



ASCENDUM

OIL ANALYSIS REPORT



Area
Ascendum Machinery/500 Hour CSA

Machine Id
VOLVO EC160EL 1836 (S/N 310219)

Component
Diesel Engine

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

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ASC0007357	VCP0007211	VCP0000826
Sample Date		Client Info		20 Feb 2024	01 Feb 2023	14 Mar 2022
Machine Age	hrs	Client Info		4444	4001	3385
Oil Age	hrs	Client Info		443	616	3385
Filter Age	hrs	Client Info		0	0	3385
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	47	60	29
Chromium	ppm	ASTM D5185m	>10	1	2	1
Nickel	ppm	ASTM D5185m	>10	<1	1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>10	8	12	7
Lead	ppm	ASTM D5185m	>20	0	2	<1
Copper	ppm	ASTM D5185m	>15	2	3	2
Tin	ppm	ASTM D5185m	>10	<1	1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

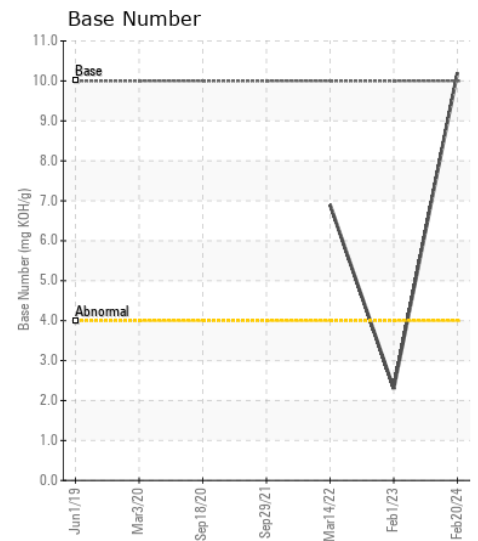
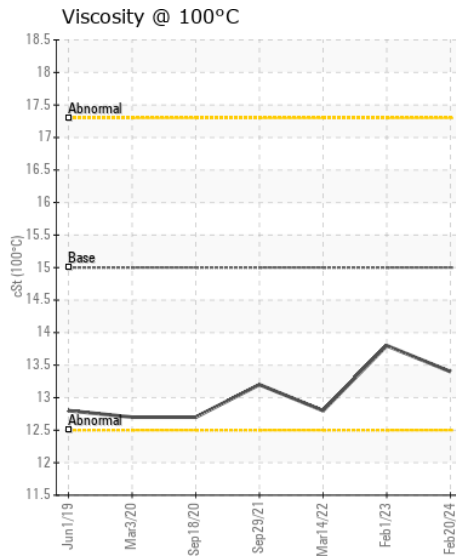
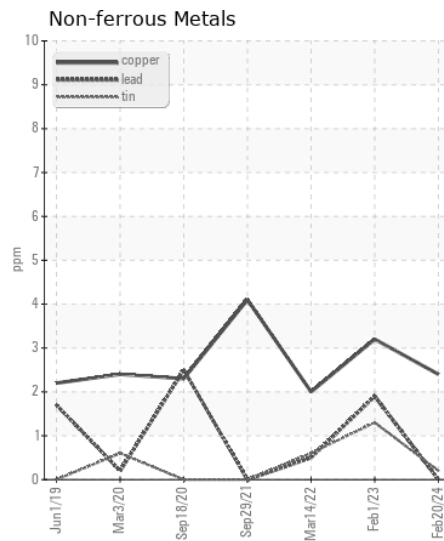
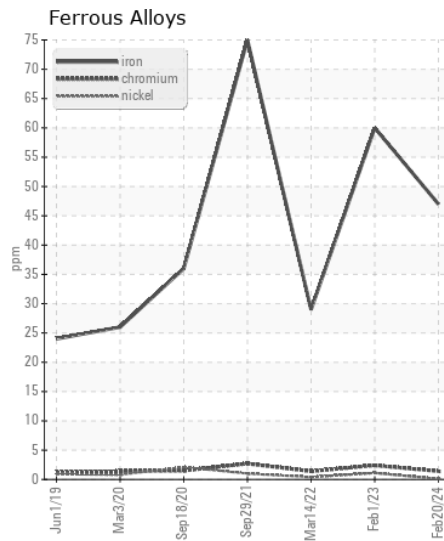
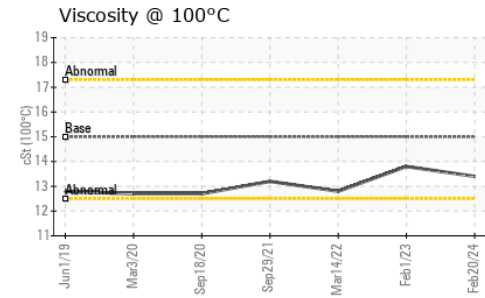
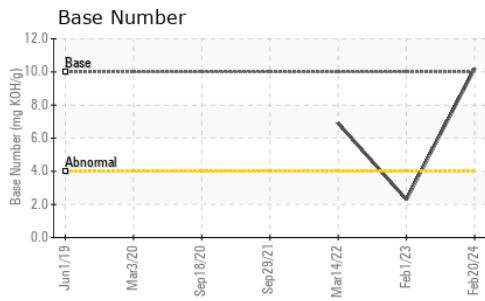
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	10	13	10
Potassium	ppm	ASTM D5185m	>20	0	4	<1
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	0.4	0.5	0.5
Nitration	Abs/cm	*ASTM D7624	>20	8.8	5.3	9.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	22.1	12.6	23.0
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		3	2	2
Boron	ppm	ASTM D5185m	2.5	36	75	50
Barium	ppm	ASTM D5185m	0.0	0	0	0
Molybdenum	ppm	ASTM D5185m	0.7	40	31	43
Manganese	ppm	ASTM D5185m	0.0	<1	<1	<1
Magnesium	ppm	ASTM D5185m	256	480	142	544
Calcium	ppm	ASTM D5185m	2057	1842	2139	1787
Phosphorus	ppm	ASTM D5185m	935	953	985	985
Zinc	ppm	ASTM D5185m	1223	1109	1231	1165
Sulfur	ppm	ASTM D5185m	4079	3029	3796	2685
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.6	11.1	18.8
Base Number (BN)	mg KOH/g	ASTM D2896	10	10.2	▲ 2.3	6.9
Visc @ 100°C	cSt	ASTM D445	15.0	13.4	13.8	12.8



Certificate L2367

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

Sample No. : ASC0007357

Lab Number : 06101294

Unique Number : 10899524

Test Package : CONST (Additional Tests: TBN)

Received : 27 Feb 2024

Tested : 28 Feb 2024

Diagnosed : 28 Feb 2024 - Wes Davis

TRIANGLE GRADING AND PAVING INC

1521 Huffman Mill Rd

BURLINGTON, NC

US 27216

Contact: ADAM CORBETT

wacorbett@trianglegradingpaving.com

T:

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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