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WEAR NORMAL CONTAMINATION NORMAL FLUID CONDITION NORMAL

Machine Id **782M** Component **Diesel Engine** Fluid **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.	Sample Number		Client Info		GFL0117563	GFL0093136	
	Sample Date		Client Info		07 May 2024	07 Nov 2023	
	Machine Age	hrs	Client Info		18116	18061	
	Oil Age	hrs	Client Info		18061	2600	
	Filter Age	hrs	Client Info		0	0	
	Oil Changed		Client Info		Not Changd	Changed	
	Filter Changed		Client Info		Not Changd	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR	Iron	ppm	ASTM D5185m	>90	20	22	
	Chromium	ppm	ASTM D5185m	>20	0	<1	
All component wear rates are normal.	Nickel	ppm	ASTM D5185m		0	0	
	Titanium	ppm	ASTM D5185m		0	0	
	Silver	ppm	ASTM D5185m		0	0	
	Aluminum	ppm	ASTM D5185m		7	2	
	Lead	ppm	ASTM D5185m		<1	<1	
	Copper	ppm	ASTM D5185m		<1	2	
	Tin	ppm	ASTM D5185m		0	0	
	Vanadium	ppm	ASTM D5185m	10	0	0	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	>25	6	5	
	Potassium	ppm	ASTM D5185m		4	1	
There is no indication of any contamination in the oil.	Fuel	ppm	WC Method		- <1.0	<1.0	
	Water		WC Method		NEG	NEG	
	Glycol		WC Method	20.2	NEG	NEG	
	Soot %	%	*ASTM D7844	>6	0.3	1.1	
	Nitration	Abs/cm	*ASTM D7624	>20	6.0	10.3	
	Sulfation	Abs/.1mm	*ASTM D7624		17.6	21.4	
	Silt	scalar	*Visual	NONE	NONE	NONE	
	Debris	scalar	*Visual	NONE	NONE	NONE	
	Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
	Appearance	scalar	*Visual	NORML	NORML	NORML	
	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water		*Visual	>0.2	NEG	NEG	
FLUID CONDITION	0.4"				40		
	Sodium	ppm	ASTM D5185m	0	10	19	
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.	Boron	ppm	ASTM D5185m		2	7	
	Barium	ppm	ASTM D5185m		0	0	
	Molybdenum	ppm	ASTM D5185m		57	60	
	Manganese	ppm	ASTM D5185m		<1	<1	
	Magnesium	ppm	ASTM D5185m		907	959	
	Calcium	ppm	ASTM D5185m		1052	1099	
	Phosphorus	ppm	ASTM D5185m		1058	1011	
	Zinc	ppm	ASTM D5185m		1211	1242	
	Sulfur	ppm	ASTM D5185m		3543	2892	
	Oxidation	Abs/.1mm	*ASTM D7414	-	13.5	16.7	
	Base Number (BN)	mg KOH/g	ASTM D2896	9.8	10.2	7.9	

Visc @ 100°C cSt

ASTM D445 15.4

13.9

14.0



