

## **OIL ANALYSIS REPORT**

### Area (P1021286) Dixon Transport-Tractor [Dixon Transport-Tractor] 325A325547

**Diesel Engine** Fluid

PETRO CANADA DURON SHP 10W30 (11 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

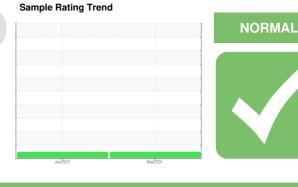
All component wear rates are normal.

#### 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		PCA0121192	PCA0114332	
Sample Date		Client Info		22 Mar 2024	19 Jan 2024	
Machine Age	mls	Client Info		414967	395873	
Oil Age	mls	Client Info		19574	43285	
Oil Changed		Client Info		Not Changd	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		NEG	NEG	
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	20	31	
Chromium	ppm	ASTM D5185m	>5	2	2	
Nickel	ppm	ASTM D5185m	>2	1	1	
Titanium	ppm	ASTM D5185m		<1	<1	
Silver	ppm	ASTM D5185m	>3	0	0	
Aluminum	ppm	ASTM D5185m		4	7	
Lead	ppm	ASTM D5185m	>30	<1	0	
Copper	ppm	ASTM D5185m	>150	5	6	
Tin	ppm	ASTM D5185m	>5	0	2	
Vanadium	ppm	ASTM D5185m		<1	<1	
Cadmium	ppm	ASTM D5185m		0	0	
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm	method ASTM D5185m	limit/base	current	history1 <1	history2
	ppm					
Boron	ppm	ASTM D5185m	2	3	<1	
Boron Barium		ASTM D5185m ASTM D5185m	2 0	3 0	<1 0	
Boron Barium Molybdenum	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	3 0 61	<1 0 58	
Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	3 0 61 <1	<1 0 58 <1	
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	3 0 61 <1 1060	<1 0 58 <1 925	
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	3 0 61 <1 1060 1175	<1 0 58 <1 925 1070	   
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	3 0 61 <1 1060 1175 1136	<1 0 58 <1 925 1070 984	   
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	3 0 61 <1 1060 1175 1136 1391	<1 0 58 <1 925 1070 984 1209	    
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	3 0 61 <1 1060 1175 1136 1391 3673	<1 0 58 <1 925 1070 984 1209 2395	
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	3 0 61 <1 1060 1175 1136 1391 3673 current	<1 0 58 <1 925 1070 984 1209 2395 history1	
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	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	3 0 61 <1 1060 1175 1136 1391 3673 current 4	<1 0 58 <1 925 1070 984 1209 2395 history1 5	     history2
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 >20	3 0 61 <1 1060 1175 1136 1391 3673 current 4 2	<1 0 58 <1 925 1070 984 1209 2395 history1 5 2	      history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm TS	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >20	3 0 61 <1 1060 1175 1136 1391 3673 <u>current</u> 4 2 2	<1 0 58 <1 925 1070 984 1209 2395 history1 5 2 2 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 TS	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 limit/base >20 20 limit/base	3 0 61 <1 1060 1175 1136 1391 3673 <i>current</i> 4 2 2 2	<1 0 58 <1 925 1070 984 1209 2395 history1 5 2 2 2 2 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 <b>TS</b> ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >20 limit/base >3	3 0 61 <1 1060 1175 1136 1391 3673 <i>current</i> 4 2 2 2 <i>current</i>	<1 0 58 <1 925 1070 984 1209 2395 history1 5 2 2 2 2 history1 0.7	     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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 imit/base >20 imit/base >3 >20	3 0 61 <1 1060 1175 1136 1391 3673 <i>current</i> 4 2 2 2 <i>current</i> 0.4 9.0	<1 0 58 <1 925 1070 984 1209 2395 history1 5 2 2 2 2 history1 0.7 11.1	     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	ASTM D5185m ASTM D5185m	2 0 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >30	3 0 61 <1 1060 1175 1136 1391 3673 <i>current</i> 4 2 2 <i>current</i> 0.4 9.0 20.2 <i>current</i>	<1 0 58 <1 925 1070 984 1209 2395 history1 5 2 2 history1 0.7 11.1 23.7 history1	      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	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >3	3 0 61 <1 1060 1175 1136 1391 3673 <i>current</i> 4 2 2 2 <i>current</i> 0.4 9.0 20.2	<1 0 58 <1 925 1070 984 1209 2395 history1 5 2 2 2 2 history1 0.7 11.1 23.7	     history2  history2  history2  history2

OIL DIAGNOSTICS

3

30

25

Abs/cm

10

8.0

(b/H0J Bu)

ul 4.0 Number Number

8g 2.0

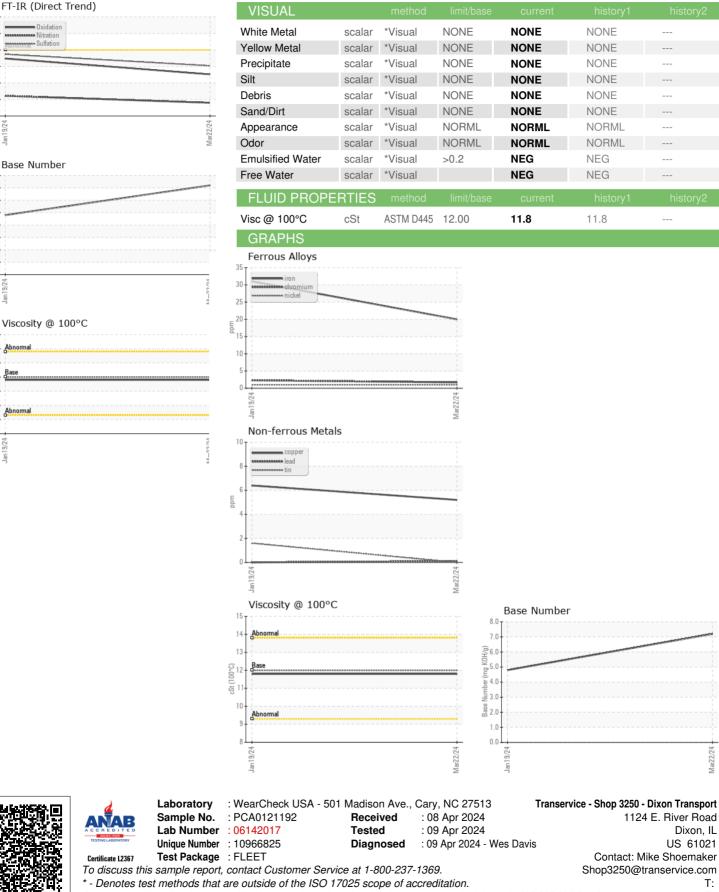
0.0

15 14

cSt (100°C)

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# **OIL ANALYSIS REPORT**



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

Submitted By: Mike Shoemaker Page 2 of 2

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