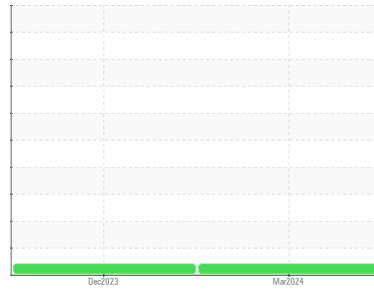




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
MACK GR64B R014 (S/N 1378414)
 Component
Diesel Engine
 Fluid
TRC PRO-SPEC V SYN BLEND 15W40 (44 LTR)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		TR06136948	TR06042725	---
Sample Date	Client Info		20 Mar 2024	13 Dec 2023	---
Machine Age	mls	Client Info	38652	26339	---
Oil Age	mls	Client Info	24171	12058	---
Oil Changed	Client Info		Not Chngd	Not Chngd	---
Sample Status			ATTENTION	ATTENTION	---

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	---
Glycol	WC Method		NEG	NEG	---

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	61	55	---
Chromium	ppm	ASTM D5185m >20	1	<1	---
Nickel	ppm	ASTM D5185m >15	2	1	---
Titanium	ppm	ASTM D5185m >2	0	0	---
Silver	ppm	ASTM D5185m >3	<1	0	---
Aluminum	ppm	ASTM D5185m >20	5	5	---
Lead	ppm	ASTM D5185m >40	4	4	---
Copper	ppm	ASTM D5185m >330	190	281	---
Tin	ppm	ASTM D5185m >15	6	6	---
Vanadium	ppm	ASTM D5185m	<1	<1	---
Cadmium	ppm	ASTM D5185m	0	0	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	14	33	---
Barium	ppm	ASTM D5185m	0	0	---
Molybdenum	ppm	ASTM D5185m	59	86	---
Manganese	ppm	ASTM D5185m	3	4	---
Magnesium	ppm	ASTM D5185m	342	462	---
Calcium	ppm	ASTM D5185m	2120	1683	---
Phosphorus	ppm	ASTM D5185m	779	748	---
Zinc	ppm	ASTM D5185m	984	865	---
Sulfur	ppm	ASTM D5185m	3087	2278	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	22	34	---
Sodium	ppm	ASTM D5185m	4	3	---
Potassium	ppm	ASTM D5185m >20	11	11	---
Fuel	%	ASTM D3524 >3.0	<1.0	0.6	---

INFRA-RED

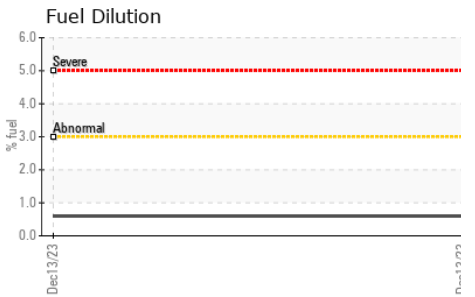
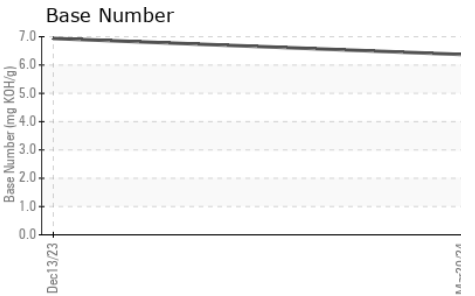
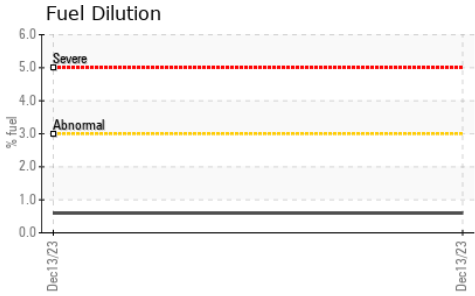
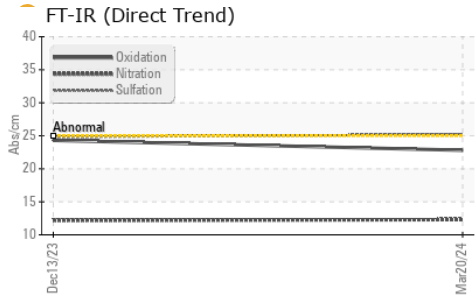
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.6	0.5	---
Nitration	Abs/cm	*ASTM D7624 >20	12.3	12.2	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	25.2	24.8	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	22.8	24.3	---
Base Number (BN)	mg KOH/g	ASTM D2896	6.37	6.94	---



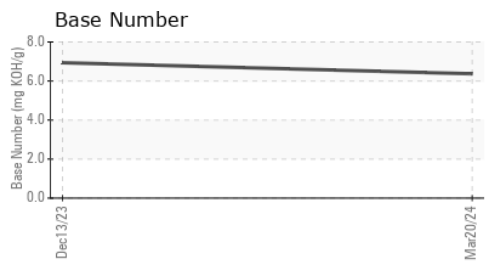
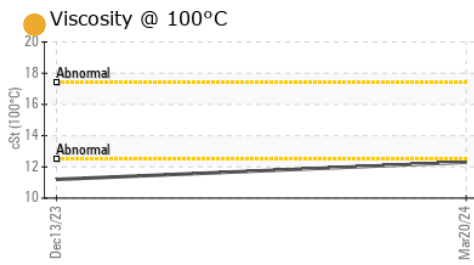
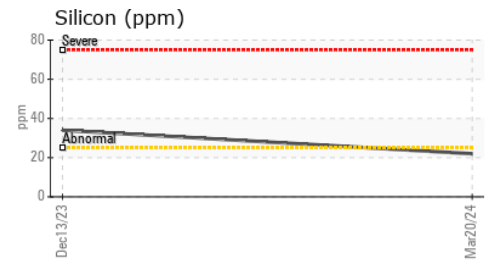
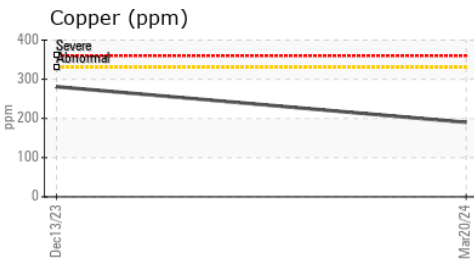
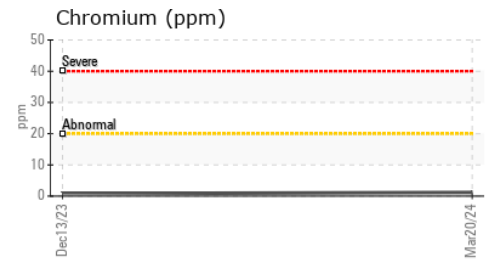
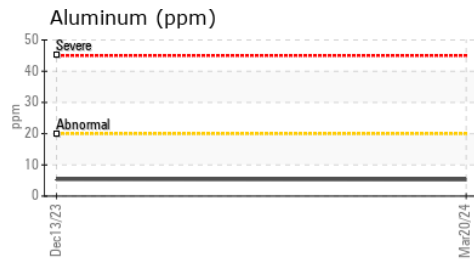
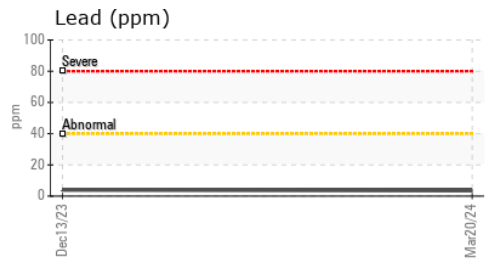
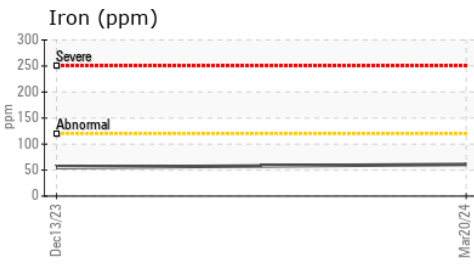
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	● 12.3	● 11.2	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : TR06136948 **Received** : 02 Apr 2024
Lab Number : 06136948 **Tested** : 03 Apr 2024
Unique Number : 10956413 **Diagnosed** : 05 Apr 2024 - Don Baldrige
Test Package : MOB 2 (Additional Tests: FuelDilution)

NORTHWEST REFUSE SERVICE
 2001 WINDSOR AVE
 BALTIMORE, MD
 US 21217
 Contact: JASON

To discuss this sample report, contact Customer Service at 1-800-827-0711.

* - 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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