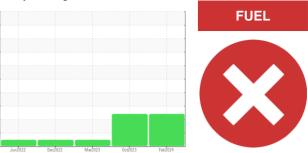


# **PROBLEM SUMMARY**

Sample Rating Trend

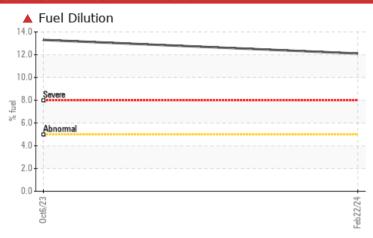


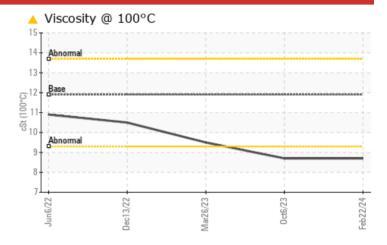
Machine Id **26611** 

Diesel Engine

PETRO CANADA DURON UHP 5W30 (--- QTS)

## **COMPONENT CONDITION SUMMARY**





## RECOMMENDATION

We advise that you check the fuel injection system. 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. Please specify the component make and model with your next sample.

PROBLEMATIC TEST RESULTS							
Sample Status				SEVERE	SEVERE	NORMAL	
Fuel	%	ASTM D3524	>5	<b>12.1</b>	<b>1</b> 3.3	<1.0	
Visc @ 100°C	cSt	<b>ASTM D445</b>	11 9	A 8 7	A 8 7	9.5	

Customer Id: PERGEODE Sample No.: PCA0119548 Lab Number: 06219429 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

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.			
Information Required			?	Please specify the component make and model with your next sample.			
Check Fuel/injector System			?	We advise that you check the fuel injection system.			

## HISTORICAL DIAGNOSIS

#### 06 Oct 2023 Diag: Wes Davis

FUEL



We advise that you check the fuel injection system. The oil change at the time of sampling has been noted. We recommend an early resample to monitor this condition. Please specify the component make and model with your next sample. All component wear rates are normal. There is a high amount of fuel present in the oil. Tests confirm the presence of fuel in the oil. 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.



#### IORMAI



**26 Mar 2023 Diag: Wes Davis**Resample at the next service interval to monitor. Please specify the component make and model with your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



#### NORMAL



13 Dec 2022 Diag: Wes Davis

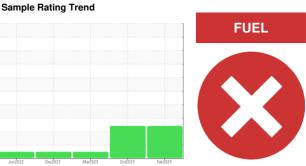
Resample at the next service interval to monitor. NOTE: Please provide information regarding reservoir capacity, filter type and micron rating with next sample. Please specify the component make and model with your next sample. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.





# **OIL ANALYSIS REPORT**

#### J



Machine Id
26611
Component

**Diesel Engine** 

PETRO CANADA DURON UHP 5W30 (--- QTS)

## DIAGNOSIS

#### Recommendation

We advise that you check the fuel injection system. 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. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

### ▲ Contamination

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

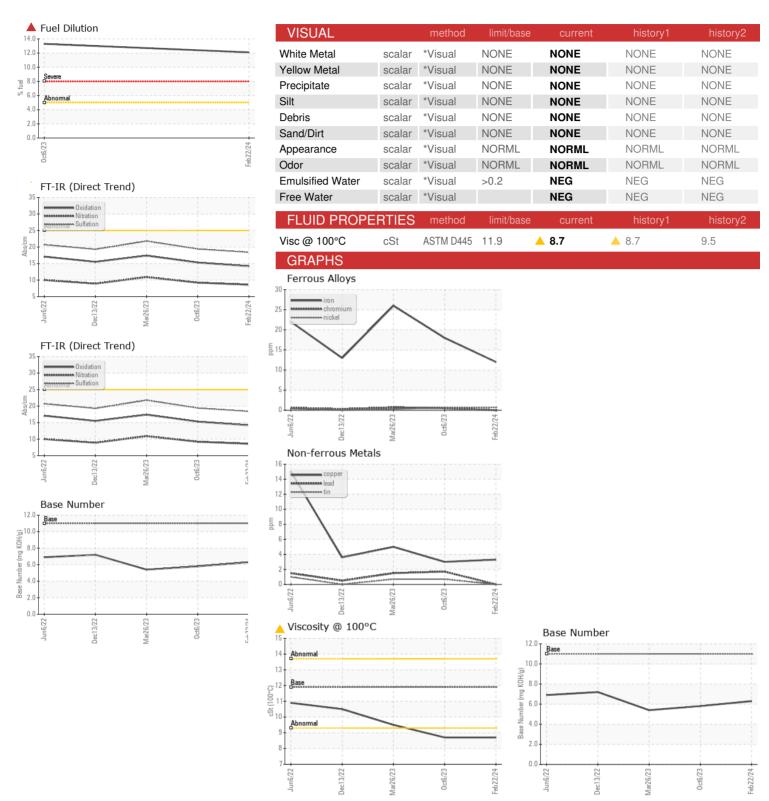
## ▲ Fluid Condition

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.

TS)		Jun 2022	Dec2022	Mar2023 Oct2023	Feb2024	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0119548	PCA0107407	PCA0095194
Sample Date		Client Info		22 Feb 2024	06 Oct 2023	26 Mar 2023
Machine Age	mls	Client Info		594764	575182	0
Oil Age	mls	Client Info		0	38717	40000
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				SEVERE	SEVERE	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	12	18	26
Chromium	ppm	ASTM D5185m	>20	0	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	<1	<1
Titanium	ppm	ASTM D5185m		4	2	7
Silver	ppm	ASTM D5185m	>3	<1	0	<1
Aluminum	ppm	ASTM D5185m	>20	2	2	2
Lead	ppm	ASTM D5185m	>40	0	2	2
Copper	ppm	ASTM D5185m	>330	3	3	5
Tin	ppm	ASTM D5185m	>15	0	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	<1	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current		history2
	ppm				history1	
Boron	• • •	ASTM D5185m	0	11	history1	3
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	0	11 0	history1 0 12	3
Boron Barium	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64	11 0 46	history1 0 12 52	3 0 51
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0	11 0 46 <1	history1 0 12 52 <1	3 0 51 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160	11 0 46 <1 803	history1  0 12 52 <1 783	3 0 51 <1 829
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 64 0 1160 820	11 0 46 <1 803 1020	history1  0 12 52 <1 783 951	3 0 51 <1 829 1063
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 64 0 1160 820 1160	11 0 46 <1 803 1020 915	history1  0 12 52 <1 783 951 881	3 0 51 <1 829 1063 872
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 64 0 1160 820 1160 1260	11 0 46 <1 803 1020 915 1112	history1  0 12 52 <1 783 951 881 1057	3 0 51 <1 829 1063 872 1137
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	0 0 64 0 1160 820 1160 1260 3000	11 0 46 <1 803 1020 915 1112 3246	history1  0 12 52 <1 783 951 881 1057 2759	3 0 51 <1 829 1063 872 1137 3299
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base	11 0 46 <1 803 1020 915 1112 3246 current	history1  0 12 52 <1 783 951 881 1057 2759 history1	3 0 51 <1 829 1063 872 1137 3299 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base	11 0 46 <1 803 1020 915 1112 3246 current	history1  0 12 52 <1 783 951 881 1057 2759 history1 4	3 0 51 <1 829 1063 872 1137 3299 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base	11 0 46 <1 803 1020 915 1112 3246 current 4	history1  0 12 52 <1 783 951 881 1057 2759 history1 4 8	3 0 51 <1 829 1063 872 1137 3299 history2 5 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base >25	11 0 46 <1 803 1020 915 1112 3246 current 4 6 2	history1  0 12 52 <1 783 951 881 1057 2759 history1 4 8 4	3 0 51 <1 829 1063 872 1137 3299 history2 5 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED	ppm	ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base >25 >20 >5	11 0 46 <1 803 1020 915 1112 3246  current 4 6 2 12.1	history1  0 12 52 <1 783 951 881 1057 2759 history1 4 8 4	3 0 51 <1 829 1063 872 1137 3299 history2 5 11 2 <1.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm	ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base >25 >20 >5	11 0 46 <1 803 1020 915 1112 3246 current 4 6 2 ▲ 12.1 current 0.2	history1  0 12 52 <1 783 951 881 1057 2759 history1  4 8 4  ▲ 13.3	3 0 51 <1 829 1063 872 1137 3299 history2 5 11 2 <1.0
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot %	ppm	ASTM D5185m	0 0 64 0 1160 820 1160 1260 3000 limit/base >25 >20 >5	11 0 46 <1 803 1020 915 1112 3246 current 4 6 2 ▲ 12.1	history1  0 12 52 <1 783 951 881 1057 2759 history1 4 8 4 ▲ 13.3 history1 0.3	3 0 51 <1 829 1063 872 1137 3299 history2 5 11 2 <1.0 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 64 0 1160 820 1160 1260 3000 limit/base >25 >20 >5	11 0 46 <1 803 1020 915 1112 3246 current 4 6 2 ▲ 12.1 current 0.2 8.6	history1  0 12 52 <1 783 951 881 1057 2759 history1 4 8 4 ▲ 13.3 history1 0.3 9.2	3 0 51 <1 829 1063 872 1137 3299 history2 5 11 2 <1.0 history2 0.5 10.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7624	0 0 64 0 1160 820 1160 1260 3000 limit/base >25 >20 >5 limit/base >3 >20 >3	11 0 46 <1 803 1020 915 1112 3246 current 4 6 2 ▲ 12.1 current 0.2 8.6 18.4	history1  0 12 52 <1 783 951 881 1057 2759 history1 4 8 4  ▲ 13.3 history1 0.3 9.2 19.4	3 0 51 <1 829 1063 872 1137 3299 history2 5 11 2 <1.0 history2 0.5 10.9 21.8



## OIL ANALYSIS REPORT







Certificate 12367

Laboratory Sample No.

Lab Number : 06219429

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0119548 Unique Number : 11097626

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

Received : 25 Jun 2024 Tested Diagnosed Test Package : FLEET ( Additional Tests: PercentFuel )

: 27 Jun 2024

: 27 Jun 2024 - Wes Davis

GEORGETOWN, DE US 19947 Contact: ROBERT LOCKWOOD Robert.Lockwood@Perdue.com

20621 SAVANAH RD

**PERDUE FARMS - GEORGETOWN** 

\* - 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)

T:

F: