



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
811043

Component
Diesel Engine

Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

Little or no information is provided as to the component and lubricant being tested. Recommendations are therefore generic in nature and may not apply to the current application. Please forward information as to equipment type, reservoir capacity, lubricant type and any pertinent information to allow for a more accurate assessment. Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. Please specify the brand, type, and viscosity of the oil on your next sample.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		GFL0074731	GFL0074739	GFL0046903
Sample Date		Client Info		13 Mar 2023	17 Feb 2023	25 Jan 2023
Machine Age	hrs	Client Info		4931	4763	4593
Oil Age	hrs	Client Info		168	170	82
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	6	4	9
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	4	2	5
Lead	ppm	ASTM D5185m	>40	0	0	0
Copper	ppm	ASTM D5185m	>330	<1	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Vanadium	ppm	ASTM D5185m		0	0	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

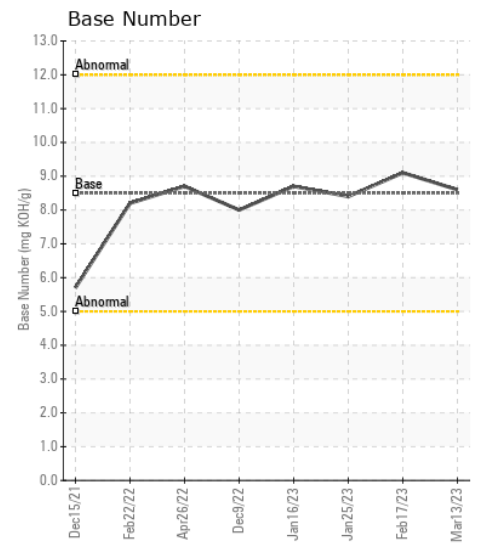
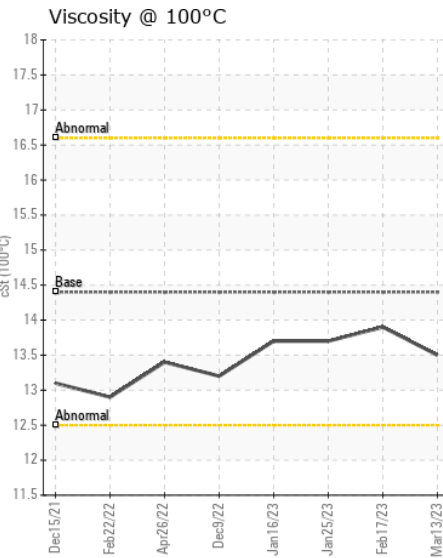
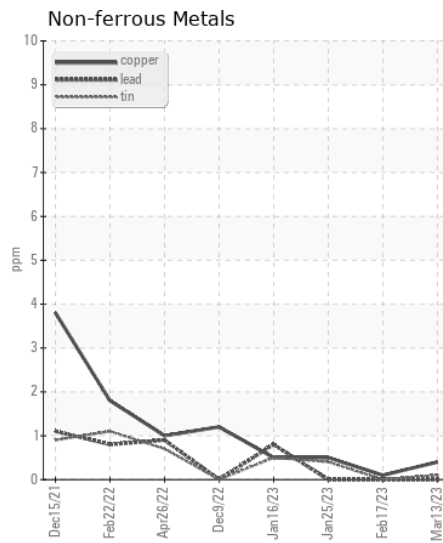
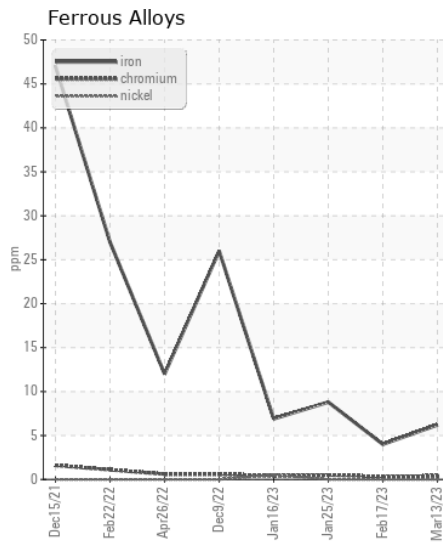
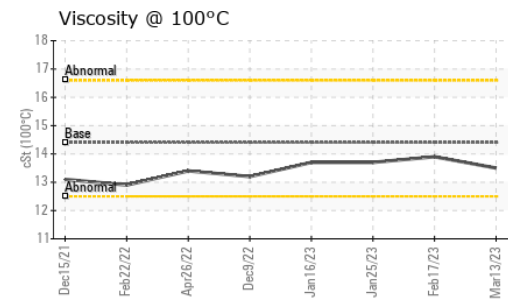
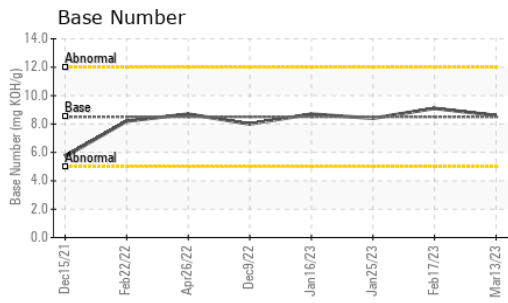
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	3	3	3
Potassium	ppm	ASTM D5185m	>20	5	4	7
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.3	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	6.6	5.7	7.0
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	17.7	18.6
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG

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.

Sodium	ppm	ASTM D5185m	>216	1	3	3
Boron	ppm	ASTM D5185m	250	3	0	12
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	57	58	56
Manganese	ppm	ASTM D5185m		<1	0	<1
Magnesium	ppm	ASTM D5185m	450	880	919	867
Calcium	ppm	ASTM D5185m	3000	1009	1074	1116
Phosphorus	ppm	ASTM D5185m	1150	958	1014	962
Zinc	ppm	ASTM D5185m	1350	1172	1225	1169
Sulfur	ppm	ASTM D5185m	4250	3462	3240	3505
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	13.4	14.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	8.6	9.1	8.4
Visc @ 100°C	cSt	ASTM D445	14.4	13.5	13.9	13.7



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0074731 **Received** : 16 Mar 2023
Lab Number : 05793925 **Diagnosed** : 17 Mar 2023
Unique Number : 10383609 **Diagnostician** : Wes Davis
Test Package : FLEET

GFL Environmental - 814 - Little Rock Hauling
 4005 Hwy 161 N.
 Little Rock, AR
 US 72117
 Contact: Brad Koenig
 bkoenig@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: