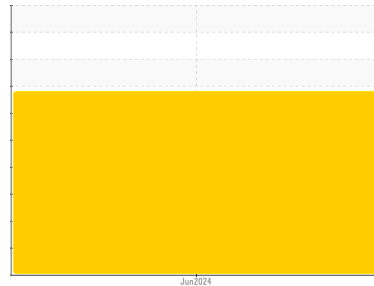




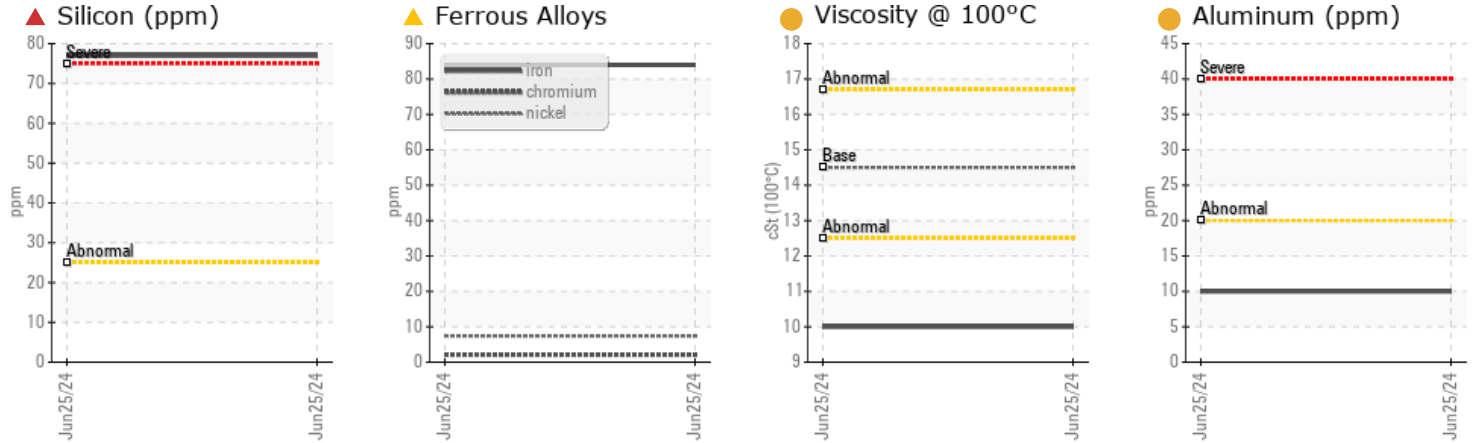
PROBLEM SUMMARY

Sample Rating Trend



Machine Id
914073
 Component
Front Diesel Engine
 Fluid
SAE 15W40 (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS

Sample Status				SEVERE	---	---
Nickel	ppm	ASTM D5185m	>4	▲ 7	---	---
Silicon	ppm	ASTM D5185m	>25	▲ 77	---	---

Customer Id: GFL413
 Sample No.: GFL0093096
 Lab Number: 06229814
 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data:
 Jonathan Hester +1 919-379-4092 x4092
jhester@wearcheckusa.com

To change component or sample information:
 Customer Service +1 1-800-237-1369
customerservice@wearcheck.com

RECOMMENDED ACTIONS

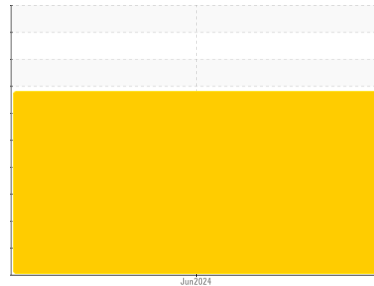
Action	Status	Date	Done By	Description
Change Fluid	---	---	?	Oil and filter change at the time of sampling has been noted.
Change Filter	---	---	?	Oil and filter change at the time of sampling has been noted.
Resample	---	---	?	We recommend an early resample to monitor this condition.
Check Dirt Access	---	---	?	We advise that you check the air filter, air induction system, and any areas where dirt may enter the component.

HISTORICAL DIAGNOSIS



OIL ANALYSIS REPORT

Sample Rating Trend



DIRT



Machine Id
914073
 Component
Front Diesel Engine
 Fluid
SAE 15W40 (--- GAL)

DIAGNOSIS

▲ Recommendation

We advise that you check the air filter, air induction system, and any areas where dirt may enter the component. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

▲ Wear

Valve wear is indicated.

▲ Contamination

Fuel content negligible. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress.

● 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	GFL0093096	---	---
Sample Date	Client Info	25 Jun 2024	---	---
Machine Age	hrs Client Info	22193	---	---
Oil Age	hrs Client Info	0	---	---
Oil Changed	Client Info	Changed	---	---
Sample Status		SEVERE	---	---

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 >100	84	---	---
Chromium	ppm ASTM D5185m >20	2	---	---
Nickel	ppm ASTM D5185m >4	▲ 7	---	---
Titanium	ppm ASTM D5185m	0	---	---
Silver	ppm ASTM D5185m >3	<1	---	---
Aluminum	ppm ASTM D5185m >20	● 10	---	---
Lead	ppm ASTM D5185m >40	<1	---	---
Copper	ppm ASTM D5185m >330	219	---	---
Tin	ppm ASTM D5185m >15	5	---	---
Vanadium	ppm ASTM D5185m	0	---	---
Cadmium	ppm ASTM D5185m	0	---	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	58	---	---
Barium	ppm ASTM D5185m	0	---	---
Molybdenum	ppm ASTM D5185m	125	---	---
Manganese	ppm ASTM D5185m	6	---	---
Magnesium	ppm ASTM D5185m	657	---	---
Calcium	ppm ASTM D5185m	1506	---	---
Phosphorus	ppm ASTM D5185m	671	---	---
Zinc	ppm ASTM D5185m	801	---	---
Sulfur	ppm ASTM D5185m	2270	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	▲ 77	---	---
Sodium	ppm ASTM D5185m >57	4	---	---
Potassium	ppm ASTM D5185m >20	18	---	---
Fuel	% ASTM D3524 >5	0.2	---	---

INFRA-RED

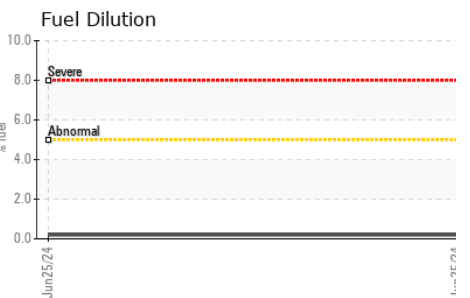
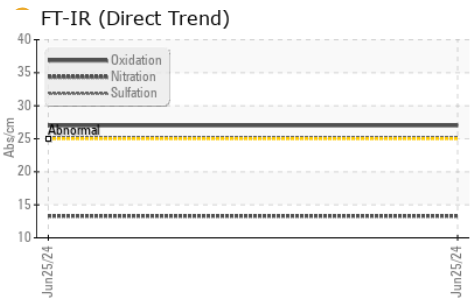
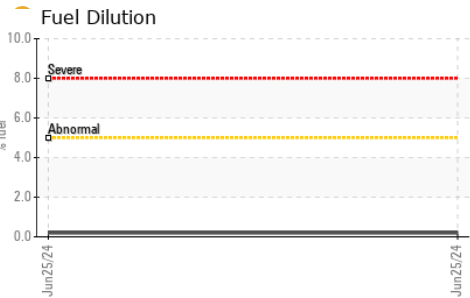
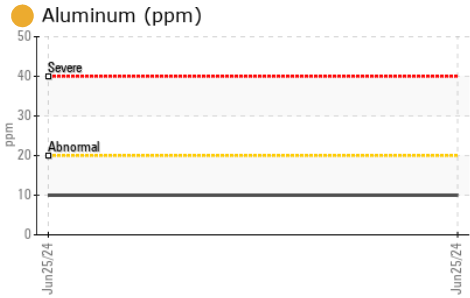
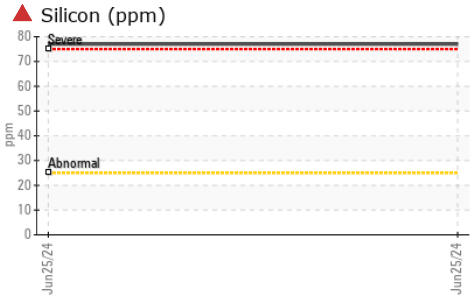
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	1	---	---
Nitration	Abs/cm *ASTM D7624 >20	13.3	---	---
Sulfation	Abs/.1mm *ASTM D7415 >30	25.1	---	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	27.0	---	---
Base Number (BN)	mg KOH/g ASTM D2896	5.3	---	---



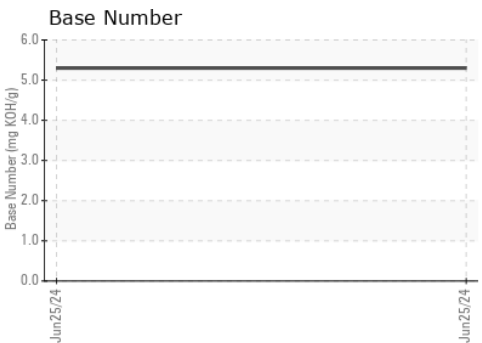
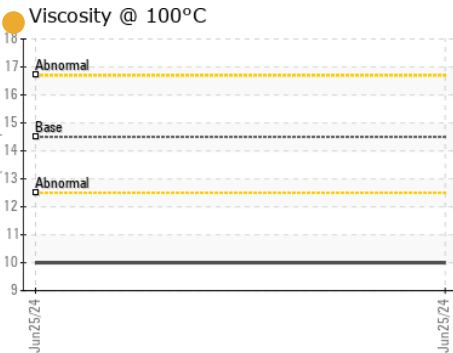
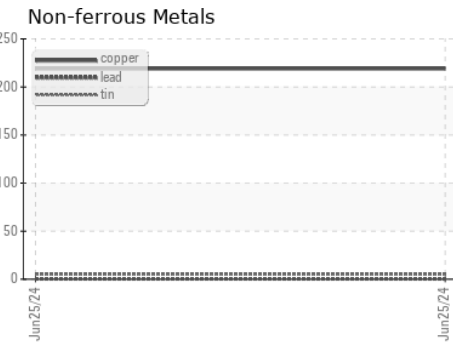
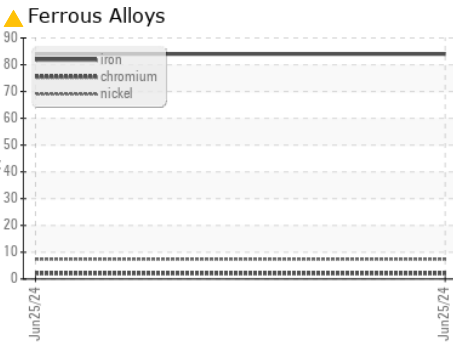
OIL ANALYSIS REPORT



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	14.5	● 10.0	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093096 **Received** : 08 Jul 2024
Lab Number : 06229814 **Tested** : 11 Jul 2024
Unique Number : 11113307 **Diagnosed** : 11 Jul 2024 - Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 413 - Whiteland Hauling
 2959 S EMERSON AVE
 WHITELAND, IN
 US 46184
 Contact: Christyan Trent-Proctor
 ctrentproctor@gflenv.com

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)