

WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

[70412] Machine Id CRN032

Diesel Engine

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

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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. (Customer Sample Comment: New purchase PM-4 changed fluid and filters)	Sample Number		Client Info		PCA0109344		
	Sample Date		Client Info		11 Apr 2024		
	Machine Age	hrs	Client Info		3980		
	Oil Age	hrs	Client Info		3980		
	Filter Age	hrs	Client Info		0		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron	ppm	ASTM D5185m		4		
All component wear rates are normal.	Chromium	ppm	ASTM D5185m		<1		
	Nickel	ppm	ASTM D5185m	>4	0		
	Titanium	ppm	ASTM D5185m		<1		
	Silver	ppm	ASTM D5185m	>3	0		
	Aluminum	ppm	ASTM D5185m	>20	<1		
	Lead	ppm	ASTM D5185m	>40	2		
	Copper	ppm	ASTM D5185m	>330	2		
	Tin	ppm	ASTM D5185m	>15	<1		
	Vanadium	ppm	ASTM D5185m		0		
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
CONTAMINATION	Silicon		ASTM D5185m	>25	4		
CONTAMINATION	Potassium	ppm			4		
There is no indication of any contamination in the oil.	Fuel	ppm	ASTM D5185m WC Method		<1		
	Water		WC Method		<1.0 NEG		
	Glycol		WC Method	>0.2			
	Soot %	%	*ASTM D7844	. 0	NEG 0.1		
	Nitration	Abs/cm		>3 >20	7.5		
	Sulfation	Abs/.1mm	*ASTM D7624		17.4		
	Silt				NONE		
	Debris	scalar	*Visual	NONE NONE	NONE		
	Sand/Dirt	scalar	*Visual				
		scalar	*Visual	NONE	NONE NORML		
	Appearance Odor	scalar	*Visual *Visual	NORML NORML			
		scalar			NORML NEG		
	Emulsified Water	scalar	*Visual	>0.2	NEG		
FLUID CONDITION	Sodium	ppm	ASTM D5185m		1		
	Boron	ppm	ASTM D5185m	0	2		
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Barium	ppm	ASTM D5185m		2		
	Molybdenum	ppm	ASTM D5185m		30		
	Manganese	ppm	ASTM D5185m		1		
	Magnesium	ppm	ASTM D5185m		324		
	Calcium	ppm	ASTM D5185m		1932		
	Phosphorus	ppm	ASTM D5185m		975		
	Zinc	ppm	ASTM D5185m		1159		
	Sulfur	ppm	ASTM D5185m		3837		
	Oxidation	Abs/.1mm	*ASTM D7414		13.5		
	D NUL (DU)				7.0		

Base Number (BN) mg KOH/g ASTM D2896 9.8

ASTM D445 15.4

Visc @ 100°C cSt

7.6

14.3



