



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL



Area
(BD70517) {UNASSIGNED}
Machine Id
814037 MACK LR64R
Component
Diesel Engine
Fluid
TIER ONE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0115277	GFL0115303	GFL0115296
Sample Date		Client Info		17 Jun 2024	20 May 2024	01 May 2024
Machine Age	hrs	Client Info		1675	1473	1342
Oil Age	hrs	Client Info		4	14	27
Filter Age	hrs	Client Info		4	14	27
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	ATTENTION

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	15	10	32
Chromium	ppm	ASTM D5185m	>20	<1	<1	3
Nickel	ppm	ASTM D5185m	>5	3	2	<1
Titanium	ppm	ASTM D5185m	>2	<1	<1	<1
Silver	ppm	ASTM D5185m	>2	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	<1	1	4
Copper	ppm	ASTM D5185m	>330	46	56	30
Tin	ppm	ASTM D5185m	>15	<1	<1	2
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

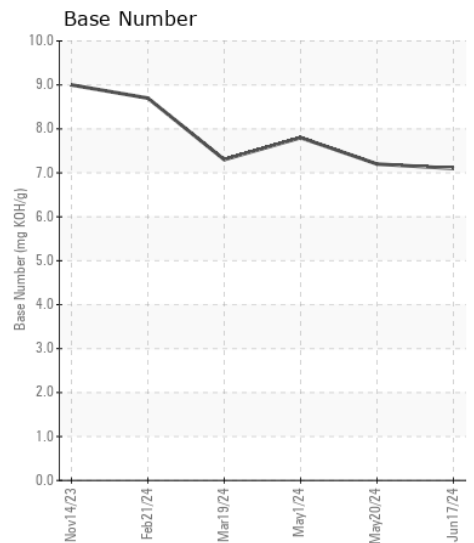
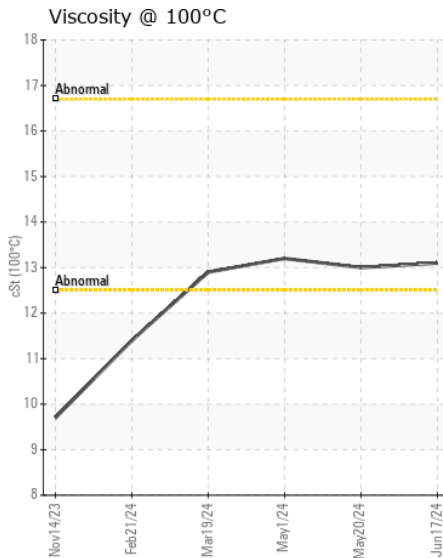
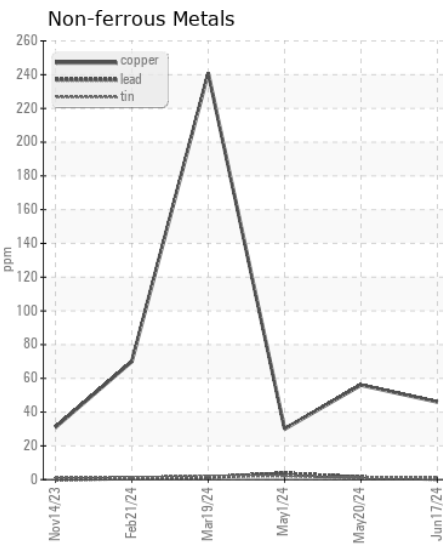
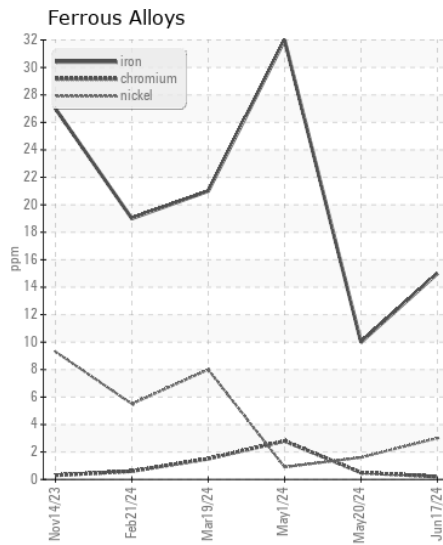
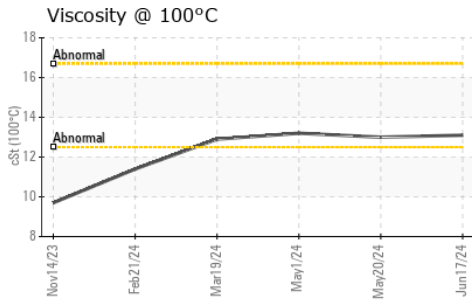
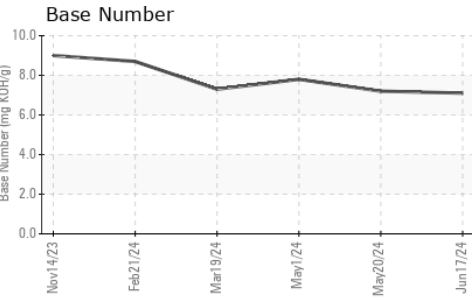
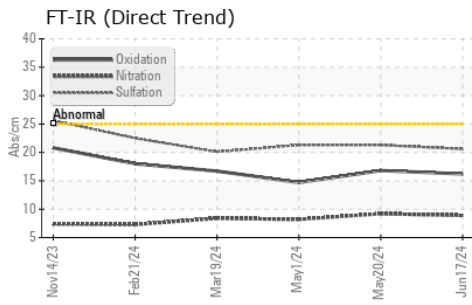
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	6	6	7
Potassium	ppm	ASTM D5185m	>20	3	2	9
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.6	0.6	1.3
Nitration	Abs/cm	*ASTM D7624	>20	8.9	9.2	8.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.6	21.3	21.3
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. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		2	<1	136
Boron	ppm	ASTM D5185m		12	6	2
Barium	ppm	ASTM D5185m		0	<1	0
Molybdenum	ppm	ASTM D5185m		60	55	60
Manganese	ppm	ASTM D5185m		1	<1	1
Magnesium	ppm	ASTM D5185m		929	821	923
Calcium	ppm	ASTM D5185m		1151	1063	1313
Phosphorus	ppm	ASTM D5185m		1050	1026	1120
Zinc	ppm	ASTM D5185m		1291	1182	1349
Sulfur	ppm	ASTM D5185m		3083	3003	3831
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.2	16.8	14.7
Base Number (BN)	mg KOH/g	ASTM D2896		7.1	7.2	7.8
Visc @ 100°C	cSt	ASTM D445		13.1	13.0	13.2



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0115277
Lab Number : 06217563
Unique Number : 11090427
Test Package : FLEET

Received : 21 Jun 2024
Tested : 24 Jun 2024
Diagnosed : 24 Jun 2024 - Wes Davis

GFL Environmental - 642- Grand Rapids Hauling
 5826 Alden Nash Ave SE
 Lowell, MI
 US 49331

Contact: Chad Crosby
 ccrosby@gflenv.com

T: (616)299-8425

F:

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)