



WEAR	NORMAL
CONTAMINATION	ABNORMAL
FLUID CONDITION	ABNORMAL



Area
(BD33438)
Machine Id
413098 MACK GU813
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. 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		GFL0115210	GFL0110981	---
Sample Date		Client Info		17 Jun 2024	10 Apr 2024	---
Machine Age	hrs	Client Info		3053	2576	---
Oil Age	hrs	Client Info		17	16	---
Filter Age	hrs	Client Info		17	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	Changed	---
Sample Status				ABNORMAL	NORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	10	2	---
Chromium	ppm	ASTM D5185m	>20	<1	0	---
Nickel	ppm	ASTM D5185m	>15	<1	0	---
Titanium	ppm	ASTM D5185m	>2	<1	<1	---
Silver	ppm	ASTM D5185m	>3	<1	0	---
Aluminum	ppm	ASTM D5185m	>20	2	2	---
Lead	ppm	ASTM D5185m	>40	<1	0	---
Copper	ppm	ASTM D5185m	>330	13	3	---
Tin	ppm	ASTM D5185m	>15	<1	0	---
Vanadium	ppm	ASTM D5185m		0	0	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

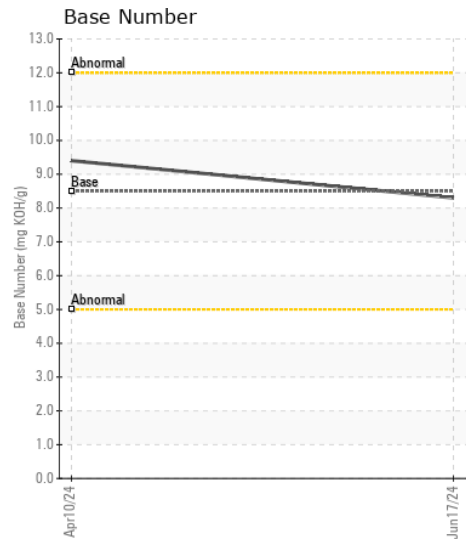
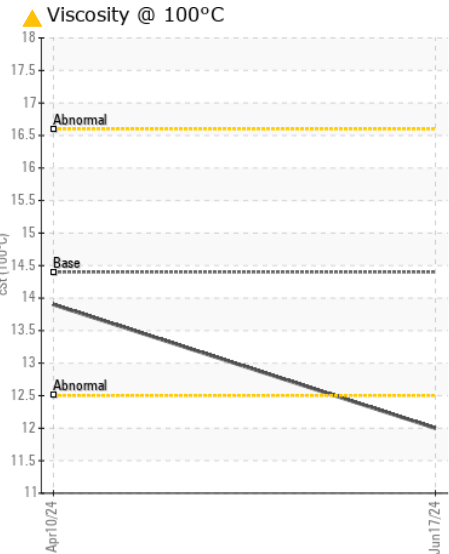
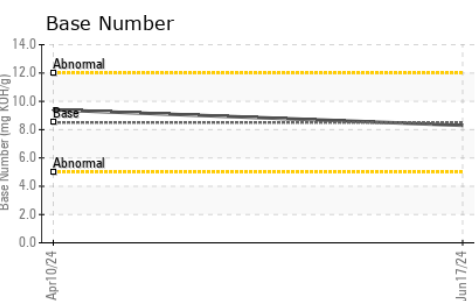
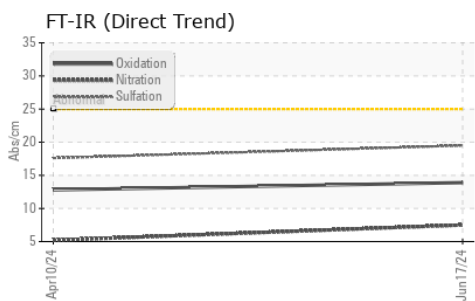
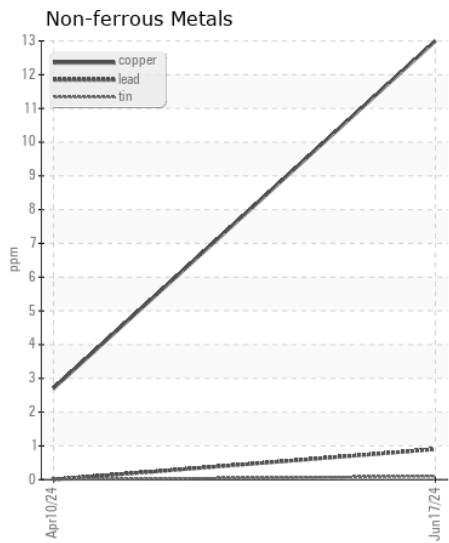
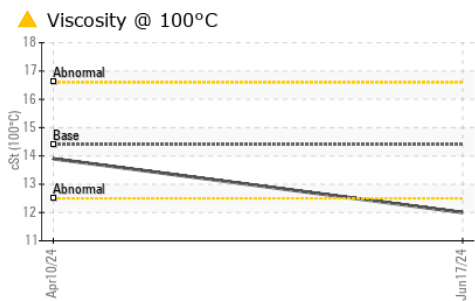
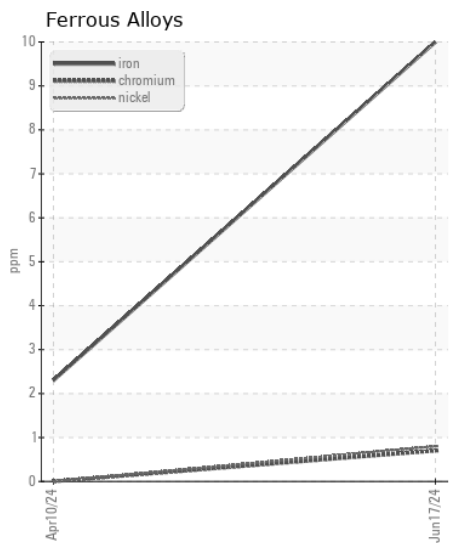
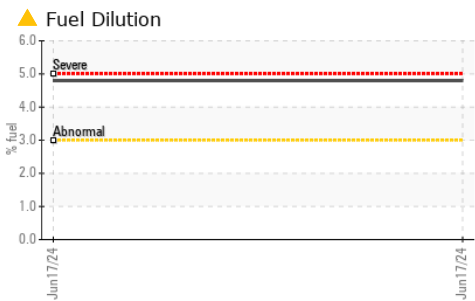
There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

Silicon	ppm	ASTM D5185m	>25	4	5	---
Potassium	ppm	ASTM D5185m	>20	2	2	---
Fuel	%	ASTM D3524	>3.0	▲ 4.8	<1.0	---
Water		WC Method	>0.2	NEG	NEG	---
Glycol		WC Method		NEG	NEG	---
Soot %	%	*ASTM D7844	>4	0.8	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	7.5	5.2	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	19.5	17.6	---
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. 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	>158	<1	1	---
Boron	ppm	ASTM D5185m	250	10	14	---
Barium	ppm	ASTM D5185m	10	0	0	---
Molybdenum	ppm	ASTM D5185m	100	53	51	---
Manganese	ppm	ASTM D5185m		0	<1	---
Magnesium	ppm	ASTM D5185m	450	820	834	---
Calcium	ppm	ASTM D5185m	3000	1054	1036	---
Phosphorus	ppm	ASTM D5185m	1150	939	999	---
Zinc	ppm	ASTM D5185m	1350	1155	1175	---
Sulfur	ppm	ASTM D5185m	4250	2747	3780	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.9	12.8	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.3	9.4	---
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 12.0	13.9	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115210 **Received** : 20 Jun 2024
Lab Number : 06216462 **Tested** : 25 Jun 2024
Unique Number : 11089326 **Diagnosed** : 25 Jun 2024 - Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 642B- MCM Disposal
 10450 Pease Ave
 Byron Center, MI
 US 49315
 Contact: Joshua VanVolkinburg

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)

T:
F: