



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	SEVERE
FLUID CONDITION	SEVERE



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

RECOMMENDATION

We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0858420	WC0840417	WC0774746
Sample Date		Client Info		30 May 2024	15 Jan 2024	31 Aug 2023
Machine Age	hrs	Client Info		600	650	38881
Oil Age	hrs	Client Info		38881	38881	38881
Filter Age	hrs	Client Info		38881	38881	38881
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	13	19	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	<1	0
Titanium	ppm	ASTM D5185m	>2	<1	0	0
Silver	ppm	ASTM D5185m	>2	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	<1
Lead	ppm	ASTM D5185m	>40	<1	<1	0
Copper	ppm	ASTM D5185m	>330	2	2	2
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	<1	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

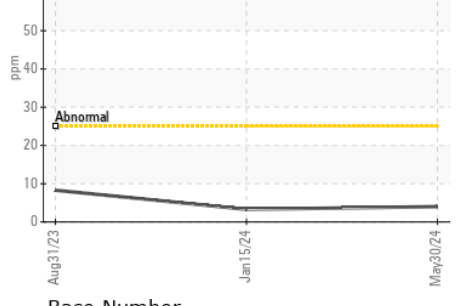
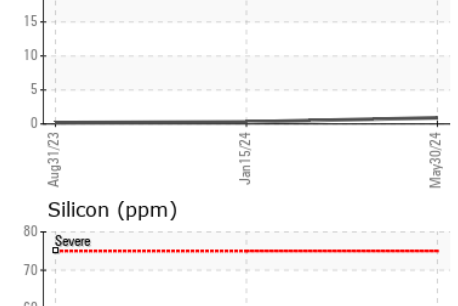
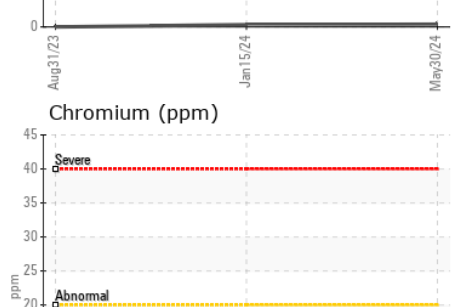
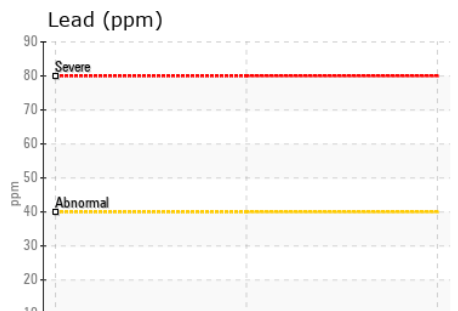
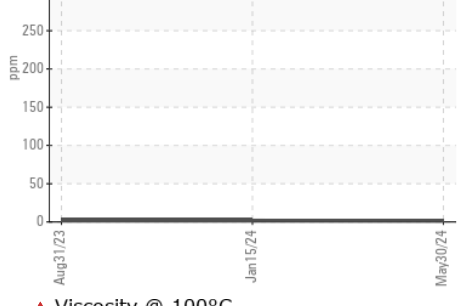
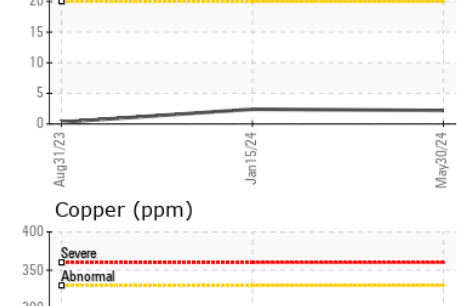
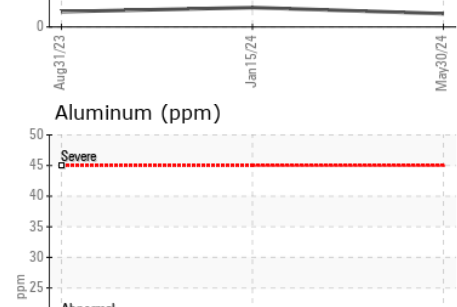
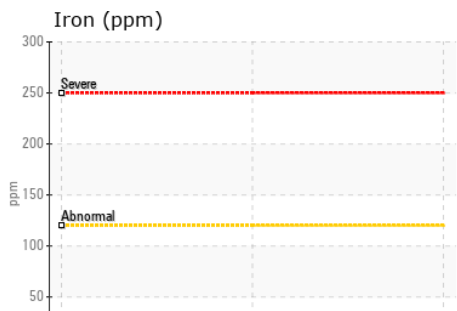
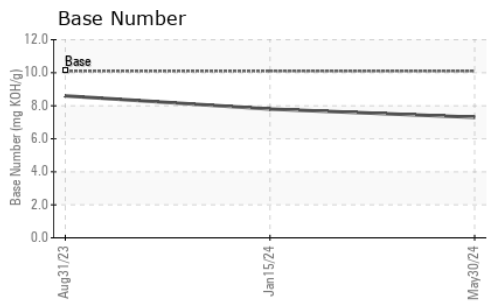
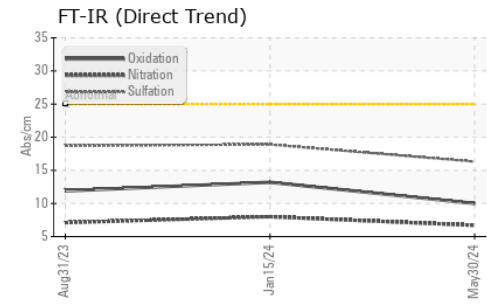
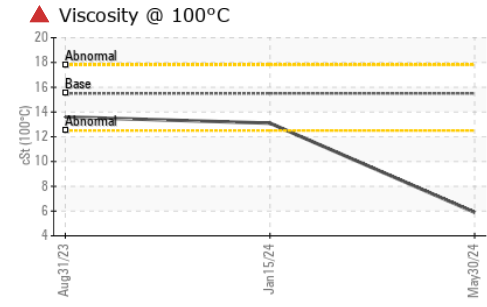
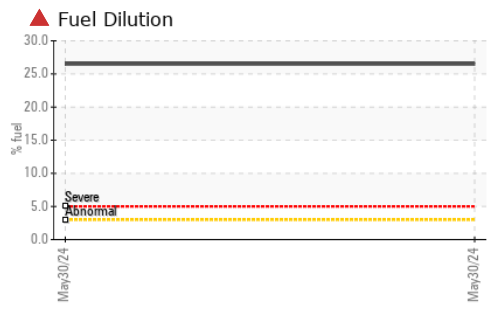
