

## **OIL ANALYSIS REPORT**

#### Sample Rating Trend

NORMAL

## Area (89790X) Walgreens - Tractor [Walgreens - Tractor] 136A69034 Component

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.

				Jan2024		
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0106609	PCA0094936	
Sample Date		Client Info		05 Jan 2024	20 Jun 2023	
Machine Age	mls	Client Info		640689	581176	
Oil Age	mls	Client Info		59689	40000	
Oil Changed		Client Info		Changed	Changed	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method	20.L	NEG	NEG	
-	~			-		
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	27	36	
Chromium	ppm	ASTM D5185m	>5	2	2	
Nickel	ppm	ASTM D5185m	>2	0	<1	
Titanium	ppm	ASTM D5185m		<1	0	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m	>30	7	9	
Lead	ppm	ASTM D5185m	>30	<1	0	
Copper	ppm	ASTM D5185m	>150	4	5	
Tin	ppm	ASTM D5185m	>5	<1	<1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		0	0	
				v	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base 2			history2
		method ASTM D5185m		current	history1	· · · · ·
Boron	ppm	method ASTM D5185m	2	current 0	history1 0	
Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 0 0	history1 0 0	
Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 0 0 60	history1 0 0 67	
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 0 0 60 <1	history1 0 0 67 <1	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 0 0 60 <1 891	history1 0 0 67 <1 1018	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	Current 0 0 60 <1 891 1097	history1 0 0 67 <1 1018 1196	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	Current 0 0 60 <1 891 1097 914	history1 0 67 <1 1018 1196 1085	   
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180	current     0     0     60     <1     891     1097     914     1131	history1     0     0     67     <1     1018     1196     1085     1306	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 950 1050 995 1180 2600	Current 0 0 60 <1 891 1097 914 1131 2120	history1   0   0   67   <1   1018   1196   1085   1306   2808	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600	current     0     0     60     <1     891     1097     914     1131     2120     current     6	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >20	Current 0 60 <1 891 1097 914 1131 2120 Current	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >20	current     0     0     60     <1     891     1097     914     1131     2120     current     6     53	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7   2	     history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >20 S20	current   0   60   <1   891   1097   914   1131   2120   current   6   53   22   current	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7   2   5   history1	     history2    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 ppm ppm	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >20 20 <b>Imit/base</b> >20	current   0   0   60   <1   891   1097   914   1131   2120   current   6   53   22   current   1.2	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7   2   5   history1   1	     history2   history2  history2
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	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >20 <i>imit/base</i> >20	current   0   0   60   <1   891   1097   914   1131   2120   current   6   53   22   current   1.2   11.5	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7   2   5   history1   1   1.0.3	     history2   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 t t t t	method     ASTM D5185m     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >3	current   0   60   <1   891   1097   914   1131   2120   current   6   53   22   current   1.2   11.5   24.9	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7   2   5   history1   1   10.3   23.4	    history2  history2  history2
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 t t t t	method     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >20 <i>imit/base</i> >20	current   0   0   60   <1   891   1097   914   1131   2120   current   6   53   22   current   1.2   11.5	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7   2   5   history1   1   1.0.3	     history2   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 t t t t	method     ASTM D5185m     ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 3 20 3 20 3 3 20 3 3 20 3 3 3 20 3 3 3 20 3 3 3 20 3 3 3 3	current   0   60   <1   891   1097   914   1131   2120   current   6   53   22   current   1.2   11.5   24.9	history1   0   0   67   <1   1018   1196   1085   1306   2808   history1   7   2   5   history1   1   10.3   23.4	     history2  history2  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	method   ASTM D5185m   ASTM D7185M   *ASTM D7624   *ASTM D7624   *ASTM D7415	2 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 3 20 3 20 3 3 20 3 3 20 3 3 3 20 3 3 3 20 3 3 3 20 3 3 3 3	current   0   60   <1   891   1097   914   1131   2120   current   6   53   22   current   1.2   11.5   24.9   current	history1   0   67   <1	     history2  history2  history2  history2



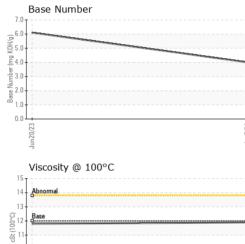
10 Abnormal

8. Jun20/23

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# **OIL ANALYSIS REPORT**

VISUAL



	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	
/24		scalar	*Visual	NORML	NORML	NORML	
Jan5/24	Odor	scalar	*Visual	NORML	NORML	NORML	
	Emulsified Water		*Visual	>0.2	NEG	NEG	
		scalar		>0.2			
	Free Water	scalar	*Visual		NEG	NEG	
	FLUID PROPE	RTIES	method	limit/base	current	history1	history2
	Visc @ 100°C	cSt	ASTM D445	12.00	11.9	11.8	
	GRAPHS						
	Ferrous Alloys						
	35 - iron						
	30						
	25						
	Ē 20						
	8 20 - 15 -						
	10						
	23			24			
	Jun 20/23			Jan5/24			
	Non-ferrous Meta						
	copper						
	8 - second lead						
	udd						
	4						
	2						
	0/23			Jan 5/24			
				Lin I			
	Jun20/23			,			
	کاiscosity @ 100°C	2		,	Pace Number		
	,	5		7.	Base Number		
	Viscosity @ 100°C	0		7.	0		
	Viscosity @ 100°C	8		7.	0		
	Viscosity @ 100°C	2		7.	0		
	Viscosity @ 100°C	C		7. 6. (0,405 HOX But But But But But But But But But But			
	Viscosity @ 100°C			7. (5) (5)HOX But 10 Ja q ump			
	Viscosity @ 100°C	C		7. (5) (5)HOX But 10 Ja q ump			
	Viscosity @ 100°C			7. 6. (0,405 HOX But But But But But But But But But But			
	Viscosity @ 100°C			7. 6. (5/HOX HOX 4. 1- 1- 1. 0			
	Viscosity @ 100°C			7. 6. (5/HOX HOX 4. 1- 1- 1. 0			
	Viscosity @ 100°C			7. 6. (04555 6. 4. 4. 4. 4. 4. 4. 9. 4. 9. 8. 8. 8. 1.			
Laboratory Sample No. Lab Number Unique Number Test Package discuss this sample report,	Viscosity @ 100°C	501 Madia Recievec Diagnose Diagnose	d : 26 c ed : 26 c tician : Wes	ry, NC 2751 Jan 2024 Jan 2024 s Davis	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	W Conta	rkeley-Waxahac 10 Ovilla Ro /axahachie, US 751 ct: Robert Be ranservice.cc

Contact/Location: Robert Beal - TSV1369