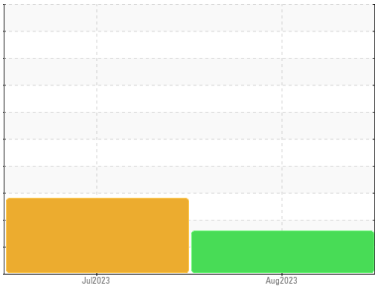
PROBLEM SUMMARY

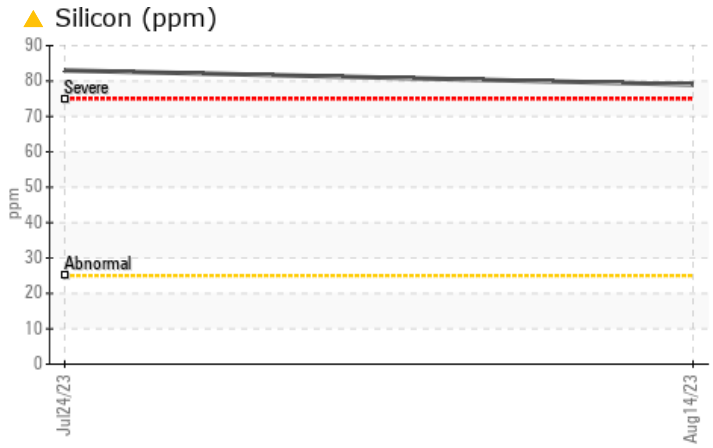
Sample Rating Trend



DIRT

Machine Id
414050
Component
Diesel Engine
Fluid
NOT GIVEN (--- GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	---
Silicon	ppm	ASTM D5185m	>25	▲ **79**	▲ 83	---

Customer Id: GFL814
Sample No.: GFL0090994
Lab Number: 05928646
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Sean Felton +1 919-379-4092
sfelton@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.
Information Required	---	---	?	Please specify the brand, type, and viscosity of the oil on your next sample.

HISTORICAL DIAGNOSIS

24 Jul 2023 Diag: Sean Felton

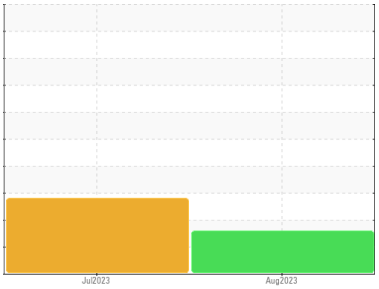
DIRT

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. Resample at the next service interval to monitor.All component wear rates are normal. Elemental levels of silicon (Si) and aluminum (Al) indicate alumina-silicate (coarse dirt) ingress. Tests indicate that there is no fuel present in the oil. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

OIL ANALYSIS REPORT

Sample Rating Trend



DIRT

Machine Id
414050
Component
Diesel Engine
Fluid
NOT GIVEN (--- GAL)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. 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		**GFL0090994**	GFL0082718	---
Sample Date		Client Info		**14 Aug 2023**	24 Jul 2023	---
Machine Age	hrs	Client Info		**419**	277	---
Oil Age	hrs	Client Info		**142**	277	---
Oil Changed		Client Info		**Changed**	Changed	---
Sample Status				**ABNORMAL**	ABNORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Glycol		WC Method		**NEG**	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	**23**	18	---
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	---
Nickel	ppm	ASTM D5185m	>4	**<1**	<1	---
Titanium	ppm	ASTM D5185m		**<1**	<1	---
Silver	ppm	ASTM D5185m	>3	**2**	1	---
Aluminum	ppm	ASTM D5185m	>20	**12**	▲ 11	---
Lead	ppm	ASTM D5185m	>40	**2**	0	---
Copper	ppm	ASTM D5185m	>330	**206**	92	---
Tin	ppm	ASTM D5185m	>15	**2**	2	---
Vanadium	ppm	ASTM D5185m		**<1**	0	---
Cadmium	ppm	ASTM D5185m		**0**	0	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		**262**	302	---
Barium	ppm	ASTM D5185m		**0**	0	---
Molybdenum	ppm	ASTM D5185m		**117**	118	---
Manganese	ppm	ASTM D5185m		**3**	3	---
Magnesium	ppm	ASTM D5185m		**725**	759	---
Calcium	ppm	ASTM D5185m		**1458**	1450	---
Phosphorus	ppm	ASTM D5185m		**684**	734	---
Zinc	ppm	ASTM D5185m		**826**	887	---
Sulfur	ppm	ASTM D5185m		**2677**	2967	---

