05HUH–01

INSPECTION

1. WIRELESS DOOR LOCK DIAGNOSTIC MODE

(a) Switch to self–diagnostic mode on the hand–held tester.

HINT:

This mode checks signal transmission/reception between the door control transmitter, door control receiver and theft warning ECU (theft deterrent ECU). If all of a customer's door control transmitters do not function, it is possible the door control transmitter(s) and/or wire harness is malfunctioning.

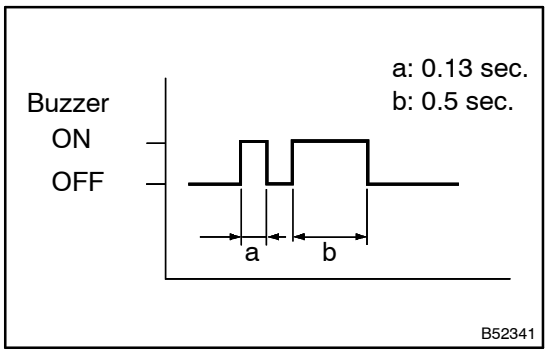
(1) Switch to self–diagnostic mode on the hand–held tester.

(2) Turn the ignition switch ON.

(3) Please refer to the hand–held tester operator's manual for further details.

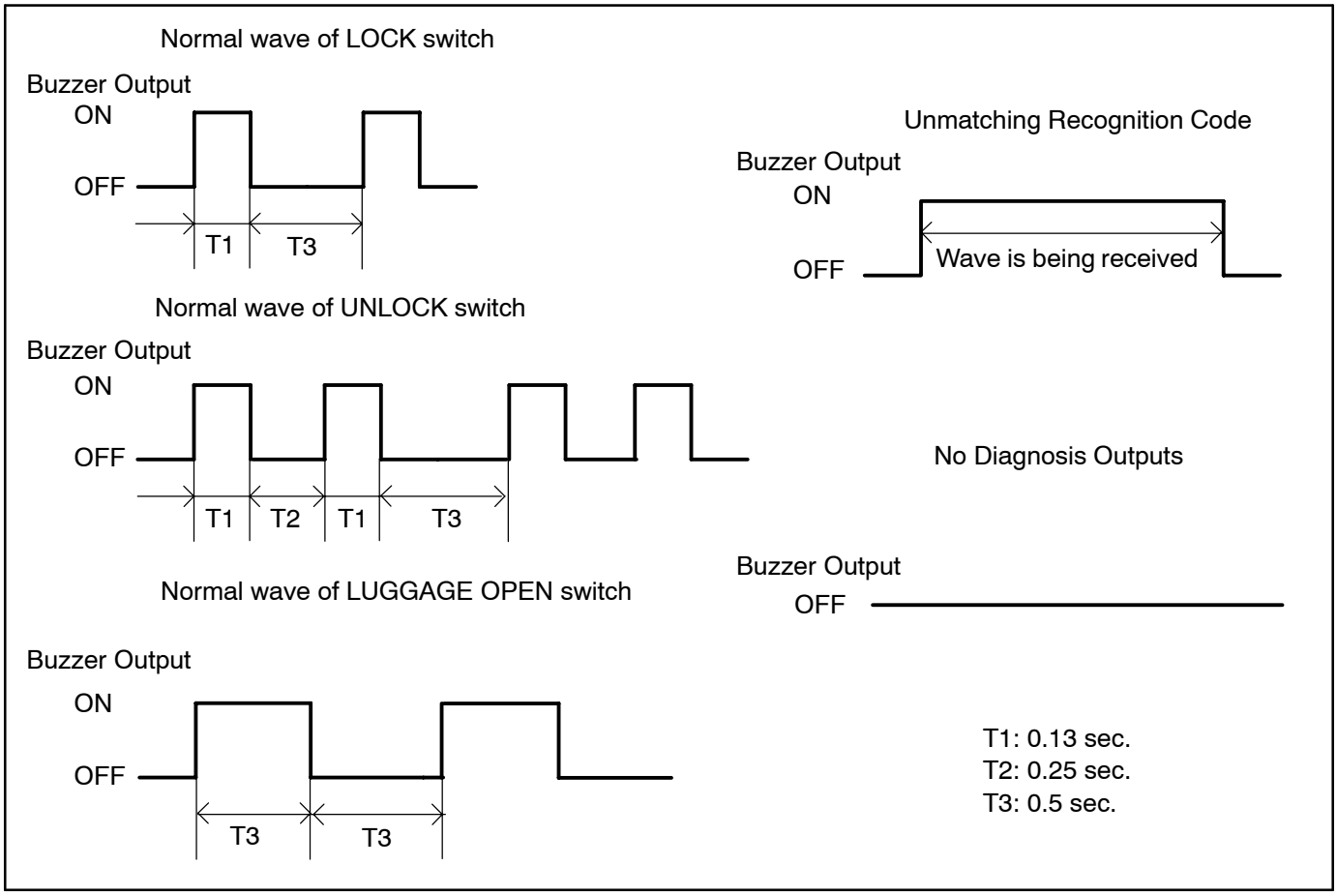
HINT:

Do not lock or unlock doors during self–diagnostic mode.



(b) Check that the system has switched to self–diagnostic mode by listening to the wireless door lock buzzer. The buzzer should sound according to the illustration on the left.

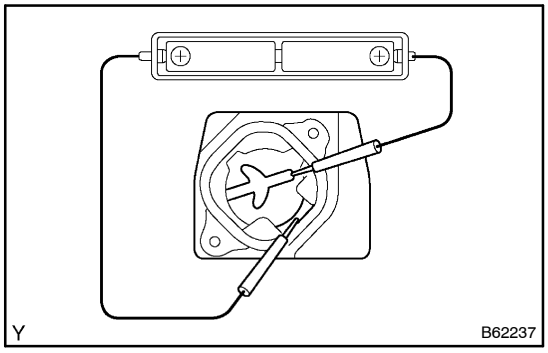
(c) Inspect the diagnosis outputs when the door control transmitter switch is held down (the diagnosis outputs can be checked with the sound of the wireless door lock buzzer).



HINT:

If "unmatching recognition code" or "no diagnosis output" is output, perform the inspections below.

- Wireless door lock transmitter.
- Door control receiver (inner mirror).
- Wire harness between the door control receiver and theft warning ECU assy.



2. INSPECTION OF TRANSMITTER SUB–ASSY (MODULE SET DOOR CONTROL

(a) Inspect operation of the transmitter.

(1) Remove the battery (lithium battery) from the transmitter (see page 05–2944).

(2) Install a new or non–depleted battery (lithium battery).

HINT:

When a new or non–depleted battery is not available, first connect 2 new 105 batteries in series. Then connect leads to the batteries and use the leads to apply 3 V to the transmitter, as shown in the illustration.

(3) From outside the vehicle, approximately 1 m (3.28 ft) from the driver side outside door handle, test the transmitter by pointing its key plate at the vehicle and pressing a transmitter switch.

OK:

The door lock can be operated via the transmitter
The LED lights up more than once.

HINT:

- The operational area differs depending on the user, the way the transmitter is held and the location.
- The transmitter's faint electric waves may be affected if the area has strong electric waves or noise. The transmitter's operation area may be shortened or the transmitter may not function.

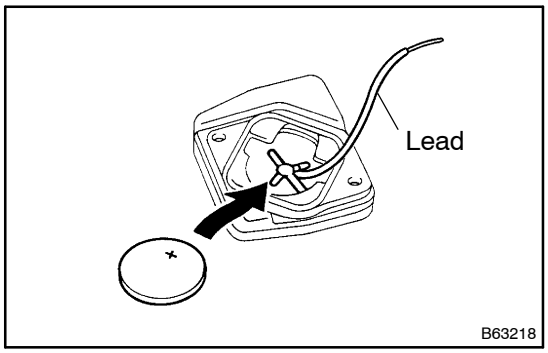
(b) Inspect the battery capacity.

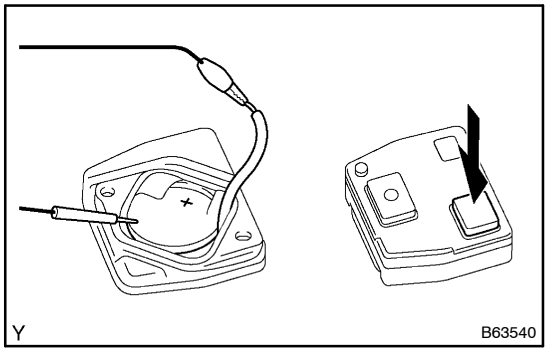
HINT:

- When checking the amount of energy left in the battery (lithium battery), the battery must be checked while it is installed in the transmitter (a resistance of 1.2 kΩ is applied to the battery). When the battery energy is checked by itself (uninstalled), the voltage reading will be more than 2.5 V until the energy is depleted.
- If the transmitter is malfunctioning, the voltage reading of the energy left in the battery will be inaccurate.

(1) remove the battery (lithium battery) from the transmitter (see page 05–2944).

(2) Connect a wire to the negative (–) terminal of the transmitter and install the battery.



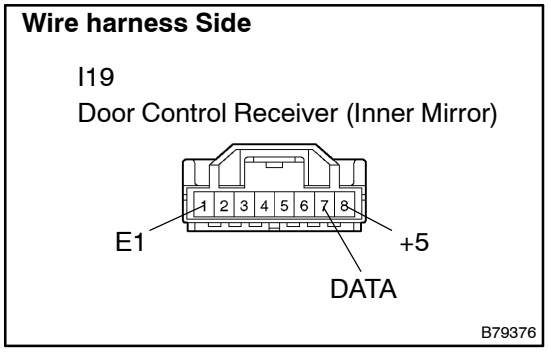


(3) Connect the tester positive (+) lead to the (+) battery (lithium battery) and the tester negative (–) lead to the lead.
(4) Press one of the transmission switches on the transmitter for approximately 1 second.
(5) Press the transmission switch on the transmitter again to check the voltage.

OK: 2.2 V or higher

HINT:

- When the temperature of the battery is low, the inspection cannot be made correctly.
  When the outcome of the test is less than 2.2 V, conduct the test again after leaving the battery in a place with a temperature of 18 °C (64 °F) for more 30 minutes.
- Read the voltage immediately after the switch is pressed. when 0.8 seconds have passed after the switch is pressed, the automatic power–off function starts and resistance applied to the battery will cease. The voltage of the battery will be 2.5 V or more.
- Press the switch at least 3 times before reading the voltage.
  If the battery has just been returned to 18 °C (64 °F), the voltage may be unusually high for the first or second voltage reading.



3. INSPECTION DOOR CONTROL RECEIVER (INNER MIRROR)

(a) Disconnect the I19 receiver connector.
(b) Measure the resistance and voltage between the wire harness side connector and body ground.

Standard:

Tester Connection	Specified Condition
I19–8 (+5) – Body ground	Below 1 Ω
I19–5 (E1) – Body ground.	Below 1 Ω

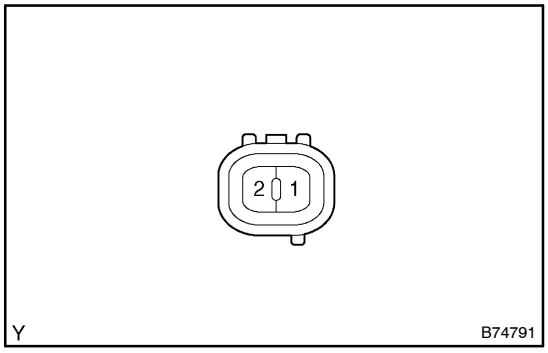
If the result is not as specified, repair or replace the wire harness and connector.

(c) Reconnect the I19 receiver connector.
(d) Measure the voltage between the terminal and body ground.

Standard:

Tester Connection	Condition	Specified Condition
I19–7 (DATA) – Body ground	No key in ignition key cylinder, all doors closed and each transmitter switch OFF → ON	Below 1 V → Approx. 6 to 7 V → Below 1 V

If the result is not as specified, replace the door control receiver.



4. INSPECT WIRELESS DOOR LOCK BUZZER

(a) Disconnect the K1 buzzer connector.

(b) Measure the resistance of each terminal of the wire harness side connector and body ground.

Standard:

Tester Connection	Specified Condition
K1–1 – Body ground	Below 1 Ω
K1–2 Body ground	Below 1 Ω

If the result is not as specified, repair or replace the wire harness and connector.

(c) Reconnect the K1 buzzer connector.

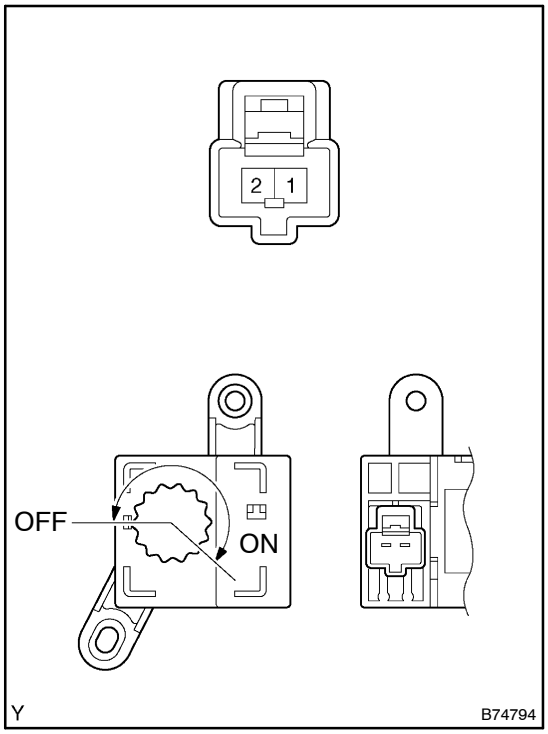
(d) Measure the resistance between terminals 1 and 2 of the buzzer.

Standard: Approximately 1 kΩ

NOTICE:

- **The buzzer circuit is built into the theft warning ECU, not into the buzzer itself.**
- **When battery voltage is directly applied to the buzzer, the buzzer does not sound.**

If the result is not as specified, replace the door control receiver.



5. INSPECT WIRELESS DOOR BUZZER CONTROLLER

(a) Measure the resistance between terminals 1 and 2 of the buzzer controller.

Standard:

Tester Connection	Condition	Specified Condition
1 – 2	OFF (knob turned fully counter-clockwise)	10 kΩ or higher
1 – 2	OFF → ON (knob turned clockwise)	10 kΩ or higher → 10 kΩ to below 1 Ω

If the result is not as specified, replace the wireless door lock buzzer controller.