



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
VOLVO L-220E LOADER CL-10
Component
Diesel Engine
Fluid
CHEVRON 15W40 (13 GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		LF0001709	LF0001341	LF0001499
Sample Date		Client Info		24 Jun 2024	03 Oct 2023	10 Jan 2023
Machine Age	hrs	Client Info		20252	19669	19469
Oil Age	hrs	Client Info		250	250	230
Filter Age	hrs	Client Info		250	250	230
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		N/A	N/A	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	4	6	10
Chromium	ppm	ASTM D5185m	>10	0	<1	<1
Nickel	ppm	ASTM D5185m	>10	0	<1	0
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	3	5	3
Lead	ppm	ASTM D5185m	>20	0	1	<1
Copper	ppm	ASTM D5185m	>15	<1	▲ 18	<1
Tin	ppm	ASTM D5185m	>10	0	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

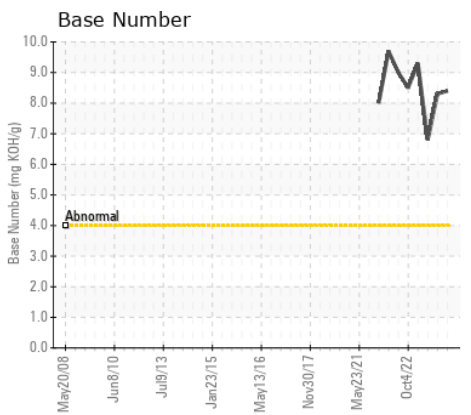
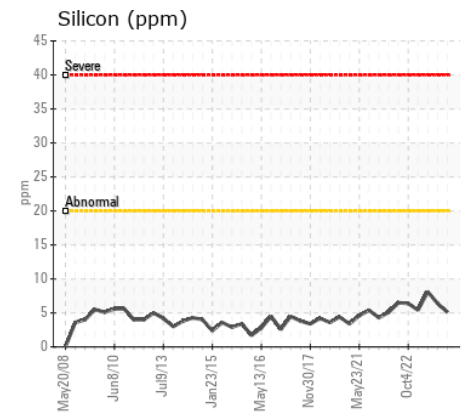
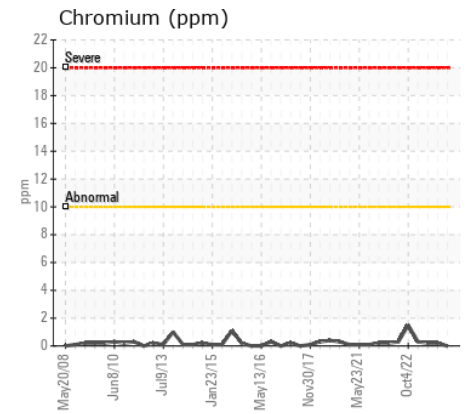
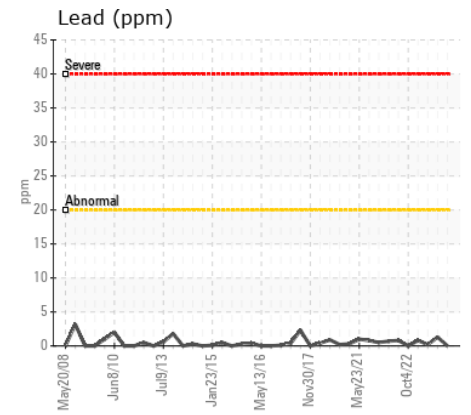
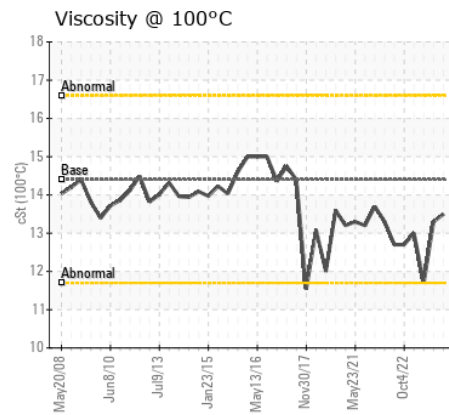
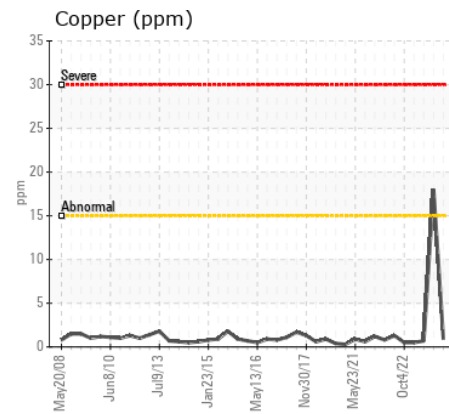
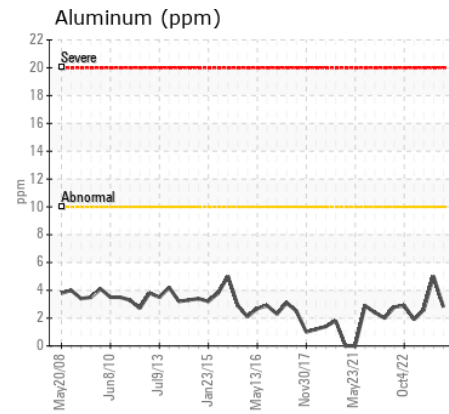
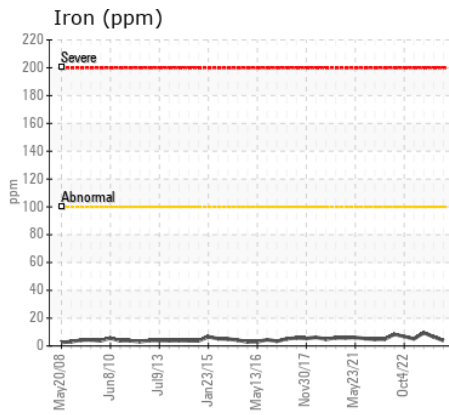
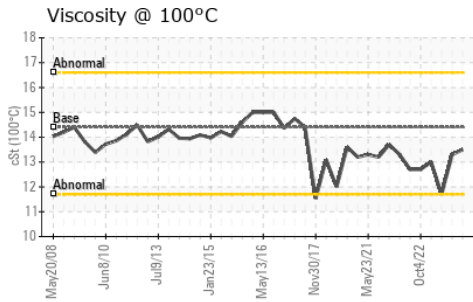
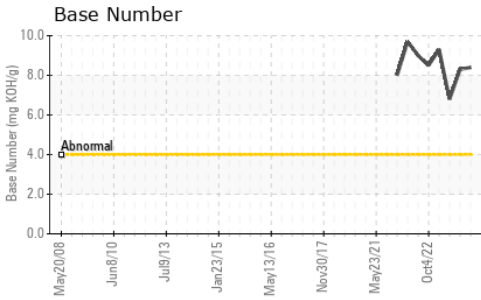
