



OIL ANALYSIS REPORT

Sample Rating Trend

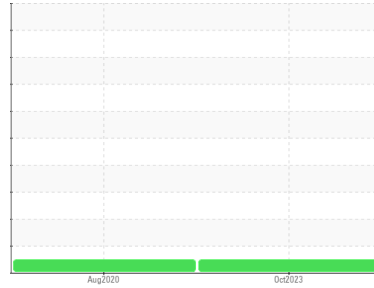
NORMAL



Machine Id
223023-632101

Component
Gasoline Engine

Fluid
GASOLINE ENGINE OIL SAE 5W20 (--- GAL)



DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

Wear

All component wear rates are normal.

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 INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0093409	GFLH-519860	---
Sample Date	Client Info	16 Oct 2023	03 Aug 2020	---
Machine Age	mls	Client Info	375733	9901
Oil Age	mls	Client Info	0	36
Oil Changed	Client Info	Changed	Changed	---
Sample Status		NORMAL	NORMAL	---

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method	>4.0	<1.0	1.5
Glycol	WC Method		NEG	NEG

WEAR METALS

method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>150	26	5
Chromium	ppm	ASTM D5185m	>20	1	0
Nickel	ppm	ASTM D5185m	>5	<1	0
Titanium	ppm	ASTM D5185m		0	0
Silver	ppm	ASTM D5185m	>2	0	0
Aluminum	ppm	ASTM D5185m	>40	8	4
Lead	ppm	ASTM D5185m	>50	0	0
Copper	ppm	ASTM D5185m	>155	<1	0
Tin	ppm	ASTM D5185m	>10	0	0
Antimony	ppm	ASTM D5185m		---	0
Vanadium	ppm	ASTM D5185m		0	0
Cadmium	ppm	ASTM D5185m		0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	75	21	271
Barium	ppm	ASTM D5185m	5	0	0
Molybdenum	ppm	ASTM D5185m	100	106	92
Manganese	ppm	ASTM D5185m		0	0
Magnesium	ppm	ASTM D5185m	12	442	497
Calcium	ppm	ASTM D5185m	2100	1343	1354
Phosphorus	ppm	ASTM D5185m	650	648	661
Zinc	ppm	ASTM D5185m	850	805	757
Sulfur	ppm	ASTM D5185m	2500	2503	---
Lithium	ppm	ASTM D5185m		---	0

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>30	13	6
Sodium	ppm	ASTM D5185m	>50	3	1
Potassium	ppm	ASTM D5185m	>20	2	0

INFRA-RED

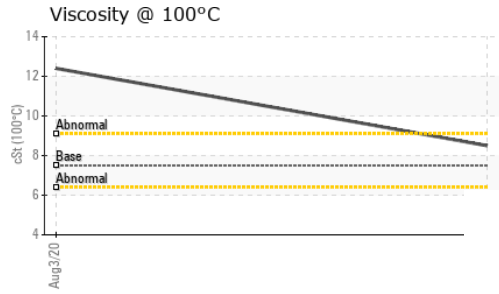
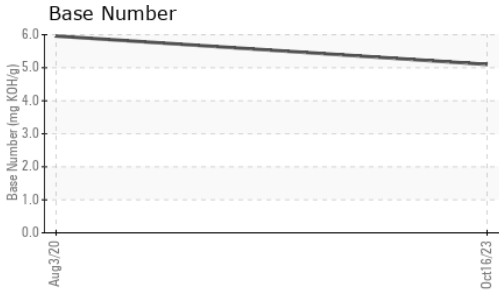
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844		0	0
Nitration	Abs/cm	*ASTM D7624	>20	10.5	9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.5	---

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	14.9	15
Base Number (BN)	mg KOH/g	ASTM D2896		5.1	5.96



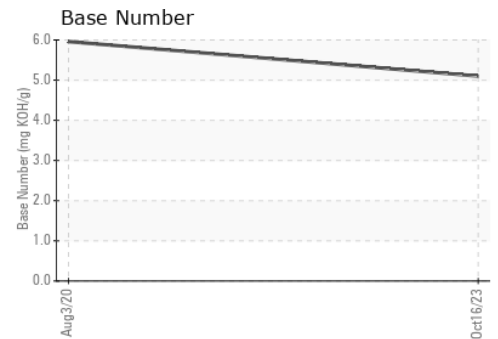
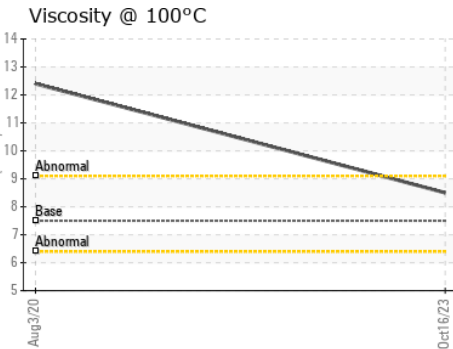
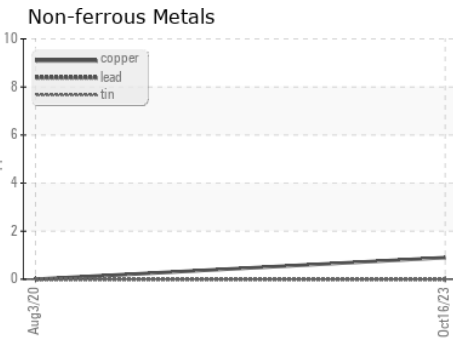
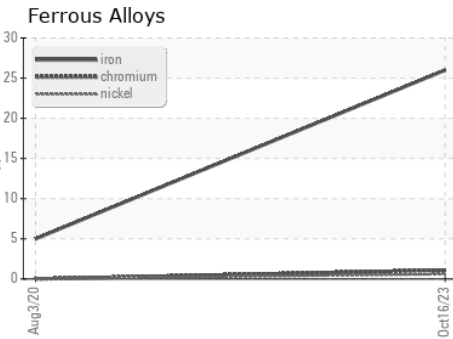
OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	---
Yellow Metal	scalar	*Visual	NONE	NONE	---
Precipitate	scalar	*Visual	NONE	NONE	---
Silt	scalar	*Visual	NONE	NONE	---
Debris	scalar	*Visual	NONE	NONE	---
Sand/Dirt	scalar	*Visual	NONE	NONE	---
Appearance	scalar	*Visual	NORML	NORML	---
Odor	scalar	*Visual	NORML	NORML	---
Emulsified Water	scalar	*Visual	>0.2	NEG	---
Free Water	scalar	*Visual		NEG	---

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445 7.5	8.5	12.4	---

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0093409 **Received** : 18 Oct 2023
Lab Number : **05982764** **Diagnosed** : 20 Oct 2023
Unique Number : 10700059 **Diagnostician** : Sean Felton
Test Package : FLEET

GFL Environmental - 892 - Pauls Valley Hauling
 405 East Airport Industrial Road
 Pauls Valley, OK
 US 73075
 Contact: Tony Graham
 tgraham2@wcamerica.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: