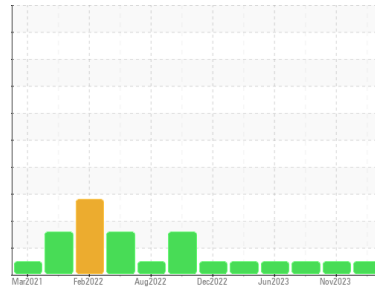




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**927021-592**  
 Component  
**Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 XLE 15W40 (--- 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>GFL0096328</b>	GFL0096313	GFL0064422	
Sample Date	Client Info	<b>19 Dec 2023</b>	28 Nov 2023	05 Sep 2023	
Machine Age	hrs	Client Info	<b>16193</b>	16134	15627
Oil Age	hrs	Client Info	<b>0</b>	0	622
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Changed	
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
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 >120	<b>12</b>	16	31
Chromium	ppm ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm ASTM D5185m >5	<b>0</b>	0	<1
Titanium	ppm ASTM D5185m >2	<b>6</b>	6	11
Silver	ppm ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm ASTM D5185m >20	<b>3</b>	4	<1
Lead	ppm ASTM D5185m >40	<b>&lt;1</b>	0	3
Copper	ppm ASTM D5185m >330	<b>&lt;1</b>	<1	2
Tin	ppm ASTM D5185m >15	<b>0</b>	0	<1
Vanadium	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Cadmium	ppm ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

method	limit/base	current	history1	history2
Boron	ppm ASTM D5185m	<b>63</b>	100	29
Barium	ppm ASTM D5185m	<b>0</b>	2	0
Molybdenum	ppm ASTM D5185m	<b>72</b>	78	60
Manganese	ppm ASTM D5185m	<b>&lt;1</b>	0	<1
Magnesium	ppm ASTM D5185m	<b>627</b>	609	723
Calcium	ppm ASTM D5185m	<b>1489</b>	1386	1692
Phosphorus	ppm ASTM D5185m 760	<b>603</b>	643	710
Zinc	ppm ASTM D5185m 830	<b>792</b>	782	877
Sulfur	ppm ASTM D5185m 2770	<b>2375</b>	2746	3343

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >25	<b>6</b>	15	9
Sodium	ppm ASTM D5185m	<b>5</b>	4	9
Potassium	ppm ASTM D5185m >20	<b>&lt;1</b>	3	1

## INFRA-RED

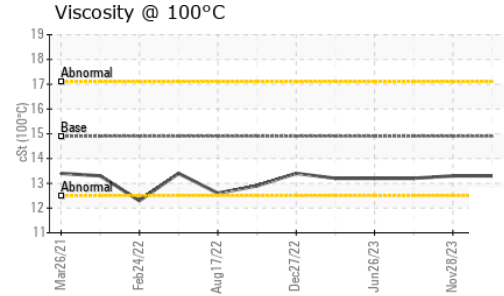
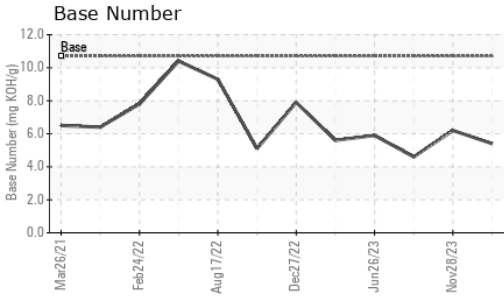
method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >4	<b>0.3</b>	0.3	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>10.6</b>	10.1	10.8
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>24.2</b>	23.1	25.1

## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>20.1</b>	18.5	21.1
Base Number (BN)	mg KOH/g ASTM D2896 10.7	<b>5.4</b>	6.2	4.6



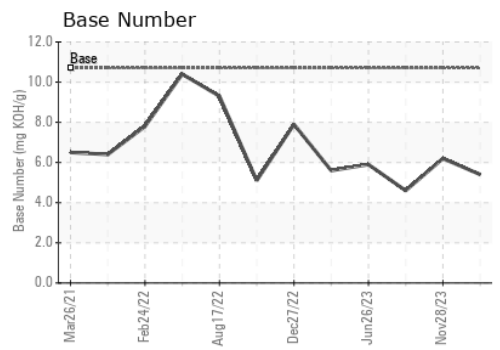
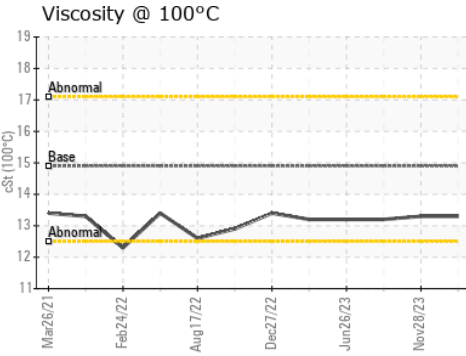
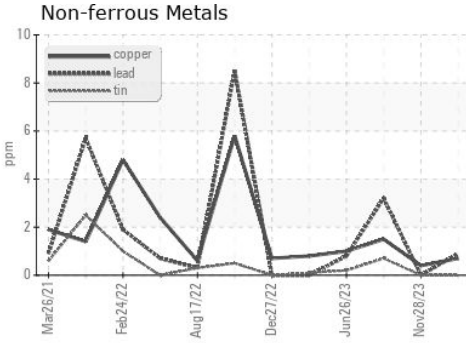
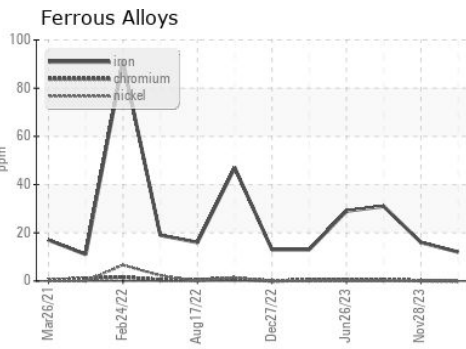
# OIL ANALYSIS REPORT



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	14.9	<b>13.3</b>	13.3	13.2

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0096328 **Received** : 27 Dec 2023  
**Lab Number** : **06045985** **Diagnosed** : 28 Dec 2023  
**Unique Number** : 10806593 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 624 - Elmira Hauling**  
 10164 M-32  
 Elmira, MI  
 US 49730  
 Contact: ANDY GROBASKI  
 andyg@americanwaste.org  
 T: (989)370-2941  
 F:

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)