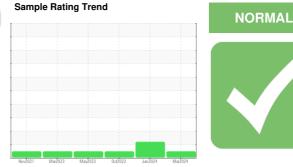


OIL ANALYSIS REPORT

G.LOPES CONSTRUCTION INC./OFF-ROAD





DIAGNOSIS

Diesel Engine Fluid

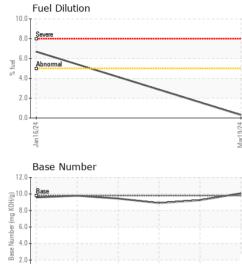
E-34 Component

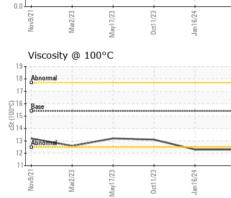
PETRO CANADA DURON SHP 15W40 (--- GAL)

DIAGNOSIS	SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Recommendation	Sample Number		Client Info		PCA0109689	PCA0109746	PCA0104589
No corrective action is recommended at this time.	Sample Date		Client Info		19 Mar 2024	16 Jan 2024	11 Oct 2023
Resample at the next service interval to monitor.	Machine Age	hrs	Client Info		9048	8403	7847
Wear	Oil Age	hrs	Client Info		9048	8403	7847
All component wear rates are normal.	Oil Changed		Client Info		N/A	N/A	N/A
Contamination	Sample Status				NORMAL	ABNORMAL	NORMAL
Fuel content negligible. There is no indication of any contamination in the oil.	CONTAMINAT	ION	method	limit/base	current	history1	history2
Fluid Condition	Water		WC Method	>0.2	NEG	NEG	NEG
The BN result indicates that there is suitable	Glycol		WC Method		NEG	NEG	NEG
alkalinity remaining in the oil. The condition of the oil is suitable for further service.	WEAR METAL	S	method	limit/base	current	history1	history2
	Iron	ppm	ASTM D5185m	>100	7	19	27
	Chromium	ppm	ASTM D5185m	>20	0	<1	<1
	Nickel	ppm	ASTM D5185m	>2	0	0	<1
	Titanium	ppm	ASTM D5185m	>2	0	0	<1
	Silver	ppm	ASTM D5185m	>2	0	0	0
	Aluminum	ppm	ASTM D5185m	>25	1	1	3
	Lead	ppm	ASTM D5185m	>40	0	0	<1
	Copper	ppm	ASTM D5185m	>330	1	2	2
	Tin	ppm	ASTM D5185m		<1	<1	<1
	Vanadium	ppm	ASTM D5185m		0	<1	0
	Cadmium	ppm	ASTM D5185m		0	0	0
	ADDITIVES		method	limit/base	current	history1	history2
	Boron	ppm	ASTM D5185m	0	44	157	396
	Barium	ppm	ASTM D5185m	0	0	0	0
	Molybdenum	ppm	ASTM D5185m	60	56	75	89
	Manganese	ppm	ASTM D5185m		0	<1	<1
	Magnesium	ppm	ASTM D5185m	1010	811	779	397
	Calcium	ppm	ASTM D5185m	1070	1073	1295	1340
	Phosphorus	ppm	ASTM D5185m	1150	910	1066	1037
	Zinc	ppm	ASTM D5185m	1270	1128	1296	1250
	Sulfur	ppm	ASTM D5185m		3049	3199	3668
	CONTAMINAN	ITS	method	limit/base	current	history1	history2
	CONTAMINAN	ITS ppm	method ASTM D5185m		current 4	history1 7	history2 10
							· · · · · ·
	Silicon	ppm	ASTM D5185m	>25	4	7	10
	Silicon Sodium	ppm ppm	ASTM D5185m ASTM D5185m	>25 >20	4 <1	7 2	10 2
	Silicon Sodium Potassium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	>25 >20	4 <1 <1 0.3	7 2 0	10 2 2
	Silicon Sodium Potassium Fuel	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524	>25 >20 >5 limit/base	4 <1 <1 0.3	7 2 0 ▲ 6.7	10 2 2 <1.0
	Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method	>25 >20 >5 limit/base >3	4 <1 <1 0.3 current	7 2 0 ▲ 6.7 history1	10 2 2 <1.0 history2
	Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm % %	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844	>25 >20 >5 limit/base >3 >20	4 <1 <1 0.3 current 0.3	7 2 0 ▲ 6.7 history1 0.4	10 2 2 <1.0 history2 1.1
	Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 >5 limit/base >3 >20	4 <1 <1 0.3 current 0.3 6.1 19.2	7 2 0 ▲ 6.7 history1 0.4 7.7	10 2 2 <1.0 history2 1.1 5.7
	Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm % % Abs/cm Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D3524 method *ASTM D7844 *ASTM D7624 *ASTM D7415	>25 >20 >5 limit/base >3 >20 >30 limit/base	4 <1 <1 0.3 current 0.3 6.1 19.2 current	7 2 0 ▲ 6.7 history1 0.4 7.7 18.4	10 2 2 <1.0 history2 1.1 5.7 21.2
	Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation FLUID DEGRA	ppm ppm % % Abs/cm Abs/.1mm DATION Abs/.1mm	ASTM D5185m ASTM D5185m ASTM D3524 ASTM D3524 *ASTM D7844 *ASTM D7624 *ASTM D7624 *ASTM D7415	>25 >20 >5 limit/base >3 >20 >30 limit/base >25	4 <1 <1 0.3 current 0.3 6.1 19.2	7 2 0 ▲ 6.7 history1 0.4 7.7 18.4 history1	10 2 2 <1.0 history2 1.1 5.7 21.2 history2



OIL ANALYSIS REPORT





					VISU	AL			method	limit/b	ase	current	his	tory1	histo	ory2		
				۷	Vhite M	etal		scalar	*Visual	NONE		NONE	NON	IE	NONE			
				Y	ellow N	letal		scalar	*Visual	NONE		NONE	NON	IE	NONE	-		
				F	Precipita	te		scalar	*Visual	NONE		NONE	NON	IE	NONE	-		
				S	Silt			scalar	*Visual	NONE		NONE	NON	IE	NONE	-		
				C	Debris			scalar	*Visual	NONE		NONE	NON	IE	NONE			
			-	S	Sand/Dir	t		scalar	*Visual	NONE		NONE	NON	IE	NONE	-		
			Mar19/24	A	Appeara	nce		scalar	*Visual	NORM	L	NORML	NOF		NORN	ЛL		
			Ma		Odor			scalar	*Visual	NORM	L	NORML	NOF		NORN	ЛL		
						ed Wate	r	scalar	*Visual	>0.2		NEG	NEG		NEG			
				F	ree Wa			scalar	*Visual			NEG	NEG	ì	NEG			
						D PRO	PE		method	limit/b	ase	current		tory1	histo	ory2		
				V	/isc @ 1			cSt	ASTM D44	5 15.4		12.3	▲ 12.3		13.1			
					GRAF													
				250-	Iron (p	opm)					100 T	Lead (ppm)						
	- 23 -	/24 -	V.C.	200-	Severe						80-	Severe						
	0ct11/23	Jan 16/24	A CL D 1 1 A	e ¹⁵⁰							e 60-							
				E 150 -	Abnormal						E 40	Abnormal						
				50-							20							
				0.			-		4	4	0	21	53	en	4			
					Nov9/21	Mar2/23	May17/23	0ct11/23	Jan 16/24	Mar19/24		Nov9/21 Mar2/23	May17/23	0ct11/23	Jan 16/24	10.01-11		
						um (pp	_	0	ηg	M		Chromium		0	2 C	2		
				50-	Τ						⁵⁰ T	·	(PPiii)					
				40.	Severe						40-	Severe						
		24 -	VC	ط ³⁰	Abnormal						e ³⁰	Abnormal						
	0ct11/23	Jan 16/24	ACL01															
	0	-i	14	10.							10-							
				0.	Nov9/21	Mar2/23 -	7/23	1/23 -	6/24	9/24	01	Nov9/21	7/23 -	1/23 -	6/24	100		
					Nov	Mar	May17/23	0ct11/23	Jan 16/24	Mar19/24		Mari	May17/23	0ct11/23	Jan 16/24	ACL01M		
						r (ppm)						Silicon (ppr	n)					
				400-	Asvere		i	1			80	Severe	!		!			
				300-							60 -							
				튭 200 -	1						뵵 40 -	Ab						
				100-							20-	Abnormal						
				0.	-						0							
					Nov9/21	Mar2/23	May17/23	0ct11/23	Jan 16/24	Mar19/24		Nov9/21 Mar2/23	May17/23	0ct11/23	Jan 16/24	Mar19/24		
						≥ ty @ 10		ŏ	Ja	Ma		Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z Z		ŏ	La	W		
				20-	T :	cy @ 10					12.0-	Base						
				18. G	Abnormal						(0)H010.0 8.0 6.0 4.0 2.0							
				(2001) 14-	Base						ji 0.0							
					Abnormal						quinn 4.0 -							
				12.							왏 2.0							
				10-	9/21	/23 -	/23 -	/23 -	/24 +	/24 +	0.0	3/21+	/23 -	/23 -	/24 +	ΨC		
					Nov9/21	Mar2/23	May17/23	0ct11/23	Jan 16/24	Mar19/24		Nov9/21 Mar2/23	May17/23	0ct11/23	Jan 16/24	10.01-01		
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						earCheck USA - 501 Madison Ave., Cary, NC 27513 A0109689 Received : 22 Mar 2024								G LOPES CONSTRUCTION 565 WINTHROP S				
CCRE	AB	Lab Nu					Tested : 26 Mar 2024								TAUNTON			
TESTING LA	BORATORY	Unique N						Diagr		26 Mar 202	4 - We	es Davis			US C)278		
		Test Pac	ckade	: M0	DB 2 (4	dditiona	al Te	sts: Perc	entFuel)				Conta	ct: BUT	CH MCGF	RATH		
Certifica		s sample i								200				·	th@glopes			