



WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
914031

Component
Diesel Engine

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

RECOMMENDATION

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		GFL0110889	GFL0110918	GFL0090965
Sample Date		Client Info		20 Feb 2024	01 Feb 2024	09 Jan 2024
Machine Age	hrs	Client Info		1180	1035	883
Oil Age	hrs	Client Info		145	152	115
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	22	16	11
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	3	3	2
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	1	1	1
Aluminum	ppm	ASTM D5185m	>20	1	1	2
Lead	ppm	ASTM D5185m	>40	0	<1	<1
Copper	ppm	ASTM D5185m	>330	179	81	32
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

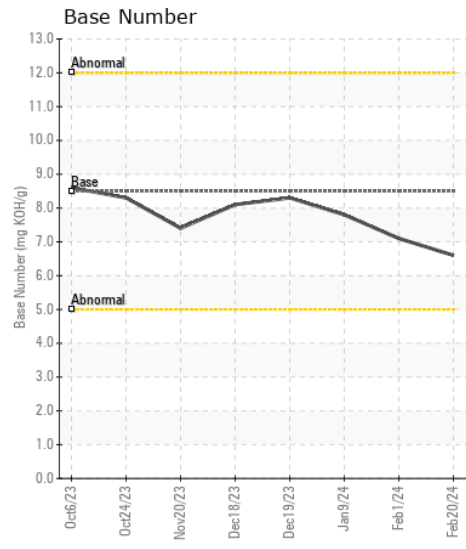
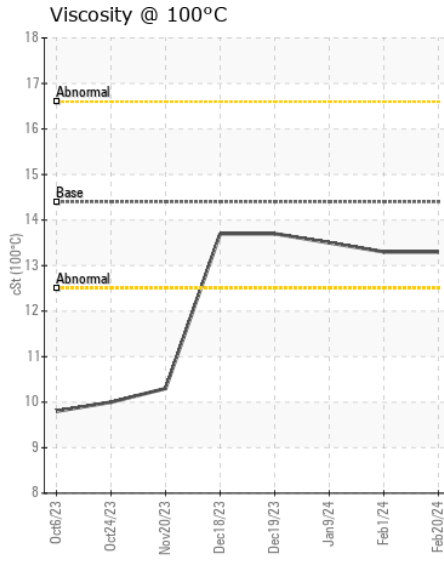
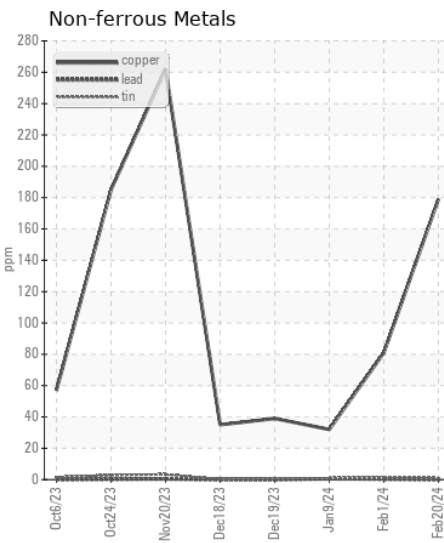
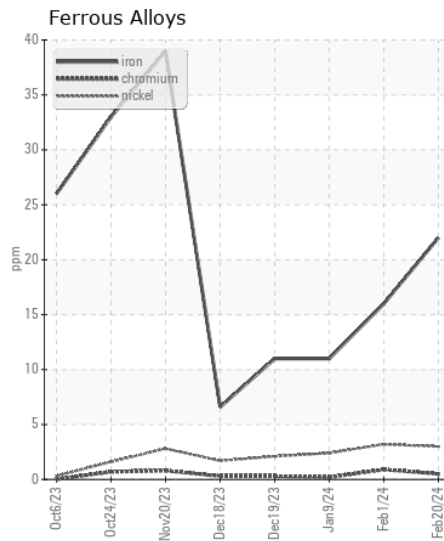
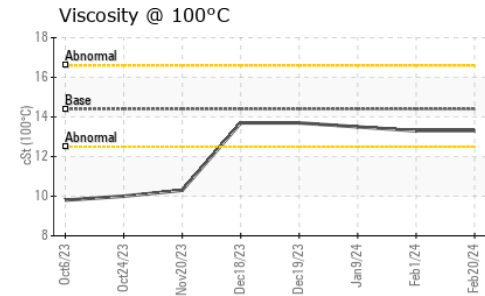
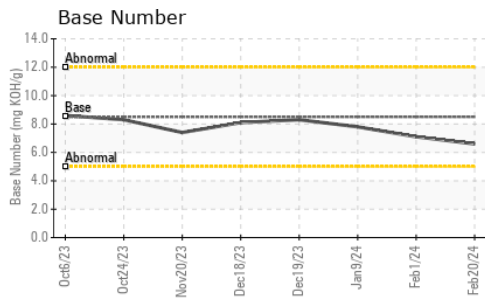
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	8	8	9
Potassium	ppm	ASTM D5185m	>20	1	2	2
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	0.4	0.3	0.2
Nitration	Abs/cm	*ASTM D7624	>20	8.7	7.9	6.9
Sulfation	Abs/.1mm	*ASTM D7415	>30	20.1	19.9	19.1
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	3	2	2
Boron	ppm	ASTM D5185m	250	11	10	18
Barium	ppm	ASTM D5185m	10	0	0	0
Molybdenum	ppm	ASTM D5185m	100	61	58	62
Manganese	ppm	ASTM D5185m		1	1	<1
Magnesium	ppm	ASTM D5185m	450	916	871	945
Calcium	ppm	ASTM D5185m	3000	1024	1048	1051
Phosphorus	ppm	ASTM D5185m	1150	983	1099	1081
Zinc	ppm	ASTM D5185m	1350	1198	1091	1266
Sulfur	ppm	ASTM D5185m	4250	2527	3171	3059
Oxidation	Abs/.1mm	*ASTM D7414	>25	16.5	15.8	15.3
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	6.6	7.1	7.8
Visc @ 100°C	cSt	ASTM D445	14.4	13.3	13.3	13.5



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513
Sample No. : GFL0110889
Lab Number : 06103602
Unique Number : 10901832
Test Package : FLEET
Received : 28 Feb 2024
Tested : 29 Feb 2024
Diagnosed : 29 Feb 2024 - Wes Davis

GFL Environmental - 814 - Little Rock Hauling
 4005 Hwy 161 N.
 Little Rock, AR
 US 72117
 Contact: Michael Lovin
 mlovin@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)