

Machine Id **AUTOCAR 933046** Component Natural Gas Engine PFTRO CANADA DURON GEO LD 15W40 (--- GAL)

Sample Number Client Info GR000612 12 Jul 2024 Client Info I 2 Jul 2024 I 7 May 2024 I	PETRO CANADA DURON GEO LD 15W40 (·····						
Sample at the next service interval to monitor. Sample Date Client Into 12 Jul 202 71 May 2024 Machine Age hrs Client Into 1154 77.6 Oll Age hrs Client Into 1154 77.6 Oll Changed Client Into 1154 77.6 Oll Changed Client Into NotChange NotChange </th <th>RECOMMENDATION</th> <th></th> <th>UOM</th> <th></th> <th>Limit/Abn</th> <th>Current</th> <th>-</th> <th>History2</th>	RECOMMENDATION		UOM		Limit/Abn	Current	-	History2
Sample Late Client Inio I 2401 2/4 I Mag Add ···· Machine Age frs Client Inio 1154 776 ··· Oil Age hrs Client Inio 1154 776 ··· Filter Age hrs Client Inio 1154 776 ··· Oil Charged Client Inio 1154 776 ··· Sample Status Not Chargd Not Chargd Not Chargd ··· Wetal levels are typical for a new component breaking in. Iron ppm ASIM D156m >2 c1 0 ··· Silver ppm ASIM D156m >3 c1 0 ··· Gopper ppm ASIM D156m >3 c1 10 ··· Vanadium ppm ASIM D156m >3 c1 11 ··· Time is no indication of any contamination in the oil. Silicorn ppm ASIM D156m >20 7 4 ··· Silicorn ppm ASIM D156m >20 <th rowspan="4">Resample at the next service interval to monitor.</th> <th>Sample Number</th> <th></th> <th>Client Info</th> <th></th> <th>GFL0109612</th> <th></th> <th></th>	Resample at the next service interval to monitor.	Sample Number		Client Info		GFL0109612		
Oil Age hrs Client Indo 1154 776 Filter Age hrs Client Indo 1154 776 Oil Changed Client Indo 1154 776 Oil Changed Client Indo 1154 776 Not Changed Client Indo Not Changed Not Changed Not Changed Not Changed Not Changed Not Changed Not Changed Not Changed Not Changed Not Changed Not Changed Not Changed								
Filte Age hrs Client Into I154 77.6 Oil Changed Client Into Not Change Not Change Not Change Sample Status Client Into Not Change Not Change Not Change Metal levels are typical for a new component breaking in. Iron pm ASTM DS15m >-2 <1 0 Nickel ppm ASTM DS15m >-2 <1 0 Nickel ppm ASTM DS15m >-2 <1 0 Nickel ppm ASTM DS15m >-2 <1 0 Aluminum ppm ASTM DS15m >-2 <1 0 Lead ppm ASTM DS15m >-4 2 <1 Visual NONE NONE NONE NONE NONE Valex ppm ASTM DS15m -4 2 <1 Valex ppm <		•	hrs	Client Info				
Oil Changed Client Into Not Change Not Change		0	hrs					
Filter Changed Sample Status Client Info Ind Changed NORMAL No Chan NorKE No No Ke <thn< th=""><th></th><th>-</th><th>hrs</th><th></th><th></th><th></th><th></th><th></th></thn<>		-	hrs					
Sample StatusNORMANORMANormal		-				-		
NEAR Iron ppm ASTM D516m >50 33 32 Metal levels are typical for a new component breaking in. Iron ppm ASTM D516m >2 1 Nickel ppm ASTM D516m >2 -1 0 Titanium ppm ASTM D516m >3 -1 0 Aluminum ppm ASTM D516m >3 -1 0 Aluminum ppm ASTM D516m >3 -1 0 Copper ppm ASTM D516m >3 1 1 Tin ppm ASTM D516m >4 2 -1 0 Copper ppm ASTM D516m >4 2 -1 0 White Metal scalar 'Visual NONE NONE NONE NONE NONE Contraminetion of any contamination in the oil. Silicon ppm ASTM D516m		-		Client Info		•		
Chronium ppm ASTM D5185m s-4 2 1		Sample Status				NORMAL	NORMAL	
Chronium ppm ASTM D5185m s-4 2 1	WEAB	Iron	maa	ASTM D5185m	>50	33	32	
Mickel ppm ASTM D5185n -2 <1							1	
Titanium ppm ASTM D5185m <1	Metal levels are typical for a new component breaking in.						0	
Silver ppm ASTM D5185m -3 <1								
Aluminum ppm ASTM D5185m >9 4 3 Lead ppm ASTM D5185m >30 9 31 Copper ppm ASTM D5185m >30 14 11 Vanadium ppm ASTM D5185m >4 2 Vanadium ppm ASTM D5185m >4 2 Vanadium ppm ASTM D5185m >4 2 Vanadium ppm ASTM D5185m >4 2 Vanadium ppm ASTM D5185m >400 NONE NONE NONE Stiff and scalar 'Visual NONE NONE NONE NONE There is no indication of any contamination in the oil. Potasson % 'ASTM D784 0 0 Stiff and scalar 'Visual NONE NONE NONE NONE					>3			
Lead ppm ASTM D5185m >30 9 3 Copper ppm ASTM D5185m >35 14 11 Vanadium ppm ASTM D5185m >4 2 <1 Vanadium ppm ASTM D5185m >4 2 <1 White Metal scalar "Visual NONE								
Copper ppm ASTM D5165m >35 14 11 Tin ppm ASTM D5165m >4 2 <1 Vanadium ppm MSTM D5165m >4 2 <1 White Metal scalar *Visual NONE NONE NONE NONE Velow Metal scalar *Visual NONE NONE NONE Solicon ppm ASTM D5165m >-100 66 7.8 Value ppm ASTM D5165m >-100 66 7.8 Solicon ppm ASTM D5165m >-20 7 4 Value Water WC Method >-0.1 NEG NEG Nitration Abs/tim ASTM D7165m >20 12.7 11.6 Soli % % a STM D7165m ASTM D7165 >30 25.8 23.1				ASTM D5185m	>30			
Tin pp ASTM D5185m >4 2 <1		Copper		ASTM D5185m	>35	14	11	
White Metal Yellow Metalscalar'VisualNONENONENONECONTAMINATIONSiliconppmASTM D5185m>+1006678DassiumppmASTM D5185m>2074PotassiumppmASTM D5185m>2074WaterWC Method>0.1NEGNEGSot %%'ASTM D78442012.711.6SulfationAbs/lm'ASTM D7445>3025.822.31SulfationAbs/lm'ASTM D7445>3025.823.1SulfationAbs/lm'ASTM D7445>3025.823.1SulfationAbs/lm'NSIM D7445>3025.823.1Obrisscalar'VisualNONENONENONEAppearancescalar'VisualNORMLNORMLNORMLAppearancescalar'VisualNORMLNORMLNORMLEnulsified Waterscalar'VisualNORMLNORMLNORMLBoronpmASTM D5185m556MagnesepmASTM D5185m044MagnesepmASTM D5185m0444MagnesepmASTM D5185m044		Tin	ppm	ASTM D5185m	>4	2	<1	
Yellow Metalscalar*VisualNONENONECONTAMINATIONSiliconppmASTM D5185m>+1006678PotassiumppmMSTM D5185m>2074PotassiumppmASTM D5185m>2012.711.6Soot %%*ASTM D784400NitrationAbs/cm*ASTM D78442012.711.6SulfationAbs/cm*ASTM D7844>00SulfationAbs/cm*ASTM D7844>00SulfationAbs/cm*ASTM D7844>00SulfationAbs/cm*ASTM D7844>00SulfationAbs/cm*ASTM D7844>00SulfationAbs/cm*ASTM D7844>00SulfationAbs/cm*ASTM D7844>0NONENONEDebrisscalar*VisualNONENONENONEAppearancescalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLThe BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.SodiumppmASTM D5185m50810		Vanadium	ppm	ASTM D5185m		<1	0	
Silicon ppm ASTM D5185m >+100 66 78 Potassium ppm ASTM D5185m >20 7 4 Water WC Method >0.1 NEG NEG Soot % % *ASTM D7844 0 0 Nitration Abs/cm *ASTM D7624 >20 12.7 11.6 Sulfation Abs/tmm *ASTM D7445 >30 25.8 23.1 Silt scalar *Visual NONE NONE NONE Debris scalar *Visual NONE NONE NONE Appearance scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Odor scalar *Visual NORML NORML NORML Mapneastubile for further service. Sodium		White Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium ppm ASTM D5185m >20 7 4 Water W2 WC Method >0.1 NEG NEG Soot % % %ASTM D7844 0 0 0 Nitration Abs/m %ASTM D764 >20 12.7 11.6 Sulfation Abs/m %ASTM D715 >30 25.8 23.1 Sulfation Abs/m *Visual NONE NONE NONE NONE Sulfation Abs/m *Visual NONE NONE NONE NONE Sulfation scalar *Visual NONE NONE NONE Odor scalar *Visual NORM NORML NORML NORML Appearance scalar *Visual NORML NORML NORML NORML NORML NORML NORML FUID CONDITION Sodium pm<		Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Potassium ppm ASTM D5185m >20 7 4 Water W2 WC Method >0.1 NEG NEG Soot % % %ASTM D7844 0 0 0 Nitration Abs/m %ASTM D764 >20 12.7 11.6 Sulfation Abs/m %ASTM D715 >30 25.8 23.1 Sulfation Abs/m *Visual NONE NONE NONE NONE Sulfation Abs/m *Visual NONE NONE NONE NONE Sulfation scalar *Visual NONE NONE NONE Odor scalar *Visual NORM NORML NORML NORML Appearance scalar *Visual NORML NORML NORML NORML NORML NORML NORML FUID CONDITION Sodium pm<	CONTAMINATION	Silicon	nom	ASTM D5185m	>+100	66	78	
There is no indication of any contamination in the oil. Water WC Method >0.1 NEG NEG Soot % % 'ASTM D7844 0 0 Nitration Abs/cm<'ASTM D7624 >20 12.7 11.6 Sulfation Abs/cm 'ASTM D7415 >30 25.8 23.1 Sulfation Abs/cm 'Visual NONE NONE NONE Debris scalar 'Visual NONE NONE NONE Appearance scalar 'Visual NOR NONE NORM Cor scalar 'Visual NOR NORE Odor scalar 'Visual NOR NORML NORML Emulsified Water scalar 'Visual NORML NORML NORML Boron ppm ASTM D5185m 5 5 6 Molybdenum ppm	OON FAMILIA HON							
Soot % % *ASTM D7844 0 0	There is no indication of any contamination in the oil.		ppiii					
Nitration Abs/cm *ASTM D762 >20 12.7 11.6 Sulfation Abs/fm *ASTM D745 >30 25.8 23.1 Silt scalar *Visual NONE NONE NONE NONE Debris scalar *Visual NONE NONE NONE NONE Sand/Dirt scalar *Visual NONE NONE NONE Appearance scalar *Visual NORM NORML NORML Odor scalar *Visual NOR NORML NORML Odor scalar *Visual NORM NORML NORML Popearance scalar *Visual NOR NORML NORML Appearance scalar *Visual NORM NORML NORML Odor scalar *Visual NORM NORML NORML Boron pp ASTM D5185m 50 5 6			%					
SulfationAbs/.tm'ASTM D7415>3025.823.1Siltscalar'VisualNONENONENONENONEDebrisscalar'VisualNONENONENONENONESand/Dirtscalar'VisualNONENONENONENONEAppearancescalar'VisualNORMNORMLNORMLNORMLNORMLOdorscalar'VisualNORMNORMLNORMLNORMLNORMLOdorscalar'VisualNORMNORMLNORMLNORMLNORMLOdorscalar'VisualNORMNORMLNORMLNORMLNORMLDebrisscalar'VisualNORMNORMLNORMLNORMLMolydetarescalar'VisualNORMNORMLNORMLNORMLThe BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.SodiumppmASTM D5185m50810MalganesseppmASTM D5185m505754MalganesseppmASTM D5185m50742780MalganesiumppmASTM D5185m151013811351PhosphorusppmASTM D5185m760748700					>20			
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Debrisscalar*VisualNONENONENONESand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMNORMLNORMLOdorscalar*VisualNORMNORMLNORMLOdorscalar*VisualNORMNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGFLUID CONDITIONSodiumppmASTM D5185m50810BoronppmASTM D5185m50810BariumppmASTM D5185m505754MolybdenumppmASTM D5185m505754MaganeseppmASTM D5185m50742780MagnesiumppmASTM D5185m151013811351ProsphorusppmASTM D5185m50748700								
Sand/Dirtscalar*VisualNONENONENONEAppearancescalar*VisualNORMLNORMLNORMLNORMLOdorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*VisualNORMLNORMLNORMLFLUID CONDITIONSodiumppmASTM D5185m50810BoronppmASTM D5185m505566BariumppmASTM D5185m5057544ManganeseppmASTM D5185m560742780MagnesiumppmASTM D5185m560742780MagnesiumppmASTM D5185m5607481351ManganeseppmASTM D5185m560742780PhosphorusppmASTM D5185m151013811351		Debris	scalar	*Visual	NONE	NONE	NONE	
Odorscalar*VisualNORMLNORMLNORMLNORMLEmulsified Waterscalar*Visual>0.1NEGNEGNEGNEGSodiumppmASTM D5185m50810BoronppmASTM D5185m50810BariumppmASTM D5185m50566MolybdenumppmASTM D5185m505754ManganeseppmASTM D5185m044MagnesiumppmASTM D5185m560742780PhosphorusppmASTM D5185m151013811351NaganeseppmASTM D5185m780748700PhosphorusppmASTM D5185m780748700		Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Emulsified Waterscalar*Visual>0.1NEGNEGFLUID CONDITIONThe BN result indicates that there is suitable alkalinity remaining in the oil is suitable for further service.SodiumppmASTM D5185m50810BariumppmASTM D5185m5056MolybdenumppmASTM D5185m505754ManganeseppmASTM D5185m044MagnesiumppmASTM D5185m560742780CalciumppmASTM D5185m151013811351PhosphorusppmASTM D5185m780748700		Appearance	scalar	*Visual	NORML	NORML	NORML	
Sodium ppm ASTM D5185m 2 5 Boron ppm ASTM D5185m 50 8 10 Barium ppm ASTM D5185m 5 6 Molybdenum ppm ASTM D5185m 50 57 54 Manganese ppm ASTM D5185m 560 742 780 Magnesium ppm ASTM D5185m 1510 1381 1351 Phosphorus ppm ASTM D5185m 780 748 700		Odor	scalar	*Visual	NORML	NORML	NORML	
BoronppmASTM D5185m50810BariumppmASTM D5185m5056BariumppmASTM D5185m505754MolybdenumppmASTM D5185m505754ManganeseppmASTM D5185m500742780CalciumppmASTM D5185m151013811351PhosphorusppmASTM D5185m780748700		Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
BoronppmASTM D5185m50810BariumppmASTM D5185m5056BariumppmASTM D5185m505754MolybdenumppmASTM D5185m505754ManganeseppmASTM D5185m500742780CalciumppmASTM D5185m151013811351PhosphorusppmASTM D5185m780748700	ELUID CONDITION	Sodium	maa	ASTM D5185m		2	5	
Barium ppm ASTM D5185m 5 6 Molybdenum ppm ASTM D5185m 50 57 54 Manganese ppm ASTM D5185m 0 4 4 Magnesium ppm ASTM D5185m 560 742 7800 Calcium ppm ASTM D5185m 1510 1381 1351 Phosphorus ppm ASTM D5185m 780 748 700					50			
Molybdenum ppm ASTM D5185m 50 57 54 Manganese ppm ASTM D5185m 0 4 4 Magnesium ppm ASTM D5185m 560 742 780 Calcium ppm ASTM D5185m 1510 1381 1351 Phosphorus ppm ASTM D5185m 780 748 700	The BN result indicates that there is suitable alkalinity remaining in the							
Manganese ppm ASTM D5185m 0 4 4 Magnesium ppm ASTM D5185m 560 742 780 Calcium ppm ASTM D5185m 1510 1381 1351 Phosphorus ppm ASTM D5185m 780 748 700								
Magnesium ppm ASTM D5185m 560 742 780 Calcium ppm ASTM D5185m 1510 1381 1351 Phosphorus ppm ASTM D5185m 780 748 700		Molybdenum	PPIII					
Calcium ppm ASTM D5185m 1510 1381 1351 Phosphorus ppm ASTM D5185m 780 748 700		-			0	4	4	
Phosphorus ppm ASTM D5185m 780 748 700		Manganese	ppm	ASTM D5185m				
		Manganese Magnesium	ppm ppm	ASTM D5185m ASTM D5185m	560	742	780	
	oil. The condition of the oil is suitable for further service.	Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	560 1510	742 1381	780 1351	

Base Number (BN) mg KOH/g ASTM D2896 10.2

ppm ASTM D5185m 2040

ASTM D445 15.1

Abs/.1mm *ASTM D7414 >25

Sulfur

Oxidation

Visc @ 100°C cSt

2773

20.9

3.8

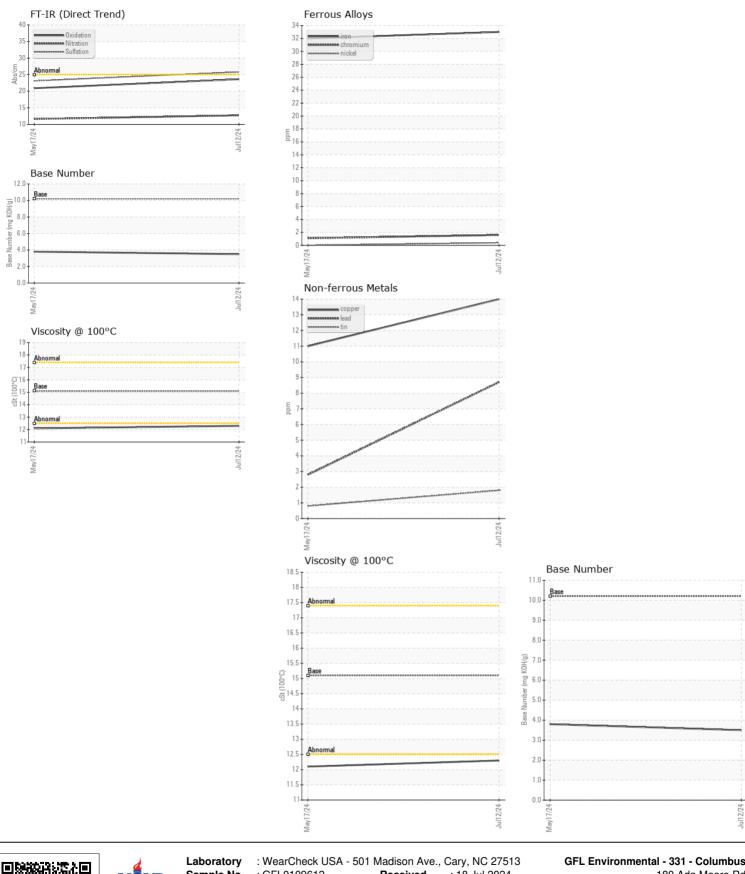
12.1

2318

23.6

3.5

12.3



GFL Environmental - 331 - Columbus Sample No. : GFL0109612 Received 180 Ada Moore Rd : 18 Jul 2024 Lab Number : 06239859 Tested Columbus, NC : 18 Jul 2024 Unique Number : 11128693 Diagnosed : 19 Jul 2024 - Don Baldridge US 28722 Test Package : FLEET Contact: Matt Segars Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. matt.segars@gflenv.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (800)207-6618 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: (252)617-2494

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