

## **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

## Area Walgreens-Reefer [Walgreens-Reefer] 136C891006 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (--- GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### 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		method	limit/base	current	history1	history2
			mmbase			
Sample Number		Client Info		PCA0100215		
Sample Date	bro	Client Info		15 Aug 2023 607		
Machine Age	hrs	Client Info Client Info		22		
Oil Age Oil Changed	hrs	Client Info		22 Changed		
Sample Status		Client into		NORMAL		
				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	>100	7		
Chromium	ppm	ASTM D5185m	>20	0		
Nickel	ppm	ASTM D5185m	>4	0		
Titanium	ppm	ASTM D5185m		<1		
Silver	ppm	ASTM D5185m	>3	0		
Aluminum	ppm	ASTM D5185m	>20	<1		
Lead	ppm	ASTM D5185m	>40	0		
Copper	ppm	ASTM D5185m	>330	<1		
Tin	ppm	ASTM D5185m	>15	0		
Vanadium	ppm	ASTM D5185m		<1		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method			history1	history2
ADDITIVES Boron	maa				history1	history2
Boron	ppm ppm	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 58		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	<1 0 58 <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	<1 0 58 <1 966		
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	<1 0 58 <1 966 1091		
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	<1 0 58 <1 966 1091 980	  	  
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	2 0 50 0 950 1050	<1 0 58 <1 966 1091	   	   
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	<1 0 58 <1 966 1091 980 1207	    	    
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	<1 0 58 <1 966 1091 980 1207 3515		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	2 0 50 950 1050 995 1180 2600	<1 0 58 <1 966 1091 980 1207 3515 current	     history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	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 limit/base >25	<1 0 58 <1 966 1091 980 1207 3515 current 2	    history1	     history2
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	<1 0 58 <1 966 1091 980 1207 3515 current 2 1 0	    history1  	     history2  
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 -25	<1 0 58 <1 966 1091 980 1207 3515 current 2 1 0 current	     history1 	     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 50 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b>	<1 0 58 <1 966 1091 980 1207 3515 <u>current</u> 2 1 0 <u>current</u>	     history1   history1	     history2  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 50 950 1050 995 1180 2600 <b>imit/base</b> >25 >20 <b>imit/base</b>	<1 0 58 <1 966 1091 980 1207 3515 current 2 1 0 current	     history1   history1  	     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 50 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	<1 0 58 <1 966 1091 980 1207 3515 <u>current</u> 2 1 0 <u>current</u> 0.5 5.3 17.6	     history1   history1  history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 <b>imit/base</b> >3 >20 >30	<1 0 58 <1 966 1091 980 1207 3515 Current 2 1 0 Current 0.5 5.3 17.6 Current	     history1  history1  history1  history1	
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 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 <b>imit/base</b> >3 >20 >30	<1 0 58 <1 966 1091 980 1207 3515 <u>current</u> 2 1 0 <u>current</u> 0.5 5.3 17.6	     history1   history1  history1	     history2  history2  history2

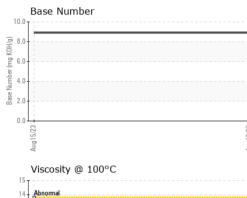


13 cSt (100°C) 11 Bas

10 Abnormal

8 Aug15/23 -

# **OIL ANALYSIS REPORT**



	VISUAL		method	limit/base	current	history1	history2
	White Metal	scalar	*Visual	NONE	NONE		
	Yellow Metal	scalar	*Visual	NONE	NONE		
	Precipitate	scalar	*Visual	NONE	NONE		
	Silt	scalar	*Visual	NONE	NONE		
	Debris	scalar	*Visual	NONE	NONE		
	Sand/Dirt	scalar	*Visual	NONE	NONE		
Aug15/23	Appearance	scalar	*Visual	NORML	NORML		
Aug1	Odor	scalar	*Visual	NORML	NORML		
)°C	Emulsified Water	scalar	*Visual	>0.2	NEG		
	Free Water	scalar	*Visual		NEG		
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.7		
	GRAPHS						
	Ferrous Alloys						
	10 T						
	iron 8						
	0 - nickel						
	6						
	Ed 4						
	2						
	0						
	2/23			5/23			
	Aug15/23			Aug15/23			
	Non-ferrous Metal	s					
	10 copper						
	8						
	sesses tin						
	6						
	8 4						
	2 -						
	0						
	ug15/23			Aug15/23			
	Aug			Aug			
	Viscosity @ 100°C	;			Base Number		
	15			9.0			
	14 - Abnormal			8.0-			
	13-			(B7.0-			
	5-00 00 73 11-	*****		0,07.0- 6.0- لال (WHO) 10,00- 4.0- 9.0- 8 8 2.0- 8 8 2.0-			
	5 11-			<sup>b</sup> e 4.0-			
	10			N 3.0			
	Abnormal 9			2.0 فق 1.0 •			
	8			0.0			
	Aug15/23			Aug15/23	Aug15/23		Aug15/23
	Aug			Aug	Aug		Aug1
Laboratory Sample No. Lab Number Unique Number Test Package To discuss this sample report, of	: 05930179 : 10615450 : FLEET contact Customer Serve	Received Diagnose Diagnost	l : 21 / ed : 22 / ician : Wes	Aug 2023 Aug 2023 s Davis 9.	Transervice	7 W Conta rbeal@tr	keley-Waxahachie 10 Ovilla Road /axahachie, TX US 75167 ct: Robert Beal ranservice.com
* - Denotes test methods that a Statements of conformity to spec					CGM 106:2012)		(972)923-9928 (972)923-9919