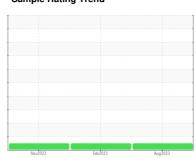


# **OIL ANALYSIS REPORT**

Sample Rating Trend



NORMAL



Machine Id **825068** 

Component

Diocal Engine

Diesel Engine

**CHEVRON 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

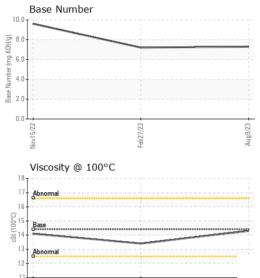
### **Fluid Condition**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

		Nov	<u>1</u> /2022	Feb 2023 Aug 20.	23	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0066055	GFL0060332	GFL0055726
Sample Date		Client Info		09 Aug 2023	27 Feb 2023	15 Nov 2022
Machine Age	hrs	Client Info		0	11218	500
Oil Age	hrs	Client Info		0	500	500
Oil Changed		Client Info		N/A	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	18	10
Chromium	ppm	ASTM D5185m	>20	1	1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	1	2	1
Lead	ppm	ASTM D5185m	>40	2	<1	<1
Copper	ppm	ASTM D5185m	>330	<1	1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		8	11	25
Barium		ACTM DE10E-		0	2	0
	ppm	ASTM D5185m		•	_	U
Molybdenum	ppm	ASTM D5185m		61	75	60
Molybdenum Manganese				-		
	ppm	ASTM D5185m ASTM D5185m ASTM D5185m		61	75	60
Manganese	ppm	ASTM D5185m ASTM D5185m		61 <1	75 <1	60 <1
Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m		61 <1 1030 1205 1050	75 <1 938	60 <1 944
Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		61 <1 1030 1205 1050 1302	75 <1 938 1263 1065 1292	60 <1 944 1157 1032 1295
Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		61 <1 1030 1205 1050	75 <1 938 1263 1065	60 <1 944 1157 1032
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	61 <1 1030 1205 1050 1302	75 <1 938 1263 1065 1292	60 <1 944 1157 1032 1295 3332 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	>25	61 <1 1030 1205 1050 1302 3594 current	75 <1 938 1263 1065 1292 2913 history1	60 <1 944 1157 1032 1295 3332 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		61 <1 1030 1205 1050 1302 3594 current	75 <1 938 1263 1065 1292 2913 history1 4	60 <1 944 1157 1032 1295 3332 history2 4
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m	>25	61 <1 1030 1205 1050 1302 3594 current	75 <1 938 1263 1065 1292 2913 history1	60 <1 944 1157 1032 1295 3332 history2
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50	61 <1 1030 1205 1050 1302 3594 current 4 6 3	75 <1 938 1263 1065 1292 2913 history1 4 4 2	60 <1 944 1157 1032 1295 3332 history2 4 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50 >20	61 <1 1030 1205 1050 1302 3594 current 4 6	75 <1 938 1263 1065 1292 2913 history1 4 4 2	60 <1 944 1157 1032 1295 3332 history2 4 4
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	>25 >50 >20 limit/base	61 <1 1030 1205 1050 1302 3594 current 4 6 3	75 <1 938 1263 1065 1292 2913 history1 4 4 2	60 <1 944 1157 1032 1295 3332 history2 4 0
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method ASTM D5185m	>25 >50 >20 limit/base >3	61 <1 1030 1205 1050 1302 3594  current 4 6 3  current 0.6	75 <1 938 1263 1065 1292 2913 history1 4 2 history1 0.4	60 <1 944 1157 1032 1295 3332 history2 4 4 0 history2 0.5
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	>25 >50 >20 limit/base >3 >20	61 <1 1030 1205 1050 1302 3594  current 4 6 3  current 0.6 9.7	75 <1 938 1263 1065 1292 2913 history1 4 4 2 history1 0.4 10.0	60 <1 944 1157 1032 1295 3332 history2 4 4 0 history2 0.5 9.5
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	>25 >50 >20 limit/base >3 >20 >30	61 <1 1030 1205 1050 1302 3594  current 4 6 3  current 0.6 9.7 21.5	75 <1 938 1263 1065 1292 2913 history1 4 4 2 history1 0.4 10.0 21.7	60 <1 944 1157 1032 1295 3332 history2 4 4 0 history2 0.5 9.5 22.4
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm	ASTM D5185m  Method  ASTM D5185m ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D7415  Method	>25 >50 >20 limit/base >3 >20 >30 limit/base	61 <1 1030 1205 1050 1302 3594 current 4 6 3 current 0.6 9.7 21.5 current	75 <1 938 1263 1065 1292 2913 history1 4 2 history1 0.4 10.0 21.7 history1	60 <1 944 1157 1032 1295 3332 history2 4 0 history2 0.5 9.5 22.4 history2



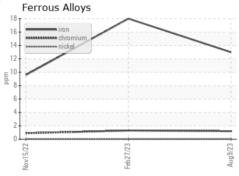
# **OIL ANALYSIS REPORT**

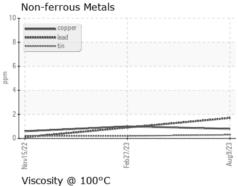


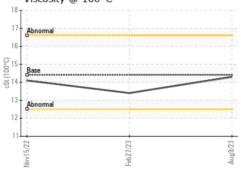
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

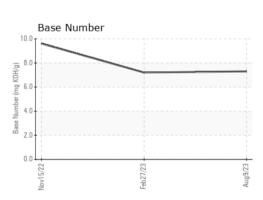
FLUID PROPI	EHILO	method			riistory i	History
Visc @ 100°C	cSt	ASTM D445	14.4	14.3	13.4	14.1

## **GRAPHS**













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10606963 Test Package : FLEET

: 05927016

: GFL0066055

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 17 Aug 2023

Diagnosed : 17 Aug 2023 Diagnostician : Wes Davis

GFL Environmental - 904 - Chippewa Falls HC

11888 & 11863 30th Avenue Chippewa Falls, WI US 54729

Contact: Andy Kane

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: (715)202-3420