



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



Machine Id  
**VOLVO ECR58F 11727**  
Component  
**Diesel Engine**  
Fluid  
**VOLVO ULTRA DIESEL ENGINE OIL 15W40 VDS-3 (3 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ML0002105</b>	VCP426385	VCP401101
Sample Date		Client Info		<b>19 Jun 2024</b>	06 Oct 2023	12 Apr 2023
Machine Age	hrs	Client Info		<b>1442</b>	1041	480
Oil Age	hrs	Client Info		<b>1442</b>	0	0
Filter Age	hrs	Client Info		<b>1442</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>Changed</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	ATTENTION

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>7</b>	10	19
Chromium	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>10	<b>&lt;1</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>2</b>	<1	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>10	<b>5</b>	2	<1
Lead	ppm	ASTM D5185m	>20	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>15	<b>7</b>	2	11
Tin	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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 no indication of any contamination in the oil.

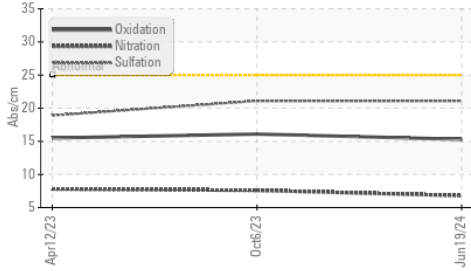
Silicon	ppm	ASTM D5185m	>20	<b>6</b>	6	14
Potassium	ppm	ASTM D5185m	>20	<b>7</b>	0	2
Fuel		WC Method	>6.0	<b>&lt;1.0</b>	<1.0	1.2
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.2</b>	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.8</b>	7.6	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.1</b>	21.1	18.9
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**

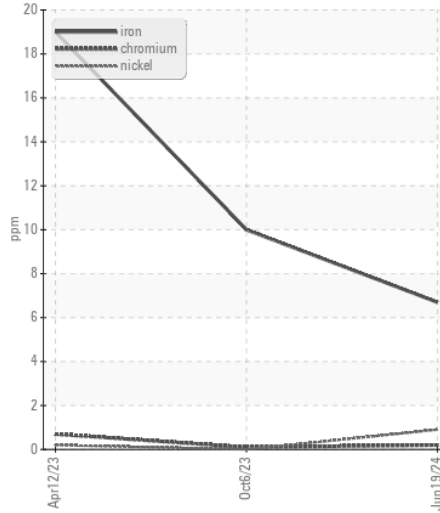
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>2</b>	2	4
Boron	ppm	ASTM D5185m	2.5	<b>385</b>	290	18
Barium	ppm	ASTM D5185m	0.0	<b>0</b>	<1	0
Molybdenum	ppm	ASTM D5185m	0.7	<b>83</b>	83	53
Manganese	ppm	ASTM D5185m	0.0	<b>1</b>	<1	2
Magnesium	ppm	ASTM D5185m	256	<b>463</b>	445	801
Calcium	ppm	ASTM D5185m	2057	<b>1459</b>	1322	1402
Phosphorus	ppm	ASTM D5185m	935	<b>1113</b>	1020	945
Zinc	ppm	ASTM D5185m	1223	<b>1361</b>	1211	1158
Sulfur	ppm	ASTM D5185m	4079	<b>4117</b>	3091	3311
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.3</b>	16.1	15.5
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>7.5</b>	7.1	8.9
Visc @ 100°C	cSt	ASTM D445	15.0	<b>12.9</b>	12.9	11.2

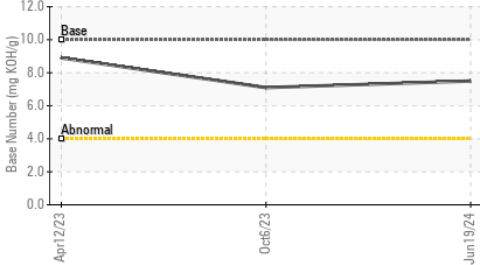
FT-IR (Direct Trend)



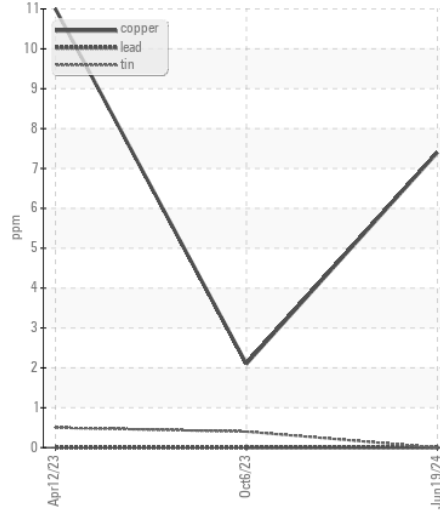
Ferrous Alloys



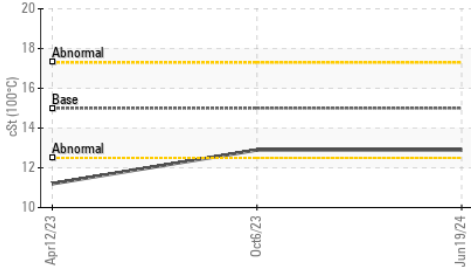
Base Number



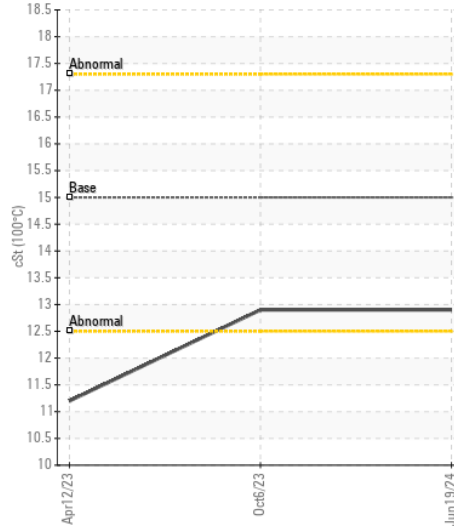
Non-ferrous Metals



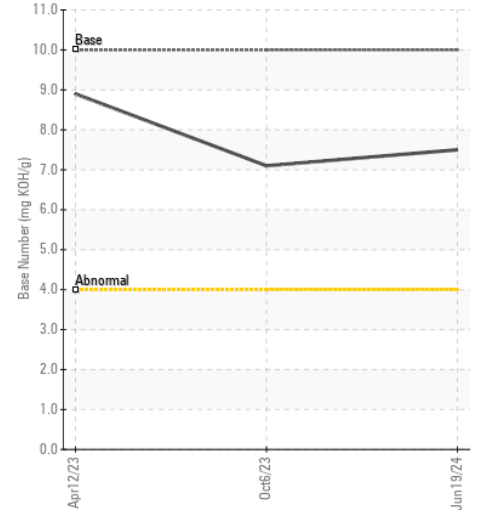
Viscosity @ 100°C



Viscosity @ 100°C



Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0002105 **Received** : 27 Jun 2024  
**Lab Number** : 06223016 **Tested** : 28 Jun 2024  
**Unique Number** : 11101213 **Diagnosed** : 30 Jun 2024 - Don Baldrige  
**Test Package** : CONST ( Additional Tests: TBN )

**MCCLUNG-LOGAN EQUIPMENT CO - BALTIMORE**  
 4601 WASHINGTON BOULEVARD  
 BALTIMORE, MD  
 US 21227

Contact: MARK CIULLA  
 mciulla@mcclung-logan.com  
 T: (410)242-6500  
 F: (410)242-7835

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)