



Machine Id
VOLVO L120G 31407
Component
Diesel Engine
Fluid
VOLVO VDS-4.5 Premium Motor Oil 15W40 (--- GAL)

RECOMMENDATION

Check for low coolant level. We advise that you check for the source of the coolant leak. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please note that this is a corrected copy for diagnostic comment updates. (Customer Sample Comment: Actual machine hours 17,722)

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ML0001528	VCP399848	VCP312883
Sample Date		Client Info		08 Jul 2024	21 Aug 2023	22 Nov 2021
Machine Age	hrs	Client Info		17722	16698	13590
Oil Age	hrs	Client Info		1000	200	590
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Not Changed	Changed
Filter Changed		Client Info		Changed	N/A	Changed
Sample Status				SEVERE	SEVERE	ABNORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	84	▲ 206	48
Chromium	ppm	ASTM D5185m	>10	4	▲ 11	2
Nickel	ppm	ASTM D5185m	>10	2	4	<1
Titanium	ppm	ASTM D5185m		1	1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	▲ 18	▲ 33	10
Lead	ppm	ASTM D5185m	>20	4	14	7
Copper	ppm	ASTM D5185m	>15	14	16	5
Tin	ppm	ASTM D5185m	>10	2	4	1
Vanadium	ppm	ASTM D5185m		<1	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

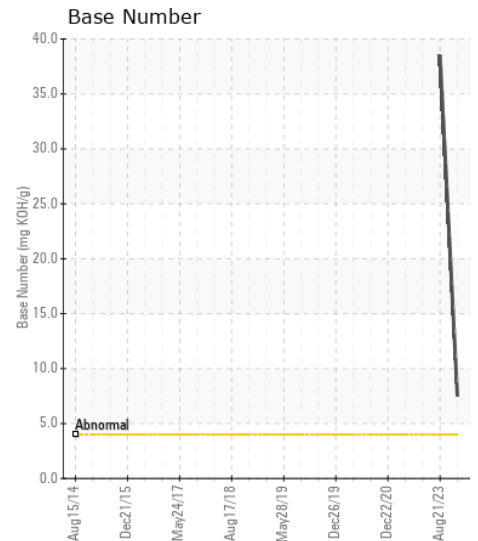
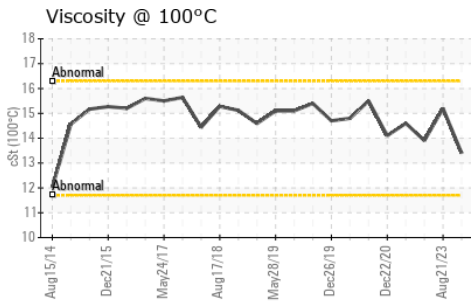
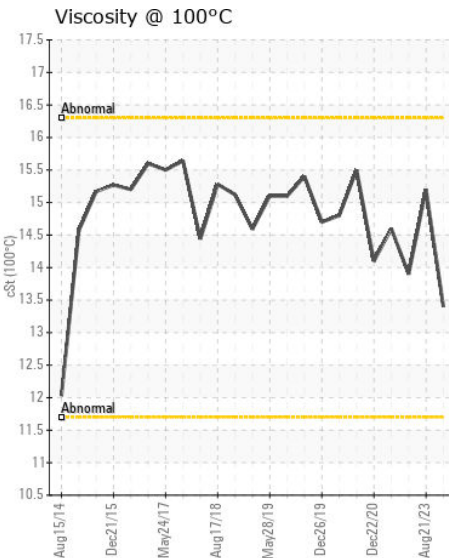
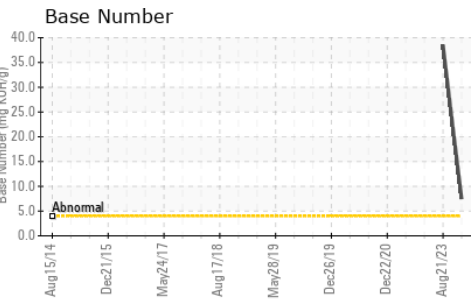
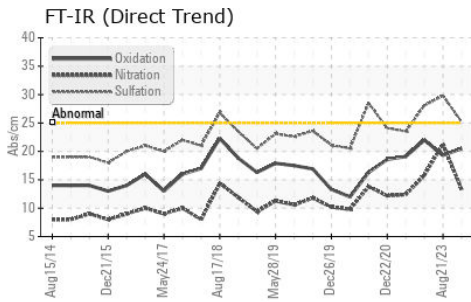
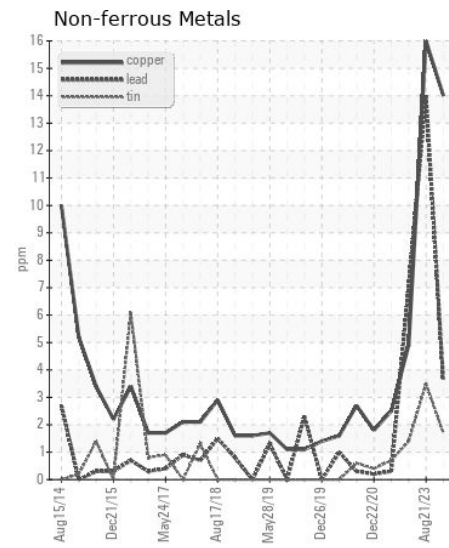
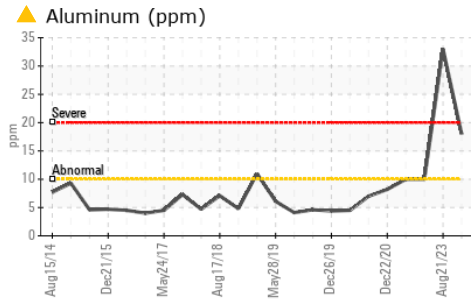
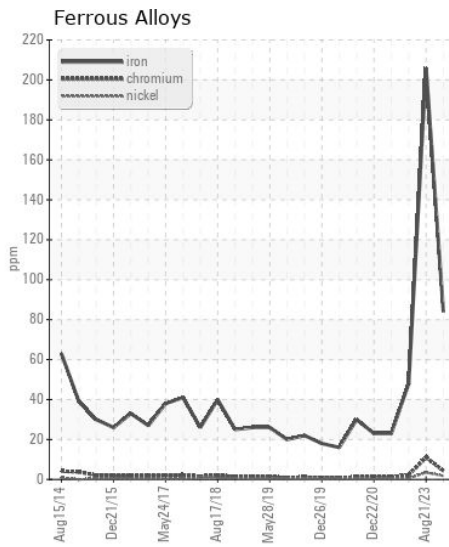
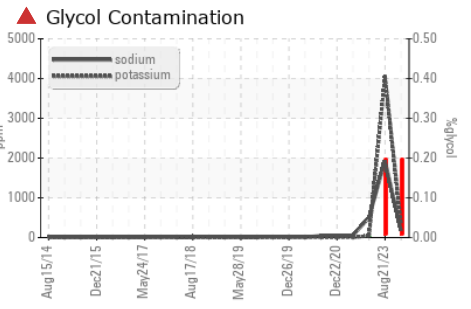
Sodium and/or potassium levels are high. Test for glycol is positive.

