



# ASCENDUM

## OIL ANALYSIS REPORT

WEAR	<b>NORMAL</b>
CONTAMINATION	<b>ABNORMAL</b>
FLUID CONDITION	<b>ABNORMAL</b>



Machine Id  
**VOLVO EC480EL 311086**  
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. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ASC0010019</b>	ASC0008903	ASC0002707
Sample Date		Client Info		<b>19 Apr 2024</b>	06 Feb 2024	07 Dec 2023
Machine Age	hrs	Client Info		<b>10181</b>	9919	9584
Oil Age	hrs	Client Info		<b>500</b>	500	320
Filter Age	hrs	Client Info		<b>500</b>	500	320
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>ABNORMAL</b>	NORMAL	NORMAL

### WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>7</b>	18	6
Chromium	ppm	ASTM D5185m	>10	<b>0</b>	<1	0
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	4	0
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	1
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>15	<b>0</b>	<1	<1
Tin	ppm	ASTM D5185m	>10	<b>0</b>	0	0
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

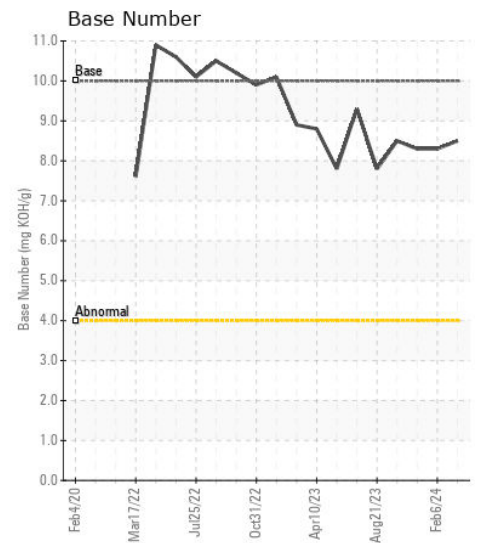
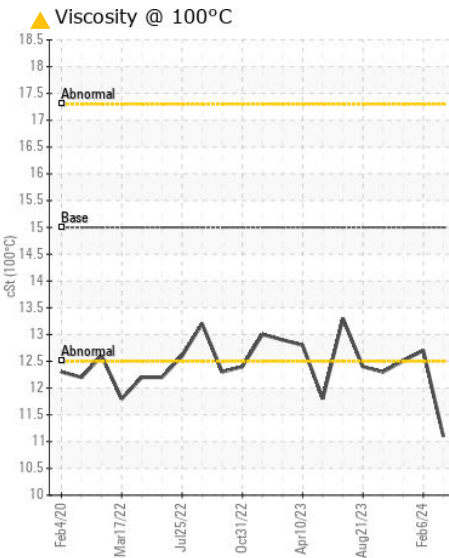
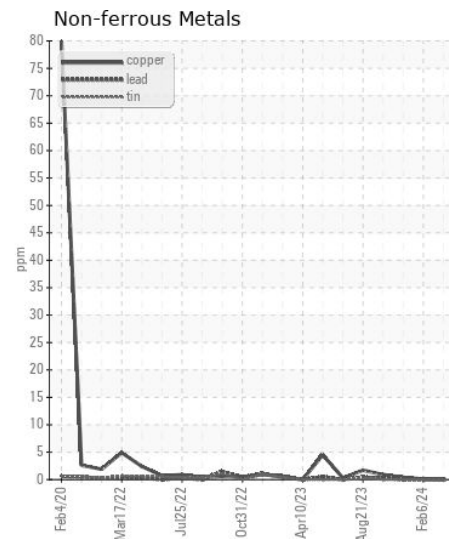
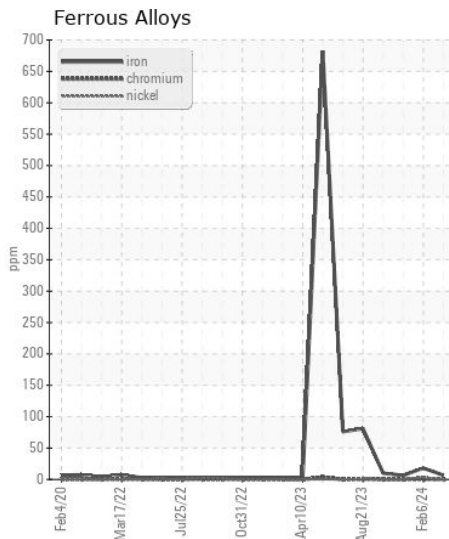
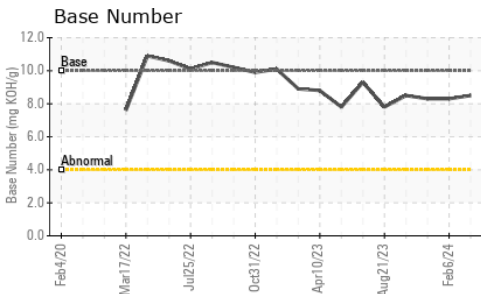
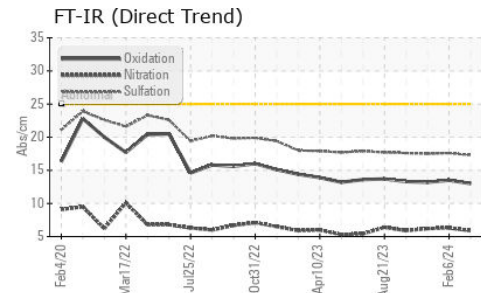
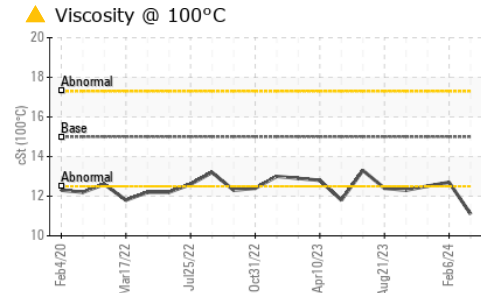
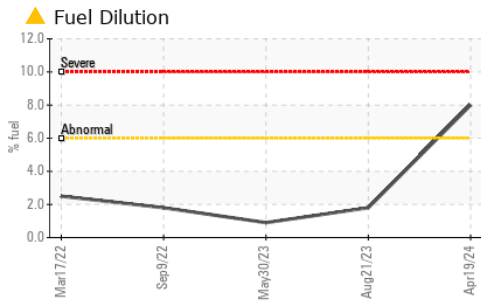
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>0</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	0	1
Fuel	%	ASTM D3524	>6.0	<b>▲ 8.0</b>	<1.0	<1.0
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.9</b>	6.3	6.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.3</b>	17.6	17.5
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

### FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		<b>5</b>	5	3
Boron	ppm	ASTM D5185m	2.5	<b>&lt;1</b>	9	6
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>51</b>	60	61
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m	256	<b>833</b>	902	951
Calcium	ppm	ASTM D5185m	2057	<b>952</b>	1072	1116
Phosphorus	ppm	ASTM D5185m	935	<b>916</b>	1037	1045
Zinc	ppm	ASTM D5185m	1223	<b>1037</b>	1214	1224
Sulfur	ppm	ASTM D5185m	4079	<b>3057</b>	2971	4067
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.0</b>	13.5	13.2
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>8.5</b>	8.3	8.3
Visc @ 100°C	cSt	ASTM D445	15.0	<b>▲ 11.1</b>	12.7	12.51



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ASC0010019 **Received** : 23 Apr 2024  
**Lab Number** : 06157409 **Tested** : 25 Apr 2024  
**Unique Number** : 10992832 **Diagnosed** : 25 Apr 2024 - Wes Davis  
**Test Package** : CONST ( Additional Tests: FuelDilution, PercentFuel, TBN )

**HANSON SOUTHEAST**  
 NC HWY 117  
 ERWIN, NC  
 US 28339  
 Contact: Service Manager

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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F: