



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



Machine Id  
**934034**  
Component  
**Natural Gas Engine**  
Fluid  
**{not provided} (--- GAL)**

**RECOMMENDATION**

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0116566</b>	GFL0111892	GFL0111838
Sample Date		Client Info		<b>10 Apr 2024</b>	20 Mar 2024	04 Mar 2024
Machine Age	hrs	Client Info		<b>98201</b>	98201	98201
Oil Age	hrs	Client Info		<b>98201</b>	98201	0
Filter Age	hrs	Client Info		<b>0</b>	0	0
Oil Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Filter Changed		Client Info		<b>Not Changd</b>	Not Changd	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	<b>39</b>	54	42
Chromium	ppm	ASTM D5185m	>4	<b>1</b>	2	<1
Nickel	ppm	ASTM D5185m	>2	<b>2</b>	3	<1
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Silver	ppm	ASTM D5185m	>3	<b>&lt;1</b>	<1	0
Aluminum	ppm	ASTM D5185m	>9	<b>4</b>	8	3
Lead	ppm	ASTM D5185m	>30	<b>2</b>	5	0
Copper	ppm	ASTM D5185m	>35	<b>15</b>	23	14
Tin	ppm	ASTM D5185m	>4	<b>2</b>	3	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</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.

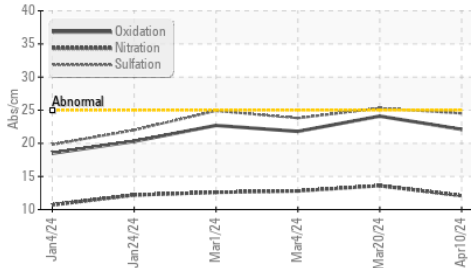
Silicon	ppm	ASTM D5185m	>+100	<b>24</b>	37	31
Potassium	ppm	ASTM D5185m	>20	<b>8</b>	13	3
Water		WC Method	>0.1	<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844		<b>0</b>	0	0
Nitration	Abs/cm	*ASTM D7624	>20	<b>12.1</b>	13.6	12.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>24.5</b>	25.3	23.8
Silt	scalar	*Visual	NONE	<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**

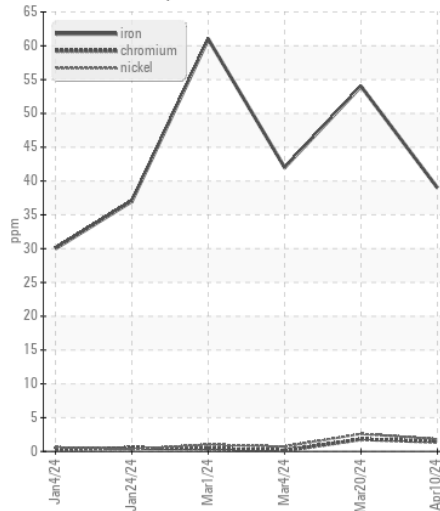
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		<b>6</b>	3	3
Boron	ppm	ASTM D5185m		<b>10</b>	4	6
Barium	ppm	ASTM D5185m		<b>1</b>	4	4
Molybdenum	ppm	ASTM D5185m		<b>55</b>	59	52
Manganese	ppm	ASTM D5185m		<b>9</b>	12	10
Magnesium	ppm	ASTM D5185m		<b>754</b>	841	800
Calcium	ppm	ASTM D5185m		<b>1411</b>	1341	1183
Phosphorus	ppm	ASTM D5185m		<b>799</b>	911	679
Zinc	ppm	ASTM D5185m		<b>932</b>	1009	886
Sulfur	ppm	ASTM D5185m		<b>2533</b>	2679	1950
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>22.1</b>	24.1	21.8
Base Number (BN)	mg KOH/g	ASTM D2896		<b>4.6</b>	2.8	3.3
Visc @ 100°C	cSt	ASTM D445		<b>14.7</b>	14.4	14.4

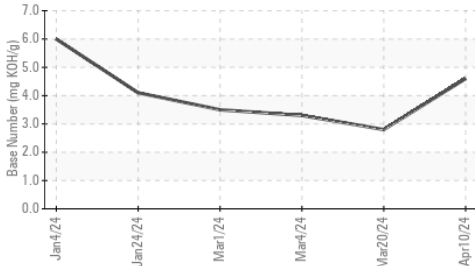
**FT-IR (Direct Trend)**



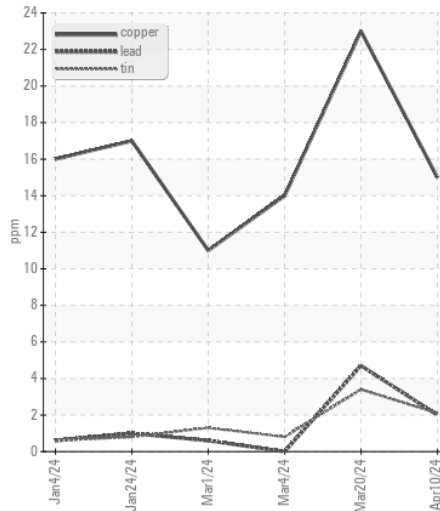
**Ferrous Alloys**



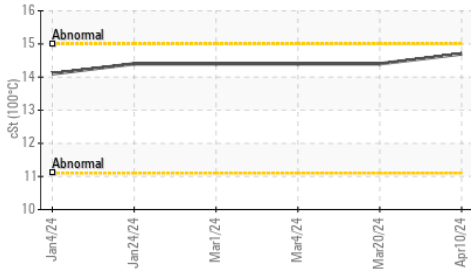
**Base Number**



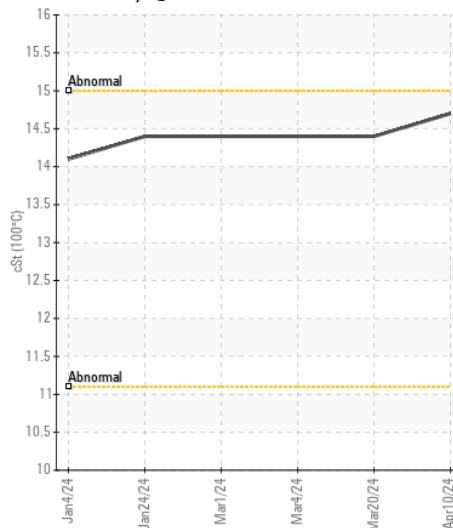
**Non-ferrous Metals**



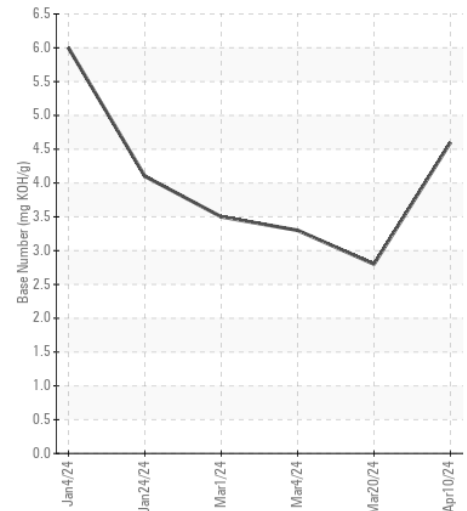
**Viscosity @ 100°C**



**Viscosity @ 100°C**



**Base Number**



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116566  
**Lab Number** : 06147936  
**Unique Number** : 10978014  
**Test Package** : FLEET

**Received** : 12 Apr 2024  
**Tested** : 15 Apr 2024  
**Diagnosed** : 15 Apr 2024 - Wes Davis

**GFL Environmental - 652 - Fredericksburg Hauling**  
 10954 Houser Drive  
 Fredericksburg, VA  
 US 22408  
 Contact: WILLIAM MILO  
 wmiло@gflenv.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)

T:  
F: