

# **OIL ANALYSIS REPORT**

## Sample Rating Trend

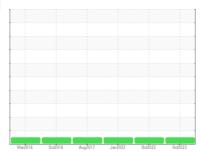
## NORMAL



G.LOPES CONSTRUCTION INC./On-Road
Machine Id
271
Component

Diesel Engine

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

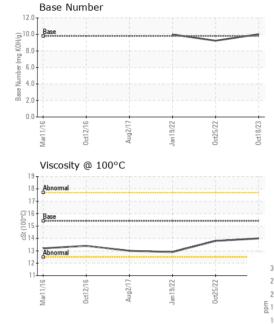
### **Fluid Condition**

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

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0104581	PCA0078201	PCA0066676
Sample Date		Client Info		18 Oct 2023	25 Oct 2022	19 Jan 2022
Machine Age	hrs	Client Info		81000	80000	80000
Oil Age	hrs	Client Info		81000	80000	80000
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
						5
Iron	ppm	ASTM D5185m	>120	3	2	
Chromium	ppm	ASTM D5185m	>20	<1 0	<1 0	<1
Nickel	ppm	ASTM D5185m	>5			0
Titanium	ppm	ASTM D5185m	>2	0	<1	<1
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	1
Lead	ppm	ASTM D5185m	>40	<1	0	1
Copper	ppm	ASTM D5185m	>330	<1	<1	1
Tin	ppm	ASTM D5185m	>15	<1	0	<1
Antimony	ppm	ASTM D5185m				0
Vanadium	ppm	ASTM D5185m		0	<1	0
Cadmium	ppm	ASTM D5185m		0	0	<1
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	9	8	70
Barium	ppm	ASTM D5185m	0	0	0	0
Molybdenum	ppm	ASTM D5185m	60	63	50	32
Manganese	ppm	ASTM D5185m	0	0	<1	<1
Magnesium	ppm	ASTM D5185m	1010	944	892	467
Calcium	ppm	ASTM D5185m	1070	1110	1156	1482
Phosphorus	ppm	ASTM D5185m	1150	1141	938	677
Zinc	ppm	ASTM D5185m	1270	1249	1216	819
Sulfur	ppm	ASTM D5185m	2060	3853	3377	2397
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	3	2	5
Sodium	ppm	ASTM D5185m		0	0	3
Potassium	ppm	ASTM D5185m	>20	2	1	<1
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>4	0	0.1	0.1
Nitration	Abs/cm	*ASTM D7624	>20	4.6	5.6	6.5
Sulfation	Abs/.1mm	*ASTM D7415	>30	17.0	19.0	22.5
FLUID DEGRAE	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	13.0	14.6	19.9
	mg KOH/g	ASTM D2896	9.8	10.02	9.24	9.98



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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
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/base	current	history1	history2

I LOID I ITOI	LITTIEO					
Visc @ 100°C	cSt	ASTM D445	15.4	14.0	13.8	12.9

GRAPHS	5					
Iron (ppm)					Lead (ppm)	
Severe					80 Severe	
					00	
Abnormal					Abnormal Abnormal	
					20	
9 9	17+	22	- 22	23	127 227 227 227 227 227 227 227 227 227	
Marl 1/16 Oct12/16	Aug2/17	Jan 19/22	0ct25/22	Oct18/23 .	Marl 1/16 Oct12/16 Aug2/17 Jan 19/22	
Aluminum	(mgg)	7			Chromium (ppm)	
Severe					50 Severe	
1					40 +	
Abnormal					20 - Abnormal	
					10	
			_		0	
Marl 1/16 Oct 12/16	Aug2/17	Jan 19/22	0ct25/22	Oct18/23	Marl 1/16 0ct12/16 Jan 19/22 0ct25/22	
		- P	ő	ŏ	2 0	
Copper (pp	om) 				Silicon (ppm)	
Severe Abnormal					60 -	
					E 40 -	
					Abnormal	
Mar1 1/16 +	Aug2/17 -	Jan 19/22	Oct25/22 -	Oct18/23	Aug2/17 - Jan19/22 - Oct25/22 -	
Mari Oct11	Aug	Jan	0ct2	Octi	Marl 1/16 0ct12/16 Aug2/17 Jan19/22	
Viscosity @	100°C				Base Number	
Abnormal					(B) Base Base	
Base					8.0 g g g	
I					0 6.0 mpm	
Abnormal					(a) H10.0 Base (b) H10.0 Base (c) H10.0 Base (d) H10.0 Base (e) H10.0 Base	
9 9	7	2			0.0	
lar11/16 -	Aug2/17	an 19/22 ·	ct25/22	Oct18/23	an 19/22 - oct 25/22 - oct 25/22 -	





Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10708423 Test Package : MOB 2

: PCA0104581 : 05985761

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received Diagnosed

: 23 Oct 2023 Diagnostician : Wes Davis

: 20 Oct 2023

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)

**G LOPES CONSTRUCTION** 

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T: F:

Report Id: GLOTAU [WUSCAR] 05985761 (Generated: 10/23/2023 11:09:13) Rev: 1

Submitted By: MATT MANOLI