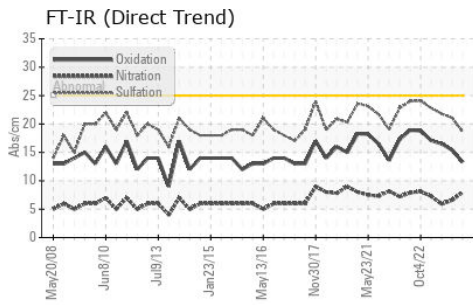
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	5	6	8
Potassium	ppm	ASTM D5185m	>20	4	3	1
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	8.0	6.6	5.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.6	21.1	21.8
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

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	>50	2	7	2
Boron	ppm	ASTM D5185m		109	306	377
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		13	85	93
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m		761	585	392
Calcium	ppm	ASTM D5185m		1349	1260	1103
Phosphorus	ppm	ASTM D5185m		748	739	693
Zinc	ppm	ASTM D5185m		861	829	815
Sulfur	ppm	ASTM D5185m		3557	3074	2671
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.3	15.4	16.5
Base Number (BN)	mg KOH/g	ASTM D2896		8.4	8.3	6.8
Visc @ 100°C	cSt	ASTM D445	14.4	13.5	13.3	11.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : LF0001709
Lab Number : 06220543
Unique Number : 11098740
Test Package : MOB 1 (Additional Tests: TBN)

Received : 25 Jun 2024
Tested : 26 Jun 2024
Diagnosed : 27 Jun 2024 - Don Baldrige

AM WELLES
 P.O. BOX 8
 NORRIS, MT
 US 59745

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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)