



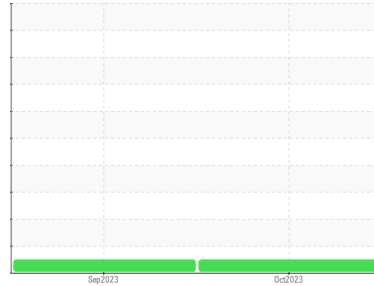
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
413022
Component
Diesel Engine
Fluid
NOT GIVEN (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

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	history1	history2
Sample Number	Client Info		GFL0092952	GFL0092936	---
Sample Date	Client Info		27 Oct 2023	11 Sep 2023	---
Machine Age	hrs	Client Info	1335	1043	---
Oil Age	hrs	Client Info	1043	0	---
Oil Changed	Client Info		N/A	N/A	---
Sample Status			NORMAL	NORMAL	---

CONTAMINATION

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

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	10	5	---
Chromium	ppm	ASTM D5185m >20	<1	<1	---
Nickel	ppm	ASTM D5185m >5	<1	<1	---
Titanium	ppm	ASTM D5185m >2	<1	<1	---
Silver	ppm	ASTM D5185m >2	<1	<1	---
Aluminum	ppm	ASTM D5185m >20	7	2	---
Lead	ppm	ASTM D5185m >40	0	<1	---
Copper	ppm	ASTM D5185m >330	3	2	---
Tin	ppm	ASTM D5185m >15	<1	1	---
Vanadium	ppm	ASTM D5185m	<1	0	---
Cadmium	ppm	ASTM D5185m	<1	<1	---

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	3	5	---
Barium	ppm	ASTM D5185m	<1	44	---
Molybdenum	ppm	ASTM D5185m	65	55	---
Manganese	ppm	ASTM D5185m	0	1	---
Magnesium	ppm	ASTM D5185m	980	863	---
Calcium	ppm	ASTM D5185m	1104	991	---
Phosphorus	ppm	ASTM D5185m	1065	919	---
Zinc	ppm	ASTM D5185m	1284	1126	---
Sulfur	ppm	ASTM D5185m	3550	3244	---

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	7	8	---
Sodium	ppm	ASTM D5185m	7	4	---
Potassium	ppm	ASTM D5185m >20	16	8	---

INFRA-RED

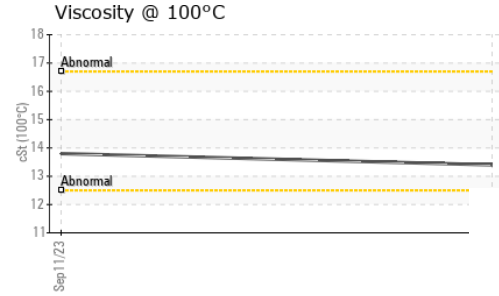
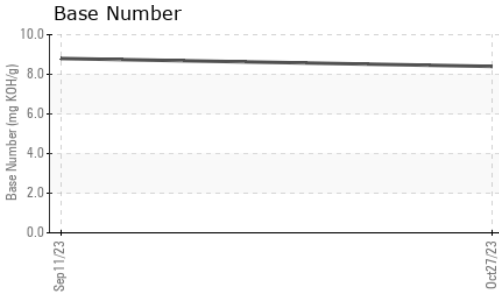
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.3	0.2	---
Nitration	Abs/cm	*ASTM D7624 >20	7.1	5.3	---
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.6	17.2	---

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	14.2	12.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.4	8.8	---



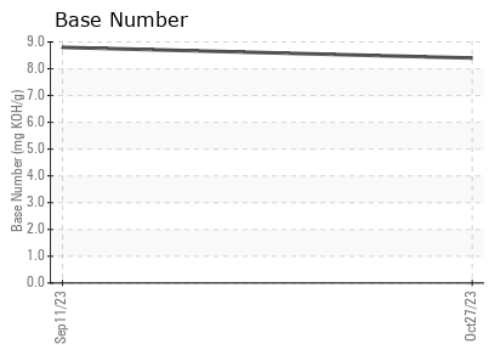
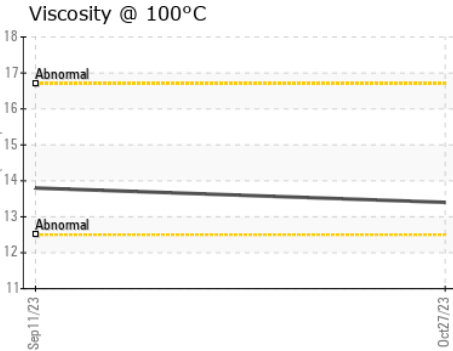
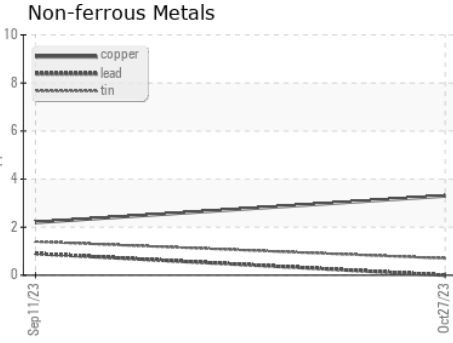
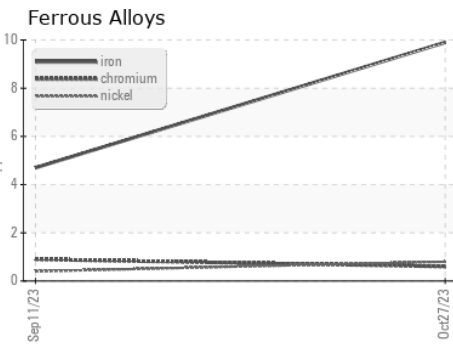
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	13.4	13.8	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0092952 **Received** : 01 Nov 2023
Lab Number : **05995399** **Diagnosed** : 02 Nov 2023
Unique Number : 10723759 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 463 - Cheboygan
 501 N. Western Ave
 Cheboygan, MI
 US 49721
 Contact: GARY BREWER

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)

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F: