

## **OIL ANALYSIS REPORT**

Sample Rating Trend



X



DIAGNOSIS Recommendation

to monitor this condition.

Contamination

Free water present. Fluid Condition

of contaminants.

Wear

Machine Id 9952

We advise that you check for the source of the coolant leak. The oil change at the time of sampling has been noted. We recommend an early resample

All component wear rates are normal.

Test for glycol is positive. There is a high

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

The oil is no longer serviceable due to the presence

Component Natural Gas Engine Fluid

PETRO CANADA DURON GEO LD 15W40 (24 LTR)

		mothed	lippit/boos	AUG2010 JU2013	history	biotomy
SAMPLE INFOR		method	iimit/base	current	nistory i	nistory
Sample Number		Client Info		GFL0097793	GFL0097751	PC0021815
Sample Date		Client Info		28 Nov 2023	02 Oct 2023	19 Jan 202
Machine Age	hrs	Client Info		18601	29262	0
Oil Age	hrs	Client Info		1200	0	0
Oil Changed		Client Info		Changed	Changed	N/A
Sample Status				SEVERE	SEVERE	NORMAL
CONTAMINA	TION	method	limit/base	current	history1	history
Water		WC Method	>0.1	NEG	NEG	NEG
WEAR META	LS	method	limit/base	current	history1	history
Iron	ppm	ASTM D5185(m)	>50	41	<b>1</b> 69	8
Chromium	ppm	ASTM D5185(m)	>4	2	<b>1</b> 3	<1
Nickel	ppm	ASTM D5185(m)	>2	1	<b>6</b>	<1
Titanium	ppm	ASTM D5185(m)		0	0	<1
Silver	ppm	ASTM D5185(m)	>3	<1	<1	0
Aluminum	ppm	ASTM D5185(m)	>9	5	<u> </u>	2
Lead	ppm	ASTM D5185(m)	>30	3	15	<1
Copper	ppm	ASTM D5185(m)	>35	15	44	2
Tin	ppm	ASTM D5185(m)	>4	<1	1	<1
Antimony	ppm	ASTM D5185(m)		0	0	<1
Vanadium	ppm	ASTM D5185(m)		0	0	0
Beryllium	ppm	ASTM D5185(m)		0	0	0
Cadmium	ppm	ASTM D5185(m)		0	0	0
ADDITIVES		method	limit/base	current	history1	history
Boron	ppm	ASTM D5185(m)	50	26	5	2
Barium	ppm	ASTM D5185(m)	5	<1	3	0
Molybdenum	ppm	ASTM D5185(m)	50	57	109	59
Manganese	ppm	ASTM D5185(m)	0	<1	6	<1
Magnesium	ppm	ASTM D5185(m)	560	583	634	920
Calcium	ppm	ASTM D5185(m)	1510	1615	1935	1043
Phosphorus	ppm	ASTM D5185(m)	780	792	839	925
Zinc	ppm	ASTM D5185(m)	870	949	1073	1179
Sulfur	ppm	ASTM D5185(m)	2040	2186	2326	2419
Lithium	ppm	ASTM D5185(m)		<1	<1	<1
CONTAMINA	NTS	method	limit/base	current	history1	history
Silicon	ppm	ASTM D5185(m)	>+100	7	17	4
Sodium	ppm	ASTM D5185(m)		<u> </u>	30	3
Potassium	ppm	ASTM D5185(m)	>20	<u> </u>	46	2
Glycol	%	ASTM D7922*		0.566	0.0	
INFRA-RED		method	limit/base	current	history1	history
Soot %	%	ASTM D7844*		0	0	0.1
	A la a / a ma	ASTM D7624*	>20	12.7	13.7	11.1
Nitration	ADS/CITI	NOTIVI DTOLA			10.1	
Nitration Sulfation	Abs/cm Abs/.1mm	ASTM D7415*	>30	16.8	30.7	25.1
Nitration Sulfation FLUID DEGRA	Abs/cm Abs/.1mm	ASTM D7415*	>30 limit/base	16.8 current	30.7 history1	25.1 history
Nitration Sulfation FLUID DEGRA Oxidation	Abs/cm Abs/.1mm	ASTM D7415* method ASTM D7414*	>30 limit/base >25	16.8 current 18.2	30.7 history1 22.7	25.1 history2 18.1



