



VOLVO

OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
[HILLSBOROUGH]
Machine Id
VOLVO EW160EL 324178
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		VCP435613	VCP431775	---
Sample Date		Client Info		19 Feb 2024	07 Nov 2023	---
Machine Age	hrs	Client Info		929	479	---
Oil Age	hrs	Client Info		0	479	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		N/A	Changed	---
Filter Changed		Client Info		N/A	Changed	---
Sample Status				NORMAL	ATTENTION	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>100	9	14	---
Chromium	ppm	ASTM D5185m	>10	1	1	---
Nickel	ppm	ASTM D5185m	>10	2	5	---
Titanium	ppm	ASTM D5185m		<1	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>10	2	4	---
Lead	ppm	ASTM D5185m	>20	<1	<1	---
Copper	ppm	ASTM D5185m	>15	2	6	---
Tin	ppm	ASTM D5185m	>10	1	2	---
Vanadium	ppm	ASTM D5185m		<1	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

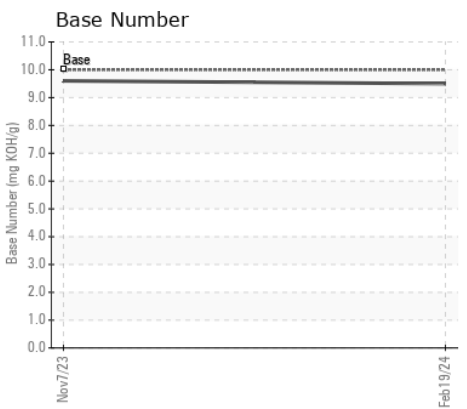
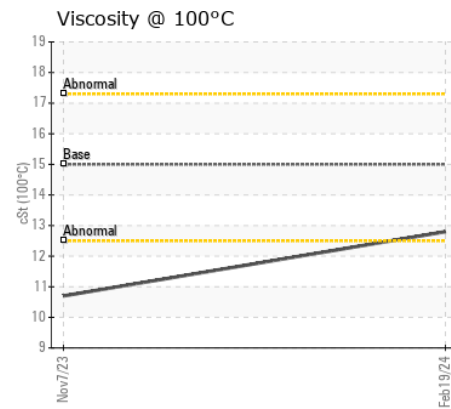
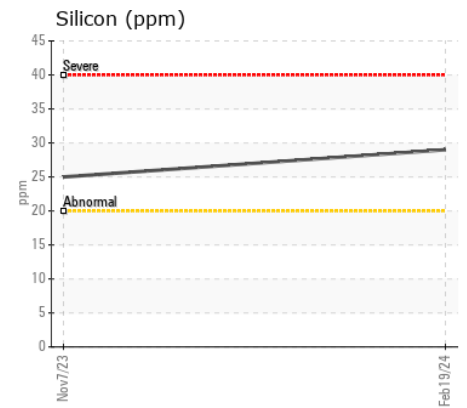
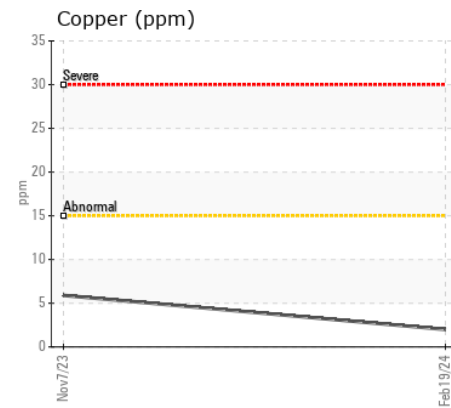
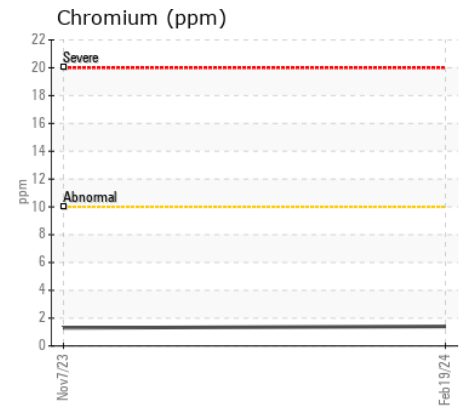
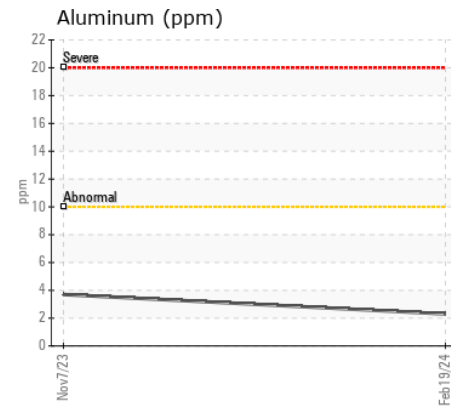
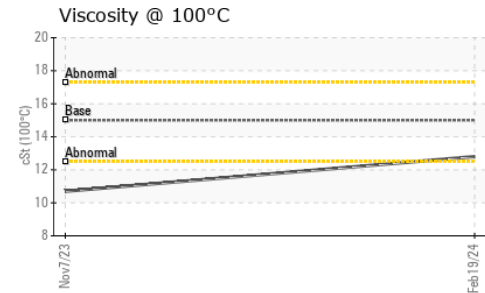
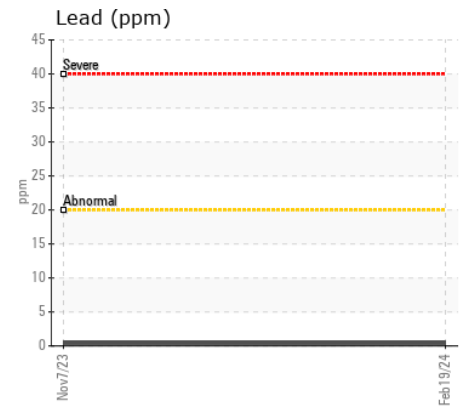
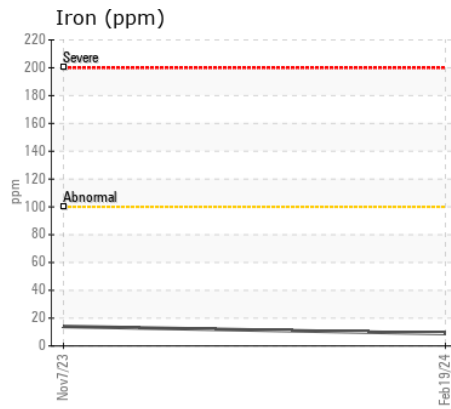
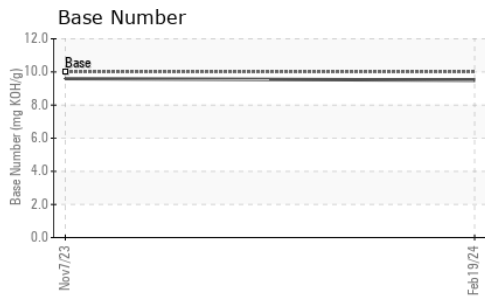
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	29	25	---
