



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
834031
 Component
Natural Gas Engine
 Fluid
{not provided} (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor. Please specify the component make and model with your next sample. 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		GFL011899	GFL0108281	GFL0108260
Sample Date		Client Info		18 Mar 2024	22 Feb 2024	01 Feb 2024
Machine Age	hrs	Client Info		622	467	324
Oil Age	hrs	Client Info		622	467	324
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Not Changd	N/A
Filter Changed		Client Info		Not Changd	Not Changd	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>50	41	42	37
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	0	<1
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>9	2	2	2
Lead	ppm	ASTM D5185m	>30	<1	0	<1
Copper	ppm	ASTM D5185m	>35	18	20	16
Tin	ppm	ASTM D5185m	>4	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

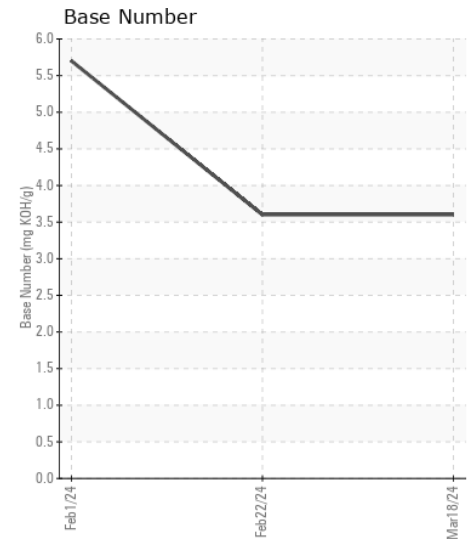
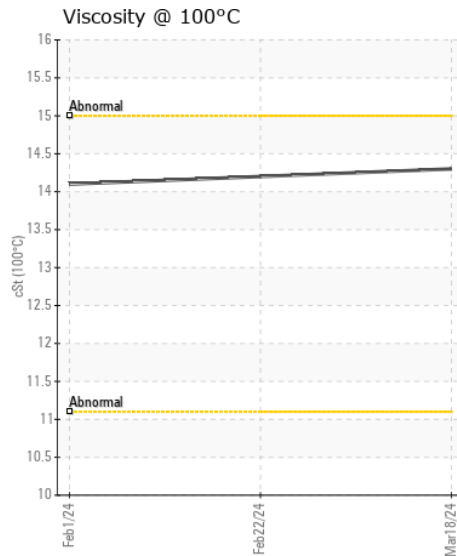
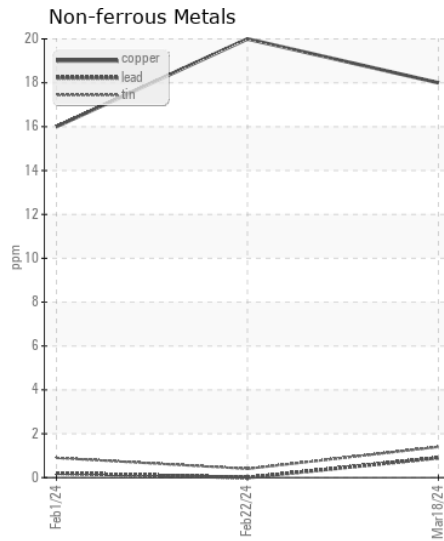
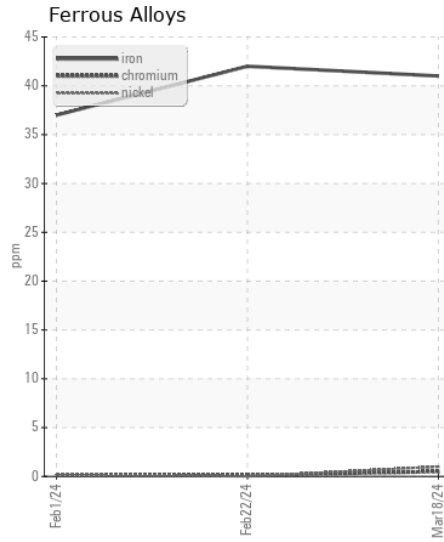
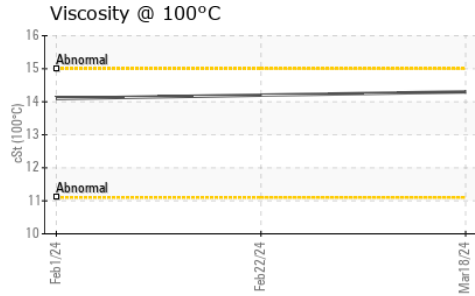
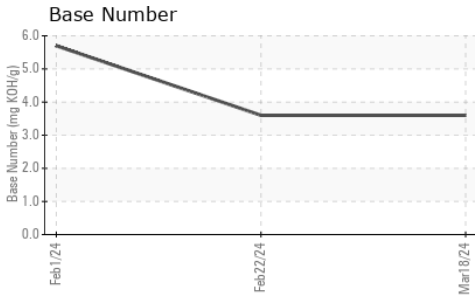
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	36	40	35
Potassium	ppm	ASTM D5185m	>20	3	3	<1
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	12.1	11.8	11.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	22.2	20.2
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	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		4	2	4
Boron	ppm	ASTM D5185m		6	8	16
Barium	ppm	ASTM D5185m		3	13	3
Molybdenum	ppm	ASTM D5185m		52	55	49
Manganese	ppm	ASTM D5185m		13	13	12
Magnesium	ppm	ASTM D5185m		748	728	766
Calcium	ppm	ASTM D5185m		1228	1138	1073
Phosphorus	ppm	ASTM D5185m		623	661	679
Zinc	ppm	ASTM D5185m		914	881	863
Sulfur	ppm	ASTM D5185m		2356	2394	2157
Oxidation	Abs/.1mm	*ASTM D7414	>25	21.1	20.2	18.9
Base Number (BN)	mg KOH/g	ASTM D2896		3.6	3.6	5.7
Visc @ 100°C	cSt	ASTM D445		14.3	14.2	14.1



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111899
Lab Number : 06122109
Unique Number : 10936260
Test Package : FLEET

Received : 19 Mar 2024
Tested : 20 Mar 2024
Diagnosed : 20 Mar 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)

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F: