



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
834047
 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		GFL0102467	GFL0102517	GFL0098605
Sample Date		Client Info		30 Dec 2023	04 Dec 2023	09 Nov 2023
Machine Age	hrs	Client Info		853	716	580
Oil Age	hrs	Client Info		0	0	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	N/A	Not Changd
Filter Changed		Client Info		Not Changd	N/A	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185m	>50	53	48	44
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	2	<1	<1
Titanium	ppm	ASTM D5185m		0	0	<1
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>9	4	2	3
Lead	ppm	ASTM D5185m	>30	2	<1	<1
Copper	ppm	ASTM D5185m	>35	16	16	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

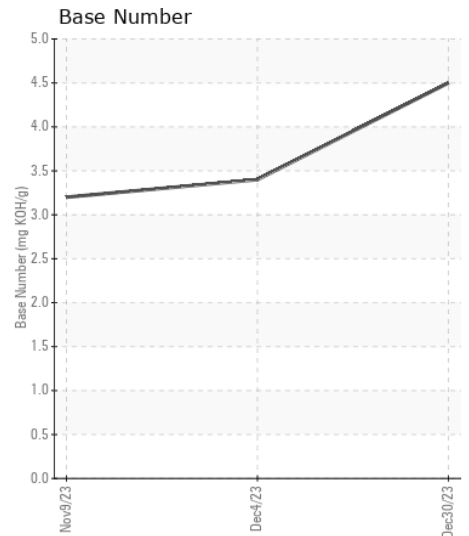
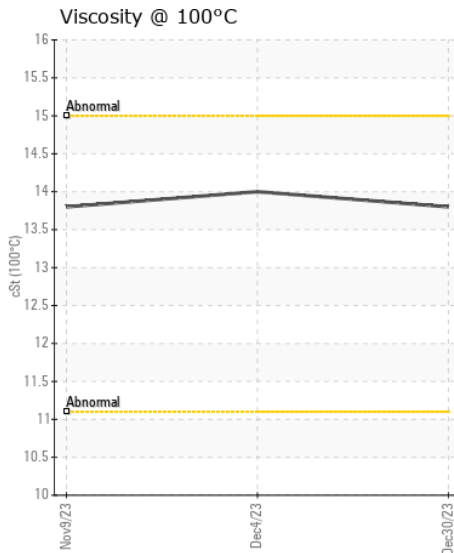
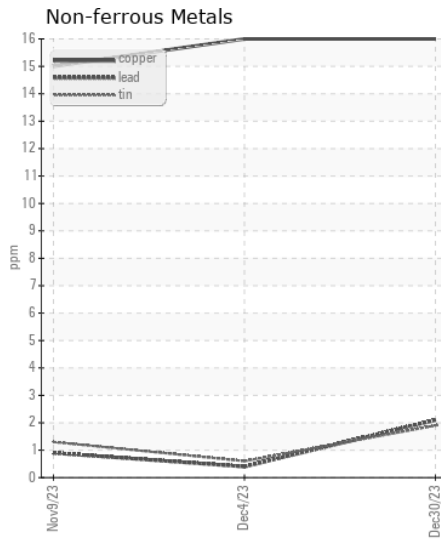
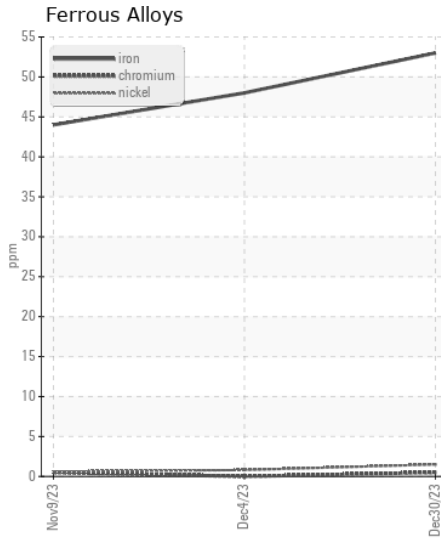
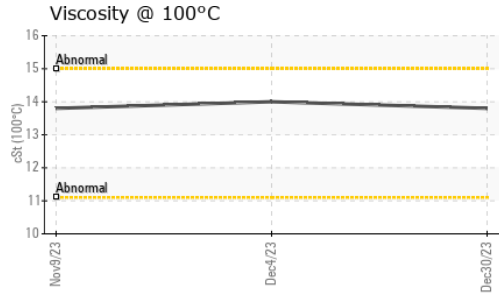
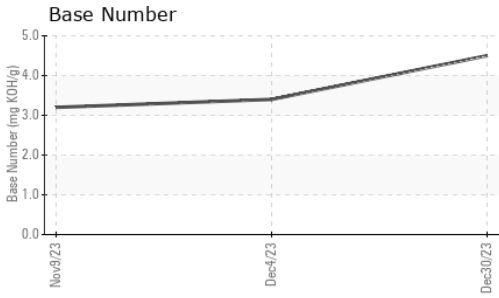
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	32	31	28
Potassium	ppm	ASTM D5185m	>20	2	3	1
Water		WC Method	>0.1	NEG	NEG	NEG
Soot %	%	*ASTM D7844		0.3	0	0.1
Nitration	Abs/cm	*ASTM D7624	>20	11.3	12.3	11.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.2	23.7	21.6
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		5	2	3
Boron	ppm	ASTM D5185m		6	6	10
Barium	ppm	ASTM D5185m		2	0	0
Molybdenum	ppm	ASTM D5185m		55	52	49
Manganese	ppm	ASTM D5185m		12	10	10
Magnesium	ppm	ASTM D5185m		867	785	780
Calcium	ppm	ASTM D5185m		1218	1146	1151
Phosphorus	ppm	ASTM D5185m		811	641	622
Zinc	ppm	ASTM D5185m		1010	896	902
Sulfur	ppm	ASTM D5185m		2474	2510	2175
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.3	21.6	19.9
Base Number (BN)	mg KOH/g	ASTM D2896		4.5	3.4	3.2
Visc @ 100°C	cSt	ASTM D445		13.8	14.0	13.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0102467 **Received** : 08 Jan 2024
Lab Number : 06054627 **Diagnosed** : 09 Jan 2024
Unique Number : 10820576 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 837 - Harrison TS
 22820 S State Route 291
 Harrisonville, MO
 US 64701
 Contact: BRYAN SWANSON
 bryanswanson@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: