



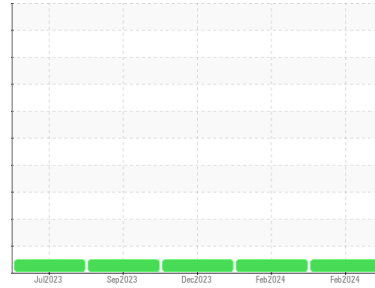
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Area
(24564UA)
Machine Id
819013
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- 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		GFL0111849	GFL0108258	GFL0098259
Sample Date	Client Info		26 Feb 2024	01 Feb 2024	21 Dec 2023
Machine Age	hrs	Client Info	10724	10566	10419
Oil Age	hrs	Client Info	10724	10566	10419
Oil Changed	Client Info		Not Changed	Not Changed	N/A
Sample Status			NORMAL	NORMAL	NORMAL

CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<1.0	<1.0	<1.0
Water	WC Method	>0.2	NEG	NEG	NEG
Glycol	WC Method		NEG	NEG	NEG

WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >120	20	12	32
Chromium	ppm	ASTM D5185m >20	<1	<1	<1
Nickel	ppm	ASTM D5185m >5	<1	0	<1
Titanium	ppm	ASTM D5185m >2	<1	<1	<1
Silver	ppm	ASTM D5185m >2	0	0	0
Aluminum	ppm	ASTM D5185m >20	6	4	7
Lead	ppm	ASTM D5185m >40	2	<1	2
Copper	ppm	ASTM D5185m >330	3	<1	3
Tin	ppm	ASTM D5185m >15	1	<1	<1
Vanadium	ppm	ASTM D5185m	<1	0	<1
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	8	11	5
Barium	ppm	ASTM D5185m 10	1	0	0
Molybdenum	ppm	ASTM D5185m 100	63	56	61
Manganese	ppm	ASTM D5185m	<1	<1	<1
Magnesium	ppm	ASTM D5185m 450	925	908	948
Calcium	ppm	ASTM D5185m 3000	1110	993	1086
Phosphorus	ppm	ASTM D5185m 1150	1058	995	961
Zinc	ppm	ASTM D5185m 1350	1251	1217	1223
Sulfur	ppm	ASTM D5185m 4250	3262	2943	2568

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	13	9	11
Sodium	ppm	ASTM D5185m >216	1	1	2
Potassium	ppm	ASTM D5185m >20	6	2	2

INFRA-RED

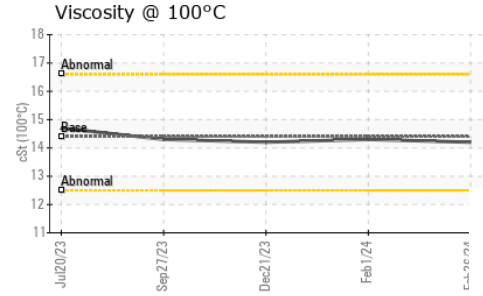
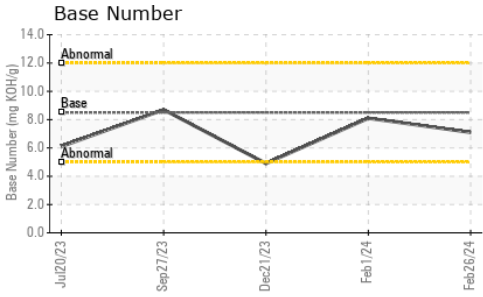
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.5	0.3	0.9
Nitration	Abs/cm	*ASTM D7624 >20	8.9	7.1	10.8
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.5	19.1	22.8

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.0	14.3	17.5
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	7.1	8.1	4.9



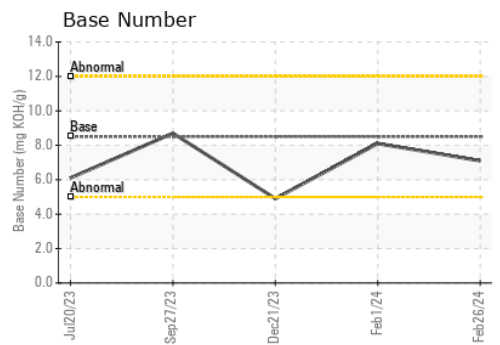
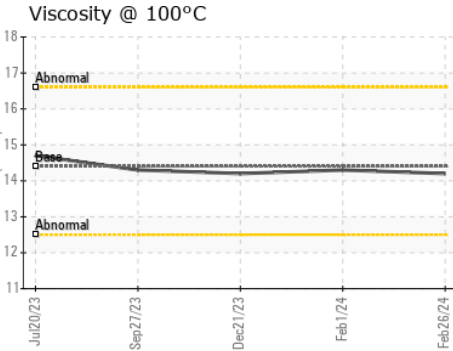
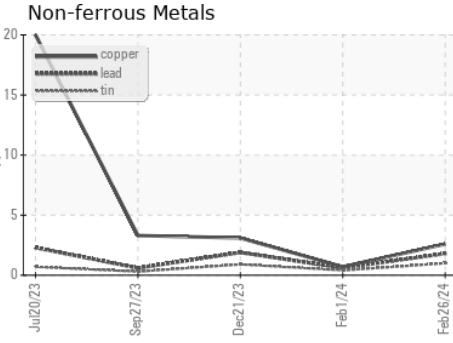
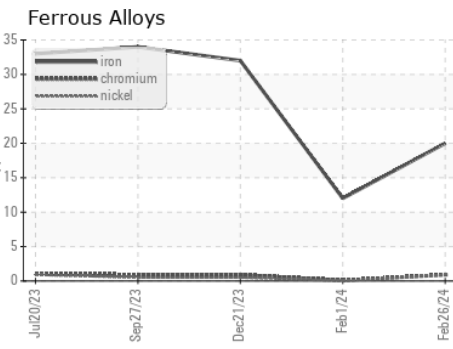
OIL ANALYSIS REPORT



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	14.4	14.2	14.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0111849 **Received** : 27 Feb 2024
Lab Number : 06102303 **Tested** : 28 Feb 2024
Unique Number : 10900533 **Diagnosed** : 28 Feb 2024 - Wes Davis
Test Package : FLEET

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)