

MIL "ON" DTC P2420

Service Category Vehicle Interior

Section Meter/Gauge/Display

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2010	4Runner, Camry, FJ Cruiser, Land Cruiser, Prius, RAV4, Yaris	
2009 – 2010	Highlander, Highlander HV	

Introduction

Some 2009 – 2010 model year Japan built Toyota vehicles may exhibit a MIL "ON" condition with Diagnostic Trouble Code (DTC) P2420 (Evaporative Emission System Switching Valve Control Circuit High) present. The charcoal canister has been updated to address this condition.

Production Change Information

This TSB applies to vehicles produced **WITHIN** the applicable VIN ranges shown below.

MODEL	DRIVETRAIN	ENGINE	PLANT	APPLICABLE VIN RANGE	
				STARTING VIN	ENDING VIN
4Runner	2WD	1GR	Tahara	JTEZU5JR#A5000107	JTEZU5JR#A5000607
	4WD			JTEBU5JR#A5000141	JTEBU5JR#A5001682
Camry	2WD	2AR	Tsutsumi	JTNBF3EK#A3003228	JTNBF3EK#A3003616
		2GR		JTNBK3EK#A3049732	JTNBK3EK#A3049908
FJ Cruiser	2WD	1GR	Hino	JTEZU4BF#AK008510	JTEZU4BF#AK008779
	4WD			JTEBU4BF#AK070007	JTEBU4BF#AK073029
Highlander	2WD	2GR	TMK1	JTED#4#A#92093701	JTE#K3EH#A2094892
	4WD			JTEES4#A#92150833	JTE#K3EH#A2152674
Highlander HV	2WD	3MZ		JTEEW4#A#92037432	JTE#W3EH#A2039130
Land Cruiser	4WD	3UR	Tahara	JTMHY7AJ#A5004934	JTMHY7AJ#A5004948
			TY	JTMHY7AJ#A4002773	JTMHY7AJ#A4002773

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Production Change Information (Continued)

MODEL	DRIVETRAIN	ENGINE	PLANT	APPLICABLE VIN RANGE	
				STARTING VIN	ENDING VIN
Prius	2WD	2ZR	Tsutsumi	JTDKN3DU#A0050338	JTDKN3DU#A0067103
				JTDKN3DU#A1068283	JTDKN3DU#A1090900
			TY	JTDKN3DU#A5056320	JTDKN3DU#A5073902
RAV4	2WD	2AR	Tahara	JTM##4DV#A5015611	JTM##4DV#A5017930
	4WD			JTM##4DV#A5018328	JTM##4DV#A5020386
	2WD	2GR		JTM##4DV#A5026271	JTM##4DV#A5026517
	4WD			JTM##4DV#A5085189	JTM##4DV#A5086951
	2WD	2AR	Shokki	JTM##4DV#AD016277	JTM##4DV#AD018549
	4WD			JTM##4DV#AD021897	JTM##4DV#AD024157
	2WD	2GR		JTM##4DV#AD003225	JTM##4DV#AD003545
	4WD			JTM##4DV#AD010411	JTM##4DV#AD011750
Yaris H/B	2WD	1NZ	Shokki	JTD#T4K3#A5281855	JTD#T9K3#A5289307
Yaris Sedan			Kanto	JTDBT4K3#A1355303	JTDBT4K3#A1363239
			Central	JTDBT4K3#A4064338	JTDBT4K3#A4068672

Parts Information

MODEL	PREVIOUS PART NUMBER	CURRENT PART NUMBER	PART NAME	QTY
4Runner	77740-35520	Same	Canister Assy, Charcoal	1
Camry	77740-33170	Same		1
FJ Cruiser	77740-35530	Same		1
Highlander	77740-48121	77740-0E020		1
Highlander HV	77740-48140	Same		1
Land Cruiser	77740-60470	Same		1
Prius	77740-47060	Same		1
RAV4	77740-42090	77740-0R010		1
Yaris	77740-52090	Same		1

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Warranty Information

OP CODE	DESCRIPTION	MODEL	TIME	OFP	T1	T2	
237811	R & R Charcoal Canister	4Runner	0.4	77740-35520	8A	99	
		Camry	2.0	77740-33170			
		FJ Cruiser	0.3	77740-35530			
		Highlander	1AR	0.8			77740-48121
			2GR	0.7			77740-48121
		Highlander HV	0.4	77740-48140			
		Land Cruiser	0.5	77740-60470			
		Prius	0.4	77740-47060			
		RAV4	2AR	0.5			77740-42090
			2GR	0.4			77740-42090
Yaris	0.3	77740-52090					

APPLICABLE WARRANTY

- This repair is covered under the Toyota Federal Emissions Warranty. This warranty is in effect for 36 months or 36,000 miles, whichever occurs first, from the vehicle's in-service date.
- For California specification Prius and 4 cylinder Camry PZEV vehicles sold, registered, and operated in California, Connecticut, Maine, Massachusetts, New Jersey, New Mexico, New York, Oregon, Rhode Island, and Vermont, this repair is covered under the California Emission Warranty, which is in effect for 180 months or 150,000 miles, whichever occurs first, from the vehicle's in-service date.
- For California specification vehicles sold and operated in California, Connecticut, Maine, Massachusetts, New Jersey, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington, the charcoal canister is covered under the California Emission Warranty, which is 84 months or 70,000 miles, whichever occurs first, from the vehicle's in-service date.
- Warranty application is limited to occurrence of the specified condition described in this bulletin.

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Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
TIS Techstream* or Techstream Lite NOTE: Software version 5.10.029 or later is required.	ADE	TSPKG1 or TSLITEDLR01	1

* Essential SST.

NOTE

Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.

Repair Procedure

1. Using TIS Techstream, check for Diagnostic Trouble Codes (DTCs).
2. Are codes other than P2420 present?
 - **YES** — Diagnose other DTC(s) first.
 - **NO** — Continue to step 3.

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Repair Procedure (Continued)

3. Inspect VSV for proper power and ground circuits.

Figure 1.

Perform the following checks with the Canister Pump Module Connector **connected** and back probe the pins to obtain the readings.

A. Check for voltage between Pin 9 (VLVB) and Chassis Ground. With IG ON, voltage should read between 9 V and 14 V.

- **YES** — Proceed to next step (3B).
- **NO** — This TSB does NOT apply – inspect and repair wiring.

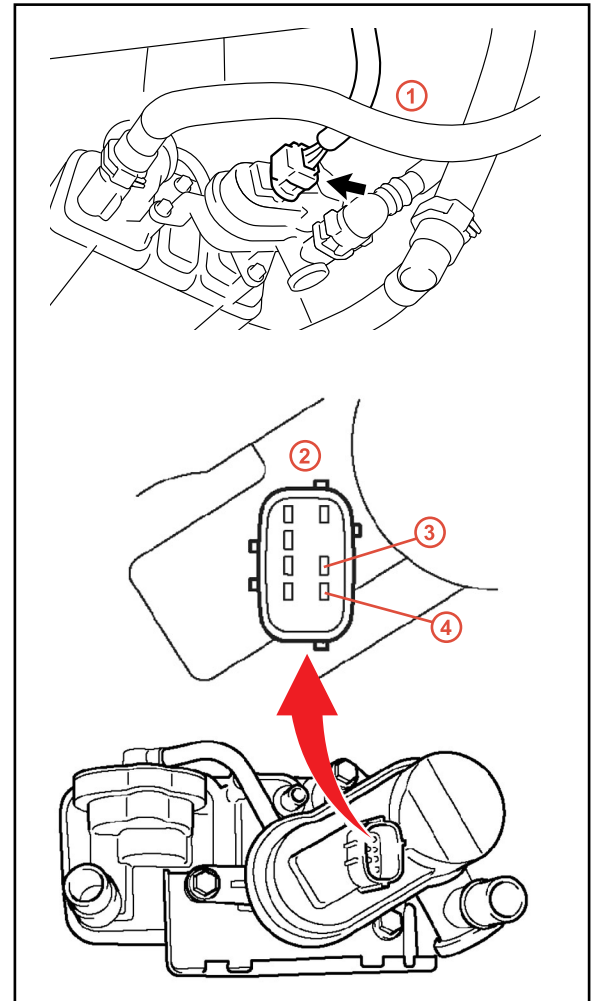
B. Check for voltage between pin 8 (VGND) and Chassis Ground. With IG ON, voltage should read between 9 V and 14 V.

- **YES** — Proceed to next step (3C).
- **NO** — Vent Valve is open – proceed to step 4.

C. Using TIS Techstream, activate the VSV and check voltage between pin 8 (VGND) and Chassis Ground.

Powertrain > Engine > Active Test > Activate the VSV for Vent Valve

- **9 V – 14 V present** – This TSB does NOT apply – inspect and repair wiring.
- **< 1 V present** – Proceed to step 4.



1	Wire Harness
2	Canister Pump Module Connector
3	Pin 8 (VGND)
4	Pin 9 (VLVB)

4. Replace the Charcoal Canister Assembly.

Refer to TIS, applicable model and model year Repair Manual:

- 2010 4Runner:
 - *Engine/Hybrid System – Emission Control – “1GR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*

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Repair Procedure (Continued)

- 2010 Camry:
 - *Engine/Hybrid System – Emission Control – “2AR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
 - *Engine/Hybrid System – Emission Control – “2GR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2010 FJ Cruiser:
 - *Engine/Hybrid System – Emission Control – “1GR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2009 Highlander:
 - *Engine/Hybrid System – Emission Control – “2GR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2010 Highlander:
 - *Engine/Hybrid System – Emission Control – “2GR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2009 Highlander HV:
 - *Engine/Hybrid System – Emission Control – “3MZ-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2010 Highlander HV:
 - *Engine/Hybrid System – Emission Control – “3MZ-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2010 Land Cruiser:
 - *Engine/Hybrid System – Emission Control – “3UR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2010 Prius:
 - *Engine/Hybrid System – Emission Control – “2ZR-FXE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 2010 RAV4:
 - *Engine/Hybrid System – Emission Control – “2AR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
 - *Engine/Hybrid System – Emission Control – “2GR-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*

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Repair Procedure (Continued)

- 2010 Yaris:
 - *Engine/Hybrid System – Emission Control – “1NZ-FE Emission Control: Canister: [Removal](#) / [Installation](#)”*
- 5. Clear all DTCs using TIS Techstream.
- 6. Perform the Automatic EVAP System Check and verify that no pending DTCs set.
System > Engine and ECT > Utility > EVAP System Check

NOTE

If the Automatic EVAP System Check fails to run, perform the following:

- Turn the ignition OFF.
- Turn TIS Techstream OFF.
- Turn the ignition ON and TIS Techstream ON and restart the Automatic EVAP System Check.