Silicon	ppm	ASTM D5185m	>20	16	▲ 45	11
Potassium	ppm	ASTM D5185m	>20	▲ 337	▲ 4059	▲ 42
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol	%	*ASTM D2982		▲ 0.20	▲ 0.20	0.0
Soot %	%	*ASTM D7844	>3	1.5	2.7	2.5
Nitration	Abs/cm	*ASTM D7624	>20	13.3	21.3	15.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.2	29.8	28.1
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		● 183	▲ 1933	▲ 500
Boron	ppm	ASTM D5185m		14	58	15
Barium	ppm	ASTM D5185m		0	0	0
Molybdenum	ppm	ASTM D5185m		99	558	53
Manganese	ppm	ASTM D5185m		2	3	<1
Magnesium	ppm	ASTM D5185m		608	476	787
Calcium	ppm	ASTM D5185m		1372	1899	1319
Phosphorus	ppm	ASTM D5185m		645	988	780
Zinc	ppm	ASTM D5185m		897	1167	928
Sulfur	ppm	ASTM D5185m		2529	4604	2422
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.5	19.3	22
Base Number (BN)	mg KOH/g	ASTM D2896		7.5	38.5	---
Visc @ 100°C	cSt	ASTM D445		13.4	15.2	13.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : ML0001528
Lab Number : 06232137
Unique Number : 11115630
Test Package : CONST (Additional Tests: TBN)

MCCLEUNG-LOGAN EQUIPMENT CO - RICHMOND
 1345 MOUNTAIN ROAD
 GLEN ALLEN, VA
 US 23060
 Contact: KYLE RATLIFFE
 KRATLIFFE@MCCLEUNG-LOGAN.COM

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)

T:
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