

OIL ANALYSIS REPORT

CONTAMINATION

Fuel

Sample Rating Trend

NORMAL

<1.0

<1.0

G.LOPES CONSTRUCTION INC

L-63

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.

NC./OFF-RO	OAD	April 023	Jul 223 Aug 2023	3 Oct2023 Dec2023	FebZ024	
SAMPLE INFORT	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0098337	PCA0109862	PCA0098627
Sample Date		Client Info		14 Feb 2024	20 Dec 2023	18 Oct 2023
Machine Age	hrs	Client Info		1924	1924	1513
Oil Age	hrs	Client Info		1924	1924	0
Oil Changed		Client Info		N/A	N/A	N/A
Sample Status				NORMAL	NORMAL	NORMAL

WC Method >5

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	16	11	14
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	0	0	0
Titanium	ppm	ASTM D5185m		<1	<1	<1
Silver	ppm	ASTM D5185m	>3	0	<1	<1
Aluminum	ppm	ASTM D5185m	>20	2	1	2
Lead	ppm	ASTM D5185m	>40	<1	0	2
Copper	ppm	ASTM D5185m	>330	6	6	26
Tin	ppm	ASTM D5185m	>15	<1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2

<1.0

71001111120						
Boron	ppm	ASTM D5185m	0	3	5	3
Barium	ppm	ASTM D5185m	0	10	0	0
Molybdenum	ppm	ASTM D5185m	60	75	57	63
Manganese	ppm	ASTM D5185m	0	0	<1	0
Magnesium	ppm	ASTM D5185m	1010	1196	915	943
Calcium	ppm	ASTM D5185m	1070	1318	1003	1081
Phosphorus	ppm	ASTM D5185m	1150	1365	1030	1065
Zinc	ppm	ASTM D5185m	1270	1558	1215	1230
Sulfur	ppm	ASTM D5185m	2060	4503	2936	3489
CONTANTAN	ıTO					

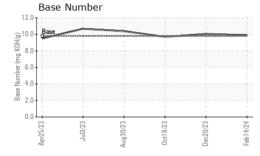
CONTAMINA	ANTS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	6	5	8
Sodium	ppm	ASTM D5185m		0	0	0
Potassium	ppm	ASTM D5185m	>20	2	0	2

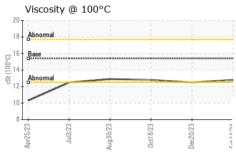
INFRA-RED		method				history2
Soot %	%	*ASTM D7844	>3	0.3	0.3	0.4
Nitration	Abs/cm	*ASTM D7624	>20	7.9	7.9	7.4
Sulfation	Abs/.1mm	*ASTM D7415	>30	18.8	19.0	19.9
FLUID DEGRAI	DATION	method	limit/base	current	history1	history2

FLUID DEGRAD	NOITAC	method				history2
Oxidation	Abs/.1mm	*ASTM D7414	>25	15.4	16.2	16.3
Base Number (BN)	mg KOH/g	ASTM D2896	9.8	9.91	10.06	9.69



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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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

FLUID PROPI	ERTIES	method	limit/b	ase	curre	nt	histor	y1	history2	2
Visc @ 100°C	cSt	ASTM D445	15.4		12.8		12.5		12.8	
GRAPHS										
Iron (ppm)				L 100 т ¬	ead (pp	m)				
200 Severe				1	Severe					
E 150 Abnormal				E 60						
100 Abnormal				20	Abnormal					-
				ا ا						_
Apr25/23 - Jul3/23 -	Aug30/23 - 0ct18/23 -	Dec20/23	Feb14/24	Apr25/23		, 57/5/lln	Aug30/23	Oct18/23	Dec20/23	Feb14/24
Aluminum (ppm)		ã	æ			m (ppm		0	ă	T.
50 T Severe				50 T	Severe	(PP	,			
40 7 0				40 7						
Abnormal 20		***************************************		E 30 - 20 - 6	Abnormal					
10				10-						
Apr25/23	Aug30/23 - 0ct18/23 -	Dec20/23	Feb14/24 +	Aor25/23 🖵		- \$7/\$Inc	4ug30/23 -	Oct18/23 -	Dec20/23 -	Feb14/24
A.	Aug	Dec	歪				Aug	Octi	Dec	Feb
Copper (ppm)	·			100 _T :	ilicon (p	pm)				
600				80 - 3	evere					-
E 400 SEVISSIMAL				E 60 - 40	1					
200				20 -	Abnormal					
23 23	23 23	- 523	24	<u>ا</u> ل	- c	57	23+	23	23	24
Apr25/23 - Jul3/23 -	Aug30/23 0ct18/23	Dec20/23	Feb14/24	Apr25/23		Jul3/23 -	Aug30/23 -	Oct18/23	Dec20/23	Feb14/24
Viscosity @ 100°	С				ase Nur					
Abnormal			-	Base Mumber (mg KOH/g) 8.0 4.0 2.0 0.0	Base					
3 16 - Base Abnormal				0.8 k						
- AND STATE OF THE PARTY OF THE			-	4.0						
10				2.0 0.0						
pr25/23 -	ug30/23 -	ec20/23 -	eb14/24	or25/23	6	· \$7/\$Inc	ug30/23 -	ct18/23	ec20/23 -	eb14/24





Laboratory

Lab Number : 06093182

Unique Number : 10886035

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. : PCA0098337

Test Package : MOB 2

Received : 19 Feb 2024 Tested : 20 Feb 2024

Diagnosed : 20 Feb 2024 - Sean Felton

TAUNTON, MA US 02780 Contact: BUTCH MCGRATH

G LOPES CONSTRUCTION

565 WINTHROP ST

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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