

INSPECTION

1. WIRELESS DOOR LOCK DIAGNOSIS MODE

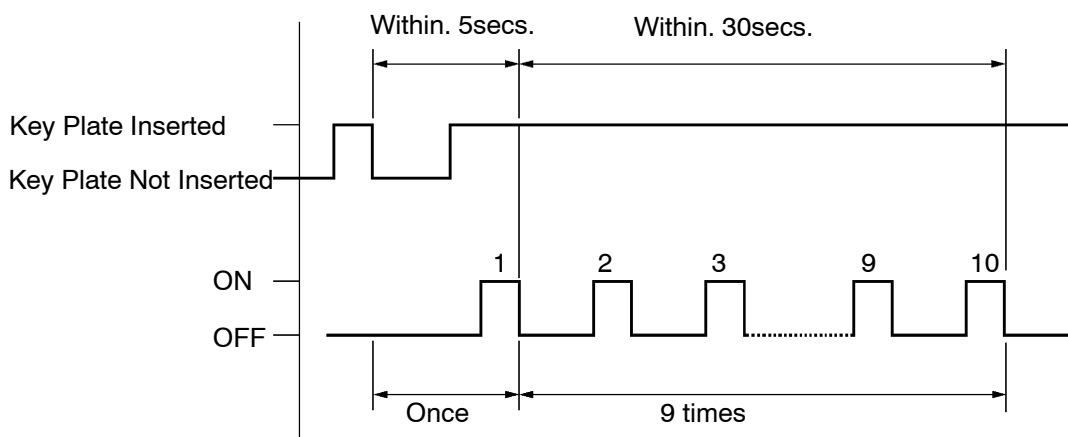
(a) Start up diagnosis mode.

HINT:

- This mode can also be used in the vehicle equipped with the smart key system.
- This mode is to check the condition of the signal transmission and reception among the transmitter, the tuner and ECU.

If all the transmitters that the customer has give no response, there is a possibility that the tuner or the wire harness is faulty.

- (1) Insert the ignition key into the ignition key cylinder.
- (2) Remove the ignition key from the ignition key cylinder.
- (3) Insert the key into the ignition switch.
- (4) Turn the ignition switch ON once within 5 sec.
- (5) Repeat turning the ignition switch OFF → ON 9 times within 30 sec.
- (6) Enter the diagnosis mode, and make sure that the buzzer sounds.



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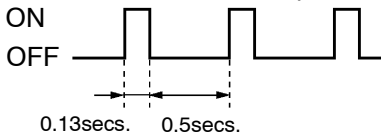
(b) Finishing the Diagnosis Mode.

During the Diagnosis mode, turn the ignition switch OFF → ON to go back to the normal mode.

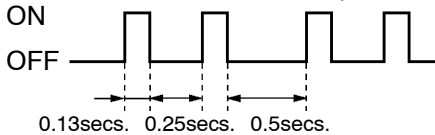
At this time make sure that the buzzer sounds.

Buzzer response:

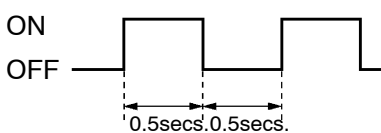
(1) When the LOCK switch is pressed



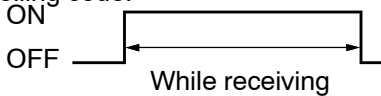
(2) When the UNLOCK switch is pressed



(3) When the TRUNK switch is pressed



(4) Disagreement of recognition code or rolling code.



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(c) Diagnosis Mode Check.

HINT:

Check how the buzzer sounds when pressing each transmitter switch.

- (1) LOCK switch
- (2) UNLOCK switch
- (3) TRUNK switch
- (4) Disagreement of recognition code or rolling code.

HINT:

If (4) is detected in the Diagnosis Check, conduct the recognition code registration.

- (5) No response from the buzzer.

HINT:

Conduct the following checks.

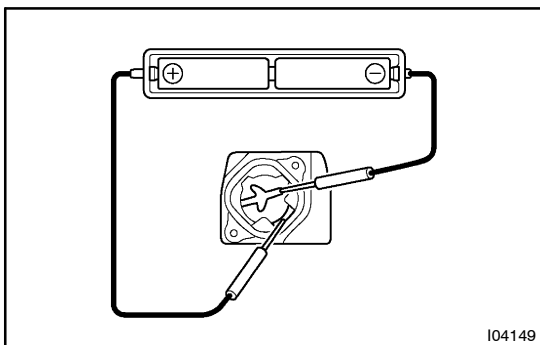
- Check the wireless door lock transmitter.
- Check the wireless door lock receiver.
- Check the wire harness between door lock tuner and theft deterrent ECU

2. w/o Smart Key:**INSPECT WIRELESS DOOR LOCK TRANSMITTER OPERATION**

HINT:

Refer to "Wireless door lock control receiver and transmitter replacement".

- (a) Using a screwdriver, remove the screw and cover.
- (b) Remove the battery (lithium battery).



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(c) Install a new or normal battery (lithium battery).

HINT:

When a new or normal battery can not be obtained, connect 2 new 1.5 V batteries in series, connect the battery (+) to the battery receptacle side terminal and battery (-) to the bottom terminal, then apply 3 V voltage to the transmitter.

- (d) In the location where is approx. 1 M away from driver's outside handle in the right direction, face the key plate of the transmitter to the vehicle, and check the transmitter operation when pressing transmission switch on the side of the transmitter body.

Standard:

- **Remote control of vehicle door lock can be operated.**
- **LED lights up more than once.**

HINT:

- The minimum operation distance differs according to operator, the way of holding, and location.
- As weak wave is used, operation distance might be shortened when noise is detected in strong wave or used frequency.

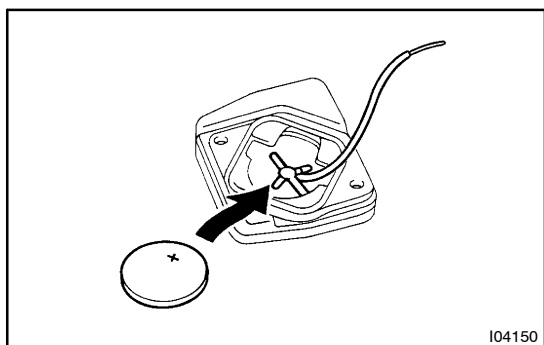
- (e) Install the battery (lithium battery).
- (f) Install a cover so that O-ring is not distorted or slipped off.
- (g) Using a screwdriver, tighten the screw.

3. w/o Smart Key:

CHECK BATTERY CAPACITY

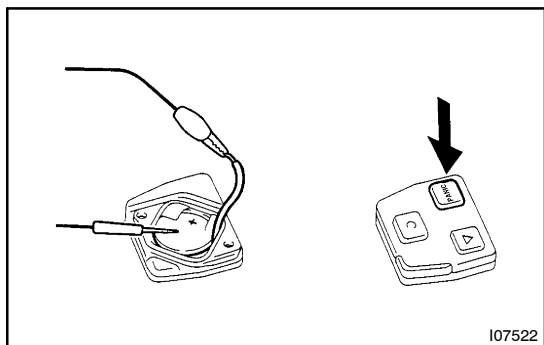
HINT:

- Make sure to use the TOYOTA electrical tester.
- With the battery unloaded, judge can not be made whether the battery is available or not on the test.
- When the transmitter is faulty, the energy amount left in the battery might not be checked correctly.
- On the lithium battery used for the transmitter, the voltage more than 2.5 V with the battery unloaded is shown on the tester until the energy is completely consumed. Accordingly when inspecting the energy amount left in the battery, it is necessary to measure the voltage when the battery is loaded. (1.2 k Ω).



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- (a) Remove the 2 screws and cover using a (-) driver.
- (b) Remove the battery (lithium battery) from the transmitter.
- (c) Connect the lead to the (-) terminal of the transmitter and install the battery.



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- (d) Connect the (+) tester to the (+) battery (lithium battery), and (-) tester to the lead respectively.
- (e) Press one of the transmitting switches on the transmitter for approx. 1 second.
- (f) Press the transmitting switch on the transmitter again to check the voltage.

Standard: 2.1 V or more

HINT:

- When the temperature of the battery is low, the judge can not be made correctly. When the outcome of the test is less than 2.1 V, conduct the test again after leaving the battery in the place at 18 °C for more than 30 minutes.
- By auto power off function, the voltage becomes no load voltage (more than 2.5 V) condition 20 seconds after the switch was pressed. Make sure to read the voltage before of it.

- High voltage might be shown 1 to 2 times after leaving the battery, judge should be made with the voltage shown at the 3rd time or later.
- (g) Disconnect the lead.
- (h) Set the battery (lithium battery) in the transmitter.
- (i) Install the cover, so that the O-ring is not distorted or slipped off.
- (j) Using a screwdriver, tighten the 2 screws.

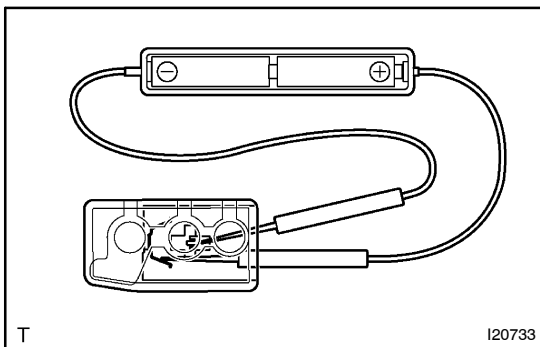
4. w/ Smart Key:

INSPECT WIRELESS DOOR LOCK TRANSMITTER OPERATION

HINT:

Refer to "Wireless door lock control receiver and transmitter replacement".

- (a) Remove the outer cover using a (-) driver.
- (b) Remove the battery (lithium battery) from the transmitter.



- (c) Install a new or normal battery (lithium battery).

HINT:

When a new or normal battery can not be obtained, connect 2 new 1.5 V batteries in series, connect the battery (+) to the battery receptacle side terminal and battery (-) to the bottom terminal, then apply 3 V voltage to the transmitter.

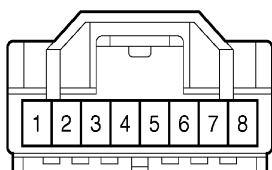
- (d) In the location where is approx. 1 M away from driver's outside handle in the right direction, face the key plate of the transmitter to the vehicle, and check the transmitter operation when pressing transmission switch on the side of the transmitter body.

Standard:

- **Remote control of vehicle door lock can be operated.**
- **LED lights up more than once.**

HINT:

- The minimum operation distance differs according to operator, the way of holding the transmitter, and location.
- As weak wave is used, operation distance might be shortened when noise is detected in strong wave or used frequency.
- (e) Install the battery (lithium battery).
- (f) Install the outer cover.

Wire Harness Side

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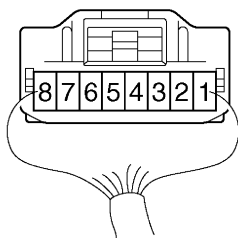
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**5. Connector disconnected:
INSPECT WIRELESS DOOR LOCK CONTROL TUNER
CIRCUIT**

Disconnect the connector from the tuner and inspect the connector on the wire harness side, as shown.

Tester connection	Condition	Specified condition
5 – Ground	Constant	Continuity
8 – Ground	–	Repeatedly change 0 – 5V

If the circuit is not as specified, inspect the circuit connected to other parts.



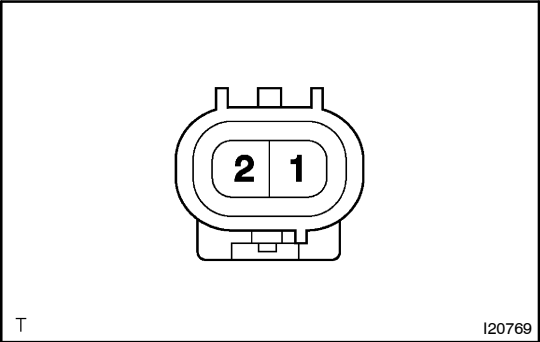
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**6. Connect connected:
INSPECT WIRELESS DOOR LOCK CONTROL RE-
CEIVER CIRCUIT**

Connect the wire harness side connector to the receiver and inspect the wire harness side connector from the back shown.

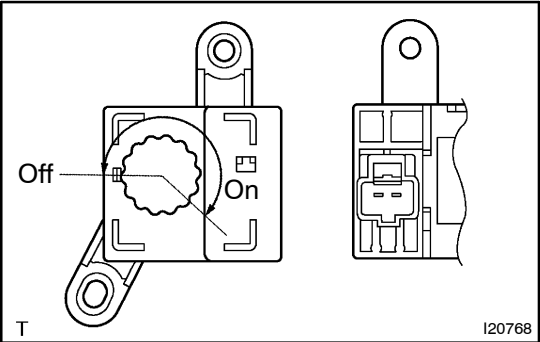
Tester connection	Condition	Specified condition
8 – Ground	Ignition switch position OFF Key removed Transmitter OFF → ON	0 ↔ 5 V → 5 V
7 – Ground	Ignition switch position OFF Key removed Transmitter OFF → ON	10 – 14V → Below 1 V
6 – Ground	Ignition switch position OFF Key removed Transmitter OFF → ON	10 – 14V → Below 1 V



7. INSPECT WIRELESS DOOR LOCK BUZZER OPERATION

Tester connection	Condition	Specified condition
1 – 2	Constant	Approx. 1 kΩ

If resistance is not as specified, replace the buzzer.



8. INSPECT WIRELESS BUZZER VOLUME AND ON/OFF SWITCH RESISTANCE

Tester connection	Condition	Specified condition
1 – 2	Knob turned clockwise	Approx. 10 kΩ – 0 Ω

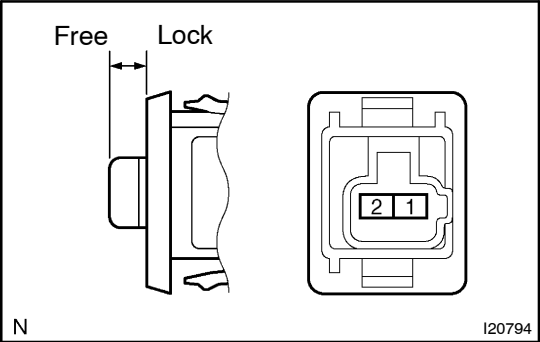
If resistance is not as specified, replace the switch.

9. INSPECT WIRELESS BUZZER VOLUME AND ON/OFF SWITCH CONTINUITY

Inspect continuity between terminal land 2.

Switch position	Specified condition
OFF (knob turned fully clockwise)	No continuity
ON (knob turned any position except fully clockwise)	Continuity

If resistance is not as specified, replace the switch.



10. INSPECT SMART KEY CANCEL SWITCH CONTINUITY

Switch position	Tester Connection	Specified condition
ON	1 – 2	No continuity
OFF	1 – 2	Continuity