



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Machine Id
VOLVO L90F VOLVO L90F
Component
Diesel Engine
Fluid
KING OIL SAE 15W40 (20 QTS)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0608108	WCM2264250	---
Sample Date		Client Info		04 Apr 2024	27 Jun 2021	---
Machine Age	hrs	Client Info		14260	12656	---
Oil Age	hrs	Client Info		804	0	---
Filter Age	hrs	Client Info		804	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				NORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>200	24	10	---
Chromium	ppm	ASTM D5185m	>20	2	<1	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>2	<1	0	---
Aluminum	ppm	ASTM D5185m	>30	4	0	---
Lead	ppm	ASTM D5185m	>40	1	<1	---
Copper	ppm	ASTM D5185m	>20	5	<1	---
Tin	ppm	ASTM D5185m	>20	2	<1	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

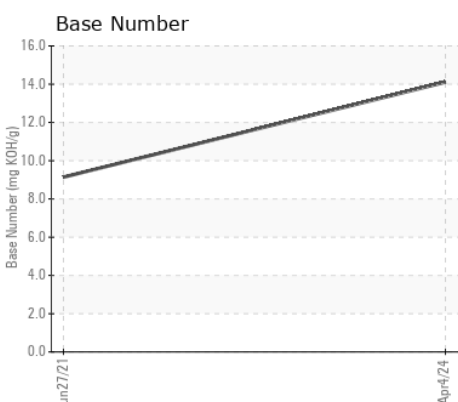
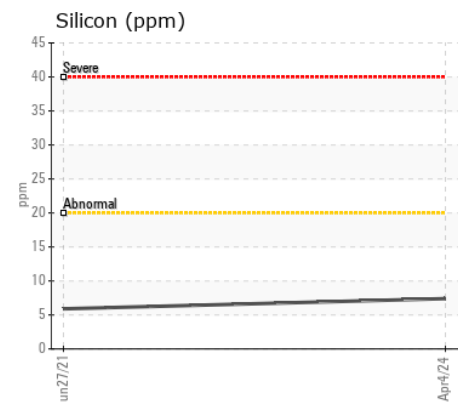
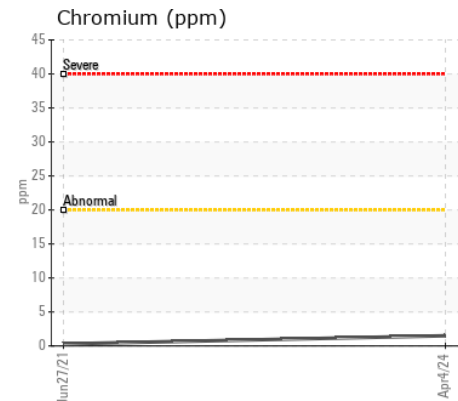
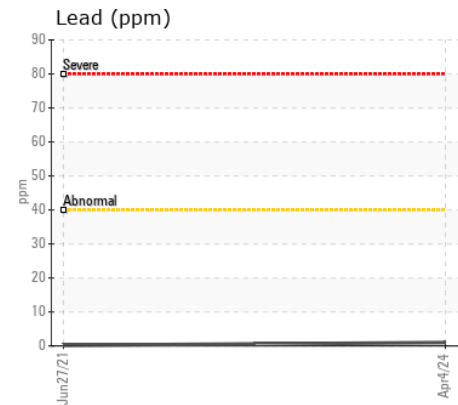
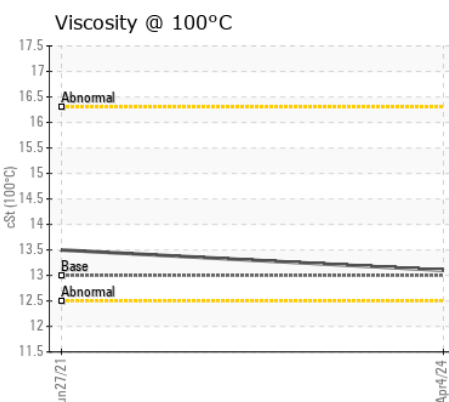
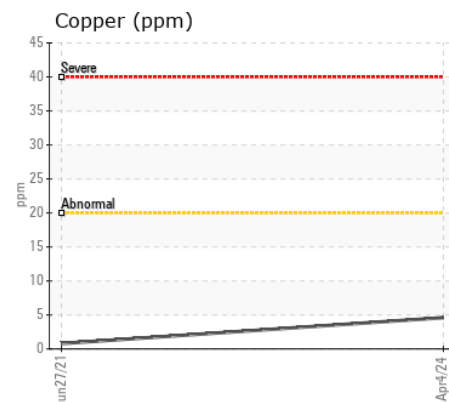
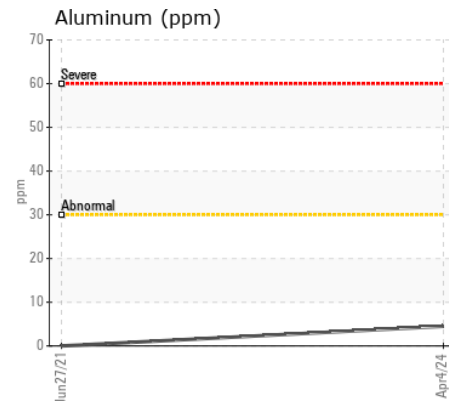
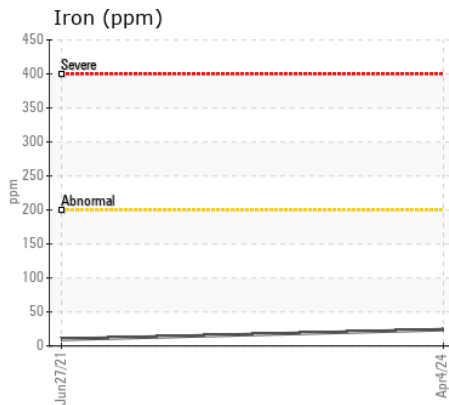
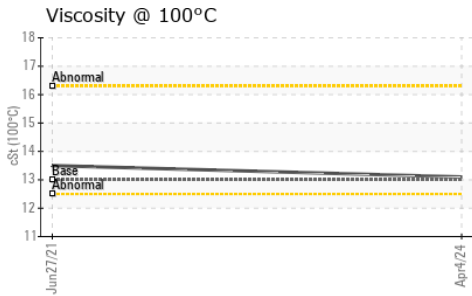
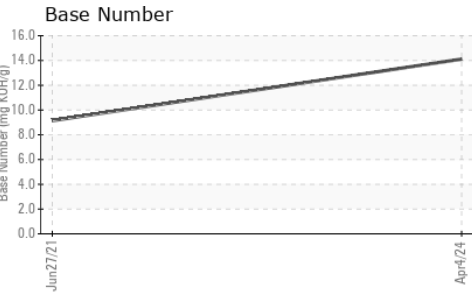
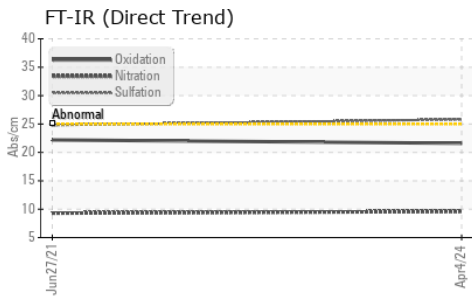
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	7	6	---
Potassium	ppm	ASTM D5185m	>20	3	<1	---
Fuel		WC Method	>6.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.6	0.5	---
Nitration	Abs/cm	*ASTM D7624	>20	9.6	9.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.8	24.8	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	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		<1	<1	---
Boron	ppm	ASTM D5185m		36	55	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m		147	45	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m		143	491	---
Calcium	ppm	ASTM D5185m		4605	1914	---
Phosphorus	ppm	ASTM D5185m		1377	967	---
Zinc	ppm	ASTM D5185m		1610	1133	---
Sulfur	ppm	ASTM D5185m		5701	2637	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.6	22.2	---
Base Number (BN)	mg KOH/g	ASTM D2896		14.11	9.14	---
Visc @ 100°C	cSt	ASTM D445	13.0	13.1	13.5	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0608108
Lab Number : 06186898
Unique Number : 11043650
Test Package : MOB 2

Received : 21 May 2024
Tested : 23 May 2024
Diagnosed : 23 May 2024 - Wes Davis

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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)