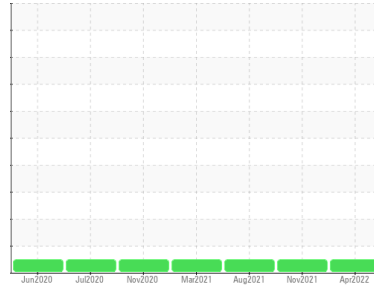




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
GFL657
 Machine Id
257002-269

Component
Gasoline Engine
 Fluid
GASOLINE ENGINE OIL SAE 5W30 (--- 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	GFL0032824	GFL0032812	GFL0022859
Sample Date	Client Info	21 Apr 2022	02 Nov 2021	13 Aug 2021
Machine Age	hrs	734	142129	135408
Oil Age	hrs	124	5721	10114
Oil Changed	Client Info	Changed	Changed	Changed
Sample Status		NORMAL	NORMAL	NORMAL

CONTAMINATION

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

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >150	14	18	31
Chromium	ppm ASTM D5185m >20	<1	<1	1
Nickel	ppm ASTM D5185m >5	0	<1	<1
Titanium	ppm ASTM D5185m	<1	<1	<1
Silver	ppm ASTM D5185m >2	0	0	0
Aluminum	ppm ASTM D5185m >40	3	3	2
Lead	ppm ASTM D5185m >50	<1	2	0
Copper	ppm ASTM D5185m >155	16	27	32
Tin	ppm ASTM D5185m >10	<1	<1	<1
Antimony	ppm ASTM D5185m	---	0	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 75	34	4	5
Barium	ppm ASTM D5185m 5	0	<1	0
Molybdenum	ppm ASTM D5185m 100	31	5	8
Manganese	ppm ASTM D5185m	<1	<1	<1
Magnesium	ppm ASTM D5185m 12	635	706	785
Calcium	ppm ASTM D5185m 2100	734	816	893
Phosphorus	ppm ASTM D5185m 650	545	587	636
Zinc	ppm ASTM D5185m 850	675	755	788
Sulfur	ppm ASTM D5185m 2500	1626	1693	1742

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >30	6	9	11
Sodium	ppm ASTM D5185m >400	2	7	12
Potassium	ppm ASTM D5185m >20	2	1	2

INFRA-RED

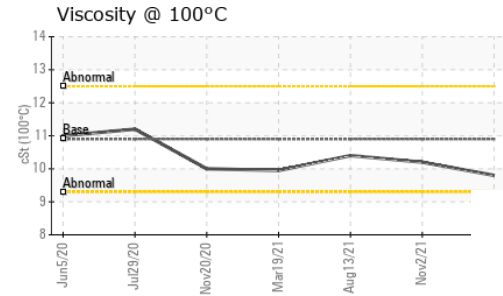
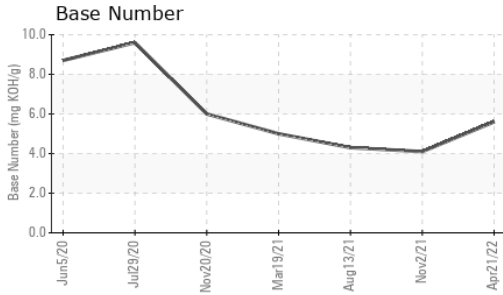
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844	0.1	0.1	0
Nitration	Abs/cm *ASTM D7624 >20	11.1	13.7	16.4
Sulfation	Abs/.1mm *ASTM D7415 >30	21.5	23.7	30.8

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	17.1	21.8	29.1
Base Number (BN)	mg KOH/g ASTM D2896	5.6	4.1	4.3



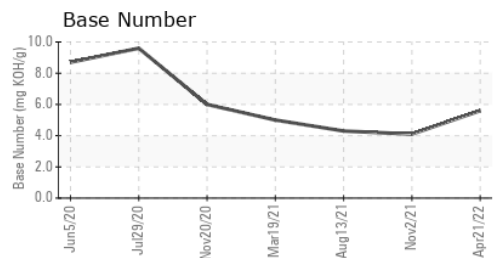
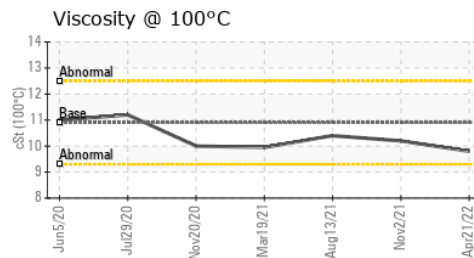
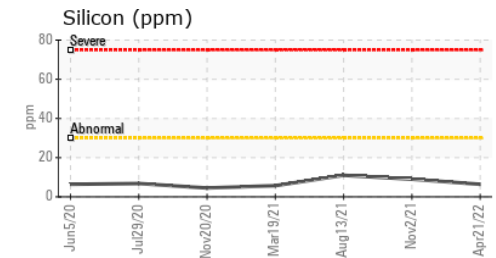
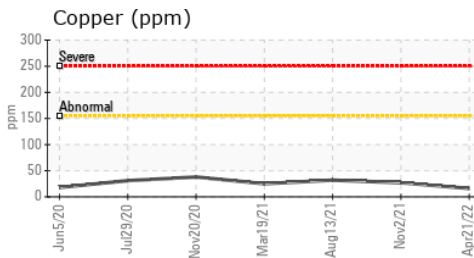
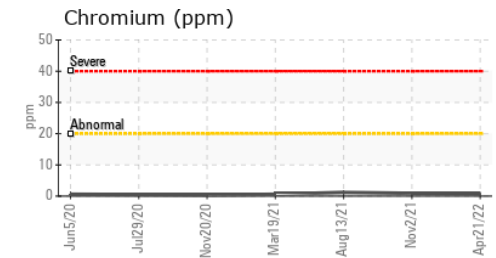
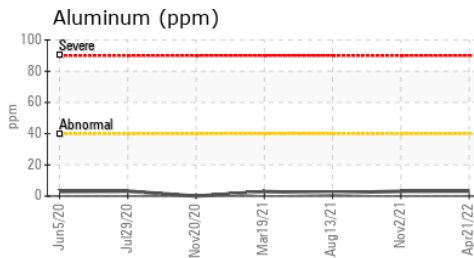
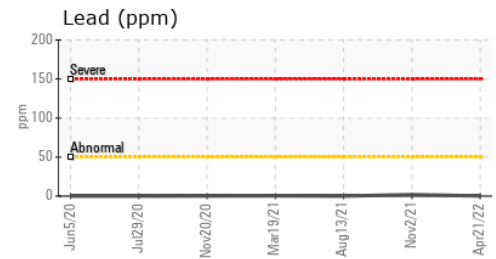
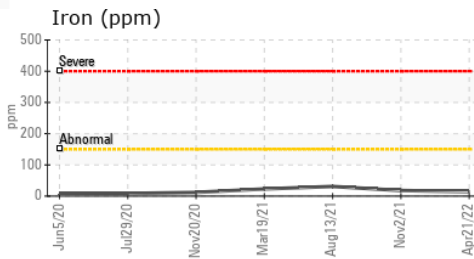
OIL ANALYSIS REPORT



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	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	10.9	9.8	10.2	10.4

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0032824 **Received** : 22 Apr 2022
Lab Number : 05526415 **Diagnosed** : 25 Apr 2022
Unique Number : 9945695 **Diagnostician** : Don Baldrige
Test Package : MOB1+

GFL Environmental - 657 - Charlottesville Hauling
 5498 Richmond Road
 Troy, VA
 US 22974
 Contact: Brian Ulickas
 bulickas@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)

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F: