

## **OIL ANALYSIS REPORT**

### Area (89625X) Walgreens - Tractor [Walgreens - Tractor] 136A68013

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

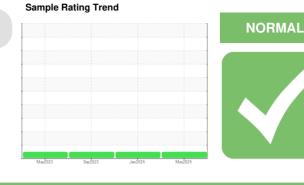
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

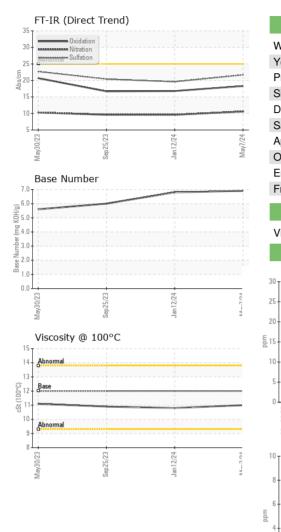
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123049	PCA0110524	PCA0093481
Sample Date		Client Info		07 May 2024	12 Jan 2024	25 Sep 2023
Machine Age	mls	Client Info		219383	209765	192448
Oil Age	mls	Client Info		209765	17317	192448
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
Water		WC Method		NEG	NEG	NEG
Glycol		WC Method	,	NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron		ASTM D5185m	>80	22	17	21
Chromium	ppm	ASTM D5185m		<1	<1	<1
Nickel	ppm	ASTM D5185m	>0	0	0	<1
Titanium	ppm	ASTM D5185m ASTM D5185m	>८	0 12	3	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	2	2	3
Lead	ppm	ASTM D5185m	>30	0	0	0
	ppm	ASTM D5185m	>150	0	1	1
Copper Tin	ppm	ASTM D5185m	>5	۰ <1	0	<1
Vanadium	ppm ppm	ASTM D5185m	>0	0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
Cadmidin	ppm	AOTIVI DOTODITI		0	0	0
			11 1. 0			
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	ASTM D5185m	2	current 16	17	16
	ppm ppm	ASTM D5185m	2 0		17 0	16 0
Boron		ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	16 1 48	17 0 51	16 0 47
Boron Barium Molybdenum Manganese	ppm	ASTM D5185m ASTM D5185m	2 0 50 0	16 1	17 0 51 <1	16 0 47 <1
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	16 1 48 <1 816	17 0 51 <1 806	16 0 47 <1 860
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	16 1 48 <1	17 0 51 <1	16 0 47 <1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	16 1 48 <1 816 1147 1021	17 0 51 <1 806 1008 852	16 0 47 <1 860 1277 1053
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180	16 1 48 <1 816 1147 1021 1170	17 0 51 <1 806 1008 852 1115	16 0 47 <1 860 1277 1053 1331
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	2 0 50 0 950 1050 995	16 1 48 <1 816 1147 1021	17 0 51 <1 806 1008 852	16 0 47 <1 860 1277 1053
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	2 0 50 950 1050 995 1180	16 1 48 <1 816 1147 1021 1170	17 0 51 <1 806 1008 852 1115	16 0 47 <1 860 1277 1053 1331
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	2 0 50 950 1050 995 1180 2600	16 1 48 <1 816 1147 1021 1170 3368	17 0 51 <1 806 1008 852 1115 2761	16 0 47 <1 860 1277 1053 1331 3464
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	2 0 50 950 1050 995 1180 2600	16 1 48 <1 816 1147 1021 1170 3368 current	17 0 51 <1 806 1008 852 1115 2761 history1	16 0 47 <1 860 1277 1053 1331 3464 history2 6 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >20	16 1 48 <1 816 1147 1021 1170 3368 current 7	17 0 51 <1 806 1008 852 1115 2761 history1 5	16 0 47 <1 860 1277 1053 1331 3464 history2 6
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >20	16 1 48 <1 816 1147 1021 1170 3368 current 7 2	17 0 51 <1 806 1008 852 1115 2761 <b>history1</b> 5 <<1	16 0 47 <1 860 1277 1053 1331 3464 history2 6 1
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >20	16 1 48 <1 816 1147 1021 1170 3368 current 7 2 0	17 0 51 <1 806 1008 852 1115 2761 <b>history1</b> 5 <1 <1	16 0 47 <1 860 1277 1053 1331 3464 history2 6 1 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >20 >20 <b>Imit/base</b> >3	16 1 48 <1 816 1147 1021 1170 3368 current 7 2 0 current	17 0 51 <1 806 1008 852 1115 2761 <b>history1</b> 5 <1 <1 <1 <1 <b>history1</b>	16 0 47 <1 860 1277 1053 1331 3464 <b>history2</b> 6 1 2 <b>history2</b>
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >20 >20 <b>Imit/base</b> >3	16 1 48 <1 816 1147 1021 1170 3368 current 7 2 0 current 0.5	17 0 51 <1 806 1008 852 1115 2761 <b>history1</b> 5 <1 <1 <1 <b>history1</b> 0.4	16 0 47 <1 860 1277 1053 1331 3464 <b>history2</b> 6 1 2 <b>history2</b> 0.5
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>limit/base</i> >20 <i>limit/base</i> >3 >20	16 1 48 <1 816 1147 1021 1170 3368 current 7 2 0 current 0.5 10.6	17 0 51 <1 806 1008 852 1115 2761 <b>history1</b> 5 <1 <1 <1 <1 history1 0.4 9.6	16 0 47 <1 860 1277 1053 1331 3464 history2 6 1 2 history2 0.5 9.6
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 ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >30	16 1 48 <1 816 1147 1021 1170 3368 <u>current</u> 7 2 0 <u>current</u> 0.5 10.6 21.7	17 0 51 <1 806 1008 852 1115 2761 <b>history1</b> 5 <1 <1 <1 <1 <b>history1</b> 0.4 9.6 19.6	16 0 47 <1 860 1277 1053 1331 3464 <b>history2</b> 6 1 2 <b>history2</b> 0.5 9.6 20.4
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 ASTM D7844 *ASTM D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 3 20 20 3 3 20 3 3 20 3 3 20 3 3 3 20 3 3 3 20 3 3 3 20 3 3 3 20 3 3 3 3	16 1 48 <1 816 1147 1021 1170 3368 Current 7 2 0 Current 0.5 10.6 21.7 Current	17 0 51 <1 806 1008 852 1115 2761 <b>history1</b> 5 <1 <1 <1 <1 0.4 9.6 19.6 19.6 <b>history1</b>	16 0 47 <1 860 1277 1053 1331 3464 history2 6 1 2 history2 0.5 9.6 20.4 history2



