



# VOLVO

## OIL ANALYSIS REPORT

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



Area  
**[SPM702771]**  
 Machine Id  
**VOLVO L220E 2194**  
 Component  
**Diesel Engine**  
 Fluid  
**DIESEL ENGINE OIL SAE 15W40 (--- GAL)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>VCP453993</b>	VCP404600	VCP365279
Sample Date		Client Info		<b>08 Jul 2024</b>	25 Apr 2023	10 Oct 2022
Machine Age	hrs	Client Info		<b>25071</b>	24189	25053
Oil Age	hrs	Client Info		<b>0</b>	0	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Filter Changed		Client Info		<b>Not Changd</b>	Changed	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>4</b>	2	12
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	1
Copper	ppm	ASTM D5185m	>15	<b>0</b>	0	<1
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

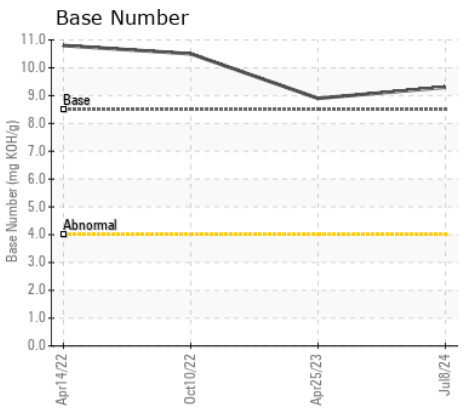
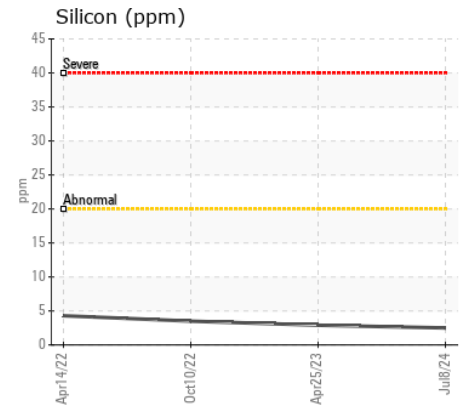
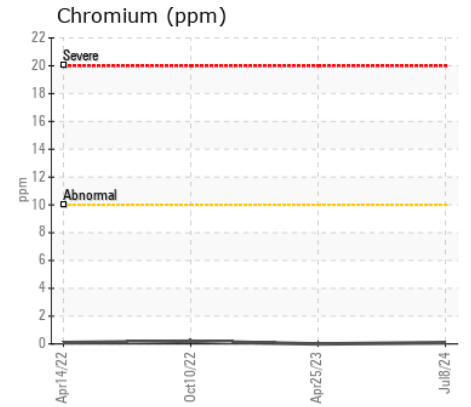
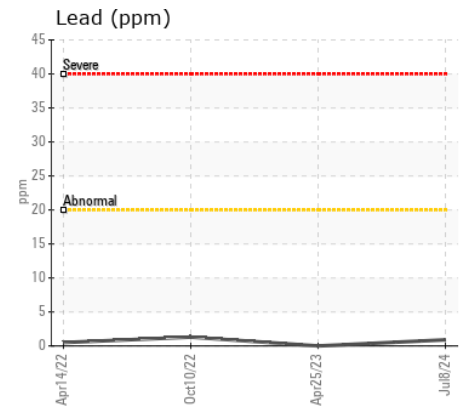
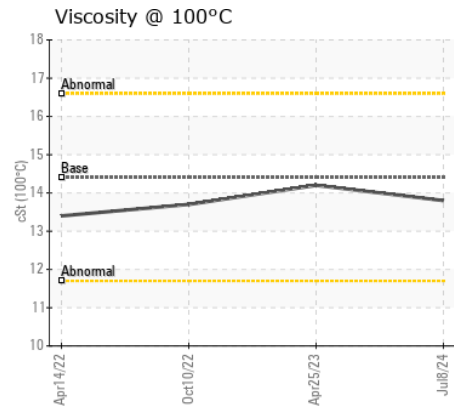
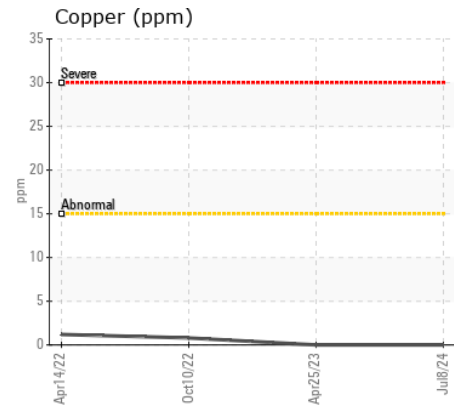
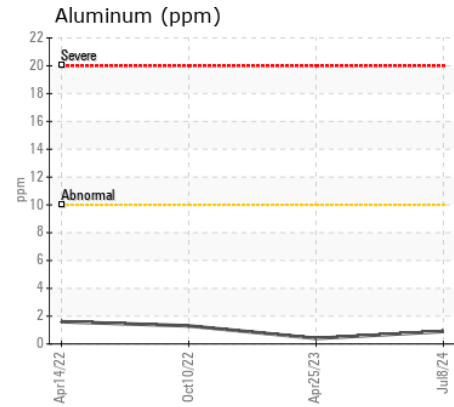
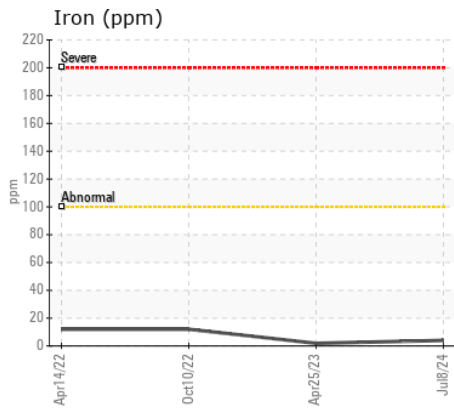
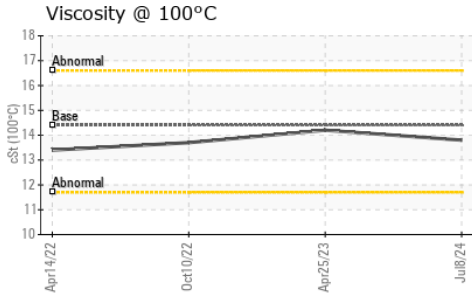
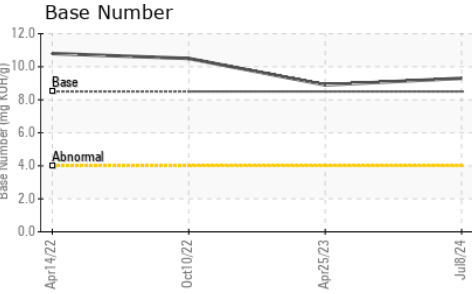
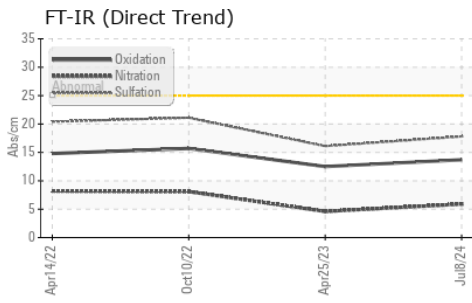
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>2</b>	3	4
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	2	0
Fuel		WC Method	>6.0	<b>&lt;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>0.3</b>	0.1	0.9
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.9</b>	4.6	8.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.8</b>	16.1	21.1
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 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	>158	<b>2</b>	0	0
Boron	ppm	ASTM D5185m	250	<b>0</b>	0	8
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>59</b>	60	56
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>927</b>	1043	873
Calcium	ppm	ASTM D5185m	3000	<b>1045</b>	1096	1160
Phosphorus	ppm	ASTM D5185m	1150	<b>992</b>	1090	1016
Zinc	ppm	ASTM D5185m	1350	<b>1124</b>	1383	1206
Sulfur	ppm	ASTM D5185m	4250	<b>3305</b>	3684	3795
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	12.5	15.7
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>9.3</b>	8.9	10.5
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	14.2	13.7



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : VCP453993 **Received** : 18 Jul 2024  
**Lab Number** : 06239971 **Tested** : 18 Jul 2024  
**Unique Number** : 11128805 **Diagnosed** : 18 Jul 2024 - Wes Davis  
**Test Package** : MOB 1 ( Additional Tests: TBN )

**WASTE MANAGEMENT - GARY**  
 1508 SHERMAN ST  
 GARY, IN  
 US 46406  
 Contact: TARA RORK

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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F: