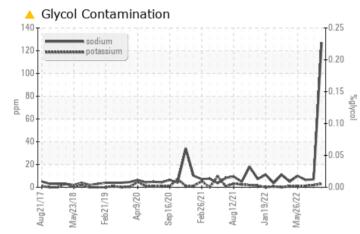


Component Natural Gas Engine Fluid PETRO CANADA DURON GEO LD 15W40 (30 QTS)

# COMPONENT CONDITION SUMMARY

GFL030

10768C



# RECOMMENDATION

We advise that you check for possible coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC	C TEST	<b>FRESULT</b>	S			
Sample Status				ABNORMAL	NORMAL	NORMAL
Sodium	ppm	ASTM D5185m		<u> </u>	7	6

Customer Id: GFL9999 Sample No.: GFL0047426 Lab Number: 05680246 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@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.
Resample			?	We recommend an early resample to monitor this condition.
Check Glycol Access			?	We advise that you check for the source of the coolant leak.

### **HISTORICAL DIAGNOSIS**



05 Aug 2022 Diag: Don Baldridge

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.





15 Jun 2022 Diag: Don Baldridge



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.

### 26 May 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.



view report





# **OIL ANALYSIS REPORT**

#### Sample Rating Trend

### **COOL CHEMICALS**

# Area GFL030 10768C

Component **Natural Gas Engine** 

Fluid

PETRO CANADA DURON GEO LD 15W40 (30 QTS)

### DIAGNOSIS

### Recommendation

We advise that you check for possible coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

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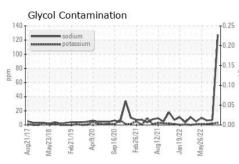


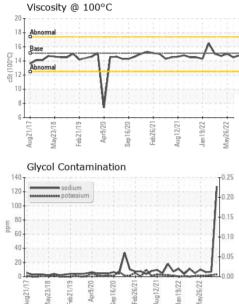
# g2017 May2018 Feb2019 Apr2020 Sep2020 Feb2021 Aug2021 Jan2022 May2022

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0047426	GFL0053634	GFL0051212
Sample Date		Client Info		27 Oct 2022	05 Aug 2022	15 Jun 2022
Machine Age	hrs	Client Info		14909	14298	13819
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				ABNORMAL	NORMAL	NORMAL
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>50	27	13	9
Chromium	ppm	ASTM D5185m	>4	4	2	<1
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		<1	0	<1
Silver	ppm	ASTM D5185m	>3	0	0	<1
Aluminum	ppm	ASTM D5185m	>9	3	3	3
Lead	ppm	ASTM D5185m	>30	2	2	<1
Copper	ppm	ASTM D5185m	>35	1	<1	2
Tin	ppm	ASTM D5185m	>4	<1	<1	<1
Vanadium	ppm	ASTM D5185m		<1	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	50	6	6	10
Barium	ppm	ASTM D5185m	5	2	0	0
Molybdenum	ppm	ASTM D5185m	50	56	55	54
Manganese	ppm	ASTM D5185m	0	<1	<1	1
Magnesium	ppm	ASTM D5185m	560	450	556	522
	1-1-			400	000	
Calcium	ppm	ASTM D5185m	1510	1901	1538	1579
Calcium Phosphorus			1510 780			
	ppm	ASTM D5185m		1901	1538	1579
Phosphorus	ppm ppm	ASTM D5185m ASTM D5185m	780	1901 763	1538 680	1579 718
Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	780 870	1901 763 1031	1538 680 979	1579 718 1004
Phosphorus Zinc Sulfur	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	780 870 2040	1901 763 1031 2765	1538 680 979 2253	1579 718 1004 2413
Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	780 870 2040 limit/base	1901 763 1031 2765 current	1538 680 979 2253 history1	1579 718 1004 2413 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm TS ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	780 870 2040 limit/base >+100	1901 763 1031 2765 current 11	1538 680 979 2253 history1 6	1579 718 1004 2413 history2 6
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	780 870 2040 limit/base >+100	1901 763 1031 2765 <u>current</u> 11 ▲ 127	1538 680 979 2253 history1 6 7	1579 718 1004 2413 history2 6 6
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	780 870 2040 limit/base >+100 >20	1901 763 1031 2765 current 11 ▲ 127 3	1538 680 979 2253 history1 6 7 2	1579 718 1004 2413 history2 6 6 6 1
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	780 870 2040 limit/base >+100 >20 limit/base	1901 763 1031 2765 current 11 ▲ 127 3 current	1538 680 979 2253 history1 6 7 2 2 history1	1579 718 1004 2413 history2 6 6 6 1 1 history2
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	780 870 2040 limit/base >+100 >20 limit/base	1901 763 1031 2765 current 11 ▲ 127 3 current 0.1	1538 680 979 2253 history1 6 7 2 2 history1 0.1	1579 718 1004 2413 history2 6 6 6 1 1 history2 0.1
Phosphorus Zinc Sulfur CONTAMINAN Solicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm TS ppm ppm ppm ppm % Abs/tmm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844	780 870 2040 limit/base >+100 >20 limit/base	1901 763 1031 2765 current 11 ▲ 127 3 current 0.1 12.5	1538 680 979 2253 history1 6 7 2 history1 0.1 0.1 11.9	1579 718 1004 2413 history2 6 6 6 6 1 1 history2 0.1 10.7
Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm TS ppm ppm ppm ppm % Abs/tmm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844	780 870 2040 limit/base >+100 >20 limit/base >20 >30	1901 763 1031 2765 current 11 ▲ 127 3 current 0.1 12.5 22.9	1538 680 979 2253 history1 6 7 2 history1 0.1 0.1 11.9 24.1	1579 718 1004 2413 history2 6 6 6 1 1 history2 0.1 10.7 20.3



