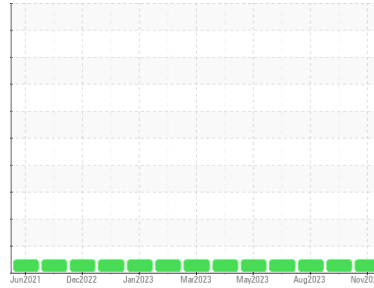




# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**920018-192568**  
 Component  
**Diesel Engine**  
 Fluid  
**CHEVRON DELO 400 MULTIGRADE 15W40 (--- LTR)**

## 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 acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0098458</b>	GFL0086331	GFL0086328
Sample Date	Client Info		<b>14 Nov 2023</b>	17 Oct 2023	18 Aug 2023
Machine Age	hrs	Client Info	<b>8446</b>	8303	8012
Oil Age	hrs	Client Info	<b>143</b>	8303	8012
Oil Changed	Client Info		<b>N/A</b>	Changed	Not 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>6</b>	14	7
Chromium	ppm	ASTM D5185m >20	<b>0</b>	<1	<1
Nickel	ppm	ASTM D5185m >5	<b>0</b>	<1	0
Titanium	ppm	ASTM D5185m >2	<b>0</b>	<1	0
Silver	ppm	ASTM D5185m >2	<b>0</b>	0	0
Aluminum	ppm	ASTM D5185m >20	<b>3</b>	5	5
Lead	ppm	ASTM D5185m >40	<b>0</b>	0	0
Copper	ppm	ASTM D5185m >330	<b>4</b>	1	<1
Tin	ppm	ASTM D5185m >15	<b>&lt;1</b>	<1	0
Vanadium	ppm	ASTM D5185m	<b>0</b>	<1	0
Cadmium	ppm	ASTM D5185m	<b>0</b>	<1	0

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m 151	<b>92</b>	39	82
Barium	ppm	ASTM D5185m 0.4	<b>0</b>	0	0
Molybdenum	ppm	ASTM D5185m 250	<b>84</b>	75	76
Manganese	ppm	ASTM D5185m	<b>&lt;1</b>	0	<1
Magnesium	ppm	ASTM D5185m 0	<b>985</b>	847	906
Calcium	ppm	ASTM D5185m 2046	<b>1323</b>	1108	1224
Phosphorus	ppm	ASTM D5185m 1043	<b>1061</b>	926	973
Zinc	ppm	ASTM D5185m 943	<b>1295</b>	1131	1184
Sulfur	ppm	ASTM D5185m 5012	<b>3449</b>	3459	3620

## CONTAMINANTS

	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m >25	<b>5</b>	7	5
Sodium	ppm	ASTM D5185m	<b>3</b>	6	3
Potassium	ppm	ASTM D5185m >20	<b>2</b>	4	<1

## INFRA-RED

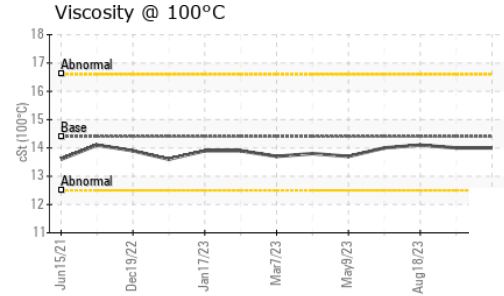
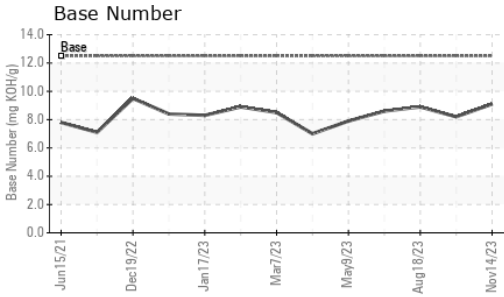
	method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844 >4	<b>0.3</b>	0.8	0.5
Nitration	Abs/cm	*ASTM D7624 >20	<b>6.1</b>	8.7	6.7
Sulfation	Abs/.1mm	*ASTM D7415 >30	<b>19.5</b>	20.5	19.6

## FLUID DEGRADATION

	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414 >25	<b>14.6</b>	15.5	14.8
Base Number (BN)	mg KOH/g	ASTM D2896 12.5	<b>9.1</b>	8.2	8.9



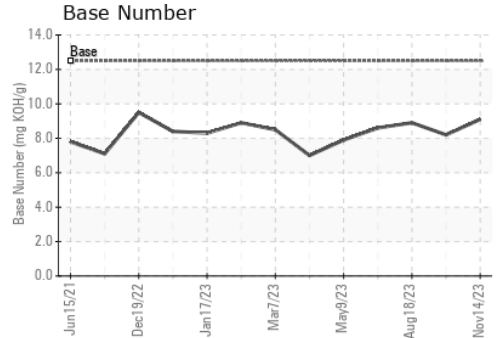
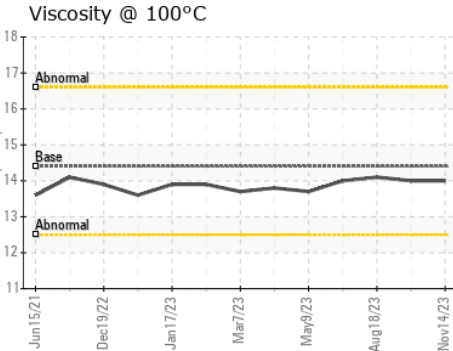
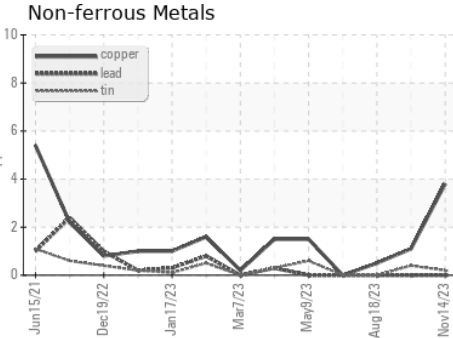
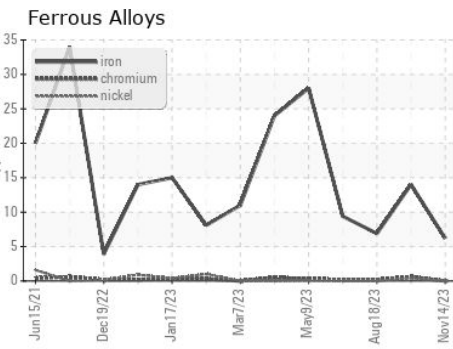
# OIL ANALYSIS REPORT



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	14.4	<b>14.0</b>	14.0	14.1

## GRAPHS



**Laboratory** : WearCheck USA - 501 Madison Ave., Cary, NC 27513  
**Sample No.** : GFL0098458 **Received** : 22 Nov 2023  
**Lab Number** : **06014816** **Diagnosed** : 25 Nov 2023  
**Unique Number** : 10753960 **Diagnostician** : Don Baldrige  
**Test Package** : FLEET

**GFL Environmental - 180 - Tuscaloosa Hauling**  
 4701 12TH ST NE  
 Tuscaloosa, AL  
 US 35404  
 Contact: FREDERICK ROGERS  
 fred.rogers@gflenv.com

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)