

# **OIL ANALYSIS REPORT**

#### Sample Rating Trend



#### Area (14251Z) Walgreens Machine Id [Walgreens] 136A61442 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

## 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.

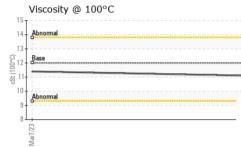
SAMPLE INFOR		method	limit/base	current	history 1	history 2
			mmbase	PCA0094412	PCA0092029	
Sample Number		Client Info				
Sample Date	mla	Client Info		28 Jun 2023	07 Mar 2023	
Machine Age	mls	Client Info		371558	359342	
Oil Age	mls	Client Info		371558	359342	
Oil Changed		Client Info		Diff Oil	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Fuel		WC Method	>2.0	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	19	9	
Chromium	ppm	ASTM D5185m	>20	2	<1	
Nickel	ppm	ASTM D5185m	>4	0	0	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>20	0	1	
Lead	ppm	ASTM D5185m	>40	2	0	
Copper	ppm	ASTM D5185m	>330	4	8	
Tin	ppm	ASTM D5185m	>15	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 0	history 1 1	history 2
	ppm ppm					
Boron		ASTM D5185m	2	0	1	
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	0 0	1 0	
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 0 61	1 0 59	
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 0 61 <1	1 0 59 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 0 61 <1 1028	1 0 59 <1 937	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	0 0 61 <1 1028 1207	1 0 59 <1 937 1135	  
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	0 0 61 <1 1028 1207 1038	1 0 59 <1 937 1135 969	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm 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	0 0 61 <1 1028 1207 1038 1317	1 0 59 <1 937 1135 969 1250	
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 50 950 1050 995 1180 2600	0 0 61 <1 1028 1207 1038 1317 3455	1 0 59 <1 937 1135 969 1250 3219	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm 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 50 950 1050 995 1180 2600	0 0 61 <1 1028 1207 1038 1317 3455 current	1 0 59 <1 937 1135 969 1250 3219 history 1	
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	0 0 61 <1 1028 1207 1038 1317 3455 current 4	1 0 59 <1 937 1135 969 1250 3219 history 1 4	     history 2
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 <b>method</b> ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >25	0 0 61 <1 1028 1207 1038 1317 3455 current 4 2	1 0 59 <1 937 1135 969 1250 3219 history 1 4 2	     history 2
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> >25 >20	0 0 61 <1 1028 1207 1038 1317 3455 current 4 2 3	1 0 59 <1 937 1135 969 1250 3219 history 1 4 2 0	     history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	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> >25 >20 <b>limit/base</b>	0 0 61 <1 1028 1207 1038 1317 3455 current 4 2 3 3	1 0 59 <1 937 1135 969 1250 3219 history 1 4 2 0 history 1	     history 2    history 2
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> >25 >20 <b>Imit/base</b> >3	0 0 61 <1 1028 1207 1038 1317 3455 <u>current</u> 4 2 3 <u>current</u> 0.5	1 0 59 <1 937 1135 969 1250 3219 history 1 4 2 0 history 1 0.3	    history 2   history 2
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>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	0 0 61 <1 1028 1207 1038 1317 3455 <i>current</i> 4 2 3 <i>current</i> 0.5 10.5	1 0 59 <1 937 1135 969 1250 3219 history 1 4 2 0 history 1 0.3 8.0	     history 2   history 2  
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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 0 50 0 950 1050 995 1180 2600 2600 25 20 220 20 20 20 20 20 20 20 20 20 20 20	0 0 61 <1 1028 1207 1038 1317 3455 <i>current</i> 4 2 3 <i>current</i> 0.5 10.5 22.0	1 0 59 <1 937 1135 969 1250 3219 history 1 4 2 0 history 1 0.3 8.0 19.3 history 1	    history 2  history 2  history 2
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 D7844 *ASTM D7844 *ASTM D7844	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	0 0 61 <1 1028 1207 1038 1317 3455 <u>current</u> 4 2 3 <u>current</u> 0.5 10.5 22.0	1 0 59 <1 937 1135 969 1250 3219 history 1 4 2 0 history 1 0.3 8.0 19.3	    history 2  history 2  history 2



# **OIL ANALYSIS REPORT**

VISUAL





	VISUAL		method	limit/base	current	history 1	history 2
	White Metal	scalar	*Visual	NONE	NONE	NONE	
	Yellow 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	
Jun28/23 .	Appearance	scalar	*Visual	NORML	NORML	NORML	
Jun2	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
	Free Water	scalar	*Visual		NEG	NEG	
	FLUID PROPE	RTIES	method	limit/base	current	history 1	history 2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.1	11.4	
	GRAPHS						
	Ferrous Alloys						
	iron		-				
	15 - nickel		Statement of the statem				
	10						
	5 -						
			********************	23			
	Mar7/23			Jun28/23			
	Non-ferrous Metal	c					
		5					
	copper						
	8- tin						
	6-						
			A DESCRIPTION OF THE OWNER OWNER				
	2		and the second se	Northeastern			
	Mar7/23			Jun28/23			
	Ma			Juni			
	Viscosity @ 100°C				Base Number	-	
	15			9.	0T		
	14 - Abnormal			8. — 7	1		
-	13			(6) 10. (6) 10. (6) 10. (7) 10. (8) 10. (8) 10. (9)	0		
10°00 11 + 50	Base			 5.	o -		
	3 11-				0		
	10 Abnormal			N ase 2	0		
	9 - Abnormal			ш <sub>2</sub> . 1.			
	84			0.	.0		
	Mar7/23			Jun28/23	Mar7/23		Jun28/23
	M			Jur	×		Jun
Laboratory	: WearCheck USA - 5	i01 Madi	son Ave Ca	rv. NC 2751	3 Transer	vice - Shop 1367 -	Berkelev-Juniter
Sample No.		Received		Jul 2023			algreens Drive
Lab Number	: 05890718	Diagnos		Jul 2023			Jupiter, FL
Unique Number		Diagnost	ician : We	s Davis		0	US 33478
Test Package	: FLEET	ion at 1 C	00 227 1260	<b>,</b>		Contact: Ma	anny Gonzalez



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