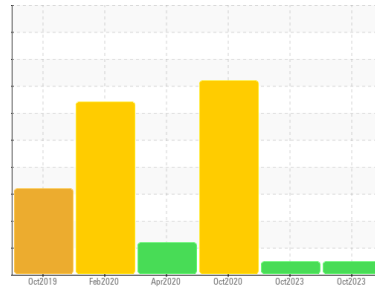




OIL ANALYSIS REPORT

Sample Rating Trend



NORMAL



Machine Id
225047-603258

Component
Diesel Engine

Fluid
DIESSEL ENGINE OIL SAE 15W40 (8 Shots)

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

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 INFORMATION

method	limit/base	current	history1	history2
Sample Number	Client Info	GFL0065472	GFL0065459	GFL10280075
Sample Date	Client Info	13 Oct 2023	06 Oct 2023	12 Oct 2020
Machine Age	hrs	692	46	2004
Oil Age	hrs	150	150	23697
Oil Changed	Client Info	Not Chngd	Not Chngd	?N/A
Sample Status		NORMAL	NORMAL	SEVERE

CONTAMINATION

method	limit/base	current	history1	history2
Fuel	WC Method >5	<1.0	<1.0	<1.0
Glycol	WC Method	NEG	NEG	0.08

WEAR METALS

method	limit/base	current	history1	history2
Iron	ppm ASTM D5185m >100	2	48	67
Chromium	ppm ASTM D5185m >20	0	2	3
Nickel	ppm ASTM D5185m >4	3	<1	1
Titanium	ppm ASTM D5185m	0	0	0
Silver	ppm ASTM D5185m >3	0	0	0
Aluminum	ppm ASTM D5185m >20	<1	2	6
Lead	ppm ASTM D5185m >40	0	2	12
Copper	ppm ASTM D5185m >330	0	1	12
Tin	ppm ASTM D5185m >15	<1	2	---
Antimony	ppm ASTM D5185m	---	---	0
Vanadium	ppm ASTM D5185m	0	0	0
Cadmium	ppm ASTM D5185m	0	0	---

ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m 250	3	4	---
Barium	ppm ASTM D5185m 10	<1	0	---
Molybdenum	ppm ASTM D5185m 100	59	57	132
Manganese	ppm ASTM D5185m	<1	1	---
Magnesium	ppm ASTM D5185m 450	952	934	---
Calcium	ppm ASTM D5185m 3000	1006	1037	2045
Phosphorus	ppm ASTM D5185m 1150	1048	1034	911
Zinc	ppm ASTM D5185m 1350	1271	1256	---
Sulfur	ppm ASTM D5185m 4250	3118	2982	---
Lithium	ppm ASTM D5185m	---	---	---

CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	3	6	---
Sodium	ppm ASTM D5185m >158	2	3	60
Potassium	ppm ASTM D5185m >20	0	3	2

INFRA-RED

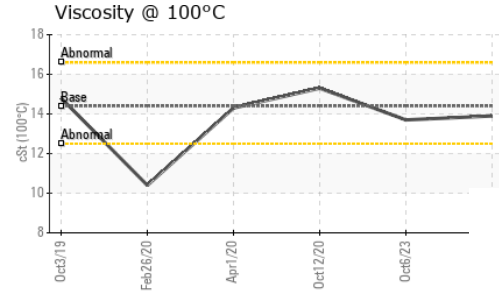
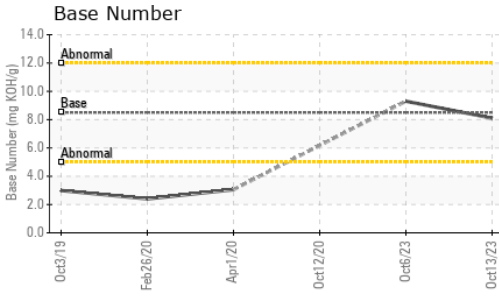
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	0.2	1.5	0.7
Nitration	Abs/cm *ASTM D7624 >20	5.1	9.0	16
Sulfation	Abs/.1mm *ASTM D7415 >30	17.6	20.9	---

FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	13.3	15.2	26
Base Number (BN)	mg KOH/g ASTM D2896 8.5	8.1	9.3	---



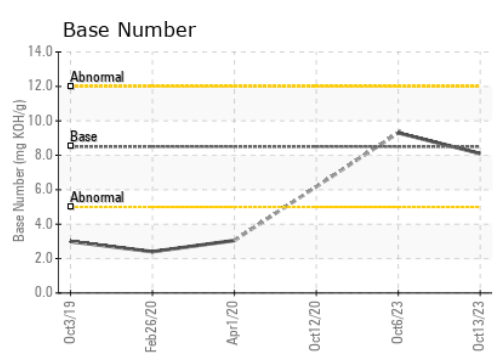
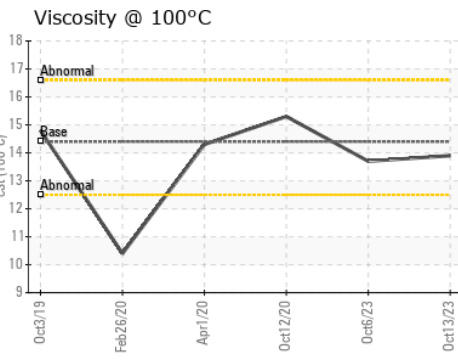
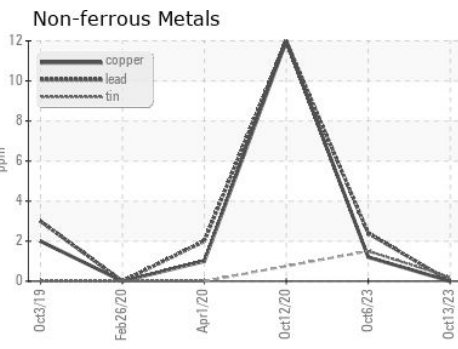
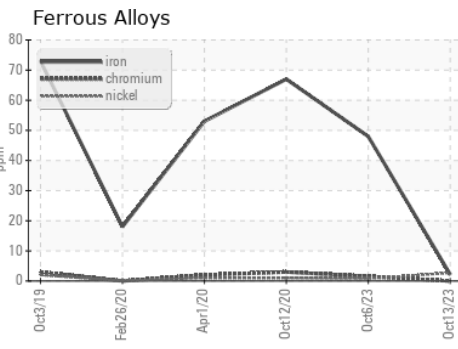
OIL ANALYSIS REPORT



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	14.4	13.9	13.7	15.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0065472 **Received** : 18 Oct 2023
Lab Number : **05982221** **Diagnosed** : 18 Oct 2023
Unique Number : 10699516 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 829 - Wilco Hauling
 5054 Highway HH
 Hartville, MO
 US 65667
 Contact: James Jones
 james.jones@gflenv.com
 T: (417)349-5006
 F:

Certificate L2367
 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)