



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
834090
 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		GFL0108269	GFL0098174	GFL0108341
Sample Date		Client Info		06 Feb 2024	15 Jan 2024	05 Jan 2024
Machine Age	hrs	Client Info		503	353	180
Oil Age	hrs	Client Info		503	353	180
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	N/A
Filter Changed		Client Info		Not Changd	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>50	81	61	30
Chromium	ppm	ASTM D5185m	>4	3	2	<1
Nickel	ppm	ASTM D5185m	>2	4	2	<1
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	48	36	2
Lead	ppm	ASTM D5185m	>30	2	1	<1
Copper	ppm	ASTM D5185m	>35	22	17	15
Tin	ppm	ASTM D5185m	>4	2	1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

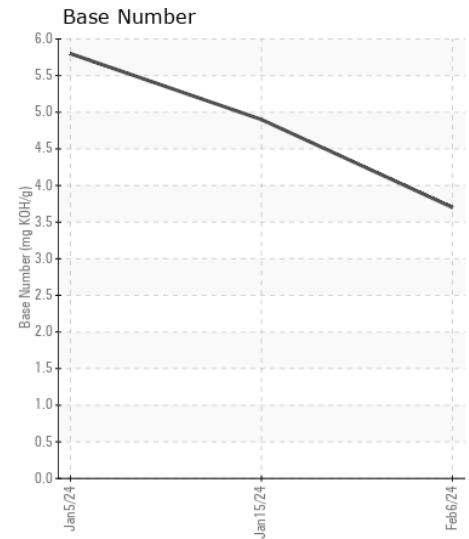
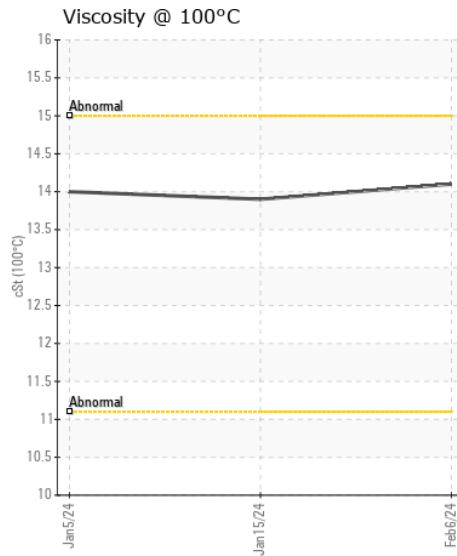
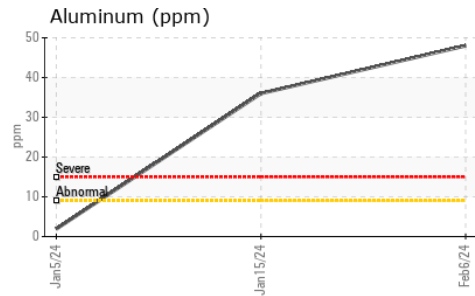
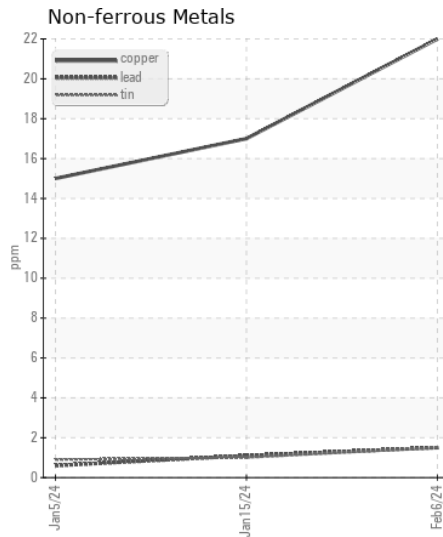
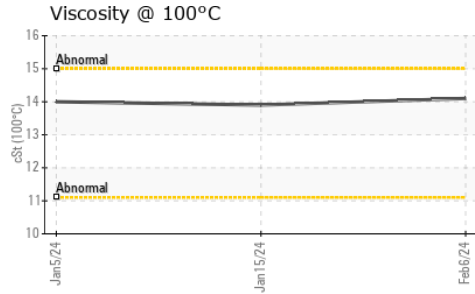
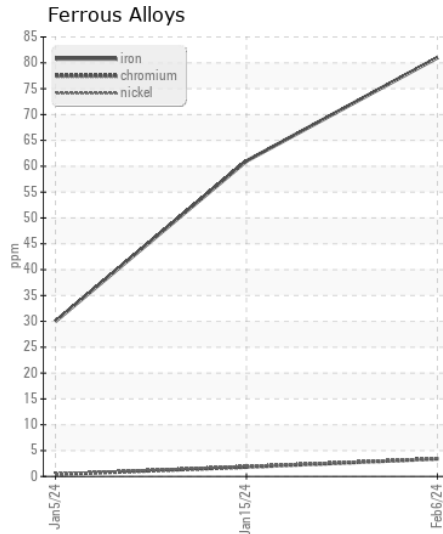
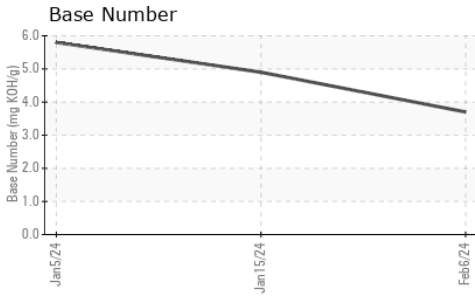
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	40	33	32
Potassium	ppm	ASTM D5185m	>20	160	119	4
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0	0	0
Nitration	Abs/cm	*ASTM D7624	>20	12.0	11.9	11.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.0	21.0	20.0
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		3	6	4
Boron	ppm	ASTM D5185m		17	22	14
Barium	ppm	ASTM D5185m		0	<1	4
Molybdenum	ppm	ASTM D5185m		68	55	49
Manganese	ppm	ASTM D5185m		17	13	13
Magnesium	ppm	ASTM D5185m		850	758	768
Calcium	ppm	ASTM D5185m		1319	1129	1150
Phosphorus	ppm	ASTM D5185m		763	735	730
Zinc	ppm	ASTM D5185m		1007	883	880
Sulfur	ppm	ASTM D5185m		2559	2321	2261
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	19.2	19.0
Base Number (BN)	mg KOH/g	ASTM D2896		3.7	4.9	5.8
Visc @ 100°C	cSt	ASTM D445		14.1	13.9	14.0



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0108269
Lab Number : 06085264
Unique Number : 10872709
Test Package : FLEET

Received : 09 Feb 2024
Tested : 12 Feb 2024
Diagnosed : 12 Feb 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: