

OIL ANALYSIS REPORT





Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- 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.

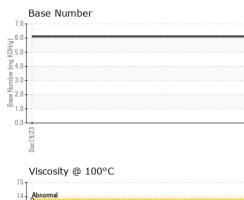
AAL)				Dec2023		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0114053		
Sample Date		Client Info		19 Dec 2023		
Machine Age	mls	Client Info		308039		
Oil Age	mls	Client Info		22622		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Water		WC Method	>0.2	NEG		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	35		
Chromium	ppm	ASTM D5185m	>20	<1		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		0		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	5		
Lead	ppm	ASTM D5185m	>40	<1		
Copper	ppm	ASTM D5185m	>330	3		
Tin	ppm	ASTM D5185m	>15	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	<1		
Barium	ppm	ASTM D5185m	0	0		
Molybdenum	ppm	ASTM D5185m	50	18		
Manganese	ppm	ASTM D5185m	0	<1		
Magnesium	ppm	ASTM D5185m	950	284		
Calcium	ppm	ASTM D5185m	1050	1898		
Phosphorus	ppm	ASTM D5185m	995	904		
Zinc	ppm	ASTM D5185m	1180	1149		
Sulfur	ppm	ASTM D5185m	2600	2464		
CONTAMINAN	ITS	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185m	>25	15		
0		ASTM D5185m		2		
Sodium	ppm	ASTIVI DOTODITI		2		
Potassium	ppm ppm	ASTM D5185m	>20	4		
			>20 limit/base			
Potassium		ASTM D5185m		4		
Potassium INFRA-RED	ppm	ASTM D5185m method	limit/base >3	4 current	 history1	 history2
Potassium INFRA-RED Soot %	ppm %	ASTM D5185m method *ASTM D7844	limit/base >3	4 current 0.8	 history1 	 history2
Potassium INFRA-RED Soot % Nitration	ppm % Abs/cm Abs/.1mm	ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20	4 current 0.8 7.4	history1 	 history2
Potassium INFRA-RED Soot % Nitration Sulfation	ppm % Abs/cm Abs/.1mm	ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20 >30	4 current 0.8 7.4 18.8	 history1 	 history2
Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAI	% Abs/cm Abs/.1mm	ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base >3 >20 >30 limit/base	4 current 0.8 7.4 18.8 current	 history1 	 history2 history2



13 (0.012 Base (0.01) 12 11

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VISUAL



	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
Dec19/23	Appearance	scalar	*Visual	NORML	NORML		
D	Odor	scalar	*Visual	NORML	NORML		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	10.2		
	GRAPHS						
	Ferrous Alloys						
	s Non-ferrous Metal			Dec19/23			
	Viscosity @ 100°C				Base Numb	er	
	14 - Abnormal						
	13			6.0 ©			
				(0,10) HOX buy and MNN and MNN aseg 2.0			
	0 12 - Base 00 () 35 111			ي 4.0 لو	+		
				4 3.0 N			
	10 - Abnormal			凝 2.0			
	9-			1.0	1		
	84						
	Dec ¹ 9/23			Dec19/23	Dec19/23		
	D			Der	Dei		
Laboratory		501 Madis Recieved Diagnose	1 : 17 .	ry, NC 27513 Jan 2024 Jan 2024		1015 E. WESTING	AX TRUCKII HOUSE BLV IARLOTTE, I
Sample No. Lab Number Unique Number Test Package	: 10833730	Diagnost		n Felton			US 282 act: Jody Gre

Submitted By: Jody Greer

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