# **OIL ANALYSIS REPORT**





т0.25	VISUAL		method	limit/base	current	history1	history2
+0.20	White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
-0.15 egycol	Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
-0.10 °	Silt	scalar	*Visual	NONE	NONE	NONE	NONE
-0.05	Debris	scalar	*Visual	NONE	NONE	NONE	NONE
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Jan 19/22 May26/22	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
May	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	NEG
	Free Water	scalar	*Visual		NEG	NEG	NEG
- A	FLUID PROPE		method	limit/base	current	history1	history2
~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	Visc @ 100°C	cSt	ASTM D445	15.1	13.3	14.8	14.5
	GRAPHS						
	Ferrous Alloys						
22	iron						
Jan 19/22 - Jan 19/22 - May26/22 -	100 - nickel						
~ ~ 2	80-						
T0.25	60						
11.1.1.1.1.1.1	40-						
-0.20	20-			1			
-0.15	Land	~	m				
-0.10	20 19 19 11 0 20 19 19 11	20	22	7			
+0.05	Aug21/17 May23/18 Feb21/19 Apr9/20	Sep 16/20 Feb 26/21	Aug12/21 Jan19/22	VI dy z D/ Z Z			
	Non-ferrous Meta			5			
9/22	350 T 2000 C 2000 C 2000 C 2						
Jan 1 9/22 May26/22	300 - copper lead						
	250 - tin						
F	200-						
id d	150						
	100-						
	50						
	Aug21/17 May23/18 Feb21/19 Apr9/20	Sep 16/20 Feb 26/21	Aug 12/21 Jan 19/22	77/g7/pM			
	Augi Mayi Febi	Sep 1	Aug	Midya			
	Viscosity @ 100°C	2			Base Number		
	20			12.	<sup>0</sup> T ? ?		
	18 - Abnormal			10.	0 - Base		
-	16 Base		$\sim \Lambda$	8. 6. 8. 6. 4.	0	Λ	Λ Λ.
	Abnormal			But I			127
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	Aug21/17 May23/18 Feb21/19 Apr9/20	Sep 16/20 Feb 26/21	Aug12/21 Jan19/22	MIAYZDZZZ	Aug21/17 May23/18 Feb21/19	Apr9/24 Sep16/20 Feb26/21	Jan 19/22 May26/22
	At Ni Fe	3 F	Ai Ja	2	Aı. Mi. Fe	S L S	Ĩ
Laboratory	: WearCheck USA - 5				3 GFL Enviro	onmental - 9999 - Moved	No Longer Used Units
Sample No. Lab Number		Received		Oct 2022 Nov 2022			
Unique Number		Diagnos Diagnost		athan Heste	r		, US
Test Package	: FLEET ( Additional			/-			Contact:

Certificate L2367 Test Package : FLEET (Additional Tests: Glycol) 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)