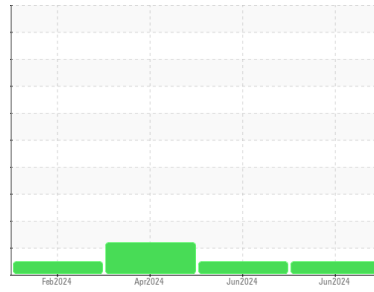




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
434029
 Component
Natural Gas Engine
 Fluid
 {not provided} (--- GAL)

DIAGNOSIS

Recommendation

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

Wear

All component wear rates are normal.

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.

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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			GFL0122014	GFL0116584	GFL0116570
Sample Date	Client Info			25 Jun 2024	03 Jun 2024	16 Apr 2024
Machine Age	hrs	Client Info		1117	947	618
Oil Age	hrs	Client Info		170	947	618
Oil Changed	Client Info			Not Changed	Changed	Not Changed
Sample Status				NORMAL	NORMAL	ABNORMAL

CONTAMINATION		method	limit/base	current	history1	history2
Water	WC Method		>0.1	NEG	NEG	NEG

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	38	37	33
Chromium	ppm	ASTM D5185m	>4	2	1	2
Nickel	ppm	ASTM D5185m	>2	<1	0	2
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>9	26	24	13
Lead	ppm	ASTM D5185m	>30	9	4	3
Copper	ppm	ASTM D5185m	>35	12	12	11
Tin	ppm	ASTM D5185m	>4	1	2	2
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	1

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		5	9	13
Barium	ppm	ASTM D5185m		6	7	6
Molybdenum	ppm	ASTM D5185m		50	52	51
Manganese	ppm	ASTM D5185m		4	4	4
Magnesium	ppm	ASTM D5185m		754	809	696
Calcium	ppm	ASTM D5185m		1181	1194	1152
Phosphorus	ppm	ASTM D5185m		722	727	647
Zinc	ppm	ASTM D5185m		898	881	845
Sulfur	ppm	ASTM D5185m		2360	2501	2463

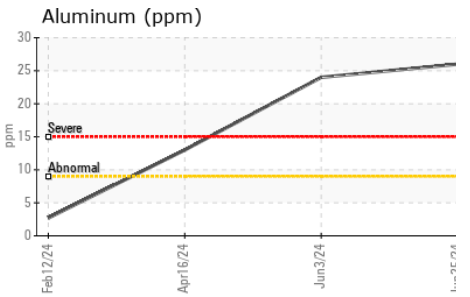
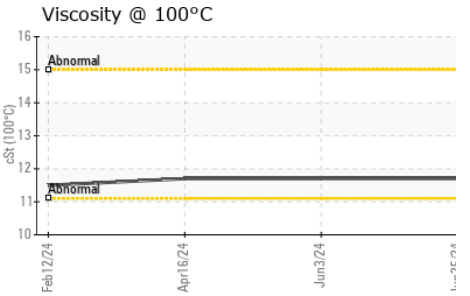
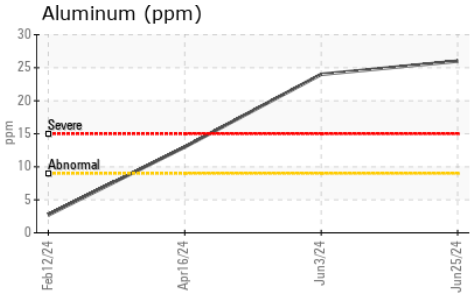
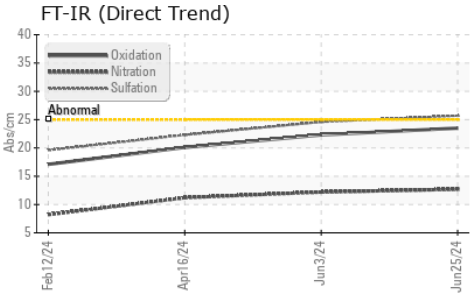
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>+100	80	91	94
Sodium	ppm	ASTM D5185m		6	7	5
Potassium	ppm	ASTM D5185m	>20	81	80	▲ 53

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844		0	0.1	0
Nitration	Abs/cm	*ASTM D7624	>20	12.7	12.2	11.2
Sulfation	Abs/.1mm	*ASTM D7415	>30	25.7	24.6	22.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	23.5	22.3	20.1
Base Number (BN)	mg KOH/g	ASTM D2896		3.4	3.0	3.9



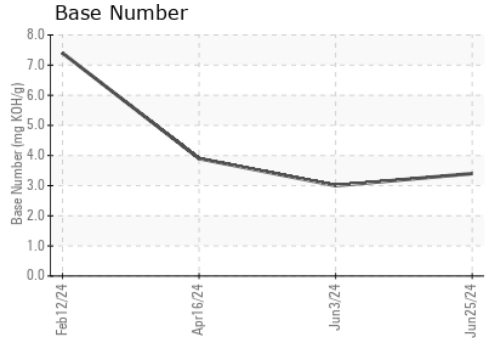
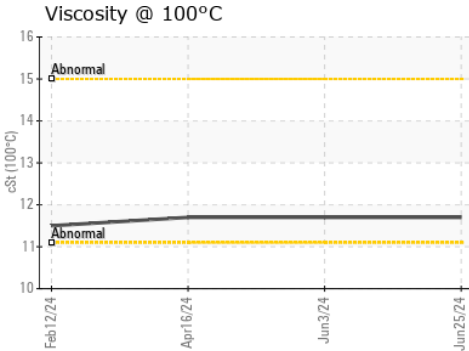
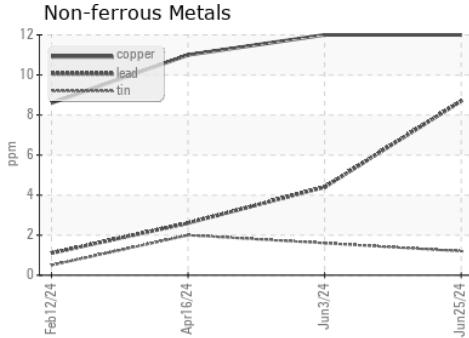
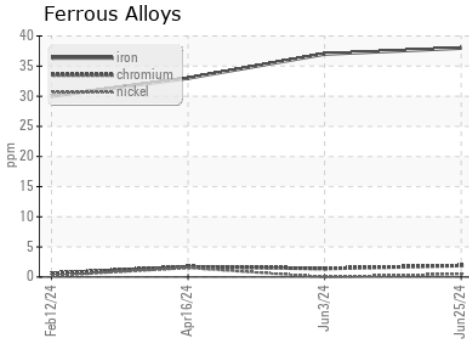
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
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
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	11.7	11.7	11.7

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0122014 **Received** : 27 Jun 2024
Lab Number : 06222182 **Tested** : 28 Jun 2024
Unique Number : 11100379 **Diagnosed** : 28 Jun 2024 - Wes Davis
Test Package : FLEET

GFL Environmental - 652 - Fredericksburg Hauling
 10954 Houser Drive
 Fredericksburg, VA
 US 22408
 Contact: WILLIAM MILO
 wmilo@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)