

PROBLEM SUMMARY

Sample Rating Trend

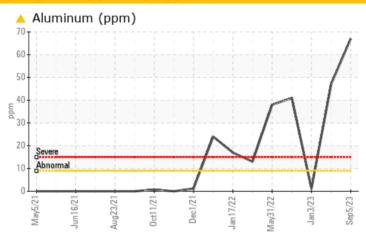


Machine Id 910028

Component **Natural Gas Engine**

PETRO CANADA DURON GEO LD 15W40 (36 QTS)

COMPONENT CONDITION SUMMARY



RECOMMENDATION

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

PROBLEMATION	C TEST	RESULT	S				
Sample Status				ABNORMAL	ABNORMAL	NORMAL	
Aluminum	nnm	ASTM D5185m	>9	A 67	A 47	1	

Customer Id: GFL002 Sample No.: PCA0101725 Lab Number: 05946441 Test Package: FLEET

To manage this report scan the QR code

To discuss the diagnosis or test data:

Don Baldridge +1 don.b505@comcast.net

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

19 Apr 2023 Diag: Don Baldridge

WEAR



No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level is abnormal. All other 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 Jan 2023 Diag: Doug Bogart

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.



20 Jun 2022 Diag: Jonathan Hester

WEAR



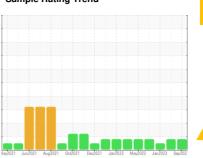
No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor. The aluminum level is abnormal. All other component wear rates are normal. There is no indication of any contamination in the oil. The BN result 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



WEAR



910028

Component

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (36 QTS)

DIAGNOSIS

Recommendation

No corrective action is recommended at this time. Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

Wear

The aluminum level is abnormal. All other component wear rates are normal.

Contamination

There is no indication of any contamination in the

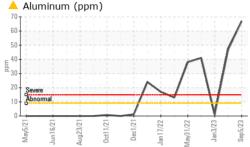
Fluid Condition

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

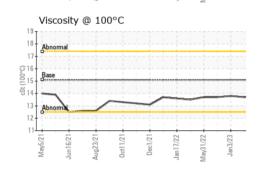
Лиу2021 Jun2021 Aug2021 Ока2021 Ока2021 Jun2022 Миу2022 Jun2023 Sep202:							
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2	
Sample Number		Client Info		PCA0101725	PCA0077282	GFL0051493	
Sample Date		Client Info		05 Sep 2023	19 Apr 2023	03 Jan 2023	
Machine Age	hrs	Client Info		4802	3614	0	
Oil Age	hrs	Client Info		1188	624	0	
Oil Changed		Client Info		Changed	Changed	N/A	
Sample Status				ABNORMAL	ABNORMAL	NORMAL	
WEAR METALS		method	limit/base	current	history1	history2	
Iron	ppm	ASTM D5185m	>50	12	7	5	
Chromium	ppm	ASTM D5185m	>4	2	<1	<1	
Nickel	ppm	ASTM D5185m	>2	0	0	0	
Titanium	ppm	ASTM D5185m		0	0	0	
Silver	ppm	ASTM D5185m	>3	0	0	0	
	ppm	ASTM D5185m	>9	<u>^</u> 67	<u>4</u> 7	1	
Lead	ppm	ASTM D5185m	>30	11	0	<1	
Copper	ppm	ASTM D5185m	>35	4	2	<1	
Tin	ppm	ASTM D5185m	>4	<1	0	<1	
Vanadium	ppm	ASTM D5185m		<1	0	0	
Cadmium	ppm	ASTM D5185m		0	0	0	
ADDITIVES		method	limit/base	current	history1	history2	
Boron	ppm	ASTM D5185m	50	7	10	8	
	PP	710 1111 20 100111		•	. 0		
	ppm	ASTM D5185m	5	0	0	0	
Barium							
Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	5	0	0	0	
Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	5 50	0 57	0 38	0 57	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0	0 57 <1	0 38 <1	0 57 <1	
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560	0 57 <1 665	0 38 <1 411	0 57 <1 892	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510	0 57 <1 665 2071	0 38 <1 411 1191	0 57 <1 892 1129	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780	0 57 <1 665 2071 837	0 38 <1 411 1191 546	0 57 <1 892 1129 985	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870	0 57 <1 665 2071 837 1082	0 38 <1 411 1191 546 717	0 57 <1 892 1129 985 1127	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040	0 57 <1 665 2071 837 1082 3322	0 38 <1 411 1191 546 717 2605	0 57 <1 892 1129 985 1127 3527 history2	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon	ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base	0 57 <1 665 2071 837 1082 3322 current	0 38 <1 411 1191 546 717 2605 history1	0 57 <1 892 1129 985 1127 3527 history2	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	pppm pppm pppm pppm pppm pppm pppm ppp	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100	0 57 <1 665 2071 837 1082 3322 current	0 38 <1 411 1191 546 717 2605 history1	0 57 <1 892 1129 985 1127 3527 history2	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium	ppm	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100	0 57 <1 665 2071 837 1082 3322 current 17 9	0 38 <1 411 1191 546 717 2605 history1	0 57 <1 892 1129 985 1127 3527 history2 3	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium	ppm	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20	0 57 <1 665 2071 837 1082 3322 current 17 9	0 38 <1 411 1191 546 717 2605 history1 13 4 0	0 57 <1 892 1129 985 1127 3527 history2 3 2 <1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20	0 57 <1 665 2071 837 1082 3322 current 17 9 0	0 38 <1 411 1191 546 717 2605 history1 13 4 0 history1	0 57 <1 892 1129 985 1127 3527 history2 3 2 <1	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m method ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 57 <1 665 2071 837 1082 3322 current 17 9 0 current 0.1	0 38 <1 411 1191 546 717 2605 history1 13 4 0 history1 0.1	0 57 <1 892 1129 985 1127 3527 history2 3 2 <1 history2 0.3	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 57 <1 665 2071 837 1082 3322 current 17 9 0 current 0.1 11.8	0 38 <1 411 1191 546 717 2605 history1 13 4 0 history1 0.1 9.5	0 57 <1 892 1129 985 1127 3527 history2 3 2 <1 history2	
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANT Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m Method ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D76145	5 50 0 560 1510 780 870 2040 limit/base >+100 >20 limit/base	0 57 <1 665 2071 837 1082 3322 current 17 9 0 current 0.1 11.8 25.8	0 38 <1 411 1191 546 717 2605 history1 13 4 0 history1 0.1 9.5 20.7	0 57 <1 892 1129 985 1127 3527 history2 3 2 <1 history2 0.3 5.3 17.6	



OIL ANALYSIS REPORT



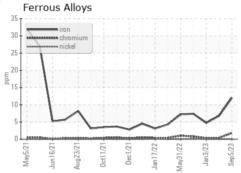
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	Base	Num	ber						
12.0	Base								
Base Number (mg KOH/g) 0.01								Λ	
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ase Nun		/	1	_	/	/			\
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0.0	lay5/21	m16/21-	12/27	t11/21-	lec1/21-	17/22	31/22	an3/23	

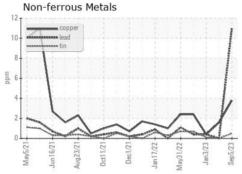


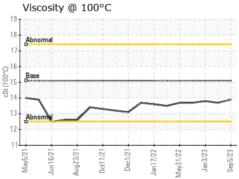
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

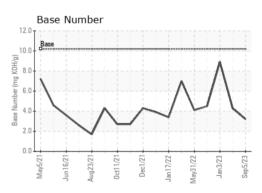
FLUID PROPI	EHIIES	method	iiiiii/base	current	riistory i	HIStory
Visc @ 100°C	cSt	ASTM D445	15.1	13.9	13.7	13.8

GRAPHS













Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10642400 Test Package : FLEET

: PCA0101725 : 05946441

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 08 Sep 2023 Diagnosed

: 12 Sep 2023 Diagnostician : Don Baldridge

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)

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Henderson, NC

US 27537

Report Id: GFL002 [WUSCAR] 05946441 (Generated: 09/12/2023 13:29:02) Rev: 1

Submitted By: Cameron King

GFL Environmental - 002 - Vance-Granville