

OIL ANALYSIS REPORT

NORMAL

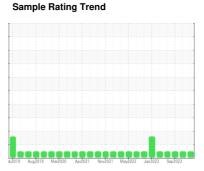


G.LOPES CONSTRUCTION INC./Off-Road

L33

Component **Diesel Engine**

PETRO CANADA DURON SHP 15W40 (--- GAL)





DIAGNOSIS

Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

Contamination

There is no indication of any contamination in the

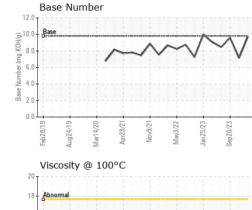
Fluid Condition

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

		rb2019 Aug2	019 Mar2020 Apr2021	Nov2021 May2022 Jan2023	Sep2023	
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0018796	PCA0078194	PCA0104753
Sample Date		Client Info		07 Feb 2024	15 Nov 2023	20 Sep 2023
Machine Age	hrs	Client Info		11001	10557	10220
Oil Age	hrs	Client Info		6908	6801	6724
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	>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	20	13
Chromium	ppm	ASTM D5185m	>20	0	<1	0
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m	>2	0	<1	0
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	<1	1	1
Lead	ppm	ASTM D5185m	>40	5	12	<1
Copper	ppm	ASTM D5185m	>330	3	5	4
Tin	ppm	ASTM D5185m		<1	<1	0
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	0	8	9	5
Barium	ppm	ASTM D5185m	0	0	<1	0
Molybdenum	ppm	ASTM D5185m	60	61	69	63
Manganese	ppm	ASTM D5185m	0	1	0	0
Magnesium	ppm	ASTM D5185m	1010	946	1044	1074
Calcium	ppm	ASTM D5185m	1070	1068	1183	1236
Phosphorus	ppm	ASTM D5185m	1150	1052	1076	1110
Zinc	ppm	ASTM D5185m	1270	1270	1329	1400
Sulfur	ppm	ASTM D5185m	2060	2977	3323	3921
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	0	4	4
Sodium	ppm	ASTM D5185m		1	2	3
Potassium	ppm	ASTM D5185m	>20	<1	3	3
INFRA-RED		method	limit/base	current	history1	history2
Soot %	%	*ASTM D7844	>3	0.2	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	10.0	12.7	10.6
Sulfation	Abs/.1mm	*ASTM D7415	>30	23.5	27.8	23.3
FLUID DEGRAE	DATION	method	limit/base	current	history1	history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	22.0	29.8	21.9
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.76	7.14	9.58
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VISUAL		method				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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPE	RTIES	method	limit/hase	current	history1	history2

18 Abn	ormal						
			111	111	111		1 1 1
16 - Base		~~~					
14-		1	and the same of	+		~	
12 Abn	ormal		1111		11:11		
					- 2		- 53
Feb28/19	Aug24/19	Mar14/20	Apr28/2	Nov9/2	May3/2:	Jan 25/2	Sep20/2

Visc @ 100°C	cSt A	STM D445 15.4	14.7	15.0	14.6
GRAPHS					
Iron (ppm)			Lead (ppm)		
200 Severe			Severe		
			00		
150 - Abnormal		-	Abnormal 40		
50		~~~	20		$\sim \sim \sim$
9/19	Nov9/21-	5/23	6/19	Apr28/21-	3,722
Feb28/19 Aug24/19 Mar14/20	Nov9/21 May3/22	Jan25/23 Sep20/23	Feb28/19 Aug24/19 Mar14/20	Apr28/21 Nov9/21	May3/22 Jan25/23 Sep20/23
Aluminum (ppm)			Chromium (p	pm)	
Severe			40 Severe		
E 30 Abnormal			Abnormal		
Abnormal 20			Abnormal Abnormal		-
10		~	10		
Feb28/19 Aug24/19 Aug24/19 Apr28/21	Nov9/21	Jan 25/23 -	Feb28/19 Aug24/19	Apr28/21-	May3/22 - Jan25/23 - Sep20/23 -
4 -	Nov	Jan25/23	Feb28/19 Aug24/19 Mar14/20	Apr2 Nov	May3/22 Jan25/23 Sep20/23
Copper (ppm)			Silicon (ppm)		
300			60		
E 200			E.40		
			Abnormal		
100			20		
Feb28/19 Aug24/19 Aug24/19 Apr28/21	Nov9/21- May3/22-	Jan 25/23 -	Feb28/19	Apr28/21	May3/22 - Jan25/23 - Sep20/23 -
_ 4 2		Jan2 Sep2	4 =		May Jan2 Sep2
Viscosity @ 100°C			Base Number	r 	
18 - Abnormal			Base Number and No. 100 Base Number and No. 100 Base No.		~~~
0 16 - Base			8.0 -	~~	~~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
9-001 16 Base Abnormal			4.0		
12			% 2.0		
10 4/19 4/20 4/20 4/20 4/20 4/20 4/20 4/20 4/20	9/21	5/23	9/19 4/19 4/20	12/8/21	3/22 -
Feb2 Aug2 Marl	Nov	Jan2 Sep2	Feb2 Aug2	Apri	May Jan2 Sep2
Feb28/19 Aug24/19 Mar14/20	Nov9/21	Jan25/23 Sep20/23	Feb 28/19 Aug 24/19 Mar 14/20	Apr28/21-	May3/22 Jan25/23 Sep20/23





Certificate L2367

Laboratory

Sample No.

Lab Number : 06085004 Unique Number : 10872449 Test Package : MOB 2

: PCA0018796

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 09 Feb 2024 Tested : 12 Feb 2024

Diagnosed : 12 Feb 2024 - Wes Davis **G LOPES CONSTRUCTION** 565 WINTHROP ST TAUNTON, MA

US 02780 Contact: BUTCH MCGRATH

bmcgrath@glopes.com

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)

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