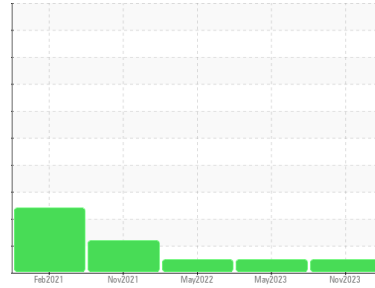




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**123017-815**

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>GFL0096124</b>	GFL0073498	GFL0042751
Sample Date	Client Info		<b>02 Nov 2023</b>	16 May 2023	02 May 2022
Machine Age	hrs	Client Info	<b>15522</b>	14960	14266
Oil Age	hrs	Client Info	<b>562</b>	694	674
Oil Changed	Client Info		<b>Changed</b>	Changed	Changed
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
Glycol	WC Method		<b>NEG</b>	NEG	NEG

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m >100	<b>16</b>	24	17
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	1	<1
Nickel	ppm	ASTM D5185m >4	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m	<b>11</b>	<1	2
Silver	ppm	ASTM D5185m >3	<b>0</b>	<1	<1
Aluminum	ppm	ASTM D5185m >20	<b>2</b>	4	4
Lead	ppm	ASTM D5185m >40	<b>0</b>	3	4
Copper	ppm	ASTM D5185m >330	<b>0</b>	1	<1
Tin	ppm	ASTM D5185m >15	<b>0</b>	1	<1
Antimony	ppm	ASTM D5185m	<b>---</b>	---	---
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	0	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>91</b>	219	257
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>51</b>	111	99
Manganese	ppm	ASTM D5185m	<b>0</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>651</b>	554	702
Calcium	ppm	ASTM D5185m	<b>1440</b>	1660	1595
Phosphorus	ppm	ASTM D5185m 760	<b>662</b>	768	732
Zinc	ppm	ASTM D5185m 830	<b>828</b>	946	820
Sulfur	ppm	ASTM D5185m 2770	<b>2856</b>	3409	2336

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>11</b>	31	5
Sodium	ppm	ASTM D5185m	<b>10</b>	12	29
Potassium	ppm	ASTM D5185m >20	<b>4</b>	6	9

## INFRA-RED

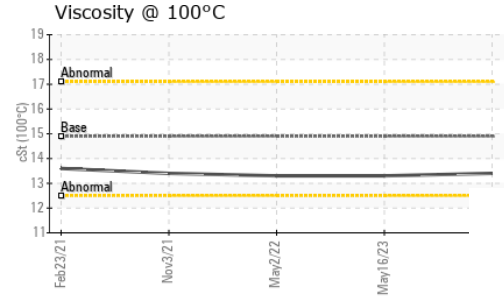
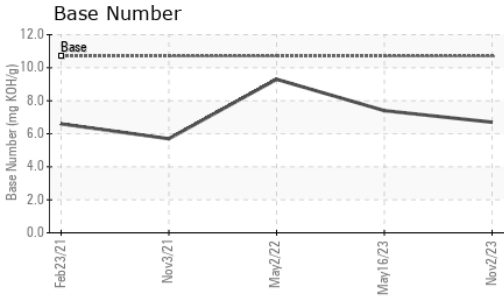
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.5	0.6
Nitration	Abs/cm	*ASTM D7624 >20	<b>10.6</b>	10.4	12.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>21.2</b>	23.4	25.1

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>15.8</b>	18.3	19.7
Base Number (BN)	mg KOH/g	ASTM D2896 10.7	<b>6.7</b>	7.4	9.3



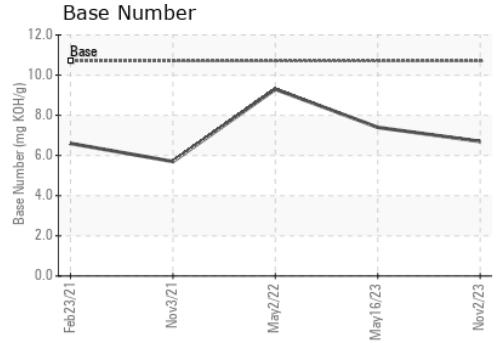
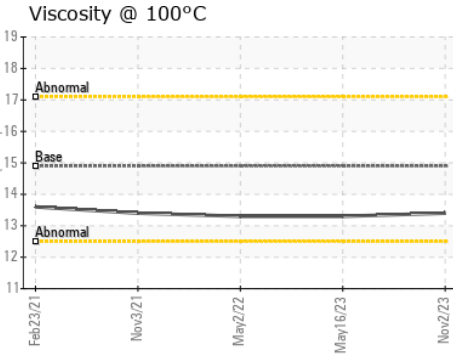
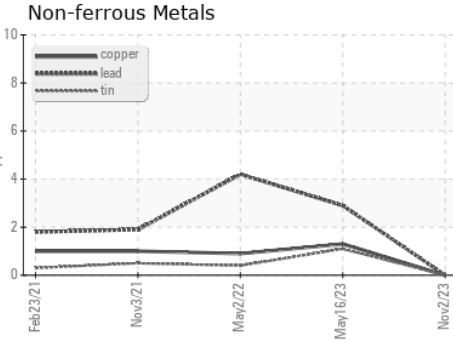
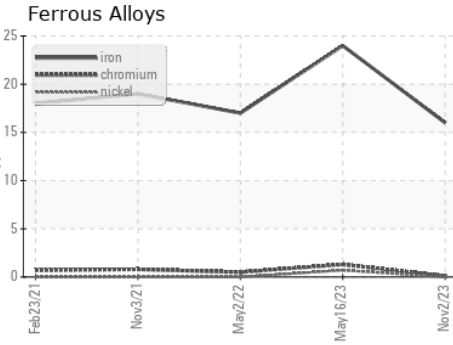
# OIL ANALYSIS REPORT



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	14.9	<b>13.4</b>	13.3	13.3

## GRAPHS



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0096124 **Received** : 06 Nov 2023  
**Lab Number** : 05998665 **Diagnosed** : 06 Nov 2023  
**Unique Number** : 10727025 **Diagnostician** : Wes Davis  
**Test Package** : FLEET

**GFL Environmental - 629 - Northern A1**  
 3947 US 131 N  
 Kalkaska, MI  
 US 49646-8428  
 Contact: MITCH HERSHBERGER

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: (231)624-0848

F: