

# **OIL ANALYSIS REPORT**

# Area (89557X) Walgreens - Tractor [Walgreens - Tractor] 136A67122

**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 Rating Trend



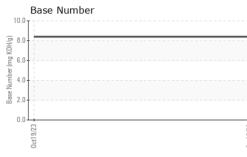
NORMAL

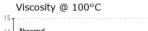
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0103707		
Sample Date		Client Info		19 Oct 2023		
Machine Age	mls	Client Info		553613		
Oil Age	mls	Client Info		23613		
Oil Changed		Client Info		Changed		
Sample Status				NORMAL		
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0		
Glycol		WC Method		NEG		
			11 11 11		11.1	
WEAR METAL	5	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>110	13		
Chromium	ppm		>4	<1		
Nickel	ppm	ASTM D5185m	>2	0		
Titanium	ppm	ASTM D5185m		1		
Silver	ppm	ASTM D5185m	>2	0		
Aluminum	ppm	ASTM D5185m	>25	3		
Lead	ppm	ASTM D5185m	>45	0		
Copper	ppm	ASTM D5185m	>85	<1		
Tin	ppm	ASTM D5185m	>4	0		
Vanadium	ppm	ASTM D5185m		0		
Cadmium	ppm	ASTM D5185m		0		
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	2	6		
				0		
Barium	ppm	ASTM D5185m	0	0		
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 58		
				-		
Molybdenum	ppm	ASTM D5185m	50	58		
Molybdenum Manganese	ppm ppm	ASTM D5185m ASTM D5185m	50 0	58 <1		
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950	58 <1 947		
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050	58 <1 947 1053		
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995	58 <1 947 1053 1057		
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180	58 <1 947 1053 1057 1265	  	
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	50 0 950 1050 995 1180 2600 <b>limit/base</b>	58 <1 947 1053 1057 1265 3096	   	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <b>limit/base</b>	58 <1 947 1053 1057 1265 3096	   	
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 limit/base >30	58 <1 947 1053 1057 1265 3096 current 4	    history1 	   history2
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	50 0 950 1050 995 1180 2600 limit/base >30	58 <1 947 1053 1057 1265 3096 <u>current</u> 4 1	     history1 	   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	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	50 0 950 1050 995 1180 2600 <b>limit/base</b> >30	58 <1 947 1053 1057 1265 3096 current 4 1 <1	    history1 	  history2 
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <b>limit/base</b> >30	58 <1 947 1053 1057 1265 3096 current 4 1 <1 <1	    history1   history1	  history2   history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	50 0 950 1050 995 1180 2600 <b>limit/base</b> >30 >20 <b>limit/base</b> >3	58 <1 947 1053 1057 1265 3096 <u>current</u> 4 1 <1 <1 <1 0.3	    history1   history1  history1	  history2   history2
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 D51854	50 0 950 1050 995 1180 2600 <b>limit/base</b> >30 >20 <b>limit/base</b> >3	58 <1 947 1053 1057 1265 3096 <u>current</u> 4 1 <1 <1 current 0.3 8.2	     history1   history1  	   history2   history2  history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon 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 D7624	50 0 950 1050 995 1180 2600 <b>imit/base</b> >30 20 <b>imit/base</b> >30 >20 >30	58 <1 947 1053 1057 1265 3096 <u>current</u> 4 1 <1 <1 current 0.3 8.2 18.7	     history1   history1	  history2  history2  history2  history2



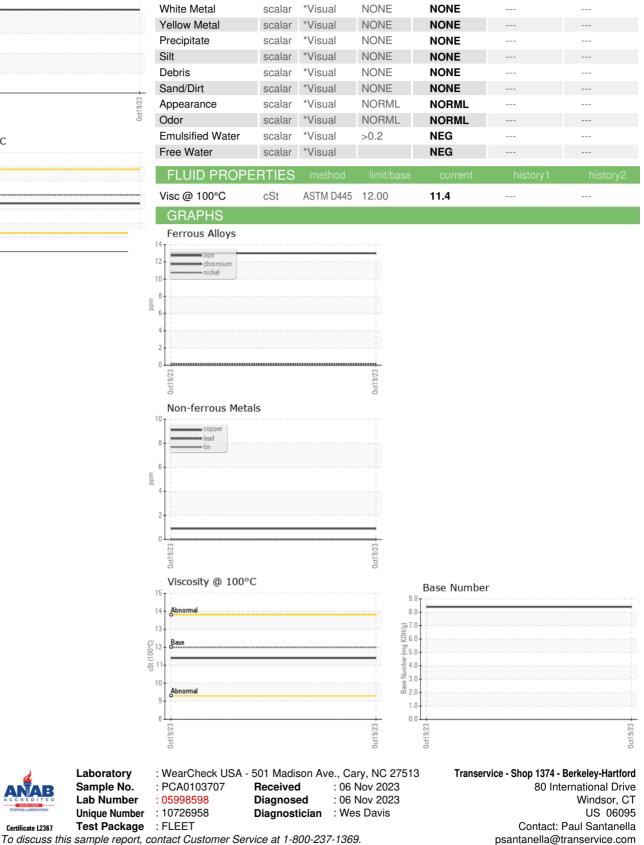
# **OIL ANALYSIS REPORT**

VISUAL









\* - 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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