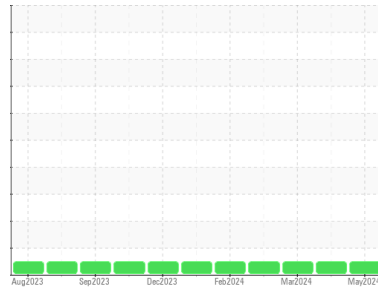




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**AUTOCAR 813022**

Component  
**Diesel Engine**

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

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor. Please specify the brand, type, and viscosity of the oil on your next sample.

### Wear

All component wear rates are normal.

### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

### 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.

SAMPLE INFORMATION		method	limit/base	current	history1	history2
Sample Number	Client Info			<b>GFL0116804</b>	GFL0116790	GFL0109021
Sample Date	Client Info			<b>06 May 2024</b>	03 Apr 2024	07 Mar 2024
Machine Age	hrs	Client Info		<b>1791</b>	1615	1473
Oil Age	hrs	Client Info		<b>1791</b>	1615	1473
Oil Changed	Client Info			<b>Not Changed</b>	N/A	N/A
Sample Status				<b>NORMAL</b>	NORMAL	NORMAL

CONTAMINATION		method	limit/base	current	history1	history2
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

WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	<b>8</b>	3	8
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	0	0
Nickel	ppm	ASTM D5185m	>4	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m	>3	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>7</b>	4	7
Lead	ppm	ASTM D5185m	>40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	0	0
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>0</b>	0	0

ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	250	<b>7</b>	11	9
Barium	ppm	ASTM D5185m	10	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	100	<b>64</b>	57	58
Manganese	ppm	ASTM D5185m		<b>0</b>	<1	0
Magnesium	ppm	ASTM D5185m	450	<b>838</b>	806	726
Calcium	ppm	ASTM D5185m	3000	<b>1137</b>	1078	1080
Phosphorus	ppm	ASTM D5185m	1150	<b>1016</b>	935	817
Zinc	ppm	ASTM D5185m	1350	<b>1188</b>	1100	1009
Sulfur	ppm	ASTM D5185m	4250	<b>2919</b>	3065	2519

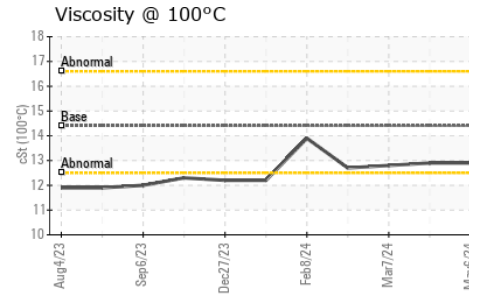
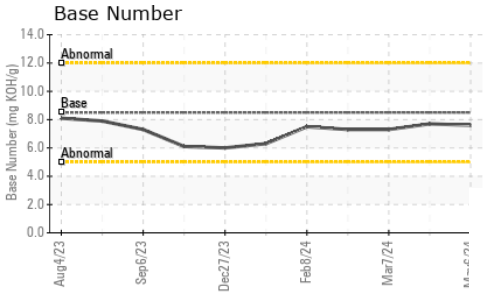
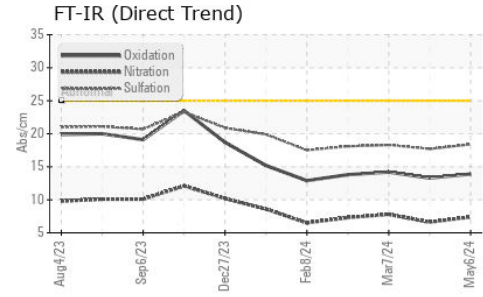
CONTAMINANTS		method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	<b>3</b>	2	2
Sodium	ppm	ASTM D5185m	>216	<b>3</b>	<1	1
Potassium	ppm	ASTM D5185m	>20	<b>15</b>	6	16

INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	<b>0.3</b>	0.2	0.3
Nitration	Abs/cm	*ASTM D7624	>20	<b>7.4</b>	6.6	7.8
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>18.4</b>	17.7	18.3

FLUID DEGRADATION		method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.9</b>	13.3	14.2
Base Number (BN)	mg KOH/g	ASTM D2896	8.5	<b>7.6</b>	7.7	7.3



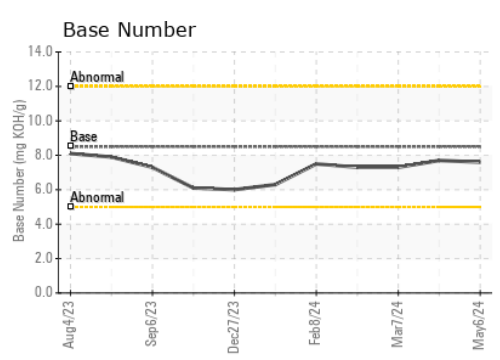
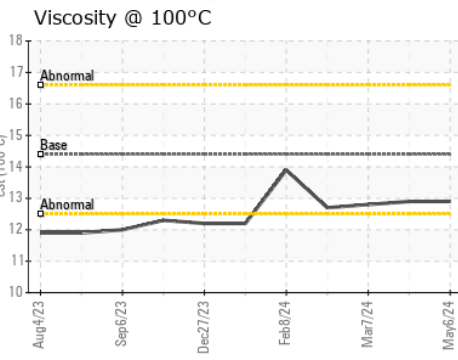
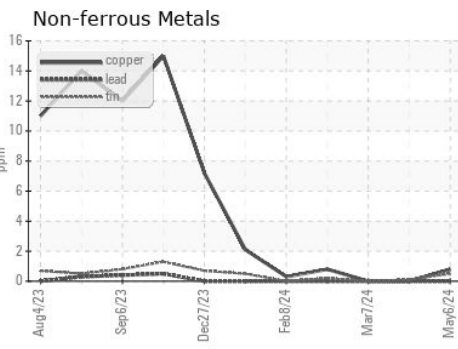
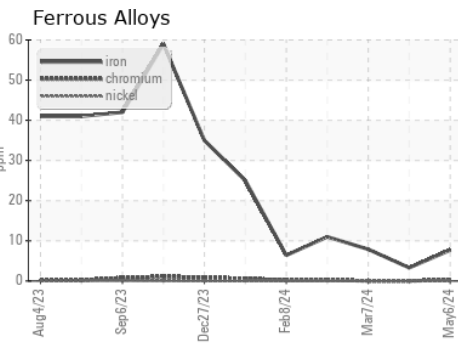
# OIL ANALYSIS REPORT



VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG

FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.4	12.9	12.9

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0116804      **Received** : 09 May 2024  
**Lab Number** : 06174942      **Tested** : 10 May 2024  
**Unique Number** : 11020995      **Diagnosed** : 10 May 2024 - Wes Davis  
**Test Package** : FLEET

**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)