

## **OIL ANALYSIS REPORT**

### Area (14249Z) Walgreens - Tractor [Walgreens - Tractor] 136A61444

**Diesel Engine** 

Fluid PETRO CANADA DURON SHP 10W30 (10 GAL)

#### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

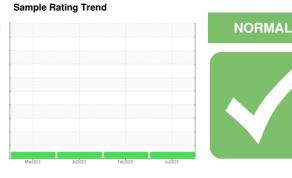
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

#### Fluid Condition

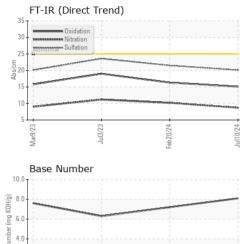
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

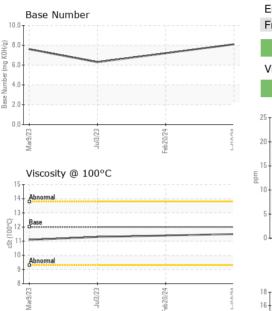


SAMPLE INFOR	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0117311	PCA0107553	PCA0094409
Sample Date		Client Info		10 Jul 2024	20 Feb 2024	03 Jul 2023
Machine Age	mls	Client Info		402944	389603	369537
Oil Age	mls	Client Info		402944	389603	369537
Oil Changed		Client Info		Not Changd	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>2.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	c		limit/base	-		history2
		method		current	history1	
Iron	ppm	ASTM D5185m	>100	12	22	22
Chromium	ppm	ASTM D5185m	>20	<1	1	1
Nickel	ppm	ASTM D5185m	>4	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>20	2	2	4
Lead	ppm	ASTM D5185m	>40	<1	2	3
Copper	ppm	ASTM D5185m	>330	3	4	6
Tin	ppm	ASTM D5185m	>15	<1	<1	<1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
						histowy)
ADDITIVES		method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185m	limit/base	current 0	history1 4	<1
	ppm ppm					
Boron		ASTM D5185m	2	0	4	<1
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	0 0	4 0	<1 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	0 0 57	4 0 57	<1 0 61
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	0 0 57 <1	4 0 57 <1	<1 0 61 <1
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	0 0 57 <1 863	4 0 57 <1 904	<1 0 61 <1 918
Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050	0 0 57 <1 863 1178	4 0 57 <1 904 1061	<1 0 61 <1 918 1131
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	0 0 57 <1 863 1178 1093	4 0 57 <1 904 1061 992	<1 0 61 <1 918 1131 1010
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 50 950 1050 995 1180	0 0 57 <1 863 1178 1093 1261	4 0 57 <1 904 1061 992 1250	<1 0 61 <1 918 1131 1010 1244
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 0 950 1050 995 1180 2600	0 0 57 <1 863 1178 1093 1261 3585	4 0 57 <1 904 1061 992 1250 2824	<1 0 61 <1 918 1131 1010 1244 2951
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	0 0 57 <1 863 1178 1093 1261 3585 current	4 0 57 <1 904 1061 992 1250 2824 history1	<1 0 61 <1 918 1131 1010 1244 2951 history2
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 0 950 1050 995 1180 2600 <b>limit/base</b> >25	0 0 57 <1 863 1178 1093 1261 3585 current 4	4 0 57 <1 904 1061 992 1250 2824 history1 5	<1 0 61 <1 918 1131 1010 1244 2951 history2 4
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 ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>limit/base</b> >25	0 0 57 <1 863 1178 1093 1261 3585 current 4 1	4 0 57 <1 904 1061 992 1250 2824 history1 5 1	<1 0 61 <1 918 1131 1010 1244 2951 history2 4 0
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 50 950 1050 995 1180 2600 <b>limit/base</b> >25	0 0 57 <1 863 1178 1093 1261 3585 current 4 1 0	4 0 57 <1 904 1061 992 1250 2824 history1 5 1 2 82 4	<1 0 61 <1 918 1131 1010 1244 2951 history2 4 0 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot %	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> >25 >20 <b>limit/base</b> >3	0 0 57 <1 863 1178 1093 1261 3585 current 4 1 0 current 0.7	4 0 57 <1 904 1061 992 1250 2824 history1 5 1 2 2 8 2 4 history1 1.2	<1 0 61 <1 918 1131 1010 1244 2951 <b>history2</b> 4 0 4 <b>history2</b> 0.7
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 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20	0 0 57 <1 863 1178 1093 1261 3585 current 4 1 0 0 current	4 0 57 <1 904 1061 992 1250 2824 history1 5 1 2 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8 2 8	<1 0 61 <1 918 1131 1010 1244 2951 history2 4 0 4 4 0 4 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 50 950 1050 995 1180 2600 <i>imit/base</i> >25 >20 <i>imit/base</i> >3 >20	0 0 57 <1 863 1178 1093 1261 3585 current 4 1 0 current 0.7 8.7	4 0 57 <1 904 1061 992 1250 2824 history1 5 1 2 2 8 2 4 history1 1 2 history1 1.2 10.2	<1 0 61 <1 918 1131 1010 1244 2951 history2 4 0 4 0 4 bistory2 0.7 11.2
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 D7844 *ASTM D7844	2 0 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >25 20 >20 >30 >30 <b>imit/base</b>	0 0 57 <1 863 1178 1093 1261 3585 current 4 1 0 current 0.7 8.7 20.1 current	4 0 57 <1 904 1061 992 1250 2824 history1 5 1 2 history1 1.2 10.2 21.5 history1	<1 0 61 <1 918 1131 1010 1244 2951 history2 4 0 4 0 4 0 4 0 11.2 23.6 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 0 950 1050 995 1180 2600 <b>imit/base</b> >25 <b>imit/base</b> >3 >20	0 0 57 <1 863 1178 1093 1261 3585 current 4 1 0 current 0.7 8.7 20.1	4 0 57 <1 904 1061 992 1250 2824 history1 5 1 2 history1 1.2 history1 1.2 10.2 21.5	<1 0 61 <1 918 1131 1010 1244 2951 <b>history2</b> 4 0 4 <b>history2</b> 0.7 11.2 23.6

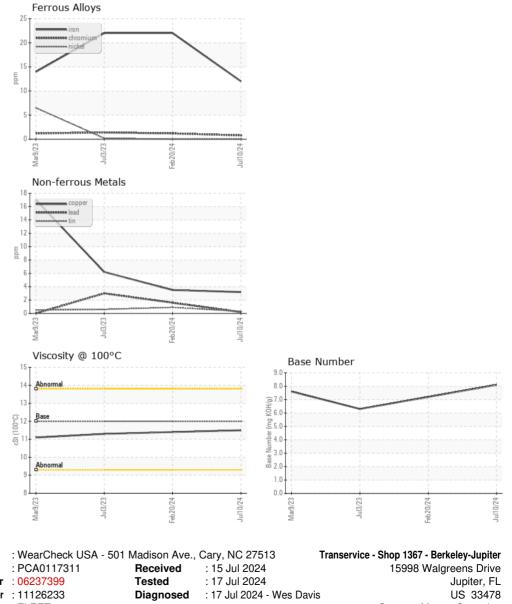


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VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
Emulsified Water	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG
FLUID PROPEI	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.5	11.4	11.3
GRAPHS						





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Submitted By: Manny Gonzalez

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