



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
933032
Component
Natural Gas Engine
Fluid
RDL-3647 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0118155	GFL0086726	---
Sample Date		Client Info		01 Jul 2024	01 Feb 2024	---
Machine Age	hrs	Client Info		2300	1194	---
Oil Age	hrs	Client Info		1106	1194	---
Filter Age	hrs	Client Info		0	0	---
Oil Changed		Client Info		Changed	Changed	---
Filter Changed		Client Info		Changed	N/A	---
Sample Status				NORMAL	ABNORMAL	---

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>50	15	46	---
Chromium	ppm	ASTM D5185m	>4	4	▲ 7	---
Nickel	ppm	ASTM D5185m	>2	<1	<1	---
Titanium	ppm	ASTM D5185m		<1	<1	---
Silver	ppm	ASTM D5185m	>3	0	0	---
Aluminum	ppm	ASTM D5185m	>9	22	48	---
Lead	ppm	ASTM D5185m	>30	3	8	---
Copper	ppm	ASTM D5185m	>35	8	14	---
Tin	ppm	ASTM D5185m	>4	1	2	---
Vanadium	ppm	ASTM D5185m		<1	<1	---
White Metal	scalar	*Visual	NONE	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	---

CONTAMINATION

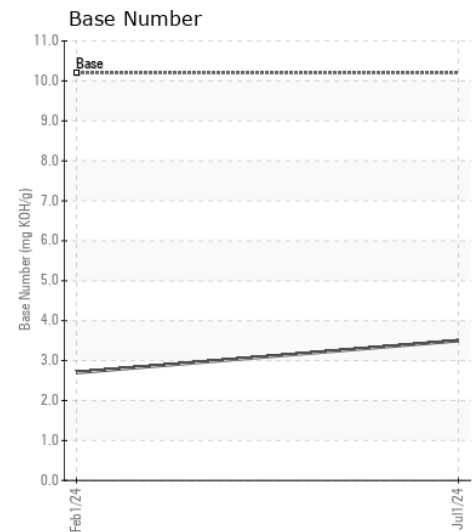
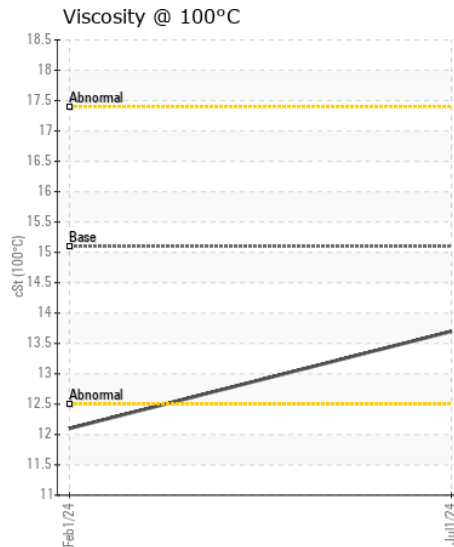
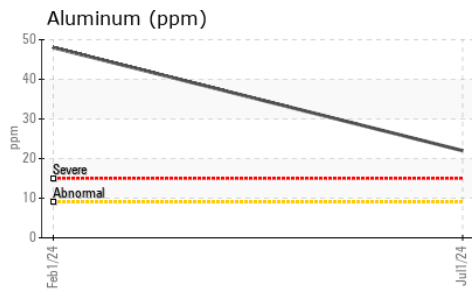
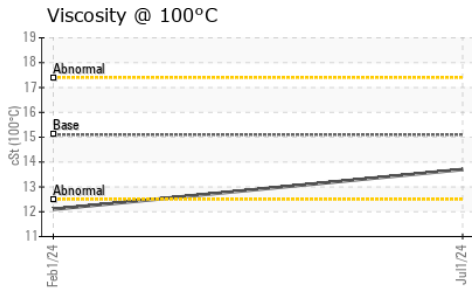
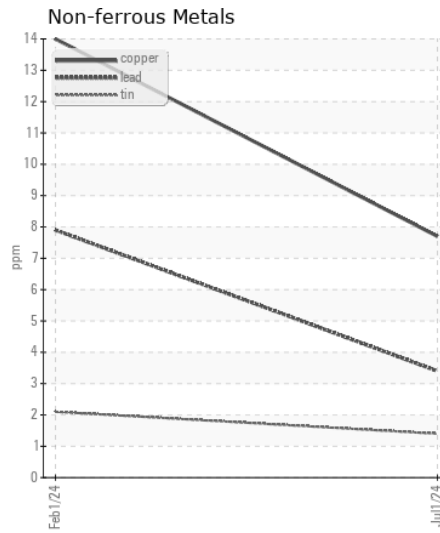
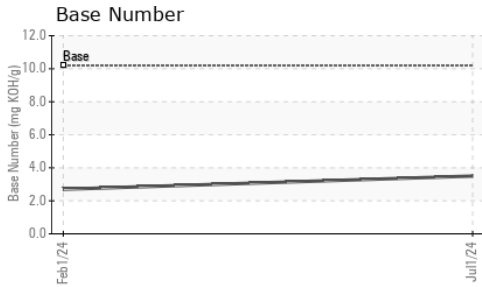
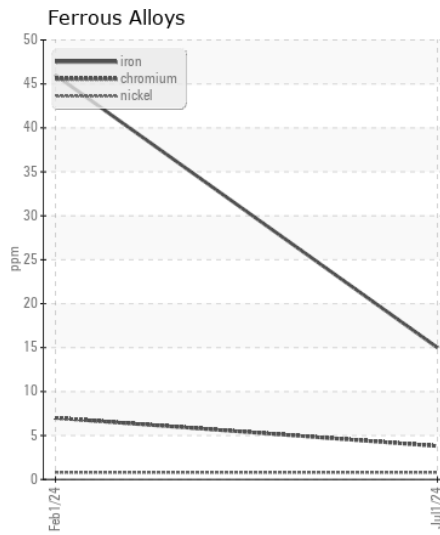
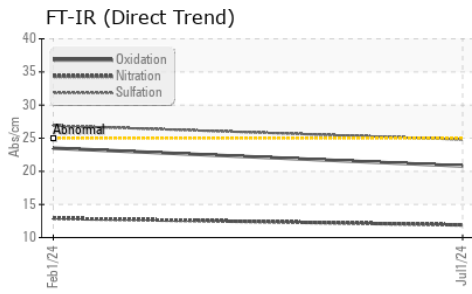
Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>+100	18	74	---
Potassium	ppm	ASTM D5185m	>20	67	172	---
Water		WC Method	>0.1	NEG	NEG	---
Soot %	%	*ASTM D7844		0	0	---
Nitration	Abs/cm	*ASTM D7624	>20	11.9	12.9	---
Sulfation	Abs/.1mm	*ASTM D7415	>30	24.8	26.9	---
Silt	scalar	*Visual	NONE	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.1	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	5	---
Boron	ppm	ASTM D5185m	50	6	7	---
Barium	ppm	ASTM D5185m	5	0	5	---
Molybdenum	ppm	ASTM D5185m	50	53	59	---
Manganese	ppm	ASTM D5185m	0	2	5	---
Magnesium	ppm	ASTM D5185m	560	552	842	---
Calcium	ppm	ASTM D5185m	1510	1532	1252	---
Phosphorus	ppm	ASTM D5185m	780	713	751	---
Zinc	ppm	ASTM D5185m	870	914	901	---
Sulfur	ppm	ASTM D5185m	2040	2338	2133	---
Oxidation	Abs/.1mm	*ASTM D7414	>25	20.8	23.5	---
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	3.5	2.7	---
Visc @ 100°C	cSt	ASTM D445	15.1	13.7	12.1	---



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0118155
Lab Number : 06232008
Unique Number : 11115501
Test Package : FLEET

Received : 10 Jul 2024
Tested : 11 Jul 2024
Diagnosed : 11 Jul 2024 - Wes Davis

GFL Environmental - 932 - Muskego HC
 W144 S6400 College Ct.
 Muskego, WI
 US 53150

Contact: Brian Schlomann
 brian.schlomann@gflenv.com

T: (262)510-4586

F:

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)