



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



Area  
**(YA169099)**  
Machine Id  
**832003**  
Component  
**Natural Gas Engine**  
Fluid  
**RDL-3647 (5 GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0079624</b>	GFL0098114	GFL0088517
Sample Date		Client Info		<b>22 Feb 2024</b>	10 Nov 2023	03 Oct 2023
Machine Age	hrs	Client Info		<b>645</b>	645	645
Oil Age	hrs	Client Info		<b>752</b>	436	319
Filter Age	hrs	Client Info		<b>0</b>	436	0
Oil Changed		Client Info		<b>N/A</b>	N/A	N/A
Filter Changed		Client Info		<b>N/A</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>50	<b>11</b>	9	7
Chromium	ppm	ASTM D5185m	>4	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>2	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m		<b>0</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	0
Aluminum	ppm	ASTM D5185m	>9	<b>2</b>	2	<1
Lead	ppm	ASTM D5185m	>30	<b>2</b>	1	<1
Copper	ppm	ASTM D5185m	>35	<b>1</b>	1	2
Tin	ppm	ASTM D5185m	>4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	0
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

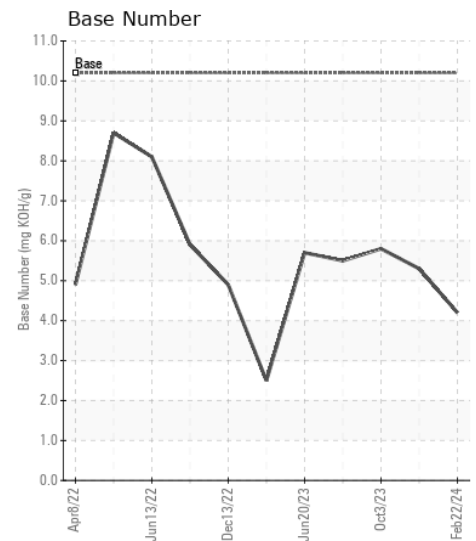
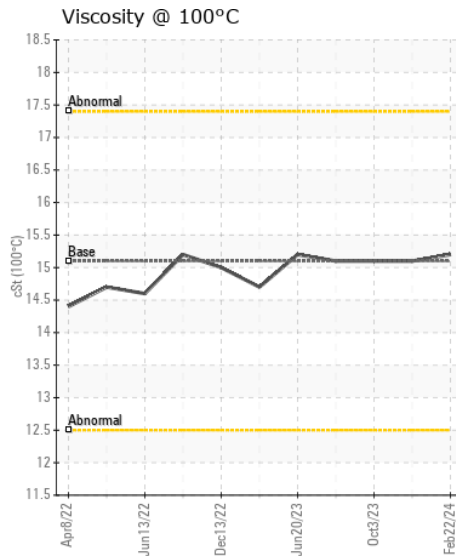
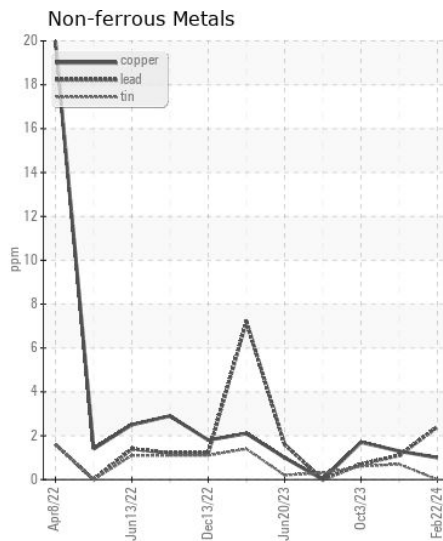
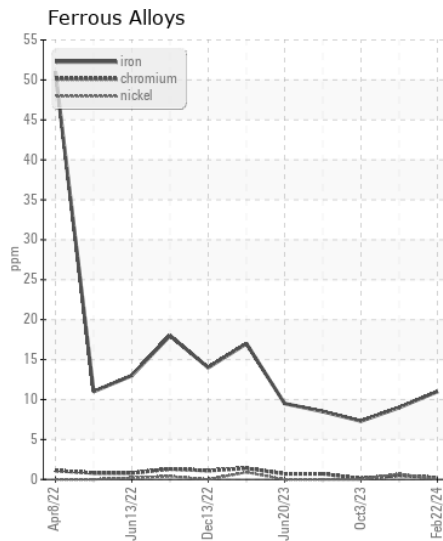
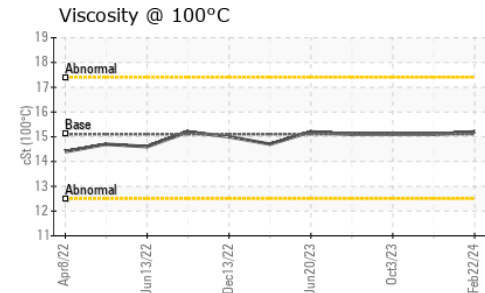
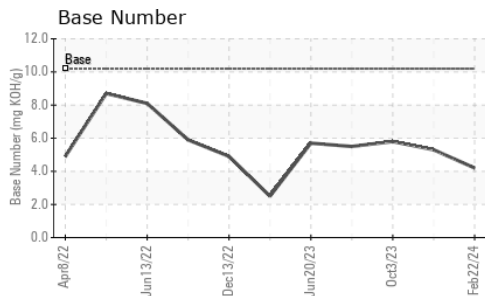
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	<b>4</b>	5	4
Potassium	ppm	ASTM D5185m	>20	<b>4</b>	4	<1
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>11.5</b>	10.7	9.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.4</b>	20.9	19.4
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>5</b>	2	6
Boron	ppm	ASTM D5185m	50	<b>10</b>	9	9
Barium	ppm	ASTM D5185m	5	<b>8</b>	0	0
Molybdenum	ppm	ASTM D5185m	50	<b>55</b>	56	54
Manganese	ppm	ASTM D5185m	0	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	560	<b>547</b>	577	601
Calcium	ppm	ASTM D5185m	1510	<b>1521</b>	1633	1636
Phosphorus	ppm	ASTM D5185m	780	<b>745</b>	724	739
Zinc	ppm	ASTM D5185m	870	<b>953</b>	988	996
Sulfur	ppm	ASTM D5185m	2040	<b>2435</b>	2540	2450
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>20.4</b>	18.3	16.7
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	<b>4.2</b>	5.3	5.8
Visc @ 100°C	cSt	ASTM D445	15.1	<b>15.2</b>	15.1	15.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0079624  
**Lab Number** : 06100006  
**Unique Number** : 10898236  
**Test Package** : FLEET

**Received** : 26 Feb 2024  
**Tested** : 27 Feb 2024  
**Diagnosed** : 27 Feb 2024 - Wes Davis

**GFL Environmental - 017 - Durham**  
 148 Stone Park Court  
 Durham, NC  
 US 27703

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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)