



VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[8000394675]
 Machine Id
VOLVO L90H 623214
 Component
Diesel Engine
 Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP392879	VCP335069	VCP260871
Sample Date		Client Info		16 Feb 2024	06 Jan 2022	14 Apr 2020
Machine Age	hrs	Client Info		7452	7150	6668
Oil Age	hrs	Client Info		0	482	493
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

Aluminum ppm levels are abnormal. Piston wear is indicated.

Iron	ppm	ASTM D5185(m)	>100	34	17	15
Chromium	ppm	ASTM D5185(m)	>10	<1	<1	1
Nickel	ppm	ASTM D5185(m)	>10	0	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>2	0	0	0
Aluminum	ppm	ASTM D5185(m)	>10	▲ 17	▲ 17	▲ 15
Lead	ppm	ASTM D5185(m)	>20	0	0	0
Copper	ppm	ASTM D5185(m)	>15	2	2	1
Tin	ppm	ASTM D5185(m)	>10	<1	<1	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

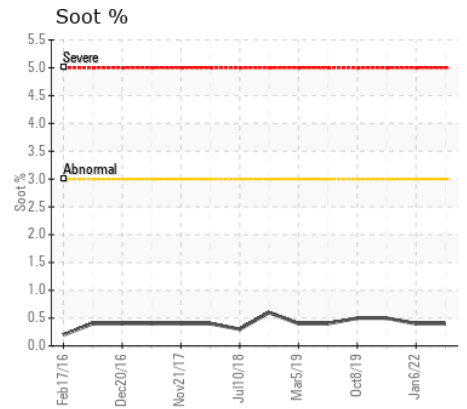
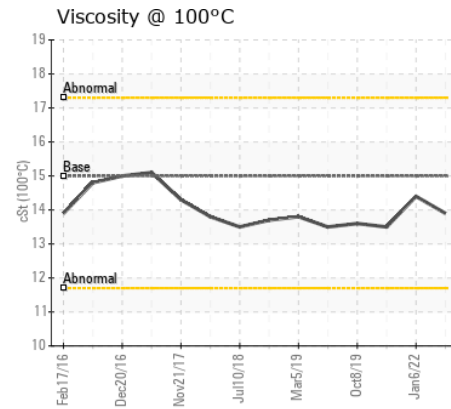
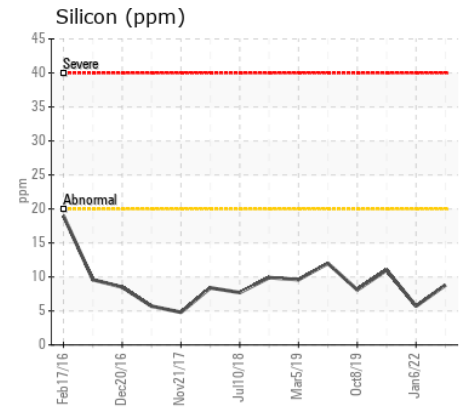
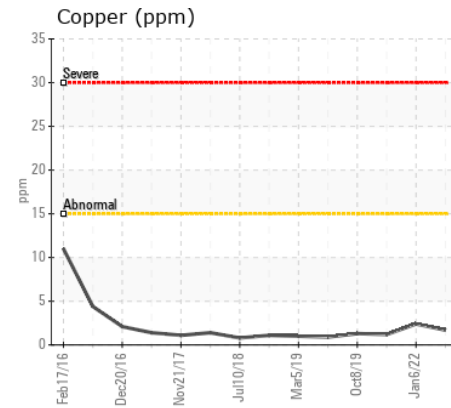
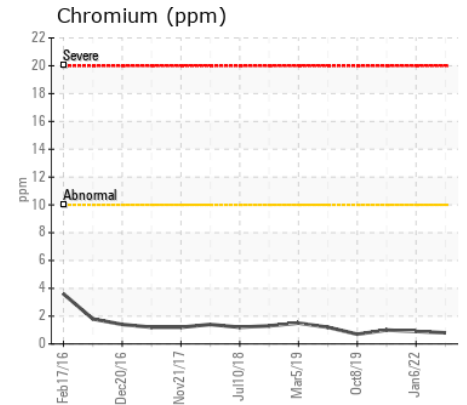
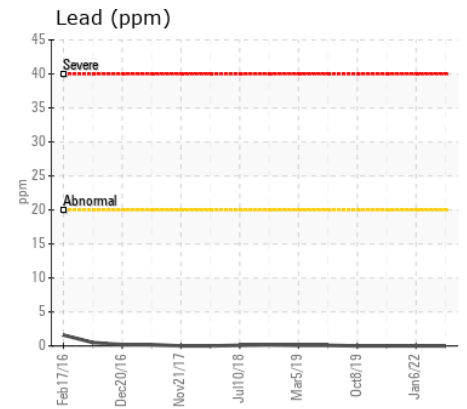
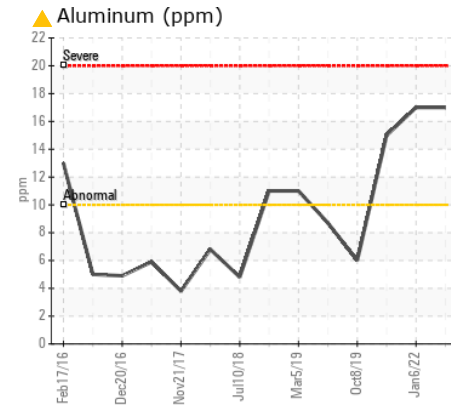
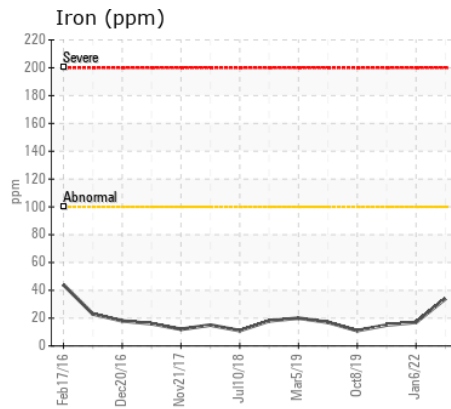
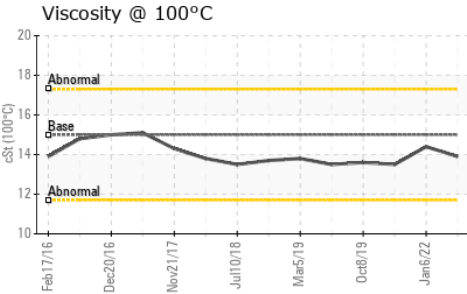
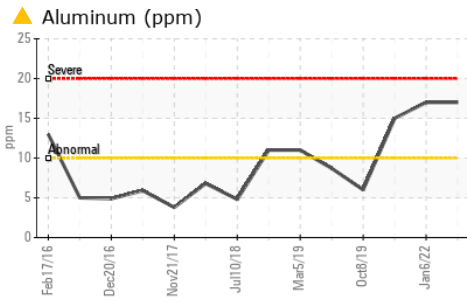
