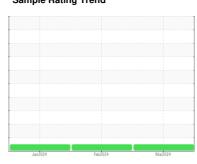


OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id 934036 Component

Natural Gas Engine

{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.

Metal levels are typical for a new component breaking in.

Contamination

There is no indication of any contamination in the

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.

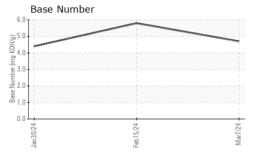
		Jar	2024	Feb2024 Mar20	24	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0111859	GFL0108284	GFL0108266
Sample Date		Client Info		07 Mar 2024	15 Feb 2024	30 Jan 2024
Machine Age	hrs	Client Info		745	584	462
Oil Age	hrs	Client Info		745	584	462
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	33	31	27
Chromium	ppm	ASTM D5185m	>4	1	<1	<1
Nickel	ppm	ASTM D5185m	>2	1	<1	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>9	9	8	7
Lead	ppm	ASTM D5185m	>30	1	0	<1
Copper	ppm	ASTM D5185m	>35	13	15	17
Tin	ppm	ASTM D5185m	>4	2	1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		4	0	0
Gaarriani	ppiii	ASTIVI DOTOSITI		<1	0	U
ADDITIVES	ррш	method	limit/base	current	history1	history2
	ррт		limit/base			_
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1	history2
ADDITIVES Boron Barium	ppm	method ASTM D5185m ASTM D5185m	limit/base	current 13 0	history1 5 3	history2 10 3
ADDITIVES Boron Barium Molybdenum	ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 13 0 55	history1 5 3 47	history2 10 3 55
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 13 0 55 12	history1 5 3 47 12	history2 10 3 55 13
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 13 0 55 12 713	history1 5 3 47 12 659	history2 10 3 55 13 692
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	current 13 0 55 12 713 1371	history1 5 3 47 12 659 1135	history2 10 3 55 13 692 1221
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 13 0 55 12 713 1371 756	history1 5 3 47 12 659 1135 617	history2 10 3 55 13 692 1221 657
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 13 0 55 12 713 1371 756 972	history1 5 3 47 12 659 1135 617 854	history2 10 3 55 13 692 1221 657 919 2296 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 13 0 55 12 713 1371 756 972 2536	history1 5 3 47 12 659 1135 617 854 2117	history2 10 3 55 13 692 1221 657 919 2296
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base	current 13 0 55 12 713 1371 756 972 2536 current	history1 5 3 47 12 659 1135 617 854 2117 history1	history2 10 3 55 13 692 1221 657 919 2296 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >+100	current 13 0 55 12 713 1371 756 972 2536 current 26	history1 5 3 47 12 659 1135 617 854 2117 history1 28	history2 10 3 55 13 692 1221 657 919 2296 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	method ASTM D5185m	limit/base >+100	current 13 0 55 12 713 1371 756 972 2536 current 26 5	history1 5 3 47 12 659 1135 617 854 2117 history1 28 4	history2 10 3 55 13 692 1221 657 919 2296 history2 29 <1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	method ASTM D5185m	limit/base >+100 >20	current 13 0 55 12 713 1371 756 972 2536 current 26 5 24	history1 5 3 47 12 659 1135 617 854 2117 history1 28 4 22	history2 10 3 55 13 692 1221 657 919 2296 history2 29 <1 22
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m	limit/base >+100 >20 limit/base	current 13 0 55 12 713 1371 756 972 2536 current 26 5 24 current	history1 5 3 47 12 659 1135 617 854 2117 history1 28 4 22 history1	history2 10 3 55 13 692 1221 657 919 2296 history2 29 <1 22 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m method ASTM D5185m	limit/base >+100 >20 limit/base	current 13 0 55 12 713 1371 756 972 2536 current 26 5 24 current	history1 5 3 47 12 659 1135 617 854 2117 history1 28 4 22 history1 0.2	history2 10 3 55 13 692 1221 657 919 2296 history2 29 <1 22 history2 0
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D76185m *ASTM D76185m ASTM D76185m *ASTM D76185m	limit/base >+100 >20 limit/base >20	current 13 0 55 12 713 1371 756 972 2536 current 26 5 24 current 0 11.7	history1 5 3 47 12 659 1135 617 854 2117 history1 28 4 22 history1 0.2 6.9	history2 10 3 55 13 692 1221 657 919 2296 history2 29 <1 22 history2 0 11.1
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	method ASTM D5185m method ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D5185m *ASTM D5185m ASTM D76185m *ASTM D76185m ASTM D76185m *ASTM D76185m	limit/base >+100 >20 limit/base >20 >30 limit/base	current 13 0 55 12 713 1371 756 972 2536 current 26 5 24 current 0 11.7 23.3	history1 5 3 47 12 659 1135 617 854 2117 history1 28 4 22 history1 0.2 6.9 17.0	history2 10 3 55 13 692 1221 657 919 2296 history2 29 <1 22 history2 0 11.1 22.2

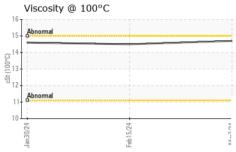
4.7

Base Number (BN) mg KOH/g ASTM D2896



OIL ANALYSIS REPORT

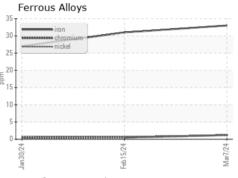


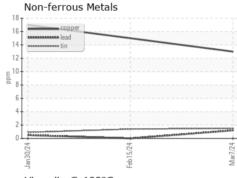


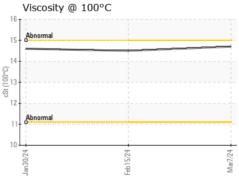
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

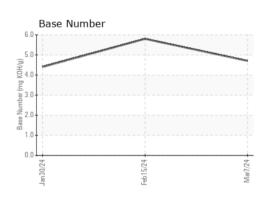
FLUID PROPERTIES		method			history2
Visc @ 100°C	cSt	ASTM D445	14.7	14.5	14.6

GRAPHS













Certificate L2367

Laboratory Sample No.

Lab Number : 06113485 Unique Number : 10916982 Test Package : FLEET

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0111859 Received : 08 Mar 2024 **Tested** : 11 Mar 2024

Diagnosed : 11 Mar 2024 - Wes Davis

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)

T:

F: