



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	ATTENTION

Machine Id
AUTOCAR 812012
 Component
Diesel Engine
 Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

No corrective action is recommended at this time. Resample at the next service interval to monitor. 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		GFL0109065	GFL0086203	GFL0086277
Sample Date		Client Info		05 Jan 2024	26 Sep 2023	17 Aug 2023
Machine Age	hrs	Client Info		4876	4274	0
Oil Age	hrs	Client Info		4876	4274	0
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Filter Changed		Client Info		N/A	N/A	N/A
Sample Status				ATTENTION	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>90	9	8	16
Chromium	ppm	ASTM D5185m	>20	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	6	4	8
Lead	ppm	ASTM D5185m	>40	0	0	<1
Copper	ppm	ASTM D5185m	>330	<1	<1	4
Tin	ppm	ASTM D5185m	>15	0	0	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

Fuel content negligible. There is no indication of any contamination in the oil.

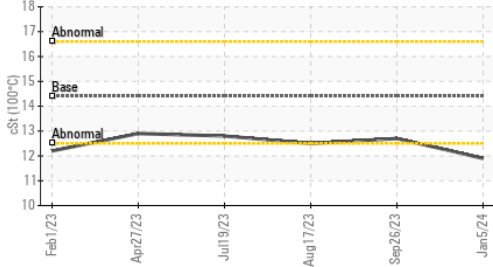
Silicon	ppm	ASTM D5185m	>25	2	2	5
Potassium	ppm	ASTM D5185m	>20	12	15	20
Fuel	%	ASTM D3524	>3.0	0.5	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	*ASTM D7844	>6	0.3	0.4	0.3
Nitration	Abs/cm	*ASTM D7624	>20	7.9	7.2	7.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.1	17.9	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

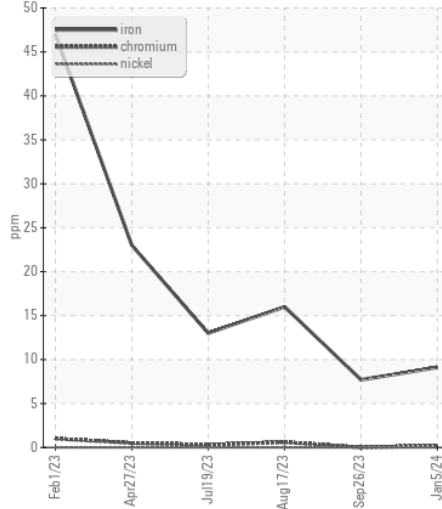
The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

Sodium	ppm	ASTM D5185m	>216	3	<1	3
Boron	ppm	ASTM D5185m	250	17	14	20
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	65	66	60
Manganese	ppm	ASTM D5185m		0	0	1
Magnesium	ppm	ASTM D5185m	450	731	897	813
Calcium	ppm	ASTM D5185m	3000	1178	1225	1136
Phosphorus	ppm	ASTM D5185m	1150	944	1028	892
Zinc	ppm	ASTM D5185m	1350	1132	1289	1093
Sulfur	ppm	ASTM D5185m	4250	2892	3238	3208
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.8	13.3	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.3	7.1	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	▲ 11.9	12.7	12.5

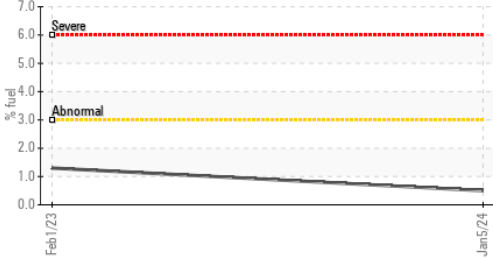
▲ Viscosity @ 100°C



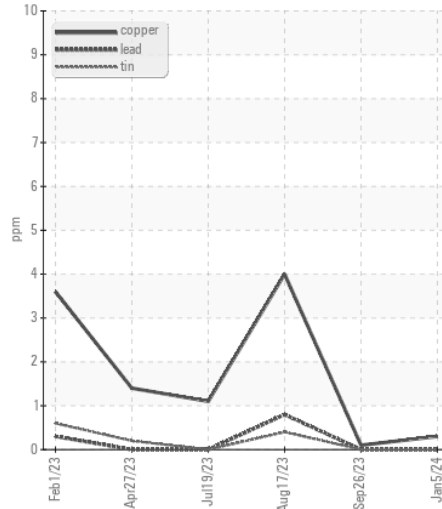
Ferrous Alloys



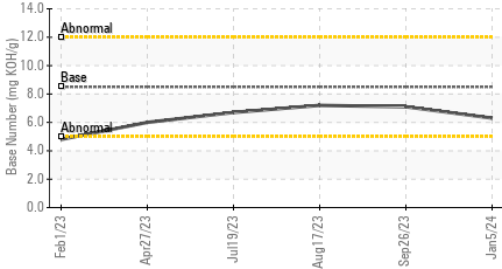
Fuel Dilution



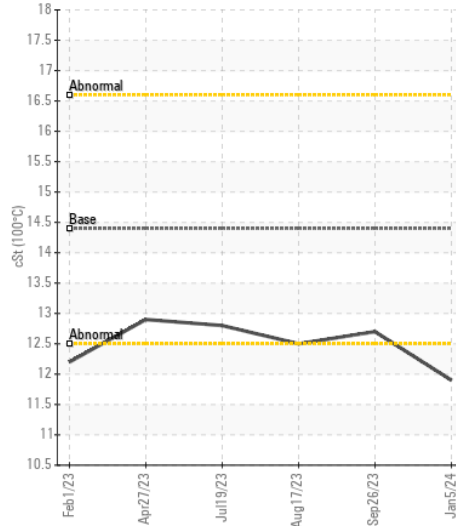
Non-ferrous Metals



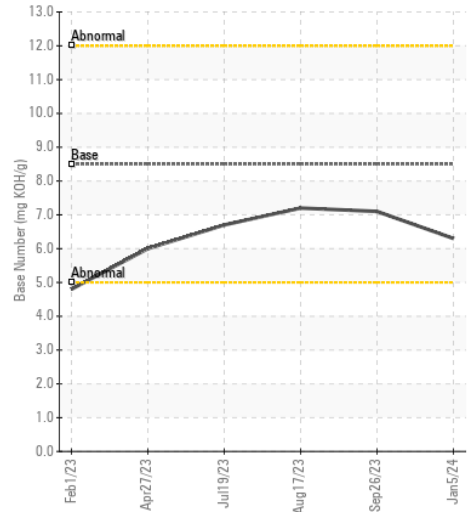
Base Number



▲ Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0109065 **Received** : 09 Jan 2024
Lab Number : 06055759 **Diagnosed** : 11 Jan 2024
Unique Number : 10821708 **Diagnostician** : Jonathan Hester
Test Package : FLEET (Additional Tests: FuelDilution, PercentFuel)

GFL Environmental - 009 - Fairburn
 6905 Roosevelt Hwy
 Fairburn, GA
 US 30213
 Contact: Eric Jones
 erjones@gflenv.com
 T: (678)630-9927
 F:

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)