



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
VOLVO EW180E 322032
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		ASC0003323	ASC0003104	VCP242243
Sample Date		Client Info		02 Jul 2024	05 Dec 2023	22 Oct 2019
Machine Age	hrs	Client Info		5495	5006	1000
Oil Age	hrs	Client Info		489	1000	0
Filter Age	hrs	Client Info		0	1000	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	10	11	9
Chromium	ppm	ASTM D5185m	>10	<1	<1	1
Nickel	ppm	ASTM D5185m	>10	0	0	2
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	4	2	4
Lead	ppm	ASTM D5185m	>20	0	0	<1
Copper	ppm	ASTM D5185m	>15	<1	<1	1
Tin	ppm	ASTM D5185m	>10	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

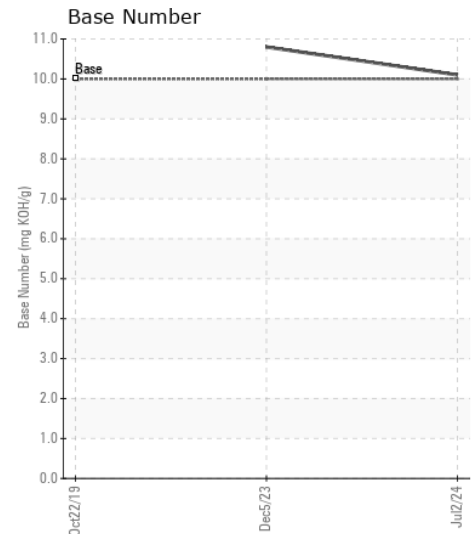
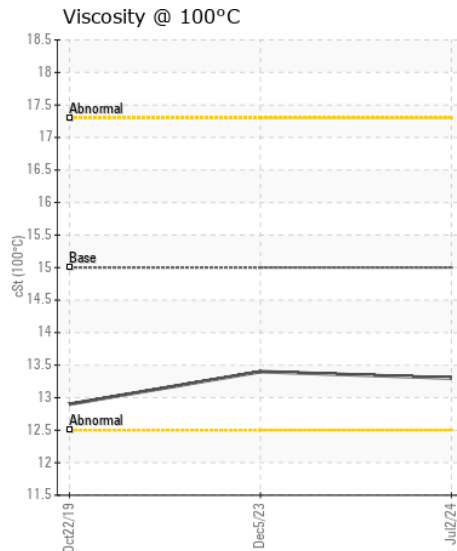
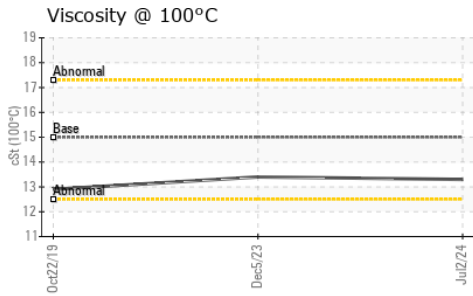
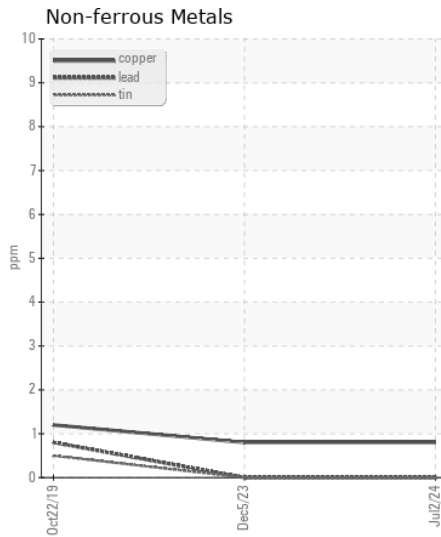
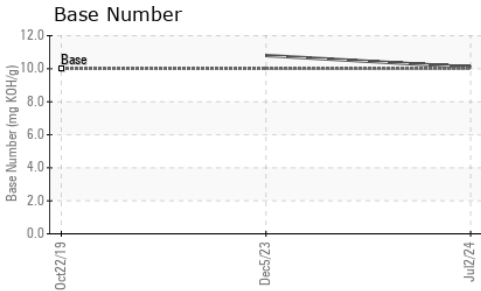
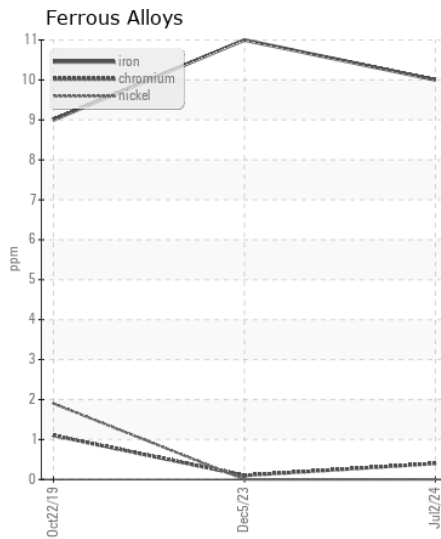
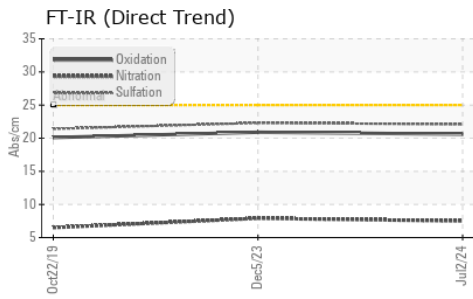
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	7	8	8
Potassium	ppm	ASTM D5185m	>20	4	6	6
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	0.3	0.3	0.1
Nitration	Abs/cm	*ASTM D7624	>20	7.5	7.9	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	22.3	21.4
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	0	3
Boron	ppm	ASTM D5185m	2.5	38	31	40
Barium	ppm	ASTM D5185m	0.0	0	2	<1
Molybdenum	ppm	ASTM D5185m	0.7	40	45	40
Manganese	ppm	ASTM D5185m	0.0	0	0	2
Magnesium	ppm	ASTM D5185m	256	495	508	507
Calcium	ppm	ASTM D5185m	2057	1633	1718	1704
Phosphorus	ppm	ASTM D5185m	935	913	923	770
Zinc	ppm	ASTM D5185m	1223	1104	1125	876
Sulfur	ppm	ASTM D5185m	4079	2615	2901	1232
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.6	20.9	20.1
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.1	10.8	---
Visc @ 100°C	cSt	ASTM D445	15.0	13.3	13.4	12.9



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : ASC0003323

Lab Number : 06226990

Unique Number : 11110483

Test Package : CONST (Additional Tests: TBN)

Received : 03 Jul 2024

Tested : 03 Jul 2024

Diagnosed : 03 Jul 2024 - Wes Davis

160 - ASCENDUM MACHINERY INC - MILLS RIVER

215 FANNING FIELDS RD

MILLS RIVER, NC

US 28759

Contact: CORY PENLAND

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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)