

## **OIL ANALYSIS REPORT**

Sample Rating Trend



Machine Id

### 153001

#### Component Diesel Engine

Fluid PETRO CANADA DURON SAE 10W30 (--- GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

The condition of the oil is acceptable for the time in service.

SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0119027		
Sample Date		Client Info		11 Jun 2024		
Machine Age	kms	Client Info		30805		
Oil Age	kms	Client Info		0		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m)	>100	14		
Chromium	ppm	ASTM D5185(m)	>20	<1		
Nickel	ppm	ASTM D5185(m)	>2	0		
Titanium	ppm	ASTM D5185(m)	>2	<1		
Silver	ppm	ASTM D5185(m)	>2	0		
Aluminum	ppm	ASTM D5185(m)	>25	3		
Lead	ppm	ASTM D5185(m)	>40	0		
Copper	ppm	ASTM D5185(m)	>330	5		
Tin	ppm	ASTM D5185(m)	>15	0		
Antimony	ppm	ASTM D5185(m)		<1		
Vanadium	ppm	ASTM D5185(m)		0		
Beryllium	ppm	ASTM D5185(m)		0		
Cadmium	ppm	ASTM D5185(m)		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m)	1	3		
Barium	ppm	ASTM D5185(m)	1	<1		
Molybdenum	ppm	ASTM D5185(m)	1	64		
Manganese	ppm	ASTM D5185(m)	1	<1		
Magnesium	ppm	ASTM D5185(m)	10	910		
Calcium	ppm	ASTM D5185(m)	2942	1017		
Phosphorus	ppm	ASTM D5185(m)	1102	896		
Zinc	ppm	ASTM D5185(m)	1351	1111		
Sulfur	ppm	ASTM D5185(m)	3903	2289		
Lithium	ppm	ASTM D5185(m)		<1		
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m)	>25	11		
Sodium	ppm	ASTM D5185(m)		4		
Potassium	ppm	ASTM D5185(m)	>20	1		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	ASTM D7844*	>3	0		
Nitration	Abs/cm	ASTM D7624*	>20	11.4		
Sulfation	Abs/.1mm	ASTM D7415*	>30	25.1		



35

30 Abs/cm

> 20 15 10

95

90 85 08 (40°C) zz 75 Base 70 65 Abnormal

60

95

90 85 (40°C) zz 75 Base 70

> 65 Abnorma 60 /24

# **OIL ANALYSIS REPORT**

<sup>0</sup> T	FT-IR (Direct Trend)		FLUID DEGRA	DATION	method	limit/base		current	history1
5 -	Oxidation Witation Sulfation	C	Dxidation	Abs/.1mm	ASTM D7414*	>25		23.6	
0-	Abnormal		VISUAL		method	limit/base		current	history1
5-	6	v	Vhite Metal	scalar	Visual*	NONE		VLITE	
0-		Y	ellow Metal	scalar	Visual*	NONE		NONE	
5-		F	Precipitate	scalar	Visual*	NONE		NONE	
0 1	/24 +	S	Silt	scalar	Visual*	NONE		NONE	
	Jun 11/24	C	Debris	scalar	Visual*	NONE		NONE	
		S	Sand/Dirt	scalar	Visual*	NONE		NONE	
5-	Viscosity @ 40°C	A	ppearance	scalar	Visual*	NORML		NORML	
0 -	Abnormal	C	Ddor	scalar	Visual*	NORML		NORML	
5 -		E	Emulsified Water	scalar	Visual*	>0.2		NEG	
0		F	Free Water	scalar	Visual*			NEG	
5 -	Base		FLUID PROPE	RTIES	method	limit/base		current	history1
5	Abnormal		/isc @ 40°C	cSt	ASTM D7279(m)	74.0		83.1	
0			/isc @ 100°C	cSt	ASTM D7279(m)	11.4		12.3	
	Jun11/24		/iscosity Index (VI)	Scale	( )	146		12.3	
	ل را سر را سر	,		Scale	AGTIVI DZZTU	140		144	
	Viscosity @ 40°C		GRAPHS						
5	Abnormal	300	Iron (ppm)			10	00т	Lead (ppm)	
5		200	Severe					Severe	
0		mqq	Abnormal			mqq	50-	Abnormal	
5 -	Base	100	- 0						
0 -		0				24	01	24	
5 -	Abnormal		Jun 11/24			Jun 11/24		Jun 11/24	
0т	124		¬ Aluminum (ppm)			7		Chromium (pp	m)
	1/24 ************************************	60					<sup>60</sup> T		
			40 Severe Abnormal					Severe	
								Abnormal	
		0	/24			/24 -	01	/24	
			Jun11/24			Jun 11/24		Jun 11/24	
			Copper (ppm)					Silicon (ppm)	
		400					<sup>80</sup> T		
		300- E aaa					60-		
		톱 200- 100-				bm	40 - 20 -	Abnormal	
		0.					0 <sup>20</sup>		
		0	Jun11/24			Jun11/24 -		Jun11/24 -	
			*			Jun		Jun	
			Viscosity @ 100°C					Soot %	
		16-					<sup>6.0</sup>	Severe	
		(100-00) 12- 10-	Abnormal Base			eed oo Soor	1.0	Abnormal	
		중 10.	Abnormal			×2	2.0	1	
		8					0.0		
			Jun 11/24			Jun11/24		Jun 11/24	
			Jur			Jur		Jur	

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9 GFL Environmental - 554 - Edmonton SW CALA Sample No. : GFL0119027 Received : 25 Jun 2024 8409 -15th Street NW Lab Number : 02644008 Tested : 25 Jun 2024 Edmonton, AB ISO 17025:2017 Accredited Laboratory CA T6P 0B8 Unique Number : 5801547 Diagnosed : 25 Jun 2024 - Wes Davis Contact: Tim Greig Test Package : MOB 1 (Additional Tests: KV40, VI, Visual) To discuss this sample report, contact Customer Service at 1-800-268-2131. tgreig@gflenv.com Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. T: (780)231-0521 Validity of results and interpretation are based on the sample and information as supplied. F:

Report Id: GFL554 [WCAMIS] 02644008 (Generated: 06/25/2024 15:34:09) Rev: 1

Contact/Location: Tim Greig - GFL554 Page 2 of 2

Jun11/24

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