

PROBLEM SUMMARY

Sample Rating Trend

De2017 1/2018 M=2010 4-2020 M-2020 4 Ann 14 Ann

DEGRADATION



10736C AUTOCAR

Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (28 QTS)

COMPONENT CONDITION SUMMARY

No relevant graphs to display

RECOMMENDATION

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATIC TEST RESULTS							
Sample Status				ABNORMAL	NORMAL	NORMAL	
Base Number (BN)	mg KOH/g	ASTM D2896	10.2	2.2	8.4	4.4	

Customer Id: GFL001 Sample No.: GFL0056708 Lab Number: 05833742 Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data: Angela Borella +1 800-237-1369 angela.borella@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS

Action	Status	Date	Done By	Description
Change Fluid			?	Oil and filter change at the time of sampling has been noted.
Change Filter			?	Oil and filter change at the time of sampling has been noted.

HISTORICAL DIAGNOSIS

12 Jul 2022 Diag: Don Baldridge

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



28 Jun 2022 Diag: Don Baldridge

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



24 May 2022 Diag: Jonathan Hester

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





OIL ANALYSIS REPORT

Sample Rating Trend



DEGRADATION



10736C AUTOCAR

Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (28 QTS)

DIAGNOSIS

Recommendation

Oil and filter change at the time of sampling has been noted. 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.

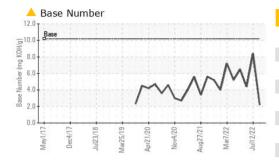
Fluid Condition

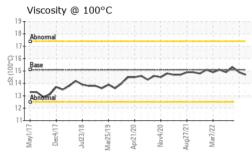
The BN level is low. The oil is no longer serviceable.

v/2017 Dec/2017 Ju/2018 Mu/2019 App2/2020 Mex/2020 Aug/2021 Mar/2022 Ju/2022						
SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		GFL0056708	GFL0052418	GFL0052463
Sample Date		Client Info		25 Apr 2023	12 Jul 2022	28 Jun 2022
Machine Age	hrs	Client Info		6121	4197	4072
Oil Age	hrs	Client Info		1759	525	545
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
WEAR METALS	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>50	38	11	28
Chromium	ppm	ASTM D5185m	>4	4	1	2
Nickel	ppm	ASTM D5185m	>2	<1	0	<1
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	0
Aluminum	ppm	ASTM D5185m	>9	6	2	6
Lead	ppm	ASTM D5185m	>30	0	<1	<1
Copper	ppm	ASTM D5185m	>35	2	1	4
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history 1	history 2
Boron	ppm	ASTM D5185m	50	2	28	6
Barium	ppm	ASTM D5185m	5	0	0	0
Molybdenum	ppm	ASTM D5185m	50	58	49	54
			0	1	4	
Manganese	ppm	ASTM D5185m		l l	<1	<1
Magnesium	ppm ppm	ASTM D5185m	560	581	530	520
Magnesium				581 1672	530 1546	520 1542
Magnesium Calcium Phosphorus	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780	581 1672 715	530 1546 704	520 1542 664
Manganese Magnesium Calcium Phosphorus Zinc	ppm	ASTM D5185m ASTM D5185m	560 1510	581 1672 715 984	530 1546	520 1542 664 990
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780	581 1672 715	530 1546 704	520 1542 664
Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780 870	581 1672 715 984	530 1546 704 942	520 1542 664 990
Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780 870 2040	581 1672 715 984 2936	530 1546 704 942 2784	520 1542 664 990 2356
Magnesium 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	581 1672 715 984 2936 current	530 1546 704 942 2784 history 1	520 1542 664 990 2356 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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	581 1672 715 984 2936 current	530 1546 704 942 2784 history 1	520 1542 664 990 2356 history 2
Magnesium 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 ASTM D5185m	560 1510 780 870 2040 Iimit/base >+100	581 1672 715 984 2936 current 9	530 1546 704 942 2784 history 1	520 1542 664 990 2356 history 2 13 9
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m MEthod ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	560 1510 780 870 2040 limit/base >+100 >20	581 1672 715 984 2936 current 9 13	530 1546 704 942 2784 history 1 12 4 <1	520 1542 664 990 2356 history 2 13 9
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm TS 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 >20	581 1672 715 984 2936 current 9 13 10	530 1546 704 942 2784 history 1 12 4 <1	520 1542 664 990 2356 history 2 13 9 2 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m method *ASTM D7844	560 1510 780 870 2040 Iimit/base >+100 >20 Iimit/base	581 1672 715 984 2936 current 9 13 10 current	530 1546 704 942 2784 history 1 12 4 <1 history 1	520 1542 664 990 2356 history 2 13 9 2 history 2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm TS ppm ppm ppm ppm Abs/.tmm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	560 1510 780 870 2040 limit/base >+100 >20 limit/base	581 1672 715 984 2936 current 9 13 10 current 0 12.3	530 1546 704 942 2784 history 1 12 4 <1 history 1 0 8.2	520 1542 664 990 2356 history 2 13 9 2 history 2 0 11.2
Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm TS ppm ppm ppm ppm Abs/.tmm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method *ASTM D7844 *ASTM D7624 *ASTM D76145	560 1510 780 870 2040 limit/base >+100 >20 limit/base >20 >30	581 1672 715 984 2936 current 9 13 10 current 0 12.3 23.9	530 1546 704 942 2784 history 1 12 4 <1 history 1 0 8.2 19.5	520 1542 664 990 2356 history 2 13 9 2 history 2 0 11.2 22.0



OIL ANALYSIS REPORT



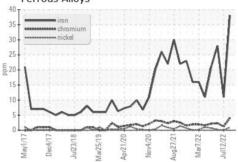


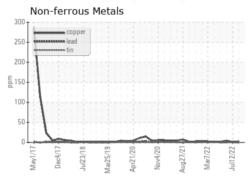
VISUAL		method	limit/base	current	history 1	history 2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

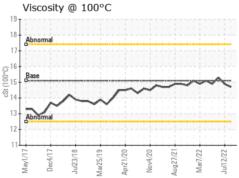
FLUID FROF	ENTIES	memod	IIIIII/Dase	Current	TIISTOLA I	HISTORY
Visc @ 100°C	cSt	ASTM D445	15.1	14.7	14.9	15.3

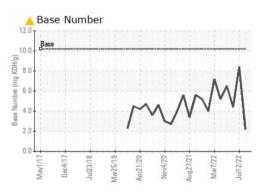
GRAPHS

Ferrous Alloys













Laboratory Sample No. Lab Number **Unique Number**

: GFL0056708 : 05833742 : 10452545

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received :01 May 2023 Diagnosed : 02 May 2023

Diagnostician : Angela Borella

Contact: Craig Johnson

craig.johnson@gflenv.com T: (919)662-7100 F: (919)662-7130

3741 Conquest Drive

Test Package : FLEET Certificate L2367 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) Garner, NC

US 27529