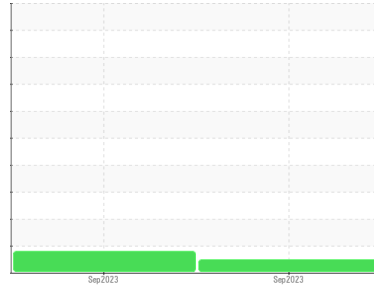




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
229037-603258
 Component
Natural Gas Engine
 Fluid
RDL-3647 (--- GAL)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

Contamination

There is no indication of any contamination in the oil.

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	GFL0093405	GFL0080388	---
Sample Date	Client Info	19 Sep 2023	05 Sep 2023	---
Machine Age	hrs Client Info	2039	2030	---
Oil Age	hrs Client Info	600	400	---
Oil Changed	Client Info	Changed	Changed	---
Sample Status		NORMAL	ABNORMAL	---

WEAR METALS

method	limit/base	current	history1	history2
Iron ppm ASTM D5185m	>50	7	32	---
Chromium ppm ASTM D5185m	>4	<1	<1	---
Nickel ppm ASTM D5185m	>2	0	0	---
Titanium ppm ASTM D5185m		<1	<1	---
Silver ppm ASTM D5185m	>3	<1	0	---
Aluminum ppm ASTM D5185m	>9	0	5	---
Lead ppm ASTM D5185m	>30	6	▲ 35	---
Copper ppm ASTM D5185m	>35	3	12	---
Tin ppm ASTM D5185m	>4	1	4	---
Vanadium ppm ASTM D5185m		0	0	---
Cadmium ppm ASTM D5185m		0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron ppm ASTM D5185m	50	8	25	---
Barium ppm ASTM D5185m	5	0	0	---
Molybdenum ppm ASTM D5185m	50	59	72	---
Manganese ppm ASTM D5185m	0	1	2	---
Magnesium ppm ASTM D5185m	560	921	419	---
Calcium ppm ASTM D5185m	1510	1179	1652	---
Phosphorus ppm ASTM D5185m	780	1064	979	---
Zinc ppm ASTM D5185m	870	1265	1151	---
Sulfur ppm ASTM D5185m	2040	3871	3791	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon ppm ASTM D5185m	>+100	15	36	---
Sodium ppm ASTM D5185m		6	24	---
Potassium ppm ASTM D5185m	>20	3	11	---

INFRA-RED

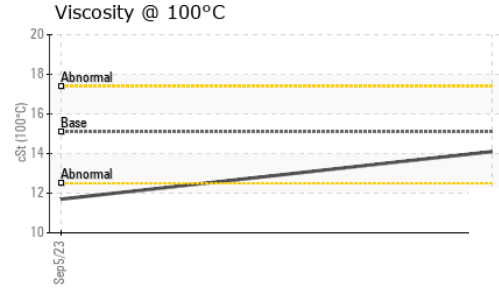
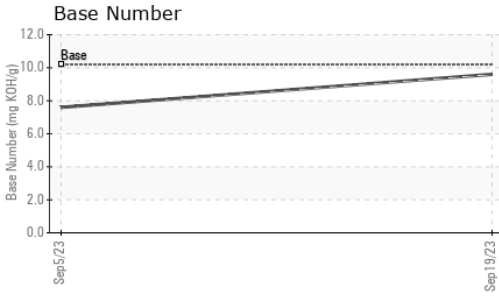
method	limit/base	current	history1	history2
Soot % *ASTM D7844		0	0.1	---
Nitration Abs/cm *ASTM D7624	>20	5.8	8.7	---
Sulfation Abs/.1mm *ASTM D7415	>30	20.5	18.3	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation Abs/.1mm *ASTM D7414	>25	15.2	14.8	---
Base Number (BN) mg KOH/g ASTM D2896	10.2	9.6	7.6	---



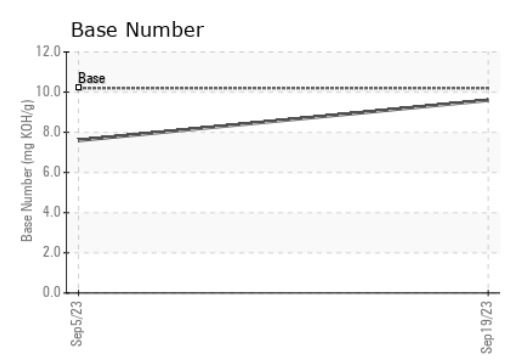
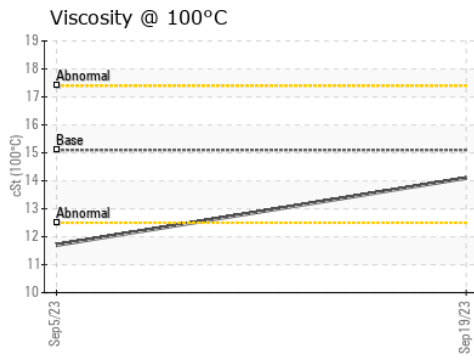
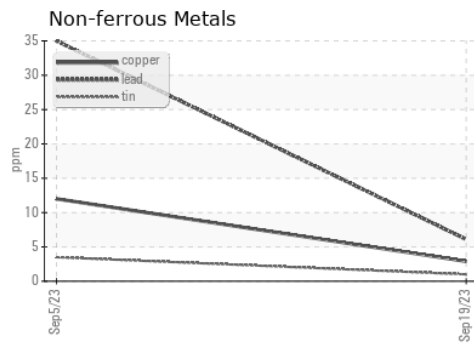
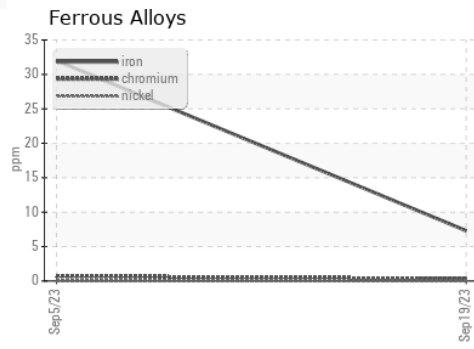
OIL ANALYSIS REPORT



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	>0.1	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.1	14.1	11.7	---

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093405 **Received** : 21 Sep 2023
Lab Number : 05957459 **Diagnosed** : 22 Sep 2023
Unique Number : 10658672 **Diagnostician** : Don Baldrige
Test Package : FLEET

GFL Environmental - 892 - Pauls Valley Hauling
 405 East Airport Industrial Road
 Pauls Valley, OK
 US 73075
 Contact: Tony Graham
 tgraham2@wcamerica.com

Certificate L2367
 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)