

Machine Id

WEAR NORMAL CONTAMINATION ABNORMAL FLUID CONDITION NORMAL

731045

Natural Gas Engine

PETRO CANADA DURON GEO LD 15W40 (--- LTR)

We advise that you check for the source of water entry. The oil change
at the time of sampling has been noted. We recommend an early
resample to monitor this condition.

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All component wear rates are normal.

RECOMMENDATION

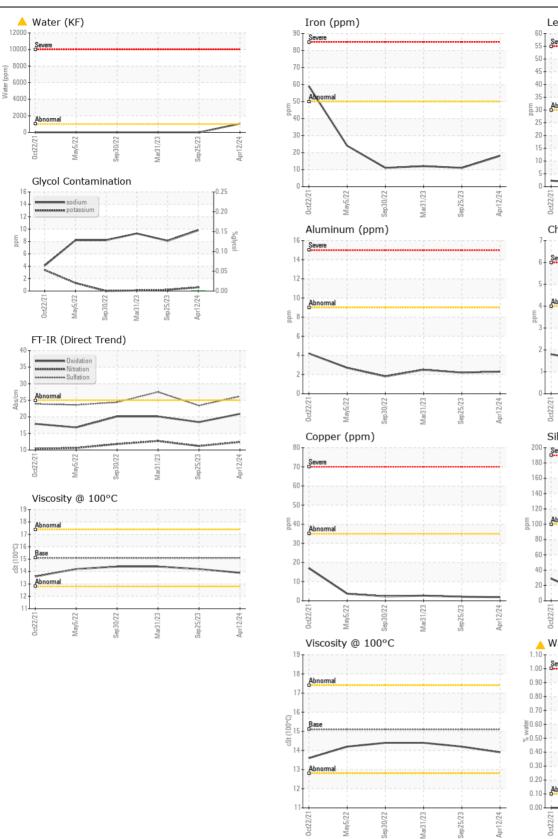
CONTAMINATION

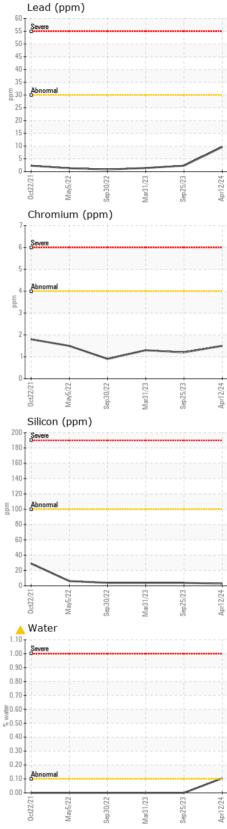
There is a moderate concentration of water present in the oil. Test for glycol is negative.

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Nu	Imber	Client Info		GFL0117150	GFL0085898	GFL0064328
Sample D	ate	Client Info		12 Apr 2024	25 Sep 2023	31 Mar 2023
Machine A	Age hrs	Client Info		6491	5361	4294
Oil Age	hrs	Client Info		1200	1200	1200
Filter Age	hrs	Client Info		1200	1200	1200
Oil Chang	ed	Client Info		Changed	Changed	Changed
Filter Cha	nged	Client Info		Changed	Changed	Changed
Sample S	tatus			ABNORMAL	NORMAL	NORMAL
Iron	ppm	ASTM D5185(m)	>50	18	11	12
Chromium	n ppm	ASTM D5185(m)	>4	2	1	1
Nickel	ppm	ASTM D5185(m)	>2	<1	<1	<1
Titanium	ppm	ASTM D5185(m)		<1	0	<1
Silver	ppm	ASTM D5185(m)	>3	0	0	0
Aluminum	ppm	ASTM D5185(m)	>9	2	2	2
Lead	ppm	ASTM D5185(m)	>30	10	2	1
Copper	ppm	ASTM D5185(m)	>35	2	2	3
Tin	ppm	ASTM D5185(m)	>4	<1	<1	<1
Vanadium	1-1-	ASTM D5185(m)		0	0	0
White Met		Visual*	NONE	NONE		
Yellow Me	etal scalar	Visual*	NONE	NONE		
Silicon	2222	ASTM D5185(m)	>+100	3	4	4
						-
	ppm	()				~1
Potassium	n ppm	ASTM D5185(m)	>20	<1	<1	<1
Potassium Water	n ppm %	ASTM D5185(m) ASTM D6304*	>20 >0.1	<1 ▲ 0.104	<1	
Potassium Water ppm Wate	n ppm % er ppm	ASTM D5185(m) ASTM D6304* ASTM D6304*	>20	<1	<1	
Potassium Water ppm Water Glycol	n ppm % er ppm %	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922*	>20 >0.1	<1 <1 <104 1045 <0.0 	<1 	
Potassium Water ppm Wate Glycol Soot %	n ppm % er ppm % %	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844*	>20 >0.1 >1000	<1 0.104 1045 0.0 0	<1 0	 0
Potassium Water ppm Wate Glycol Soot % Nitration	n ppm % ppm % % % Abs/cm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7624*	>20 >0.1 >1000 >20	<1 0.104 1045 0.0 0 12.4	<1 0 11.2	 0 12.7
Potassium Water ppm Wate Glycol Soot %	n ppm % er ppm % %	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844*	>20 >0.1 >1000	<1 0.104 1045 0.0 0	<1 0	 0
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation	n ppm % pr ppm % % % Abs/cm Abs/.1mm scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7924* ASTM D7624* ASTM D7624* Visual*	>20 >0.1 >1000 >20 >30 NONE	<1 <10.104 1045 0.0 0 12.4 26.2 	<1 0 11.2 23.4	 0 12.7 27.5
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt	n ppm % pr ppm % % Abs/cm Abs/cm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7624* ASTM D7615*	>20 >0.1 >1000 >20 >30	<1 0.104 1045 0.0 0 12.4 26.2 NONE 	<1 0 11.2 23.4 	 0 12.7 27.5
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt	n ppm % ppm % % % Abs/cm Abs/.1mm scalar scalar scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* Visual* Visual*	>20 >0.1 >1000 >20 >30 NONE NONE	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE 	<1 0 111.2 23.4 	 0 12.7 27.5
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris	n ppm % ppm % % % Abs/cm Abs/.1mm scalar scalar scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* Visual* Visual* Visual*	>20 >0.1 >1000 >20 >30 NONE NONE NONE	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE 	<1 0 111.2 23.4 	 0 12.7 27.5
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan	n ppm % ppm % % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7415* Visual* Visual* Visual*	>20 >0.1 >1000 >20 >30 NONE NONE NONE	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE NORML 	<1 0 111.2 23.4 	 0 12.7 27.5
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified	n ppm % ppm % % % Abs/cm Abs/.nm scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7624* Visual* Visual* Visual* Visual* Visual* Visual*	>20 >0.1 >1000 >20 >30 NONE NONE NONE NORML NORML	<1 <1045 0.00 0 12.4 26.2 NONE NONE NONE NORML NORML 	<1 0 11.2 23.4 NORML NEG	 0 12.7 27.5 NORML NEG
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified V Sodium	n ppm % pr ppm % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7415* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m)	>20 >0.1 >1000 >20 >30 NONE NONE NONE NORML NORML >0.1	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE NORML NORML NORML 2% 	<1 0 11.2 23.4 NORML NEG 8	 0 12.7 27.5 NORML NEG 9
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified Sodium Boron	n ppm % % ppm % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7624* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 >20 >30 NONE NONE NORML NORML >0.1	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE NORML NORML 2% 	<1 0 11.2 23.4 NORML NEG 8 8	 0 12.7 27.5 NORML NEG 9 8
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified Sodium Boron Barium	n ppm % % ppm % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7922* ASTM D7844* ASTM D7624* ASTM D7624* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 >20 >30 NONE NONE NORML NORML >0.1 50 5	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE NORML NORML NORML 10 6 <1 	<1 0 11.2 23.4 NORML NEG 8 8 8 8 <1	 0 12.7 27.5 NORML NEG 9 8 0
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearam Odor Emulsified Sodium Boron Barium Molybden	n ppm % % ppm % % Abs/cm Abs/.nm scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar gpm ppm ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7922* ASTM D7844* ASTM D7624* ASTM D7415* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 >20 >30 NONE NONE NONE NORML NORML >0.1 50 5 50	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE NORML NORML .2% 10 6 <1 58 	<1 0 11.2 23.4 NORML NEG 8 8 8 8 <1 62	 0 12.7 27.5 NORML NEG 9 8 0 0 62
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearam Odor Emulsified Sodium Boron Barium Molybden Manganes	n ppm % % pr ppm % % % Abs/cm Abs/.nm scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar gpm ppm ppm ppm ppm se ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7624* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 >20 >30 NONE NONE NONE NORML >0.1 50 5 50 0	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE NORML NORML .2% 10 6 <1 58 <1 	<1 0 11.2 23.4 NORML NEG 8 8 8 <1 62 0	 0 12.7 27.5 NORML NEG 9 8 0 62 <1
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified Sodium Boron Barium Molybden Manganesi	n ppm % % ppm % % % Abs/cm Abs/cm scalar scalar scalar scalar scalar scalar scalar scalar scalar gpm ppm ppm ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7415* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 >20 >30 NONE NONE NONE NORML >0.1 50 50 50 50 0 560	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NONE NORML NORML 2% 	<1 0 111.2 23.4 NORML NEG 8 8 8 <1 62 0 606	 0 12.7 27.5 NORML NEG 9 8 0 62 <1 617
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified Sodium Boron Barium Molybden Manganesiu Calcium	n ppm % % ppm % % % Abs/cm Abs/.nm scalar scalar scalar scalar scalar scalar scalar scalar scalar scalar gpm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7415* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 20 >30 NONE NONE NONE NORML >0.1 50 50 50 0 50 0 560 1510	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NORML NORML .2% 10 6 <1 58 <1 622 1695 	<1 0 11.2 23.4 NORML NEG 8 8 8 8 8 4 1 62 0 606 1601	 0 12.7 27.5 NORML NEG 9 8 0 62 <1 617 1773
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified V Sodium Boron Barium Molybden Manganes Magnesiu Calcium	n ppm % % ppm % % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar scalar scalar gpm ppm ppm ppm ppm ppm ppm ppm se ppm ppm se ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7624* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 20 >30 NONE NONE NONE NORML >0.1 50 50 50 0 550 50 0 560 1510 780	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NORML NORML NORML 2% 	<1 0 11.2 23.4 NORML NEG 8 8 8 8 8 4 1 62 0 606 1601 710	 0 12.7 27.5 NORML NEG 9 8 0 62 <1 617 1773 797
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified N Sodium Boron Barium Molybden Manganes Magnesiu Calcium Phosphori Zinc	n ppm % % ppm % % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar scalar gpm ppm ppm ppm ppm ppm se ppm ppm ppm ppm se ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7624* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 20 >30 NONE NONE NONE NORML >0.1 50 50 50 50 50 0 560 1510 780 870	<1 0.104 0.104 0.0 0 12.4 26.2 NONE NONE NORML NORML NORML 2% 10 6 <1 58 <1 622 1695 742 951 	<1 0 11.2 23.4 23.4 NORML NEG 8 8 8 <1 62 0 606 1601 710 920	 0 12.7 27.5 NORML NEG 9 8 0 62 <1 617 1773 797 960
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified Sodium Boron Barium Molybden Manganes Magnesiu Calcium Phosphori Zinc Sulfur	n ppm % % ppm % % % % % % % % % % % % % %	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7415* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 20 >30 NONE NONE NORM NORM >0.1 50 50 50 50 50 50 50 50 50 50 50 50 50	<1 0.104 1045 0.0 0 12.4 26.2 NONE NONE NORML NORML NORML 2% 10 6 <1 58 <1 622 1695 742 951 2031 	<1 0 11.2 23.4 23.4 NORML NEG 8 8 8 <1 62 0 606 1601 710 920 2004	 0 12.7 27.5 NORML NEG 9 8 0 62 <1 617 1773 797 960 2151
Potassium Water ppm Wate Glycol Soot % Nitration Sulfation Silt Debris Sand/Dirt Appearan Odor Emulsified N Sodium Boron Barium Molybden Manganes Magnesiu Calcium Phosphori Zinc	n ppm % % ppm % % % Abs/cm Abs/.1mm scalar scalar scalar scalar scalar scalar scalar gpm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185(m) ASTM D6304* ASTM D6304* ASTM D6304* ASTM D7922* ASTM D7844* ASTM D7844* ASTM D7624* ASTM D7624* Visual* Visual* Visual* Visual* Visual* Visual* Visual* Visual* ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m) ASTM D5185(m)	>20 >0.1 >1000 20 >30 NONE NONE NONE NORML >0.1 50 50 50 50 50 0 560 1510 780 870	<1 0.104 0.104 0.0 0 12.4 26.2 NONE NONE NORML NORML NORML 2% 10 6 <1 58 <1 622 1695 742 951 	<1 0 11.2 23.4 23.4 NORML NEG 8 8 8 <1 62 0 606 1601 710 920	 0 12.7 27.5 NORML NEG 9 8 0 62 <1 617 1773 797 960





Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 209 - Hamilton CALA Sample No. : GFL0117150 Received : 24 Apr 2024 560 Seaman Street H Lab Number : 02631087 Tested : 24 Apr 2024 Stoney Creek, ON ISO 17025:2017 Accredited : 24 Apr 2024 - Kevin Marson CA L8E 3X7 Unique Number : 5772240 Diagnosed Laboratory Test Package : MOB 1 (Additional Tests: Glycol, KF, Visual) Contact: Fred Carleton To discuss this sample report, contact Customer Service at 1-800-268-2131. fred.carleton@gflenv.com T: (289)925-6693 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab. F: (905)664-9008 Validity of results and interpretation are based on the sample and information as supplied.

Submitted By: Fred Carleton Page 2 of 2