



OIL ANALYSIS REPORT

Sample Rating Trend

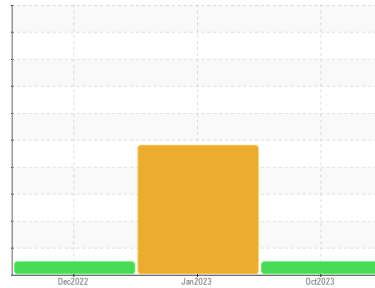
NORMAL



Machine Id
MACK 423086

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)



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 BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type. The condition of the oil is suitable for further service.

SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		GFL0083724	GFL0064521	GFL0064541
Sample Date	Client Info		02 Oct 2023	23 Jan 2023	21 Dec 2022
Machine Age	mls	Client Info	0	445685	0
Oil Age	mls	Client Info	0	0	200
Oil Changed	Client Info		N/A	Changed	Not Chngd
Sample Status			NORMAL	SEVERE	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	3	6	3
Chromium	ppm	ASTM D5185m >20	<1	0	0
Nickel	ppm	ASTM D5185m >5	<1	0	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	11	0	1
Lead	ppm	ASTM D5185m >40	<1	0	0
Copper	ppm	ASTM D5185m >330	<1	<1	<1
Tin	ppm	ASTM D5185m >15	<1	0	<1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	8	23	18
Barium	ppm	ASTM D5185m 10	0	0	0
Molybdenum	ppm	ASTM D5185m 100	70	75	70
Manganese	ppm	ASTM D5185m	<1	0	<1
Magnesium	ppm	ASTM D5185m 450	1059	786	820
Calcium	ppm	ASTM D5185m 3000	1167	1247	1305
Phosphorus	ppm	ASTM D5185m 1150	1130	966	994
Zinc	ppm	ASTM D5185m 1350	1410	1151	1169
Sulfur	ppm	ASTM D5185m 4250	4148	2860	4038

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	2	121	<1
Sodium	ppm	ASTM D5185m >158	1	<1	<1
Potassium	ppm	ASTM D5185m >20	<1	2	1

INFRA-RED

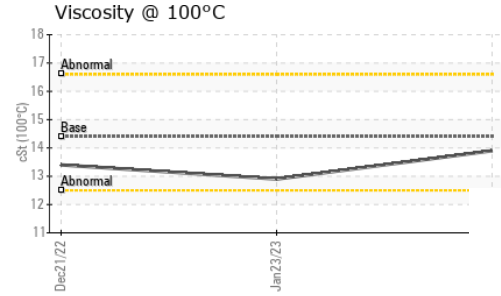
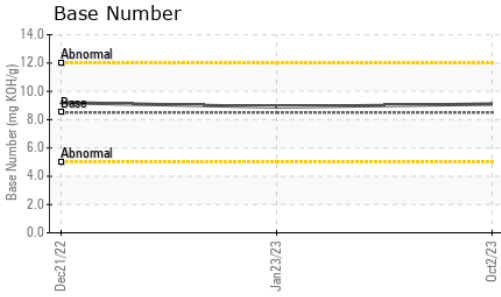
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.1	0.3	0.1
Nitration	Abs/cm	*ASTM D7624 >20	5.4	8.0	6.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	17.0	18.1	19

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.0	13.9	14.4
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	9.1	8.9	9.2



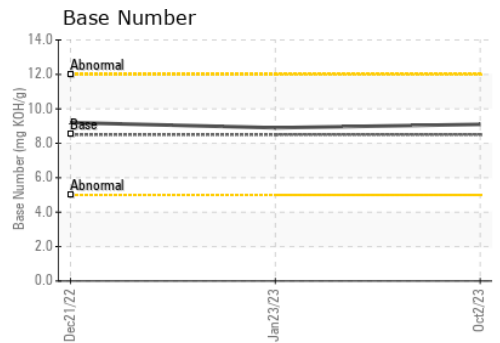
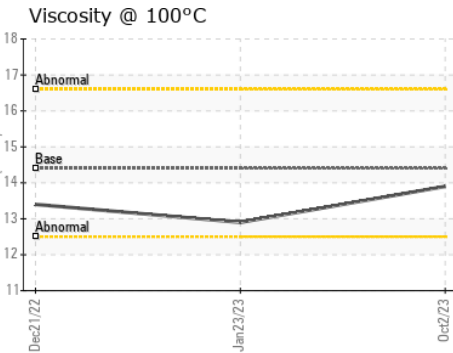
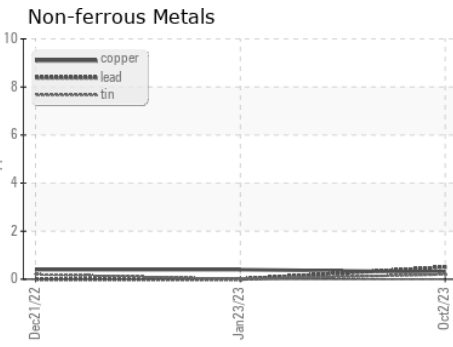
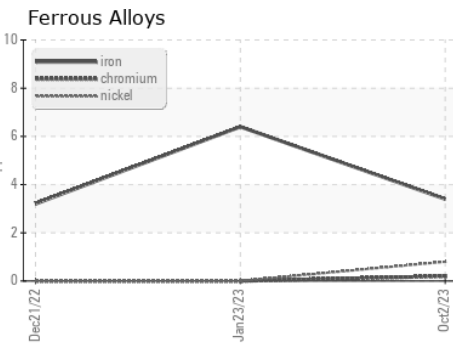
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
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	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	13.9	12.9

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0083724 Received : 06 Oct 2023
 Lab Number : 05972135 Diagnosed : 11 Oct 2023
 Unique Number : 10684085 Diagnostician : Sean Felton
 Test Package : FLEET

GFL Environmental - 842 - Lewisport Hauling
 4995 US Highway 60 West
 Lewisport, KY
 US 42351
 Contact: AUSTIN FRALIEUX
 afraliex@gflenv.com
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 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)