

## Area (89543X) Walgreens - Tractor [Walgreens - Tractor] 136A67108

**Diesel Engine** 

Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

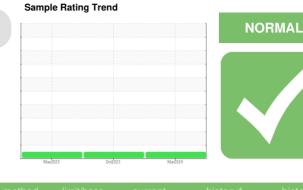
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

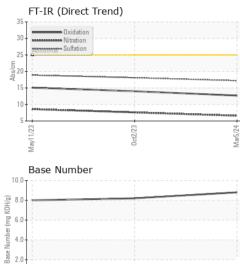
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

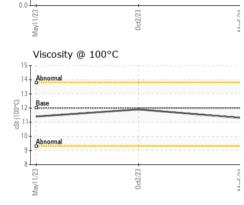


SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0103661	PCA0103697	PCA0093640
Sample Date		Client Info		05 Mar 2024	02 Oct 2023	11 May 2023
Machine Age	mls	Client Info		633668	624613	612082
Oil Age	mls	Client Info		34662	12023	0
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT		mathad	limit/booo			
	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	14	5	9
Chromium	ppm	ASTM D5185m	>4	<1	0	<1
Nickel	ppm	ASTM D5185m	>2	<1	<1	0
Titanium	ppm	ASTM D5185m		4	26	3
Silver	ppm	ASTM D5185m	>2	0	0	0
Aluminum	ppm	ASTM D5185m	>25	3	2	<1
Lead	ppm	ASTM D5185m	>45	<1	0	0
Copper	ppm	ASTM D5185m	>85	5	0	<1
Tin	ppm	ASTM D5185m	>4	<1	0	0
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		<1	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base 2	current	history1 28	history2 8
	ppm ppm		2			
Boron		ASTM D5185m	2	11	28	8
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	11 <1	28 0	8
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	11 <1 46	28 0 39	8 0 56
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	11 <1 46 <1	28 0 39 <1	8 0 56 <1
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	11 <1 46 <1 732	28 0 39 <1 778	8 0 56 <1 893
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	11 <1 46 <1 732 1382	28 0 39 <1 778 1286	8 0 56 <1 893 1189
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	11 <1 46 <1 732 1382 1063	28 0 39 <1 778 1286 932	8 0 56 <1 893 1189 1025
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 0 950 1050 995 1180	11 <1 46 <1 732 1382 1063 1171	28 0 39 <1 778 1286 932 1234	8 0 56 <1 893 1189 1025 1222
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	11 <1 46 <1 732 1382 1063 1171 3869	28 0 39 <1 778 1286 932 1234 3515	8 0 56 <1 893 1189 1025 1222 3784
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	11 <1 46 <1 732 1382 1063 1171 3869 current	28 0 39 <1 778 1286 932 1234 3515 history1	8 0 56 <1 893 1189 1025 1222 3784 history2
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 <b>method</b>	2 0 50 950 1050 995 1180 2600 limit/base >30	11 <1 46 <1 732 1382 1063 1171 3869 current 7	28 0 39 <1 778 1286 932 1234 3515 history1 5	8 0 56 <1 893 1189 1025 1222 3784 history2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm 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 limit/base >30	11 <1 46 <1 732 1382 1063 1171 3869 <u>current</u> 7 0	28 0 39 <1 778 1286 932 1234 3515 history1 5 1	8 0 56 <1 893 1189 1025 1222 3784 history2 4 1
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 ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >30 ->20 limit/base	11 <1 46 <1 732 1382 1063 1171 3869 current 7 0 4 current	28 0 39 <1 778 1286 932 1234 3515 history1 5 1 3 3 <i>history1</i>	8 0 56 <1 893 1189 1025 1222 3784 history2 4 1 2 2 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >30 20 limit/base >3	11 <1 46 <1 732 1382 1063 1171 3869 current 7 0 4 current 0.2	28 0 39 <1 778 1286 932 1234 3515 history1 5 1 3 1 3 1 3 1 3 1 3 3 1 3 3 1 3 3	8 0 56 <1 893 1189 1025 1222 3784 history2 4 1 2 <u>history2</u> 0.4
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 ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >30 ->20 limit/base	11 <1 46 <1 732 1382 1063 1171 3869 current 7 0 4 current	28 0 39 <1 778 1286 932 1234 3515 history1 5 1 3 3 <i>history1</i>	8 0 56 <1 893 1189 1025 1222 3784 history2 4 1 2 2 history2
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 0 950 1050 995 1180 2600 imit/base >30 imit/base >20	11 <1 46 <1 732 1382 1063 1171 3869 current 7 0 4 current 0.2 6.6	28 0 39 <1 778 1286 932 1234 3515 history1 5 1 3 history1 0.3 7.6 18.1	8 0 56 <1 893 1189 1025 1222 3784 <b>history2</b> 4 1 2 <b>history2</b> 0.4 8.6 18.9
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 <b>imit/base</b> >30 <b>imit/base</b> >20 >30 >30	11 <1 46 <1 732 1382 1063 1171 3869 current 7 0 4 current 0.2 6.6 17.2 current	28 0 39 <1 778 1286 932 1234 3515 history1 5 1 3 5 1 3 <i>history1</i> 0.3 7.6 18.1 <i>history1</i>	8 0 56 <1 893 1189 1025 1222 3784 history2 4 1 2 history2 0.4 8.6 18.9 history2
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> >30 <b>imit/base</b> >20 <b>imit/base</b> >3 >20	11 <1 46 <1 732 1382 1063 1171 3869 <i>current</i> 7 0 4 <i>current</i> 0.2 6.6 17.2	28 0 39 <1 778 1286 932 1234 3515 history1 5 1 3 history1 0.3 7.6 18.1	8 0 56 <1 893 1189 1025 1222 3784 <b>history2</b> 4 1 2 <b>history2</b> 0.4 8.6 18.9



# **OIL ANALYSIS REPORT**





VIOLAI						
VISUAL		method	limit/base	current	history1	history
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
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual	20.L	NEG	NEG	NEG
FLUID PROP		method	limit/base	current	history1	history
Visc @ 100°C	cSt		12.00	11.3	11.9	11.4
GRAPHS						
Ferrous Alloys						
<sup>14</sup>						
12 - chromium		/				
10 -						
8		/				
	_ /	·				
	$\sim$					
4 <b>-</b>						
2						
	23		54			
May11/23	0ct2/23		Mar5/24			
Non-ferrous Met	.dl5					
copper						
8 - sesses tin						
6 -						
шdd						
4-		/				
2-						
2						
0		and Production Constants	4			
1/2	0ct2/23		Mar5/24			
√1						
Viscosity @ 100			2			
Viscosity @ 100'				Base Number	-	
Viscosity @ 100			9.0			
Viscosity @ 100			9.0		-	
Viscosity @ 100			9.0			
Viscosity @ 100			9.0		-	
Viscosity @ 1000			9.0		-	
Viscosity @ 100 Abnormal Base Base Abnormal			9.0			
Viscosity @ 100 bnormal Base 3 12 Base 3 11 10 10 10 10 10 10 10 10 10			9.0		-	
Viscosity @ 100 Abnormal Base Abnormal Abnormal Abnormal	°C		9.0- 8.0- (0,7.0- HOX b6.0- Lag 4.0- 20,0- 80,0- 80,0- 80,0- 80,0- 80,0- 80,0- 1,0- 0,0- 0,0- 0,0- 0,0- 0,0- 0,0-			
Viscosity @ 100			9.0 8.0 (0)(10)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0)(0		0et2/23	

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)

Certificate L2367

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