



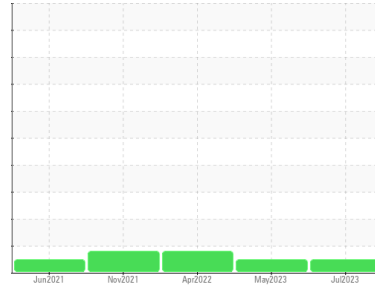
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
ENVIRAN
 Machine Id
VOLVO EC220E 314315
 Component
Diesel Engine
 Fluid
VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		WC0804649	WC0804977	WC0676174
Sample Date	Client Info		24 Jul 2023	08 May 2023	27 Apr 2022
Machine Age	hrs	Client Info	3585	3101	1531
Oil Age	hrs	Client Info	0	0	0
Oil Changed	Client Info		Changed	Changed	N/A
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>6.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	18	18	30
Chromium	ppm	ASTM D5185(m) >10	1	<1	3
Nickel	ppm	ASTM D5185(m) >10	0	0	2
Titanium	ppm	ASTM D5185(m)	0	<1	0
Silver	ppm	ASTM D5185(m) >2	0	0	0
Aluminum	ppm	ASTM D5185(m) >10	8	6	▲ 18
Lead	ppm	ASTM D5185(m) >20	<1	<1	<1
Copper	ppm	ASTM D5185(m) >15	<1	<1	2
Tin	ppm	ASTM D5185(m) >10	<1	<1	1
Antimony	ppm	ASTM D5185(m)	0	<1	<1
Vanadium	ppm	ASTM D5185(m)	0	0	0
Beryllium	ppm	ASTM D5185(m)	0	0	0
Cadmium	ppm	ASTM D5185(m)	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 2.5	34	36	26
Barium	ppm	ASTM D5185(m) 0.0	0	0	<1
Molybdenum	ppm	ASTM D5185(m) 0.7	47	45	43
Manganese	ppm	ASTM D5185(m) 0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185(m) 256	696	576	545
Calcium	ppm	ASTM D5185(m) 2057	1757	1878	1710
Phosphorus	ppm	ASTM D5185(m) 935	1157	1105	820
Zinc	ppm	ASTM D5185(m) 1223	1302	1215	933
Sulfur	ppm	ASTM D5185(m) 4079	2804	2738	2200
Lithium	ppm	ASTM D5185(m)	<1	<1	<1

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >20	12	10	13
Sodium	ppm	ASTM D5185(m)	3	4	3
Potassium	ppm	ASTM D5185(m) >20	<1	0	<1

INFRA-RED

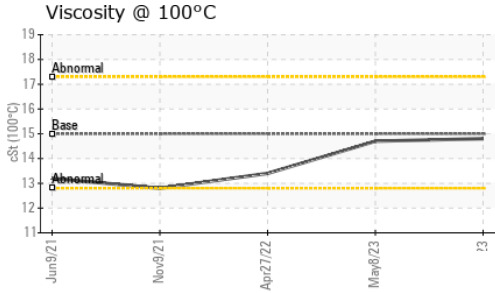
	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	0	0	0
Nitration	Abs/cm	ASTM D7624* >20	11.6	12.5	10.5
Sulfation	Abs/.1mm	ASTM D7415* >30	24.3	26.8	25.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	ASTM D7414* >25	22.9	28.9	24.2



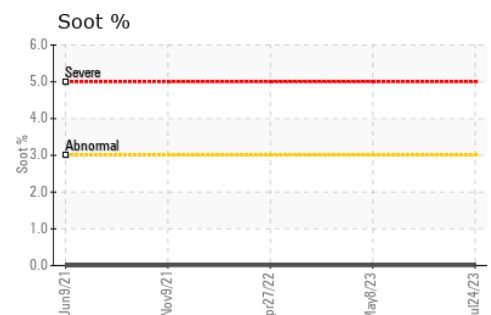
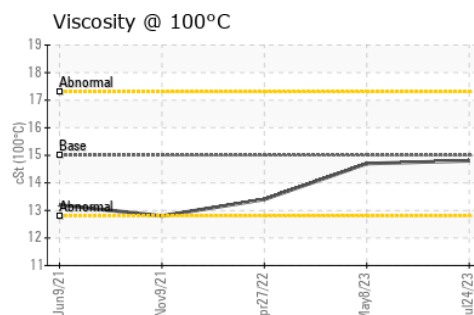
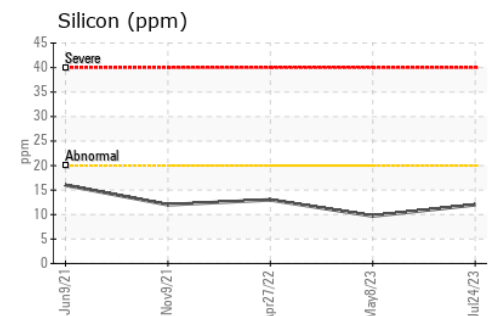
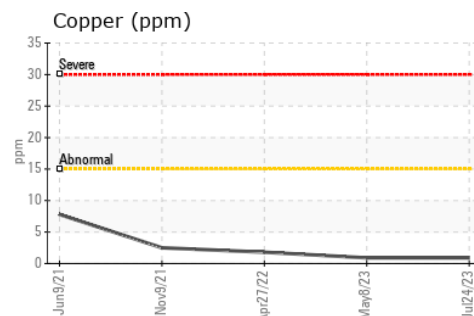
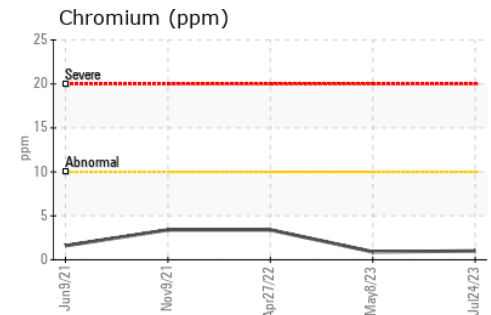
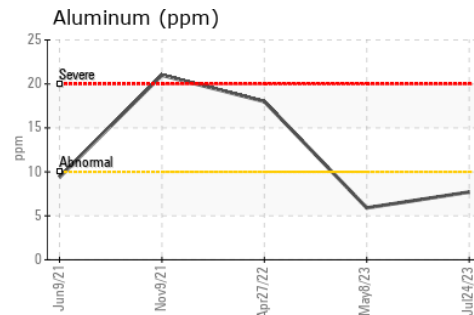
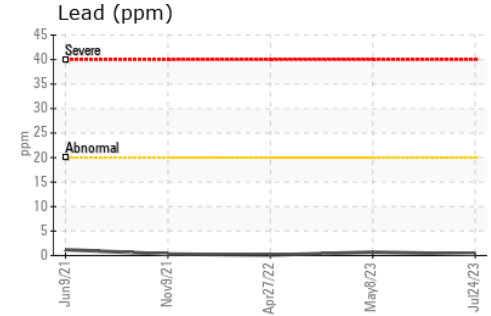
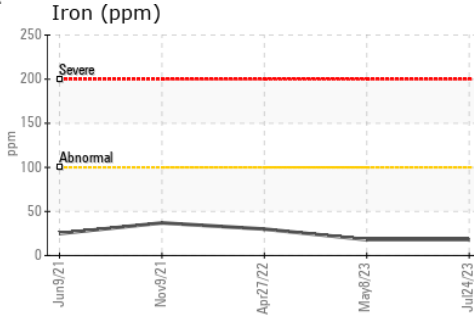
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
Emulsified Water	scalar	Visual*	>0.1	NEG	NEG
Free Water	scalar	Visual*		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	14.8	14.7

GRAPHS



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0804649
Lab Number : 02577667
Unique Number : 5630727
Test Package : MOB 1

Received : 23 Aug 2023
Diagnosed : 23 Aug 2023
Diagnostician : Wes Davis

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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.