

PROBLEM SUMMARY

Sample Rating Trend

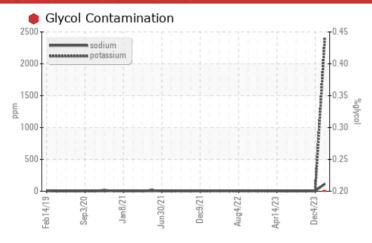


Machine Id **2714C** Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (12 GAL)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS							
Sample Status				SEVERE	NORMAL	NORMAL	
Sodium	ppm	ASTM D5185m		<u> </u>	4	4	
Potassium	ppm	ASTM D5185m	>20	2394	2	0	
Glycol	%	*ASTM D2982		0.20			

Customer Id: GFL017 Sample No.: GFL0112921 Lab Number: 06100020 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 ihester@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			?	We recommend that you drain the oil and perform a filter service on this component if not already done.		
Change Filter			?	We recommend that you drain the oil and perform a filter service on this component if not already done.		
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

04 Dec 2023 Diag: Wes Davis





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.



03 Oct 2023 Diag: Wes Davis

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.



13 Sep 2023 Diag: Wes Davis

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







Machine Id 2714C Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (12 GAL)

DIAGNOSIS

Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil and perform a filter service on this component if not already done. We recommend an early resample to monitor this condition.

Wear

All component wear rates are normal.

Contamination

Sodium and/or potassium levels are high. Test for glycol is positive.

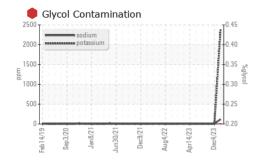
▲ Fluid Condition

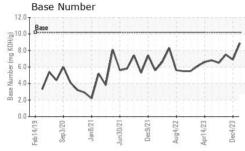
The BN result indicates that there is suitable alkalinity remaining in the oil. The oil is no longer serviceable due to the presence of contaminants.

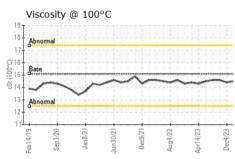
(12 GAL)						
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0112921	GFL0098130	GFL0079601
Sample Date		Client Info		26 Feb 2024	04 Dec 2023	03 Oct 2023
Machine Age	hrs	Client Info		3340	3340	3340
Oil Age	hrs	Client Info		595	379	142
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				SEVERE	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
Iron	ppm	ASTM D5185m	>50	10	1	2
Chromium	ppm	ASTM D5185m	>4	1	<1	0
Nickel	ppm	ASTM D5185m	>2	0	<1	0
Titanium	ppm	ASTM D5185m		<1	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>9	2	2	0
Lead	ppm	ASTM D5185m	>30	13	<1	<1
Copper	ppm	ASTM D5185m	>35	3	0	0
Tin	ppm	ASTM D5185m	>4	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVEO			11 1.0			
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	method ASTM D5185m	50	current 7	history1 23	history2 31
	ppm				•	
Boron		ASTM D5185m	50	7	23	31
Boron Barium	ppm	ASTM D5185m ASTM D5185m	50 5	7 8	23	31
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50	7 8 52	23 0 50	31 0 50
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0	7 8 52 0	23 0 50 <1	31 0 50
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560	7 8 52 0 460	23 0 50 <1 603	31 0 50 0 589
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510	7 8 52 0 460 1306	23 0 50 <1 603 1524	31 0 50 0 589 1575
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 5 50 0 560 1510 780	7 8 52 0 460 1306 712	23 0 50 <1 603 1524 835	31 0 50 0 589 1575 785
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 ASTM D5185m	50 5 50 0 560 1510 780 870	7 8 52 0 460 1306 712 832	23 0 50 <1 603 1524 835 1000	31 0 50 0 589 1575 785 966
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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	50 5 50 0 560 1510 780 870 2040	7 8 52 0 460 1306 712 832 2225	23 0 50 <1 603 1524 835 1000 2569	31 0 50 0 589 1575 785 966 2590
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040	7 8 52 0 460 1306 712 832 2225	23 0 50 <1 603 1524 835 1000 2569 history1	31 0 50 0 589 1575 785 966 2590 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040	7 8 52 0 460 1306 712 832 2225 current	23 0 50 <1 603 1524 835 1000 2569 history1	31 0 50 0 589 1575 785 966 2590 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	7 8 52 0 460 1306 712 832 2225 current 8 ▲ 116	23 0 50 <1 603 1524 835 1000 2569 history1 3	31 0 50 0 589 1575 785 966 2590 history2 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	7 8 52 0 460 1306 712 832 2225 current 8 ▲ 116 ▲ 2394	23 0 50 <1 603 1524 835 1000 2569 history1 3 4	31 0 50 0 589 1575 785 966 2590 history2 3 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol	ppm	ASTM D5185m METHOD ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100	7 8 52 0 460 1306 712 832 2225 current 8 △ 116 △ 2394 ● 0.20	23 0 50 <1 603 1524 835 1000 2569 history1 3 4 2	31 0 50 0 589 1575 785 966 2590 history2 3 4 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D2982	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20	7 8 52 0 460 1306 712 832 2225 current 8 △ 116 △ 2394 ④ 0.20 current	23 0 50 <1 603 1524 835 1000 2569 history1 3 4 2 	31 0 50 0 589 1575 785 966 2590 history2 3 4 0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20	7 8 52 0 460 1306 712 832 2225 current 8 △ 116 △ 2394 ● 0.20 current 0	23 0 50 <1 603 1524 835 1000 2569 history1 3 4 2 history1	31 0 50 0 589 1575 785 966 2590 history2 3 4 0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20	7 8 52 0 460 1306 712 832 2225 current 8 △ 116 △ 2394 ● 0.20 current 0 12.2	23 0 50 <1 603 1524 835 1000 2569 history1 3 4 2 history1 0 8.7	31 0 50 0 589 1575 785 966 2590 history2 3 4 0 history2 0 7.3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624	50 5 50 0 560 1510 780 870 2040 limit/base >+100 >20	7 8 52 0 460 1306 712 832 2225 current 8 △ 116 △ 2394 ● 0.20 current 0 12.2 23.1	23 0 50 <1 603 1524 835 1000 2569 history1 3 4 2 history1 0 8.7 19.5	31 0 50 0 589 1575 785 966 2590 history2 3 4 0 history2 0 7.3 18.7



OIL ANALYSIS REPORT



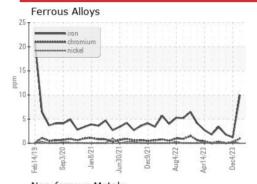


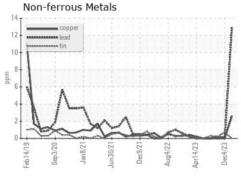


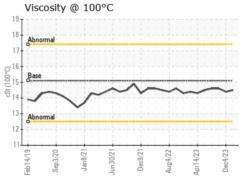
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

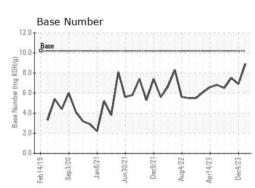
FLUID PROPI	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	14.5	14.4	14.6

GRAPHS













Laboratory Sample No. Lab Number : 06100020 Unique Number: 10898250

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0112921

Tested Diagnosed

Received : 26 Feb 2024 : 28 Feb 2024

: 28 Feb 2024 - Jonathan Hester

GFL Environmental - 017 - Durham

148 Stone Park Court Durham, NC

US 27703 Contact:

bill.waring@wearcheck.com T: (919)596-1363

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)

Test Package: FLEET (Additional Tests: GLYCOL)

F: (919)598-1852