There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	4	3	8
Potassium	ppm	ASTM D5185m	>20	3	2	<1
Fuel	%	ASTM D3524	>3.0	▲ 26.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.7	1.3	1.4
Nitration	Abs/cm	*ASTM D7624	>20	6.7	8.0	7.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	16.3	18.9	18.7
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

FLUID CONDITION

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m		3	6	8
Boron	ppm	ASTM D5185m		5	11	10
Barium	ppm	ASTM D5185m		1	0	0
Molybdenum	ppm	ASTM D5185m	66	42	58	59
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	1000	606	756	756
Calcium	ppm	ASTM D5185m	1050	869	1097	1262
Phosphorus	ppm	ASTM D5185m	1150	706	979	948
Zinc	ppm	ASTM D5185m	1270	877	1160	1179
Sulfur	ppm	ASTM D5185m		2304	3031	3622
Oxidation	Abs/.1mm	*ASTM D7414	>25	10.0	13.2	11.9
Base Number (BN)	mg KOH/g	ASTM D2896	10.1	7.3	7.8	8.6
Visc @ 100°C	cSt	ASTM D445	15.5	▲ 5.9	13.1	13.6



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : WC0858420 **Received** : 28 Jun 2024
Lab Number : 06223142 **Tested** : 02 Jul 2024
Unique Number : 11101339 **Diagnosed** : 02 Jul 2024 - Wes Davis
Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN)

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

Certificate L2367
 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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