



OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>MARGINAL</b>



Area  
**[W/O11009]**  
Machine Id  
**VOLVO L220H 3434**  
Component  
**Diesel Engine**  
Fluid  
**CHEVRON 15W40 (13 GAL)**

**RECOMMENDATION**

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ML0002120</b>	ML0001236	VCP422884
Sample Date		Client Info		<b>03 Jul 2024</b>	01 May 2024	12 Dec 2023
Machine Age	hrs	Client Info		<b>5680</b>	5156	4298
Oil Age	hrs	Client Info		<b>524</b>	858	0
Filter Age	hrs	Client Info		<b>524</b>	858	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>MARGINAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

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

**CONTAMINATION**

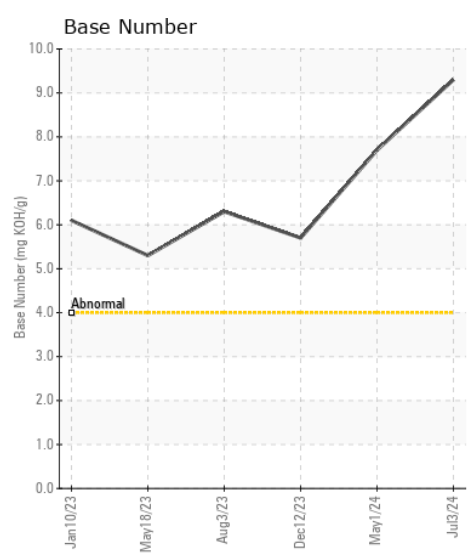
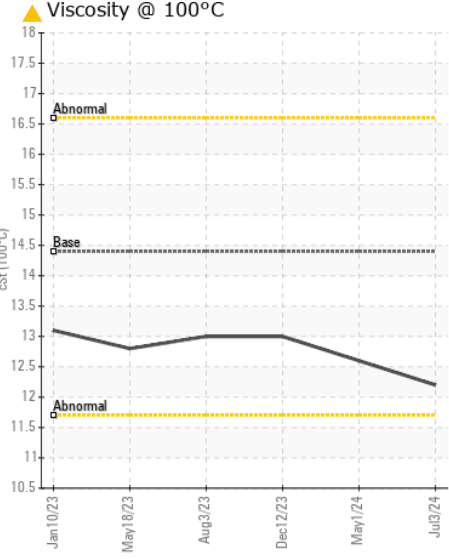
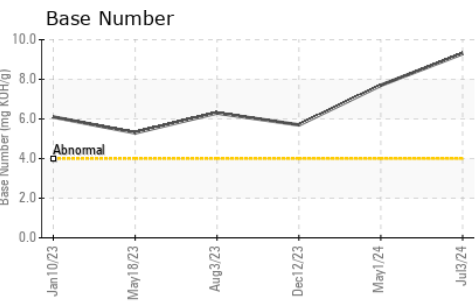
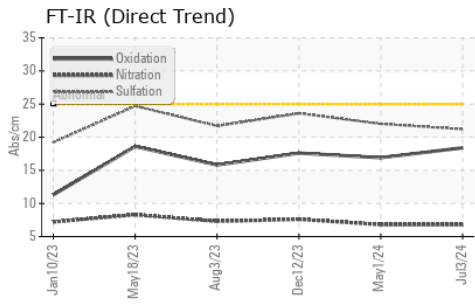
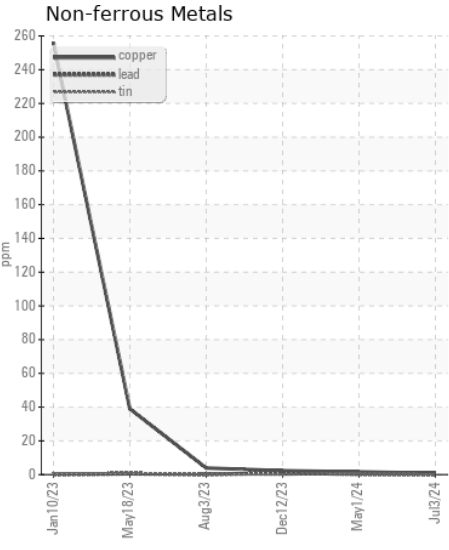
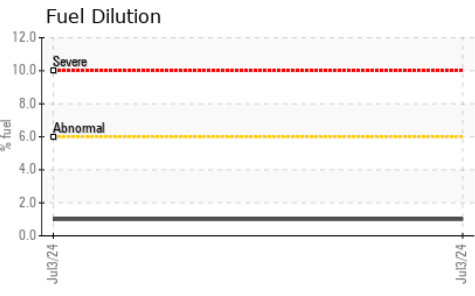
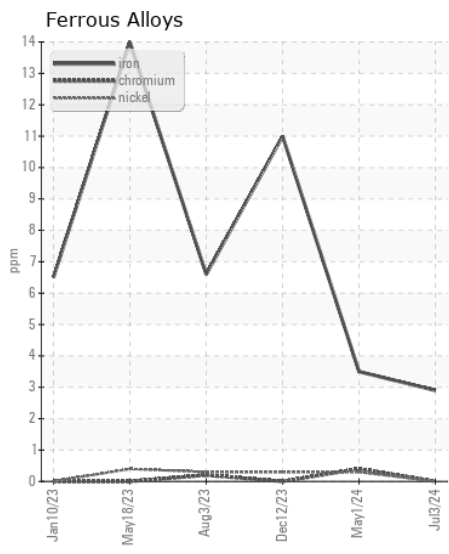
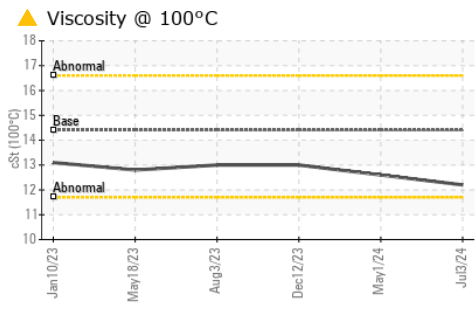
Fuel content negligible. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>6</b>	7	16
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	2	2
Fuel	%	ASTM D3524	>6.0	<b>1.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.8</b>	6.8	7.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.2</b>	22.0	23.6
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

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

Sodium	ppm	ASTM D5185m	>50	<b>2</b>	0	<1
Boron	ppm	ASTM D5185m		<b>65</b>	303	223
Barium	ppm	ASTM D5185m		<b>0</b>	2	0
Molybdenum	ppm	ASTM D5185m		<b>74</b>	105	83
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>526</b>	570	424
Calcium	ppm	ASTM D5185m		<b>1793</b>	1484	1550
Phosphorus	ppm	ASTM D5185m		<b>926</b>	842	1133
Zinc	ppm	ASTM D5185m		<b>1064</b>	947	1270
Sulfur	ppm	ASTM D5185m		<b>3279</b>	2854	3254
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>18.4</b>	16.9	17.6
Base Number (BN)	mg KOH/g	ASTM D2896		<b>9.3</b>	7.7	5.7
Visc @ 100°C	cSt	ASTM D445	14.4	<b>▲ 12.2</b>	12.6	13.0



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0002120 **Received** : 11 Jul 2024  
**Lab Number** : 06234225 **Tested** : 16 Jul 2024  
**Unique Number** : 11123059 **Diagnosed** : 16 Jul 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: FUELDILUTION, PercentFuel, TBN )

**RECYCLE 1**  
 4700 LAWRENCE ST  
 HYATTSVILLE, MD  
 US 20781  
 Contact: MIKE DESJARDINS  
 mdesjarkins@wbwaste.com

Certificate L2367  
 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)