

# **OIL ANALYSIS REPORT**

Sample Rating Trend

## NORMAL

### Area Walgreens - Tractor [Walgreens - Tractor] 136A624067

Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)

### DIAGNOSIS

#### Recommendation

No corrective action is recommended at this time. Resample at the next service interval to monitor. ( Customer Sample Comment: Top Up Amount: .5 GAL )

#### Wear

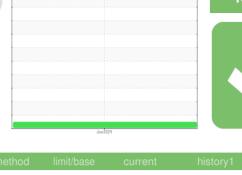
Metal levels are typical for a new component breaking in.

#### Contamination

Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. 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.





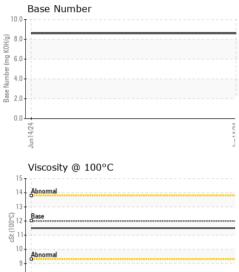
SAMPLE INFORI	MATION	method	limit/base	current	history1	history2							
Sample Number		Client Info		PCA0107543									
Sample Date		Client Info		14 Jun 2024									
Machine Age	mls	Client Info		15045									
Oil Age	mls	Client Info		15045									
Oil Changed		Client Info		Not Changd									
Sample Status				NORMAL									
CONTAMINAT	ION	method	limit/base	current	history1	history2							
Fuel		WC Method	>2.0	<1.0									
Water		WC Method	>0.2	NEG									
Glycol		WC Method		NEG									
WEAR METAL	S	method	limit/base	current	history1	history2							
Iron	ppm	ASTM D5185m	>100	25									
Chromium	ppm	ASTM D5185m	>20	1									
Nickel	ppm	ASTM D5185m	>4	0									
Titanium	ppm	ASTM D5185m		<1									
Silver	ppm	ASTM D5185m	>3	<1									
Aluminum	ppm	ASTM D5185m	>20	32									
Lead	ppm	ASTM D5185m	>40	2									
Copper	ppm	ASTM D5185m	>330	23									
Tin	ppm	ASTM D5185m	>15	2									
Vanadium	ppm	ASTM D5185m		0									
Cadmium	ppm	ASTM D5185m		0									
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	 history1	 history2							
	ppm ppm		limit/base	-									
ADDITIVES		method		current	history1								
ADDITIVES Boron	ppm	method ASTM D5185m	2	current	history1	history2							
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 77 4	history1 	history2 							
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 77 4 55	history1 	history2  							
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 77 4 55 4	history1 	history2  							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 77 4 55 4 4 460	history1   	history2   							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	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	current           77           4           55           4           460           1698	history1   	history2   							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm 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           77           4           55           4           460           1698           1002	history1	history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180	current           77           4           55           4           460           1698           1002           1275	history1	history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	current           77           4           55           4           460           1698           1002           1275           3576	history1	history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	current           77           4           55           4           460           1698           1002           1275           3576           current	history1	history2 history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method 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	current           77           4           555           4           460           1698           1002           1275           3576           current           50	history1 history1	history2 history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b>	current           77           4           55           4           460           1698           1002           1275           3576           current           50           5	history1	history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b>	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25 >20	current           77           4           55           4           460           1698           1002           1275           3576           current           50           5           97	history1 history1	history2 history2 history2							
ADDITIVES 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> >25 -20 <b>imit/base</b>	current           77           4           55           4           460           1698           1002           1275           3576           current           50           5           97           current	history1                        history1            history1            history1            history1	history2 history2 history2 history2							
ADDITIVES 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>limit/base</b> >25 >20 <b>limit/base</b>	current           77           4           55           4           460           1698           1002           1275           3576           current           50           5           97           current           0.2	history1 history1 history1 history1	history2 history2 history2 history2 history2							
ADDITIVES 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 <b>TS</b> ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	current           77           4           55           4           460           1698           1002           1275           3576           current           50           5           97           current           0.2           7.0	history1                              history1            history1            history1	history2 <tr th="" tt<=""></tr> <tr><th>ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation</th><th>ppm ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm</th><th>method           ASTM D5185m           ASTM D5185m</th><th>2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> &gt;25 20 <b>imit/base</b> &gt;3 &gt;20 33 &gt;30</th><th>current           77           4           55           4           460           1698           1002           1275           3576           current           50           5           97           current           0.2           7.0           20.4</th><th>history1                           history1            history1            history1                        history1  &lt;</th><th>history2   history2               history2  </th></tr>	ADDITIVES 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 <b>TS</b> ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 <b>imit/base</b> >3 >20 33 >30	current           77           4           55           4           460           1698           1002           1275           3576           current           50           5           97           current           0.2           7.0           20.4	history1                           history1            history1            history1                        history1  <	history2   history2               history2
ADDITIVES 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 <b>TS</b> ppm ppm ppm	method           ASTM D5185m           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 <b>imit/base</b> >3 >20 33 >30	current           77           4           55           4           460           1698           1002           1275           3576           current           50           5           97           current           0.2           7.0           20.4	history1                           history1            history1            history1                        history1  <	history2   history2               history2							



Jun14/24

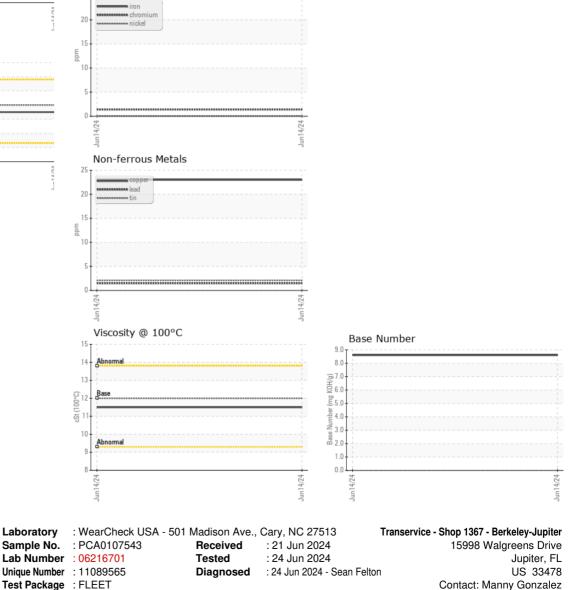
## **OIL ANALYSIS REPORT**





VISUAL NONE White Metal \*Visual NONE scalar Yellow Metal \*Visual NONE NONE scalar Precipitate scalar \*Visual NONE NONE Silt scalar \*Visual NONE NONE Debris \*Visual NONE NONE scalar Sand/Dirt NONE NONE scalar \*Visual NORML Appearance \*Visual NORML scalar Odor scalar \*Visual NORML NORML Emulsified Water \*\/iou 0.2

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





\* - 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)

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Submitted By: Manny Gonzalez

egonzalez@transervice.com

T: (561)776-0755

F: (561)776-0799