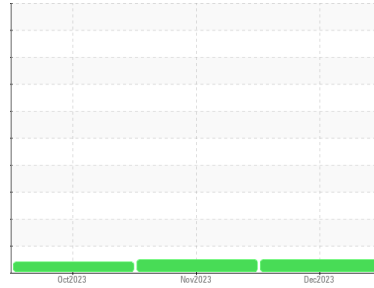




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
414049
 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		GFL0103002	GFL0090968	GFL0098815
Sample Date	Client Info		14 Dec 2023	17 Nov 2023	25 Oct 2023
Machine Age	hrs	Client Info	436	289	144
Oil Age	hrs	Client Info	0	145	144
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	ABNORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	26	24	20
Chromium	ppm	ASTM D5185m >20	1	<1	<1
Nickel	ppm	ASTM D5185m >4	2	1	2
Titanium	ppm	ASTM D5185m	<1	<1	<1
Silver	ppm	ASTM D5185m >3	<1	<1	<1
Aluminum	ppm	ASTM D5185m >20	20	20	16
Lead	ppm	ASTM D5185m >40	3	2	<1
Copper	ppm	ASTM D5185m >330	180	156	73
Tin	ppm	ASTM D5185m >15	2	2	2
Vanadium	ppm	ASTM D5185m	<1	0	0
Cadmium	ppm	ASTM D5185m	0	0	<1

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	164	254	402
Barium	ppm	ASTM D5185m	0	0	0
Molybdenum	ppm	ASTM D5185m	107	114	121
Manganese	ppm	ASTM D5185m	3	4	3
Magnesium	ppm	ASTM D5185m	716	654	626
Calcium	ppm	ASTM D5185m	1322	1433	1349
Phosphorus	ppm	ASTM D5185m	722	643	721
Zinc	ppm	ASTM D5185m	912	823	826
Sulfur	ppm	ASTM D5185m	2393	2236	2808

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	54	67	74
Sodium	ppm	ASTM D5185m	16	5	3
Potassium	ppm	ASTM D5185m >20	45	42	32
Fuel	%	ASTM D3524 >5	<1.0	<1.0	0.2
Glycol	%	*ASTM D2982	NEG	NEG	NEG

INFRA-RED

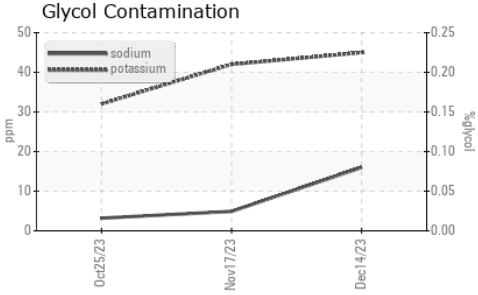
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	0.3	0.2	0.1
Nitration	Abs/cm	*ASTM D7624 >20	9.1	8.5	6.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	23.7	25.5	25.2

FLUID DEGRADATION

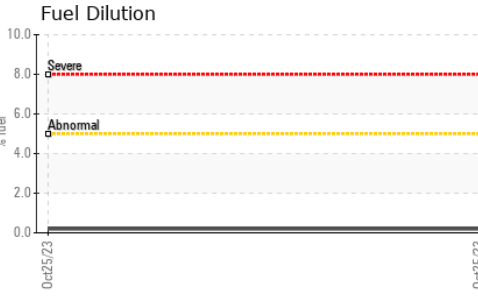
	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	21.3	22.2	20.2
Base Number (BN)	mg KOH/g	ASTM D2896	7.7	8.8	8.8



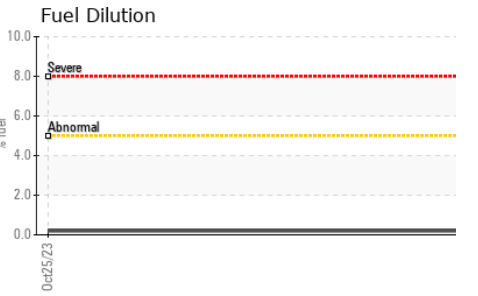
OIL ANALYSIS REPORT



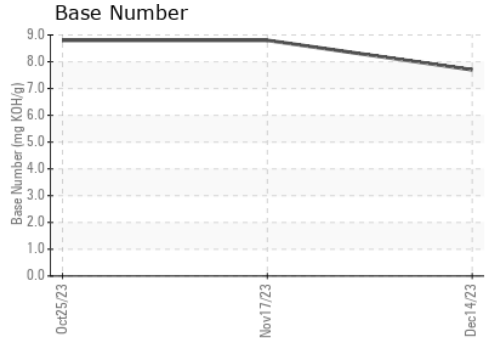
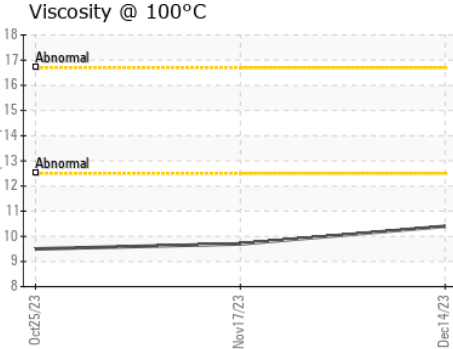
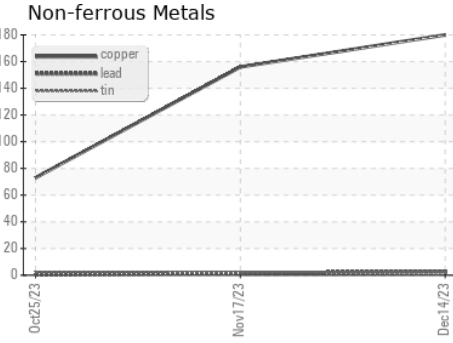
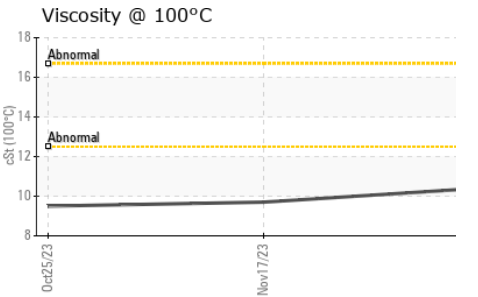
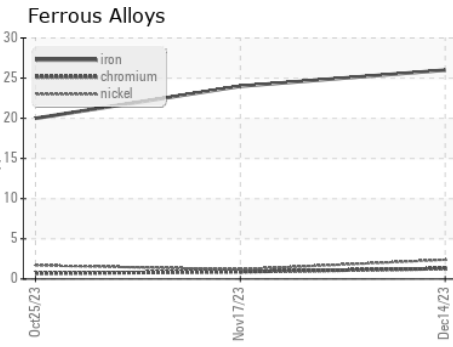
VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	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	10.4	9.7	▲ 9.5



GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103002 **Received** : 19 Dec 2023
Lab Number : 06039902 **Diagnosed** : 21 Dec 2023
Unique Number : 10795131 **Diagnostician** : Don Baldrige
Test Package : FLEET (Additional Tests: FuelDilution, Glycol)

GFL Environmental - 814 - Little Rock Hauling
 4005 Hwy 161 N.
 Little Rock, AR
 US 72117
 Contact: Brad Manager

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)

T:
F: