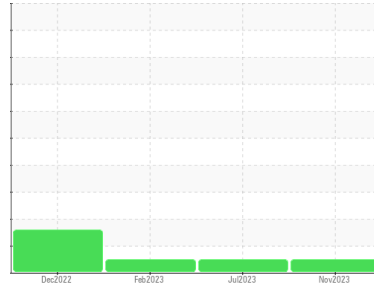




OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
913041-Frontload

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 40 (40 QTS)

DIAGNOSIS

Recommendation

Resample at the next service interval to monitor. The fluid was not specified, however, a fluid match indicates that this fluid is (GENERIC) DIESEL ENGINE OIL SAE 40. Please confirm.

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		GFL0090915	GFL0061994	GFL0061722
Sample Date	Client Info		01 Nov 2023	26 Jul 2023	03 Feb 2023
Machine Age	hrs	Client Info	2936	2414	0
Oil Age	hrs	Client Info	522	600	600
Oil Changed	Client Info		Not Chngd	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	17	38	14
Chromium	ppm	ASTM D5185m >20	<1	1	<1
Nickel	ppm	ASTM D5185m >5	7	7	3
Titanium	ppm	ASTM D5185m >2	<1	0	0
Silver	ppm	ASTM D5185m >2	<1	<1	1
Aluminum	ppm	ASTM D5185m >20	2	5	2
Lead	ppm	ASTM D5185m >40	<1	<1	1
Copper	ppm	ASTM D5185m >330	25	40	237
Tin	ppm	ASTM D5185m >15	1	2	2
Vanadium	ppm	ASTM D5185m	0	0	0
Cadmium	ppm	ASTM D5185m	<1	0	0

ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 250	5	1	11
Barium	ppm	ASTM D5185m 10	5	1	0
Molybdenum	ppm	ASTM D5185m 100	61	66	65
Manganese	ppm	ASTM D5185m	<1	2	1
Magnesium	ppm	ASTM D5185m 450	897	939	870
Calcium	ppm	ASTM D5185m 3000	1058	1151	1125
Phosphorus	ppm	ASTM D5185m 1150	1029	961	905
Zinc	ppm	ASTM D5185m 1350	1191	1255	1143
Sulfur	ppm	ASTM D5185m 4250	3012	2356	3065

CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	8	10	8
Sodium	ppm	ASTM D5185m >216	2	2	<1
Potassium	ppm	ASTM D5185m >20	6	13	4

INFRA-RED

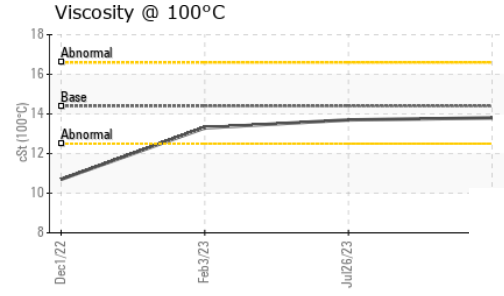
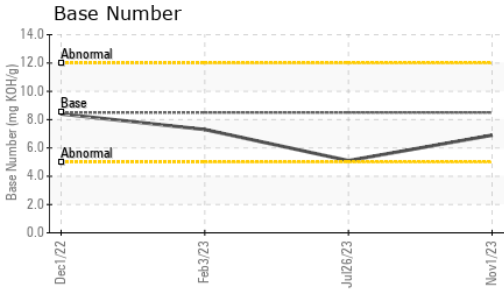
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	0.5	1	0.3
Nitration	Abs/cm	*ASTM D7624 >20	8.7	11.5	8.1
Sulfation	Abs/.1mm	*ASTM D7415 >30	20.3	23.1	19.7

FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	16.6	20.1	15.5
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	6.9	5.1	7.3



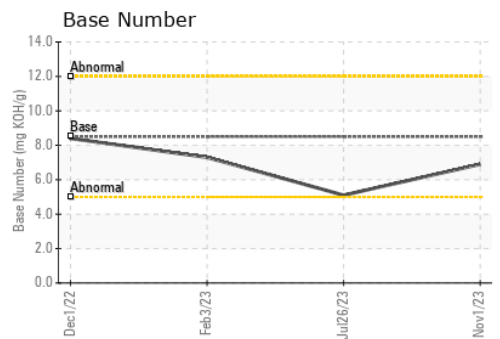
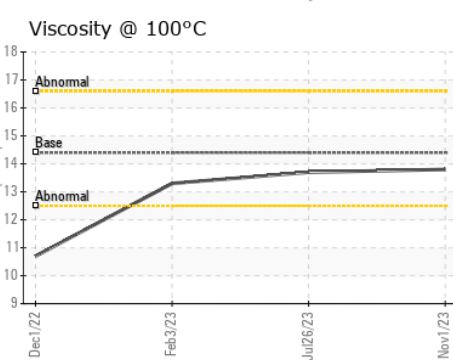
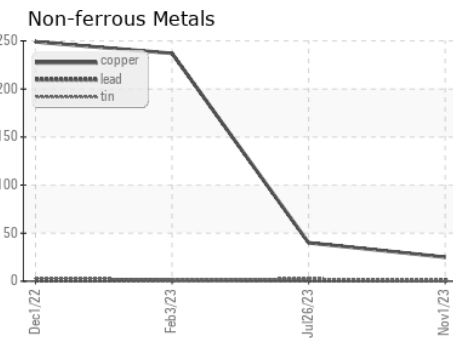
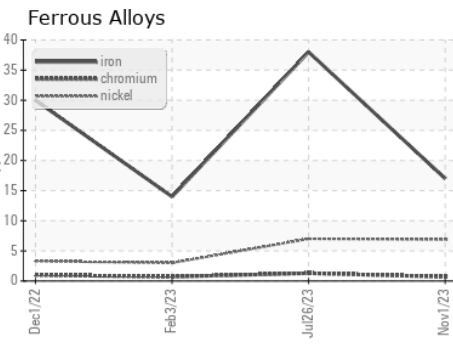
OIL ANALYSIS REPORT



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	14.4	13.8	13.7	13.3

GRAPHS



Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0090915 **Received** : 06 Nov 2023
Lab Number : 05999771 **Diagnosed** : 07 Nov 2023
Unique Number : 10728131 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 656 - Culpeper Hauling
 15490 Montanus Drive
 Culpeper, VA
 US 22701
 Contact: Matt Hanna
 mhanna@gflenv.com
 T: (540)727-0887
 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)