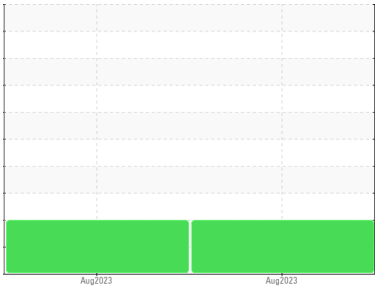
PROBLEM SUMMARY

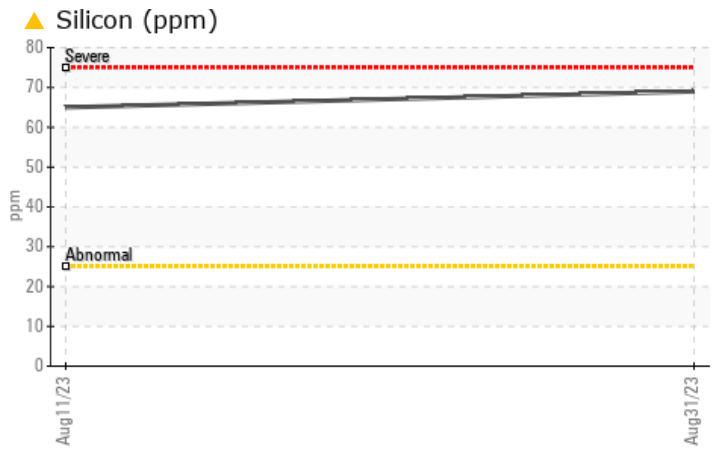
Area
166
Machine Id
414061
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

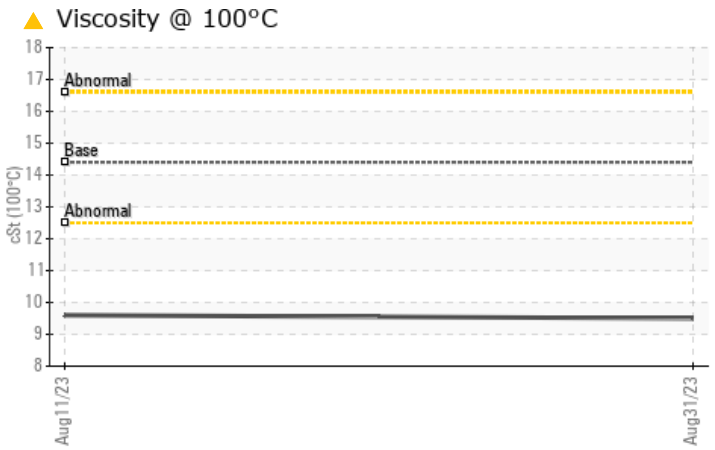
Sample Rating Trend



DIRT

COMPONENT CONDITION SUMMARY





RECOMMENDATION

Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS

Sample Status				**ABNORMAL**	ABNORMAL	---
Silicon	ppm	ASTM D5185m	>25	▲ **69**	▲ 65	---
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **9.5**	▲ 9.6	---

Customer Id: GFL166
Sample No.: GFL0087865
Lab Number: 05945383
Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:
Doug Bogart +1 (800)237-1369 x4016
dougb@wearcheckusa.com

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

RECOMMENDED ACTIONS

There are no recommended actions for this sample.

HISTORICAL DIAGNOSIS

11 Aug 2023 Diag: Don Baldridge

DIRT

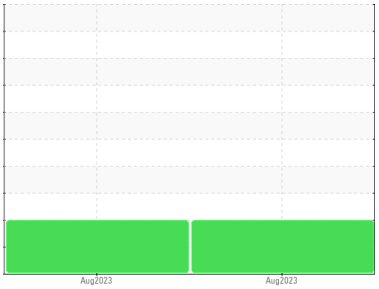
No corrective action is recommended at this time. Resample at the next service interval to monitor.All component wear rates are normal. Fuel content negligible. Elemental level of silicon (Si) above normal indicating ingress of seal material. The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

view report

OIL ANALYSIS REPORT

Area
166
Machine Id
414061
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W40 (--- GAL)

Sample Rating Trend



DIRT

DIAGNOSIS

Recommendation
Resample at the next service interval to monitor.

Wear
All component wear rates are normal.

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

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		**GFL0087865**	GFL0091205	---
Sample Date		Client Info		**31 Aug 2023**	11 Aug 2023	---
Machine Age	hrs	Client Info		**4464**	142	---
Oil Age	hrs	Client Info		**600**	142	---
Oil Changed		Client Info		**Not Changd**	Not Changd	---
Sample Status				**ABNORMAL**	ABNORMAL	---

CONTAMINATION		method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	**<1.0**	0.3	---
Glycol		WC Method		**NEG**	NEG	---

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	**24**	20	---
Chromium	ppm	ASTM D5185m	>20	**<1**	<1	---
Nickel	ppm	ASTM D5185m	>5	**1**	1	---
Titanium	ppm	ASTM D5185m	>2	**0**	<1	---
Silver	ppm	ASTM D5185m	>2	**1**	<1	---
Aluminum	ppm	ASTM D5185m	>20	**8**	7	---
Lead	ppm	ASTM D5185m	>40	**1**	1	---
Copper	ppm	ASTM D5185m	>330	**66**	45	---
Tin	ppm	ASTM D5185m	>15	**3**	2	---
Vanadium	ppm	ASTM D5185m		**<1**	<1	---
Cadmium	ppm	ASTM D5185m		**0**	<1	---

