



VOLVO

OIL ANALYSIS REPORT

WEAR
CONTAMINATION
FLUID CONDITION

MARGINAL
SEVERE
NORMAL



Area

IMPACT AUTO [400743]

Machine Id

VOLVO L90G 617716

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. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP391662	VCP273127	VCP260475
Sample Date		Client Info		11 Apr 2024	26 Aug 2020	07 Jan 2020
Machine Age	hrs	Client Info		10801	8368	7274
Oil Age	hrs	Client Info		500	500	500
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	ATTENTION

WEAR

Chromium and copper ppm levels are marginal. Ring wear is indicated. Bearing wear is indicated.

Iron	ppm	ASTM D5185(m)	>100	80	21	19
Chromium	ppm	ASTM D5185(m)	>10	▲ 10	1	<1
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	<1	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	17	11	13
Lead	ppm	ASTM D5185(m)	>20	3	0	<1
Copper	ppm	ASTM D5185(m)	>15	▲ 15	1	1
Tin	ppm	ASTM D5185(m)	>10	7	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	<1

CONTAMINATION

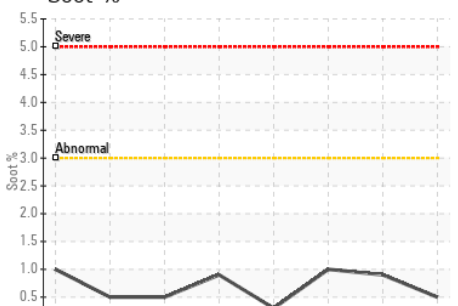
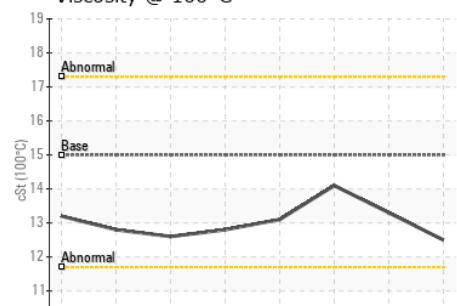
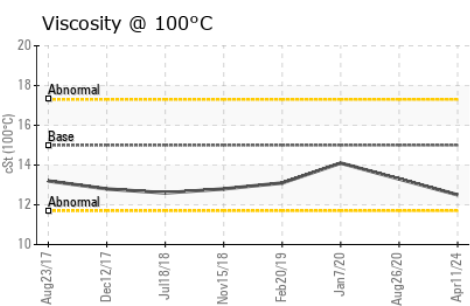
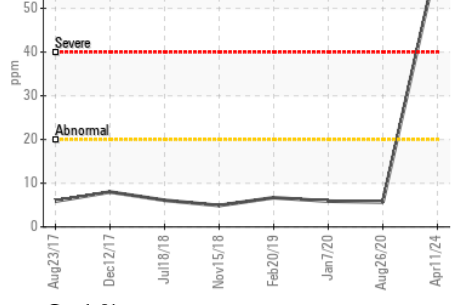
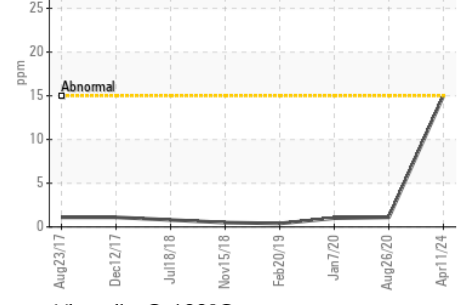
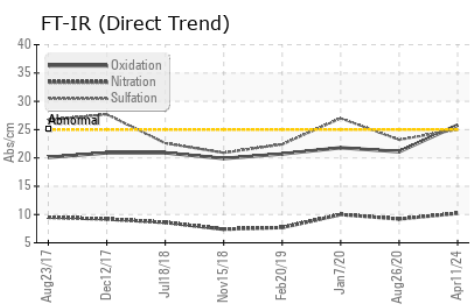
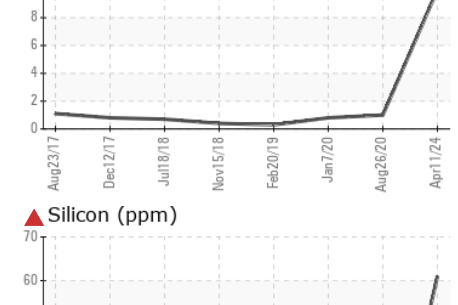
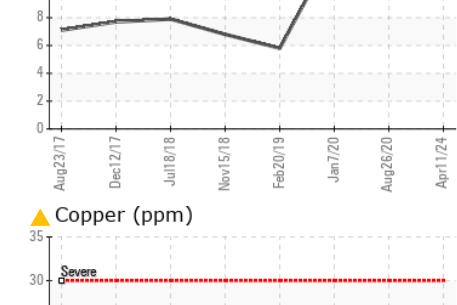
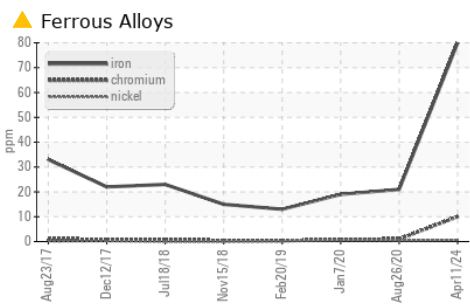
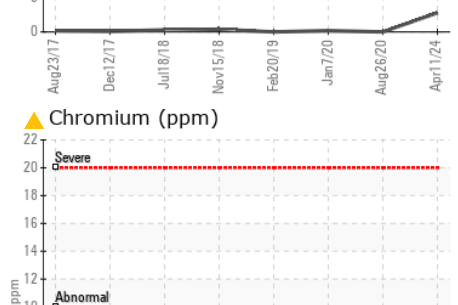
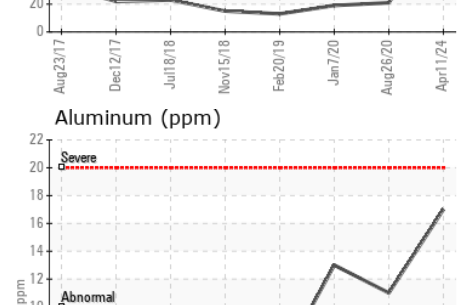
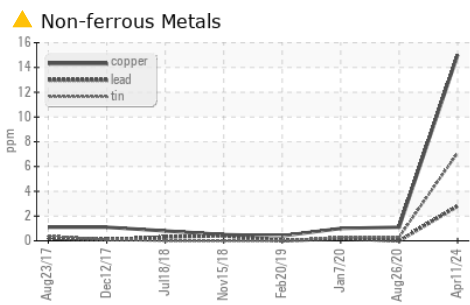
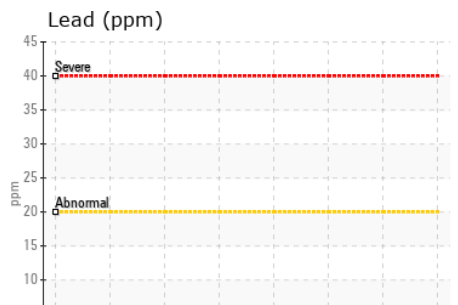
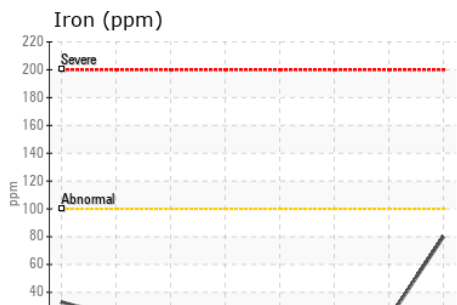
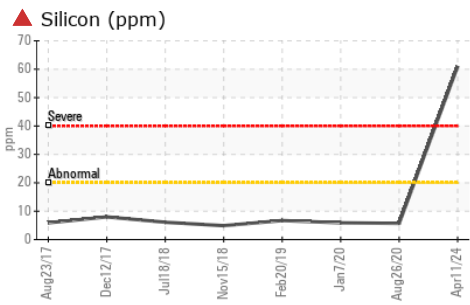
Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. High amount of ingressed dirt has caused abrasive wear to the component.

Silicon	ppm	ASTM D5185(m)	>20	▲ 61	6	6
Potassium	ppm	ASTM D5185(m)	>20	3	<1	<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	0.5	0.9	1
Nitration	Abs/cm	ASTM D7624*	>20	10.2	9.2	10.0
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.0	23.2	27.0
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG	NEG

FLUID CONDITION

The oil is no longer serviceable as a result of the abnormal and/or severe wear.

Sodium	ppm	ASTM D5185(m)		5	2	2
Boron	ppm	ASTM D5185(m)	2.5	29	27	29
Barium	ppm	ASTM D5185(m)	0.0	<1	0	<1
Molybdenum	ppm	ASTM D5185(m)	0.7	41	41	42
Manganese	ppm	ASTM D5185(m)	0.0	2	<1	<1
Magnesium	ppm	ASTM D5185(m)	256	517	514	512
Calcium	ppm	ASTM D5185(m)	2057	1723	1706	1708
Phosphorus	ppm	ASTM D5185(m)	935	890	766	749
Zinc	ppm	ASTM D5185(m)	1223	1056	897	899
Sulfur	ppm	ASTM D5185(m)	4079	2223	2004	2062
Oxidation	Abs/.1mm	ASTM D7414*	>25	25.8	21.1	21.8
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	12.5	13.3	14.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : VCP391662
Lab Number : 02629884
Unique Number : 5763016
Test Package : MOB 1

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To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.