



WEAR	<b>NORMAL</b>
CONTAMINATION	<b>NORMAL</b>
FLUID CONDITION	<b>NORMAL</b>



Area  
**(34739UA)**  
Machine Id  
**812091**  
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		<b>GFL0108259</b>	GFL0098212	GFL0061478
Sample Date		Client Info		<b>01 Feb 2024</b>	30 Dec 2023	08 May 2023
Machine Age	hrs	Client Info		<b>4970</b>	4778	2894
Oil Age	hrs	Client Info		<b>192</b>	4778	2894
Filter Age	hrs	Client Info		<b>192</b>	0	0
Oil Changed		Client Info		<b>Changed</b>	N/A	N/A
Filter Changed		Client Info		<b>Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	ABNORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>120	<b>6</b>	29	25
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	1	1
Nickel	ppm	ASTM D5185m	>5	<b>&lt;1</b>	<1	1
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	<1	<1
Silver	ppm	ASTM D5185m	>2	<b>&lt;1</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>1</b>	1	<1
Lead	ppm	ASTM D5185m	>40	<b>0</b>	<1	<1
Copper	ppm	ASTM D5185m	>330	<b>4</b>	24	8
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	4	<1
Vanadium	ppm	ASTM D5185m		<b>0</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

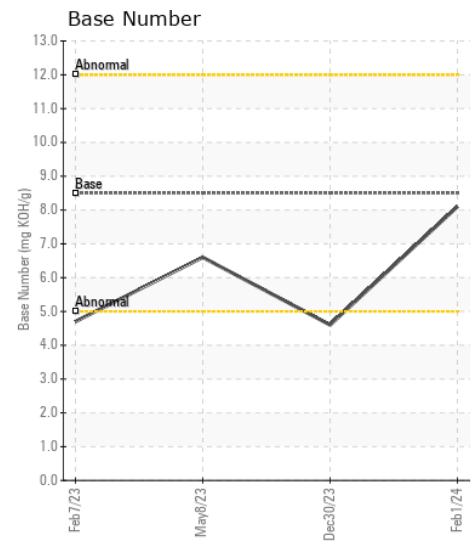
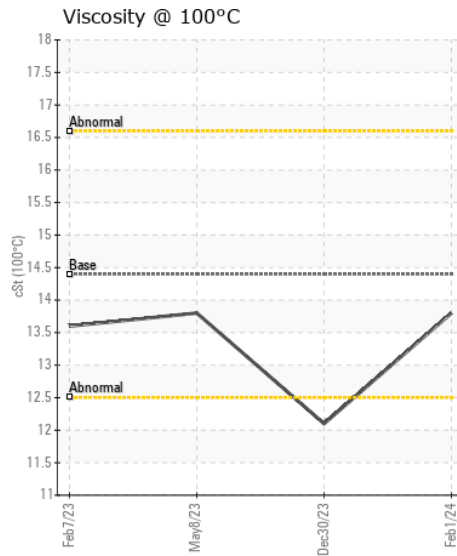
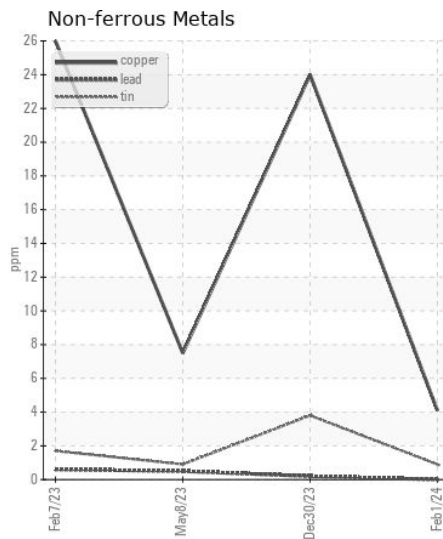
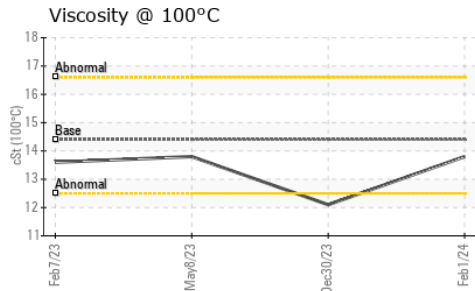
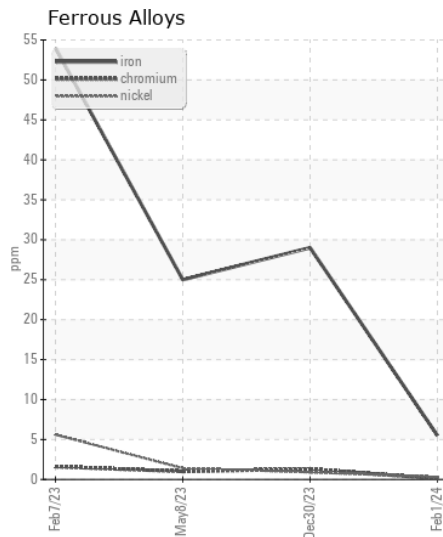
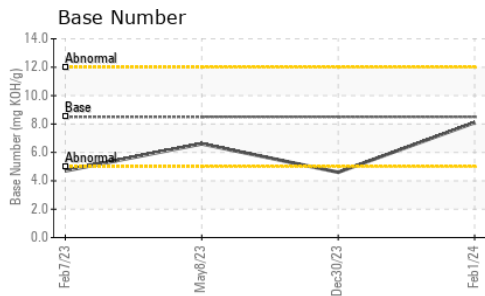
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>7</b>	▲ 40	4
Potassium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	6	5
Fuel		WC Method	>3.0	<b>&lt;1.0</b>	0.2	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>4	<b>0.2</b>	0.5	0.7
Nitration	Abs/cm	*ASTM D7624	>20	<b>6.2</b>	8.6	9.1
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.4</b>	22.8	21.2
Silt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Debris	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Appearance	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Odor	scalar	*Visual	NORML	<b>NORML</b>	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	<b>NEG</b>	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	<b>&lt;1</b>	4	4
Boron	ppm	ASTM D5185m	250	<b>9</b>	3	5
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>51</b>	13	66
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	5	<1
Magnesium	ppm	ASTM D5185m	450	<b>845</b>	154	1043
Calcium	ppm	ASTM D5185m	3000	<b>1055</b>	1998	1265
Phosphorus	ppm	ASTM D5185m	1150	<b>980</b>	865	1055
Zinc	ppm	ASTM D5185m	1350	<b>1199</b>	1089	1406
Sulfur	ppm	ASTM D5185m	4250	<b>2913</b>	2814	3240
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.5</b>	14.5	17.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>8.1</b>	4.6	6.6
Visc @ 100°C	cSt	ASTM D445	14.4	<b>13.8</b>	▲ 12.1	13.8



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0108259  
**Lab Number** : 06083033  
**Unique Number** : 10870478  
**Test Package** : FLEET

**Received** : 07 Feb 2024  
**Tested** : 08 Feb 2024  
**Diagnosed** : 08 Feb 2024 - Wes Davis

**GFL Environmental - 652 - Fredericksburg Hauling**  
 10954 Houser Drive  
 Fredericksburg, VA  
 US 22408  
 Contact: WILLIAM MILO  
 wmilo@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)

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F: