



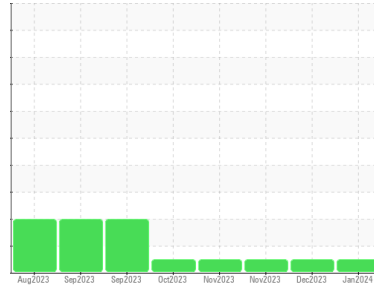
OIL ANALYSIS REPORT

Sample Rating Trend

NORMAL



Machine Id
414063
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 15W40 (--- 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	GFL0025060	GFL0098450	GFL0098442	
Sample Date	Client Info	18 Jan 2024	26 Dec 2023	29 Nov 2023	
Machine Age	hrs	Client Info	1205	1070	896
Oil Age	hrs	Client Info	1205	1070	896
Oil Changed	Client Info	Not Chngd	N/A	Not Chngd	
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	3	12	10
Chromium	ppm	ASTM D5185m >20	0	<1	<1
Nickel	ppm	ASTM D5185m >5	0	1	0
Titanium	ppm	ASTM D5185m >2	0	0	0
Silver	ppm	ASTM D5185m >2	0	<1	<1
Aluminum	ppm	ASTM D5185m >20	1	6	4
Lead	ppm	ASTM D5185m >40	0	0	0
Copper	ppm	ASTM D5185m >330	<1	98	40
Tin	ppm	ASTM D5185m >15	<1	1	0
Vanadium	ppm	ASTM D5185m	<1	<1	0
Cadmium	ppm	ASTM D5185m	0	0	0

ADDITIVES

method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m 250	44	61	78
Barium	ppm	ASTM D5185m 10	0	0	2
Molybdenum	ppm	ASTM D5185m 100	73	74	78
Manganese	ppm	ASTM D5185m	0	1	0
Magnesium	ppm	ASTM D5185m 450	872	840	795
Calcium	ppm	ASTM D5185m 3000	1094	1123	1148
Phosphorus	ppm	ASTM D5185m 1150	979	940	851
Zinc	ppm	ASTM D5185m 1350	1154	1138	1036
Sulfur	ppm	ASTM D5185m 4250	3058	2695	2825

CONTAMINANTS

method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m >25	4	10	10
Sodium	ppm	ASTM D5185m >158	2	4	<1
Potassium	ppm	ASTM D5185m >20	<1	11	10

INFRA-RED

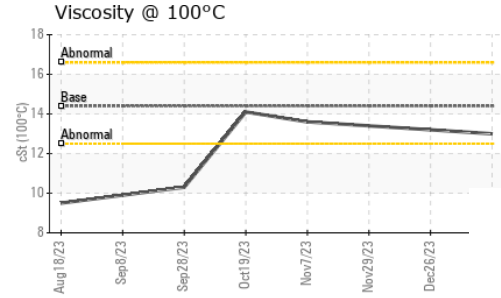
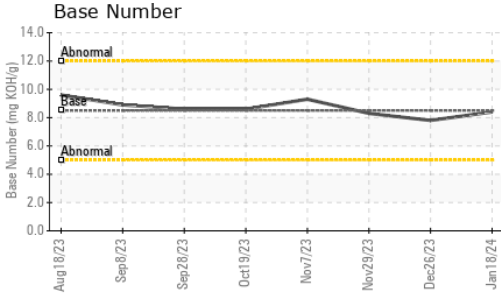
method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844 >4	0.4	0.3	0.2
Nitration	Abs/cm	*ASTM D7624 >20	5.7	7.4	6.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	18.5	20.9	20.3

FLUID DEGRADATION

method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414 >25	13.6	16.3	15.6
Base Number (BN)	mg KOH/g	ASTM D2896 8.5	8.4	7.8	8.3



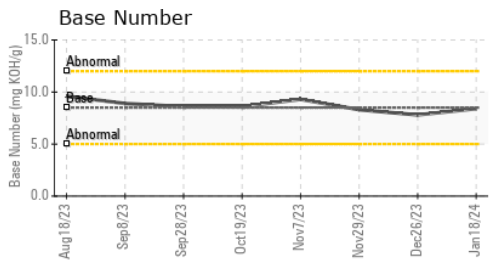
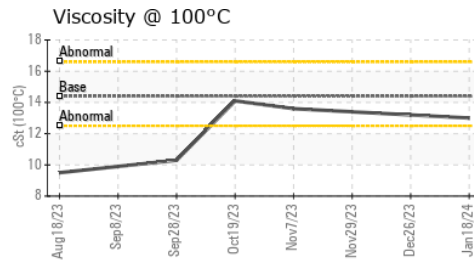
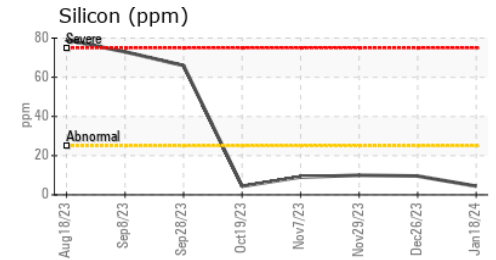
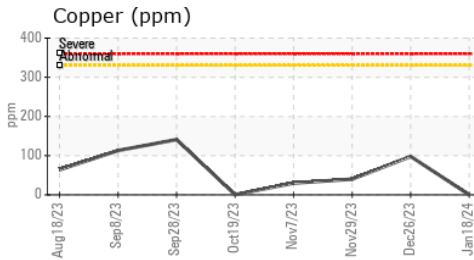
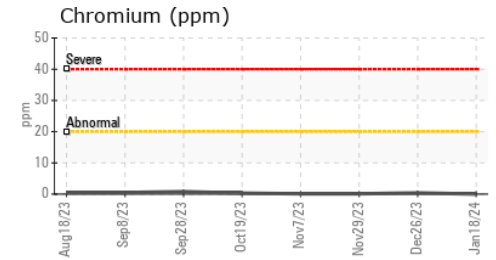
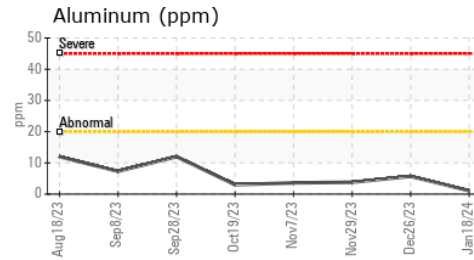
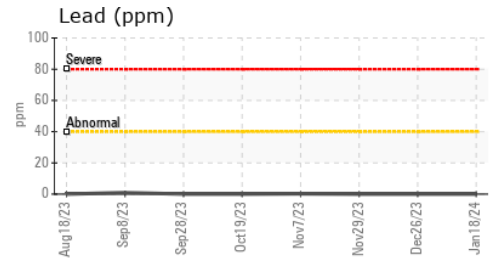
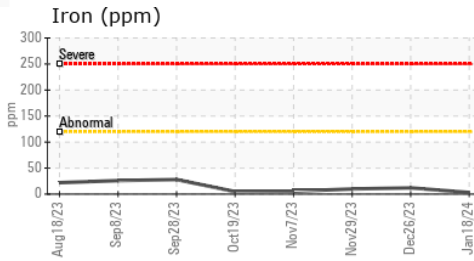
OIL ANALYSIS REPORT



PARAMETER	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	13.0	13.2

GRAPHS



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
 Sample No. : GFL0025060
 Lab Number : 06068247
 Unique Number : 10844924
 Test Package : MOB1+

GFL Environmental - 180 - Tuscaloosa Hauling
 4701 12TH ST NE
 Tuscaloosa, AL
 US 35404
 Contact: FREDERICK ROGERS
 fred.rogers@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)

T:
F: