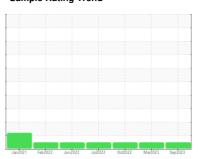


## **OIL ANALYSIS REPORT**

#### Sample Rating Trend



NORMAL



# Machine Id **605551**

Component **Diesel Engine** 

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

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor. Please specify the component make and model with your next sample.

#### Wear

All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### **Fluid Condition**

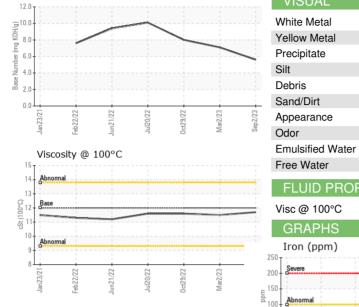
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

GAL)		Jan 2021	Feb2022 Jun2022	Jul2022 Oct2022 Mar2023	Sep2023	
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0105299	PCA0093268	PCA0076741
Sample Date		Client Info		02 Sep 2023	02 Mar 2023	29 Oct 2022
Machine Age	mls	Client Info		253066	213207	185268
Oil Age	mls	Client Info		253066	213207	24233
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	53	36	32
Chromium	ppm	ASTM D5185m	>20	<1	<1	<1
Nickel	ppm	ASTM D5185m	>4	<1	0	0
Titanium	ppm	ASTM D5185m		4	6	10
Silver	ppm	ASTM D5185m	>3	0	0	2
Aluminum	ppm	ASTM D5185m	>20	16	14	9
Lead	ppm	ASTM D5185m	>40	2	0	<1
Copper	ppm	ASTM D5185m	>330	6	3	3
Tin	ppm	ASTM D5185m	>15	1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current 1	history1 4	history2 8
	ppm					
Boron		ASTM D5185m	2	1	4	8
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	1 0	4	8
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	1 0 64	4 0 56	8 0 54
Boron Barium Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	1 0 64 <1	4 0 56 <1	8 0 54 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	1 0 64 <1 935	4 0 56 <1 862	8 0 54 <1 776
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	1 0 64 <1 935 1257	4 0 56 <1 862 1164	8 0 54 <1 776 1261
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	1 0 64 <1 935 1257 1067	4 0 56 <1 862 1164 927	8 0 54 <1 776 1261 965
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	2 0 50 0 950 1050 995 1180	1 0 64 <1 935 1257 1067	4 0 56 <1 862 1164 927 1144	8 0 54 <1 776 1261 965 1203
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	1 0 64 <1 935 1257 1067 1330 3205	4 0 56 <1 862 1164 927 1144 3044	8 0 54 <1 776 1261 965 1203 3748
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	1 0 64 <1 935 1257 1067 1330 3205	4 0 56 <1 862 1164 927 1144 3044 history1	8 0 54 <1 776 1261 965 1203 3748 history2 6 <1
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	1 0 64 <1 935 1257 1067 1330 3205 current	4 0 56 <1 862 1164 927 1144 3044 history1	8 0 54 <1 776 1261 965 1203 3748 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base	1 0 64 <1 935 1257 1067 1330 3205 current	4 0 56 <1 862 1164 927 1144 3044 history1 7	8 0 54 <1 776 1261 965 1203 3748 history2 6 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	1 0 64 <1 935 1257 1067 1330 3205 current 9 1	4 0 56 <1 862 1164 927 1144 3044 history1 7 <1	8 0 54 <1 776 1261 965 1203 3748 history2 6 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm	ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25	1 0 64 <1 935 1257 1067 1330 3205 current 9 1 8	4 0 56 <1 862 1164 927 1144 3044 history1 7 <1 4	8 0 54 <1 776 1261 965 1203 3748 history2 6 <1 11
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	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	1 0 64 <1 935 1257 1067 1330 3205 current 9 1 8 current	4 0 56 <1 862 1164 927 1144 3044 history1 7 <1 4 history1 0.7	8 0 54 <1 776 1261 965 1203 3748 history2 6 <1 11 history2 0.6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration	ppm	ASTM D5185m  Method  *ASTM D5185m ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20	1 0 64 <1 935 1257 1067 1330 3205 current 9 1 8 current 0.9	4 0 56 <1 862 1164 927 1144 3044 history1 7 <1 4 history1 0.7 9.6	8 0 54 <1 776 1261 965 1203 3748 history2 6 <1 11 history2 0.6 9.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation	ppm	ASTM D5185m  Method  *ASTM D5185m ASTM D5185m  Method  *ASTM D7844  *ASTM D7624  *ASTM D76145	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3 >20 >30	1 0 64 <1 935 1257 1067 1330 3205 current 9 1 8 current 0.9 10.3 22.9	4 0 56 <1 862 1164 927 1144 3044 history1 7 <1 4 history1 0.7 9.6 21.6	8 0 54 <1 776 1261 965 1203 3748 history2 6 <1 11 history2 0.6 9.7 21.4



Base Number

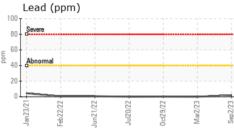
## **OIL ANALYSIS REPORT**

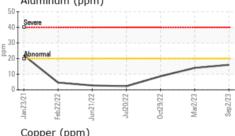


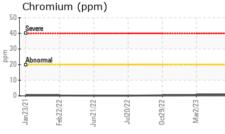
VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	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
	DTIES	mothod	limit/basa	current	history1	history?

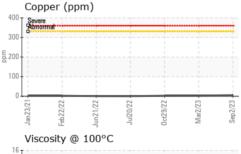
I LOID I HOI L	111120					
Visc @ 100°C	cSt	ASTM D445	12.00	11.7	11.5	11.6

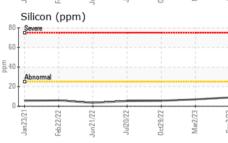
Severe						
-						
Abnorma						
1:						
-	-					
/21	22	22	22-	22-	23+	23
an 23/21	sb22/22	m21/22 -	ul20/22	ct29/22 +	/lar2/23 +	Sep 2/23
Jan23/21	Feb22/22 -	Jun21/22	Jul20/22 -	0ct29/22 +	Mar2/23 +	Sep2/23 -
Alumi		,	Jul20/22 -	0ct29/22 +	Mar2/23 +	Sep2/23 -

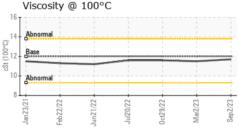


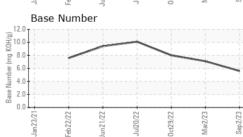














Report Id: MILPHINE [WUSCAR] 05955153 (Generated: 09/20/2023 16:34:17) Rev: 1

Laboratory Sample No.

Lab Number **Unique Number** 

: PCA0105299 : 05955153 : 10656366

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

: 19 Sep 2023

: 20 Sep 2023

Diagnostician : Wes Davis

Test Package : MOB 1 (Additional Tests: 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)

**MILLER TRUCK LEASING #118** 

2196 BENNETT ROAD PHILADELPHIA, PA US 19116

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