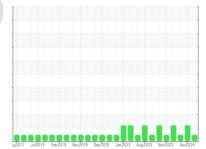


# **OIL ANALYSIS REPORT**

### Sample Rating Trend









Machine Id
901014
Component
Diesel Engine
Fluid

PETRO CANADA DURON SHP 15W40 (19 LTR)

## DIAGNOSIS

#### Recommendation

The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.

#### Wear

All component wear rates are normal.

### Contamination

Light fuel dilution occurring. No other contaminants were detected in the oil.

#### **Fluid Condition**

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

SAMPLE INFORI	MATION	method	limit/base	current	history1	history2		
Sample Number		Client Info		GFL0122282	GFL0111733	GFL0111764		
Sample Date		Client Info		17 Jul 2024	18 Apr 2024	31 Jan 2024		
Machine Age	kms	Client Info		196592	15894	247017		
		Client Info		0	600	0		
Oil Changed		Client Info		Changed	Changed	Not Changd		
Sample Status				NORMAL	ABNORMAL	NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2		
Water		WC Method	>0.2	NEG	NEG	NEG		
Glycol		WC Method		NEG	0.0	NEG		
WEAR METAL	S	method	limit/base	current	history1	history2		
ron	ppm	ASTM D5185(m)	>120	5	5	2		
Chromium	ppm	ASTM D5185(m)	>20	0	0	0		
Nickel	ppm	ASTM D5185(m)	>5	0	0	0		
Titanium	ppm	ASTM D5185(m)	>2	0	0	0		
Silver	ppm	ASTM D5185(m)	>2	0	0	0		
Aluminum	ppm	ASTM D5185(m)	>20	1	2	1		
Lead	ppm	ASTM D5185(m)	>40	0	0	0		
Copper	ppm	ASTM D5185(m)	>330	<1	<1	<1		
Tin	ppm	ASTM D5185(m)	>15	0	0	0		
Antimony	ppm	ASTM D5185(m)		0	0	0		
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	history2		
Boron	ppm	ASTM D5185(m)	0	7	8	13		
Barium	ppm	ASTM D5185(m)	0	0	0	0		
Molybdenum	ppm	ASTM D5185(m)	60	59	57	58		
Manganese	ppm	ASTM D5185(m)	0	<1	0	0		
Magnesium	ppm	ASTM D5185(m)	1010	921	928	921		
Calcium	ppm	ASTM D5185(m)	1070	1019	999	1017		
Phosphorus	ppm	ASTM D5185(m)	1150	989	948	986		
Zinc	ppm	ASTM D5185(m)	1270	1160	1130	1135		
Sulfur	ppm	ASTM D5185(m)	2060	2370	2365	2734		
Lithium	ppm	ASTM D5185(m)		<1	<1	<1		
CONTAMINAN	TS	method	limit/base	current	history1	history2		
Silicon	ppm	ASTM D5185(m)	>25	2	1	2		
Sodium	ppm	ASTM D5185(m)		2	1	<1		
Potassium	ppm	ASTM D5185(m)	>20	0	<1	<1		
Fuel	%	ASTM D7593*	>3.0	1.3	▲ 3.5	1.5		
INFRA-RED		method	limit/base	current	history1	history2		
Soot %	%	ASTM D7844*	>4	0	0	0		
Nitration	Abs/cm	ASTM D7624*	>20	8.5	8.8	5.2		
Sulfation	Abs/.1mm	ASTM D7415*	>30	20.0	19.5	17.9		



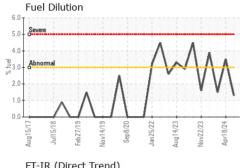
# **OIL ANALYSIS REPORT**

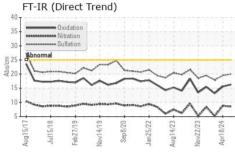
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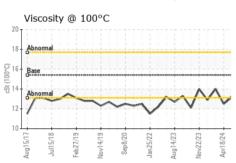
ASTM D7279(m) 15.4

Visc @ 100°C

GRAPHS







FLUID DEGRAD	DATION	method	limit/base	current	history1	history2	
Oxidation	Abs/.1mm	ASTM D7414*	>25	16.3	15.6	13.2	
VISUAL		method	limit/base	current	history1	history2	
White Metal	scalar	Visual*	NONE	VLITE		NONE	
Yellow Metal	scalar	Visual*	NONE	NONE		NONE	
Precipitate	scalar	Visual*	NONE	NONE		VLITE	
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	NORML	
<b>Emulsified Water</b>	scalar	Visual*	>0.2	NEG	.2%	NEG	
Free Water	scalar	Visual*		NEG	NEG	NEG	
FLUID PROPE	RTIES	method	limit/base	current	history1	history2	

13.2

**12.5** 

14.0

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	Aug15/17	=======================================	27	-	8	125	-	72	=		13	=======================================	527	2	8	125	-	757	=

: 18 Jul 2024

: 19 Jul 2024



CALA ISO 17025:2017 Accredited Laboratory

Laboratory Sample No. Lab Number : 02648634 Unique Number : 5814186

: WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9

: GFL0122282

Received **Tested** Diagnosed

: 19 Jul 2024 - Wes Davis Test Package : MOB 1 ( Additional Tests: PercentFuel, 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.

GFL Environmental - 217 - Aurora

14131 BAYVIEW AVE, AURORA YARD AURORA, ON

CA L4G 0K6 Contact: Mike Havens MHavens@gflenv.com T:

F: (905)713-2445

Submitted By: Scott Ewan