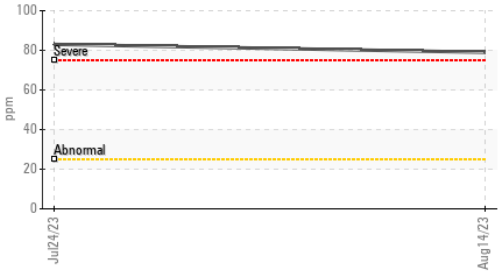
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **79**	▲ 83	---
Sodium	ppm	ASTM D5185m		**4**	4	---
Potassium	ppm	ASTM D5185m	>20	**26**	21	---
Fuel	%	ASTM D3524	>5	**<1.0**	0.4	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	**0.2**	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	**8.4**	7.4	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**23.9**	25.0	---

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**21.0**	20.5	---
Base Number (BN)	mg KOH/g	ASTM D2896		**8.4**	9.3	---

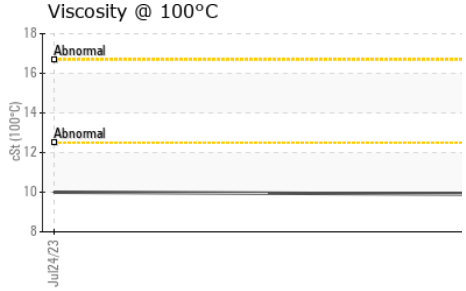
OIL ANALYSIS REPORT

Silicon (ppm)

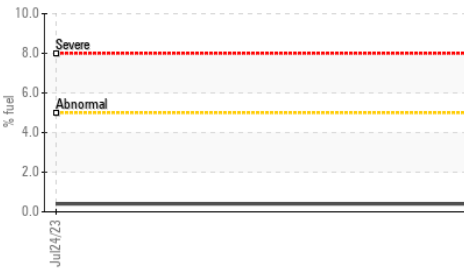


Fuel Dilution

Viscosity @ 100°C



Fuel Dilution

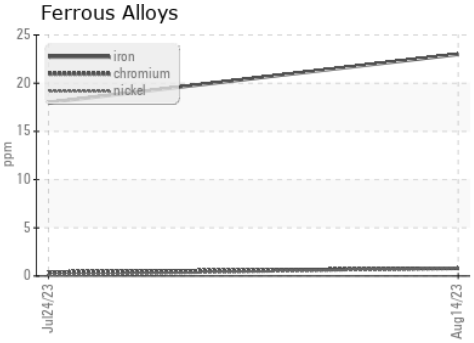


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt	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	---

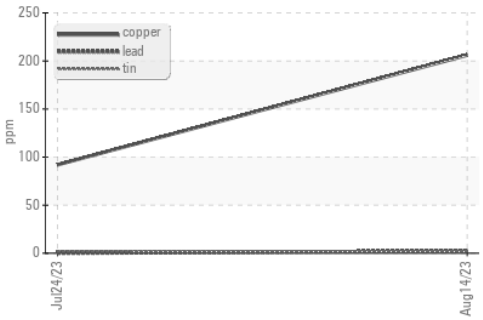
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445		**9.9**	▲ 10.0	---

GRAPHS

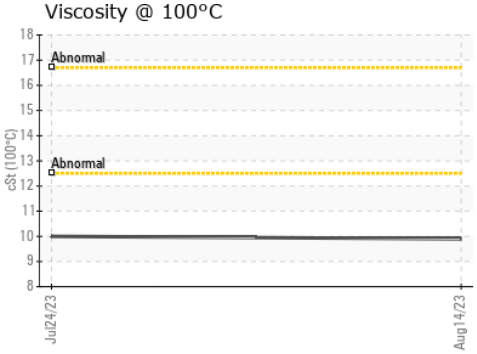
Ferrous Alloys



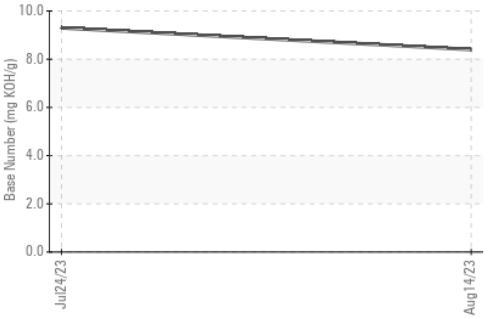
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090994 **Received** : 18 Aug 2023
Lab Number : 05928646 **Diagnosed** : 21 Aug 2023
Unique Number : 10608593 **Diagnostician** : Sean Felton
Test Package : FLEET (Additional Tests: FuelDilution)

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)

GFL Environmental - 814 - Little Rock Hauling
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LIttle Rock, AR
US 72117
Contact: Nicole Walls
nwalls@gflenv.com
T:
F:

Report Id: GFL814 [WUSCAR] 05928646 (Generated: 08/21/2023 15:28:57) Rev: 1

Submitted By: Nicole Walls