

## **OIL ANALYSIS REPORT**

Sample Rating Trend





Component Diesel Engine PETRO CANADA 15W40 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0111251		
Sample Date		Client Info		09 Apr 2024		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		600		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>120	27		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>5	0		
Titanium	ppm	ASTM D5185m	>2	0		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>20	2		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	2		
Tin	ppm	ASTM D5185m	>15	1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m		0		
Barium	ppm	ASTM D5185m		0		
Molybdenum	ppm	ASTM D5185m		57		
Manganese	ppm	ASTM D5185m		<1		
Magnesium	ppm	ASTM D5185m		915		
Calcium	ppm	ASTM D5185m		1116		
Phosphorus	ppm	ASTM D5185m		914		
Zinc	ppm	ASTM D5185m		1148		
Sulfur	ppm	ASTM D5185m		3424		
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6		
Sodium	ppm	ASTM D5185m		6		
Potassium	ppm	ASTM D5185m	>20	0		
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0.6		
Nitration	Abs/cm	*ASTM D7624	>20	12.7		
Sulfation	Abs/.1mm	*ASTM D7415	>30	21.4		
FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	18.7		
Base Number (BN)	mg KOH/g	ASTM D2896		6.6		



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FT-IR (Direct Trend)	VISUAL		method	limit/base	current	history1	history2
0xidation 30-	White Metal	scalar	*Visual	NONE	NONE		
sussesses Sulfation	Yellow Metal	scalar	*Visual	NONE	NONE		
525 Abnormal	Precipitate	scalar	*Visual	NONE	NONE		
<sup>4</sup> 20	Silt	scalar	*Visual	NONE	NONE		
15-	Debris	scalar	*Visual	NONE	NONE		
10	Sand/Dirt	scalar	*Visual	NONE	NONE		
Apr3/24 Apr3/24	Appearance	scalar	*Visual	NORML	NORML		
Ap	Odor	scalar	*Visual	NORML	NORML		
Base Number	Emulsified Water	scalar	*Visual	>0.2	NEG		
7.0	Free Water	scalar	*Visual		NEG		
6.0 H 5.0	FLUID PROPE	ERTIES	method	limit/base	current	history1	history2
Ē 4.0+	Visc @ 100°C	cSt	ASTM D445		13.0		
10. 20. 20. 20. 10.	GRAPHS						
<sup>20</sup> 1.0	Ferrous Alloys						
0.0	30						
Apr3/24	25 - chromium						
	20						
Viscosity @ 100°C	ā 15 -						
19 18	10						
17- Abnormal							
©16 0015	5						
2) 15 3 14	24 0			24			
13 Abnormal	Apr9/24			Apr9/24			
12+	Non-ferrous Meta	le					
	10 T						
Apr	copper						
	sussesses tin						
	6						
	특 						
	2-						
	0						
	Apr9/24			Apr9/24			
				A			
	Viscosity @ 100°	С			Base Number		
	18			7.0			
	Abnormal			6.0			
				(B)HOX Bu.			
	(2)16 00(1)15 43 14			ළි 4.0- ක	1		
	<sup>63</sup> 14			. Number			
	13 Abnormal			巖 2.0-	• • • • • • • • • • • • • • • • • • • •		
	12-			1.0-			
	11			-0.0	24		
	Apr9/24			Apr9/24	Apr9/24		Apr9/24
	: WearCheck USA - 50	)1 Madiso	n Ave., Carv	. NC 27513	GFL Fn	vironmental - 960E	3 - Pittsfield HC
Sample No.	: GFL0111251	Recei	ved : 19	9 Apr 2024			V. Washington
	r : 06154085	Teste	d : 22	2 Apr 2024	<b>_</b> .		Pittsfield, IL
	r :10989508	Diagn	iosed : 22	2 Apr 2024 - We	es Davis	Contact: D	US 62363 avid Bradshaw
To discuss this sample report		vice at 1-8	00-237-136	9.		david.bradshav	
* - Denotes test methods that	t are outside of the ISO i	17025 sco	pe of accred	litation.			T:
Statements of conformity to s	specifications are based	on the sin	nple accepta	nce decision r	ule (JCGM 10	6:2012)	F:

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Submitted By: See also GFL960B, 960C, 960D - David Bradshaw