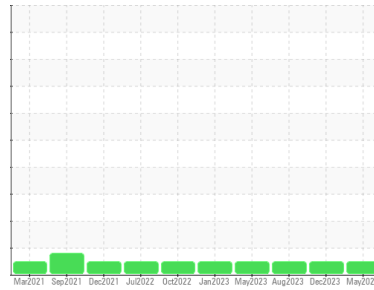




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**124007-630**

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>GFL0110939</b>	GFL0096102	GFL0084518
Sample Date	Client Info		<b>21 May 2024</b>	18 Dec 2023	07 Aug 2023
Machine Age	hrs	Client Info	<b>18740</b>	0	16764
Oil Age	hrs	Client Info	<b>4226</b>	0	2250
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
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 >110	<b>14</b>	23	18
Chromium	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >2	<b>0</b>	0	0
Titanium	ppm	ASTM D5185m	<b>7</b>	11	16
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >25	<b>3</b>	4	3
Lead	ppm	ASTM D5185m >45	<b>9</b>	32	28
Copper	ppm	ASTM D5185m >85	<b>&lt;1</b>	1	1
Tin	ppm	ASTM D5185m >4	<b>0</b>	<1	<1
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	<1
Cadmium	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	<b>173</b>	76	51
Barium	ppm	ASTM D5185m	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>77</b>	70	48
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>615</b>	784	848
Calcium	ppm	ASTM D5185m	<b>1645</b>	1759	1931
Phosphorus	ppm	ASTM D5185m 760	<b>1039</b>	930	784
Zinc	ppm	ASTM D5185m 830	<b>1204</b>	1100	997
Sulfur	ppm	ASTM D5185m 2770	<b>3688</b>	3454	3871

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >30	<b>28</b>	7	5
Sodium	ppm	ASTM D5185m	<b>4</b>	6	6
Potassium	ppm	ASTM D5185m >20	<b>3</b>	6	5

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.5	0.4
Nitration	Abs/cm	*ASTM D7624 >20	<b>11.2</b>	13.8	13.2
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>26.9</b>	28.8	26.4

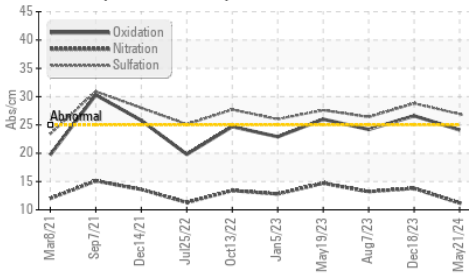
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>24.1</b>	26.6	24.2
Base Number (BN)	mg KOH/g	ASTM D2896 10.7	<b>5.5</b>	5.0	5.9

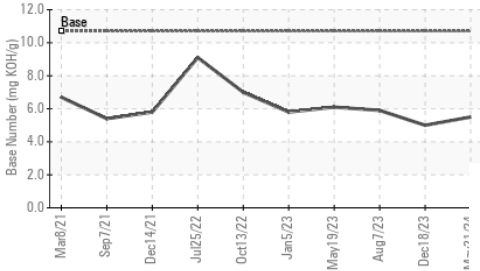


# OIL ANALYSIS REPORT

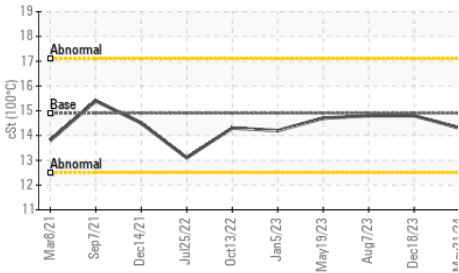
FT-IR (Direct Trend)



Base Number



Viscosity @ 100°C



## VISUAL

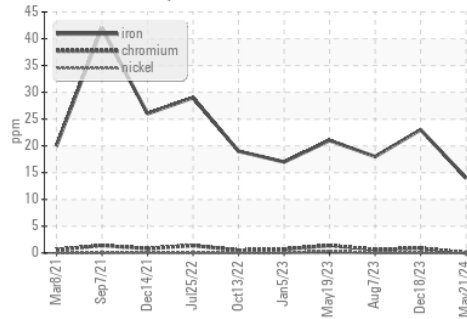
	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance	scalar	*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

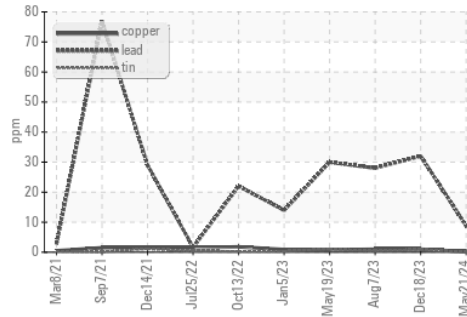
	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	14.9	14.3	14.8

## GRAPHS

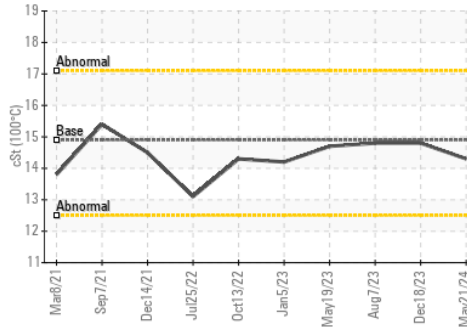
Ferrous Alloys



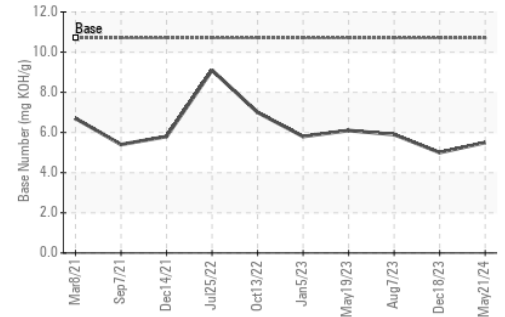
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
 Sample No. : GFL0110939  
 Lab Number : 06191665  
 Unique Number : 11048417  
 Test Package : FLEET

Received : 24 May 2024  
 Tested : 29 May 2024  
 Diagnosed : 29 May 2024 - Angela Borella

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: