

## Machine Id 2227114 Component Diesel Engine PETRO CANADA DURON SHP 10W30 (--- QTS)

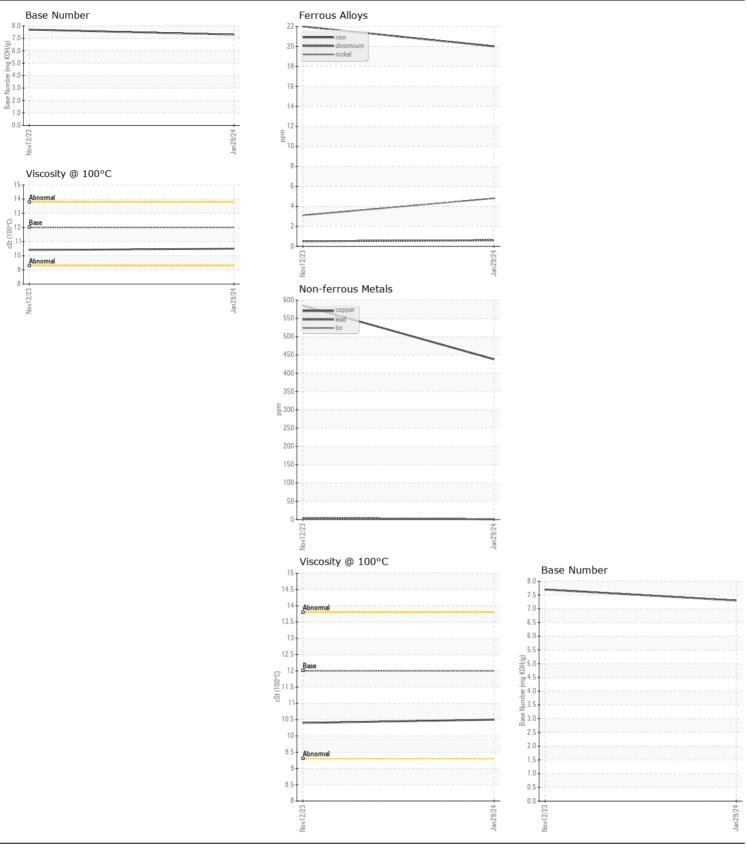
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RECOMMENDATION	Test	UOM	Method	Limit/Abn	Current	History1	History2
Resample at the next service interval to monitor. Please specify the component make and model with your next sample.	Sample Number		Client Info		PCA0114815	PCA0106359	
	Sample Date		Client Info		29 Jan 2024	12 Nov 2023	
	Machine Age	mls	Client Info		610000	41690	
	Oil Age	mls	Client Info		20000	41690	
	Filter Age	mls	Client Info		20000	20000	
	Oil Changed		Client Info		N/A	Changed	
	Filter Changed		Client Info		Changed	Changed	
	Sample Status				NORMAL	NORMAL	
WEAR All component wear rates are normal.	Iron	ppm	ASTM D5185m	>100	20	22	
	Chromium	ppm	ASTM D5185m	>20	<1	<1	
	Nickel	ppm	ASTM D5185m	>4	5	3	
	Titanium	ppm	ASTM D5185m		4	<1	
	Silver	ppm	ASTM D5185m	>3	3	5	
	Aluminum	ppm	ASTM D5185m	>20	8	15	
	Lead	ppm	ASTM D5185m		<1	4	
	Copper	ppm	ASTM D5185m	>330	438	585	
	Tin	ppm	ASTM D5185m	>15	2	1	
	Vanadium	ppm	ASTM D5185m		0	<1	
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
CONTAMINATION	Silicon	ppm	ASTM D5185m	<u>~25</u>	7	12	
OONTAMINATION	Potassium	ppm	ASTM D5185m		22	39	
There is no indication of any contamination in the oil.	Fuel	ppiii	WC Method		<1.0	<1.0	
	Water		WC Method		NEG	NEG	
	Glycol		WC Method		NEG	NEG	
	Soot %	%	*ASTM D7844	>3	0.2	0.2	
	Nitration	Abs/cm	*ASTM D7624	>20	8.1	8.3	
	Sulfation	Abs/.1mm	*ASTM D7415	>30	19.2	19.8	
	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	scalar	*Visual	>0.2	NEG	NEG	
FLUID CONDITION	Sodium	ppm	ASTM D5185m		0	4	
	Boron	ppm	ASTM D5185m	2	4	11	
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		13	0	
	Molybdenum	ppm	ASTM D5185m		60	64	
	Manganese	ppm	ASTM D5185m		1	1	
	Magnesium	ppm	ASTM D5185m		875	828	
	Calcium	ppm		1050	1121	1130	
	Phosphorus	ppm	ASTM D5185m		985	884	
	Zinc	ppm	ASTM D5185m		1151	1016	
	Sulfur	ppm	ASTM D5185m		3011	2323	
	Oxidation	Abs/.1mm	*ASTM D7414		15.3	16.3	
	Base Number (BN)				7.3	7.7	
		oC+	ACTM D445	12.00	10.5	10.4	

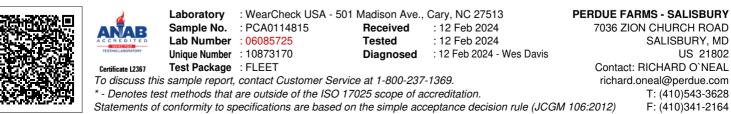
Visc @ 100°C cSt

ASTM D445 12.00

10.5

10.4





Contact/Location: RICHARD O`NEAL - PERSALMD