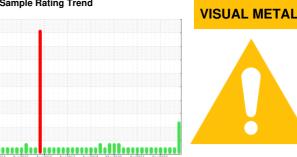


# **OIL ANALYSIS REPORT**

Sample Rating Trend



# 10510C AUTOCAR ACX

Component

**Natural Gas Engine** 

PETRO CANADA DURON GEO LD 15W40 (28 QTS)

## DIAGNOSIS

#### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor.

#### Wear

Moderate concentration of visible metal present. All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the

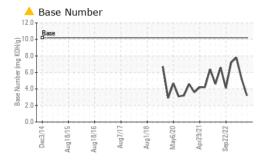
### Fluid Condition

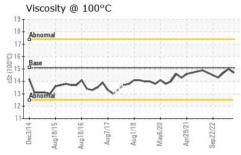
The BN level is low. The condition of the oil is acceptable for the time in service.

28 QTS)	2014 Aug2015 Aug2017 Aug2017 Aug2018 Mey0020 Aug2021 Sup0022					
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0103167	GFL0094726	GFL0087131
Sample Date		Client Info		20 Feb 2024	17 Nov 2023	18 Jul 2023
Machine Age	hrs	Client Info		6222	5548	4771
Oil Age	hrs	Client Info		0	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				ABNORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
ron	ppm	ASTM D5185m	>50	17	19	14
Chromium	ppm	ASTM D5185m	>4	1	2	1
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	3	5
Lead	ppm	ASTM D5185m	>30	0	<1	<1
Copper	ppm	ASTM D5185m	>35	1	2	6
Tin	ppm	ASTM D5185m	>4	0	<1	<1
√anadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	6	9	26
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum						
	ppm	ASTM D5185m	50	46	54	51
Manganese	ppm	ASTM D5185m ASTM D5185m	50	46 <1	54 <1	51 <1
•						
Magnesium	ppm	ASTM D5185m	0	<1	<1	<1
Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m	0 560	<1 487	<1 589	<1 523
Magnesium Calcium Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 560 1510	<1 487 1396	<1 589 1688	<1 523 1528
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 560 1510 780	<1 487 1396 555	<1 589 1688 751	<1 523 1528 747
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 560 1510 780 870	<1 487 1396 555 816	<1 589 1688 751 1039	<1 523 1528 747 923
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 560 1510 780 870 2040	<1 487 1396 555 816 1873	<1 589 1688 751 1039 2496	<1 523 1528 747 923 2566
Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 560 1510 780 870 2040 limit/base	<1 487 1396 555 816 1873 current	<1 589 1688 751 1039 2496 history1	<1 523 1528 747 923 2566 history2
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 Method ASTM D5185m	0 560 1510 780 870 2040 Iimit/base >+100	<1 487 1396 555 816 1873 current 4	<1 589 1688 751 1039 2496 history1	<1 523 1528 747 923 2566 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 560 1510 780 870 2040 Iimit/base >+100	<1 487 1396 555 816 1873 current 4 5	<1 589 1688 751 1039 2496 history1 5	<1 523 1528 747 923 2566 history2 10 4
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 560 1510 780 870 2040 limit/base >+100	<1 487 1396 555 816 1873 current 4 5	<1 589 1688 751 1039 2496 history1 5 4 3	<1 523 1528 747 923 2566 history2 10 4
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 560 1510 780 870 2040 Iimit/base >+100 >20	<1 487 1396 555 816 1873 current 4 5 0 current	<1 589 1688 751 1039 2496 history1 5 4 3 history1	<1 523 1528 747 923 2566 history2 10 4 3 history2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 560 1510 780 870 2040 limit/base >+100 	<1 487 1396 555 816 1873 current 4 5 0 current 0	<1 589 1688 751 1039 2496 history1 5 4 3 history1 0	<1 523 1528 747 923 2566 history2 10 4 3 history2 0.1
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 D7844  *ASTM D7624  *ASTM D7415	0 560 1510 780 870 2040 limit/base >+100 	<1 487 1396 555 816 1873	<1 589 1688 751 1039 2496 history1 5 4 3 history1 0 10.8	<1 523 1528 747 923 2566 history2 10 4 3 history2 0.1 8.4
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 D7844  *ASTM D7624  *ASTM D7415	0 560 1510 780 870 2040  limit/base >+100  >20  limit/base	<1 487 1396 555 816 1873 current 4 5 0 current 0 11.7 23.6	<1 589 1688 751 1039 2496 history1 5 4 3 history1 0 10.8 20.8	<1 523 1528 747 923 2566 history2 10 4 3 history2 0.1 8.4 19.1



## **OIL ANALYSIS REPORT**

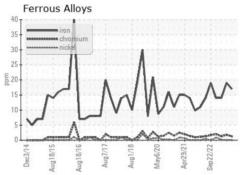


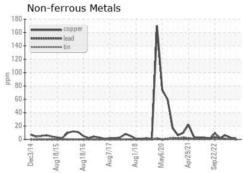


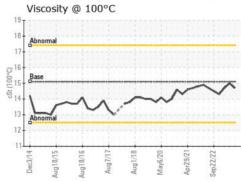
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	▲ MODER	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

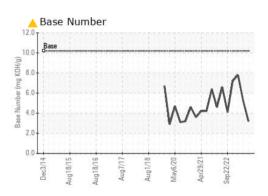
FLUID PROPERTIES		method	limit/base	current	history1	history2	
Visc @ 100°C	cSt	ASTM D445	15.1	14.7	15.0	14.7	

#### **GRAPHS**













Certificate L2367

Laboratory Sample No.

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0103167 Lab Number : 06095293

Unique Number : 10888146 Test Package : FLEET

To discuss this sample report, contact Customer Service at 1-800-237-1369.

Received : 21 Feb 2024 **Tested** 

: 23 Feb 2024 Diagnosed : 23 Feb 2024 - Don Baldridge

GFL Environmental - 001 - Raleigh(CNG)

3741 Conquest Drive Garner, NC US 27529

Contact: Craig Johnson craig.johnson@gflenv.com T: (919)662-7100

\* - 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)

Report Id: GFL001 [WUSCAR] 06095293 (Generated: 02/23/2024 15:26:24) Rev: 1

Submitted By: Craig Johnson

F: (919)662-7130