

PROBLEM SUMMARY

Sample Rating Trend

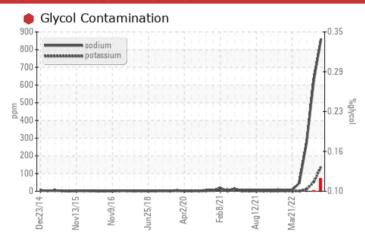


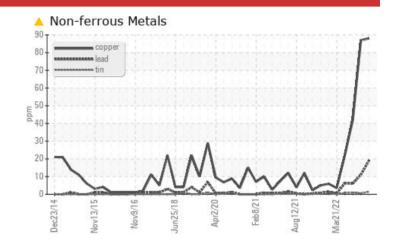
Machine Id 2568C Component

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 from the component if this has not already been done. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS								
Sample Status				SEVERE	SEVERE	ABNORMAL		
Copper	ppm	ASTM D5185m	>35	<u>^</u> 88	▲ 87	42		
Sodium	ppm	ASTM D5185m		A 860	△ 626	△ 278		
Potassium	ppm	ASTM D5185m	>20	139	<u>▲</u> 52	11		
Glycol	%	*ASTM D2982		0.12	0.10			

Customer Id: GFL331 Sample No.: GFL0071827 Lab Number: 05876451 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

HISTORICAL DIAGNOSIS

23 Feb 2023 Diag: Jonathan Hester

GLYCOL



We advise that you check for the source of the coolant leak. Check for low coolant level. We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition. The copper level is abnormal. All other component wear rates are normal. Sodium and/or potassium levels are high. Test for glycol is positive. The BN result indicates that there is suitable alkalinity remaining in the oil.

View report

13 Jan 2023 Diag: Jonathan Hester

COOL CHEMICALS



We advise that you check for possible coolant leak. Check for low coolant level. We recommend an early resample to monitor this condition. All component wear rates are normal. Sodium and/or potassium levels are high. The BN result indicates that there is suitable alkalinity remaining in the oil.

view report

09 Nov 2022 Diag: Don Baldridge

WEAR



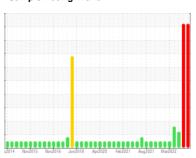
Oil and filter change at the time of sampling has been noted. No corrective action is recommended at this time. We recommend an early resample to monitor this condition. Cylinder, crank, or cam shaft wear is indicated. There is no indication of any contamination in the oil. The BN result indicates that 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 2568C 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 from the component if this has not already been done. We recommend an early resample to monitor this condition.

Wear

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

Contamination

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

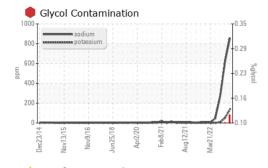
Fluid Condition

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

SAMPLE INFORM Sample Number Sample Date Machine Age			(12 GAL)							
Sample Date	MATION	method	limit/base	current	history1	history2				
		Client Info		GFL0071827	GFL0071802	GFL0052784				
Machine Age		Client Info		16 Jun 2023	23 Feb 2023	13 Jan 2023				
- 3 -	hrs	Client Info		8020	7758	7591				
Oil Age	hrs	Client Info		429	167	1329				
Oil Changed		Client Info		Not Changd	Not Changd	Not Changd				
Sample Status				SEVERE	SEVERE	ABNORMAL				
WEAR METALS	3	method	limit/base	current	history1	history2				
Iron	ppm	ASTM D5185m	>50	45	25	24				
Chromium	ppm	ASTM D5185m	>4	6	4	4				
Nickel	ppm	ASTM D5185m	>2	1	<1	<1				
Titanium	ppm	ASTM D5185m		<1	0	<1				
Silver	ppm	ASTM D5185m	>3	0	0	0				
Aluminum	ppm	ASTM D5185m	>9	2	3	3				
Lead	ppm	ASTM D5185m	>30	19	11	6				
Copper	ppm	ASTM D5185m	>35	<u> </u>	▲ 87	42				
Tin	ppm	ASTM D5185m	>4	1	<1	<1				
Vanadium	ppm	ASTM D5185m		<1	<1	0				
Cadmium	ppm	ASTM D5185m		0	0	0				
ADDITIVES		method	limit/base	current	history1	history2				
Boron	ppm	ASTM D5185m	50	9	11	10				
Barium	ppm	ASTM D5185m	5	0	0	0				
Molybdenum	ppm	ASTM D5185m	50	106	84	64				
Manganese	ppm	ASTM D5185m	0	2	1	<1				
Magnesium	ppm	ASTM D5185m	560	611	563	592				
Calcium	ppm	ASTM D5185m	1510	1827	1661	1625				
Phosphorus	ppm	ASTM D5185m	780	751	740	754				
Zinc	ppm	ASTM D5185m	870	1053	1032	996				
Sulfur	ppm	ASTM D5185m	2040	3030	2512	2864				
CONTAMINANT	TS	method	limit/base	current	history1	history2				
Silicon	ppm	ASTM D5185m	>+100	26	18	16				
Sodium	ppm	ASTM D5185m		<u>▲</u> 860	<u>▲</u> 626	<u>▲</u> 278				
	ppm	ASTM D5185m	>20	139	<u>▲</u> 52	11				
Potassium	%	*ASTM D2982		0.12	• 0.10					
Potassium Glycol										
		method	limit/base	current	history1	history2				
Glycol	%	method *ASTM D7844	limit/base	current 0.1	history1	history2				
Glycol INFRA-RED	% Abs/cm									
Glycol INFRA-RED Soot %		*ASTM D7844		0.1	0.1	0.1				
Glycol INFRA-RED Soot % Nitration	Abs/cm Abs/.1mm	*ASTM D7844 *ASTM D7624	>20	0.1 15.3	0.1 12.2	0.1				
Glycol INFRA-RED Soot % Nitration Sulfation	Abs/cm Abs/.1mm	*ASTM D7844 *ASTM D7624 *ASTM D7415	>20 >30	0.1 15.3 24.8	0.1 12.2 21.8	0.1 11.4 20.0				



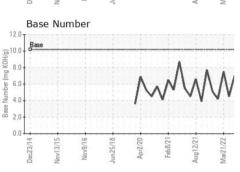
OIL ANALYSIS REPORT



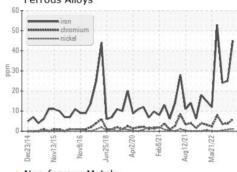
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual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

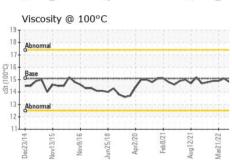
Nor	ı-ferrous N	1etals					
80	copper lead						Γ
E 60+							-
Ed 40-						/	
20		W	V~	Λ,	^^	1	
Dec23/14	Nov13/15	Jun25/18	Apr2/20	Feb8/21	Aug12/21	Mar21/22	

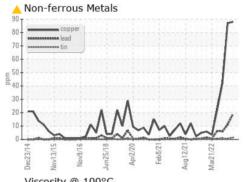


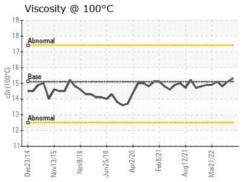


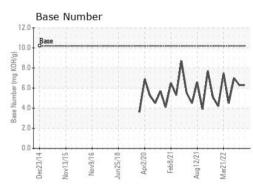
















Laboratory Sample No. Lab Number **Unique Number**

: 10521554

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : GFL0071827 : 05876451

Received Diagnosed Diagnostician

: 19 Jun 2023 : 20 Jun 2023 : Jonathan Hester GFL Environmental - 331 - Columbus

180 Ada Moore Rd Columbus, NC US 28722 Contact: Matt Segars

matt.segars@gflenv.com T: (800)207-6618 F: (252)617-2494

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)