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	9	6	11
Potassium	ppm	ASTM D5185(m)	>20	<1	2	<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	0.4	0.4	0.5
Nitration	Abs/cm	ASTM D7624*	>20	8.9	9.9	10.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	22.7	22.3	26.9
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)		4	2	2
Boron	ppm	ASTM D5185(m)	2.5	34	21	34
Barium	ppm	ASTM D5185(m)	0.0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0.7	36	7	44
Manganese	ppm	ASTM D5185(m)	0.0	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	256	483	360	545
Calcium	ppm	ASTM D5185(m)	2057	1799	1905	1745
Phosphorus	ppm	ASTM D5185(m)	935	931	912	793
Zinc	ppm	ASTM D5185(m)	1223	1056	1042	934
Sulfur	ppm	ASTM D5185(m)	4079	2517	2941	2127
Oxidation	Abs/.1mm	ASTM D7414*	>25	20.9	17.3	22.2
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	13.9	14.4	13.5



ISO 17025:2017
Accredited
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : VCP392879
Lab Number : 02617582
Unique Number : 5734692
Test Package : MOB 1

Received : 23 Feb 2024
Tested : 23 Feb 2024
Diagnosed : 23 Feb 2024 - Kevin Marson

STRONGCO EQUIPMENT INC.
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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.