

# **OIL ANALYSIS REPORT**

(BD56785) 213034

Component

**Front Diesel Engine** 

CHEVRON DELO 400 LE 15W40 (--- GAL)

# Sample Rating Trend



## **DIAGNOSIS**

### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

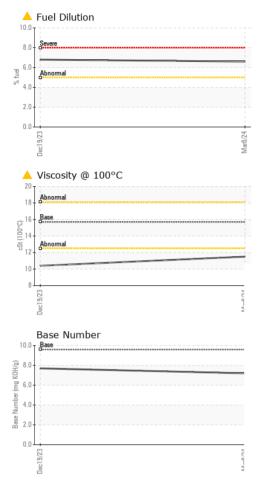
### ▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

			Dec2023	Mar 2024		
SAMPLE INFORM	IATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0104593	GFL0096319	
Sample Date		Client Info		08 Mar 2024	19 Dec 2023	
Machine Age	hrs	Client Info		8309	339	
Oil Age	hrs	Client Info		0	0	
Oil Changed		Client Info		N/A	Changed	
Sample Status				ABNORMAL	ABNORMAL	
CONTAMINATIO	NC	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METALS	;	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	23	44	
Chromium	ppm	ASTM D5185m	>20	2	3	
Nickel	ppm	ASTM D5185m	>2	0	0	
	ppm	ASTM D5185m	>2	10	2	
Silver	ppm	ASTM D5185m	>2	<1	9	
Aluminum	ppm	ASTM D5185m	>25	3	3	
Lead	ppm	ASTM D5185m	>40	0	<1	
Copper	ppm	ASTM D5185m	>330	4	25	
Tin	ppm	ASTM D5185m	>15	0	0	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		an a the a al	lineit/lenen		la la tament	hiotom/0
ADDITIVEO		method	limit/base	current	history1	history2
_	ppm	ASTM D5185m	iimii/base	93	57	riistory2
Boron	ppm ppm		ıımıt/base			,
Boron Barium		ASTM D5185m	iimivbase	93	57	
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	iimivoase	93 0	57 0	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	iimivbase	93 0 39	57 0 5	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	iimivbase	93 0 39 1	57 0 5 4	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200	93 0 39 1 654	57 0 5 4 655	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		93 0 39 1 654 1397	57 0 5 4 655 1280	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200	93 0 39 1 654 1397 723	57 0 5 4 655 1280 843	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200 1300	93 0 39 1 654 1397 723	57 0 5 4 655 1280 843 1070	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200 1300 3200	93 0 39 1 654 1397 723 802 3180	57 0 5 4 655 1280 843 1070 3142	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1200 1300 3200 limit/base	93 0 39 1 654 1397 723 802 3180 current	57 0 5 4 655 1280 843 1070 3142 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm	ASTM D5185m	1200 1300 3200 limit/base	93 0 39 1 654 1397 723 802 3180 current	57 0 5 4 655 1280 843 1070 3142 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m	1200 1300 3200 limit/base >25	93 0 39 1 654 1397 723 802 3180 current 7	57 0 5 4 655 1280 843 1070 3142 history1 26 10	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m	1200 1300 3200 limit/base >25 >20	93 0 39 1 654 1397 723 802 3180 current 7 3	57 0 5 4 655 1280 843 1070 3142 history1 26 10 4	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	1200 1300 3200 limit/base >25 >20 >5	93 0 39 1 654 1397 723 802 3180  current 7 3 2  6.6	57 0 5 4 655 1280 843 1070 3142 history1 26 10 4	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	1200 1300 3200 limit/base >25 >20 >5	93 0 39 1 654 1397 723 802 3180 current 7 3 2 ▲ 6.6 current	57 0 5 4 655 1280 843 1070 3142 history1 26 10 4 ▲ 6.8 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m	1200 1300 3200 limit/base >25 >20 >5 limit/base >3	93 0 39 1 654 1397 723 802 3180	57 0 5 4 655 1280 843 1070 3142 history1 26 10 4 ▲ 6.8 history1 0.3	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7844	1200 1300 3200 limit/base >25 >20 >5 limit/base >3 >20	93 0 39 1 654 1397 723 802 3180 current 7 3 2  6.6 current 0.3 10.2	57 0 5 4 655 1280 843 1070 3142 history1 26 10 4 ▲ 6.8 history1 0.3 10.1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m ASTM D7824  method  *ASTM D7624 *ASTM D7624 *ASTM D7415  method	1200 1300 3200 limit/base >25 >20 >5 limit/base >3 >20 >30 limit/base	93 0 39 1 654 1397 723 802 3180 current 7 3 2 ▲ 6.6 current 0.3 10.2 19.7 current	57 0 5 4 655 1280 843 1070 3142 history1 26 10 4  6.8 history1 0.3 10.1 21.5 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7614	1200 1300 3200 limit/base >25 >20 >5 limit/base >3 >20 >30	93 0 39 1 654 1397 723 802 3180	57 0 5 4 655 1280 843 1070 3142 history1 26 10 4 ▲ 6.8 history1 0.3 10.1 21.5	history2 history2



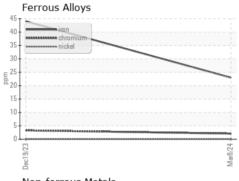
# **OIL ANALYSIS REPORT**

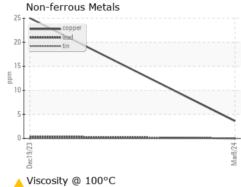


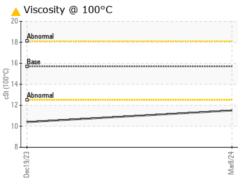
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance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

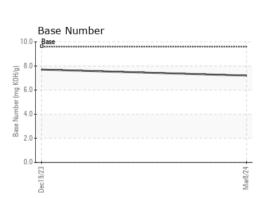
FLUID PROPE	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.7	<b>▲ 11.5</b>	<u> 104</u>	

### **GRAPHS**











Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0104593 Lab Number : 06116386

**Tested** Unique Number : 10925219

Diagnosed Test Package: FLEET (Additional Tests: PercentFuel)

Received : 12 Mar 2024 : 13 Mar 2024

: 13 Mar 2024 - Wes Davis

GFL Environmental - 624 - Elmira Hauling 10164 M-32 Elmira, MI US 49730 Contact: ANDY GROBASKI

andyg@americanwaste.org

T: (989)370-2941

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)