

# **OIL ANALYSIS REPORT**

Sample Rating Trend

VISCOSITY

Machine Id **338717** 

Component **Diesel Engine** 

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

# Jun 2023

# DIAGNOSIS

### Recommendation

Oil and filter change at the time of sampling has been noted. Resample at the next service interval to monitor.

### Wear

All component wear rates are normal.

### Contamination

Tests indicate that there is no fuel present in the oil. There is no indication of any contamination in the oil.

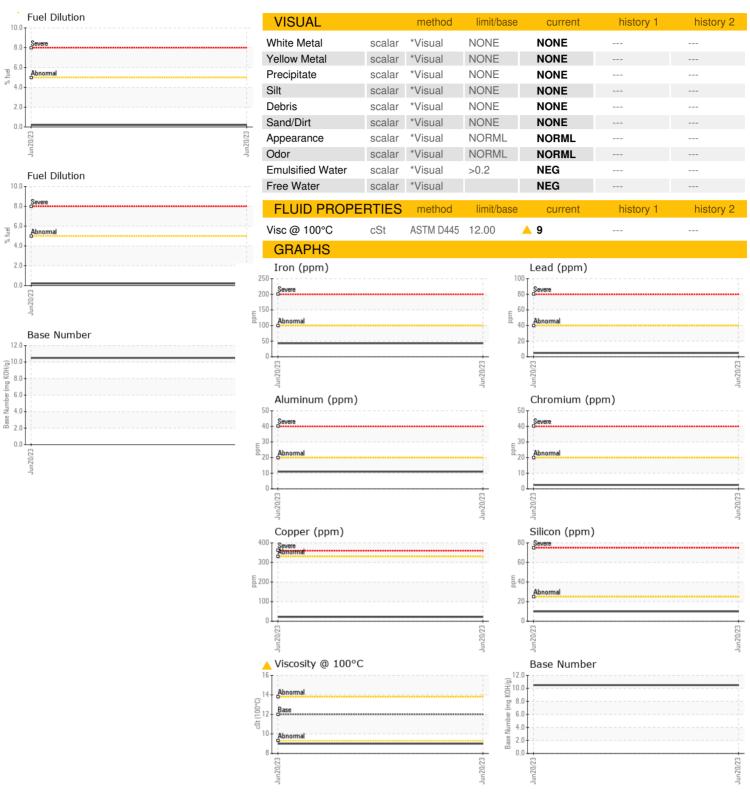
## Fluid Condition

The oil viscosity is lower than normal. The BN result indicates that there is suitable alkalinity remaining in the oil. Confirm oil type.

RTS)				Jun 2023		
SAMPLE INFORM	MATION	method	limit/base	current	history 1	history 2
Sample Number		Client Info		PCA0083824		
Sample Date		Client Info		20 Jun 2023		
Machine Age	mls	Client Info		6028		
Oil Age	mls	Client Info		6028		
Oil Changed	0	Client Info		Changed		
Sample Status				ABNORMAL		
CONTAMINAT	ION	method	limit/base	current	history 1	history 2
Glycol		WC Method		NEG		
WEAR METAL	S	method	limit/base	current	history 1	history 2
Iron	ppm	ASTM D5185m	>100	43		
Chromium	ppm	ASTM D5185m	>20	2		
Nickel	ppm	ASTM D5185m	>4	2		
Titanium	ppm	ASTM D5185m		3		
Silver	ppm	ASTM D5185m	>3	2		
Aluminum	ppm	ASTM D5185m	>20	11		
Lead	ppm	ASTM D5185m	>40	5		
Copper	ppm	ASTM D5185m	>330	22		
Tin	ppm	ASTM D5185m	>15	4		
Vanadium	ppm	ASTM D5185m		1		
Cadmium	ppm	ASTM D5185m		2		
				_		
ADDITIVES		method	limit/base	current	history 1	history 2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base		history 1	history 2
	ppm			current		
Boron		ASTM D5185m	2	current 55		
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2	current 55 20		
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	55 20 31	 	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	55 20 31 9	  	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	55 20 31 9 403		
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	55 20 31 9 403 1285		
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	current  55 20 31 9 403 1285 576		
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	current  55 20 31 9 403 1285 576 711		
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	2 0 50 0 950 1050 995 1180 2600	current  55 20 31 9 403 1285 576 711 2214		
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	2 0 50 0 950 1050 995 1180 2600 limit/base	current  55 20 31 9 403 1285 576 711 2214 current	     history 1	     history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	current  55 20 31 9 403 1285 576 711 2214  current 10	     history 1	history 2
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 >25	current  55 20 31 9 403 1285 576 711 2214  current  10 6	    history 1	history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	current  55  20  31  9  403  1285  576  711  2214  current  10  6  20	history 1	history 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Fuel	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 >5	current  55 20 31 9 403 1285 576 711 2214  current 10 6 20 0.2	history 1	history 2
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	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 >5	current  55 20 31 9 403 1285 576 711 2214  current 10 6 20 0.2  current	history 1 history 1	history 2 history 2
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	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 >5	current  55 20 31 9 403 1285 576 711 2214  current 10 6 20 0.2  current	history 1 history 1	history 2 history 2
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 D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 >5	current  55 20 31 9 403 1285 576 711 2214  current 10 6 20 0.2  current 0.2 7.1	history 1 history 1	history 2 history 2
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 D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 >5 limit/base >3 >20 >30	current  55 20 31 9 403 1285 576 711 2214  current 10 6 20 0.2  current 0.2 7.1 22.8	history 1 history 1	history 2 history 2



# **OIL ANALYSIS REPORT**







Certificate L2367

Laboratory Sample No.

Lab Number **Unique Number** 

: PCA0083824 : 05888787 : 10539270

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received

: 03 Jul 2023 Diagnosed : 06 Jul 2023

Diagnostician : Angela Borella

Test Package : MOB 1 (Additional Tests: FuelDilution, PercentFuel, TBN) 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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