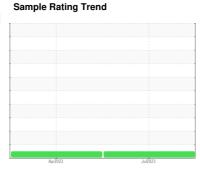


# **OIL ANALYSIS REPORT**

# BARTO 7069 [BARTO] Component Diesel Engine Fluid

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





# 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

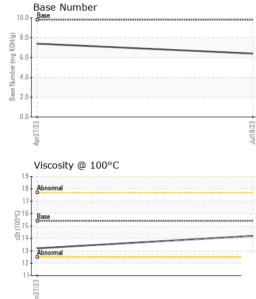
## **Fluid Condition**

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

			Apr2023	Jul2023		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		SBP0004375	SBP0002558	
Sample Date		Client Info		18 Jul 2023	27 Apr 2023	
Machine Age	mls	Client Info		292515	250650	
Oil Age	mls	Client Info		41865	40000	
Oil Changed		Client Info		Changed	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINATIO	N	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Glycol		WC Method		NEG	NEG	
WEAR METALS		method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	17	22	
Chromium	ppm	ASTM D5185m	>5	2	2	
Nickel	ppm	ASTM D5185m	>2	0	0	
Titanium	ppm	ASTM D5185m		0	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>30	3	12	
Lead	ppm	ASTM D5185m	>30	0	0	
Copper	ppm		>150	11	13	
Tin	ppm	ASTM D5185m	>5	<1	<1	
Vanadium	ppm	ASTM D5185m		0	0	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method				history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 2	history1 18	history2
	ppm					
Boron Barium	ppm	ASTM D5185m	0	2	18	
Boron Barium Molybdenum	ppm	ASTM D5185m ASTM D5185m	0 0 60	2 0	18	
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60	2 0 57	18 0 38	
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0	2 0 57 <1	18 0 38 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010	2 0 57 <1 896	18 0 38 <1 336	
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	0 0 60 0 1010 1070 1150	2 0 57 <1 896 1443	18 0 38 <1 2298 928	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070	2 0 57 <1 896 1443 984	18 0 38 <1 336 2298	
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 1270	2 0 57 <1 896 1443 984 1301	18 0 38 <1 336 2298 928 1187	
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 60 0 1010 1070 1150 1270 2060	2 0 57 <1 896 1443 984 1301 3288	18 0 38 <1 336 2298 928 1187 4072	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	2 0 57 <1 896 1443 984 1301 3288	18 0 38 <1 336 2298 928 1187 4072 history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060	2 0 57 <1 896 1443 984 1301 3288 current	18 0 38 <1 336 2298 928 1187 4072 history1	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20	2 0 57 <1 896 1443 984 1301 3288 current 4	18 0 38 <1 336 2298 928 1187 4072 history1 9 8	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20	2 0 57 <1 896 1443 984 1301 3288 current 4 4	18 0 38 <1 336 2298 928 1187 4072 history1 9 8 8	history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 	2 0 57 <1 896 1443 984 1301 3288 current 4 4	18 0 38 <1 336 2298 928 1187 4072 history1 9 8 8	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot %	ppm	ASTM D5185m  Method  *ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m  ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 	2 0 57 <1 896 1443 984 1301 3288 current 4 4 4	18 0 38 <1 336 2298 928 1187 4072 history1 9 8 8 history1 0.6	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m  method  *ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 0 60 0 1010 1070 1150 1270 2060 limit/base >20 >20 limit/base	2 0 57 <1 896 1443 984 1301 3288 current 4 4 4 0.8	18 0 38 <1 336 2298 928 1187 4072 history1 9 8 8 history1 0.6 11.0	history2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINANTS Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m  Method  *ASTM D5185m ASTM D7844  *ASTM D7624  *ASTM D76145	0 0 0 0 1010 1070 1150 1270 2060 limit/base >20 >20 limit/base >3 >20 >3	2 0 57 <1 896 1443 984 1301 3288 current 4 4 4 0.8 9.8 21.9	18 0 38 <1 336 2298 928 1187 4072 history1 9 8 8 history1 0.6 11.0 25.3	history2 history2

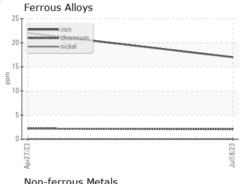


# **OIL ANALYSIS REPORT**

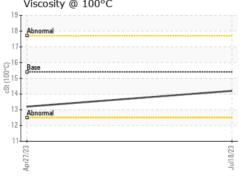


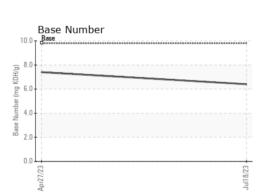
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	
Precipitate	scalar	*Visual	NONE	NONE	NONE	
Silt	scalar	*Visual	NONE	NONE	NONE	
Debris	scalar	*Visual	NONE	NONE	NONE	
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	
Appearance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

FLUID PROPER	TIES	method	limit/base		history1	history2
Visc @ 100°C	cSt	ASTM D445	15.4	14.2	13.2	



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Apr27/23		
pr2		









Certificate L2367

Laboratory Sample No. Lab Number Unique Number : 10660206 Test Package : FLEET

: 05958993

: SBP0004375

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 Received : 22 Sep 2023 Diagnosed : 25 Sep 2023

Diagnostician : Wes Davis

**SCHMIDT TRANSPORTATION - BARTO** 

108 E Bay Road Plattsmouth, NE US 68048

Contact: Service Manager

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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F: