

## **OIL ANALYSIS REPORT**

**Sample Rating Trend** 







# 10582C AUTOCAR ISL

Component

**Natural Gas Engine** 

PETRO CANADA DURON GEO LD 15W40 (28 QTS)

#### 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.

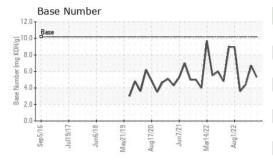
#### **Fluid Condition**

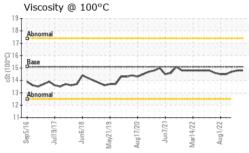
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

(20 GTS)  52016 Jul2017 Jun2018 May2019 Aug2020 Jun2021 May2022 Aug2022						
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0056736	GFL0087130	GFL0056699
Sample Date		Client Info		20 Sep 2023	18 Jul 2023	05 Jun 2023
Machine Age	hrs	Client Info		4237	4020	3653
Oil Age	hrs	Client Info		0	0	662662
Oil Changed		Client Info		Changed	N/A	Changed
Sample Status				NORMAL	ABNORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	12	13	8
Chromium	ppm	ASTM D5185m	>4	2	2	1
Nickel	ppm	ASTM D5185m	>2	0	<1	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	0	5	0
Lead	ppm	ASTM D5185m	>30	<1	<1	<1
Copper	ppm	ASTM D5185m	>35	2	<1	<1
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	8	12	6
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	52	51	52
Manganese			^	1		
	ppm	ASTM D5185m			<1	<1
Magnesium	ppm	ASTM D5185m	560	574	510	513
Calcium		ASTM D5185m ASTM D5185m	560 1510	574 1677	510 1529	513 1544
Calcium Phosphorus	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780	574 1677 703	510 1529 716	513 1544 660
Calcium Phosphorus Zinc	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780 870	574 1677 703 970	510 1529 716 924	513 1544 660 949
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780 870 2040	574 1677 703	510 1529 716	513 1544 660
Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780 870	574 1677 703 970	510 1529 716 924 2385 history1	513 1544 660 949 2599 history2
Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	560 1510 780 870 2040	574 1677 703 970 2848	510 1529 716 924 2385 history1	513 1544 660 949 2599 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	560 1510 780 870 2040 limit/base	574 1677 703 970 2848 current	510 1529 716 924 2385 history1 17	513 1544 660 949 2599 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m	560 1510 780 870 2040 limit/base	574 1677 703 970 2848 current	510 1529 716 924 2385 history1	513 1544 660 949 2599 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	560 1510 780 870 2040 limit/base >+100	574 1677 703 970 2848 current 14	510 1529 716 924 2385 history1 17	513 1544 660 949 2599 history2 3
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm TS	ASTM D5185m	560 1510 780 870 2040 limit/base >+100	574 1677 703 970 2848 current 14 9	510 1529 716 924 2385 history1 17 4	513 1544 660 949 2599 history2 3 4
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780 870 2040 limit/base >+100	574 1677 703 970 2848 current 14 9 2	510 1529 716 924 2385 history1 17 4 2	513 1544 660 949 2599 history2 3 4 1
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m	560 1510 780 870 2040 limit/base >+100 >20 limit/base	574 1677 703 970 2848 current 14 9 2 current	510 1529 716 924 2385 history1 17 4 2 history1 0.1	513 1544 660 949 2599 history2 3 4 1 history2
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	560 1510 780 870 2040 limit/base >+100 >20 limit/base	574 1677 703 970 2848 current 14 9 2 current 0 11.3	510 1529 716 924 2385 history1 17 4 2 history1 0.1 9.5	513 1544 660 949 2599 history2 3 4 1 history2 0.1 10.3
Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm Abs/cm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m  Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	560 1510 780 870 2040 limit/base >+100 >20 limit/base	574 1677 703 970 2848 current 14 9 2 current 0 11.3 23.9	510 1529 716 924 2385 history1 17 4 2 history1 0.1 9.5 19.6	513 1544 660 949 2599 history2 3 4 1 history2 0.1 10.3 21.6



### **OIL ANALYSIS REPORT**



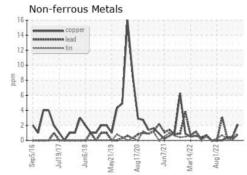


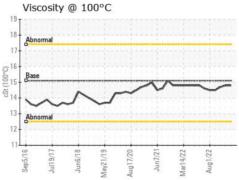
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	▲ MODER	NONE
Sand/Dirt	scalar	*Visual	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

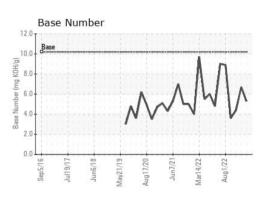
FLUID PROPE	RTIES	method				history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.8	14.8	14.7

#### **GRAPHS**

# Ferrous Alloys E 10











Certificate L2367

Laboratory Sample No. Lab Number

**Unique Number** Test Package : FLEET

: GFL0056736 : 05957513

: 10658726

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 21 Sep 2023

Diagnosed Diagnostician : Wes Davis

: 22 Sep 2023

GFL Environmental - 001 - Raleigh(CNG)

3741 Conquest Drive Garner, NC US 27529

Contact: Craig Johnson craig.johnson@gflenv.com

T: (919)662-7100 F: (919)662-7130

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)