



# OIL ANALYSIS REPORT

Sample Rating Trend

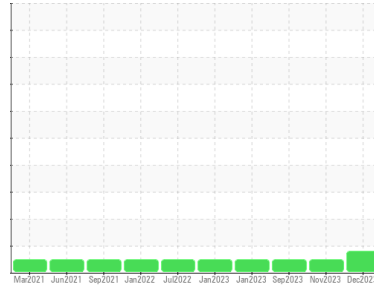
**WEAR**



Machine Id  
**728018-1145**

Component  
**Diesel Engine**

Fluid  
**CHEVRON DELO 400 XLE 15W40 (--- GAL)**



## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

Cylinder, crank, or cam shaft wear is indicated.

### 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>GFL0096326</b>	GFL0096278	GFL0055604
Sample Date	Client Info	<b>27 Dec 2023</b>	28 Nov 2023	11 Sep 2023
Machine Age	hrs	Client Info	14344	14164
Oil Age	hrs	Client Info	<b>12795</b>	0
Oil Changed	Client Info	<b>Changed</b>	Not Changd	Not Changd
Sample Status		<b>ABNORMAL</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 >80	<b>▲ 85</b>	63	23
Chromium	ppm ASTM D5185m >5	<b>2</b>	1	<1
Nickel	ppm ASTM D5185m >2	<b>&lt;1</b>	0	0
Titanium	ppm ASTM D5185m	<b>11</b>	11	10
Silver	ppm ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm ASTM D5185m >30	<b>6</b>	5	4
Lead	ppm ASTM D5185m >30	<b>1</b>	0	<1
Copper	ppm ASTM D5185m >150	<b>23</b>	22	11
Tin	ppm ASTM D5185m >5	<b>&lt;1</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>62</b>	74	122
Barium	ppm ASTM D5185m	<b>0</b>	2	0
Molybdenum	ppm ASTM D5185m	<b>51</b>	48	46
Manganese	ppm ASTM D5185m	<b>2</b>	<1	1
Magnesium	ppm ASTM D5185m	<b>779</b>	643	724
Calcium	ppm ASTM D5185m	<b>1581</b>	1411	1557
Phosphorus	ppm ASTM D5185m 760	<b>781</b>	642	686
Zinc	ppm ASTM D5185m 830	<b>932</b>	774	829
Sulfur	ppm ASTM D5185m 2770	<b>3098</b>	2860	3535

## CONTAMINANTS

method	limit/base	current	history1	history2
Silicon	ppm ASTM D5185m >20	<b>13</b>	12	8
Sodium	ppm ASTM D5185m	<b>26</b>	22	18
Potassium	ppm ASTM D5185m >20	<b>8</b>	7	5

## INFRA-RED

method	limit/base	current	history1	history2
Soot %	% *ASTM D7844 >3	<b>1</b>	1	0.5
Nitration	Abs/cm *ASTM D7624 >20	<b>11.7</b>	12.3	9.7
Sulfation	Abs/.1mm *ASTM D7415 >30	<b>23.9</b>	23.6	19.6

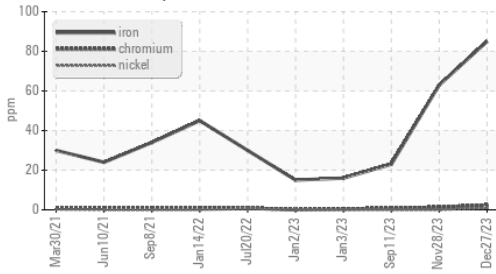
## FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs/.1mm *ASTM D7414 >25	<b>21.2</b>	21.0	15.5
Base Number (BN)	mg KOH/g ASTM D2896 10.7	<b>6.9</b>	7.4	8.6

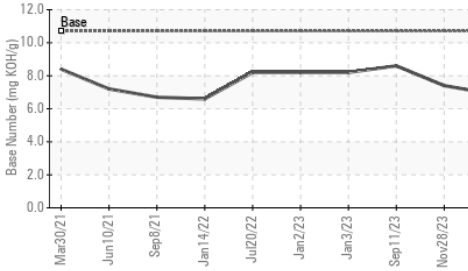


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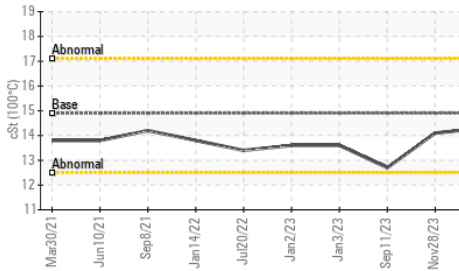
### ▲ Ferrous Alloys



### Base Number



### Viscosity @ 100°C

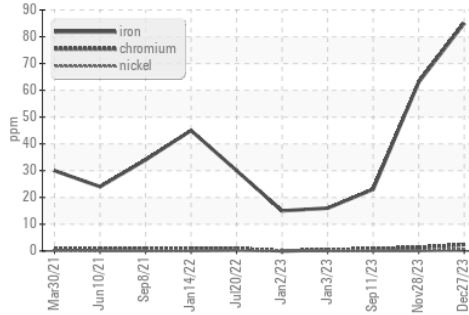


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

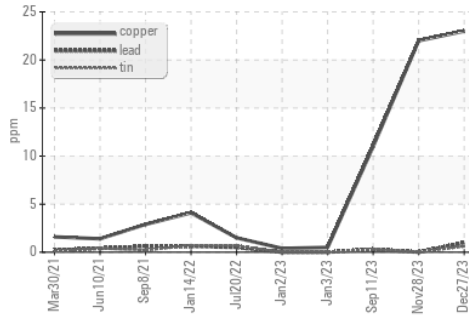
FLUID PROPERTIES	method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	14.9	14.3	14.1	12.7

### GRAPHS

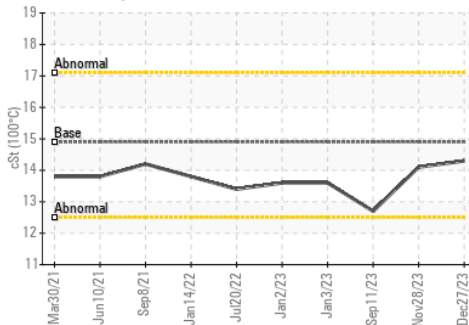
#### ▲ Ferrous Alloys



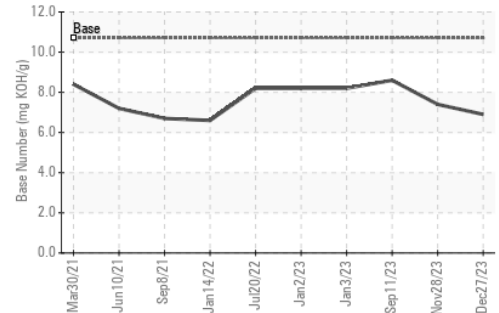
#### Non-ferrous Metals



#### Viscosity @ 100°C



#### Base Number



Certificate L2367

**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0096326 **Received** : 08 Jan 2024  
**Lab Number** : 06054650 **Diagnosed** : 10 Jan 2024  
**Unique Number** : 10820599 **Diagnostician** : Sean Felton  
**Test Package** : FLEET

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