

Reduced Wireless Remote Control Range

Service Category Vehicle Interior

Section Theft Deterrent/Keyless Entry

Market USA

Toyota Supports
 ASE Certification 

Applicability

YEAR(S)	MODEL(S)	ADDITIONAL INFORMATION
2015	Highlander	
2015	RAV4	

Introduction

Some 2015 model year Highlander and RAV4 vehicles without Smart Key may have a wireless/TPMS receiver with a hardware condition that significantly reduces wireless remote control range. Follow the Repair Procedure in this bulletin to address non-smart key wireless/TPMS receivers with this reduced range condition.

Production Change Information

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

MODEL	PLANT	APPLICABLE VIN RANGE	
		STARTING VIN	ENDING VIN
Highlander	TMMI	5TDBKRFH#FS121887	5TDBKRFH#FS147450
		5TDZARFH#FS011992	5TDZARFH#FS013377
		5TDZKRFH#FS063963	5TDZKRFH#FS075935
RAV4	TMMC	2T3BFREV#FW283697	2T3BFREV#FW289074
		2T3DFREV#FW283503	2T3DFREV#FW289078
		2T3RFREV#FW283467	2T3RFREV#FW289085
		2T3WFREV#FW161683	2T3WFREV#FW164974
		2T3YFREV#FW161726	2T3YFREV#FW164981
		2T3ZFREV#FW161780	2T3ZFREV#FW164970

Warranty Information

OP CODE	DESCRIPTION	TIME	MODEL	OFF	T1	T2
EL1511	R & R Wireless/TPMS receiver	1.1	Highlander	897A0-0E010	87	71
EL1512		0.8	RAV4	897A0-0R010		

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Warranty Information (Continued)

APPLICABLE WARRANTY

- This repair is covered under the Toyota Basic Warranty. This warranty is in effect for 36 months or 36,000 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.

Parts Information

MODEL	PART NUMBER	PART NAME	QTY
Highlander	897A0-0E010	Receiver Assy, Door Control and TPMS	1
RAV4	897A0-0R010		1

Required Tools & Equipment

SPECIAL SERVICE TOOLS (SST)	PART NUMBER	QTY
RF Detector*	00002-09001-01	1

* Essential SST.

NOTE

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

REQUIRED MATERIAL	QUANTITY
Tape measure (Suggested length: Over 65 feet)	1

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Repair Procedure

NOTE

- Because there are valid reasons why wireless range can be reduced from items like radio towers, building alarms, and other radio frequency (RF) sources, determine if the low range condition only occurs at certain places in order to rule out other causes.
- If after testing with the procedure below there are any questions as to the validity of the test, compare to a car with a known good range. If both vehicles appear to have low range, it may be necessary to move the vehicles to a different open area away from possible sources of interference to check the range.
- When performing this inspection, be sure to test both vehicles at the exact same range and angle, and outside in an open area. Because of sheet metal design, varying the testing angle to the car may lead to inaccurate results.

1. Verify the reduced range condition.

Close all the doors and press either the Lock or Unlock button on the wireless remote control a few times to confirm. Does the remote operate normally within a few feet of the vehicle?

- **YES** — Go to step 3.
- **NO** — Continue to step 2.

2. Check for normal operation of the wireless remote control using the RF detector (SST P/N 00002-09001-01) to verify the normal range. Directions for testing remote transmitters can be found on the back of the RF detector.

Does the installation of a test battery restore operation when using the RF detector?

- **YES** — Continue to step 3.
- **NO** — This bulletin does NOT apply. Continue diagnosis using the applicable Repair Manual.

Refer to the Technical Information System (TIS), applicable model and model year Repair Manual:

- 2014 – 2015 Highlander:
Vehicle Interior – Door Lock – “Door Lock: Wireless Door Lock Control System (w/o Smart Key System): [Operation Check](#) / [Diagnosis System](#)”
- 2013 – 2015 RAV4:
Vehicle Interior – Door Lock – “Door Lock: Wireless Door Lock Control System (w/o Smart Key System): [Operation Check](#) / [Diagnosis System](#)”

3. Check the wireless range.

NOTE

The check should be performed facing perpendicular to the passenger front door handle.

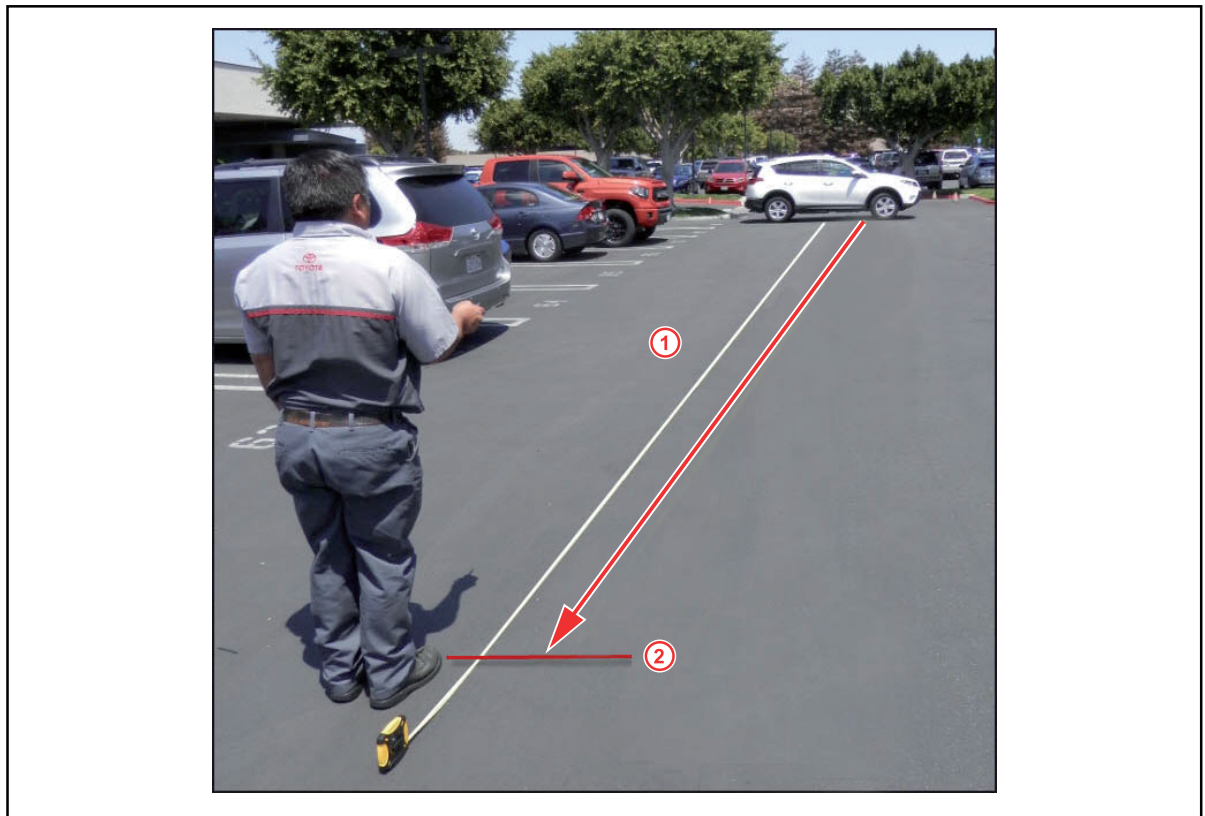
A. Park vehicle in an open area, such as between rows of cars on the dealer lot.

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Repair Procedure (Continued)

- B. Turn ignition OFF, remove wireless remote from ignition and keep in your hand.
- C. Make sure all doors, windows, and sun roofs are closed.
- D. Ensure that NO cars or other obstructions are located between the test operator/wireless remote control and the vehicle being tested.
- E. Using the tape measure to verify distance, stand approximately 65 feet (20 meters) from the vehicle with a clear, straight line of sight perpendicular to the passenger front door handle. Do **NOT** use the driver's door for testing.

Figure 1.



1	Clear Line of Sight with NO Obstructions
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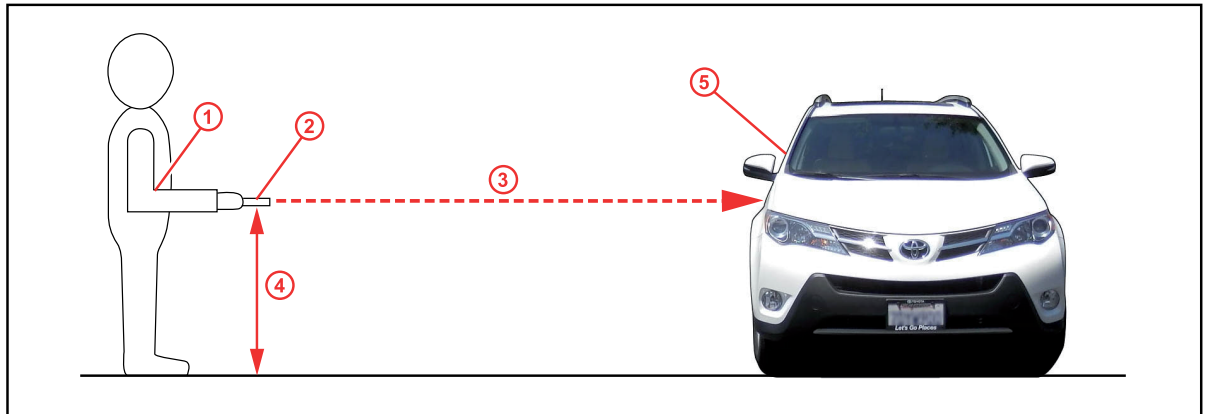
2	Start Test Standing 65 ft (20 m) Away
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Repair Procedure (Continued)

- F. Facing the passenger front door handle, with arm bent at a 90 degree angle, press the Lock button on the wireless remote control. (See Figure 2.)

Figure 2.



1	Bend Elbow 90°
2	Wireless Remote Control
3	Clear, Straight Line of Sight

4	Hold Remote Approximately 3 ft (1 m) from Ground
5	Passenger Front Door Handle

HINT

Range may be affected by the height the wireless remote control is held at. Hold the wireless remote control at approximately 3 feet above the ground. The size of the person holding the remote can also have an effect on range. When in doubt, have someone similar in size to the customer verify the range.

Does the car lock (lights blink/chirp sounds)?

- **YES** — Continue to step G.
- **NO** — Go to step 4.

- G. The wireless range is good and test is considered a “PASS” condition. Repeat step F for additional pass conditions, and compare to a like vehicle in the same open area to see if range is similar. Follow the applicable Repair Manual section for diagnosis.
4. If car does NOT lock (no lights blink, no chirp sounds), then confirm the poor range by slowly walking straight toward the passenger front door handle, pressing the Lock button approximately every 2 seconds until car locks (lights blink/chirp sounds).

Examples of Wireless/TPMS Receiver with Incorrect Chip (Poor Range):

- A Highlander containing a receiver with the hardware concern will likely not lock until the test operator is approximately 42 feet (13 meters), or less, from the vehicle when approaching perpendicular to the passenger front door handle.

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Repair Procedure (Continued)

- A RAV4 containing a receiver with the hardware concern will likely not lock until the test operator is approximately 22 feet (7 meters), or less, from the vehicle when approaching perpendicular to the passenger front door handle.

Does wireless operation start working around 42 feet (Highlander) or 22 feet (RAV4) or less?

NOTE

Under some conditions, the range may be drastically shorter than 22 or 42 feet, and operation may be intermittent.

- **YES** — Continue to step 5.
 - **NO** — A vehicle that has absolutely NO wireless functionality, regardless of how close to the vehicle the operator stands, or position around the vehicle, is likely to be caused by an unregistered wireless remote control, dead remote battery, potential receiver harness connection, or another issue. Follow the appropriate Repair Manual section for these conditions.
5. Remove and replace the wireless/TPMS receiver. Be sure to fully seat the connector on the new receiver with the wiring harness in the vehicle.

HINT

Before removing and replacing the wireless/TPMS receiver, write down the TPMS ID numbers . It is not necessary to remove the tires to retrieve the ID numbers.

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

- **2014 – 2015 Highlander:**
Suspension – Tire Pressure Monitoring – “Tire Pressure Monitoring: Tire Pressure Warning System: [Data List/Active Test](#)”

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

- 2014 – 2015 Highlander:
Suspension – Tire Pressure Monitoring – “Tire Pressure Monitoring: Tire Pressure Warning Receiver: [Removal](#) / [Installation](#)”
- 2013 – 2015 RAV4:
Suspension – Tire Pressure Monitoring – “Tire Pressure Monitoring: Tire Pressure Warning Receiver: [Removal](#) / [Installation](#)”

6. Register the wireless remote control(s) to the NEW receiver.

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

- 2014 – 2015 Highlander:
Vehicle Interior – Door Lock – “Door Lock: Wireless Door Lock Control System (w/o Smart Key System): [Registration](#)”

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Repair Procedure (Continued)

- 2013 – 2015 RAV4:
Vehicle Interior – Door Lock – “Door Lock: Wireless Door Lock Control System (w/o Smart Key System): [Registration](#)”
7. Verify wireless range is at least 65 feet (20 meters) per steps 1 – 3 in the Repair Procedure.