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VISUAL		method	limit/base	current	history1	history2		
White Metal	scalar	Visual*	NONE	NONE	🔺 LIGHT			
Yellow Metal	scalar	Visual*	NONE	NONE	NONE			
Precipitate	scalar	Visual*	NONE	NONE	NONE			
Silt	scalar	Visual*	NONE	VLITE	NONE			
Debris	scalar	Visual*	NONE	VLITE	NONE			
Sand/Dirt	scalar	Visual*	NONE	NONE	VLITE			
Appearance	scalar	Visual*	NORML	NORML	NORML			
Odor	scalar	Visual*	NORML	NORML	NORML			
Emulsified Water	scalar	Visual*	>0.1	.2%	NEG	NEG		
Free Water	scalar	Visual*		<b>6</b> 5%	NEG	NEG		
FLUID PROPE	RTIES	method	limit/base	current	history1	history2		
√isc @ 100°C	cSt	ASTM D7279(m)	15.1	16.9	13.2	13.1		
GRAPHS								
Iron (ppm)				Lead (ppm)				
			60	Severe				
			A - 50					
Severe			E.3	Abnormal				
Abnormal		1	2					
		$\sim$	10					
22 22 22 22 22 22 22 22 22 22 22 22 22	9 0	6	53			6 5		
-eb2/1 ul13/1 ar23/1	1/6nu	1/11/I	Dct2/2	-eb2/1 ul13/1	ar23/1 un9/1 g10/1	ul11/1 0ct2/2		
H Jr W		ne Il	0	ш г	M. N.	n D		
Aluminum (ppm)			1	Chromium (	ppm)			
				T				
Severe			Λ 1	,		Λ		
			L L L	Severe				
Abnorma	~	1		- Abnormal		1		
$\sim$	/	V				$\sim$		
15 15 1	16+	6	53+		16	719		
Feb 2/ Jul13/	/eunl	/or Bn	0ct2/	Feb 2/ Jul13/	lar23/ Jun9/ ug10/	0ct2/		
Connor (nnm)		£ '		Cilicon (nnm	2 . 4	,		
Copper (ppm)			200	Silicon (ppm	)			
			10					
$\mathbf{X}$			15					
· · · · · · · · · · · · · · · · · · ·			틆100	Abnormal		+ + + + + + + + + + + + + + + + + + + +		
Severe	I.		50					
Abhômal	_							
3/15 -	9/16	1/19	2/23	3/15	3/16 -	1/19 -		
Jul1: Mar23	Junt	1111	Oct	Jul13	Mar2: Jun5 Aug10	Jul1		
Viscosity @ 100°C	2	-		Glycol Conta	mination			
, <u>,</u> , .								
1				sodium potassiu	m	<b>1</b> +0.60		
$\boldsymbol{\Lambda}$			10 E					
			đ			10.40 -2		
Abnormal Base						0.20		
	1		- I			0.00		
b2/15 13/15 23/16	n9/16	11/19	ct2/2:	b2/15 13/15 23/16	n9/16 10/18	ct2/23		
Jul Jul	nr ,	.Inf	ŏ	Fe Jul Mar	Jul Augʻ	ŏ		
WearCheck - C8-11	75 Apple	by Line, Bur	lington, ON L	./L 5H9 <b>GFL E</b>	nvironmental -	209 - Hamilto		
GFLUU97793	Receive Diagnos	ad :01	Dec 2023		560	Seaman Stre		
5685184	Diagnos	tician Kov	/in Marson		510	CA ISE 3		
MOB 1 (Additional	Tests: G	vcol. Visual	)		Contact	· Fred Carlet		

Accredited Laboratory Test Package : MOB 1 (Additional Tests: Glycol, Visual) To discuss this sample report, contact Customer Service at 1-800-268-2131. Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab. Validity of results and interpretation are based on the sample and information as supplied.

Laboratory

Sample No.

Lab Number

Unique Number

CALA

Report Id: GFL209 [WCAMIS] 02600104 (Generated: 12/04/2023 14:53:54) Rev: 1

ISO 17025:2017

Submitted By: Fred Carleton

fred.carleton@gflenv.com

T: (289)925-6693

F: (905)664-9008