

Transaxle Rattle Noise Between 25 and 35 mph

Service Category Drivetrain

Section Automatic Transmission/Transaxle

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2009 - 2011	RAV4	WMI(s): 2T3, JTM VDS(s): BF31V, BF32V, BF33V, BF34V, BF35V, BF4DV, DF4DV, EF4DV, JF4DV, KF4DV, RF4DV, WF4DV, XF4DV, YF4DV, ZF31V, ZF32V, ZF33V, ZF34V, ZF35V, ZF4DV Engine(s): 2AR Drive Type(s): 4WD, 2WD Transmission(s): 4AT

REVISION NOTICE

December 12, 2017 Rev1:

- The Warranty and Parts Information sections have been updated.
- Any previous printed versions of this bulletin should be discarded.

Introduction

Some 2009 – 2011 model year RAV4 vehicles equipped with the 2AR-FE engine and four speed automatic transaxle (2WD and 4WD) may exhibit a rattle noise from the transaxle assembly between 25 and 35 mph. The Engine Control Module (ECM) (SAE term: Powertrain Control Module [PCM]) logic has been revised to address this condition.

Warranty Information

OP CODE	DESCRIPTION	TIME	OFF	T1	T2
EG1016	Reprogram ECM (PCM)	0.6	89661-#####	06	99

APPLICABLE WARRANTY

- This repair is covered under the Toyota Federal Emission Warranty. This warranty is in effect for 96 months or 80,000 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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Parts Information

PRODUCTION	DRIVETRAIN	PART NUMBER		PART NAME	QTY
		PREVIOUS	NEW		
Japan	2WD	89661-42J80 89661-42J81 89661-42Q20 89661-42Q21 89661-42Q22 89661-42Q23	89661-42Q24	Computer, Engine Control (ECM/PCM)	-
	4WD	89661-42J90 89661-42J91 89661-42Q30 89661-42Q31 89661-42Q32 89661-42Q33	89661-42Q34		
NAP	2WD	89661-0R090 89661-0R091 89661-0R230 89661-0R231 89661-0R232 89661-0R233	89661-0R234		
	4WD	89661-0R100 89661-0R101 89661-0R240 89661-0R241 89661-0R242 89661-0R243	89661-0R244		
-	-	00451-00001-LBL		Authorized Modifications Labels	1

NOTE

- The ECM (PCM) should NOT be replaced as part of the Repair Procedure.
- Authorized Modifications Labels may be ordered in packages of 25 from the Materials Distribution Center (MDC) through *Dealer Daily – Parts – Dealer Support Materials Orders*.

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Required Tools & Equipment

REQUIRED EQUIPMENT	SUPPLIER	PART NUMBER	QTY
Techstream 2.0*	ADE	TS2UNIT	1
Techstream Lite		TSLITEPDLR01	
Techstream Lite (Green Cable)		TSLP2DLR01	

* Essential SST.

NOTE

- **ONLY ONE** of the Techstream units listed above is required.
- Software version 12.20.024 or later is required.
- Additional Techstream units may be ordered by calling Approved Dealer Equipment (ADE) at 1-800-368-6787.
- Use Techstream or an approved J2534 interface to perform flash reprogramming updates. Visit techinfo.toyota.com for more information regarding J2534 reprogramming.

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
GR8 Battery Diagnostic Station*	00002-MCGR8	1

* Essential SST.

NOTE

Additional SSTs may be ordered by calling 1-800-933-8335.

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Calibration Information

ENGINE	TRANSMISSION	CALIBRATION ID		VDS
		PREVIOUS	NEW	
2AR-FE	U241E (2WD)	34287000 34287100 342F0000 342F0100	342F0200	KF4DV WF4DV XF4DV YF4DV ZF31V ZF32V ZF33V ZF34V ZF35V ZF4DV
	U140F (4WD)	34288000 34288100 342F1000 342F1100	342F1200	BF32V BF33V BF34V BF35V BF4DV DF4DV EF4DV JF4DV RF4DV

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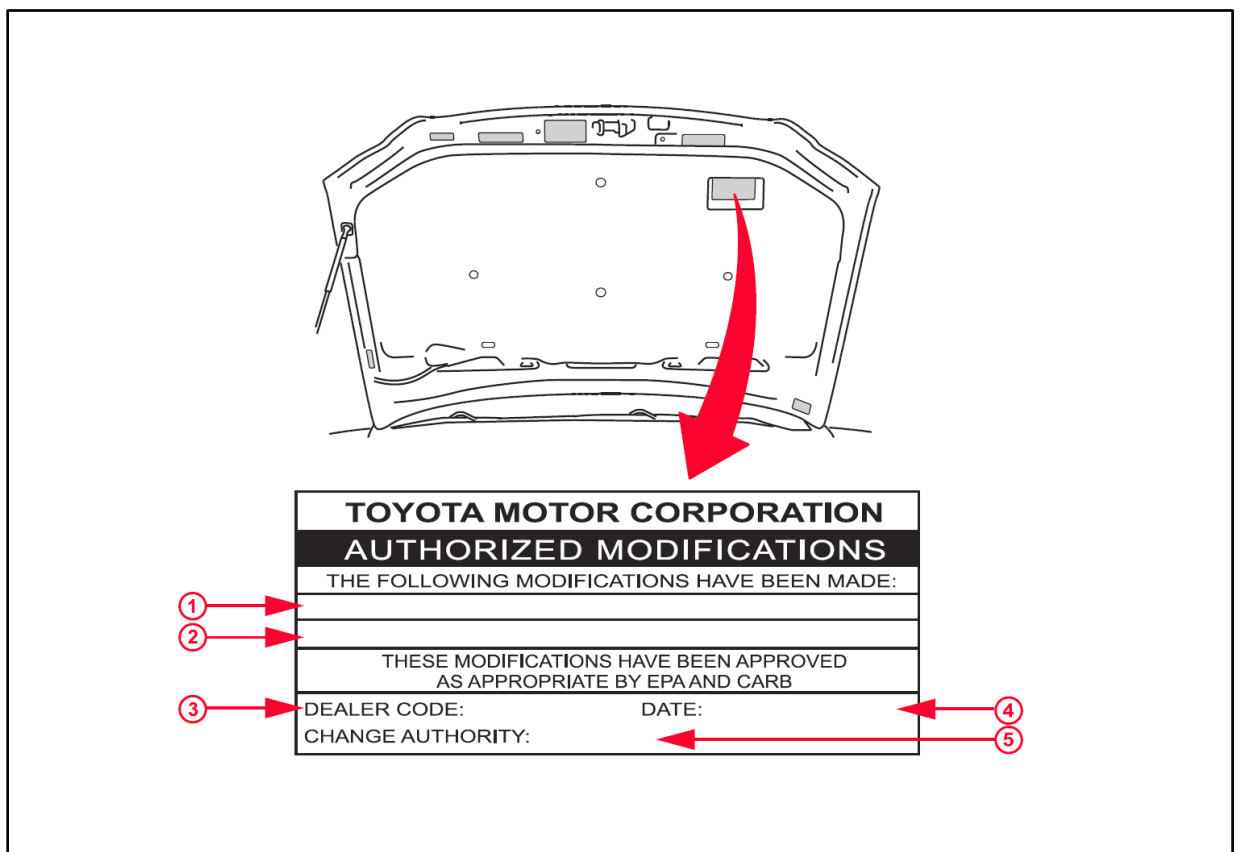
Repair Procedure

1. Check for the Authorized Modifications Label affixed to the vehicle in the location shown below. Confirm if the ECM (PCM) calibration has been updated.

Is the calibration ID listed the latest ECM (PCM) calibration?

- **YES** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.
- **NO** — Continue to step 2.

Figure 1. Location of Authorized Modifications Label for 2009 – 2011 RAV4



1	Replacement ECM (PCM) Part Number (e.g., 89661-42Q22)
2	New Calibration ID (e.g., 342F0200)
3	Dealer Code

4	Date Completed
5	This SB Number

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Repair Procedure (Continued)

- Flash reprogram the ECM (PCM).

NOTE

- The GR8 Battery Diagnostic Station **MUST** be used in Power Supply Mode to maintain battery voltage at 13.5V while flash reprogramming vehicle.
- For details on how to use the GR8 Battery Diagnostic Station, refer to the "[GR8 Instruction Manual](#)" located on the Technical Information System (TIS), *Diagnostics – Tools & Equipment – Battery Diagnostics*.

Follow the procedures outlined in Service Bulletin No. [T-SB-0134-16](#) "Techstream ECU Flash Reprogramming Procedure," and flash the ECM (PCM) with the NEW calibration file update.

- Start the engine and warm it up to normal operating temperature.
- Prepare and install the Authorized Modifications Label.
 - Using a permanent marker, enter the following information on the label:
 - ECM part number [Refer to the **Parts Information** section for the **NEW PART NUMBER**]
 - Calibration ID(s) [Refer to the **Calibration Information** section for the **NEW CALIBRATION ID**]
 - Dealer Code
 - Repair Date
 - Change Authority [**This bulletin number**]
 - Affix the Authorized Modifications Label to the vehicle at the location shown in Figure 1. The Authorized Modifications Label is available through the MDC, P/N 00451-00001-LBL.
- Reset the transaxle memory prior to test driving the vehicle.

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

 - [2009](#) / [2010](#) / [2011](#) RAV4:
Drivetrain – Automatic Transmission/Transaxle – "U241E Automatic Transaxle: Automatic Transaxle System: Initialization"
 - [2009](#) / [2010](#) / [2011](#) RAV4:
Drivetrain – Automatic Transmission/Transaxle – "U140F Automatic Transaxle: Automatic Transaxle System: Initialization"

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Repair Procedure (Continued)

6. Test drive the vehicle to confirm proper vehicle operation and ECM (PCM) initial learning.

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

- [2009](#) / [2010](#) / [2011](#) RAV4:
Drivetrain – Automatic Transmission/Transaxle – “U241E Automatic Transaxle: Automatic Transaxle System: Road Test”
- [2009](#) / [2010](#) / [2011](#) RAV4:
Drivetrain – Automatic Transmission/Transaxle – “U140F Automatic Transaxle: Automatic Transaxle System: Road Test”