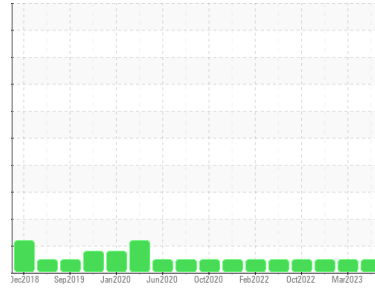




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
728060-362002

Component
Diesel Engine
Fluid
MFA 15W40 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

Metal levels are typical for a new component breaking in.

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	history1	history2
Sample Number	Client Info		GFL0046114	GFL0039530	GFL0039518
Sample Date	Client Info		13 Sep 2023	09 Mar 2023	17 Nov 2022
Machine Age	hrs	Client Info	600	450	200
Oil Age	hrs	Client Info	0	450	200
Oil Changed	Client Info		Changed	Changed	Not Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>5	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	59	38	12
Chromium	ppm	ASTM D5185m >20	3	1	<1
Nickel	ppm	ASTM D5185m >4	0	<1	0
Titanium	ppm	ASTM D5185m	0	0	0
Silver	ppm	ASTM D5185m >3	0	0	<1
Aluminum	ppm	ASTM D5185m >20	7	9	2
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	2	2	<1
Tin	ppm	ASTM D5185m >15	<1	<1	<1
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	4	3	9
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	67	69	60
Manganese	ppm	ASTM D5185m	1	<1	<1
Magnesium	ppm	ASTM D5185m	926	831	852
Calcium	ppm	ASTM D5185m	1254	1248	1168
Phosphorus	ppm	ASTM D5185m	1038	1035	1021
Zinc	ppm	ASTM D5185m	1331	1274	1244
Sulfur	ppm	ASTM D5185m	3711	2952	3452

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	6	6	3
Sodium	ppm	ASTM D5185m	7	4	2
Potassium	ppm	ASTM D5185m >20	<1	2	0

INFRA-RED

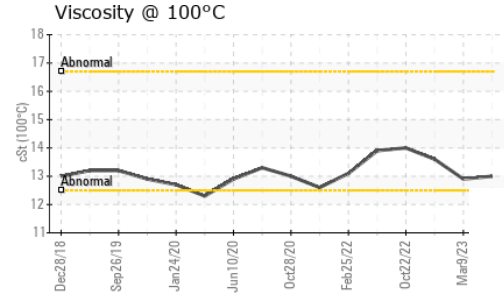
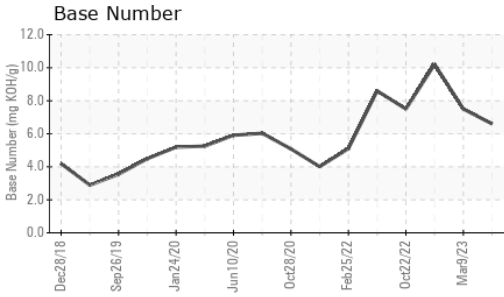
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	1.2	1.4	0.5
Nitration	Abs/cm	*ASTM D7624 >20	11.6	11.3	7.4
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.9	22.7	20.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	19.7	17.7	14.8
Base Number (BN)	mg KOH/g	ASTM D2896	6.6	7.5	10.2



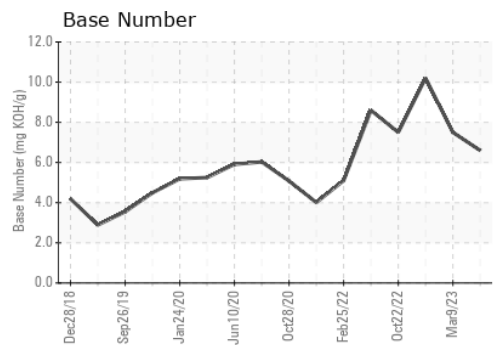
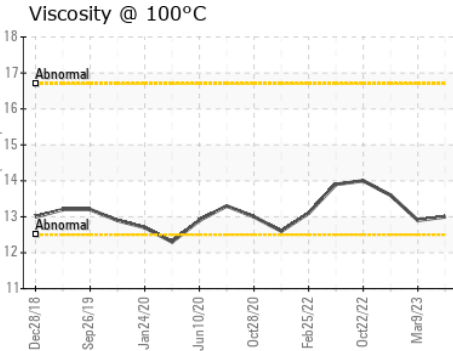
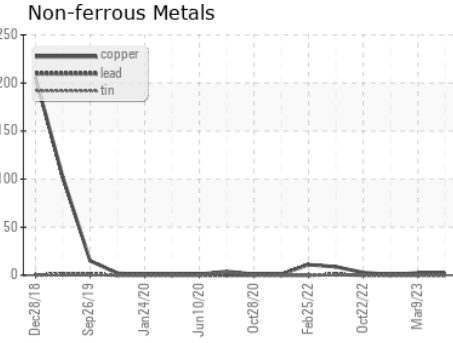
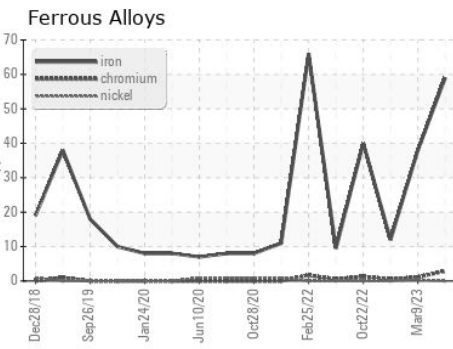
OIL ANALYSIS REPORT



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	13.0	12.9	13.6

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0046114
 Lab Number : 05958430
 Unique Number : 10659643
 Test Package : FLEET

GFL Environmental - 834 - Chillicothe Hauling
 201 Mitchell Road
 Chillicothe, MO
 US 64601
 Contact: Terry McKiddy
 tmckiddy@gflenv.com
 T: (816)225-6699
 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)