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	**372**	404	---
Barium	ppm	ASTM D5185m	10	**0**	0	---
Molybdenum	ppm	ASTM D5185m	100	**126**	116	---
Manganese	ppm	ASTM D5185m		**4**	4	---
Magnesium	ppm	ASTM D5185m	450	**720**	695	---
Calcium	ppm	ASTM D5185m	3000	**1573**	1462	---
Phosphorus	ppm	ASTM D5185m	1150	**689**	663	---
Zinc	ppm	ASTM D5185m	1350	**844**	793	---
Sulfur	ppm	ASTM D5185m	4250	**2822**	2783	---

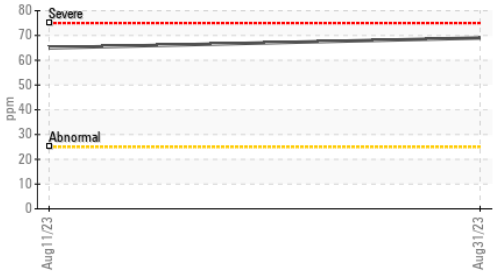
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	▲ **69**	▲ 65	---
Sodium	ppm	ASTM D5185m	>158	**6**	6	---
Potassium	ppm	ASTM D5185m	>20	**19**	18	---

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	**0.1**	0.1	---
Nitration	Abs/cm	*ASTM D7624	>20	**7.0**	6.1	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	**25.2**	24.9	---

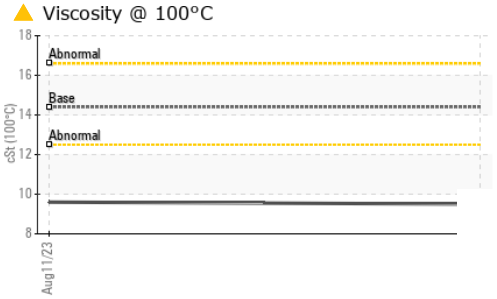
FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	**20.5**	19.9	---
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	**9.1**	9.3	---

OIL ANALYSIS REPORT

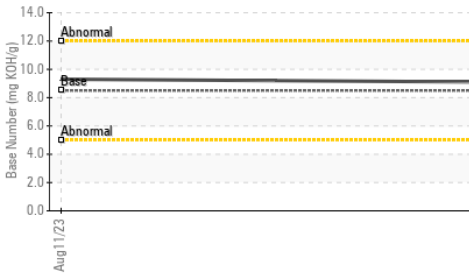
Silicon (ppm)



Viscosity @ 100°C



Base Number

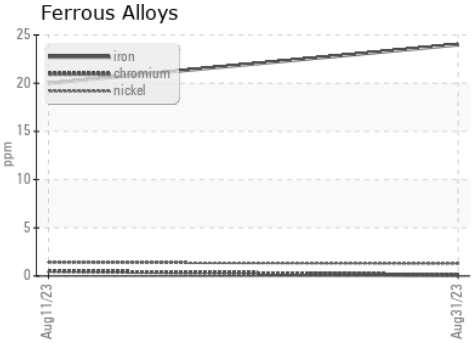


VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Yellow Metal	scalar	*Visual	NONE	**NONE**	NONE	---
Precipitate	scalar	*Visual	NONE	**NONE**	NONE	---
Silt	scalar	*Visual	NONE	**NONE**	NONE	---
Debris	scalar	*Visual	NONE	**NONE**	NONE	---
Sand/Dirt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

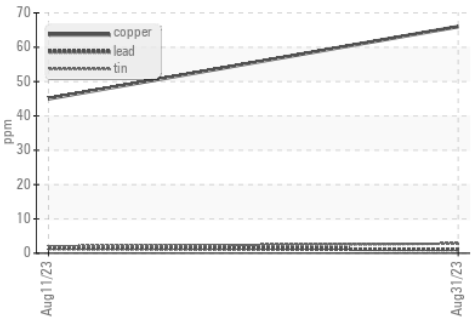
FLUID PROPERTIES		method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ **9.5**	▲ 9.6	---

GRAPHS

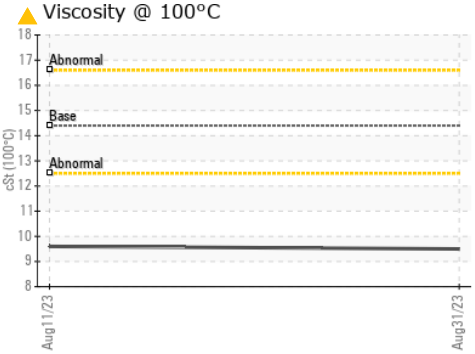
Ferrous Alloys



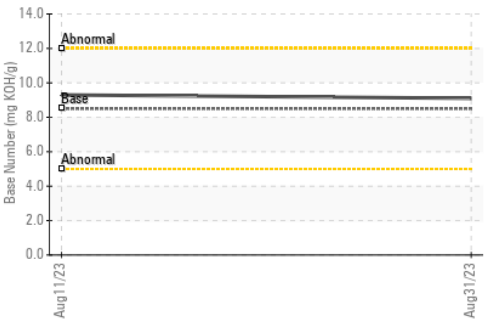
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0087865
Lab Number : 05945383
Unique Number : 10635995
Test Package : FLEET

Received : 08 Sep 2023
Diagnosed : 11 Sep 2023
Diagnostician : Doug Bogart

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 - 166 - Phenix City
18 Old Brickyard Rd
Phenix City, AL
US 36869
Contact: DEAN PEACE JR
dean.peace@gflenv.com
T:
F:

Report Id: GFL166 [WUSCAR] 05945383 (Generated: 09/11/2023 16:20:56) Rev: 1

Submitted By: DARRIN WRIGHT