



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>

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

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0111963</b>	GFL0111971	GFL0102584
Sample Date		Client Info		<b>12 Mar 2024</b>	01 Mar 2024	16 Jan 2024
Machine Age	hrs	Client Info		<b>2186</b>	2184	2134
Oil Age	hrs	Client Info		<b>600</b>	0	0
Filter Age	hrs	Client Info		<b>600</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Filter Changed		Client Info		<b>Changed</b>	Not Changd	Not Changd
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>27</b>	25	19
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	0	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	0	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>9	<b>4</b>	3	3
Lead	ppm	ASTM D5185m	>30	<b>6</b>	7	7
Copper	ppm	ASTM D5185m	>35	<b>2</b>	2	3
Tin	ppm	ASTM D5185m	>4	<b>&lt;1</b>	2	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

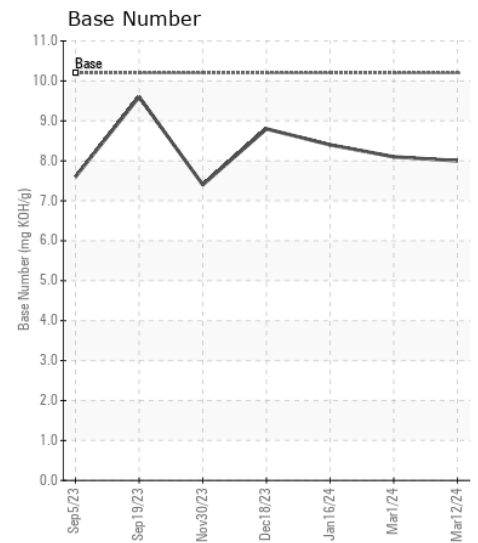
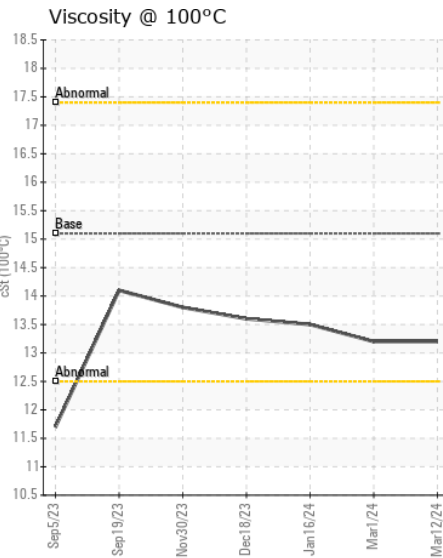
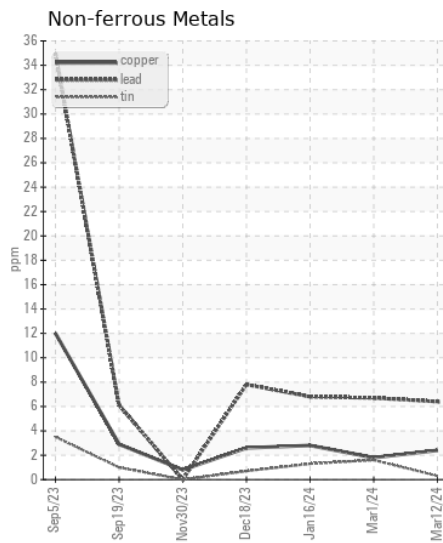
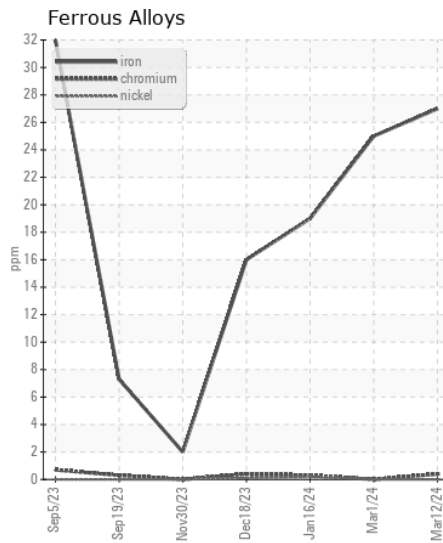
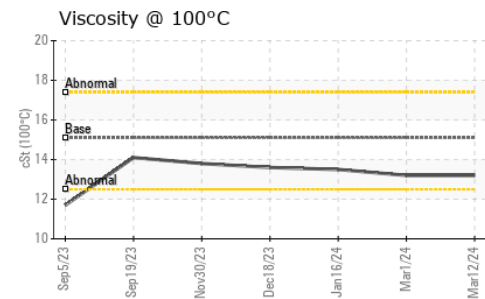
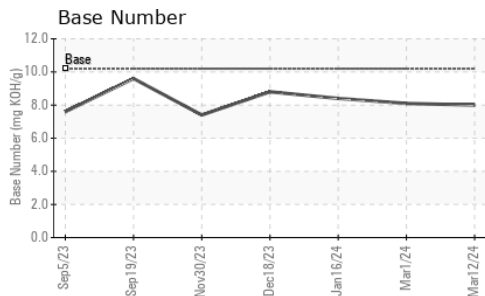
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	<b>15</b>	15	15
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	0	4
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0.1</b>	0.2	0.1
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.5</b>	7.5	6.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>19.1</b>	18.9	18.7
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	<b>NEG</b>	NEG	NEG

**FLUID CONDITION**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>7</b>	6	4
Boron	ppm	ASTM D5185m	50	<b>4</b>	4	4
Barium	ppm	ASTM D5185m	5	<b>0</b>	0	3
Molybdenum	ppm	ASTM D5185m	50	<b>59</b>	55	58
Manganese	ppm	ASTM D5185m	0	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	560	<b>872</b>	925	835
Calcium	ppm	ASTM D5185m	1510	<b>1116</b>	1185	1108
Phosphorus	ppm	ASTM D5185m	780	<b>1005</b>	1009	978
Zinc	ppm	ASTM D5185m	870	<b>1188</b>	1258	1188
Sulfur	ppm	ASTM D5185m	2040	<b>3592</b>	3014	3472
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>16.1</b>	16.4	15.1
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>8.0</b>	8.1	8.4
Visc @ 100°C	cSt	ASTM D445	15.1	<b>13.2</b>	13.2	13.5



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0111963  
**Lab Number** : 06122985  
**Unique Number** : 10937136  
**Test Package** : FLEET

**Received** : 19 Mar 2024  
**Tested** : 20 Mar 2024  
**Diagnosed** : 21 Mar 2024 - Don Baldrige

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

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F: