

## **OIL ANALYSIS REPORT**



Machine Id

#### 877 Component Diesel Engine Fluid PETRO CANADA DURON SHP 10W30 (--- QTS)

### 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.

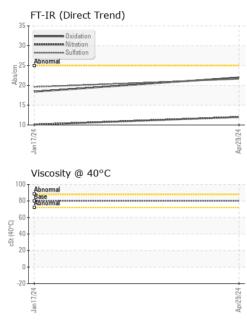
#### Fluid Condition

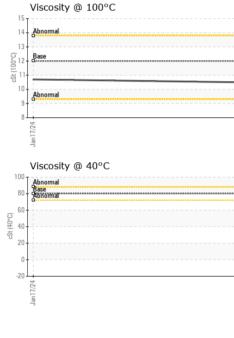
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0114432	PCA0114450	
Sample Date		Client Info		29 Apr 2024	17 Jan 2024	
Machine Age	mls	Client Info		98391	91118	
Oil Age	mls	Client Info		7300	7100	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	26	18	
Chromium	ppm	ASTM D5185m	>20	<1	1	
Nickel	ppm	ASTM D5185m	>4	0	<1	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	0	<1	
Aluminum	ppm	ASTM D5185m	>20	4	2	
Lead	ppm	ASTM D5185m	>40	0	1	
Copper	ppm	ASTM D5185m	>330	1	3	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		0	<1	
Cadmium	ppm	ASTM D5185m		0	<1	
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	4	6	
Barium	ppm	ASTM D5185m	0	0	0	
Molybdenum	ppm	ASTM D5185m	50	54	52	
Manganese	ppm	ASTM D5185m	0	<1	<1	
Magnesium	ppm	ASTM D5185m	950	921	830	
Calcium	ppm	ASTM D5185m	1050	1054	996	
Phosphorus	ppm	ASTM D5185m	995	1019	935	
Zinc	ppm	ASTM D5185m	1180	1220	1079	
Sulfur	ppm	ASTM D5185m	2600	3333	3265	
CONTAMINAN	TS	method	limit/base	current	history1	history2
Silicon	ppm		>25	8	8	
Sodium	ppm	ASTM D5185m			$\cap$	
				3	0	
Potassium	ppm	ASTM D5185m		3 1	2	
INFRA-RED	ppm	ASTM D5185m method	limit/base	1 current	2 history1	
INFRA-RED Soot %	ppm %	ASTM D5185m method *ASTM D7844	limit/base >3	1 current 0.3	2 history1 0.3	
INFRA-RED Soot % Nitration	ppm % Abs/cm	ASTM D5185m method *ASTM D7844 *ASTM D7624	limit/base >3 >20	1 current 0.3 12.0	2 history1 0.3 10.1	history2
INFRA-RED Soot %	ppm %	ASTM D5185m method *ASTM D7844	limit/base >3	1 current 0.3	2 history1 0.3	history2
INFRA-RED Soot % Nitration	ppm % Abs/cm Abs/.1mm	ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415	limit/base >3 >20	1 current 0.3 12.0	2 history1 0.3 10.1	 history2 
INFRA-RED Soot % Nitration Sulfation	ppm % Abs/cm Abs/.1mm	ASTM D5185m method *ASTM D7844 *ASTM D7624 *ASTM D7415 method	limit/base >3 >20 >30	1 current 0.3 12.0 21.6	2 history1 0.3 10.1 19.6	 history2  

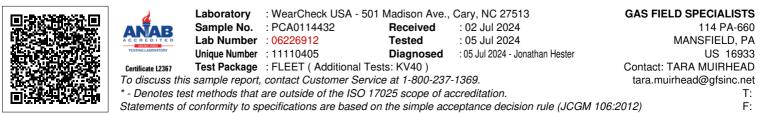


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VISUAL		method	limit/base	current	history1	history2
Vhite Metal	scalar	*Visual	NONE	NONE	NONE	
ellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
ppearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
ree Water	scalar	*Visual		NEG	NEG	
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
/isc @ 100°C	cSt	ASTM D445	12.00	10.5	10.7	
GRAPHS						
Ferrous Alloys						
iron chromium						
nickel						
7/24			9/24			
Jan 17/24			Apr29/24			
hon-ferrous Meta	s		Apr29/24			
Non-ferrous Meta	ls		Apr29/24			
Non-ferrous Meta	5		Apr29/24			
Non-ferrous Meta	ls		Apr29/24			
Non-ferrous Meta	s		Apr29/24			
Non-ferrous Meta	5		Apr29/24			
Non-ferrous Meta	s		Apr29/24			
Non-ferrous Meta	5		Apr29/24			
Non-ferrous Meta	5		Apr29/24			
Non-ferrous Meta	S		Apr29/24			
Non-ferrous Metal	S					
Non-ferrous Metal	S					
Non-ferrous Metal	220000000000000000000000000000000000000		Apr29/24 4 Apr29/24 4			
Non-ferrous Metal	220000000000000000000000000000000000000		Apr29/24	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		Apr29/24	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		Apr29/24	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0 (0)(100) fbull sequence 8 2.0 1.0 0.0 0.0	Base Number		
Non-ferrous Metal	220000000000000000000000000000000000000		8.0 7.0 (6/HOX bul) 4.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9.0 9	Base Number		



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