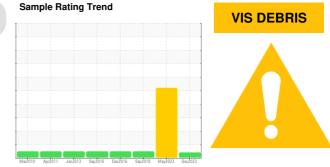


OIL ANALYSIS REPORT





G.LOPES CONSTRUCTION INC./Off-Road Machine

Component **Hydraulic System**

PETRO CANADA DURATRAN (--- GAL)

DIAGNOSIS	SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
A Recommendation	Sample Number		Client Info		PCA0109863	PCA0090579	PCA82420026
We recommend you service the filters on this	Sample Date		Client Info		20 Dec 2023	09 May 2023	21 Sep 2018
component. Resample at the next service interval to	Machine Age	hrs	Client Info		29479	29236	23198
monitor. We were unable to perform a particle count	Oil Age	hrs	Client Info		12388	12803	
due to a high concentration of particles present in	Oil Changed		Client Info		N/A	N/A	N/A
this sample.	Sample Status				ABNORMAL	ABNORMAL	NORMAL
Wear					ABROTINAL		
All component wear rates are normal.	CONTAMINATI	ON	method	limit/base	current	history1	history2
Contamination Moderate concentration of visible dirt/debris present	Water	~	WC Method	>0.1	NEG	NEG	NEG
in the oil.	WEAR METALS	5	method	limit/base	current	history1	history2
Fluid Condition	Iron	ppm	ASTM D5185m	>20	16	A 31	15
The AN level is acceptable for this fluid. The	Chromium	ppm	ASTM D5185m	>10	6	1 7	0
condition of the oil is suitable for further service.	Nickel	ppm	ASTM D5185m	>10	<1	<1	0
	Titanium	ppm	ASTM D5185m		<1	<1	
	Silver	ppm	ASTM D5185m		0	0	
	Aluminum	ppm	ASTM D5185m	>10	3	▲ 8	1
	Lead	ppm	ASTM D5185m	>10	2	2	4
	Copper	ppm	ASTM D5185m	>75	5	5	9
	Tin	ppm	ASTM D5185m	>10	<1	<1	0
	Vanadium	ppm	ASTM D5185m		<1	0	
	Cadmium	ppm	ASTM D5185m		<1	0	
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	110	82	93	30
	Barium	ppm	ASTM D5185m	0.0	7	2	0
	Molybdenum	ppm	ASTM D5185m	0.0	6	7	0
	Manganese	ppm	ASTM D5185m	1	<1	<1	
	Magnesium	ppm	ASTM D5185m		63	69	32
	Calcium	ppm	ASTM D5185m		2701	2833	1287
	Phosphorus	ppm	ASTM D5185m	1192	1045	1014	1015
	Zinc	ppm	ASTM D5185m	1455	1221	1306	1123
	Sulfur	ppm	ASTM D5185m	2641	5788	5635	
	CONTAMINAN	TS	method	limit/base	current	history1	history2
	Silicon	ppm	ASTM D5185m	>20	11	▲ 22	6
	Sodium	ppm	ASTM D5185m		6	4	1
	Potassium	ppm	ASTM D5185m	>20	3	5	1
	FLUID CLEANL	INESS	method	limit/base	current	history1	history2
	Particles >4µm		ASTM D7647	>5000		▲ 192265	
	Particles >6µm		ASTM D7647	>1300		A 77615	
	Particles >14µm		ASTM D7647	>160		12	
	Particles >21µm		ASTM D7647	>40		1	
	Particles >38µm		ASTM D7647			0	
	Particles >71µm		ASTM D7647	>3		0	
	Oil Cleanliness		ISO 4406 (c)			▲ 25/23/11	
	FLUID DEGRAD	DATION	method	limit/base	current	history1	history2
	Acid Number (AN)		ASTM D8045	1.6	0.96	1.01	

Submitted By: MATT MANOLI



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Mar15/10

Apr14/11

OIL ANALYSIS REPORT

method

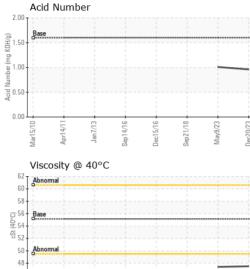
limit/base

current

history1

history2

VISUAL



Jan7/13 .

