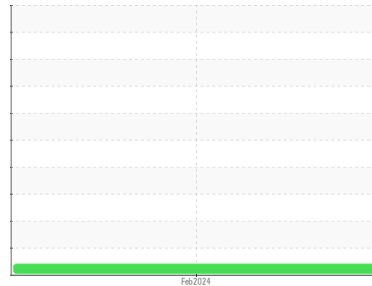




OIL ANALYSIS REPORT

Sample Rating Trend



VISCOSITY



Machine Id
351148

Component
Diesel Engine

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

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

Fuel content negligible. There is no indication of any contamination in the oil.

Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

SAMPLE INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0110185	---	---
Sample Date	Client Info	28 Feb 2024	---	---
Machine Age	mls Client Info	178114	---	---
Oil Age	mls Client Info	5000	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		ATTENTION	---	---

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >120	23	---	---
Chromium	ppm ASTM D5185m >20	<1	---	---
Nickel	ppm ASTM D5185m >5	2	---	---
Titanium	ppm ASTM D5185m >2	0	---	---
Silver	ppm ASTM D5185m >2	0	---	---
Aluminum	ppm ASTM D5185m >20	5	---	---
Lead	ppm ASTM D5185m >40	18	---	---
Copper	ppm ASTM D5185m >330	9	---	---
Tin	ppm ASTM D5185m >15	<1	---	---
Vanadium	ppm ASTM D5185m	0	---	---
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 250	19	---	---
Barium	ppm ASTM D5185m 10	0	---	---
Molybdenum	ppm ASTM D5185m 100	56	---	---
Manganese	ppm ASTM D5185m	<1	---	---
Magnesium	ppm ASTM D5185m 450	879	---	---
Calcium	ppm ASTM D5185m 3000	1048	---	---
Phosphorus	ppm ASTM D5185m 1150	832	---	---
Zinc	ppm ASTM D5185m 1350	979	---	---
Sulfur	ppm ASTM D5185m 4250	2754	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	15	---	---
Sodium	ppm ASTM D5185m >158	3	---	---
Potassium	ppm ASTM D5185m >20	3	---	---
Fuel	% ASTM D3524 >3.0	0.9	---	---

INFRA-RED

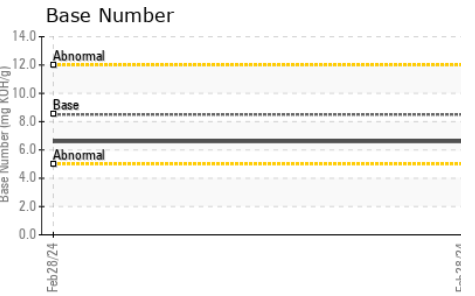
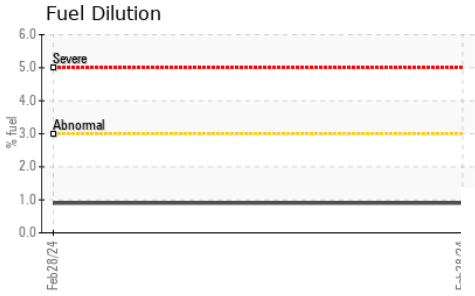
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	0.2	---	---
Nitration	Abs/cm *ASTM D7624 >20	9.5	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	21.5	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	16.6	---	---
Base Number (BN)	mg KOH/g ASTM D2896 8.5	6.6	---	---



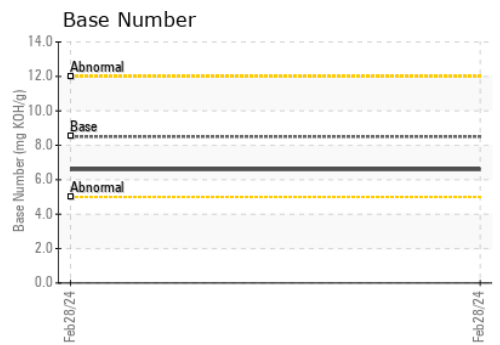
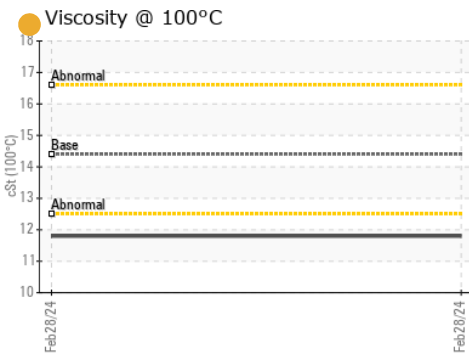
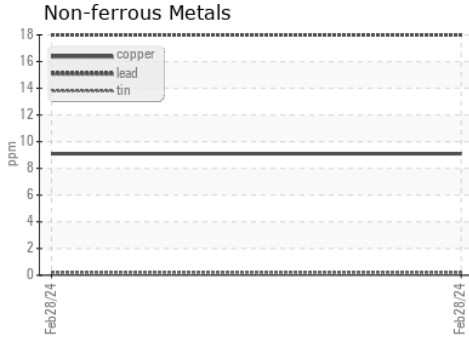
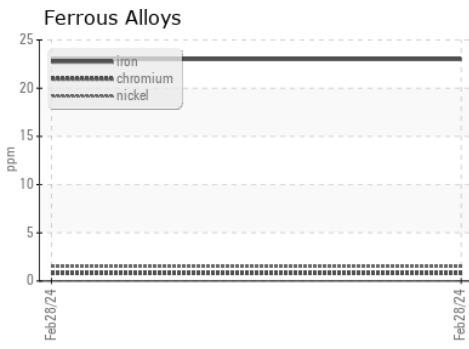
OIL ANALYSIS REPORT



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	14.4	● 11.8	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110185 **Received** : 05 Mar 2024
Lab Number : 06109313 **Tested** : 10 Mar 2024
Unique Number : 10912810 **Diagnosed** : 10 Mar 2024 - Doug Bogart
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 660 - Lynchburg Hauling
 2410 Mayflower Drive
 Lynchburg, VA
 US 24501
 Contact: Delbert Beasley
 dbeasley@countyclecycling.net
 T: (434)665-5998
 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)