

## INSPECTION

### 1. WIRELESS DOOR LOCK DIAGNOSIS MODE

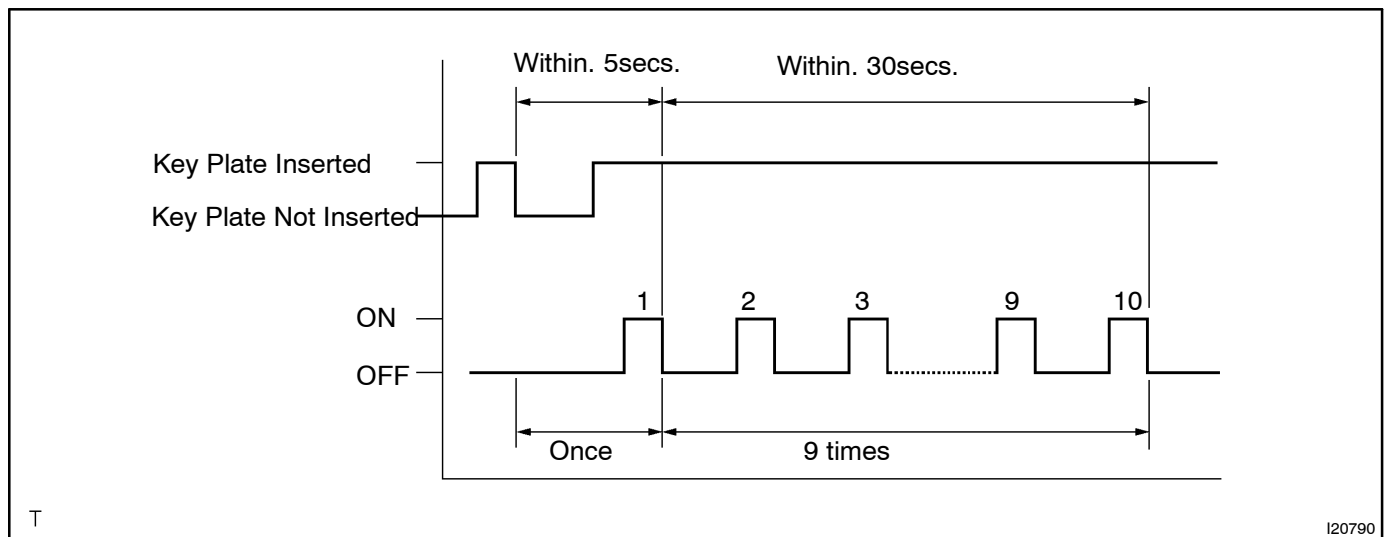
(a) Start up diagnosis mode.

HINT:

This mode is to check the condition of the signal transmission and reception among the transmitter, the tuner and ECU.

If all transmitters for a vehicle does not respond, 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 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.



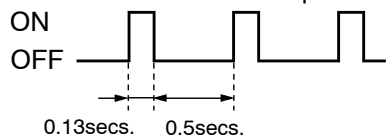
(b) Finishing the Diagnosis Mode.

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

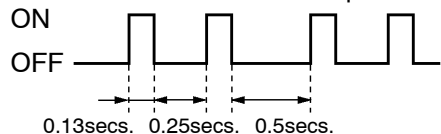
At this time, make sure that the buzzer sounds.

**Buzzer response:**

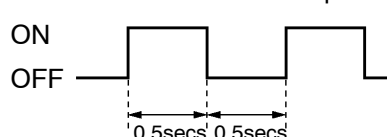
(1) When the LOCK switch is pressed



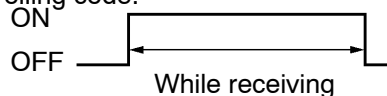
(2) When the UNLOCK switch is pressed



(3) When the TRUNK switch is pressed



(4) Disagreement of recognition code or rolling code.



T

I20456

(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.

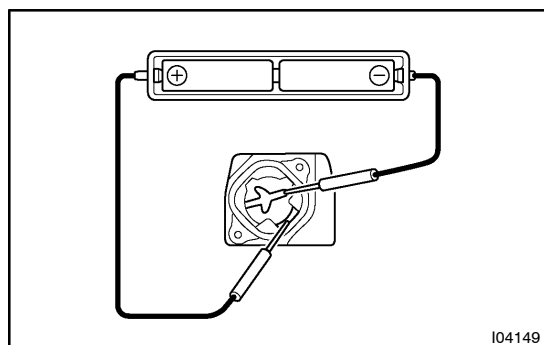
- Check the wireless door lock transmitter.
- Check the wireless door lock receiver.
- Check the wire harness between door lock tuner and theft deterrent ECU

**2. 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 the cover.
- (b) Remove the battery (lithium battery).



(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 the 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 while pressing transmission switch on the side of the transmitter body.

**Standard:**

- Remote control of vehicle door lock operates.
- LED comes on more than once.

HINT:

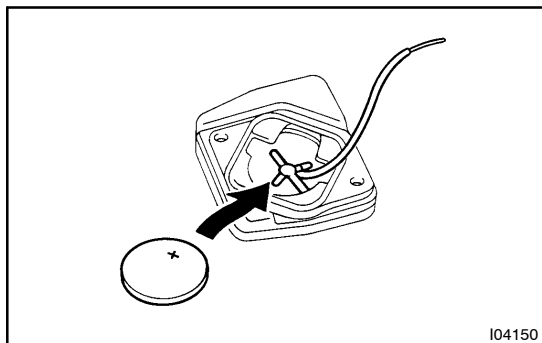
- The minimum operation distance differs depending on a operator, the way of holding, and the location.
- As the transmitter uses weak wave, its operating range becomes narrow when the weak wave is interrupted by noise.

- (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.

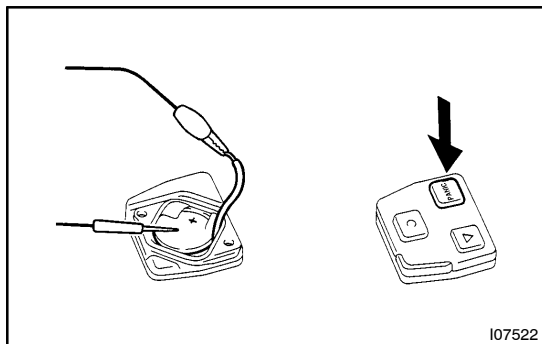
### 3. CHECK BATTERY CAPACITY

#### 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 $\Omega$ ).



- (a) Remove the 2 screws and the 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.



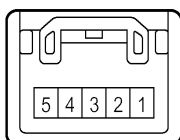
- (d) Connect the (+) tester to the (+) battery (lithium battery), and (-) tester to the lead respectively.
- (e) Press one of the transmitting switches on the transmitter for approx. 1 second.
- (f) Press the transmitting switch on the transmitter again to check the voltage.

**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, and 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.

**Wire Harness Side**

I25814

#### 4. 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      |
|-------------------|--------------------------------------------------------------------------|--------------------------|
| 1 (E) – Ground    | Always                                                                   | Continuity               |
| 2 (RDA) – Ground  | Ignition switch off, all doors closed and transmitter switch not pressed | 10 – 14 V                |
|                   | Ignition switch off, all doors closed and transmitter switch pressed     | Pulse generation         |
| 5 (+B) – Ground   | Always                                                                   | Repeatedly change 0 – 5V |

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

#### 5. INSPECT WIRELESS DOOR BUZZER CIRCUIT (See page [DI-989](#))