



**McCLUNG-LOGAN**  
EQUIPMENT COMPANY, INC.

OIL ANALYSIS REPORT

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



Machine Id  
**VOLVO ECR235 314138**  
Component  
**Diesel Engine**  
Fluid  
**MOBIL 15W40 (9 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: 4000 hour service )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>ML0886321</b>	VCP397809	VCP375636
Sample Date		Client Info		<b>09 Feb 2024</b>	01 May 2023	23 Sep 2022
Machine Age	hrs	Client Info		<b>4085</b>	3575	3057
Oil Age	hrs	Client Info		<b>500</b>	500	500
Filter Age	hrs	Client Info		<b>500</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	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>30</b>	17	23
Chromium	ppm	ASTM D5185m	>10	<b>1</b>	1	1
Nickel	ppm	ASTM D5185m	>10	<b>0</b>	<1	<1
Titanium	ppm	ASTM D5185m		<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Aluminum	ppm	ASTM D5185m	>10	<b>6</b>	4	4
Lead	ppm	ASTM D5185m	>20	<b>2</b>	0	1
Copper	ppm	ASTM D5185m	>15	<b>4</b>	2	2
Tin	ppm	ASTM D5185m	>10	<b>&lt;1</b>	<1	2
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

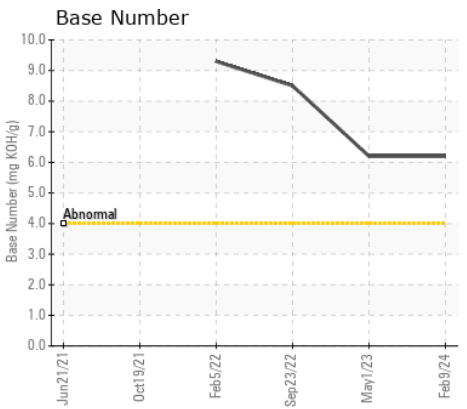
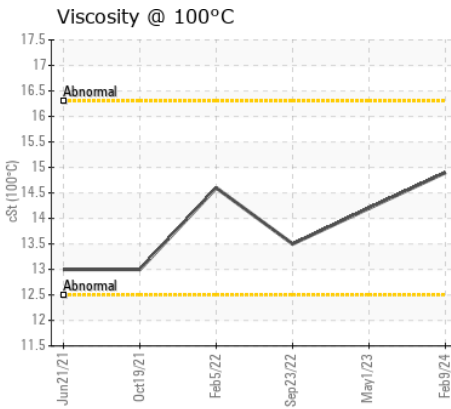
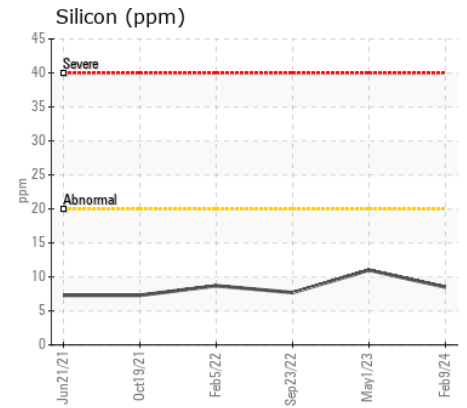
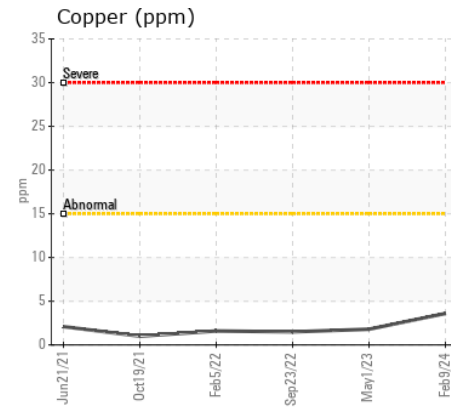
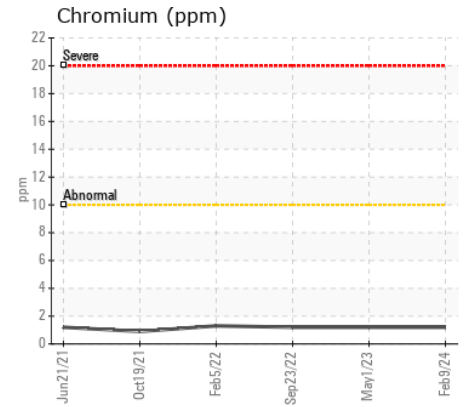
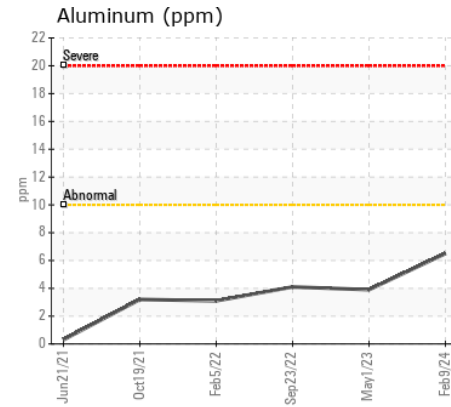
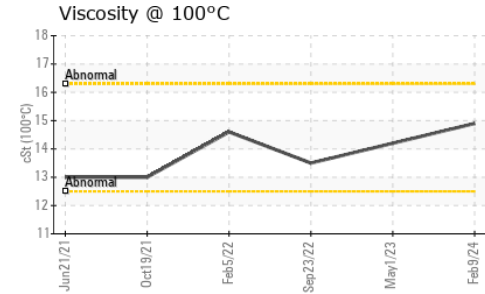
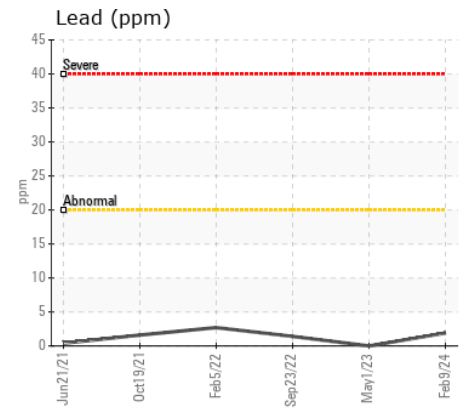
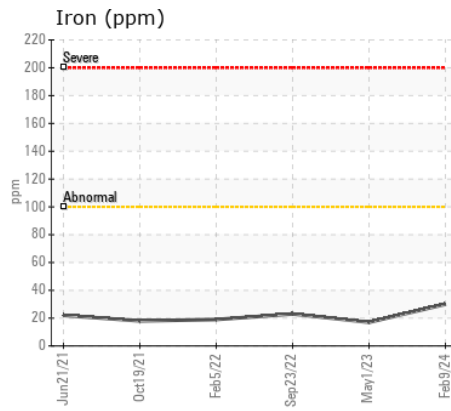
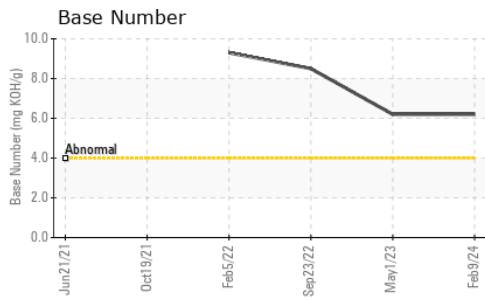
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>20	<b>8</b>	11	8
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	2
Fuel		WC Method	>6.0	<b>&lt;1.0</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>0.3</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.3</b>	10.1	12.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>26.5</b>	21.1	24.2
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	>118	<b>1</b>	2	2
Boron	ppm	ASTM D5185m		<b>79</b>	78	19
Barium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>98</b>	74	39
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>562</b>	467	413
Calcium	ppm	ASTM D5185m		<b>2019</b>	2069	2087
Phosphorus	ppm	ASTM D5185m		<b>916</b>	912	983
Zinc	ppm	ASTM D5185m		<b>1112</b>	1126	1212
Sulfur	ppm	ASTM D5185m		<b>3087</b>	3875	3820
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>23.7</b>	18.4	23.0
Base Number (BN)	mg KOH/g	ASTM D2896		<b>6.2</b>	6.2	8.5
Visc @ 100°C	cSt	ASTM D445		<b>14.9</b>	14.2	13.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : ML0886321 **Received** : 13 Feb 2024  
**Lab Number** : 06087940 **Tested** : 14 Feb 2024  
**Unique Number** : 10875385 **Diagnosed** : 15 Feb 2024 - Don Baldrige  
**Test Package** : MOBCE ( Additional Tests: TBN )

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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)