



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
Rockaway
Machine Id
MACK 1328
Component
Diesel Engine
Fluid
GIBRALTAR 15W/40 SUPER S-3 LX (11)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0840417	WC0774746	---
Sample Date		Client Info		15 Jan 2024	31 Aug 2023	---
Machine Age	hrs	Client Info		650	38881	---
Oil Age	hrs	Client Info		38881	38881	---
Filter Age	hrs	Client Info		38881	38881	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				NORMAL	NORMAL	---

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>120	19	15	---
Chromium	ppm	ASTM D5185m	>20	<1	<1	---
Nickel	ppm	ASTM D5185m	>5	<1	0	---
Titanium	ppm	ASTM D5185m	>2	0	0	---
Silver	ppm	ASTM D5185m	>2	0	0	---
Aluminum	ppm	ASTM D5185m	>20	2	<1	---
Lead	ppm	ASTM D5185m	>40	<1	0	---
Copper	ppm	ASTM D5185m	>330	2	2	---
Tin	ppm	ASTM D5185m	>15	<1	<1	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

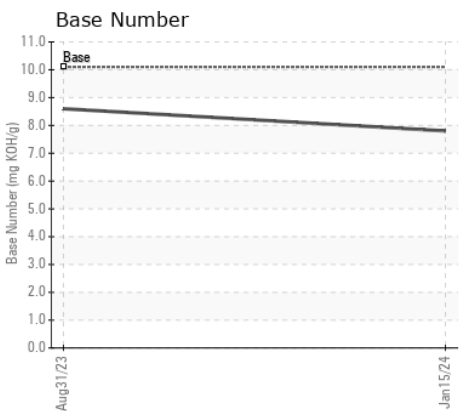
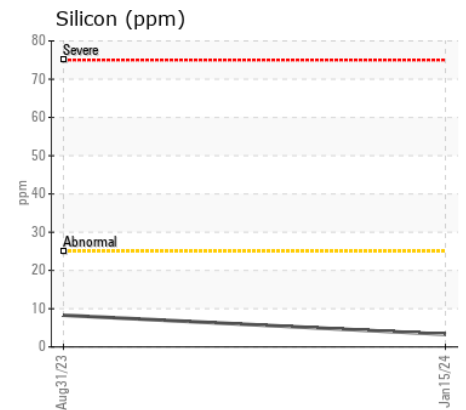
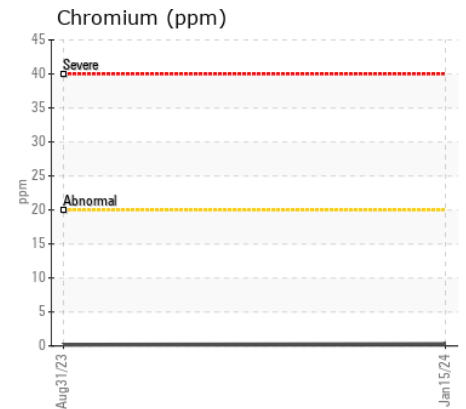
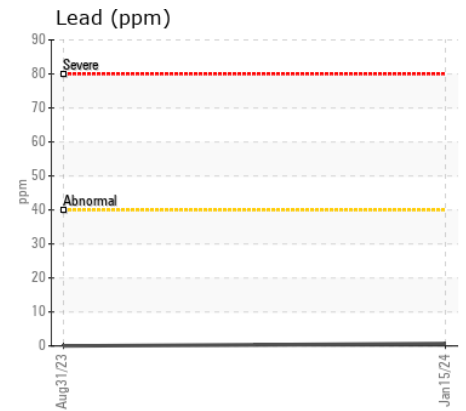
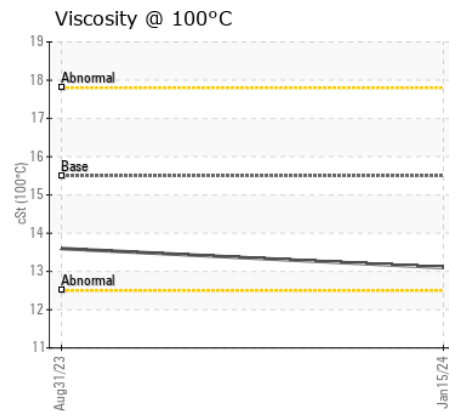
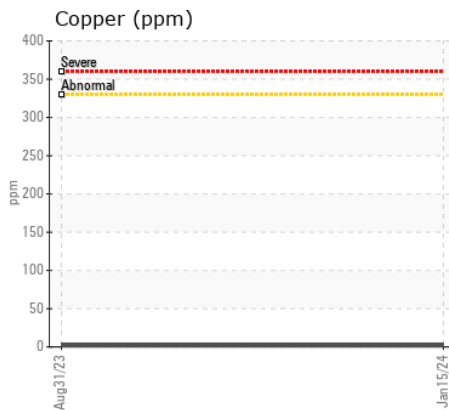
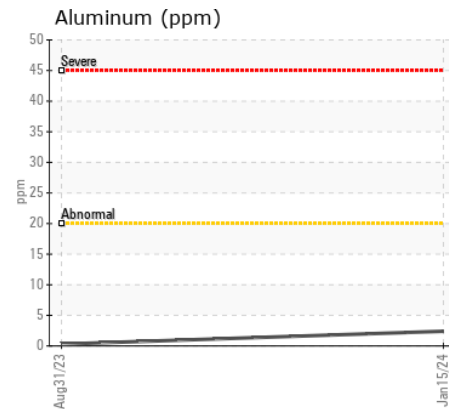
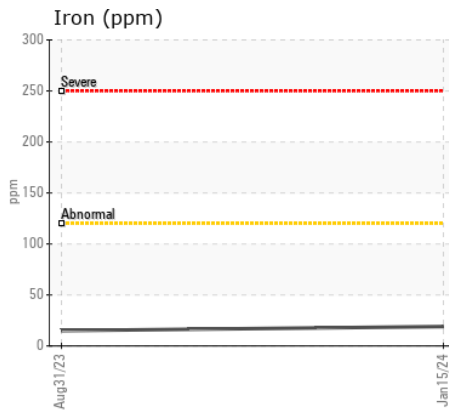
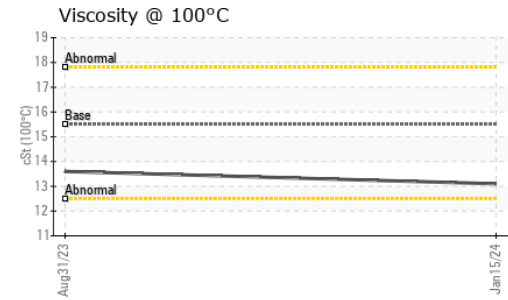
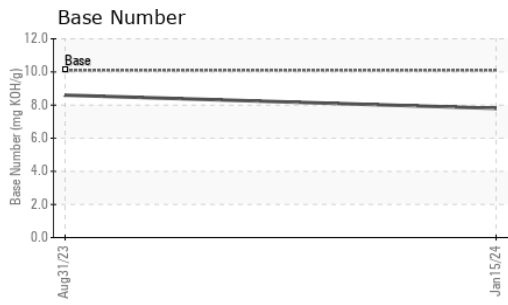
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	8	---
