

## **OIL ANALYSIS REPORT**

### Area (89661X) Walgreens - Tractor [Walgreens - Tractor] 136A69082

**Diesel Engine** 

Fluid PETRO CANADA DURON SHP 10W30 (11 GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

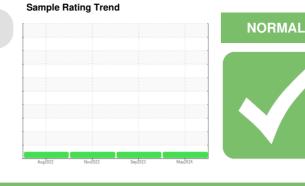
All component wear rates are normal.

#### 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.

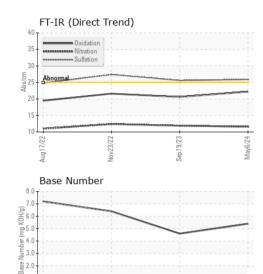


SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0123385	PCA0106136	PCA0087937
Sample Date		Client Info		06 May 2024	19 Sep 2023	23 Nov 2022
Machine Age	mls	Client Info		676892	618640	509831
Oil Age	mls	Client Info		58252	71103	61736
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINAT	ION	method	limit/base	current	history1	history2
Fuel		WC Method	>5	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
WEAR METAL	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	50	46	42
Chromium	ppm	ASTM D5185m	>5	3	3	3
Nickel	ppm	ASTM D5185m	>2	0	0	<1
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm	ASTM D5185m	>30	25	22	17
Lead	ppm	ASTM D5185m	>30	0	0	<1
Copper	ppm	ASTM D5185m	>150	4	4	6
Tin	ppm	ASTM D5185m	>5	1	<1	1
Vanadium	ppm	ASTM D5185m		0	0	0
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
ADDITIVES Boron	ppm		limit/base	current 4	history1 4	history2 5
	ppm ppm		2			
Boron		ASTM D5185m	2	4	4	5
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0 50	4 2	4	5 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	4 2 67	4 0 66	5 0 62
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	4 2 67 <1	4 0 66 <1	5 0 62 <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	4 2 67 <1 919	4 0 66 <1 996	5 0 62 <1 900
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	4 2 67 <1 919 1206	4 0 66 <1 996 1190	5 0 62 <1 900 1269
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	2 0 50 0 950 1050 995	4 2 67 <1 919 1206 1063	4 0 66 <1 996 1190 1028	5 0 62 <1 900 1269 986
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	4 2 67 <1 919 1206 1063 1225	4 0 66 <1 996 1190 1028 1295	5 0 62 <1 900 1269 986 1188
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	4 2 67 <1 919 1206 1063 1225 2892	4 0 66 <1 996 1190 1028 1295 2822	5 0 62 <1 900 1269 986 1188 2543
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	4 2 67 <1 919 1206 1063 1225 2892 current 8 3	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2	5 0 62 <1 900 1269 986 1188 2543 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 <b>method</b>	2 0 50 950 1050 995 1180 2600	4 2 67 <1 919 1206 1063 1225 2892 current 8	4 0 66 <1 996 1190 1028 1295 2822 history1 7	5 0 62 <1 900 1269 986 1188 2543 <b>history2</b> 8
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> >20	4 2 67 <1 919 1206 1063 1225 2892 current 8 3	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2	5 0 62 <1 900 1269 986 1188 2543 <b>history2</b> 8 2
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>imit/base</b> >20	4 2 67 <1 919 1206 1063 1225 2892 current 8 3 3 3	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2 5	5 0 62 <1 900 1269 986 1188 2543 history2 8 2 4
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b>	4 2 67 <1 919 1206 1063 1225 2892 current 8 3 3 3	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2 2 5 5 history1	5 0 62 <1 900 1269 986 1188 2543 history2 8 2 4 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 ppm ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >20 20 <b>imit/base</b> >20	4 2 67 <1 919 1206 1063 1225 2892 current 8 3 3 Current 1.5	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2 2 5 history1 1.7	5 0 62 <1 900 1269 986 1188 2543 history2 8 2 4 4 history2 1.7
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 imit/base >20 20 imit/base >20	4 2 67 <1 919 1206 1063 1225 2892 current 8 3 3 current 1.5 11.6	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2 5 history1 1.7 11.9	5 0 62 <1 900 1269 986 1188 2543 history2 8 2 4 4 history2 1.7 1.7
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 50 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >30	4 2 67 <1 919 1206 1063 1225 2892 current 8 3 3 current 1.5 11.6 25.9	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2 5 history1 1.7 11.9 25.6	5 0 62 <1 900 1269 986 1188 2543 <b>history2</b> 8 2 4 <b>history2</b> 1.7 1.7 12.4 27.4
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 TS ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624	2 0 50 950 1050 995 1180 2600 2600 220 220 220 imit/base >3 220 330	4 2 67 <1 919 1206 1063 1225 2892 current 8 3 3 current 1.5 11.6 25.9 current	4 0 66 <1 996 1190 1028 1295 2822 history1 7 2 5 history1 1.7 11.9 25.6 history1	5 0 62 <1 900 1269 986 1188 2543 history2 8 2 4 4 history2 1.7 1.7 12.4 27.4 history2

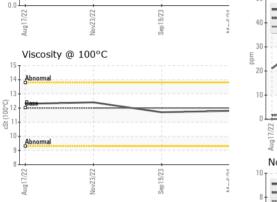


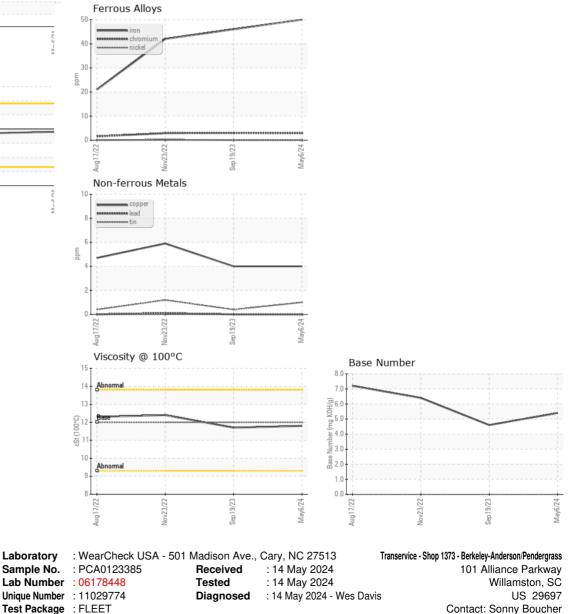
# **OIL ANALYSIS REPORT**

VISUAL









To discuss this sample report, contact Customer Service at 1-800-237-1369. \* - 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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Certificate 12367

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