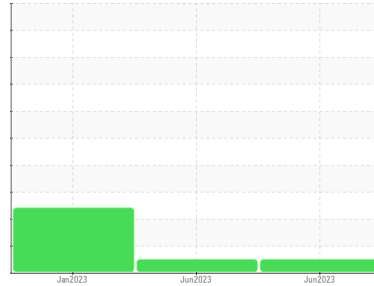




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
MACK 813005

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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.

SAMPLE INFORMATION

	method	limit/base	current	history 1	history 2
Sample Number	Client Info		GFL0057564	GFL0086244	GFL0057582
Sample Date	Client Info		23 Jun 2023	14 Jun 2023	12 Jan 2023
Machine Age	hrs	Client Info	2205	425	425
Oil Age	hrs	Client Info	2205	2180	425
Oil Changed	Client Info		N/A	N/A	N/A
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history 1	history 2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m >120	40	38	82
Chromium	ppm	ASTM D5185m >20	1	2	2
Nickel	ppm	ASTM D5185m >5	11	11	▲ 26
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	<1	<1	<1
Aluminum	ppm	ASTM D5185m >20	<1	0	6
Lead	ppm	ASTM D5185m >40	0	2	4
Copper	ppm	ASTM D5185m >330	28	28	239
Tin	ppm	ASTM D5185m >15	2	3	7
Vanadium	ppm	ASTM D5185m	0	0	<1
Cadmium	ppm	ASTM D5185m	0	<1	0

ADDITIVES

	method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m 250	5	6	41
Barium	ppm	ASTM D5185m 10	14	4	0
Molybdenum	ppm	ASTM D5185m 100	71	67	107
Manganese	ppm	ASTM D5185m	1	2	6
Magnesium	ppm	ASTM D5185m 450	875	859	696
Calcium	ppm	ASTM D5185m 3000	1187	1142	1510
Phosphorus	ppm	ASTM D5185m 1150	887	879	678
Zinc	ppm	ASTM D5185m 1350	1232	1161	834
Sulfur	ppm	ASTM D5185m 4250	2719	2551	2062

CONTAMINANTS

	method	limit/base	current	history 1	history 2
Silicon	ppm	ASTM D5185m >25	7	9	▲ 53
Sodium	ppm	ASTM D5185m >216	3	3	3
Potassium	ppm	ASTM D5185m >20	2	2	5

INFRA-RED

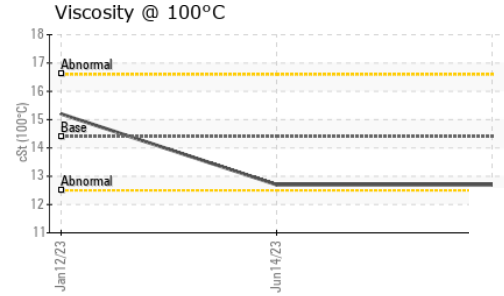
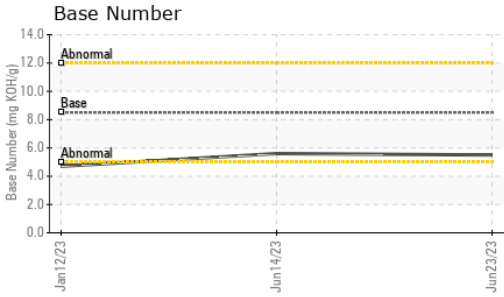
	method	limit/base	current	history 1	history 2
Soot %	%	*ASTM D7844 >4	1.1	1	1.3
Nitration	Abs/cm	*ASTM D7624 >20	10.4	10.0	13.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	22.4	22.0	25.4

FLUID DEGRADATION

	method	limit/base	current	history 1	history 2
Oxidation	Abs/.1mm	*ASTM D7414 >25	18.0	17.7	26.1
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	5.5	5.6	4.7



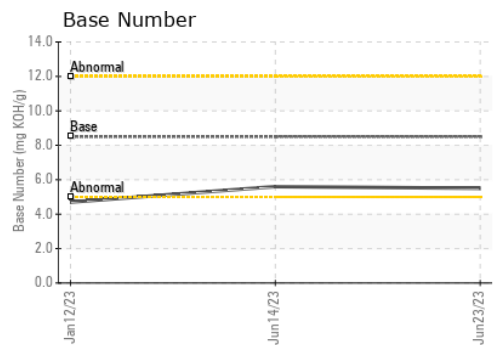
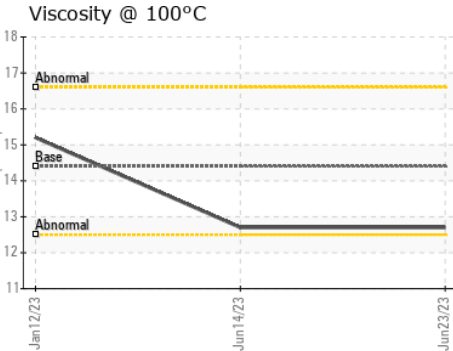
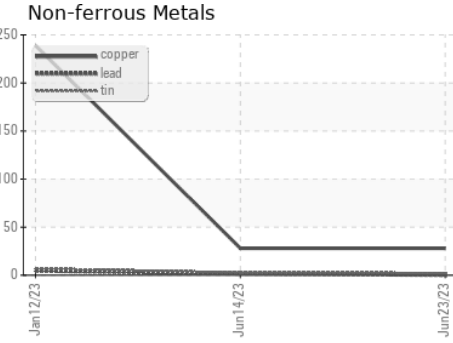
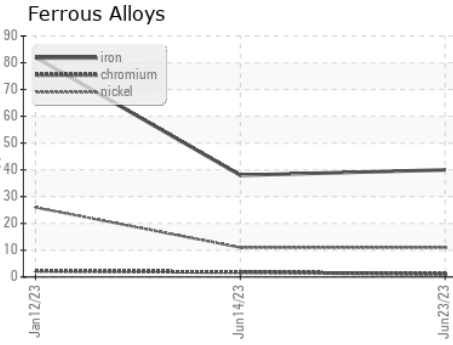
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history 1	history 2	
Visc @ 100°C	cSt	ASTM D445	14.4	12.7	12.7	15.2

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0057564 **Received** : 30 Jun 2023
Lab Number : **05887659** **Diagnosed** : 02 Jul 2023
Unique Number : 10538142 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 009 - Fairburn
 6905 Roosevelt Hwy
 Fairburn, GA
 US 30213
 Contact: Eric Jones
 erjones@gflenv.com
 T: (678)630-9927
 F:

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)