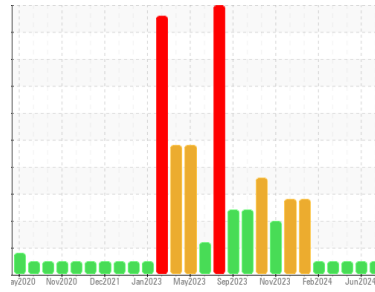




# OIL ANALYSIS REPORT

Sample Rating Trend



**NORMAL**



Machine Id  
**820018-101303**

Component  
**Diesel Engine**

Fluid  
**CHEVRON DELO 400 MULTIGRADE 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>GFL0122943</b>	GFL0122955	GFL0115439
Sample Date	Client Info		<b>30 Jun 2024</b>	03 Jun 2024	19 May 2024
Machine Age	hrs	Client Info	<b>10230</b>	10079	9978
Oil Age	hrs	Client Info	<b>0</b>	0	0
Oil Changed	Client Info		<b>N/A</b>	N/A	N/A
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 >100	<b>9</b>	22	20
Chromium	ppm	ASTM D5185m >20	<b>&lt;1</b>	2	<1
Nickel	ppm	ASTM D5185m >4	<b>&lt;1</b>	0	0
Titanium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Silver	ppm	ASTM D5185m >3	<b>&lt;1</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	3	3
Lead	ppm	ASTM D5185m >40	<b>&lt;1</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>1</b>	2	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>32</b>	13	19
Barium	ppm	ASTM D5185m	<b>&lt;1</b>	0	0
Molybdenum	ppm	ASTM D5185m	<b>82</b>	71	78
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	<1	<1
Magnesium	ppm	ASTM D5185m	<b>904</b>	959	1025
Calcium	ppm	ASTM D5185m	<b>1117</b>	1184	1192
Phosphorus	ppm	ASTM D5185m 1360	<b>912</b>	1055	1116
Zinc	ppm	ASTM D5185m 1480	<b>1152</b>	1253	1362
Sulfur	ppm	ASTM D5185m	<b>2652</b>	3359	3599

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>6</b>	2	7
Sodium	ppm	ASTM D5185m	<b>8</b>	27	30
Potassium	ppm	ASTM D5185m >20	<b>6</b>	3	<1

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >3	<b>0.4</b>	0.6	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>7.3</b>	10.2	8.5
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.4</b>	22.5	20.6

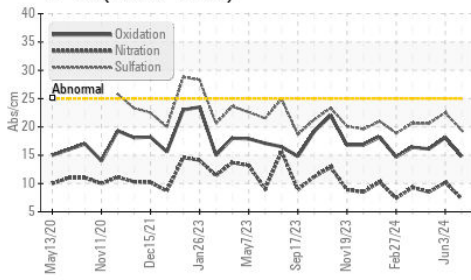
## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.8</b>	18.1	16.1
Base Number (BN)	mg KOH/g	ASTM D2896 12.2	<b>8.3</b>	7.4	8.1

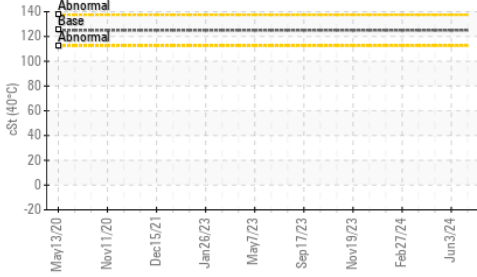


# OIL ANALYSIS REPORT

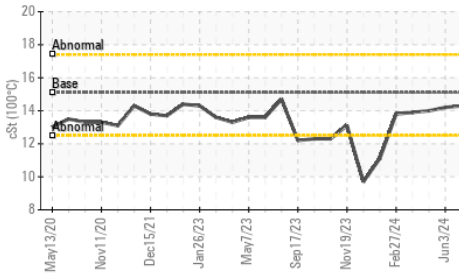
FT-IR (Direct Trend)



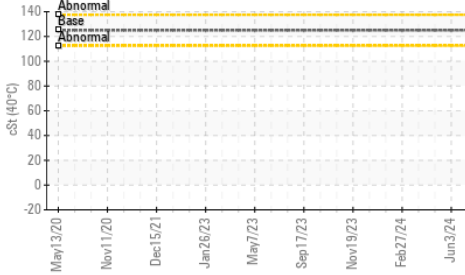
Viscosity @ 40°C



Viscosity @ 100°C



Viscosity @ 40°C

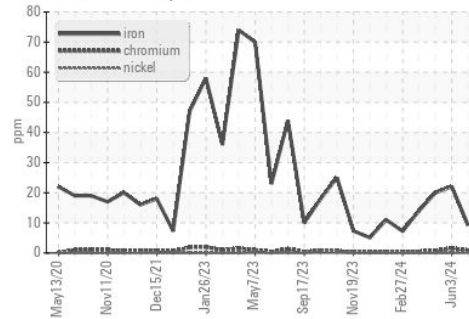


VISUAL	method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE
Appearance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

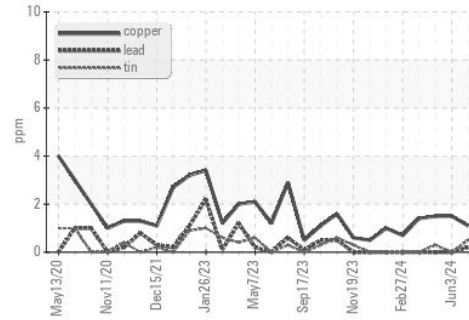
FLUID PROPERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.2

## GRAPHS

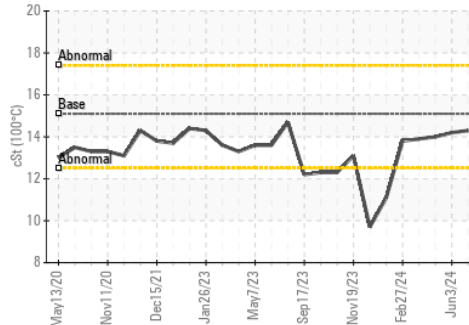
Ferrous Alloys



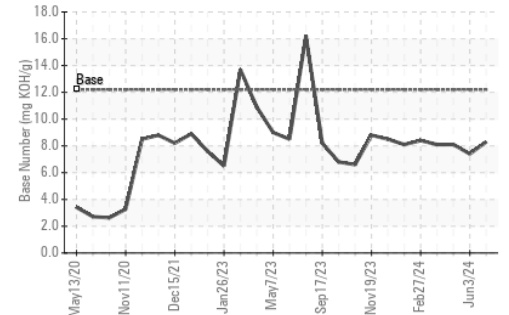
Non-ferrous Metals



Viscosity @ 100°C



Base Number



Certificate L2367

Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513

Sample No. : GFL0122943

Lab Number : 06225654

Unique Number : 11103851

Test Package : FLEET ( Additional Tests: KV40 )

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)

Received : 01 Jul 2024

Tested : 03 Jul 2024

Diagnosed : 03 Jul 2024 - Don Baldrige

GFL Environmental - 816 - WCA of South Arkansas

3083 Smackover Hwy

El Dorado, AR

US 71730

Contact: Mike Howell

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