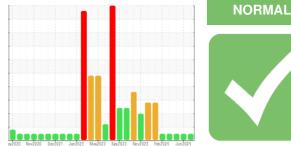


## **OIL ANALYSIS REPORT**

SAMPLE INFORMATION method

Sample Rating Trend





Machine Id

## 820018-101303

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.

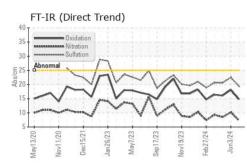
### Fluid Condition

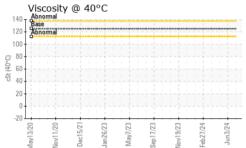
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

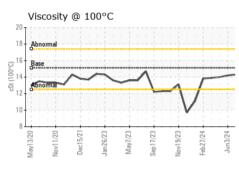
				Current	· · · · ·	
Sample Number		Client Info		GFL0122943	GFL0122955	GFL0115439
Sample Date		Client Info		30 Jun 2024	03 Jun 2024	19 May 2024
Machine Age	hrs	Client Info		10230	10079	9978
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
		and the set	Provide Anna anna		In the tax work	history O
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	9	22	20
Chromium	ppm	ASTM D5185m	>20	<1	2	<1
Nickel	ppm	ASTM D5185m		<1	0	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	<1	0	0
Aluminum	ppm	ASTM D5185m	>20	3	3	3
Lead	ppm	ASTM D5185m	>40	۲ ۲	0	0
Copper	ppm		>330	1	2	2
Tin	ppm	ASTM D5185m	>15	י <1	0	<1
Vanadium	ppm	ASTM D5185m	210	<1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
	ppm		1			-
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	32	13	19
Boron Barium	ppm	ASTM D5185m ASTM D5185m	limit/base	32 <1	13 0	19 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	limit/base	32 <1 82	13 0 71	19 0 78
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIMI/base	32 <1 82 <1	13 0 71 <1	19 0 78 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	IIMI/base	32 <1 82 <1 904	13 0 71 <1 959	19 0 78 <1 1025
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m		32 <1 82 <1 904 1117	13 0 71 <1 959 1184	19 0 78 <1 1025 1192
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1360	32 <1 82 <1 904 1117 912	13 0 71 <1 959 1184 1055	19 0 78 <1 1025 1192 1116
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		32 <1 82 <1 904 1117	13 0 71 <1 959 1184 1055 1253	19 0 78 <1 1025 1192
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	1360	32 <1 82 <1 904 1117 912	13 0 71 <1 959 1184 1055	19 0 78 <1 1025 1192 1116
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	1360	32 <1 82 <1 904 1117 912 1152	13 0 71 <1 959 1184 1055 1253	19 0 78 <1 1025 1192 1116 1362
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	1360 1480	32 <1 82 <1 904 1117 912 1152 2652	13 0 71 <1 959 1184 1055 1253 3359	19 0 78 <1 1025 1192 1116 1362 3599
Boron Barium Molybdenum 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 ASTM D5185m	1360 1480 limit/base	32 <1 82 <1 904 1117 912 1152 2652 current	13 0 71 <1 959 1184 1055 1253 3359 history1	19 0 78 <1 1025 1192 1116 1362 3599 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1360 1480 limit/base	32 <1 82 <1 904 1117 912 1152 2652 current 6	13 0 71 <1 959 1184 1055 1253 3359 history1 2	19 0 78 <1 1025 1192 1116 1362 3599 history2 7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	1360 1480 limit/base >25	32 <1 82 <1 904 1117 912 1152 2652 current 6 8	13 0 71 <1 959 1184 1055 1253 3359 history1 2 2 27	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	1360 1480 limit/base >25 >20 limit/base	32 <1 82 <1 904 1117 912 1152 2652 current 6 8 6 8 6	13 0 71 <1 959 1184 1055 1253 3359 history1 2 27 3 3	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30 <1 *
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	1360 1480 limit/base >25 >20 limit/base >3	32 <1 82 <1 904 1117 912 1152 2652 current 6 8 6 8 6 current 0.4	13 0 71 <1 959 1184 1055 1253 3359 history1 2 2 27 3 history1 0.6	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30 <1 4 history2 0.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1360 1480 225 >20 limit/base >20 limit/base >3 >20	32 <1 82 <1 904 1117 912 1152 2652 <i>current</i> 6 8 6 8 6 <i>current</i> 0.4 7.3	13 0 71 <1 959 1184 1055 1253 3359 history1 2 2 27 3 history1 0.6 10.2	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30 <1 30 <1 history2 0.5 8.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1360 1480 225 >25 >20 limit/base >3 >20 >3 >20	32 <1 82 <1 904 1117 912 1152 2652 <i>current</i> 6 8 6 8 6 <i>current</i> 0.4 7.3 19.4	13 0 71 <1 959 1184 1055 1253 3359 history1 2 27 3 <b>history1</b> 0.6 10.2 22.5	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30 <1 history2 0.5 8.5 20.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1360 1480 225 >20 limit/base >20 limit/base >3 >20	32 <1 82 <1 904 1117 912 1152 2652 <i>current</i> 6 8 6 8 6 <i>current</i> 0.4 7.3	13 0 71 <1 959 1184 1055 1253 3359 history1 2 2 27 3 history1 0.6 10.2	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30 <1 30 <1 history2 0.5 8.5
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	1360 1480 225 >25 >20 limit/base >3 >20 >3 >20	32 <1 82 <1 904 1117 912 1152 2652 <i>current</i> 6 8 6 8 6 <i>current</i> 0.4 7.3 19.4	13 0 71 <1 959 1184 1055 1253 3359 history1 2 27 3 <b>history1</b> 0.6 10.2 22.5	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30 <1 history2 0.5 8.5 20.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	1360 1480 225 >225 >20 imit/base >3 >20 >30 >30	32 <1 82 <1 904 1117 912 1152 2652 <i>current</i> 6 8 6 <i>current</i> 0.4 7.3 19.4 <i>current</i>	13 0 71 <1 959 1184 1055 1253 3359 history1 2 27 3 history1 0.6 10.2 22.5 history1	19 0 78 <1 1025 1192 1116 1362 3599 history2 7 30 <1 7 30 <1 history2 0.5 8.5 20.6 history2

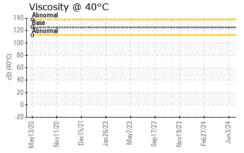


# **OIL ANALYSIS REPORT**



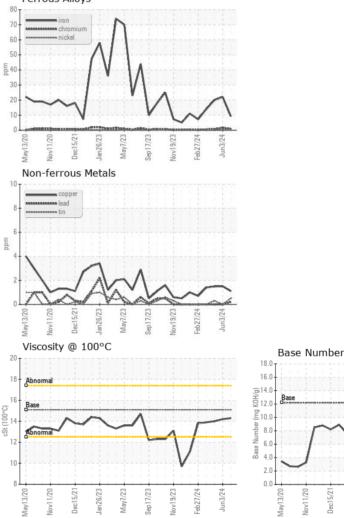


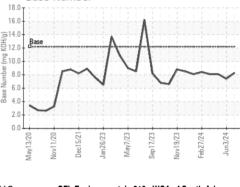




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
		method	11111/0430	ounchi	motory	motoryz
Visc @ 100°C	cSt	ASTM D445	15.1	14.3	14.2	14.0
CRADHS						

GRAPHS Ferrous Alloys





Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 GFL Environmental - 816 - WCA of South Arkansas Sample No. : GFL0122943 Received : 01 Jul 2024 3083 Smackover Hwy Lab Number : 06225654 Tested : 03 Jul 2024 El Dorado, AR US 71730 Unique Number : 11103851 Diagnosed : 03 Jul 2024 - Don Baldridge Test Package : FLEET (Additional Tests: KV40) Contact: Mike Howell Certificate 12367 To discuss this sample report, contact Customer Service at 1-800-237-1369. mike.howell@gflenv.com \* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Т: F:

Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)