							method	limit/base	current	history1	history2
					White Metal	scalar	*Visual	NONE	NONE	NONE	
					Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
			_		Precipitate	scalar	*Visual	NONE	NONE	NONE	
					Silt	scalar	*Visual	NONE	NONE	NONE	
					Debris	scalar	*Visual	NONE		NONE	
Sep14/16 Dec15/16				Sand/Dirt	scalar	*Visual	NONE	NONE	NONE		
	21/18	Sep 21/18 May9/23	Dec20/23	Appearance	scalar	*Visual	NORML	NORML	NORML		
vep	Dec	Sep	Ma	Dec	Odor	scalar	*Visual	NORML	NORML	NORML	
					Emulsified Water	scalar	*Visual	>0.1	NEG	NEG	
1					Free Water	scalar	*Visual		NEG	NEG	
					FLUID PROP	ERTIES	method	limit/base	current	history1	history2
					Visc @ 40°C	cSt	ASTM D445	55.14	47.5	47.4	
					SAMPLE IMA	GES	method	limit/base	current	history1	history2
Sep14/16 -	Dec15/16 -	Sep21/18 .	May9/23	Dec20/23	Color						no image
					Bottom						no image
					GRAPHS Ferrous Alloys						
					60 - iron 60 - iron						
				mdd	40 -		~				
					20	\sum	-	and the second se			
						Maagaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaaa					
					11 11	16 16	18.	53			
					lar15/10 Apr14/11 Jan7/13	ep14/16 lec15/16	ep 2 1/1 8 . May9/23 .	lec20/23			
					Non-ferrous Met	Sep14/16	Sep21/18. May9/23	Dec20/23			
					Non-ferrous Met		Sep21/18 May9/23	Dec20/23			
					Non-ferrous Met		Sep21/18 May9/23	Dec20/23			
				ш	Non-ferrous Met		Sep21/18 May9/23	Dec20/23			
				mqq	Non-ferrous Met		Sep21/18 May9/23	Dec20/23			
				Шd	Non-ferrous Met		Sep21/18 Mar/9/23	Dec20/23			
				Шd	Non-ferrous Met	als					
				Ш	Non-ferrous Met		Sep21/18 Sep21/18 May9/23 May9/23	Dec20/23			
				Lidd	Non-ferrous Met	Sep14/16 Dec15/16			Acid Numbe	r	
				Шdd	Non-ferrous Met	Sep14/16 Dec15/16		Dec20/23		r	
					Non-ferrous Met	Sep14/16 Dec15/16		Dec20/23		r	
					Non-ferrous Met	Sep14/16 Dec15/16		Dec20/23		r	
				cSt (40°C)	Non-ferrous Met	Sep14/16 Dec15/16		Dec20/23		r	
					Non-ferrous Met	Sep14/16 Dec15/16				r	
					Non-ferrous Met	als	Sep21/18	Dec20/23 Acid Number (mg KDH/g)	00 50 50 50		1/18 323 1/13
					Non-ferrous Met	Sep14/16 Dec15/16		Dec20/23	00 50 Base 50 -	Jan/1/13	Sep21/18 May0/23
		I ah	Orator	cSt (40°C)	Non-ferrous Met	Sep14/16	Sep21/18 Sep21/18 May9/23	Dec20/23 +	00 50 50 50 00 50 00 00 00 00 00 00 00 0	Jan // J. Sep 14/16	
			orator pole N	. cst (40°C)	Non-ferrous Met	als Sap14/16 S	BU/12des BU/12des eziblew son Ave., Ca	(0)HOX BUILD FOR THE PROVIDENT OF THE PR	00 50 50 50 00 50 00 00 00 00 00 00 00 0	Sliving Blvjblg Bropes co	ONSTRUCTION
	AB	San	orator pple N Numb	у о.	Non-ferrous Met	Sep14/16	BU/12des BU/12des ezio/ew son Ave., Ca d : 22	Dec20/23 +	00 50 50 50 00 50 00 00 00 00 00 00 00 0	91/5100 G LOPES CC 565 V	DNSTRUCTION WINTHROP S
		San Lab Uniq	nple N Numb Jue Nur	y o. oer nber	Non-ferrous Met	sals 91/11/des 5011 Madii Recieved	8U/12das 8U/12das et : 221 ed : 271	(0) (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	00 00 00 00 00 00 00 00 00 00	G LOPES CC 565 1	DNSTRUCTION WINTHROP S TAUNTON, M/ US 02780
	ABB BOATOWY te L2367	San Lab Uniq Tes	nple N Numb Jue Nur t Pack	y o. oer nber age	Non-ferrous Met	- 501 Madii Recieved Diagnos	BUI12des BUI12d	ry, NC 2751 Dec 2023 Dec 2023 athan Heste	00 00 00 00 00 00 00 00 00 00	G LOPES CC 565 V Contact: BUT	DNSTRUCTION WINTHROP S TAUNTON, M/ US 02780 CCH MCGRATH
o dis	cuss th	San Lab Uniq Tes	nple N Numb Jue Nur t Pack ple rep	y o. oer mber age oort, co	Non-ferrous Met	- 501 Madii Recieved Diagnosi Diagnosi	BU/12des BU/12d	ry, NC 2751 Dec 2023 Dec 2023 athan Heste	00 00 00 00 00 00 00 00 00 00	G LOPES CC 565 V Contact: BUT	BIVIZE BIVIZE SUBSTRUCTION WINTHROP ST TAUNTON, MU US 0278 TAUNTON, MU US 0278 CH MCGRATH th@glopes.com