# **OIL ANALYSIS REPORT**



		VISU	AL		method	limit/base	current	history1	history2
		White M	etal	scalar	*Visual	NONE	NONE	NONE	NONE
		Yellow M	<i>M</i> etal	scalar	*Visual	NONE	NONE	NONE	NONE
	and a factor for the factor for	Precipita	ate	scalar	*Visual	NONE	NONE	NONE	NONE
		Silt		scalar	*Visual	NONE	NONE	NONE	NONE
*******************************	Loop & Constant & Constant & Constant	Debris		scalar	*Visual	NONE	NONE	NONE	NONE
		Sand/Di	rt	scalar	*Visual	NONE	NONE	NONE	NONE
Jan 12/24	May7/24	Appeara	ance	scalar	*Visual	NORML	NORML	NORML	NORML
Jan	Wa	Odor		scalar	*Visual	NORML	NORML	NORML	NORML
			ed Water	scalar	*Visual	>0.2	NEG	NEG	NEG
		Free Wa	ater	scalar	*Visual		NEG	NEG	NEG
		FLUI	d prope	RTIES	method	limit/base	current	history1	history2
		Visc @	100°C	cSt	ASTM D445	12.00	11.0	10.8	10.9
		GRA	PHS						
		Ferrou	ıs Alloys						
- 724	10		iron chromium						
Jan 12/24	5 W		- nickel						
		20-							
		ā 15 -							
		10							
		5-							
		0		<u> </u>					
		May30/23	Sep25/23		Jan 12/24	May7/24			
		May	Sepi		Jan	Mar			
	~		errous Meta	ls					
Jan 12/24	667-1	<sup>10</sup>	copper						
n n	N	8 -	•• lead •• tin						
		mqq							
		4							
		2							
		2							
		0	n N		4	4			
		May30/23	Sep 25/23		Jan 12/24	1ay7/2			
				_	2	2			
		<sup>15</sup> T :	ity @ 100°(	• • • • • • • • • • • • • •		7.0	Base Number	r	
		14 - Abnorma				6.0			
		13-							
		D 12 Base				S S S			
		(0) 12 - Base 001) 35 11-				(0) HOX HOX Buy and and Nov Buy and Nov Buy and Nov Seg 2.0			
		5				N N N N N N N N N N N N N N N N N N N			
		10							
		10 Abnorma				1.0			
		10 Abnorma 9							
		9 8			2/24	7/24	0/23	5/23 .	
		Abnorma	Sep 25/23		Jan 12/24	May7/24	May30/23	Sep25/23	
		9 8			Jan 12/24	May7/24 -	May30/23	Sep 25/23 Jan 12/24	
	Laboratory	Benche Berche	EZJSZdag ck USA - 50		n Ave., Cary	+ <i>Z/L/NEW</i>		vice - Shop 1376 -	Berkeley-Linde
NAR	Sample No.	: WearChe : PCA0123	ck USA - 50 049	Recei	n Ave., Cary <b>ved</b> : 14	, NC 27513 May 2024		vice - Shop 1376 -	<b>Berkeley-Linde</b> ley Point Roa
	Sample No. Lab Number	: WearChe : PCA0123 : 06178440	ck USA - 50 049	Recei Teste	n Ave., Cary ved : 14 d : 14	, NC 27513 May 2024 May 2024	Transer	vice - Shop 1376 -	<b>Berkeley-Linde</b> ley Point Roa Linden, N
ESTING LABORATORY	Sample No. Lab Number Unique Number Test Package	: WearChe : PCA0123 : 0617844( : 11029766 : FLEET	ck USA - 50 049	Recei Teste Diagr	n Ave., Cary ved : 14 d : 14 nosed : 14	, NC 27513 May 2024 May 2024 May 2024 - W	<b>Transer</b> les Davis	<b>vice - Shop 1376 -</b> 3425 Trem Contact: Shop 13	Berkeley-Linde ley Point Roa Linden, N US 0703 76 Oil Analys
ertificate L2367	Sample No. Lab Number Unique Number	: WearChe : PCA0123 : 06178440 : 11029766 : FLEET contact Cu	ck USA - 50 049 ) Stomer Serv	Recei Teste Diagr	n Ave., Cary ved : 14 d : 14 nosed : 14	, NC 27513 May 2024 May 2024 May 2024 - W 2024 - W	<b>Transer</b> les Davis	<b>vice - Shop 1376 -</b> 3425 Trem	Berkeley-Linde ley Point Roa Linden, N US 0703 76 Oil Analys

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