

# **OIL ANALYSIS REPORT**

Sample Rating Trend

NORMAL

### Area Walgreens - Tractor [Walgreens - Tractor] 136A63369 Component

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

Metal levels are typical for a new component breaking in.

#### Contamination

There is no indication of any contamination in the oil.

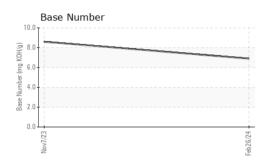
#### Fluid Condition

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

			Nov2023	Feb2024		
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117917	PCA0105431	
Sample Date		Client Info		26 Feb 2024	07 Nov 2023	
Machine Age	mls	Client Info		68902	45923	
Oil Age	mls	Client Info		36000	3359	
Oil Changed		Client Info		Changed	Not Changd	
Sample Status				NORMAL	NORMAL	
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0	<1.0	
Water		WC Method	>0.2	NEG	NEG	
Glycol		WC Method		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	23	16	
Chromium	ppm	ASTM D5185m	>20	2	<1	
Nickel	ppm	ASTM D5185m	>4	<1	5	
Titanium	ppm	ASTM D5185m		0	<1	
Silver	ppm	ASTM D5185m	>3	<1	<1	
Aluminum	ppm	ASTM D5185m	>20	8	4	
Lead	ppm	ASTM D5185m	>40	4	2	
Copper	ppm	ASTM D5185m	>330	6	11	
Tin	ppm	ASTM D5185m	>15	1	<1	
Vanadium	ppm	ASTM D5185m		<1	0	
Cadmium	ppm	ASTM D5185m		<1	0	
ADDITIVES		method	limit/base	current	history1	history2
Boron			0	-	26	
DOLOU	ppm	ASTM D5185m	2	9	20	
Barium	ppm	ASTM D5185m ASTM D5185m	0	9	0	
Barium	ppm	ASTM D5185m	0	0	0	
Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m	0 50	0 60	0 62	
Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0	0 60 2	0 62 1	
Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950	0 60 2 867	0 62 1 785	 
Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 50 0 950 1050	0 60 2 867 1196	0 62 1 785 1213	
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	0 50 0 950 1050 995	0 60 2 867 1196 1004	0 62 1 785 1213 998	
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	0 50 0 950 1050 995 1180	0 60 2 867 1196 1004 1211	0 62 1 785 1213 998 1256	   
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	0 50 0 950 1050 995 1180 2600	0 60 2 867 1196 1004 1211 2686	0 62 1 785 1213 998 1256 2731	   
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	0 50 0 950 1050 995 1180 2600	0 60 2 867 1196 1004 1211 2686 current	0 62 1 785 1213 998 1256 2731 history1	     history2
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 <b>method</b> ASTM D5185m	0 50 0 950 1050 995 1180 2600	0 60 2 867 1196 1004 1211 2686 current 11	0 62 1 785 1213 998 1256 2731 history1 13	     history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m <b>method</b> ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 Limit/base >25	0 60 2 867 1196 1004 1211 2686 current 11 2	0 62 1 785 1213 998 1256 2731 history1 13 0	     history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	0 60 2 867 1196 1004 1211 2686 <u>current</u> 11 2 10	0 62 1 785 1213 998 1256 2731 history1 13 0 9	     history2  
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25 >20	0 60 2 867 1196 1004 1211 2686 <u>current</u> 11 2 10 <u>current</u>	0 62 1 785 1213 998 1256 2731 history1 13 0 9 9 history1	    history2   history2
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	ASTM D5185m ASTM D5185m	0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	0 60 2 867 1196 1004 1211 2686 <u>current</u> 11 2 10 <u>current</u> 0.3	0 62 1 785 1213 998 1256 2731 history1 13 0 9 9 history1 0.1	    history2   history2
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	0 50 950 1050 995 1180 2600 <i>limit/base</i> >25 >20 <i>limit/base</i> >3 >20	0 60 2 867 1196 1004 1211 2686 <u>current</u> 11 2 10 <u>current</u> 0.3 8.7	0 62 1 785 1213 998 1256 2731 history1 13 0 9 9 history1 0.1 6.0	     history2  history2  history2
Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAM	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7844 *ASTM D7844	0 50 950 1050 995 1180 2600 <b>limit/base</b> >25 20 <b>limit/base</b> >3 >20 >30	0 60 2 867 1196 1004 1211 2686 current 11 2 10 current 0.3 8.7 20.5 current	0 62 1 785 1213 998 1256 2731 history1 13 0 9 <u>history1</u> 0.1 6.0 19.3 history1	    history2  history2  history2
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	0 50 950 1050 995 1180 2600 imit/base >25 20 imit/base >3 >20 >30	0 60 2 867 1196 1004 1211 2686 Current 11 2 10 Current 0.3 8.7 20.5	0 62 1 785 1213 998 1256 2731 history1 13 0 9 9 history1 0.1 6.0 19.3	<ul> <li></li> <li></li> <li></li> <li></li> <li></li> <li>history2</li> <li></li> <li>history2</li> <li></li> <li></li> <li>history2</li> <li></li> <li>history2</li> <li></li> <li>history2</li> <li></li> <li>history2</li> <li></li> <li>history2</li> <li></li> <li>history2</li> </ul>



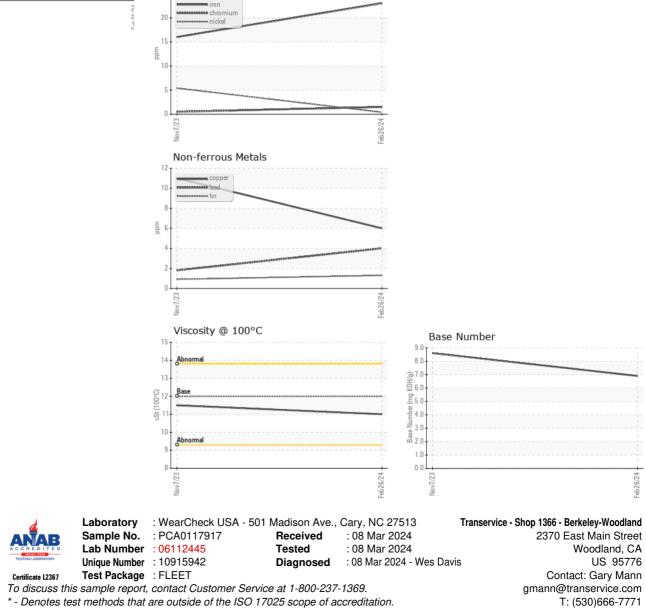
# **OIL ANALYSIS REPORT**



## Viscosity @ 100°C



VISUAL		method	limit/base	current	history1	history2
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	
Appearance	scalar	*Visual	NORML	NORML	NORML	
Odor	scalar	*Visual	NORML	NORML	NORML	
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	
Free Water	scalar	*Visual		NEG	NEG	
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.0	11.5	
GRAPHS						
Ferrous Alloys						



Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012)

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