Potassium	ppm	ASTM D5185m	>20	2	<1	---
Fuel		WC Method	>3.0	<1.0	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>4	1.3	1.4	---
Nitration	Abs/cm	*ASTM D7624	>20	8.0	7.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.9	18.7	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	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		6	8	---
Boron	ppm	ASTM D5185m		11	10	---
Barium	ppm	ASTM D5185m		0	0	---
Molybdenum	ppm	ASTM D5185m	66	58	59	---
Manganese	ppm	ASTM D5185m		<1	<1	---
Magnesium	ppm	ASTM D5185m	1000	756	756	---
Calcium	ppm	ASTM D5185m	1050	1097	1262	---
Phosphorus	ppm	ASTM D5185m	1150	979	948	---
Zinc	ppm	ASTM D5185m	1270	1160	1179	---
Sulfur	ppm	ASTM D5185m		3031	3622	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.2	11.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.8	8.6	---
Visc @ 100°C	cSt	ASTM D445	15.5	13.1	13.6	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0840417 **Received** : 31 Jan 2024
Lab Number : 06075593 **Diagnosed** : 31 Jan 2024
Unique Number : 10857684 **Diagnostician** : Wes Davis
Test Package : MOB 1 (Additional Tests: TBN)

INTERSTATE WASTE-ROCKAWAY
 311 WEST MAIN STREET, STE 8
 ROCKAWAY, NJ
 US 07866
 Contact: Service Manager

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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F: