

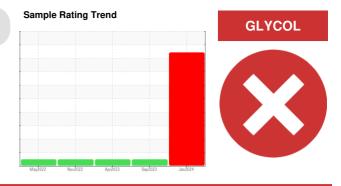
### **PROBLEM SUMMARY**

# Area (15594Z) Walgreens - Tractor

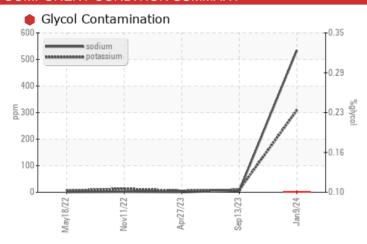
[Walgreens - Tractor] 136A61269

Component
Diesel Engine

PETRO CANADA DURON SHP 10W30 (11 GAL)



### **COMPONENT CONDITION SUMMARY**



### RECOMMENDATION

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

PROBLEMATIC TEST RESULTS							
Sample Status				SEVERE	NORMAL	NORMAL	
Sodium	ppm	ASTM D5185m		<u> </u>	6	<1	
Potassium	ppm	ASTM D5185m	>20	<b>△</b> 309	9	5	
Glycol	%	*ASTM D2982		0.10	NEG	NEG	

Customer Id: TSV1365 Sample No.: PCA0103624 Lab Number: 06071402 Test Package: FLEET



To manage this report scan the QR code

To discuss the diagnosis or test data: Jonathan Hester +1 919-379-4092 x4092 jhester@wearcheckusa.com

To change component or sample information: Customer Service +1 1-800-237-1369 customerservice@wearcheck.com

RECOMMENDED ACTIONS							
Action	Status	Date	Done By	Description			
Change Fluid			?	Oil and filter change at the time of sampling has been noted.			
Change Filter			?	Oil and filter change at the time of sampling has been noted.			
Resample			?	We recommend an early resample to monitor this condition.			
Check Glycol Access			?	We advise that you check for the source of the coolant leak.			

### HISTORICAL DIAGNOSIS

### 13 Sep 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



### 27 Apr 2023 Diag: Wes Davis

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



### 11 Nov 2022 Diag: Don Baldridge

NORMAL



Resample at the next service interval to monitor. All component wear rates are normal. There is no indication of any contamination in the oil. The BN result indicates that there is suitable alkalinity remaining in the oil. The condition of the oil is suitable for further service.



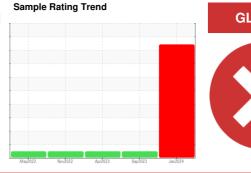


### **OIL ANALYSIS REPORT**

### (15594Z) Walgreens - Tractor [Walgreens - Tractor] 136A61269

**Diesel Engine** 

PETRO CANADA DURON SHP 10W30 (11 GAL)





### **DIAGNOSIS**

### Recommendation

We advise that you check for the source of the coolant leak. Check for low coolant level. Oil and filter change at the time of sampling has been noted. We recommend an early resample to monitor this condition.

### Wear

All component wear rates are normal.

### Contamination

Sodium and/or potassium levels are high. Test for glycol is positive.

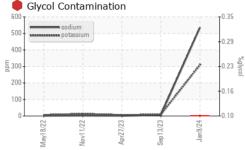
### ▲ Fluid Condition

The BN result indicates that there is suitable alkalinity remaining in the oil.

		May2022	Nov2022	Apr2023 Sep2023	Jan2024	
SAMPLE INFORM	MATION	method	limit/base	current	history1	history2
Sample Number		Client Info		PCA0103624	PCA0093579	PCA0095130
Sample Date		Client Info		09 Jan 2024	13 Sep 2023	27 Apr 2023
Machine Age	mls	Client Info		463362	452325	404226
Oil Age	mls	Client Info		23117	36218	57870
Oil Changed		Client Info		Changed	Changed	Changed
Sample Status				SEVERE	NORMAL	NORMAL
CONTAMINATI	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
WEAR METALS	S	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185m	>80	21	12	35
Chromium	ppm		>5	1	<1	2
Nickel	ppm	ASTM D5185m	>2	0	0	0
Titanium	ppm	ASTM D5185m		1	81	<1
Silver	ppm	ASTM D5185m	>3	0	0	0
Aluminum	ppm		>30	10	4	14
Lead	ppm	ASTM D5185m	>30	<1	1	0
Copper	ppm	ASTM D5185m		6	8	4
Tin	ppm	ASTM D5185m	>5	<1	2	<1
Vanadium	ppm	ASTM D5185m		<1	<1	0
Cadmium	ppm	ASTM D5185m		0	0	0
	ррпп		lineit/lenen			
ADDITIVES		method	limit/base	current	history1	history2
Boron Barium	ppm	ASTM D5185m	2	11 0	2	0
		ASTM D5185m		-		
	ppm	ACTM DE10E		CE	4 4	00
Molybdenum	ppm	ASTM D5185m	50	65	11	69
Molybdenum Manganese	ppm	ASTM D5185m	0	<1	2	<1
Molybdenum Manganese Magnesium	ppm ppm ppm	ASTM D5185m ASTM D5185m	950	<1 511	2 797	<1 1064
Molybdenum Manganese Magnesium Calcium	ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050	<1 511 1543	2 797 1333	<1 1064 1298
Molybdenum Manganese Magnesium Calcium Phosphorus	ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995	<1 511 1543 881	2 797 1333 1007	<1 1064 1298 1112
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc	ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180	<1 511 1543 881 1064	2 797 1333 1007 1257	<1 1064 1298 1112 1379
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600	<1 511 1543 881	2 797 1333 1007	<1 1064 1298 1112 1379 3146
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN	ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	<1 511 1543 881 1064 3284	2 797 1333 1007 1257 3489 history1	<1 1064 1298 1112 1379 3146 history2
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 Method ASTM D5185m	0 950 1050 995 1180 2600	<1 511 1543 881 1064 3284 current	2 797 1333 1007 1257 3489 history1	<1 1064 1298 1112 1379 3146 history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >20	<1 511 1543 881 1064 3284  current 8  535	2 797 1333 1007 1257 3489 history1 14	<1 1064 1298 1112 1379 3146 history2 7 <1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base	<1 511 1543 881 1064 3284  current 8  535 309	2 797 1333 1007 1257 3489 history1 14 6	<1 1064 1298 1112 1379 3146 history2 7 <1 5
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m Method ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >20	<1 511 1543 881 1064 3284  current 8  535	2 797 1333 1007 1257 3489 history1 14	<1 1064 1298 1112 1379 3146 history2 7 <1
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m Method ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	0 950 1050 995 1180 2600 limit/base >20	<1 511 1543 881 1064 3284  current 8  535 309	2 797 1333 1007 1257 3489 history1 14 6	<1 1064 1298 1112 1379 3146 history2 7 <1 5
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m	0 950 1050 995 1180 2600 limit/base >20	<1 511 1543 881 1064 3284  current 8  535 309 0.10	2 797 1333 1007 1257 3489 history1 14 6 9 NEG	<1 1064 1298 1112 1379 3146 history2 7 <1 5 NEG
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D2982	0 950 1050 995 1180 2600 limit/base >20 >20	<1 511 1543 881 1064 3284 current 8  535 309 0.10 current	2 797 1333 1007 1257 3489 history1 14 6 9 NEG	<1 1064 1298 1112 1379 3146 history2 7 <1 5 NEG
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot %	ppm ppm ppm ppm ppm ppm ppm ppm TS ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982  method  *ASTM D7844	0 950 1050 995 1180 2600 limit/base >20 >20	<1 511 1543 881 1064 3284  current 8  ▲ 535  ▲ 309  ● 0.10  current 0.5	2 797 1333 1007 1257 3489 history1 14 6 9 NEG history1	<1 1064 1298 1112 1379 3146 history2 7 <1 5 NEG history2
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982  method *ASTM D7844 *ASTM D7624 *ASTM D76145	0 950 1050 995 1180 2600 limit/base >20 >20	<1 511 1543 881 1064 3284 current 8  535 309 0.10 current 0.5 9.8	2 797 1333 1007 1257 3489 history1 14 6 9 NEG history1 1.3 12.0	<1 1064 1298 1112 1379 3146 history2 7 <1 5 NEG history2 1.1 10.9
Molybdenum Manganese Magnesium Calcium Phosphorus Zinc Sulfur CONTAMINAN Silicon Sodium Potassium Glycol INFRA-RED Soot % Nitration Sulfation	ppm ppm ppm ppm ppm ppm ppm ppm ppm ppm	ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D5185m *ASTM D2982  method *ASTM D7844 *ASTM D7624 *ASTM D76145	0 950 1050 995 1180 2600 limit/base >20 >20 limit/base >3 >20 >3	<1 511 1543 881 1064 3284  current 8  535 309 0.10  current  0.5 9.8 19.1	2 797 1333 1007 1257 3489 history1 14 6 9 NEG history1 1.3 12.0 26.1	<1 1064 1298 1112 1379 3146 history2 7 <1 5 NEG history2 1.1 10.9 23.3



### **OIL ANALYSIS REPORT**

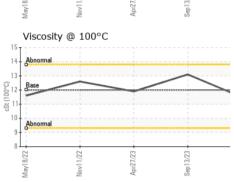




VISUAL		method	limit/base	current	history1	history2
White Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Yellow Metal	scalar	*Visual	NONE	NONE	NONE	NONE
Precipitate	scalar	*Visual	NONE	NONE	NONE	NONE
Silt	scalar	*Visual	NONE	NONE	NONE	NONE
Debris	scalar	*Visual	NONE	NONE	NONE	NONE
Sand/Dirt	scalar	*Visual	NONE	NONE	NONE	NONE
Appearance	scalar	*Visual	NORML	NORML	NORML	NORML
Odor	scalar	*Visual	NORML	NORML	NORML	NORML
<b>Emulsified Water</b>	scalar	*Visual	>0.2	NEG	NEG	NEG
Free Water	scalar	*Visual		NEG	NEG	NEG

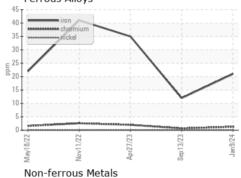
FLUID PROPE	RTIES	method	limit/base	current	history1	history2
Visc @ 100°C	cSt	ASTM D445	12.00	11.5	13.1	11.9

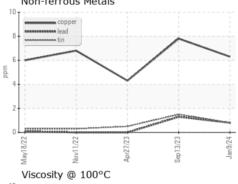
## Base Number (mg KOH/g) 0.0 Sep 13/23 Viscosity @ 100°C

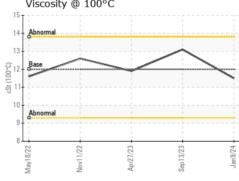


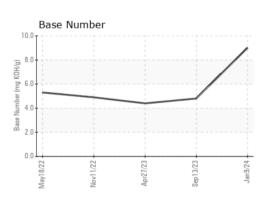
## Ferrous Alloys

**GRAPHS** 













Laboratory Sample No. Lab Number **Unique Number** 

: WearCheck USA - 501 Madison Ave., Cary, NC 27513 : PCA0103624 : 06071402

Recieved Diagnosed : 10848079

: 26 Jan 2024 : 30 Jan 2024 Diagnostician : Jonathan Hester

Test Package : FLEET ( Additional Tests: Glycol )

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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Submitted By: Sonny Boucher