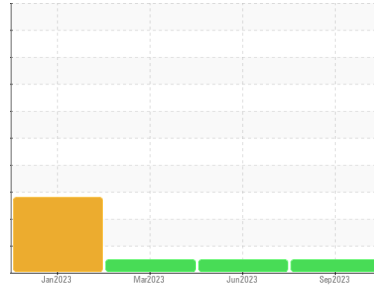




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
413032
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 15W30 (11 GAL)

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

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		GFL0092466	GFL0083628	GFL0074564
Sample Date	Client Info		07 Sep 2023	13 Jun 2023	20 Mar 2023
Machine Age	hrs	Client Info	2095	1027	1027
Oil Age	hrs	Client Info	1027	1027	448
Oil Changed	Client Info		Changed	Changed	Changed
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	11	15	17
Chromium	ppm	ASTM D5185m >20	<1	<1	1
Nickel	ppm	ASTM D5185m >5	<1	<1	3
Titanium	ppm	ASTM D5185m >2	0	<1	<1
Silver	ppm	ASTM D5185m >2	<1	<1	1
Aluminum	ppm	ASTM D5185m >20	13	12	15
Lead	ppm	ASTM D5185m >40	0	<1	2
Copper	ppm	ASTM D5185m >330	11	63	226
Tin	ppm	ASTM D5185m >15	<1	2	2
Vanadium	ppm	ASTM D5185m	0	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	2	2	9
Barium	ppm	ASTM D5185m 10	0	0	0
Molybdenum	ppm	ASTM D5185m 100	59	64	62
Manganese	ppm	ASTM D5185m	<1	<1	2
Magnesium	ppm	ASTM D5185m 450	933	869	894
Calcium	ppm	ASTM D5185m 3000	1055	1132	1124
Phosphorus	ppm	ASTM D5185m 1150	956	923	900
Zinc	ppm	ASTM D5185m 1350	1195	1156	1151
Sulfur	ppm	ASTM D5185m 4250	3150	2817	2730

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	5	8	15
Sodium	ppm	ASTM D5185m	6	4	4
Potassium	ppm	ASTM D5185m >20	28	33	38

INFRA-RED

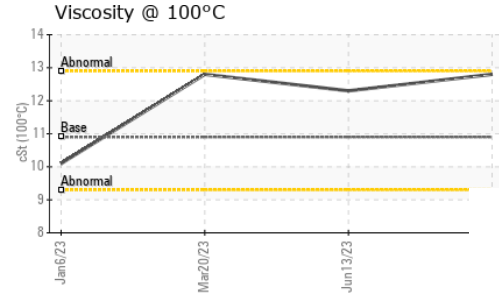
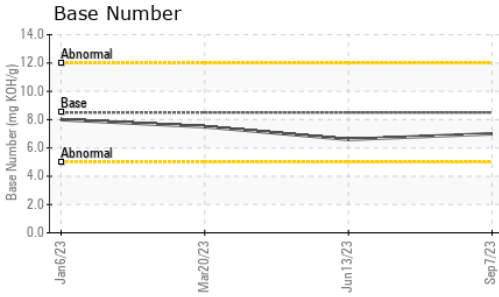
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.4	0.4	0.4
Nitration	Abs/cm	*ASTM D7624 >20	8.2	8.3	8.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	19.6	19.8	20.1

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	15.4	15.2	15.9
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	7.0	6.6	7.5



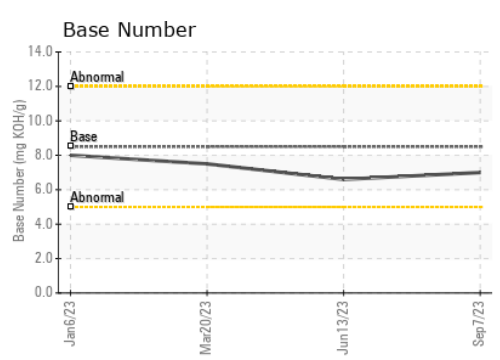
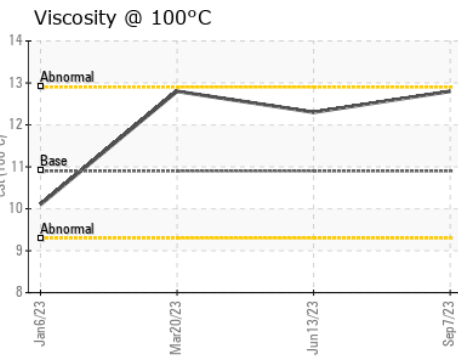
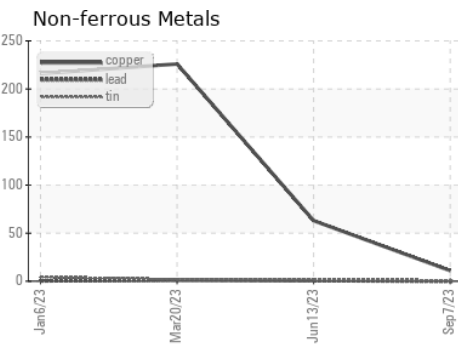
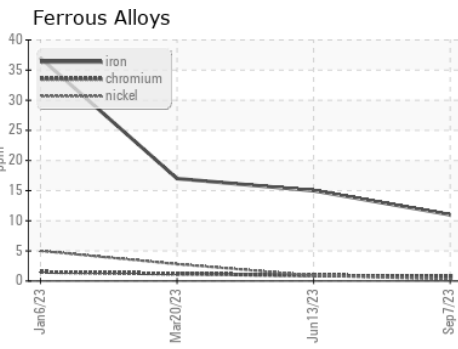
OIL ANALYSIS REPORT



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	12.8	12.3	12.8

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0092466 **Received** : 12 Sep 2023
Lab Number : **05948829** **Diagnosed** : 14 Sep 2023
Unique Number : 10644788 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 095 - Atlanta West
 2699 Cochran Industrial Blvd
 Douglasville, GA
 US 30127-1332
 Contact: Darrell Welch
 darrell.welch@gflenv.com
 T: (800)207-6618
 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)