



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

Machine Id  
**913002**

Component  
**Diesel Engine**

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

**RECOMMENDATION**

Resample at the next service interval to monitor. ( Customer Sample Comment: COMPLETED BY CHARLIE )

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		<b>GFL0058112</b>	GFL0058093	GFL0082502
Sample Date		Client Info		<b>07 Feb 2024</b>	20 Nov 2023	17 Aug 2023
Machine Age	hrs	Client Info		<b>3325</b>	2742	2061
Oil Age	hrs	Client Info		<b>583</b>	548	523
Filter Age	hrs	Client Info		<b>0</b>	548	523
Oil Changed		Client Info		<b>Changed</b>	Changed	Changed
Filter Changed		Client Info		<b>N/A</b>	Changed	Changed
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

**WEAR**

All component wear rates are normal.

Iron	ppm	ASTM D5185m	>100	<b>12</b>	18	15
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	<1
Nickel	ppm	ASTM D5185m	>4	<b>4</b>	6	2
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Silver	ppm	ASTM D5185m	>3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	5	4
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	<1
Copper	ppm	ASTM D5185m	>330	<b>1</b>	8	12
Tin	ppm	ASTM D5185m	>15	<b>1</b>	1	1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
White Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	<b>NONE</b>	NONE	NONE

**CONTAMINATION**

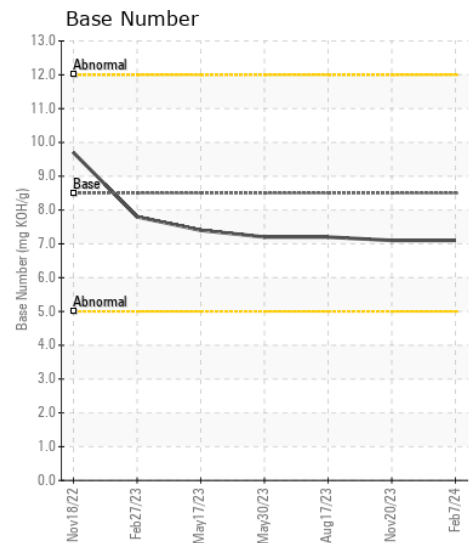
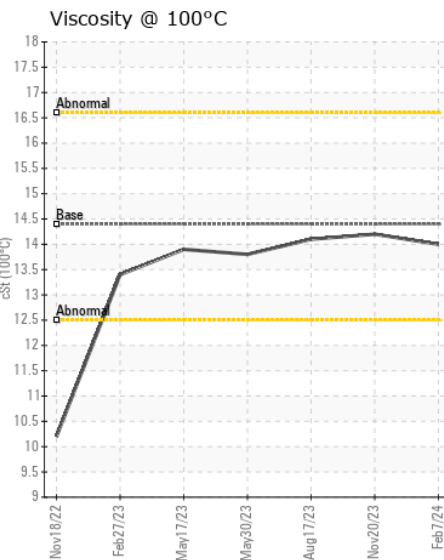
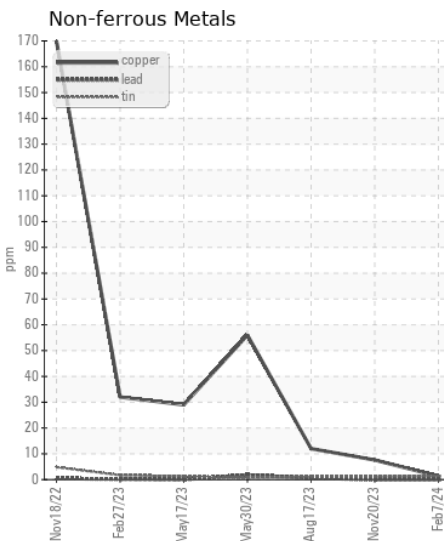
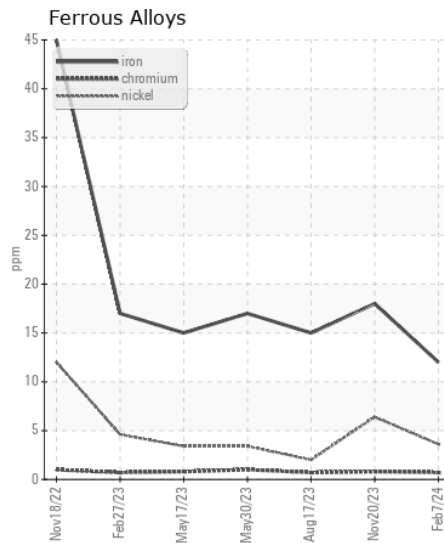
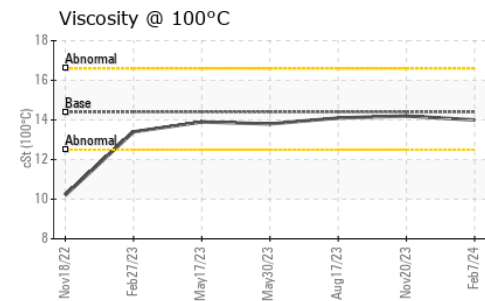
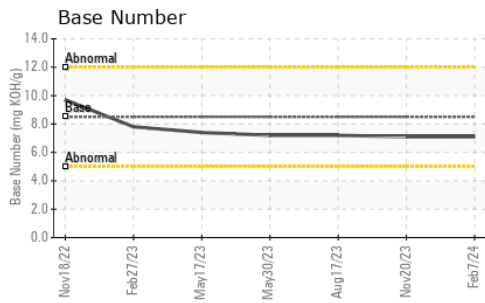
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185m	>25	<b>4</b>	9	6
Potassium	ppm	ASTM D5185m	>20	<b>2</b>	10	8
Fuel		WC Method	>5	<b>&lt;1.0</b>	<1.0	<1.0
Water		WC Method	>0.2	<b>NEG</b>	NEG	NEG
Glycol		WC Method		<b>NEG</b>	NEG	NEG
Soot %	%	*ASTM D7844	>3	<b>0.6</b>	0.7	0.6
Nitration	Abs/cm	*ASTM D7624	>20	<b>9.8</b>	10.0	9.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>21.2</b>	22.2	22.1
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>4</b>	6	6
Boron	ppm	ASTM D5185m	250	<b>2</b>	13	2
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>60</b>	64	66
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	450	<b>935</b>	980	1021
Calcium	ppm	ASTM D5185m	3000	<b>1032</b>	1101	1214
Phosphorus	ppm	ASTM D5185m	1150	<b>1000</b>	1050	1035
Zinc	ppm	ASTM D5185m	1350	<b>1176</b>	1282	1304
Sulfur	ppm	ASTM D5185m	4250	<b>2728</b>	2840	3358
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>17.3</b>	18.5	18.1
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.1</b>	7.1	7.2
Visc @ 100°C	cSt	ASTM D445	14.4	<b>14.0</b>	14.2	14.1



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0058112  
**Lab Number** : 06083299  
**Unique Number** : 10870744  
**Test Package** : FLEET

**Received** : 08 Feb 2024  
**Tested** : 08 Feb 2024  
**Diagnosed** : 09 Feb 2024 - Don Baldrige

**GFL Environmental - 657 - Charlottesville Hauling**  
 5498 Richmond Road  
 Troy, VA  
 US 22974  
 Contact: Brian Ulickas  
 bulickas@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)

T:  
F: