



VOLVO

OIL ANALYSIS REPORT

WEAR	ABNORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[25354]

Machine Id
VOLVO ECR145EL 311468

Component
Diesel Engine

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

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		VCP408868	VCP371898	VCP285417
Sample Date		Client Info		10 Apr 2024	07 Jul 2022	04 Jun 2020
Machine Age	hrs	Client Info		1404	951	567
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ABNORMAL	ABNORMAL	ABNORMAL

WEAR

The aluminum level is abnormal. All other component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	84	78	53
Chromium	ppm	ASTM D5185m	>10	5	7	10
Nickel	ppm	ASTM D5185m	>10	0	2	11
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	<1	0
Aluminum	ppm	ASTM D5185m	>10	▲ 40	▲ 49	▲ 77
Lead	ppm	ASTM D5185m	>20	0	1	1
Copper	ppm	ASTM D5185m	>15	3	6	14
Tin	ppm	ASTM D5185m	>10	0	2	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

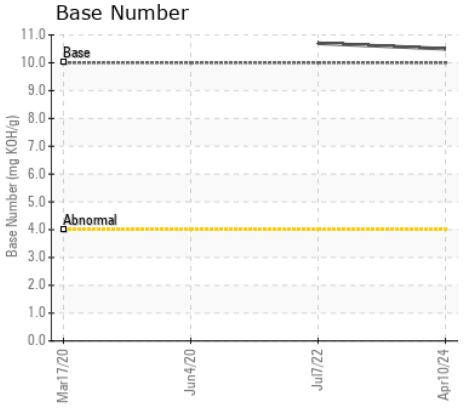
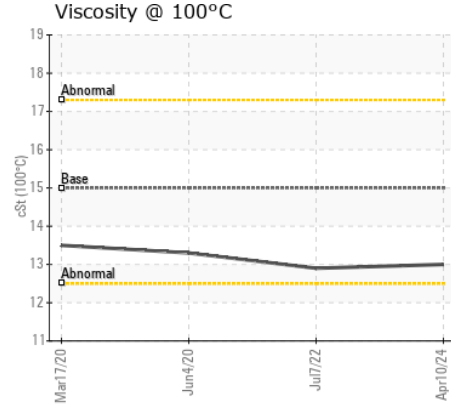
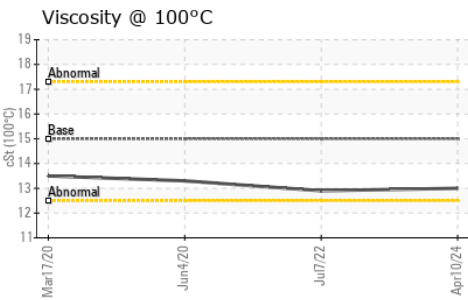
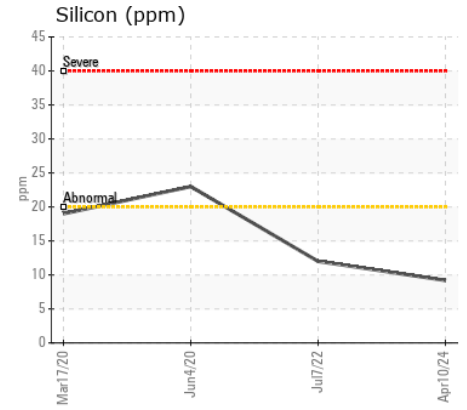
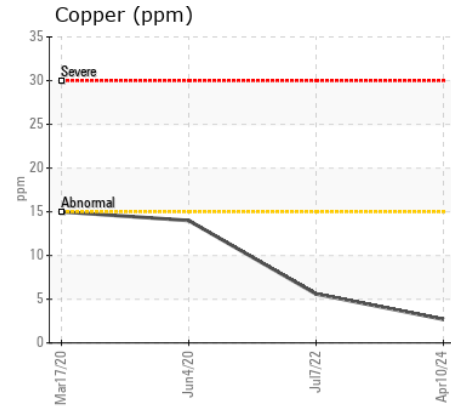
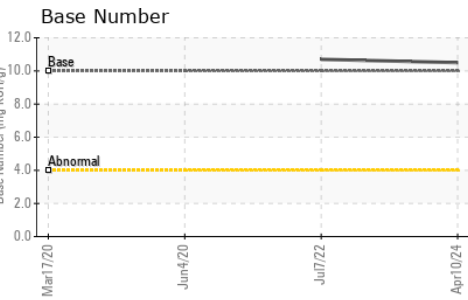
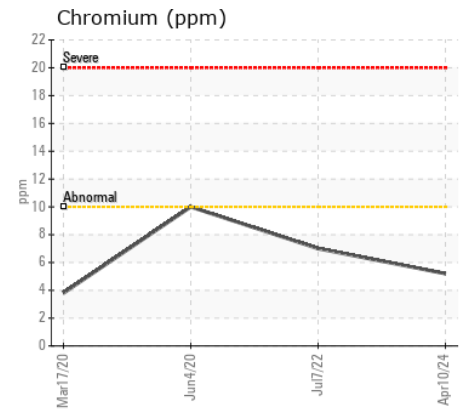
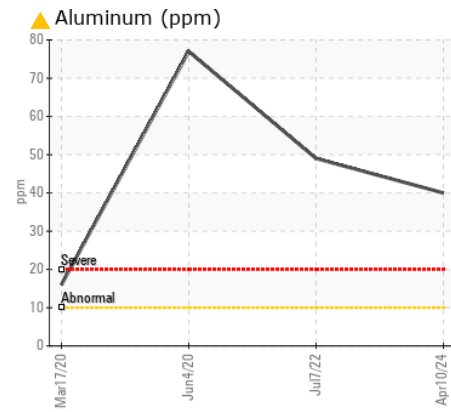
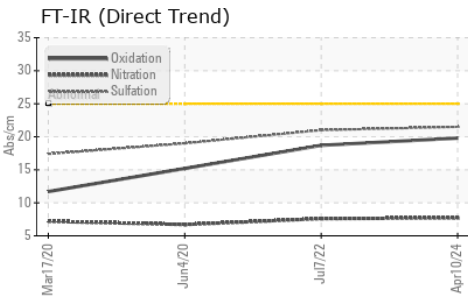
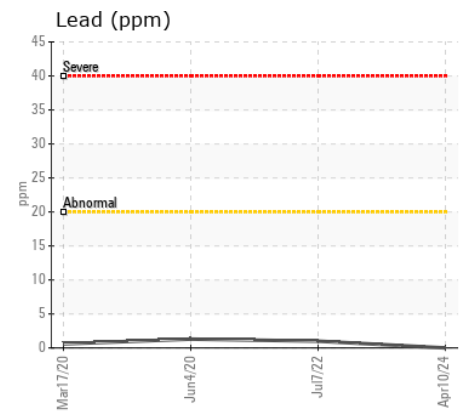
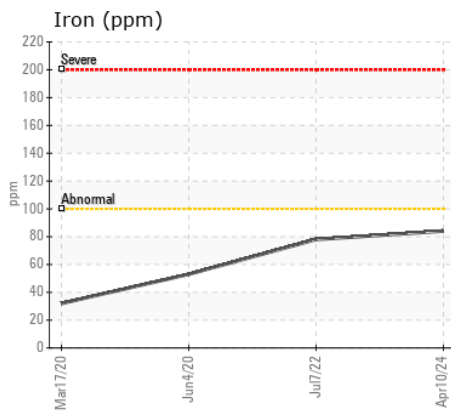
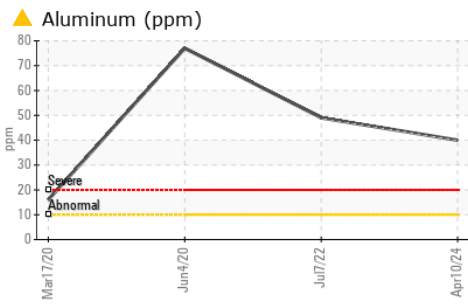
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	9	12	23
Potassium	ppm	ASTM D5185m	>20	0	1	2
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	0.2	0.2	0.2
Nitration	Abs/cm	*ASTM D7624	>20	7.7	7.6	6.7
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.5	21.0	19
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	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 condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	2	3
Boron	ppm	ASTM D5185m	2.5	41	71	3
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	44	32	14
Manganese	ppm	ASTM D5185m	0.0	0	1	4
Magnesium	ppm	ASTM D5185m	256	550	353	52
Calcium	ppm	ASTM D5185m	2057	1953	1890	2208
Phosphorus	ppm	ASTM D5185m	935	1073	894	951
Zinc	ppm	ASTM D5185m	1223	1231	1095	1024
Sulfur	ppm	ASTM D5185m	4079	3904	3480	3313
Oxidation	Abs/.1mm	*ASTM D7414	>25	19.8	18.7	15.2
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.5	10.7	---
Visc @ 100°C	cSt	ASTM D445	15.0	13.0	12.9	13.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : VCP408868
Lab Number : 06147006
Unique Number : 10977084
Test Package : MOB 1 (Additional Tests: TBN)

Received : 12 Apr 2024
Tested : 15 Apr 2024
Diagnosed : 15 Apr 2024 - Sean Felton

218 - ASCENDUM MACHINERY INC - N. CHARLESTON
 7235 CROSS COUNTRY RD.
 NORTH CHARLESTON, SC
 US 29418

Contact: MATT MITCHAM
 matt.mitcham@ascendummachinery.com

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)

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