

## NORMAL

# Area (21927Z) Walgreens - Tractor [Walgreens - Tractor] 136A61456

**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.

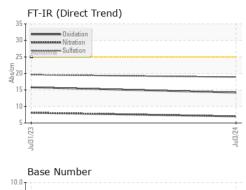
#### Fluid Condition

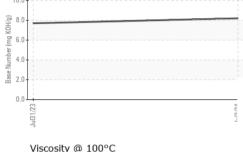
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

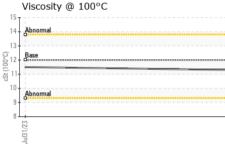
SAMPLE INFOR	MATION	method	limit/base	current	history1	history2							
Sample Number		Client Info		PCA0129482	PCA0093986								
Sample Date		Client Info		03 Jul 2024	31 Jul 2023								
Machine Age	mls	Client Info		478784	418774								
Oil Age	mls	Client Info		418774	0								
Oil Changed		Client Info		Not Changd	N/A								
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	14	17								
Chromium	ppm	ASTM D5185m	>5	1	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	>30	10	8								
Lead	ppm	ASTM D5185m	>30	0	<1								
Copper	ppm	ASTM D5185m	>150	9	4								
Tin	ppm	ASTM D5185m	>5	<1	<1								
Vanadium	ppm	ASTM D5185m		0	0								
Cadmium	ppm	ASTM D5185m		0	0								
Cadmium ADDITIVES	ppm	ASTM D5185m method	limit/base	0 current	0 history1	history2							
	ppm ppm		limit/base	-	-								
ADDITIVES		method		current	history1	history2							
ADDITIVES Boron	ppm	method ASTM D5185m	2	current 10	history1 6	history2							
ADDITIVES Boron Barium	ppm ppm	method ASTM D5185m ASTM D5185m	2 0	current 10 0	history1 6 0	history2 							
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50	current 10 0 63	history1 6 0 59	history2  							
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current           10           0           63           <1	history1 6 0 59 <1	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 10 0 63 <1 969	history1 6 0 59 <1 977	history2   							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	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           10           0           63           <1           969           1165	history1 6 0 59 <1 977 1078	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 10 0 63 <1 969 1165 1120	history1 6 0 59 <1 977 1078 1037	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 50 950 1050 995 1180	current           10           0           63           <1           969           1165           1120           1336	history1 6 0 59 <1 977 1078 1037 1309	history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 0 950 1050 995 1180 2600	Current 10 0 63 <1 969 1165 1120 1336 3829	history1 6 0 59 <1 977 1078 1037 1309 3612	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           10           0           63           <1           969           1165           1120           1336           3829           current	history1 6 0 59 <1 977 1078 1037 1309 3612 history1	history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon	ppm 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 0 950 1050 995 1180 2600 <b>limit/base</b>	current           10           0           63           <1           969           1165           1120           1336           3829           current           6	history1           6           0           59           <1           977           1078           1037           1309           3612           history1           6	history2 history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	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>	current           10           0           63           <1           969           1165           1120           1336           3829           current           6           2	history1         6         0         59         <1         977         1078         1037         1309         3612         history1         6         2	history2							
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <b>limit/base</b> >20	current           10           0           63           <1           969           1165           1120           1336           3829           current           6           2           18	history1           6           0           59           <1           977           1078           1037           1309           3612           history1           6           2           10	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> >20 \$20	current           10           0           63           <1           969           1165           1120           1336           3829           current           6           2           18           current	history1         6         0         59         <1         977         1078         1037         1309         3612         history1         6         2         10         history1	history2 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>Imit/base</b> >20 \$20	current           10           0           63           <1           969           1165           1120           1336           3829           current           6           2           18           current           0.3	history1         6         0         59         <1         977         1078         1037         1309         3612         history1         6         2         10         history1         0.5	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 ppm	method           ASTM D5185m	2 0 50 950 1050 995 1180 2600 <i>imit/base</i> >20 <i>imit/base</i> >20	current           10           0           63           <1           969           1165           1120           1336           3829           current           6           2           18           current           0.3           7.0	history1         6         0         59         <1         977         1078         1037         1309         3612         history1         6         2         10         history1         0.5         8.1	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 ppm</th><th>method           ASTM D5185m           ASTM D5185m</th><th>2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 3 20 20 20 3 3 20 20 20 20 20 20 20 20 20 20 20 20 20</th><th>current           10           0           63           &lt;1           969           1165           1120           1336           3829           current           6           2           18           current           0.3           7.0           18.9</th><th>history1         6         0         59         &lt;1         977         1078         1037         1309         3612         history1         6         2         10         history1         0.5         8.1         19.6</th><th>history2 history2 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 ppm	method           ASTM D5185m           ASTM D5185m	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 3 20 20 20 3 3 20 20 20 20 20 20 20 20 20 20 20 20 20	current           10           0           63           <1           969           1165           1120           1336           3829           current           6           2           18           current           0.3           7.0           18.9	history1         6         0         59         <1         977         1078         1037         1309         3612         history1         6         2         10         history1         0.5         8.1         19.6	history2 history2 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 ppm	method           ASTM D5185m           ASTM D5185m	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 3 20 20 20 3 3 20 20 20 20 20 20 20 20 20 20 20 20 20	current           10           0           63           <1           969           1165           1120           1336           3829           current           6           2           18           current           0.3           7.0           18.9	history1         6         0         59         <1         977         1078         1037         1309         3612         history1         6         2         10         history1         0.5         8.1         19.6	history2 history2 history2 history2 history2							



# **OIL ANALYSIS REPORT**







VISUAL NONE White Metal \*Visual NONE NONE scalar Yellow Metal \*Visual NONE NONE NONE scalar NONE Precipitate scalar \*Visual NONE NONE Silt scalar \*Visual NONE NONE NONE Debris \*Visual NONE NONE NONE scalar Sand/Dirt NONE NONE NONE scalar \*Visual NORML NORML Appearance scalar \*Visual NORML Odor \*Visual NORML NORML scalar NORML **Emulsified Water** scalar \*Visual >0.2 NEG NEG Free Water scalar \*Visual NEG NEG **FLUID PROPERTIES** Visc @ 100°C cSt ASTM D445 12.00 11.3 11.5 GRAPHS Ferrous Alloys 16 10 Ο. Non-ferrous Metals Viscosity @ 100°C Base Number 9.0 14 8.0 (B/T.0) (B/HOX 6.0 13 St (100°C) Ē 5.0 檀 4.0 3.0 ase 2.0 Abnorma 1.0 0.0 Jul31/23 lul3/24



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

Submitted By: Ryan Cruz Page 2 of 2