

## Machine Id 522001 Component **Diesel Engine** PETRO CANADA DURON SHP 15W40 (--- GAL)

RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
The oil change at the time of sampling has been noted. Resample at the next service interval to monitor. No other corrective action is recommended at this time.	Sample Number		Client Info		GFL0089829		
	Sample Date		Client Info		07 Jun 2024		
	Machine Age	hrs	Client Info		19143		
	Oil Age	hrs	Client Info		570		
	Filter Age	hrs	Client Info		570		
	Oil Changed		Client Info		Changed		
	Filter Changed		Client Info		Changed		
	Sample Status				NORMAL		
WEAR	Iron	nnm	ASTM D5185(m)	<120	9		
	Chromium	ppm ppm	ASTM D5185(m)		-9 <1		
All component wear rates are normal.	Nickel	ppm	ASTM D5185(m)		1		
	Titanium	ppm	ASTM D5185(m)		0		
	Silver	ppm	ASTM D5185(m)		0		
	Aluminum	ppm	ASTM D5185(m)		3		
	Lead	ppm	ASTM D5185(m)	>40	-3 <1		
	Copper	ppm	ASTM D5185(m)		1		
	Tin	ppm	ASTM D5185(m)		- <1		
	Vanadium	ppm	ASTM D5185(m)	210	0		
	White Metal	scalar	Visual*	NONE	NONE		
	Yellow Metal	scalar	Visual*	NONE	NONE		
CONTAMINATION	Silicon	ppm	ASTM D5185(m)	>25	3		
Light fuel dilution occurring. No other contaminants were detected in the oil.	Potassium	ppm	ASTM D5185(m)	>20	2		
	Fuel	%	ASTM D7593*	>3.0	2.6		
	Water		WC Method	>0.2	NEG		
	Glycol		WC Method		NEG		
	Soot %	%	ASTM D7844*	>4	0.3		
	Nitration	Abs/cm	ASTM D7624*	>20	9.5		
	Sulfation	Abs/.1mm	ASTM D7415*	>30	19.9		
	Silt	scalar	Visual*	NONE	NONE		
	Debris	scalar	Visual*	NONE	NONE		
	Sand/Dirt	scalar	Visual*	NONE	NONE		
	Appearance	scalar	Visual*	NORML	NORML		
	Odor	scalar	Visual*	NORML	NORML		
	Emulsified Water	scalar	Visual*	>0.2	NEG		
	O e ell'erre						
FLUID CONDITION	Sodium	ppm	ASTM D5185(m)	0	4		
The condition of the oil is acceptable for the time in service.	Boron	ppm	ASTM D5185(m)		1		
·	Barium	ppm	ASTM D5185(m)				
	Molybdenum	ppm	ASTM D5185(m) ASTM D5185(m)		56		
	Manganese Magnesium	ppm	ASTM D5185(m) ASTM D5185(m)		<1 908		
	Calcium	ppm	ASTM D5185(m) ASTM D5185(m)		1000		
	Phosphorus	ppm	ASTM D5185(m)		909		
	Zinc	ppm	ASTM D5185(m) ASTM D5185(m)		1123		
	Sulfur	ppm ppm	ASTM D5185(m)		2469		
	Oxidation	Abs/.1mm	ASTM D5185(III) ASTM D7414*		18.0		
	Visc @ 40°C	cSt	ASTM D7414 ASTM D7279(m)		90.4		
	Visc @ 40 C Visc @ 100°C	cSt	ASTM D7279(m) ASTM D7279(m)		90.4 12.8		
	Visc @ 100 C	Orali		10.4	12.0		

Viscosity Index (VI) Scale ASTM D2270\* 142

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