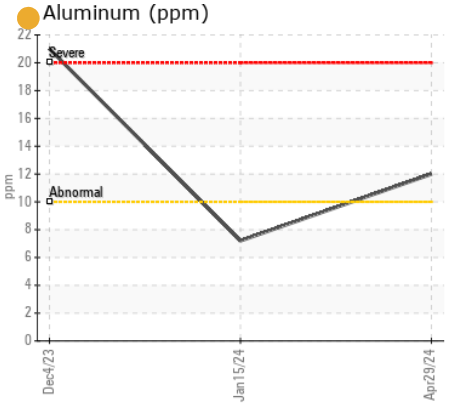
Lead (ppm)



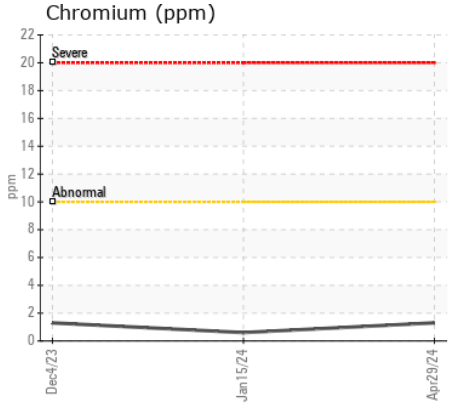
Aluminum (ppm)



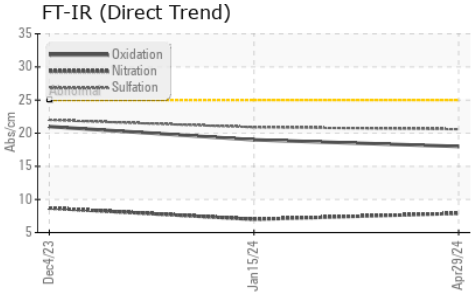
Aluminum (ppm)



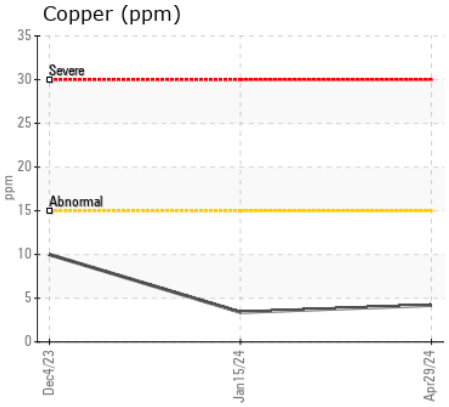
Chromium (ppm)



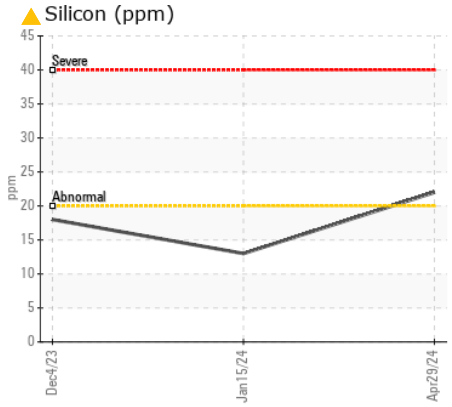
FT-IR (Direct Trend)



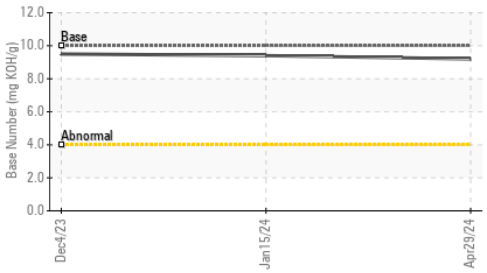
Copper (ppm)



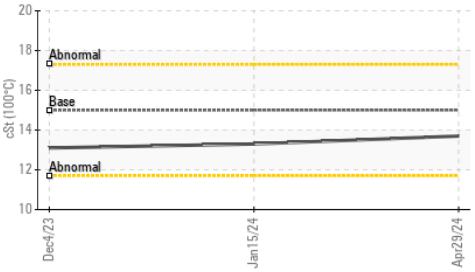
Silicon (ppm)



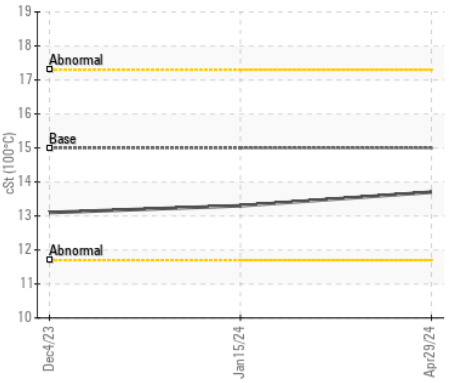
Base Number



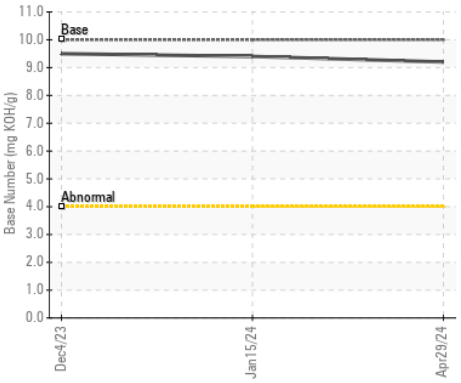
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP449548
Lab Number : 06194959
Unique Number : 11057082
Test Package : MOB 1 (Additional Tests: TBN)

Received : 30 May 2024
Tested : 31 May 2024
Diagnosed : 31 May 2024 - Don Baldridge

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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