

# **OIL ANALYSIS REPORT**

### Sample Rating Trend



Machine Id **2026804** 

Component **Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (35 QTS)

## DIAGNOSIS

### Recommendation

Resample at the next service interval to monitor.

All component wear rates are normal.

### Contamination

There is no indication of any contamination in the

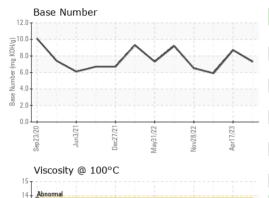
### **Fluid Condition**

The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

Sep2020 Jun2021 Dex2021 Mex2022 Nex2022 Apr2023						
SAMPLE INFORM	ATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0100724	PCA0097047	PCA0092285
Sample Date		Client Info		20 Jun 2023	17 Apr 2023	07 Feb 2023
Machine Age	mls	Client Info		264794	245645	225001
Oil Age	mls	Client Info		264794	20645	48618
Oil Changed		Client Info		Changed	Not Changd	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	method	limit/base	current	history1	history2
Fuel		WC Method	>6.0	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	25	17	33
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	<1
Titanium	ppm	ASTM D5185m		5	6	28
Silver	ppm	ASTM D5185m	>2	0	0	<1
Aluminum	ppm	ASTM D5185m	>25	3	3	7
Lead	ppm	ASTM D5185m	>40	2	0	<1
Copper	ppm	ASTM D5185m	>330	8	6	17
Tin	ppm	ASTM D5185m	>15	1	<1	1
Vanadium	ppm	ASTM D5185m		0	<1	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 2	history1 5	history2 4
	ppm					
Boron	• •	ASTM D5185m	2	2	5	4
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	2 0	5 0	4
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	2 0 59	5 0 52	4 0 35
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	2 0 59 <1	5 0 52 <1	4 0 35 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	2 0 59 <1 904	5 0 52 <1 894	4 0 35 <1 642
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	2 0 59 <1 904 1202	5 0 52 <1 894 1146	4 0 35 <1 642 1236
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	2 0 59 <1 904 1202 1029	5 0 52 <1 894 1146 999	4 0 35 <1 642 1236 792
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 ASTM D5185m	2 0 50 0 950 1050 995 1180	2 0 59 <1 904 1202 1029	5 0 52 <1 894 1146 999 1231	4 0 35 <1 642 1236 792 1002
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600	2 0 59 <1 904 1202 1029 1239 3281	5 0 52 <1 894 1146 999 1231 4105	4 0 35 <1 642 1236 792 1002 3191
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	2 0 59 <1 904 1202 1029 1239 3281 current	5 0 52 <1 894 1146 999 1231 4105 history1	4 0 35 <1 642 1236 792 1002 3191 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	2 0 59 <1 904 1202 1029 1239 3281 current	5 0 52 <1 894 1146 999 1231 4105 history1	4 0 35 <1 642 1236 792 1002 3191 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	2 0 59 <1 904 1202 1029 1239 3281 current 4	5 0 52 <1 894 1146 999 1231 4105 history1 6	4 0 35 <1 642 1236 792 1002 3191 history2 5 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	2 0 59 <1 904 1202 1029 1239 3281 current 4 0 5	5 0 52 <1 894 1146 999 1231 4105 history1 6 1	4 0 35 <1 642 1236 792 1002 3191 history2 5 3
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	2 0 59 <1 904 1202 1029 1239 3281 current 4 0 5	5 0 52 <1 894 1146 999 1231 4105 history1 6 1 4	4 0 35 <1 642 1236 792 1002 3191 history2 5 3 12
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m  Method  *ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	2 0 59 <1 904 1202 1029 1239 3281 current 4 0 5	5 0 52 <1 894 1146 999 1231 4105 history1 6 1 4	4 0 35 <1 642 1236 792 1002 3191 history2 5 3 12 history2 0.8
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 ppm ppm	ASTM D5185m  method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	2 0 59 <1 904 1202 1029 1239 3281 current 4 0 5	5 0 52 <1 894 1146 999 1231 4105 history1 6 1 4 history1 0.4 7.8	4 0 35 <1 642 1236 792 1002 3191 history2 5 3 12 history2 0.8 10.5
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  Method  *ASTM D5185m ASTM D7844  *ASTM D7624  *ASTM D7415	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	2 0 59 <1 904 1202 1029 1239 3281 current 4 0 5 current 0.5 9.2 19.5	5 0 52 <1 894 1146 999 1231 4105 history1 6 1 4 history1 0.4 7.8 19.2	4 0 35 <1 642 1236 792 1002 3191 history2 5 3 12 history2 0.8 10.5 23.9
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm	ASTM D5185m  Method  ASTM D5185m  Method	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30 limit/base	2 0 59 <1 904 1202 1029 1239 3281 current 4 0 5 current 0.5 9.2 19.5	5 0 52 <1 894 1146 999 1231 4105 history1 6 1 4 history1 0.4 7.8 19.2 history1	4 0 35 <1 642 1236 792 1002 3191 history2 5 3 12 history2 0.8 10.5 23.9 history2



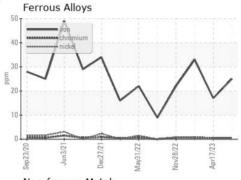
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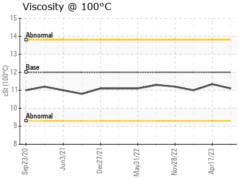
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

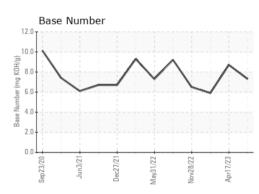
FLUID PROPE	RHES	method			history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.1	11.34	11.0

## **GRAPHS**



Non-fer	rous Metals			
450 T :				
TUU T	copper			
350 - ***********************************				
300	<del></del>			
E 250				
돌 <sup>250</sup>	i			
150	\			
100				
50				
0	<del></del>			
3/20	13/21	1/22	8/22	7/23
Sep23/20	Jun3/2 Dec27/2	May31,	Nov28/22	Apr17,
		_		









Certificate L2367

Laboratory Sample No. Lab Number Test Package : FLEET

: PCA0100724 : 05930757 Unique Number : 10616028

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Aug 2023 Diagnosed : 22 Aug 2023 Diagnostician : Wes Davis

**PERDUE FARMS - GEORGETOWN** 

20621 SAVANAH RD GEORGETOWN, DE US 19947

Contact: ROBERT LOCKWOOD

Robert.Lockwood@Perdue.com T:

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)

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