



# WEAR CHECK

## OIL ANALYSIS REPORT

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



Machine Id  
**MACK 222388**  
Component  
**Diesel Engine**  
Fluid  
**DIESEL ENGINE OIL SAE 15W40 (40 QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>WC0898710</b>	WC0869772	WC0846173
Sample Date		Client Info		<b>10 Jan 2024</b>	11 Oct 2023	02 Aug 2023
Machine Age	mls	Client Info		<b>20918</b>	15963	11926
Oil Age	mls	Client Info		<b>4193</b>	4037	4302
Filter Age	mls	Client Info		<b>4193</b>	0	4302
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

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	<b>7</b>	12	10
Chromium	ppm	ASTM D5185m	>20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	1	2
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	1	<1
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	11	15
Tin	ppm	ASTM D5185m	>15	<b>1</b>	2	1
Vanadium	ppm	ASTM D5185m		<b>0</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

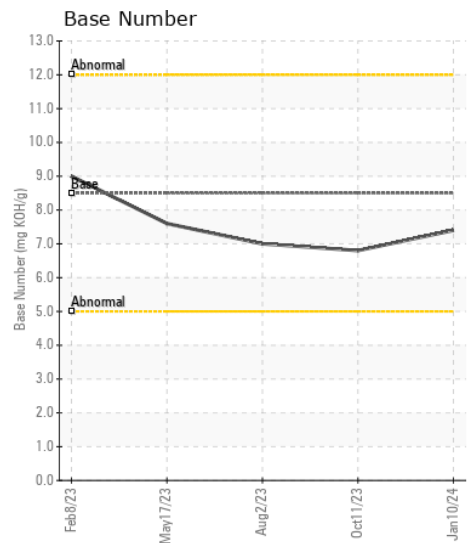
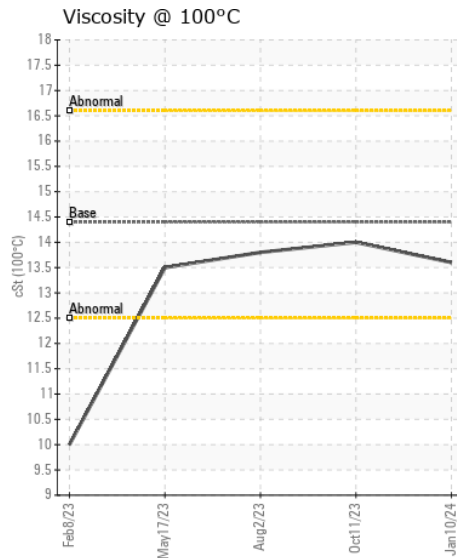
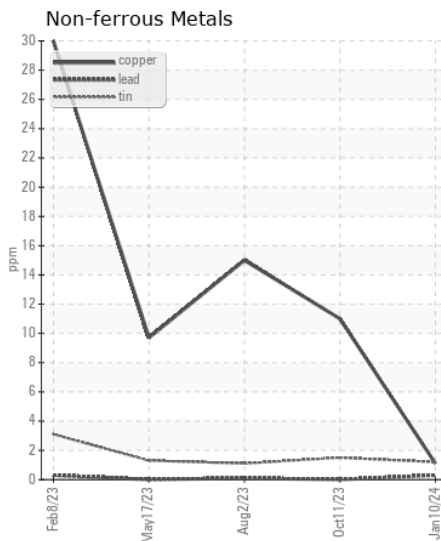
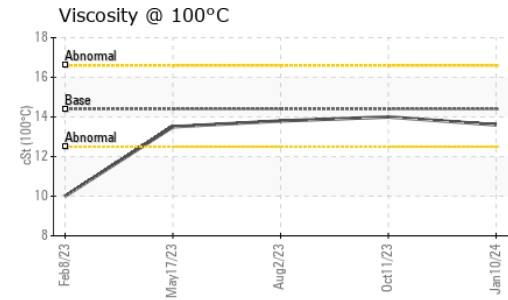
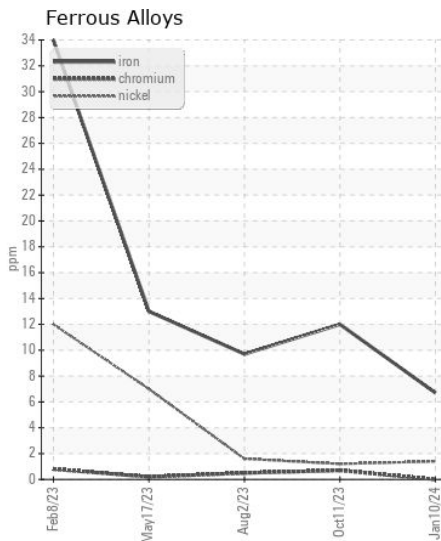
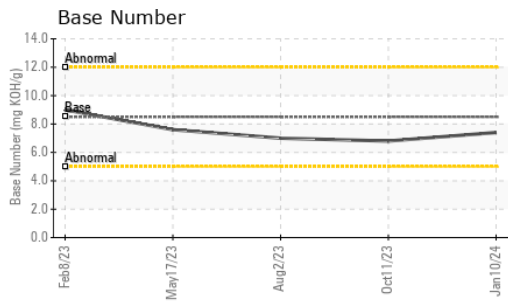
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	6	5
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.4</b>	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.5</b>	9.3	9.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.0</b>	20.6	20.8
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	>0.2	<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	>158	<b>4</b>	4	4
Boron	ppm	ASTM D5185m	250	<b>31</b>	28	26
Barium	ppm	ASTM D5185m	10	<b>0</b>	3	0
Molybdenum	ppm	ASTM D5185m	100	<b>48</b>	55	49
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>785</b>	597	749
Calcium	ppm	ASTM D5185m	3000	<b>1115</b>	1294	1230
Phosphorus	ppm	ASTM D5185m	1150	<b>750</b>	701	685
Zinc	ppm	ASTM D5185m	1350	<b>884</b>	850	863
Sulfur	ppm	ASTM D5185m	4250	<b>2234</b>	2110	2472
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>19.1</b>	18.6	19.4
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.4</b>	6.8	7.0
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.6</b>	14.0	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : WC0898710 **Received** : 17 Jan 2024  
**Lab Number** : 06063433 **Diagnosed** : 18 Jan 2024  
**Unique Number** : 10834815 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

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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)