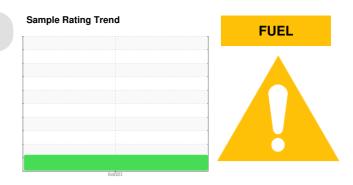


**PROBLEM SUMMARY** 

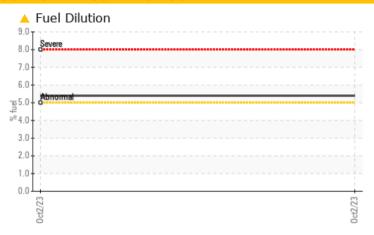
Machine Id **223068** Component

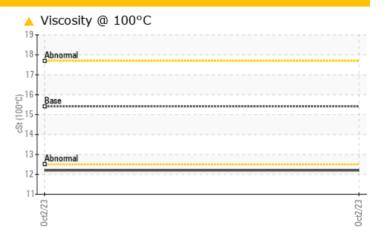
**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (--- GAL)









#### RECOMMENDATION

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

### PROBLEMATIC TEST RESULTS

Sample Status				ABNORMAL	 
Fuel	%	ASTM D3524	>5	<b>△</b> 5.4	 
Visc @ 100°C	cSt	ASTM D445	15.4	<b>12.2</b>	 

Customer Id: GFL957 Sample No.: GFL0085277 Lab Number: 05978720 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Wes Davis +1 905-569-8600 x223 wesd@wearcheck.ca

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMEND	RECOMMENDED ACTIONS					
Action	Status	Date	Done By	Description		
Change Fluid			?	We recommend that you drain the oil from the component if this has not already been done.		
Resample			?	We recommend an early resample to monitor this condition.		

# HISTORICAL DIAGNOSIS

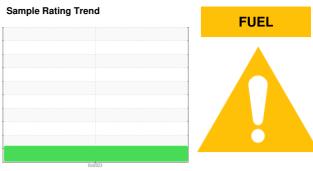


# **OIL ANALYSIS REPORT**

Machine Id 223068 Component

**Diesel Engine** 

PETRO CANADA DURON SHP 15W40 (--- G



#### **DIAGNOSIS**

#### Recommendation

We recommend that you drain the oil from the component if this has not already been done. We recommend an early resample to monitor this condition.

#### Wear

All component wear rates are normal.

#### Contamination

There is a moderate amount of fuel present in the oil. Tests confirm the presence of fuel in the oil.

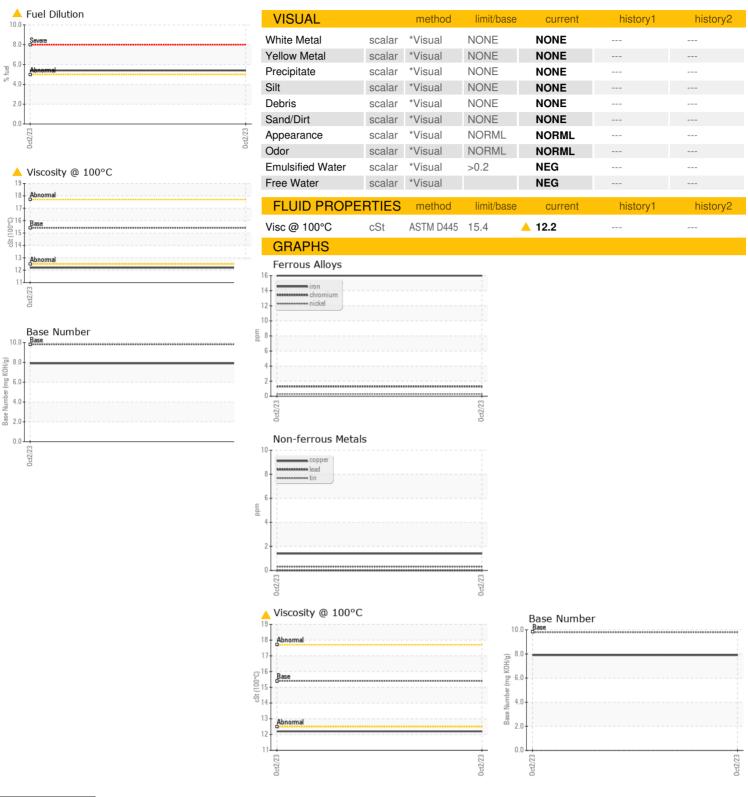
#### Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil. Fuel is present in the oil and is lowering the viscosity. The oil is no longer serviceable due to the presence of contaminants.

GAL)				Oct2023		
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		GFL0085277		
Sample Date		Client Info		02 Oct 2023		
Machine Age	hrs	Client Info		0		
Oil Age	hrs	Client Info		500		
Oil Changed		Client Info		N/A		
Sample Status				ABNORMAL		
CONTAMINATI	ION	method	limit/base	current	history1	history2
Glycol		WC Method		NEG		
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	16		
Chromium	ppm	ASTM D5185m	>20	1		
Nickel	ppm	ASTM D5185m	>2	<1		
Titanium	ppm	ASTM D5185m	>2	<1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m		11		
Lead	ppm	ASTM D5185m	>40	0		
Copper		ASTM D5185m		1		
• •	ppm					
Tin	ppm	ASTM D5185m	>15	<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 0	current 40	history1	history2
	ppm		0			
Boron		ASTM D5185m	0	40		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	0 0 60	40 12		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	40 12 42		
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	40 12 42 <1		
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	40 12 42 <1 630		
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	40 12 42 <1 630 1388		
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150	40 12 42 <1 630 1388 785		
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 ASTM D5185m	0 0 60 0 1010 1070 1150	40 12 42 <1 630 1388 785 948		
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 ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	40 12 42 <1 630 1388 785 948 2595	   	   
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 ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	40 12 42 <1 630 1388 785 948 2595	     history1	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	40 12 42 <1 630 1388 785 948 2595 current 5	     history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	40 12 42 <1 630 1388 785 948 2595 current 5	    history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25	40 12 42 <1 630 1388 785 948 2595  current 5 2 3	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5	40 12 42 <1 630 1388 785 948 2595  current  5 2 3 ▲ 5.4	history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >5	40 12 42 <1 630 1388 785 948 2595  current  5 2 3  ▲ 5.4  current  0.3	history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >5	40 12 42 <1 630 1388 785 948 2595  current  5 2 3  ▲ 5.4  current	history1 history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 60 0 1010 1150 1270 2060 limit/base >25 >20 >5	40 12 42 <1 630 1388 785 948 2595  current  5 2 3  ▲ 5.4  current  0.3 9.7	history1 history1	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 60 0 1010 1070 1150 1270 2060 limit/base >25 >20 >5 limit/base >3 >20 >3	40 12 42 <1 630 1388 785 948 2595  current  5 2 3  ▲ 5.4  current  0.3 9.7 20.7	history1 history1	history2 history2



## **OIL ANALYSIS REPORT**





Certificate L2367

Laboratory Sample No. Lab Number Unique Number

: 05978720 : 10696015

: GFL0085277

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 13 Oct 2023 Diagnosed : 17 Oct 2023

Diagnostician : Wes Davis Test Package : FLEET ( Additional Tests: FuelDilution, PercentFuel )

To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - 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)

GFL Environmental - 957 - Pekin - Tazewell County

14379 Illinois Rte 29 South Pekin, IL US 61554 Contact: Bryan Link blink@gflenv.com T: (309)407-0130

Submitted By: Also GFL958,958A, 958B - Bryan Link

F: