

## **OIL ANALYSIS REPORT**



Machine Id

### 425085

#### Component Diesel Engine

Fluid PETRO CANADA DURON SHP 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.

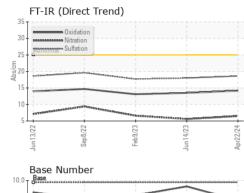
#### Fluid Condition

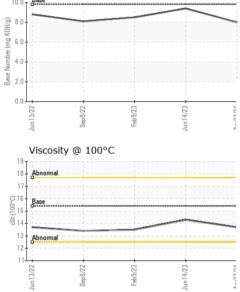
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0114634	GFL0081561	GFL0065630
Sample Date		Client Info		22 Apr 2024	14 Jun 2023	09 Feb 2023
Machine Age	hrs	Client Info		14514	17830	17143
Oil Age	hrs	Client Info		600	600	600
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	5	3	4
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	<1	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	<1	0
Lead	ppm	ASTM D5185m	>40	<1	0	<1
Copper	ppm	ASTM D5185m	>330	0	<1	<1
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	18	6	20
Barium	ppm	ASTM D5185m	0	1	0	0
Molybdenum	ppm	ASTM D5185m	60	51	65	64
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	830	967	782
Calcium	ppm	ASTM D5185m	1070			
Phosphorus			1070	1182	1254	1267
	ppm	ASTM D5185m	1150	1182 1057	1254 1083	1267 921
Zinc	ppm ppm	ASTM D5185m ASTM D5185m				
Zinc Sulfur			1150	1057	1083	921
	ppm ppm	ASTM D5185m	1150 1270	1057 1267	1083 1297	921 1160
Sulfur	ppm ppm	ASTM D5185m ASTM D5185m	1150 1270 2060	1057 1267 3498	1083 1297 3907	921 1160 3425
Sulfur CONTAMINAN	ppm ppm TS	ASTM D5185m ASTM D5185m method	1150 1270 2060 limit/base	1057 1267 3498 current	1083 1297 3907 history1	921 1160 3425 history2
Sulfur CONTAMINAN Silicon	ppm ppm TS ppm	ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m	1150 1270 2060 limit/base >25	1057 1267 3498 current 3	1083 1297 3907 history1 3	921 1160 3425 history2 3
Sulfur CONTAMINAN Silicon Sodium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	1150 1270 2060 limit/base >25	1057 1267 3498 current 3 2	1083 1297 3907 history1 3 <1	921 1160 3425 history2 3 <1
Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m	1150 1270 2060 <i>limit/base</i> >25 >20	1057 1267 3498 current 3 2 5	1083 1297 3907 <u>history1</u> 3 <1 <1	921 1160 3425 history2 3 <1 0
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m method	1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	1057 1267 3498 current 3 2 5 5 current	1083 1297 3907 history1 3 <1 <1 <1 history1	921 1160 3425 history2 3 <1 0 history2
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> *ASTM D7844	1150 1270 2060 <i>limit/base</i> >25 >20 <i>limit/base</i> >3	1057 1267 3498 current 3 2 5 current 0.3	1083 1297 3907 history1 3 <1 <1 <1 history1 0.2	921 1160 3425 history2 3 <1 0 history2 0.2
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7824 *ASTM D7415	1150 1270 2060 imit/base >25 >20 imit/base >3 >20	1057 1267 3498 current 3 2 5 current 0.3 6.5	1083 1297 3907 history1 3 <1 <1 <1 history1 0.2 5.6	921 1160 3425 history2 3 <1 0 history2 0.2 6.6
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7824 *ASTM D7415	1150 1270 2060 imit/base >25 >20 imit/base >3 >20 >30	1057 1267 3498 current 3 2 5 current 0.3 6.5 18.6	1083 1297 3907 history1 3 <1 <1 <1 history1 0.2 5.6 18.0	921 1160 3425 history2 3 <1 0 history2 0.2 6.6 17.7
Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm TS ppm ppm ppm ppm % Abs/cm Abs/cm Abs/1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	1150 1270 2060 <b>imit/base</b> >25 >20 <b>imit/base</b> >30 >30 <b>imit/base</b>	1057 1267 3498 current 3 2 5 current 0.3 6.5 18.6 current	1083 1297 3907 history1 3 <1 <1 <1 0.2 5.6 18.0 history1	921 1160 3425 history2 3 <1 0 history2 0.2 6.6 17.7 history2



# **OIL ANALYSIS REPORT**





	VISUAL		method	limit/base	current	history1	history2
	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
/24	Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Apr22/24	Odor	scalar	*Visual	NORML	NORML	NORML	NORML
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
******	Free Water	scalar	*Visual		NEG	NEG	NEG
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	15.4	13.7	14.3	13.5
	GRAPHS						
	Ferrous Alloys						
VCI CC-W	10 iron		1				
1000	8 - chromium						
- V	HICKEI						
	6						
	4						
			$\sim$				
	2-						
	0						
	Jun 13/22 Sep 8/22	Feb 9/23	Jun 14/23	Apr22/24			
	Se	£.	ղոր	Apr			
	Non-ferrous Meta	ls					
6 6 6 6 7 7	copper		   				
<	8 - Henrick lead		· · · · · · · · · · · · · · · · · · ·				
	6						
	udd						
	4		·				
	2						
	and the second distances of the second distances of						
	5 55	23 -	53	24			
	Jun 13/22 Sep 8/22	Feb9/23	Jun14/23	Apr22/24			
	 Viscosity @ 100°0	2	- 2	-	D		
	<sup>19</sup>		1	10.0	Base Number	-	
	18 - Abnormal						$\frown$
	17-			(B/H)			
	Base			¥ 6.0	)		
	Base 15 700015			nber (r			
	13 Abnormal			<sup>20</sup> 2.0	)		
	12-						
	11	- 1/23	f/23 -	0.0		1/23 +	1/24 -
	Jun 13/22 Sep 8/22	Feb9/23	Jun 14/23	Apr22/24	Jun 13/22 Sep 8/22	Feb9/23	Jun 14/23 Apr22/24
	-		-		-		
aboratory	: WearCheck USA - 50				GFL E	Environmental -	
Sample No.	: GFL0114634	Recei Teste		5 Apr 2024		1263 W	Landstreet Rd
.ab Number Inique Number	: 06160163 : 10995586			6 Apr 2024 6 Apr 2024 - W	les Davis		Orlando, FL US 32824
Fest Package		Diagi	.20			Contact: JEFF C	

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 L2367

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Submitted By: TIMOTHY MOURER Page 2 of 2

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