



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
814023
 Component
Diesel Engine
 Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

▲ Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Wear

Metal levels are typical for a new component breaking in.

▲ Contamination

Elemental level of silicon (Si) above normal indicating ingress of seal material.

Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is acceptable for the time in service.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0103013	GFL0103032	---
Sample Date	Client Info	18 Dec 2023	29 Nov 2023	---
Machine Age	hrs	258	141	---
Oil Age	hrs	117	141	---
Oil Changed	Client Info	Changed	Changed	---
Sample Status		ABNORMAL	ABNORMAL	---

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	16	12	---
Chromium	ppm ASTM D5185m >20	<1	<1	---
Nickel	ppm ASTM D5185m >4	3	4	---
Titanium	ppm ASTM D5185m	<1	0	---
Silver	ppm ASTM D5185m >3	<1	0	---
Aluminum	ppm ASTM D5185m >20	6	4	---
Lead	ppm ASTM D5185m >40	0	<1	---
Copper	ppm ASTM D5185m >330	17	12	---
Tin	ppm ASTM D5185m >15	2	3	---
Vanadium	ppm ASTM D5185m	<1	<1	---
Cadmium	ppm ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	353	374	---
Barium	ppm ASTM D5185m	<1	<1	---
Molybdenum	ppm ASTM D5185m	119	103	---
Manganese	ppm ASTM D5185m	4	3	---
Magnesium	ppm ASTM D5185m	701	648	---
Calcium	ppm ASTM D5185m	1391	1371	---
Phosphorus	ppm ASTM D5185m	721	644	---
Zinc	ppm ASTM D5185m	836	766	---
Sulfur	ppm ASTM D5185m	2399	1963	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	▲ 79	▲ 79	---
Sodium	ppm ASTM D5185m	4	2	---
Potassium	ppm ASTM D5185m >20	4	4	---
Fuel	% ASTM D3524 >5	<1.0	0.4	---

INFRA-RED

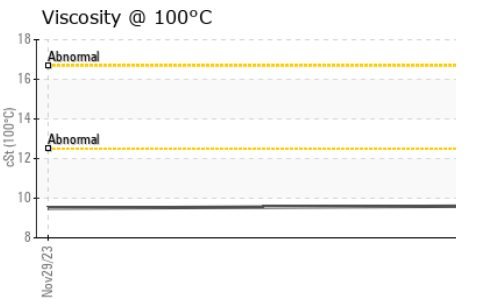
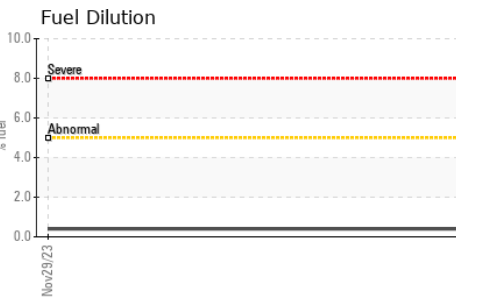
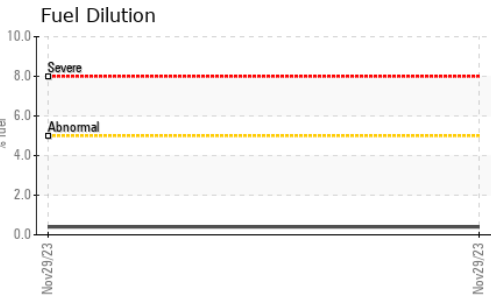
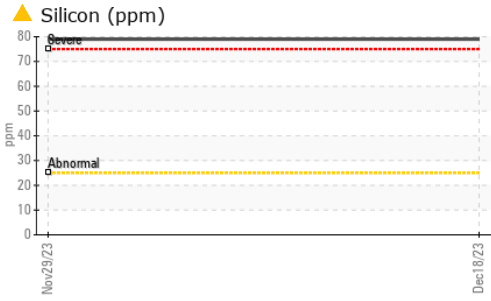
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.2	0.1	---
Nitration	Abs/cm *ASTM D7624 >20	7.5	6.5	---
Sulfation	Abs/.1mm *ASTM D7415 >30	25.9	25.8	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	21.1	20.5	---
Base Number (BN)	mg KOH/g ASTM D2896	9.1	9.6	---



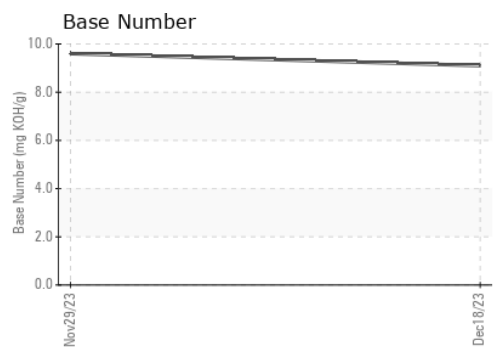
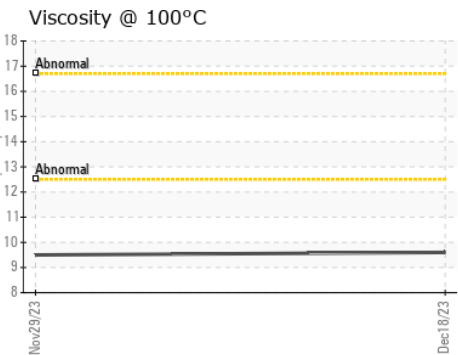
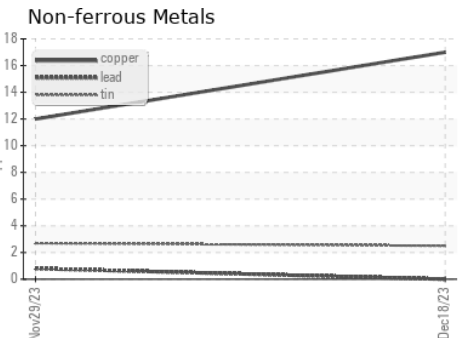
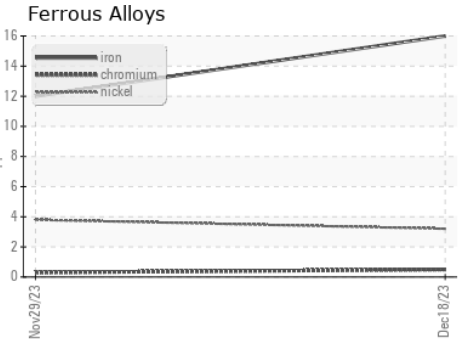
OIL ANALYSIS REPORT



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	9.6	9.5	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0103013 **Received** : 22 Dec 2023
Lab Number : **06043766** **Diagnosed** : 27 Dec 2023
Unique Number : 10804374 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution)

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)

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