



Area
(34744UA)
Machine Id
813000
Component
Diesel Engine
Fluid
DIESEL ENGINE OIL SAE 40 (--- GAL)

RECOMMENDATION

We advise that you check for the source of the coolant leak. We recommend that you drain the oil from the component if this has not already been done. We advise that you flush the component thoroughly before re-filling with oil. We recommend an early resample to monitor this condition. 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		GFL0111898	GFL0111827	GFL0108252
Sample Date		Client Info		18 Mar 2024	27 Feb 2024	09 Feb 2024
Machine Age	hrs	Client Info		3890	3749	3627
Oil Age	hrs	Client Info		141	3749	3627
Filter Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Filter Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				SEVERE	NORMAL	NORMAL

WEAR

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	8	23	15
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>5	<1	2	1
Titanium	ppm	ASTM D5185m	>2	<1	0	<1
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>40	0	<1	1
Copper	ppm	ASTM D5185m	>330	1	2	2
Tin	ppm	ASTM D5185m	>15	<1	1	2
Vanadium	ppm	ASTM D5185m		0	<1	0
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE

CONTAMINATION

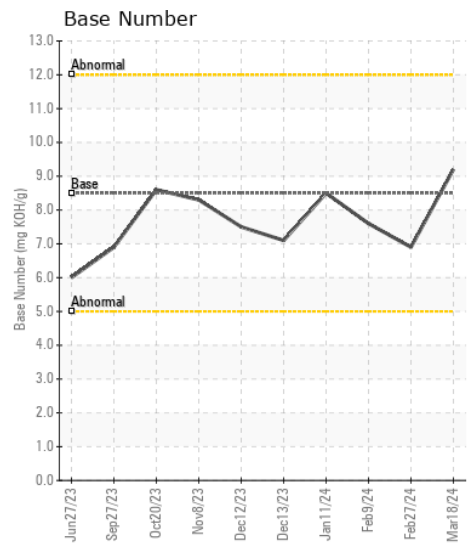
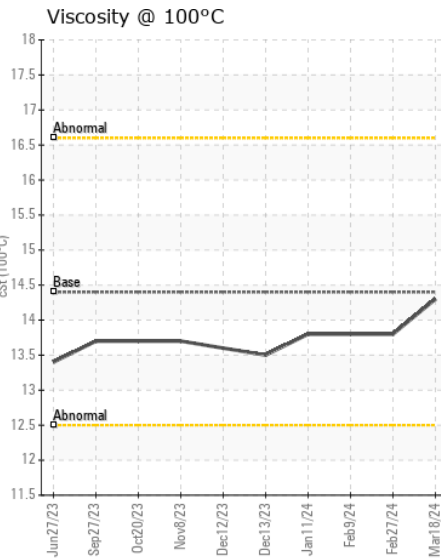
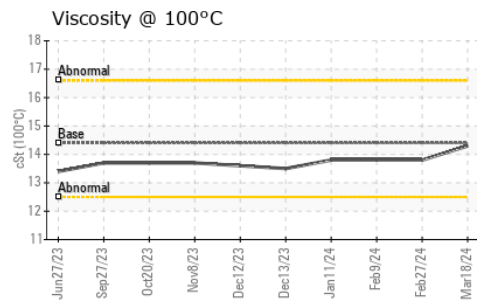
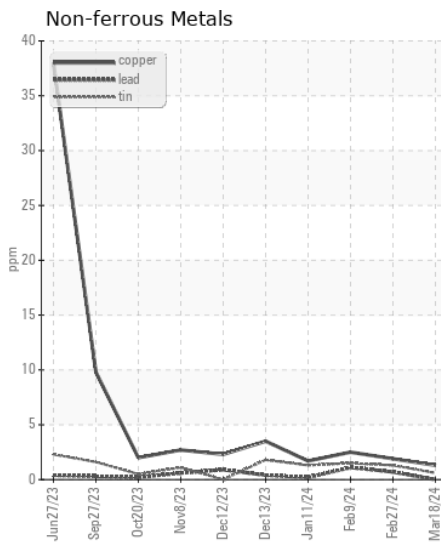
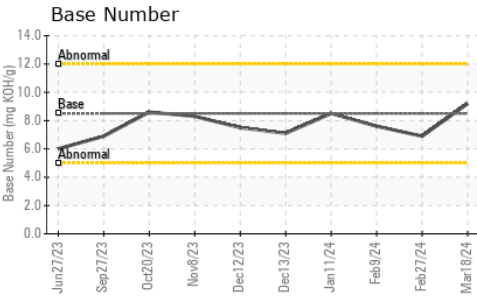
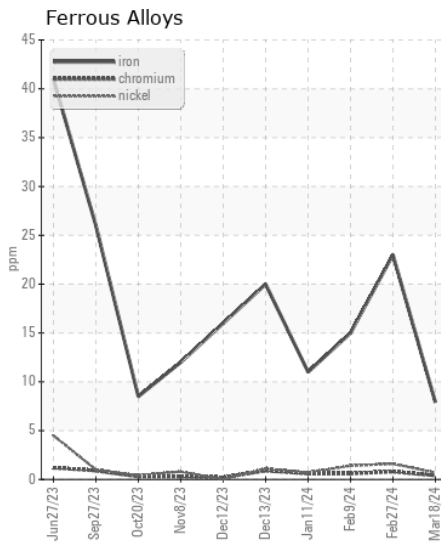
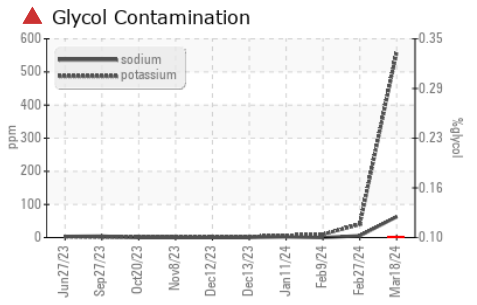
Test for glycol is positive. There is a high concentration of glycol present in the oil.

Silicon	ppm	ASTM D5185m	>25	6	5	4
Potassium	ppm	ASTM D5185m	>20	560	40	10
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol	%	*ASTM D2982		0.10	NEG	NEG
Soot %	%	*ASTM D7844	>4	0.4	1.2	0.9
Nitration	Abs/cm	*ASTM D7624	>20	6.9	9.7	8.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.7	21.3	19.8
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 oil is no longer serviceable due to the presence of contaminants.

Sodium	ppm	ASTM D5185m	>216	63	5	0
Boron	ppm	ASTM D5185m	250	12	5	6
Barium	ppm	ASTM D5185m	10	0	0	13
Molybdenum	ppm	ASTM D5185m	100	99	63	56
Manganese	ppm	ASTM D5185m		<1	<1	<1
Magnesium	ppm	ASTM D5185m	450	903	1122	829
Calcium	ppm	ASTM D5185m	3000	1128	1331	1067
Phosphorus	ppm	ASTM D5185m	1150	1008	1014	960
Zinc	ppm	ASTM D5185m	1350	1218	1490	1101
Sulfur	ppm	ASTM D5185m	4250	3321	3263	3241
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.7	16.0	14.6
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	9.2	6.9	7.6
Visc @ 100°C	cSt	ASTM D445	14.4	14.3	13.8	13.8



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0111898

Lab Number : 06122106

Unique Number : 10936257

Test Package : FLEET (Additional Tests: Glycol)

Received : 19 Mar 2024

Tested : 20 Mar 2024

Diagnosed : 20 Mar 2024 - Wes Davis

GFL Environmental - 652 - Fredericksburg Hauling

10954 Houser Drive

Fredericksburg, VA

US 22408

Contact: WILLIAM MILO

wmilo@gflenv.com

T:

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)