



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



Machine Id  
**VOLVO EC480 310440**  
Component  
**Diesel Engine**  
Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (14 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ML0000146</b>	VCP286047	---
Sample Date		Client Info		<b>02 Feb 2024</b>	27 Aug 2020	---
Machine Age	hrs	Client Info		<b>5715</b>	4753	---
Oil Age	hrs	Client Info		<b>250</b>	500	---
Filter Age	hrs	Client Info		<b>250</b>	0	---
Oil Changed		Client Info		<b>Changed</b>	Changed	---
Filter Changed		Client Info		<b>Changed</b>	Changed	---
Sample Status				<b>NORMAL</b>	NORMAL	---

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>1</b>	12	---
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	---
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	---
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	15	---
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	---
Aluminum	ppm	ASTM D5185m	>10	<b>3</b>	2	---
Lead	ppm	ASTM D5185m	>20	<b>0</b>	2	---
Copper	ppm	ASTM D5185m	>15	<b>0</b>	2	---
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	1	---
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	---
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	---

**CONTAMINATION**

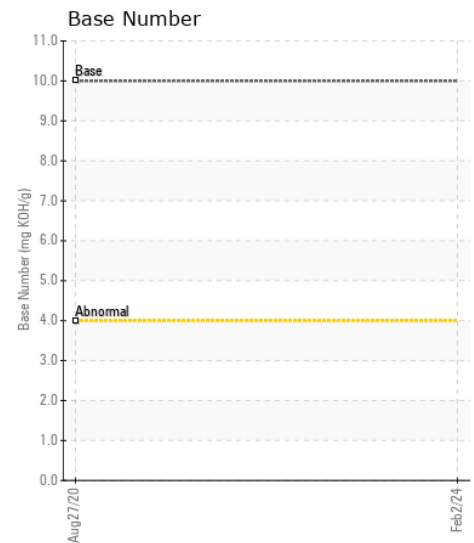
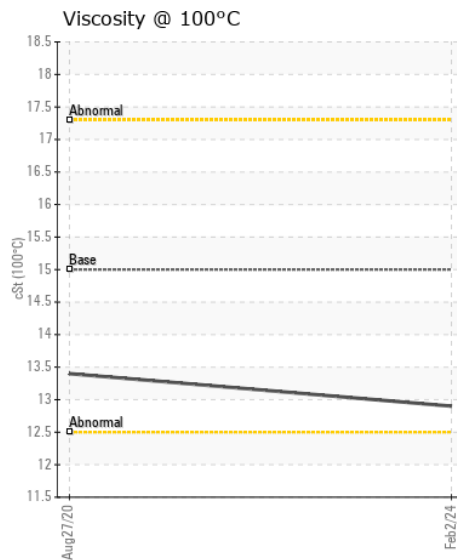
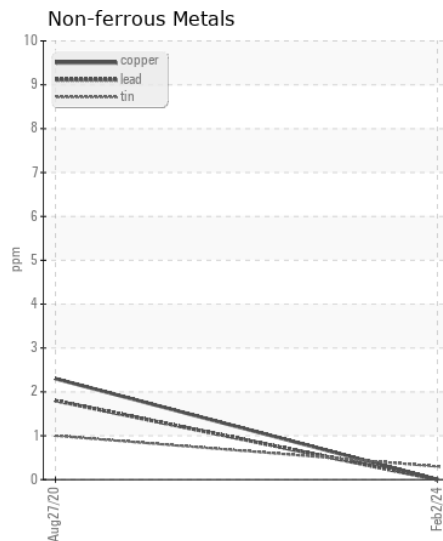
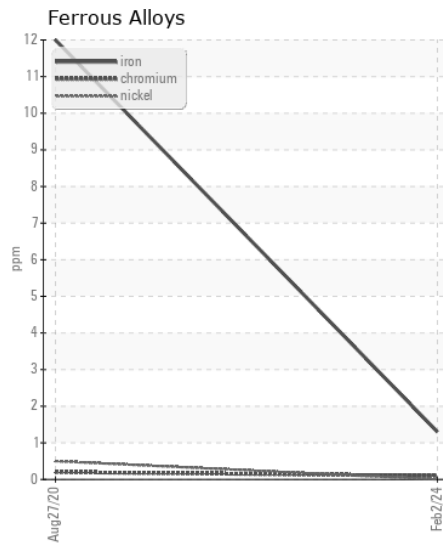
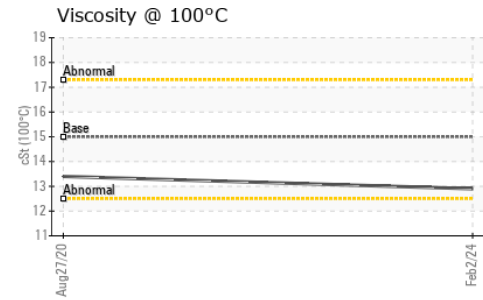
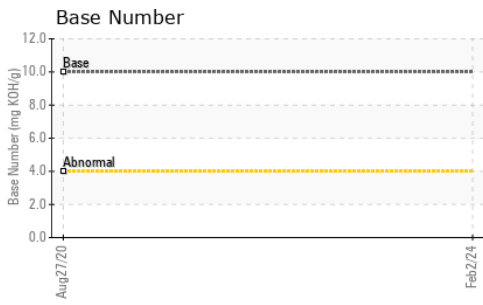
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>6</b>	6	---
Potassium	ppm	ASTM D5185m	>20	<b>0</b>	4	---
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	---
Water		WC Method	>0.1	<b>NEG</b>	NEG	---
Glycol		WC Method		<b>NEG</b>	NEG	---
Soot %	%	*ASTM D7844	>3	<b>0.1</b>	0.2	---
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.1</b>	10.5	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.9</b>	22.3	---
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	---
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	---
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	---

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185m		<b>&lt;1</b>	3	---
Boron	ppm	ASTM D5185m	2.5	<b>312</b>	24	---
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	0	---
Molybdenum	ppm	ASTM D5185m	0.7	<b>109</b>	27	---
Manganese	ppm	ASTM D5185m	0.0	<b>&lt;1</b>	<1	---
Magnesium	ppm	ASTM D5185m	256	<b>631</b>	742	---
Calcium	ppm	ASTM D5185m	2057	<b>1346</b>	1554	---
Phosphorus	ppm	ASTM D5185m	935	<b>720</b>	664	---
Zinc	ppm	ASTM D5185m	1223	<b>837</b>	731	---
Sulfur	ppm	ASTM D5185m	4079	<b>2399</b>	3465	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.8</b>	17.4	---
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>8.2</b>	---	---
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.9</b>	13.4	---



Certificate L2367

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

**Sample No.** : ML0000146

**Lab Number** : 06082925

**Unique Number** : 10870370

**Test Package** : CONST ( Additional Tests: TBN )

**Received** : 07 Feb 2024

**Tested** : 08 Feb 2024

**Diagnosed** : 09 Feb 2024 - Don Baldrige

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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)