



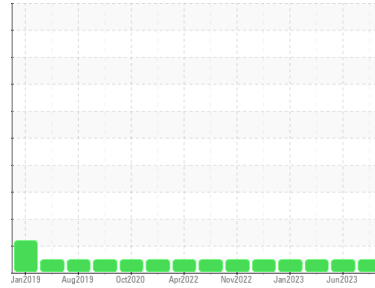
# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**729044-361494**  
 Component  
**Diesel Engine**  
 Fluid  
**CASTROL CRB Multi 15W-40 CK-4 (--- GAL)**



## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

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>GFL0090234</b>	GFL0076795	GFL0076824
Sample Date	Client Info		<b>30 Aug 2023</b>	05 Jun 2023	10 May 2023
Machine Age	hrs	Client Info	<b>4690</b>	4082	3902
Oil Age	hrs	Client Info	<b>150</b>	600	200
Oil Changed	Client Info		<b>Not Chngd</b>	Changed	Not Chngd
Sample Status			<b>NORMAL</b>	NORMAL	NORMAL

## CONTAMINATION

	method	limit/base	current	history1	history2
Fuel	WC Method	>3.0	<b>&lt;1.0</b>	<1.0	<1.0
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>120	<b>5</b>	13	13
Chromium	ppm	ASTM D5185m	>20	<b>&lt;1</b>	<1	0
Nickel	ppm	ASTM D5185m	>5	<b>1</b>	0	0
Titanium	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Silver	ppm	ASTM D5185m	>2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m	>20	<b>2</b>	1	4
Lead	ppm	ASTM D5185m	>40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m	>330	<b>&lt;1</b>	1	2
Tin	ppm	ASTM D5185m	>15	<b>&lt;1</b>	0	<1
Vanadium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0
Cadmium	ppm	ASTM D5185m		<b>&lt;1</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m		<b>6</b>	<1	0
Barium	ppm	ASTM D5185m		<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m		<b>58</b>	58	60
Manganese	ppm	ASTM D5185m		<b>&lt;1</b>	<1	0
Magnesium	ppm	ASTM D5185m		<b>997</b>	1013	947
Calcium	ppm	ASTM D5185m		<b>1098</b>	1095	1069
Phosphorus	ppm	ASTM D5185m		<b>1097</b>	1026	956
Zinc	ppm	ASTM D5185m		<b>1344</b>	1428	1218
Sulfur	ppm	ASTM D5185m		<b>3368</b>	3878	3148

## CONTAMINANTS

	method	limit/base	current	history1	history2	
Silicon	ppm	ASTM D5185m	>25	<b>6</b>	6	5
Sodium	ppm	ASTM D5185m		<b>8</b>	7	6
Potassium	ppm	ASTM D5185m	>20	<b>1</b>	2	0

## INFRA-RED

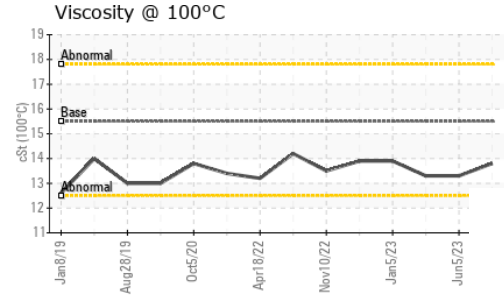
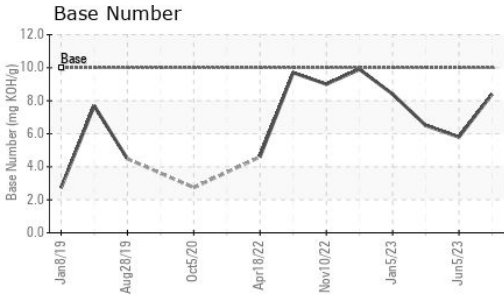
	method	limit/base	current	history1	history2	
Soot %	%	*ASTM D7844	>4	<b>0.2</b>	0.4	0.4
Nitration	Abs/cm	*ASTM D7624	>20	<b>5.4</b>	8.7	9.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	<b>17.9</b>	21.1	20.3

## FLUID DEGRADATION

	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	*ASTM D7414	>25	<b>13.7</b>	18.1	16.8
Base Number (BN)	mg KOH/g	ASTM D2896	10	<b>8.4</b>	5.8	6.5



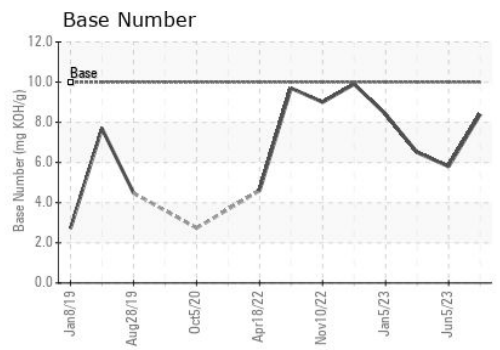
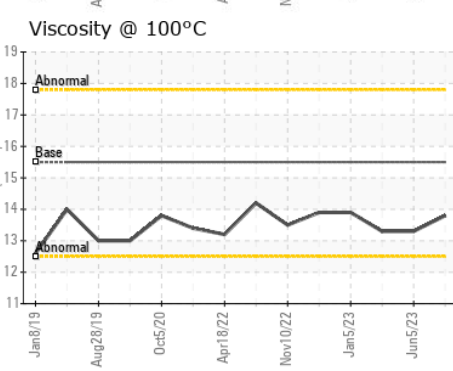
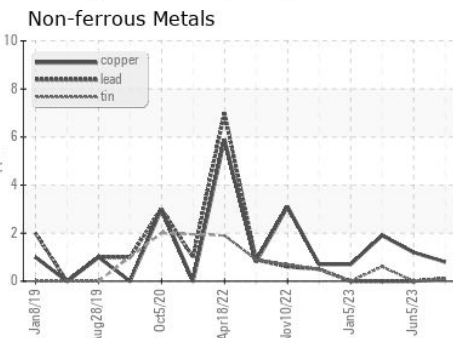
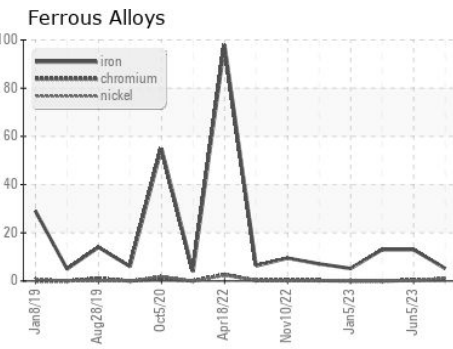
# OIL ANALYSIS REPORT



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	15.5	<b>13.8</b>	13.3	13.3

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0090234 **Received** : 18 Sep 2023  
**Lab Number** : **05953798** **Diagnosed** : 19 Sep 2023  
**Unique Number** : 10655011 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 821 - Ozarks Hauling**  
 33924 Olath Drive  
 Lebanon, MO  
 US 65536  
 Contact: Landen Johnson  
 landen.johnson@gflenv.com  
 T: (417)664-0010  
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Certificate L2367  
 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)