



WEAR	NORMAL
CONTAMINATION	MARGINAL
FLUID CONDITION	ABNORMAL

Machine Id
729041-361666
 Component
Diesel Engine
 Fluid
{not provided} (--- GAL)

RECOMMENDATION

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. 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		GFL0074702	GFL0061915	GFL0029971
Sample Date		Client Info		06 Apr 2023	21 Nov 2022	14 Apr 2022
Machine Age	hrs	Client Info		18868	18528	18482
Oil Age	hrs	Client Info		18868	650	600
Filter Age	hrs	Client Info		0	650	600
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	ATTENTION	ATTENTION

WEAR

Metal levels are typical for a components first oil change.

Iron	ppm	ASTM D5185m	>100	31	18	22
Chromium	ppm	ASTM D5185m	>20	2	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>20	2	5	3
Lead	ppm	ASTM D5185m	>40	2	<1	1
Copper	ppm	ASTM D5185m	>330	2	1	1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

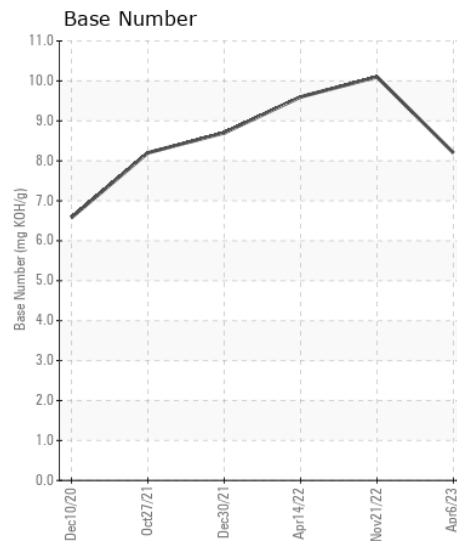
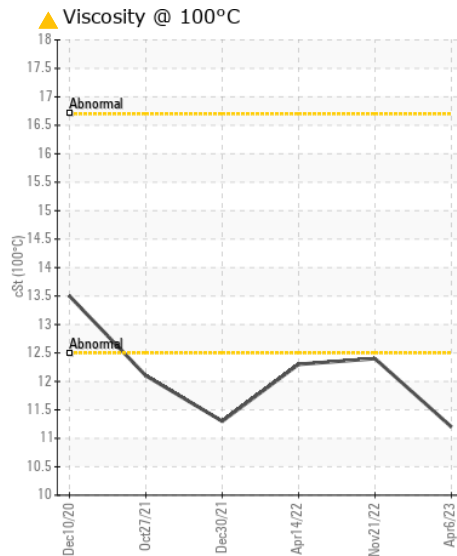
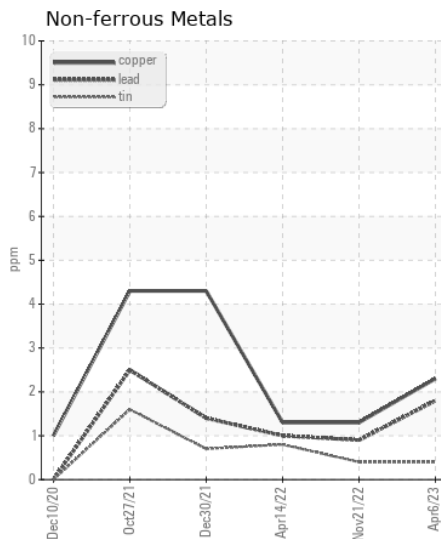
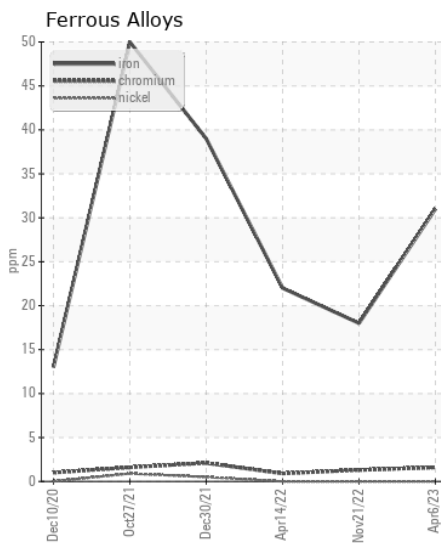
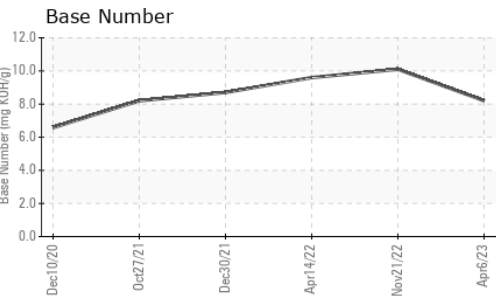
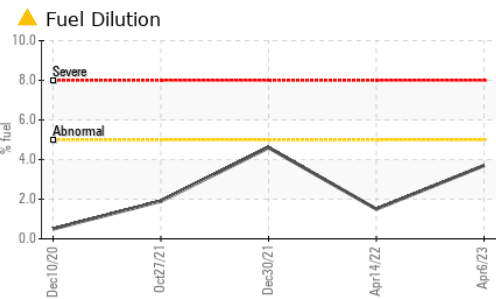
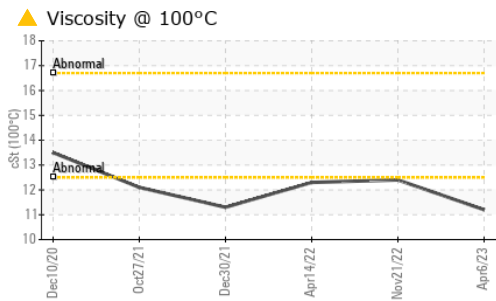
Light fuel dilution occurring.

Silicon	ppm	ASTM D5185m	>25	8	5	7
Potassium	ppm	ASTM D5185m	>20	1	1	<1
Fuel	%	ASTM D3524	>5	▲ 3.7	<1.0	1.5
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>3	0.5	0.2	0.4
Nitration	Abs/cm	*ASTM D7624	>20	6.8	5.7	6.3
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.3	18.8	19.4
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. Fuel is present in the oil and is lowering the viscosity. The condition of the oil is suitable for further service.

Sodium	ppm	ASTM D5185m		6	3	3
Boron	ppm	ASTM D5185m		2	13	14
Barium	ppm	ASTM D5185m		2	2	0
Molybdenum	ppm	ASTM D5185m		58	61	60
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m		905	901	966
Calcium	ppm	ASTM D5185m		1068	1111	1124
Phosphorus	ppm	ASTM D5185m		1008	1031	1075
Zinc	ppm	ASTM D5185m		1202	1215	1196
Sulfur	ppm	ASTM D5185m		2970	3731	2884
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	14.0	14.5
Base Number (BN)	mg KOH/g	ASTM D2896		8.2	10.1	9.6
Visc @ 100°C	cSt	ASTM D445		▲ 11.2	▲ 12.4	▲ 12.3



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0074702 **Received** : 11 Apr 2023
Lab Number : 05816849 **Diagnosed** : 14 Apr 2023
Unique Number : 10419641 **Diagnostician** : Wes Davis
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

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)