



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area

[8000408941]

Machine Id

VOLVO ECR145EL 312258

Component

Diesel Engine

Fluid

VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP450318	VCP353171	VCP394684
Sample Date		Client Info		21 Jun 2024	23 Nov 2023	24 Aug 2023
Machine Age	hrs	Client Info		0	4828	4570
Oil Age	hrs	Client Info		509	328	526
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		Changed	Changed	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185(m)	>100	71	44	53
Chromium	ppm	ASTM D5185(m)	>10	2	<1	1
Nickel	ppm	ASTM D5185(m)	>10	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		0	0	0
Silver	ppm	ASTM D5185(m)	>2	0	<1	0
Aluminum	ppm	ASTM D5185(m)	>10	5	4	7
Lead	ppm	ASTM D5185(m)	>20	0	<1	0
Copper	ppm	ASTM D5185(m)	>15	3	<1	2
Tin	ppm	ASTM D5185(m)	>10	<1	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
White Metal	scalar	Visual*	NONE	VLITE	---	---
Yellow Metal	scalar	Visual*	NONE	NONE	---	---

CONTAMINATION

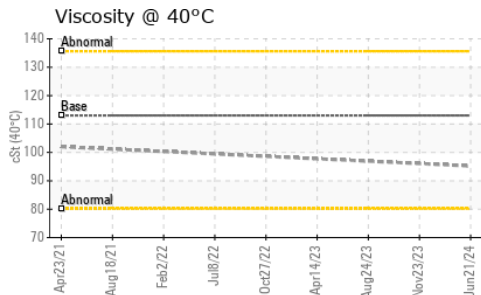
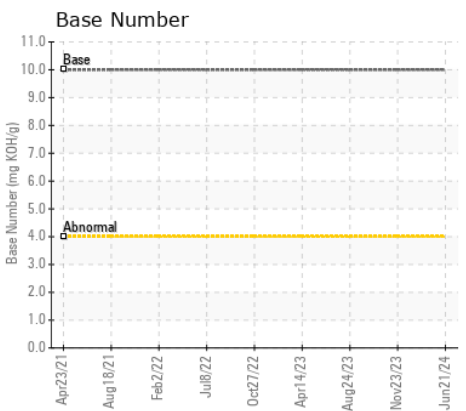
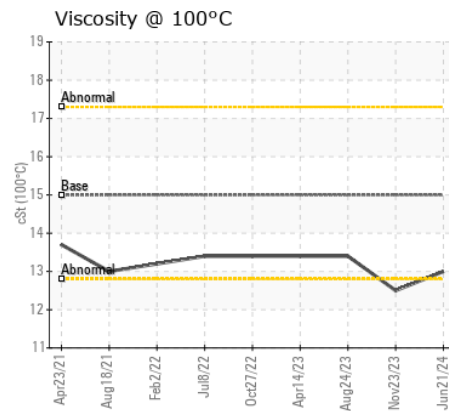
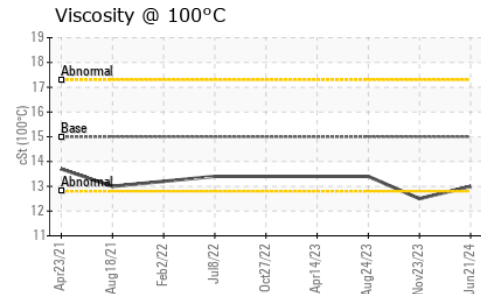
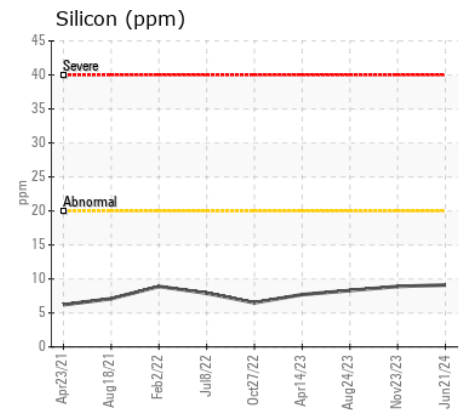
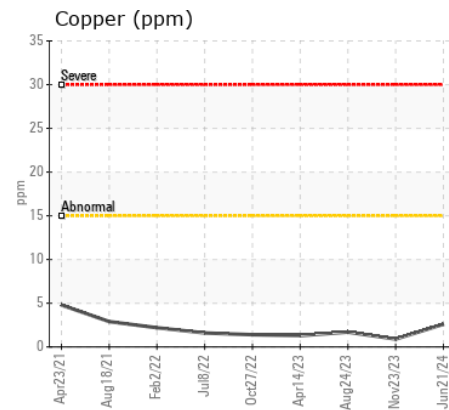
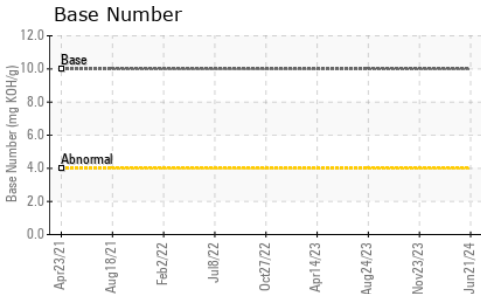
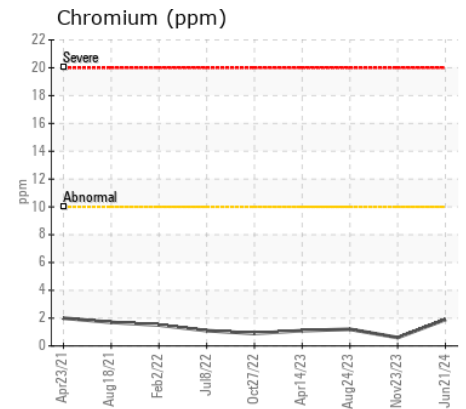
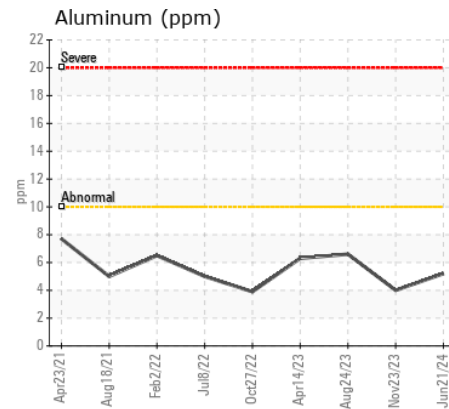
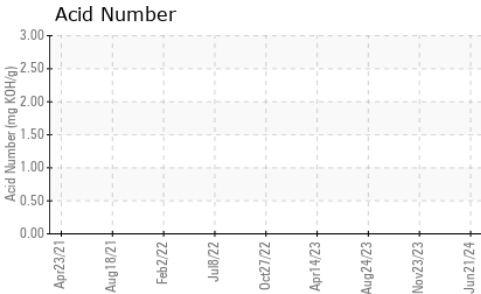
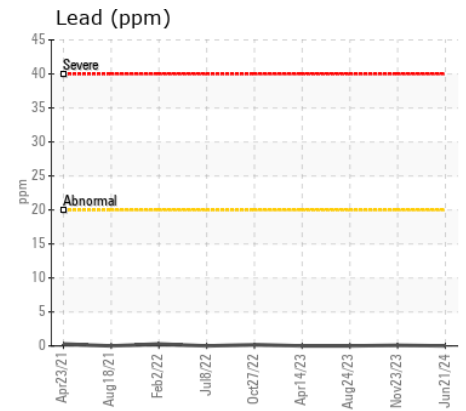
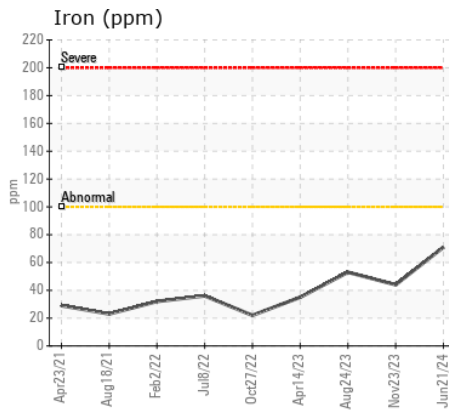
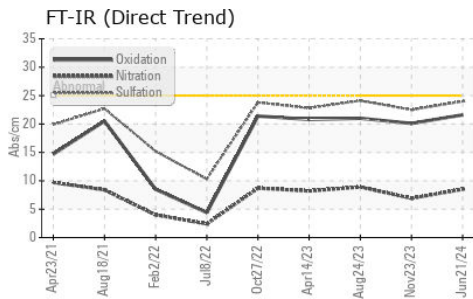
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>20	9	9	8
Potassium	ppm	ASTM D5185(m)	>20	<1	0	<1
Fuel		WC Method	>6.0	<1.0	1.1	<1.0
Water		WC Method	>0.1	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>3	0.5	0.4	0.5
Nitration	Abs/cm	ASTM D7624*	>20	8.5	6.9	8.9
Sulfation	Abs/.1mm	ASTM D7415*	>30	24.0	22.5	24.1
Silt	scalar	Visual*	NONE	NONE	---	---
Debris	scalar	Visual*	NONE	NONE	---	---
Sand/Dirt	scalar	Visual*	NONE	NONE	---	---
Appearance	scalar	Visual*	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 AN level is acceptable for this fluid. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185(m)		3	3	3
Boron	ppm	ASTM D5185(m)	2.5	32	37	27
Barium	ppm	ASTM D5185(m)	0.0	0	0	0
Molybdenum	ppm	ASTM D5185(m)	0.7	41	40	48
Manganese	ppm	ASTM D5185(m)	0.0	<1	0	<1
Magnesium	ppm	ASTM D5185(m)	256	518	484	486
Calcium	ppm	ASTM D5185(m)	2057	1720	1683	1758
Phosphorus	ppm	ASTM D5185(m)	935	879	890	973
Zinc	ppm	ASTM D5185(m)	1223	1073	1034	1124
Sulfur	ppm	ASTM D5185(m)	4079	2281	2277	2490
Oxidation	Abs/.1mm	ASTM D7414*	>25	21.6	20.1	21.0
Acid Number (AN)	mg KOH/g	ASTM D974*		2.51	---	---
Base Number (BN)	mg KOH/g	ASTM D2896*	10	9.52	---	---
Visc @ 40°C	cSt	ASTM D7279(m)	113	95.2	---	---
Visc @ 100°C	cSt	ASTM D7279(m)	15.0	13.0	12.5	13.4
Viscosity Index (VI)	Scale	ASTM D2270*	138	134	---	---



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : VCP450318
Lab Number : 02644124
Unique Number : 5801663
Test Package : MOB 2 (Additional Tests: KV40, TAN Auto, VI, Visual)

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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.*