



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



Machine Id  
**MACK V111**  
Component  
**Diesel Engine**  
Fluid  
**CAT DIESEL ENGINE OIL 15W40 (--- QTS)**

### RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>JR0219552</b>	JR0193333	JR0178377
Sample Date		Client Info		<b>12 Jun 2024</b>	28 Dec 2023	20 Sep 2023
Machine Age	mls	Client Info		<b>120166</b>	113606	0
Oil Age	mls	Client Info		<b>6560</b>	5780	6741
Filter Age	mls	Client Info		<b>6560</b>	5780	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	>120	<b>16</b>	7	11
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>15</b>	8	8
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>2</b>	1	1
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

### CONTAMINATION

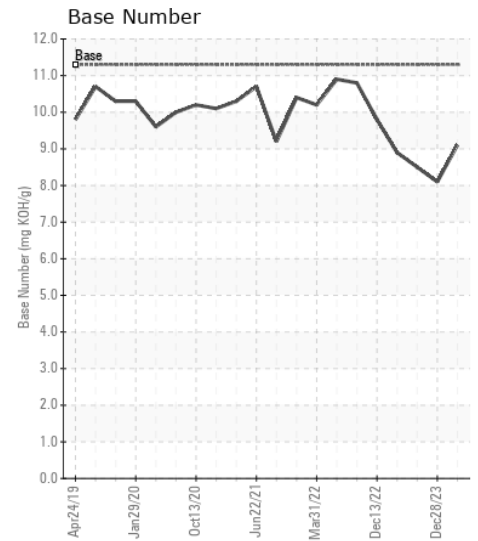
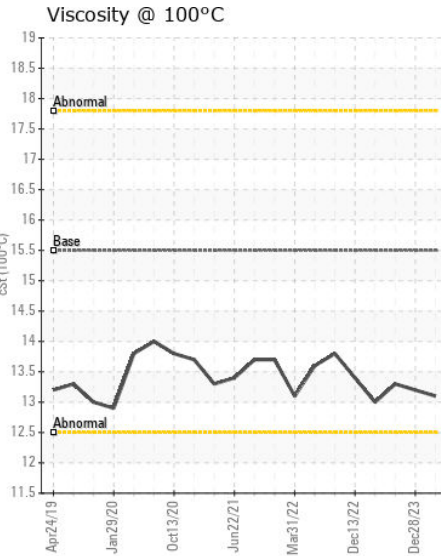
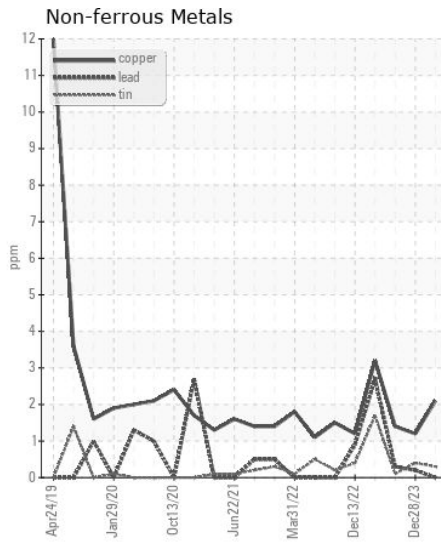
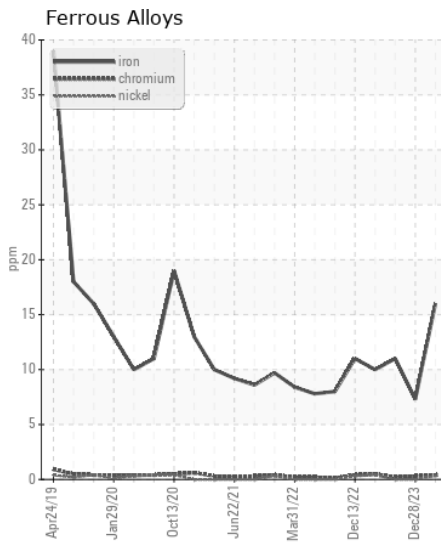
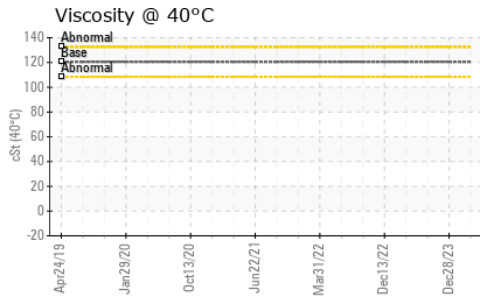
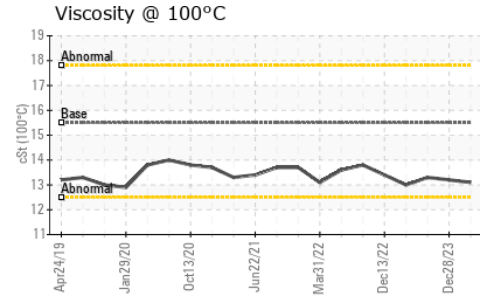
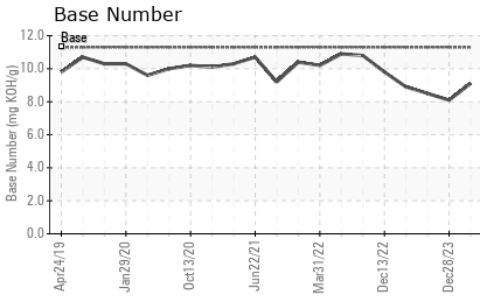
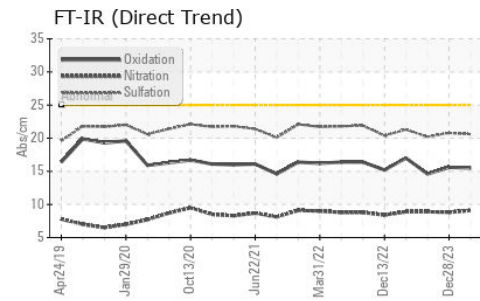
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	6	8
Potassium	ppm	ASTM D5185m	>20	<b>5</b>	1	5
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>0.5</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.1</b>	8.8	8.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>20.6</b>	20.8	20.2
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	>0.2	<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		<b>1</b>	2	2
Boron	ppm	ASTM D5185m		<b>226</b>	205	253
Barium	ppm	ASTM D5185m		<b>2</b>	<1	0
Molybdenum	ppm	ASTM D5185m		<b>250</b>	222	244
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m		<b>767</b>	747	855
Calcium	ppm	ASTM D5185m		<b>1336</b>	1330	1489
Phosphorus	ppm	ASTM D5185m		<b>862</b>	904	897
Zinc	ppm	ASTM D5185m	1460	<b>1036</b>	1005	1092
Sulfur	ppm	ASTM D5185m		<b>2729</b>	2940	3538
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>15.5</b>	15.6	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	11.3	<b>9.1</b>	8.1	8.5
Visc @ 100°C	cSt	ASTM D445	15.5	<b>13.1</b>	13.2	13.3



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : JR0219552 **Received** : 02 Jul 2024  
**Lab Number** : 06225820 **Tested** : 03 Jul 2024  
**Unique Number** : 11109313 **Diagnosed** : 03 Jul 2024 - Jonathan Hester  
**Test Package** : CONST ( Additional Tests: KV40, TBN )

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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