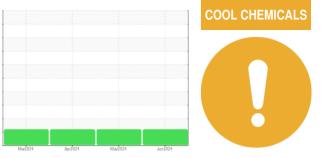


OIL ANALYSIS REPORT

Sample Rating Trend



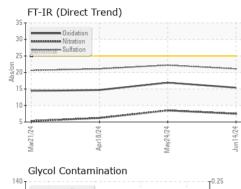
Machine Id 834054

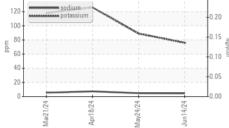
Component Natural Gas Engine PETRO CANADA DURON GEO LD 15W40 (--- GAL)

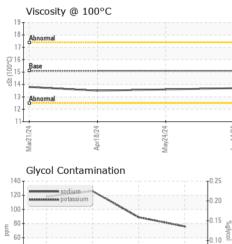
DIAGNOSIS	SAMPLE INFOR	ΜΑΤΙΟΝ	method	limit/base	current		
Recommendation	Sample Number		Client Info		GFL0122807	GFL0122834	GFL0118805
No corrective action is recommended at this time.	Sample Date		Client Info		14 Jun 2024	24 May 2024	18 Apr 2024
Resample at the next service interval to monitor.	Machine Age	bro	Client Info		543	428	286
Near	Oil Age	hrs hrs	Client Info		543 543	428	286
vear Il component wear rates are normal.	Oil Changed	1115	Client Info				
,	•		Client into		Not Changd	Not Changd	Not Changd
Contamination odium and/or potassium levels remain high. Test	Sample Status				ATTENTION	ATTENTION	ABNORMAL
or glycol is negative.	CONTAMINAT	ION	method	limit/base	current	history1	history2
luid Condition	Water		WC Method	>0.1	NEG	NEG	NEG
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	WEAR METAL	.S	method	limit/base	current	history1	history2
	Iron	ppm	ASTM D5185m	>50	22	22	28
	Chromium	ppm	ASTM D5185m	>5	<1	0	<1
	Nickel	ppm	ASTM D5185m	>4	<1	0	1
	Titanium	ppm	ASTM D5185m	>5	0	0	<1
	Silver	ppm	ASTM D5185m	>3	<1	0	<1
	Aluminum	ppm	ASTM D5185m	>25	5	6	7
	Lead	ppm	ASTM D5185m		<1	0	<1
	Copper	ppm	ASTM D5185m	>150	5	4	7
	Tin	ppm	ASTM D5185m	>4	1	<1	2
	Vanadium	ppm	ASTM D5185m		0	0	<1
	Cadmium	ppm	ASTM D5185m		0	0	<1
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	50	14	16	32
	Boron Barium				14 <1	16 0	32 <1
	Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5	<1		
	Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	5 50		0	<1
	Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0	<1 98 2	0 100 2	<1 153 3
	Barium Molybdenum	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560	<1 98 2 657	0 100	<1 153
	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510	<1 98 2 657 1278	0 100 2 625 1177	<1 153 3 856
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780	<1 98 2 657 1278 651	0 100 2 625 1177 605	<1 153 3 856 1685 955
	Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870	<1 98 2 657 1278	0 100 2 625 1177	<1 153 3 856 1685
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870	<1 98 2 657 1278 651 784 3120	0 100 2 625 1177 605 710	<1 153 3 856 1685 955 1062
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base	<1 98 2 657 1278 651 784 3120	0 100 2 625 1177 605 710 2891 history1	<1 153 3 856 1685 955 1062 4429 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base	<1 98 2 657 1278 651 784 3120 current	0 100 2 625 1177 605 710 2891 history1 24	<1 153 3 856 1685 955 1062 4429 history2 34
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 Limit/base >25	<1 98 2 657 1278 651 784 3120 current 22	0 100 2 625 1177 605 710 2891 history1	<1 153 3 856 1685 955 1062 4429 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 Limit/base >25	<1 98 2 657 1278 651 784 3120 current 22 5 76	0 100 2 625 1177 605 710 2891 history1 24 5	<1 153 3 856 1685 955 1062 4429 history2 34 7 126
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm 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 ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >25	<1 98 2 657 1278 651 784 3120 current 22 5 76	0 100 2 625 1177 605 710 2891 history1 24 5 89 89 history1	<1 153 3 856 1685 955 1062 4429 history2 34 7
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base	<1 98 2 657 1278 651 784 3120 current 22 5 76 current 0	0 100 2 625 1177 605 710 2891 history1 24 5 89 history1 0.1	<1 153 3 856 1685 955 1062 4429 history2 34 7 ↓ 126 history2 0
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	5 50 0 560 1510 780 870 2040 limit/base >25 >20 limit/base	<1 98 2 657 1278 651 784 3120 current 22 5 76	0 100 2 625 1177 605 710 2891 history1 24 5 89 89 history1	<1 153 3 856 1685 955 1062 4429 history2 34 7 126 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm 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 ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7844 *ASTM D7844	5 50 0 560 1510 780 870 2040 limit/base >25 -20 limit/base >20	<1 98 2 657 1278 651 784 3120 current 22 5 76 current 0 7.5 21.1	0 100 2 625 1177 605 710 2891 history1 24 5 89 89 history1 0.1 8.5 22.2	<1 153 3 856 1685 955 1062 4429 history2 34 7 ▲ 126 history2 0 6.2 21.1
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	5 50 0 560 1510 780 870 2040 limit/base >20 limit/base >20 s 30	<1 98 2 657 1278 651 784 3120 current 22 5 76 current 0 7.5 21.1 current	0 100 2 625 1177 605 710 2891 history1 24 5 89 history1 0.1 8.5 22.2 history1	<1 153 3 856 1685 955 1062 4429 history2 34 7 ▲ 126 history2 0 6.2 21.1 history2
	Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	5 50 560 1510 780 870 2040 limit/base >20 limit/base >20 limit/base >30	<1 98 2 657 1278 651 784 3120 current 22 5 76 current 0 7.5 21.1	0 100 2 625 1177 605 710 2891 history1 24 5 89 89 history1 0.1 8.5 22.2	<1 153 3 856 1685 955 1062 4429 history2 34 7 ▲ 126 history2 0 6.2 21.1



OIL ANALYSIS REPORT







Apr18/24

May24/24

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Mar21/24

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 PROP	ERTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	15.1	13.7	13.6	13.5
GRAPHS						
iron	-					
25 - chromium						
20						
E 15						
10-						
5						
24	COLUMN TO COLUMN	/24	24			
pr18/		ay24/	un14/			
		≥				
10 T T T T T T T T T T T T T T T T T T T	ais					
copper						
8 - exercise lead						
ud						
<u>□</u>						
4						
4-						
2-						
Compared State Sta	and and a state of the state of	Stranger of the state of the st				
	No. and the second s	4/2/4	4/2/4			
ARCONCERSOR OF THE OWNER OWN	Alasaan ahaa ka k	May24/24	Jun 14/24			
	C	Ma/24/24	Juni 14/24		_	
Mar21/24	C	May24/24	7	Base Numbe	r	
0 +52112/mW Viscosity @ 1000	C	May24/24	12.0	Base	r	
0 +2/12 Viscosity @ 100°	C	Ma/24/24	12.0	Base	r	
0 +72122mW Viscosity @ 1000 19 18 Abnomal	C	Ma/24/24	12.0	Base	r	
0 +72122mW Viscosity @ 1000 19 18 Abnomal	C	May24/24	12.0	Base	r	
0 +72122mW Viscosity @ 1000 19 18 Abnomal	C	May24/24	12.0	Base	r	
Viscosity @ 100°	C	May24/24	12.0	Base	r	
0 0 0 0 0 0 0 0 0 0 0 0 0 0	C	May24/24	12.0 10.1 (0)H 8.0 but but but but but but but but but but	0 - Base	r	
0 +5210 +5210 +5210 - - - - - - - - - - - - -	C	May24/24	12.0 (0)H 00, 000 (0)H 00, 000	D - Base 	r	
0 0 0 0 0 0 0 0 0 0 0 0 0 0	C	May24/24 May24/24	12.0 (B)(HCX BU) 10.0 (B)(HCX BU) 10.0 (D - Base 	Apr18/24	
	Silt Debris Sand/Dirt Appearance Odor Emulsified Water Free Water FLUID PROP Visc @ 100°C GRAPHS Ferrous Alloys	Silt scalar Debris scalar Sand/Dirt scalar Appearance scalar Odor scalar Emulsified Water scalar Free Water scalar Free Water scalar Free Water cst GRAPHS Ferrous Alloys The ferrous Metals	Silt scalar *Visual Debris scalar *Visual Sand/Dirt scalar *Visual Appearance scalar *Visual Odor scalar *Visual Emulsified Water scalar *Visual Eree Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual Free Water scalar *Visual Competition *Visual Free Water scalar *Visual Visc @ 100°C cSt ASTM D445 CRAPHS Ferrous Alloys	Silt scalar *Visual NONE Debris scalar *Visual NONE Sand/Dirt scalar *Visual NONE Appearance scalar *Visual NORML Odor scalar *Visual NORML Emulsified Water scalar *Visual >0.1 Free Water scalar *Visual >0.1 Free Water scalar *Visual FLUID PROPERTIES method limit/base Visc @ 100°C cSt ASTM D445 15.1 GRAPHS Ferrous Alloys	Silt scalar *Visual NONE NONE Debris scalar *Visual NONE NONE Sand/Dirt scalar *Visual NONE NONE Appearance scalar *Visual NORML NORML Odor scalar *Visual NORML NORML Emulsified Water scalar *Visual >0.1 NEG Free Water scalar *Visual NORML NEG Free Water scalar *Visual NORML NEG Free Water scalar *Visual NEG Non-ferrous Alloys Non-ferrous Metals	Silt scalar 'Visual NONE NONE NONE Debris scalar 'Visual NONE NONE NONE Sand/Dirt scalar 'Visual NONE NONE NONE Appearance scalar 'Visual NORML NORML NORML Odor scalar 'Visual NORML NORML NORML Emulsified Water scalar 'Visual >0.1 NEG NEG Free Water scalar 'Visual NORML NEG NEG Free Water scalar 'Visual NORML NEG NEG Free Water scalar 'Visual NEG NEG Free Water scalar 'Visual NORML NEG NEG Free Water scalar 'Visual NEG NEG Free Water scalar 'Visual NEG NEG Free Water scalar 'Visual NEG NEG NEG Free Water Scalar 'Visual NEG NEG NEG Neg NEG Neg NEG Neg NEG Non-ferrous Alloys Non-ferrous Metals

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)

Certificate 12367

Submitted By: JEREMY BROWN

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