

# **OIL ANALYSIS REPORT**

## (16065Z) Walgreens - Tractor [Walgreens - Tractor] 136A61356 Component

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)

### DIAGNOSIS

#### Recommendation

Resample at the next service interval to monitor.

#### Wear

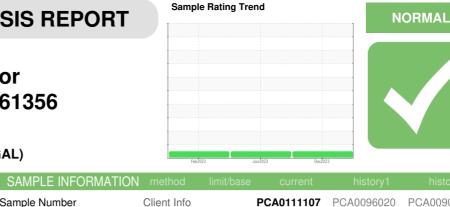
All component wear rates are normal.

#### Contamination

There is no indication of any contamination in the oil.

### Fluid Condition

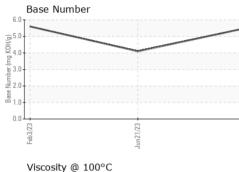
The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.

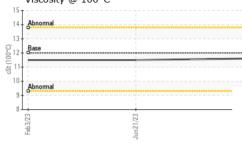


SAMPLE INFURI		methoa	iiiiii/base	current	TIIStOry I	Thistoryz
Sample Number		Client Info		PCA0111107	PCA0096020	PCA0090900
Sample Date		Client Info		06 Dec 2023	21 Jun 2023	03 Feb 2023
Machine Age	mls	Client Info		413870	361044	308510
Oil Age	mls	Client Info		50000	50000	50000
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL
· · ·			11 1. //			
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	30	34	27
Chromium	ppm	ASTM D5185m		30	3	2
Nickel		ASTM D5185m		0	0	0
Titanium	ppm ppm	ASTM D5185m	>2	0	0	0
Silver		ASTM D5185m	. 2	0	0	0
Aluminum	ppm ppm	ASTM D5185m		14	12	10
Lead		ASTM D5185m	>30	0	0	0
Copper	ppm	ASTM D5185m		7	9	8
Tin	ppm		>150	/ <1	<1	0 <1
Vanadium	ppm	ASTM D5185m	>0	<1	0	0
vanaulum	ppm			<1	0	
Cadmium	nnm	ASTM D5185m		-1	0	0
Cadmium	ppm	ASTM D5185m		<1	0	0
Cadmium ADDITIVES	ppm	method	limit/base	<1 current	history1	history2
	ppm ppm	method ASTM D5185m	2	current 1	history1 3	history2 0
ADDITIVES		method	2	current 1 0	history1 3 0	history2 0 0
ADDITIVES Boron Barium Molybdenum	ppm	method ASTM D5185m	2 0 50	current 1 0 63	history1 3 0 85	history2 0 0 60
ADDITIVES Boron Barium Molybdenum Manganese	ppm ppm	method ASTM D5185m ASTM D5185m	2 0 50 0	current 1 0	history1 3 0 85 <1	history2 0 0 60 <1
ADDITIVES Boron Barium Molybdenum	ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950	current 1 0 63 <1 945	history1 3 0 85 <1 1220	history2 0 0 60 <1 861
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0	current 1 0 63 <1	history1 3 0 85 <1 1220 1412	history2 0 0 60 <1 861 1054
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	Current 1 0 63 <1 945 1117 1045	history1 3 0 85 <1 1220 1412 1264	history2 0 0 60 <1 861 1054 919
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	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           1           0           63           <1           945           1117	history1 3 0 85 <1 1220 1412 1264 1624	history2 0 0 60 <1 861 1054 919 1146
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm ppm ppm	method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	2 0 50 0 950 1050 995	Current 1 0 63 <1 945 1117 1045	history1 3 0 85 <1 1220 1412 1264	history2 0 0 60 <1 861 1054 919
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           1           0           63           <1           945           1117           1045           1275	history1 3 0 85 <1 1220 1412 1264 1624	history2 0 0 60 <1 861 1054 919 1146
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	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 ASTM D5185m	2 0 50 950 1050 995 1180 2600	Current 1 0 63 <1 945 1117 1045 1275 2749	history1 3 0 85 <1 1220 1412 1264 1624 3833 history1	history2 0 0 60 <1 861 1054 919 1146 2431 history2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	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	2 0 50 950 1050 995 1180 2600	current         1         0         63         <1         945         1117         1045         1275         2749         current	history1 3 0 85 <1 1220 1412 1264 1624 3833	history2 0 0 60 <1 861 1054 919 1146 2431
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 50 950 1050 995 1180 2600	current           1           0           63           <1           945           1117           1045           1275           2749           current           6	history1           3           0           85           <1           1220           1412           1264           1624           3833           history1           7	history2           0           0           60           <1           861           1054           919           1146           2431           history2           6
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 50 950 1050 995 1180 2600 limit/base >20	current         1         0         63         <1         945         1117         1045         1275         2749         current         6         3	history1         3         0         85         <1         1220         1412         1264         1624         3833         history1         7         4	history2           0           0           60           <1           861           1054           919           1146           2431           history2           6           <1
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>limit/base</b> >20 <b>limit/base</b>	current         1         0         63         <1         945         1117         1045         1275         2749         current         6         3         7         current	history1         3         0         85         <1         1220         1412         1264         1624         3833         history1         7         4         8         history1	history2         0         0         60         <1         861         1054         919         1146         2431         history2         6         <1         9         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 <b>TS</b> ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 limit/base >20 }	current         1         0         63         <1         945         1117         1045         1275         2749         current         6         3         7         current         1.2	history1         3         0         85         <1         1220         1412         1624         3833         history1         7         4         8         history1         1.1	history2         0         0         60         <1         861         1054         919         1146         2431         history2         6         <1         9         history2         1.2
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 <b>TS</b> ppm ppm ppm	method           ASTM D5185m	2 0 50 0 950 1050 995 1180 2600 <b>i</b> mit/base >20 <b>i</b> mit/base >20	current         1         0         63         <1         945         1117         1045         1275         2749         current         6         3         7         current         1.2         9.9	history1         3         0         85         <1         1220         1412         1264         1624         3833         history1         7         4         8         history1         1.1         9.2	history2           0           0           60           <1           861           1054           919           1146           2431           history2           6           <1           9           history2           1.2           9.9
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 50 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >3	current         1         0         63         <1         945         1117         1045         1275         2749         current         6         3         7         current         1.2         9.9         23.0	history1         3         0         85         <1         1220         1412         1264         1624         3833         history1         7         4         8         history1         1.1         9.2         22.5	history2         0         0         60         <1         861         1054         919         1146         2431         history2         6         <1         9         history2         1.2         9.9         23.2
ADDITIVES Boron Barium Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium INFRA-RED Soot % Nitration Sulfation FLUID DEGRAE	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	method           ASTM D5185m           ASTM D7844           *ASTM D7624           *ASTM D7415           method	2 0 0 50 0 950 1050 995 1180 2600 2600 20 20 20 20 20 3 20 20 3 3 20 3 3 3 20 3 3 3 20 3 3 3 20 3 3 3 20 3 3 3 3	current         1         0         63         <1         945         1117         1045         1275         2749         current         6         3         7         current         1.2         9.9         23.0         current	history1         3         0         85         <1         1220         1412         1264         1624         3833         history1         7         4         8         history1         1.1         9.2         22.5         history1	history2         0         0         60         <1         861         1054         919         1146         2431         history2         6         <1         9         history2         1.2         9.9         23.2         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 50 950 1050 995 1180 2600 <b>imit/base</b> >20 <b>imit/base</b> >3 >20 >3	current         1         0         63         <1         945         1117         1045         1275         2749         current         6         3         7         current         1.2         9.9         23.0	history1         3         0         85         <1         1220         1412         1264         1624         3833         history1         7         4         8         history1         1.1         9.2         22.5	history2         0         0         60         <1         861         1054         919         1146         2431         history2         6         <1         9         history2         1.2         9.9         23.2



# **OIL ANALYSIS REPORT**







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)

Certificate L2367

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