Potassium	ppm	ASTM D5185m	>20	3	2	---
Fuel		WC Method	>6.0	<1.0	0.4	---
Water		WC Method	>0.1	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>3	0.1	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	6.4	6.3	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	22.1	---
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	>0.1	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	4	---
Boron	ppm	ASTM D5185m	2.5	31	48	---
Barium	ppm	ASTM D5185m	0.0	2	0	---
Molybdenum	ppm	ASTM D5185m	0.7	45	34	---
Manganese	ppm	ASTM D5185m	0.0	1	4	---
Magnesium	ppm	ASTM D5185m	256	585	496	---
Calcium	ppm	ASTM D5185m	2057	1319	1448	---
Phosphorus	ppm	ASTM D5185m	935	910	866	---
Zinc	ppm	ASTM D5185m	1223	1083	1039	---
Sulfur	ppm	ASTM D5185m	4079	3192	2797	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.1	20.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	9.5	9.6	---
Visc @ 100°C	cSt	ASTM D445	15.0	12.8	10.7	---



Certificate L2367

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

Sample No. : VCP435613

Lab Number : 06102230

Unique Number : 10900460

Test Package : MOB 1 (Additional Tests: TBN)

Received : 27 Feb 2024

Tested : 28 Feb 2024

Diagnosed : 28 Feb 2024 - Wes Davis

ALTA EQUIPMENT/FLAGLER CONSTRUCTION EQUIPMENT LLC

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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)