

## **OIL ANALYSIS REPORT**

#### Area (89733X) Walgreens Machine Id [Walgreens] 136A67171 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

## DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Eluid

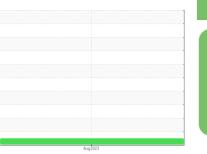
All component wear rates are normal.

#### 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 Rating Trend

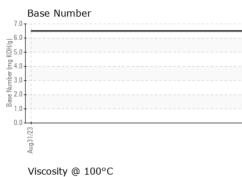


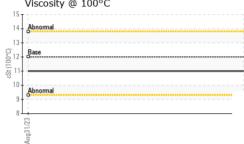
NORMAL

SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0105677		
Sample Date		Client Info		31 Aug 2023		
Machine Age	mls	Client Info		0		
Oil Age	mls	Client Info		50000		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	10		
Chromium	ppm	ASTM D5185m	>4	0		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m		1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>25	6		
Lead	ppm	ASTM D5185m	>45	<1		
Copper	ppm	ASTM D5185m	>85	2		
Tin	ppm	ASTM D5185m	>4	<1		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 1	history1	history2
	ppm ppm					
Boron		ASTM D5185m	2	1		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	1 0		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	1 0 59		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	1 0 59 0		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	1 0 59 0 929 1120 984		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	1 0 59 0 929 1120 984 1194	   	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	1 0 59 0 929 1120 984	   	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	1 0 59 0 929 1120 984 1194 3266 current	    	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b>	2 0 50 950 1050 995 1180 2600	1 0 59 0 929 1120 984 1194 3266 current 4		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >30	1 0 59 0 929 1120 984 1194 3266 <u>current</u> 4 3		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >30	1 0 59 0 929 1120 984 1194 3266 current 4	    history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >30	1 0 59 0 929 1120 984 1194 3266 <u>current</u> 4 3	    history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >30 >20 <b>Imit/base</b> >3	1 0 59 0 929 1120 984 1194 3266 <u>current</u> 4 3 9 9 <u>current</u>	     history1  	     history2  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >30 >20 <b>limit/base</b>	1 0 59 0 929 1120 984 1194 3266 current 4 3 9 9	    history1   history1	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >30 >20 <b>Imit/base</b> >3	1 0 59 0 929 1120 984 1194 3266 <u>current</u> 4 3 9 9 <u>current</u>	     history1   history1  history1	     history2   history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >30 220 <i>limit/base</i> >3 >20	1 0 59 0 929 1120 984 1194 3266 <i>current</i> 4 3 9 <i>current</i> 0.4 8.8 20.5	     history1  history1  history1	     history2   history2  history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >30 20 <b>imit/base</b> >3 >20	1 0 59 0 929 1120 984 1194 3266 <b>current</b> 4 3 9 <b>current</b> 0.4 8.8 20.5	     history1  history1  history1	     history2  history2  history2



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	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal		*Visual	NONE	NONE		
	Precipitate		*Visual	NONE	NONE		
	Silt		*Visual	NONE	NONE		
	Debris		*Visual	NONE	NONE		
	Sand/Dirt		*Visual	NONE	NONE		
/23	Appearance		*Visual	NORML	NORML		
Aug31/23	Odor		*Visual	NORML	NORML		
	Emulsified Water		*Visual	>0.2	NEG		
	Free Water		*Visual		NEG		
	FLUID PROPE		method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.0		
	GRAPHS						
	Ferrous Alloys						
	iron						
	8 - nickel						
	6-						
	E d						
	4-						
	2-						
	0			<u>53</u>			
	Aug31/23			Aug31/23			
				Au			
	Non-ferrous Meta	ls					
	copper						
	8 - sessessesses lead						
	6						
	4						
	2-			-			
	0			*****			
	1/23			1/23			
	Aug31/23			Aug31/23			
	Viscosity @ 100°C	2			Base Number		
	15 T			7.0	base mullipel		
	14 Abnormal			6.0			
	13			0			
				- ×			
				y B .0- y B 			
	5 12- <b>Base</b> 5 11- 5 11-	****		y 64.0- Jag 3.0- N			
	Base 12 - Base 11			(B/HO) Bu) Jac KOM Bu ) Jac KOM JAC (JAC KOM BU ) Jac KOM JAC (JAC KOM JAC KOM JAC (JAC KOM JAC KOM JAC (JAC KOM JAC KOM J			
	5 12- <b>Base</b> 5 11- 5 11-			y But 4.0- un un u			
	Base Base Base Abnormal 9 8			1.0-			
	Base Base Base Abnormal 9 8			1.0-	g31/23		
	Base 112 111 10 Abnormal			1.0-	Aug31/23		
	Base Base 3 11 Abnormal 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	501 Madiso	on Ave., Ca	1.0- 0.0		ce - Shop 1374 - F	
Laboratory Sample No.	: WearCheck USA - 5 : PCA0105677	501 Madiso Received	: 07 \$	ry, NC 27513 Sep 2023		ce - Shop 1374 - F 80 Inte	Berkeley-Hartfo
Laboratory Sample No. Lab Number	Base Base Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Clic	Received Diagnose	:07 S d:08 S	ry, NC 27513 Sep 2023 Sep 2023			ernational Driv Windsor, C
Laboratory Sample No.	Base Base Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Base Click Clic	Received	:07 S d:08 S	ry, NC 27513 Sep 2023		80 Inte	Berkeley-Hartfo ernational Driv

VISUAI method limit/base current history1 history2

\* - Denotes test methods that are outside of the ISO 17025 scope of accreditation. Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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