

# **OIL ANALYSIS REPORT**

Sample Rating Trend

## NORMAL

# Area Walgreens - Tractor [Walgreens - Tractor] 136A63367

**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.

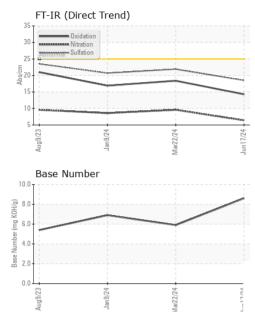
### Fluid Condition

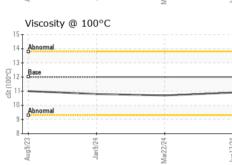
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

SAMPLE INFORM	ΛΑΤΙΟΝ	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0127889	PCA0117892	PCA0105444
Sample Date		Client Info		17 Jun 2024	22 Mar 2024	09 Jan 2024
Machine Age	mls	Client Info		85352	76372	67153
Oil Age	mls	Client Info		16016	50000	17248
Oil Changed		Client Info		Not Changd	Changed	Not Changd
Sample Status				NORMAL	NORMAL	NORMAL
CONTAMINATI	ON	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 METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>100	13	40	33
Chromium	ppm	ASTM D5185m	>20	2	4	4
Nickel	ppm	ASTM D5185m	>4	3	2	3
Titanium	ppm	ASTM D5185m		0	0	0
Silver	ppm	ASTM D5185m	>3	<1	<1	<1
Aluminum	ppm	ASTM D5185m	>20	13	51	40
Lead	ppm	ASTM D5185m	>40	0	4	4
Copper	ppm	ASTM D5185m	>330	1	8	8
Tin	ppm	ASTM D5185m	>15	<1	2	2
Vanadium	ppm	ASTM D5185m		0	0	<1
Cadmium	ppm	ASTM D5185m		0	0	0
ADDITIVES		method	limit/base	current	history1	history2
			initia sacoo	Guircin	TIIStOLA	
Boron	ppm	ASTM D5185m	2	8	9	9
	ppm ppm					
Boron		ASTM D5185m	2	8	9	9
Boron Barium	ppm	ASTM D5185m ASTM D5185m	2 0	8 0	9 <1	9 0
Boron Barium Molybdenum	ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	8 0 57	9 <1 62	9 0 57
Boron Barium Molybdenum Manganese	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	8 0 57 <1	9 <1 62 2	9 0 57 2
Boron Barium Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	8 0 57 <1 926	9 <1 62 2 879	9 0 57 2 855
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	8 0 57 <1 926 1119	9 <1 62 2 879 1255	9 0 57 2 855 1213
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	8 0 57 <1 926 1119 1065	9 <1 62 2 879 1255 1044	9 0 57 2 855 1213 1000
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm 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	8 0 57 <1 926 1119 1065 1251	9 <1 62 2 879 1255 1044 1295	9 0 57 2 855 1213 1000 1273
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 0 950 1050 995 1180 2600	8 0 57 <1 926 1119 1065 1251 3692	9 <1 62 2 879 1255 1044 1295 3469	9 0 57 2 855 1213 1000 1273 2952
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	8 0 57 <1 926 1119 1065 1251 3692 current	9 <1 62 2 879 1255 1044 1295 3469 history1	9 0 57 2 855 1213 1000 1273 2952 history2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm	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	8 0 57 <1 926 1119 1065 1251 3692 current 6	9 <1 62 2 879 1255 1044 1295 3469 history1 13	9 0 57 2 855 1213 1000 1273 2952 history2 13
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm	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	8 0 57 <1 926 1119 1065 1251 3692 <u>current</u> 6 2	9 <1 62 2 879 1255 1044 1295 3469 history1 13 2	9 0 57 2 855 1213 1000 1273 2952 history2 13 2
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm	ASTM D5185m ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>imit/base</b> >25	8 0 57 <1 926 1119 1065 1251 3692 <u>current</u> 6 2 39	9 <1 62 2 879 1255 1044 1295 3469 history1 13 2 178	9 0 57 2 855 1213 1000 1273 2952 history2 13 2 133
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	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>Imit/base</b> >25 >20	8 0 57 <1 926 1119 1065 1251 3692 current 6 2 39 current	9 <1 62 2 879 1255 1044 1295 3469 history1 13 2 178 history1	9 0 57 2 855 1213 1000 1273 2952 history2 13 2 133 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 ppm ppm	ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >25 >20 limit/base >3	8 0 57 <1 926 1119 1065 1251 3692 current 6 2 39 current 0.2	9 <1 62 2 879 1255 1044 1295 3469 history1 13 2 178 history1 0.4	9 0 57 2 855 1213 1000 1273 2952 history2 13 2 13 2 133 2 0.3
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 TS ppm ppm ppm ppm spm 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	8 0 57 <1 926 1119 1065 1251 3692 <u>current</u> 6 2 39 <u>current</u> 0.2 6.4	9 <1 62 2 879 1255 1044 1295 3469 history1 13 2 178 history1 0.4 9.6	9 0 57 2 855 1213 1000 1273 2952 history2 13 2 133 2 133 history2 0.3 8.6
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 spm ppm	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 >30	8 0 57 <1 926 1119 1065 1251 3692 <u>current</u> 6 2 39 <u>current</u> 0.2 6.4 18.5	9 <1 62 2 879 1255 1044 1295 3469 history1 13 2 178 history1 0.4 9.6 21.9	9 0 57 2 855 1213 1000 1273 2952 history2 13 2 133 2 133 history2 0.3 8.6 20.7
Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAD	ppm ppm ppm ppm ppm ppm ppm ppm <b>TS</b> ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D7844 *ASTM D7624 *ASTM D7415	2 0 0 50 0 950 1050 995 1180 2600 2600 25 20 220 20 20 20 20 20 20 20 20 20 20	8 0 57 <1 926 1119 1065 1251 3692 current 6 2 39 current 0.2 6.4 18.5	9 <1 62 2 879 1255 1044 1295 3469 history1 13 2 178 history1 0.4 9.6 21.9 history1	9 0 57 2 855 1213 1000 1273 2952 history2 13 2 133 133 history2 0.3 8.6 20.7 history2

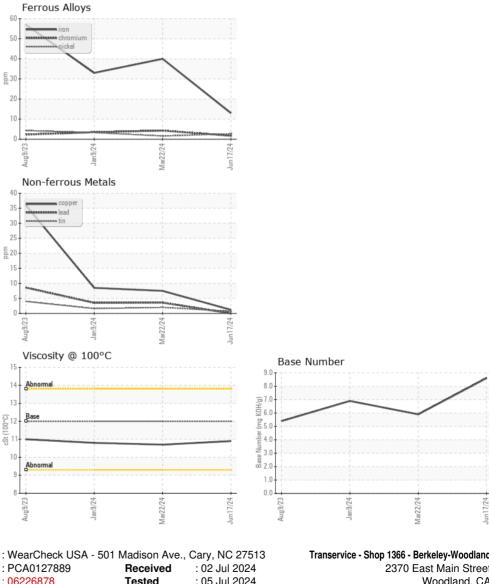


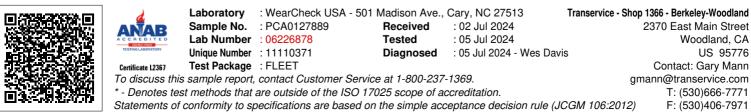
# **OIL ANALYSIS REPORT**





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 PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	10.9	10.7	10.8
GRAPHS						





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