

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id **734000** Component **Natural Gas Engine** Fluid **{not provided} (--- GAL)** 

### DIAGNOSIS

#### 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.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

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 INFORM	NATION	method	limit/base	current	history1	history2	
Sample Number		Client Info	GFL0127185		GFL0122031	GFL0122038	
Sample Date		Client Info	10 Jul 2024		25 Jun 2024	06 Jun 2024	
Machine Age	hrs	Client Info	782		652	507	
Oil Age	hrs	Client Info	782		652	507	
Oil Changed		Client Info	Not Changd		Not Changd	Not Changd	
Sample Status				NORMAL	NORMAL	NORMAL	
CONTAMINATI	ON	method	limit/base	current	history1	history2	
Water		WC Method	>0.1	NEG	NEG	NEG	
WEAR METALS	S	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>50	56	57	55	
Chromium	ppm	ASTM D5185m	>4	<1	<1	<1	
Nickel	ppm	ASTM D5185m	>2	1	2	1	
Titanium	ppm	ASTM D5185m		<1	<1	<1	
Silver	ppm	ASTM D5185m	>3	1	<1	<1	
Aluminum	ppm	ASTM D5185m	>9	3	6	3	
Lead	ppm	ASTM D5185m	>30	1	1	1	
Copper	ppm	ASTM D5185m	>35	19	18	19	
Tin	ppm	ASTM D5185m	>4	1	1	1	
Vanadium	ppm	ASTM D5185m		<1	<1	0	
Cadmium	ppm	ASTM D5185m		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		17	18	22	
Barium	ppm	ASTM D5185m		3	3	<1	
Molybdenum	ppm	ASTM D5185m		55	54	54	
Manganese	ppm	ASTM D5185m		10	10	10	
Magnesium				14	12	13	
	ppm	ASTM D5185m		717	762	727	
Calcium	ppm ppm	ASTM D5185m ASTM D5185m		717 1208	762 1126	727 1051	
Calcium Phosphorus	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		717 1208 640	762 1126 736	727 1051 554	
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		12 717 1208 640 935	762 1126 736 1001	727 1051 554 869	
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		717 1208 640 935 2226	762 1126 736 1001 2768	727 1051 554 869 2130	
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	limit/base	717 1208 640 935 2226 current	762 1126 736 1001 2768 history1	13 727 1051 554 869 2130 history2	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	limit/base >+100	12 717 1208 640 935 2226 current 32	762 1126 736 1001 2768 history1 30	13 727 1051 554 869 2130 history2 34	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >+100	12 717 1208 640 935 2226 current 32 2	762 1126 736 1001 2768 history1 30 9	13 727 1051 554 869 2130 history2 34 5	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >+100 >20	12 717 1208 640 935 2226 current 32 2 10	762 1126 736 1001 2768 history1 30 9 9	13 727 1051 554 869 2130 history2 34 5 9	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base >+100 >20 limit/base	12 717 1208 640 935 2226 current 32 2 10 current	762 1126 736 1001 2768 history1 30 9 9 9 9	13 727 1051 554 869 2130 history2 34 5 9 history2	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844	limit/base >+100 >20 limit/base	12 717 1208 640 935 2226 current 32 2 10 current 0	762 1126 736 1001 2768 history1 30 9 9 9 history1 0	13 727 1051 554 869 2130 history2 34 5 9 history2 0	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844	limit/base >+100 >20 limit/base >20	12 717 1208 640 935 2226 current 32 2 10 current 0 11.0	762 1126 736 1001 2768 history1 30 9 9 9 history1 0 10.8	13 727 1051 554 869 2130 history2 34 5 9 history2 0 10.2	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	limit/base >+100 >20 limit/base >20 >30	12 717 1208 640 935 2226 <u>current</u> 32 2 10 <u>current</u> 0 11.0 23.7	762 762 1126 736 1001 2768 history1 30 9 9 9 history1 0 10.8 23.0	13 727 1051 554 869 2130 history2 34 5 9 history2 0 10.2 21.7	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7624 tASTM D7415	limit/base >+100 >20 limit/base >20 >30 limit/base	12 717 1208 640 935 2226 current 32 2 10 current 0 11.0 23.7 current	762 762 1126 736 1001 2768 history1 30 9 9 9 9 history1 0 10.8 23.0 history1	13 727 1051 554 869 2130 history2 34 5 9 history2 0 10.2 21.7 history2	
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD Oxidation	ppm ppm ppm ppm TS ppm ppm ppm ppm ppm % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7415	limit/base >+100 >20 limit/base >20 >30 limit/base >25	12 717 1208 640 935 2226 current 32 2 10 current 0 11.0 23.7 current 21.2	762 762 1126 736 1001 2768 history1 30 9 9 9 history1 0 10.8 23.0 history1 20.8	13 727 1051 554 869 2130 history2 34 5 9 history2 0 10.2 21.7 history2 19.5	



35

30.

4ps/cm 25 20

15 10 Jun6/24

4.0 3.5

Base Number (mg KOH/g) 0.2 2.5 1.0 1.0 1.0

0.5 0.0 Jun6/24 -

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11-10 Jun6/24

# **OIL ANALYSIS REPORT**

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Yellow Melai   scalar   Would NONE   NONE   NONE   NONE   NONE     Yellow Melai   scalar   Yellow Melai   Scalar   Yellow Melai   NONE   NORE   NONE	Oxidation			White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
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Debris calar Visual NONE NONE NONE NONE NONE NONE NONE NON				Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Oiri Scalar Visual NORML				Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance scalar Visual NORML NORML NORM NORM NORM NORM NORM NORM NORM NORM				Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
A Godor Scalar Visual NORML NO	In6/24	125/24	110/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Base Number FLUID PROPERTIES method imitbase carrent history: his	7	Jur	η	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Viscosity @ 100°C	Base Number			Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
FLUED PROPERTIES   method   imitbase   ournet   hetory1   hetory2     usc @ 100°C   cst   ASTM D445   14.3   14.2   14.2     usc @ 100°C   cst   ASTM D445   14.3   14.2   14.2     usc @ 100°C   cst   ASTM D445   14.3   14.2   14.2     usc @ 100°C     usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C     usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 100°C   usc @ 10°C   usc @				Free Water	scalar	*Visual		NEG	NEG	NEG
Viscosity @ 100°C		· · · · · · · · · · · · · · · · · · ·		FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Viscosity @ 100°C				Visc @ 100°C	cSt	ASTM D445		14.3	14.2	14.2
Image: Second		· · · · · · · · · · · · · · · · · · ·		GRAPHS						
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and   a	*	*		Non-ferrous Meta	ls					
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Image: Second state of the second state state state state state state				Jun6,	Jun25,		Jul10,	Jun6	Jun 25,	Jul10,
Sample No. : GFL0127185   Received : 15 Jul 2024   10954 Houser Drive     Lab Number : 06235552   Tested : 15 Jul 2024   Fredericksburg, VA     Unique Number : 11124386   Diagnosed : 15 Jul 2024 - Wes Davis   US 22408     Certificate 12367   Test Package : FLEET   Contact: WILLIAM MILO     To discuss this sample report, contact Customer Service at 1-800-237-1369.   wmilo@gflenv.com     * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.   T:     Statements of conformity to specifications are based on the simple acceptance decision rule (ICCM 106:2012)   T:		٨	Laboratorv	: WearCheck USA - 50	1 Madiso	on Ave., Carv	v. NC 27513	GFL Envir	ronmental - 652 - Fred	lericksburg Hauling
Image: Second state and state are outside of the ISO 17025 scope of accreditation.   Lab Number : 06235552   Tested : 15 Jul 2024   Fredericksburg, VA     Image: Second state are outside of the ISO 17025 scope of accreditation.   Test Package : FLEET   Contact: WILLIAM MILO     Vertificate 12367   Test Package : FLEET   Contact: WILLIAM MILO   wmilo@gflenv.com     * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.   T:   T:     Statements of conformity to specifications are based on the simple acceptance decision rule (ICCM 106:2012)   T:			Sample No.	: GFL0127185	Rece	ived :15	5 Jul 2024		1095	4 Houser Drive
Gentlicate L2367   Test Package : FLEET   Contact: WILLIAM MILO     Certificate L2367   Test Package : FLEET   Contact: WILLIAM MILO     To discuss this sample report, contact Customer Service at 1-800-237-1369.   wmilo@gflenv.com     * - Denotes test methods that are outside of the ISO 17025 scope of accreditation.   T:     Statements of conformity to specifications are based on the simple accentance decision rule (ICCM 106:2012)   F:		A C C R E D I T E D	Lab Number	: 06235552	Teste	ed : 15	5 Jul 2024		Fred	ericksburg, VA
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 (ICCM 106:2012)		Certificate 12367	Test Package	. 11124380 : FLEET	Diagr	1 <b>05ea</b> : 15	) JUI 2024 - W	US Davis	Contact: )	05 22408 WILLIAM MIL O
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		* - Denotes te	st methods that	are outside of the ISO 1	7025 sco	ppe of accred	litation.	rule (ICCM 10	5-2012)	T:

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Submitted By: TECHNICIAN ACCOUNT

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