

## 6. Diagnostics Procedure

### A: BASIC DIAGNOSTICS PROCEDURE

#### 6A1 : CHECK KEYLESS ENTRY FUNCTION.

- 1) Perform pre-inspection.  
<Ref. to 6-2b [T200].>
- 2) Remove ignition key from ignition switch.
- 3) Set the room light switch in the middle position.
- 4) Close all doors, rear gate and trunk lid.
- 5) Press the LOCK/ARM button one time.

**CHECK** : *Do all doors and rear gate lock normally?*

**YES** : Go to step **6A2**.

**NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

#### 6A2 : CHECK KEYLESS ENTRY FUNCTION.

Check if the horn signal chirps.

**CHECK** : *Does the horn chirp one time?*

**YES** : Go to step **6A3**.

**NO** : Go to step **6B1**.

#### 6A3 : CHECK KEYLESS ENTRY FUNCTION.

Press the UNLOCK/DISARM button one time.

**CHECK** : *Does the driver's door unlock normally?*

**YES** : Go to step **6A4**.

**NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

#### 6A4 : CHECK KEYLESS ENTRY FUNCTION.

Check if the horn signal chirps.

**CHECK** : *Does the horn chirp two times?*

**YES** : Go to step **6A5**.

**NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

#### 6A5 : CHECK KEYLESS ENTRY FUNCTION.

Check if the room light is turned on.

**CHECK** : *Does the room light turn on for 30 seconds, and then turn off?*

**YES** : Go to step **6A6**.

**NO** : Go to step **6C1**.

#### 6A6 : CHECK KEYLESS ENTRY FUNCTION.

- 1) Press the LOCK/ARM button one time.
- 2) Press the UNLOCK/DISARM button two times.

**CHECK** : *Do all doors and rear gate unlock normally?*

**YES** : Go to step **6A7**.

**NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

#### 6A7 : CHECK KEYLESS ENTRY FUNCTION.

Keep the LOCK/ARM button pressed for more than 1.5 seconds.

**CHECK** : *Does the horn sound for 30 seconds, and then turns off?*

**YES** : Go to step **6A8**.

**NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

#### 6A8 : CHECK KEYLESS ENTRY FUNCTION.

- 1) Keep the LOCK/ARM button pressed for more than 1.5 seconds.
- 2) Horn will sound, and then press the LOCK/ARM button.

**CHECK** : *Does the horn turn off?*

**YES** : Go to step **6A9**.

**NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

#### 6A9 : CHECK KEYLESS ENTRY FUNCTION.

- 1) Keep the LOCK/ARM button pressed for more than 1.5 seconds.
- 2) Horn will sound, and then press the UNLOCK/DISARM button.

**CHECK** : *Does the horn turn off?*

**YES** : Go to step **6A10**.

**NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

**6A10 : CHECK DOOR SWITCH FUNCTION.**

Open the front left door.

- CHECK** : ***Does the room light turn on?***
- YES** : Go to step **6A11**.
- NO** : Go to step **6D1**.

**6A11 : CHECK DOOR SWITCH FUNCTION.**

- 1) Close the front left door.
- 2) Open the front right door.

- CHECK** : ***Does the room light turn on?***
- YES** : Go to step **6A12**.
- NO** : Go to step **6D1**.

**6A12 : CHECK DOOR SWITCH FUNCTION.**

- 1) Close the front right door.
- 2) Open the rear left door.

- CHECK** : ***Does the room light turn on?***
- YES** : Go to step **6A13**.
- NO** : Go to step **6D1**.

**6A13 : CHECK DOOR SWITCH FUNCTION.**

- 1) Close the rear left door.
- 2) Open the rear right door.

- CHECK** : ***Does the room light turn on?***
- YES** : Go to step **6A14**.
- NO** : Go to step **6D1**.

**6A14 : PERFORM PROGRAMMING.**

**NOTE:**

Finish operation from step 1) through 4) within 45 seconds.

- 1) Sit on the driver's seat and close all doors, rear gate and trunk lid.
- 2) Open the driver's door.
- 3) Close the driver's door.
- 4) Turn the ignition switch from ON to LOCK ten times in rapid succession (within 15 seconds).

**NOTE:**

Do not start the engine at this time.

- 5) The horn chirps one time to indicate that the system has been in the programming mode.
- 6) Open the driver's door.
- 7) Close the driver's door.
- 8) Press any button on the transmitter that you wish to program into the system.
- 9) Horn will chirp two times to indicate that the transmitter has been programmed.

**NOTE:**

Any additional transmitter can also be programmed at this time. Repeat steps 6) through 9) for an additional transmitter.

10) Remove the ignition key from the ignition switch.

11) The horn will chirp three times to indicate that the system has exited the programming mode.

12) Check the keyless entry system properly operates by operating each transmitter.

- CHECK** : ***Does the transmitter operate normally?***
- YES** : Go to step **6A15**.
- NO** : Go to step **6E1**.

**6A15 : CHECK IGNITION KEY SWITCH.**

- 1) Insert the ignition key to the ignition switch (at LOCK position).
- 2) Perform lock and unlock with transmitter.

- CHECK** : ***Does the power door lock function normally?***
- YES** : Go to step **6F1**.
- NO** : End of basic diagnostics procedure.

**B: DIAGNOSTICS ITEM 1**

**6B1 : SELECT HORN SIGNAL OPERATION.**

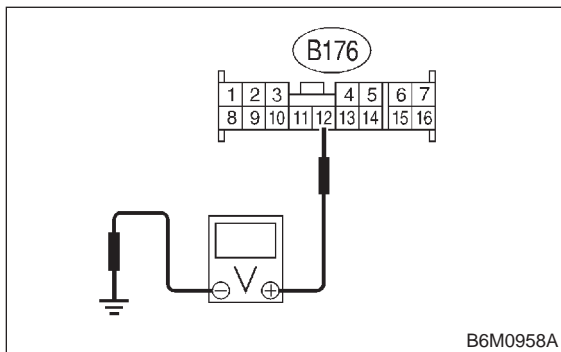
Keep both LOCK/ARM and UNLOCK/DISARM buttons pressed for more than 1.5 seconds.

- CHECK** : *Does the horn chirp one time?*
- YES** : Go to step **6B2**.
- NO** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A1].>

**6B2 : CHECK HORN SIGNAL OUTPUT SIGNAL.**

- 1) Disconnect connector from keyless entry control module.
- 2) Measure voltage between keyless entry control module connector (B176) and chassis ground.

**Connector & terminal**  
**(B176) No. 12 (+) — Chassis ground (-):**

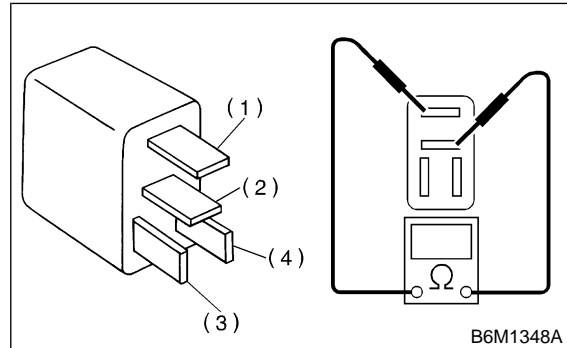


- CHECK** : *Is the voltage more than 10 V?*
- YES** : Go to step **6B3**.
- NO** : Go to step **6B6**.

**6B3 : CHECK HORN RELAY.**

- 1) Remove horn relay from main fuse box.
- 2) Check continuity between horn relay terminals.

**Terminals**  
**No. 1 — No. 2:**

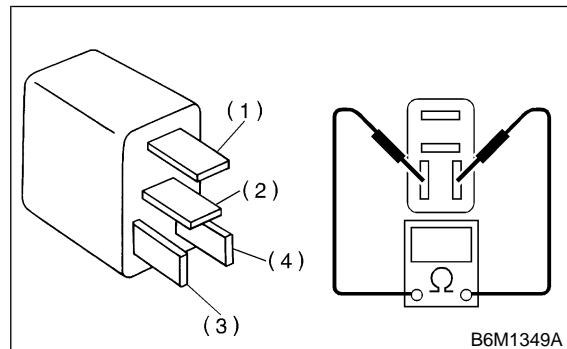


- CHECK** : *Does continuity exist?*
- YES** : Replace horn relay.
- NO** : Go to step **6B4**.

**6B4 : CHECK HORN RELAY.**

Check continuity between horn relay terminals.

**Terminals**  
**No. 3 — No. 4:**



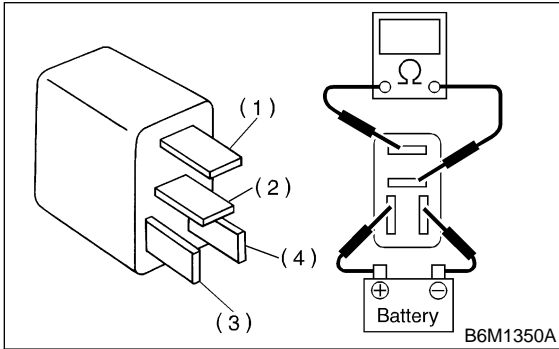
- CHECK** : *Does continuity exist?*
- YES** : Go to step **6B5**.
- NO** : Replace horn relay.

**6B5 : CHECK HORN RELAY.**

- 1) Connect the battery to horn relay terminals No. 3 and No. 4.
- 2) Check continuity between horn relay terminals.

**Terminals**

**No. 1 — No. 2:**



- CHECK** : **Does continuity exist?**
- YES** : Repair wiring harness of horn circuit.
- NO** : Replace horn relay.

**6B6 : CHECK FUSE.**

Remove and visually check the fuse No. 6 (in main fuse box).

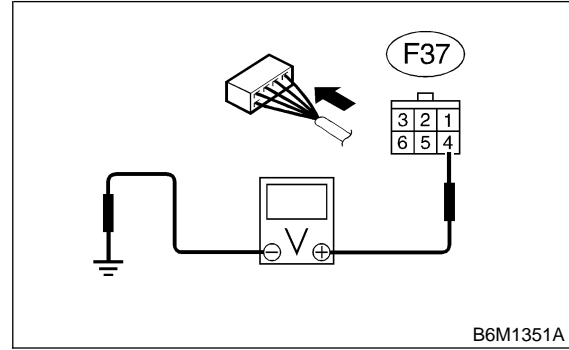
- CHECK** : **Is the fuse No. 6 blown?**
- YES** : Replace fuse (15 A).
- NO** : Go to step **6B7**.

**6B7 : CHECK POWER SUPPLY FOR HORN RELAY.**

- 1) Install horn relay to main fuse box.
- 2) Measure voltage between main fuse box connector (F37) and chassis ground.

**Connector & terminal**

**(F37) No. 4 (+) — Chassis ground (-):**



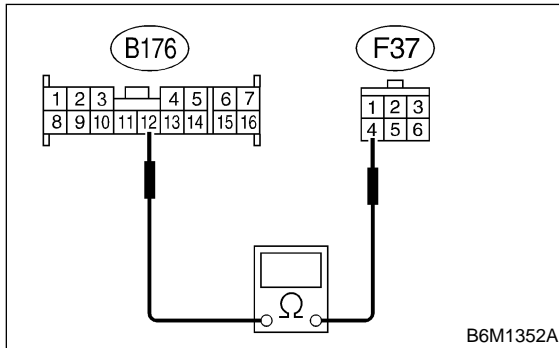
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **6B8**.
- NO** : Repair wiring harness between main fuse box and battery.

**6B8 : CHECK RESISTANCE BETWEEN HORN RELAY AND KEYLESS ENTRY CONTROL MODULE.**

- 1) Disconnect connector from main fuse box and keyless entry control module.
- 2) Measure resistance between keyless entry control module connector (B176) and main fuse box connector (F37).

**Connector & terminal**

**(B176) No. 12 — (F37) No. 4:**



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace keyless entry control module. <Ref. to 6-2 [W13A1].>
- NO** : Repair wiring harness between main fuse box and keyless entry control module.

**C: DIAGNOSTICS ITEM 2**

**6C1 : CHECK FUSE.**

Remove and visually check the fuse No. 2 (in main fuse box).

- CHECK** : **Is fuse No. 2 blown?**
- YES** : Replace fuse (15 A).
- NO** : Go to step **6C2**.

**6C2 : CHECK ROOM LIGHT BULB.**

Remove and visually check the room light bulb.

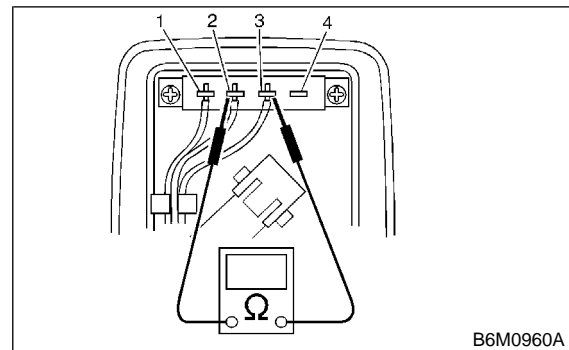
- CHECK** : **Is the bulb blown?**
- YES** : Replace bulb.
- NO** : Go to step **6C3**.

**6C3 : CHECK ROOM LIGHT SWITCH.**

- 1) Remove room light.
- 2) Measure resistance of room light switch terminal at the middle position.

**Terminals**

**No. 2 — No. 3:**



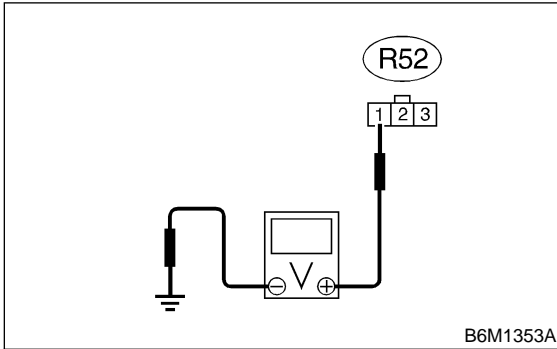
- CHECK** : **Is the resistance less than 1 Ω?**
- YES** : Repair or replace room light.
- NO** : Go to step **6C4**.

**6C4 : CHECK POWER SUPPLY FOR ROOM LIGHT.**

- 1) Disconnect connector from room light.
- 2) Open any door.
- 3) Measure voltage between room light connector (R52) and chassis ground.

**Connector & terminal**

**(R52) No. 1 (+) — Chassis ground (-):**



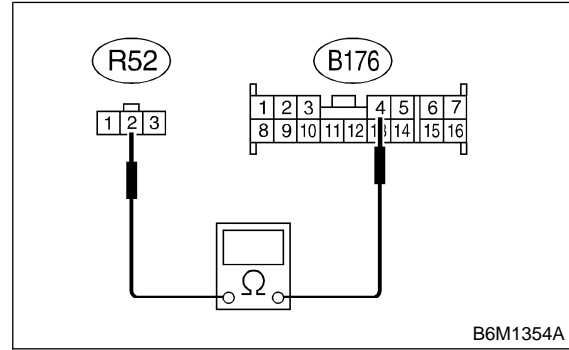
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **6C5**.
- NO** : Repair wiring harness between room light and battery.

**6C5 : CHECK HARNESS CONNECTOR BETWEEN ROOM LIGHT AND KEYLESS ENTRY CONTROL MODULE.**

- 1) Disconnect connector from keyless entry control module.
- 2) Measure resistance between room light connector (R52) and keyless entry module connector (B176).

**Connector & terminal**

**(R52) No. 2 — (B176) No.4:**

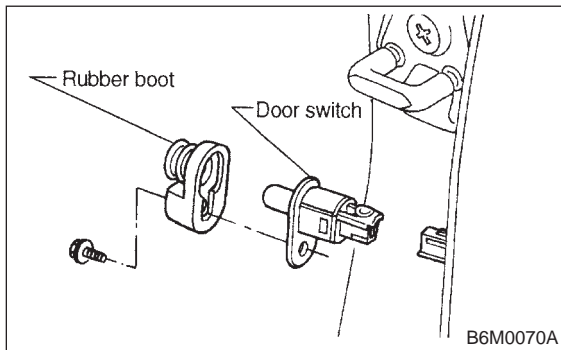


- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace keyless entry control module. <Ref. to 6-2 [W13A1].>
- NO** : Repair wiring harness between room light and keyless entry control module.

D: DIAGNOSTICS ITEM 3

6D1 : CHECK DOOR SWITCH.

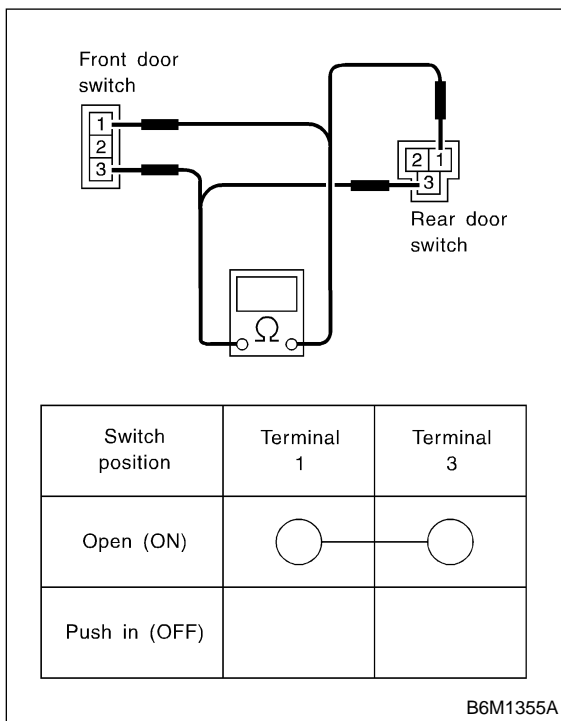
1) Remove door switch.



2) Move switch and check continuity between terminals of door switch.

**Terminals**

**No. 1 — No. 3**



**CHECK** : Does any fault exist in the door switch?

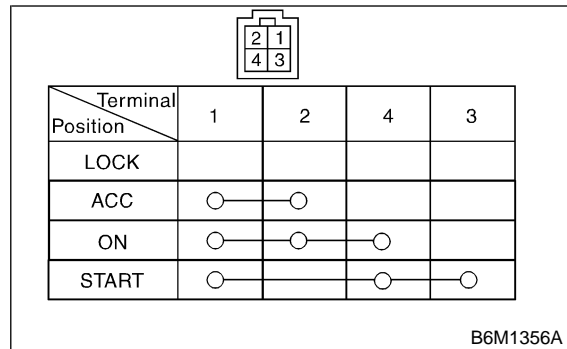
**YES** : Replace door switch.

**NO** : Replace keyless entry control module. <Ref. to 6-2 [W13A1].>

E: DIAGNOSTICS ITEM 4

6E1 : CHECK IGNITION SWITCH.

1) Remove ignition switch. <Ref. to 6-2 [W3A1].>  
2) Turn ignition key to each position and check continuity between terminals of ignition switch connector.



**CHECK** : Is the ignition switch faulty?

**YES** : Replace ignition switch. <Ref. to 6-2 [W3A1].>

**NO** : Replace keyless entry control module. <Ref. to 6-2 [W13A1].>

**F: DIAGNOSTICS ITEM 5**

**6F1 : CHECK FUSE.**

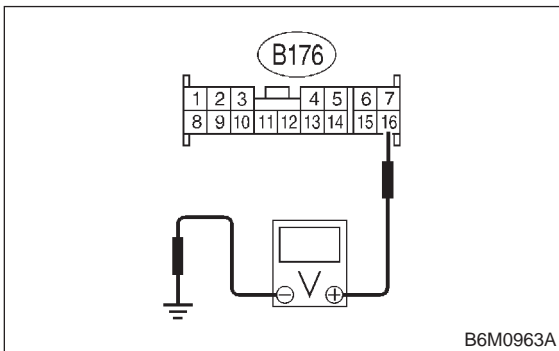
Remove and visually check the fuse No. 6 (in main fuse box).

- CHECK** : *Is fuse No. 6 blown?*
- YES** : Replace fuse (15 A).
- NO** : Go to step **6F2**.

**6F2 : CHECK KEYLESS ENTRY CONTROL MODULE.**

- 1) Disconnect connector from keyless entry control module.
- 2) Insert the key to ignition switch (LOCK position).
- 3) Measure voltage between keyless entry control module connector (B176) and chassis ground.

**Connector & terminal**  
**(B176) No. 16 (+) — Chassis ground (-):**

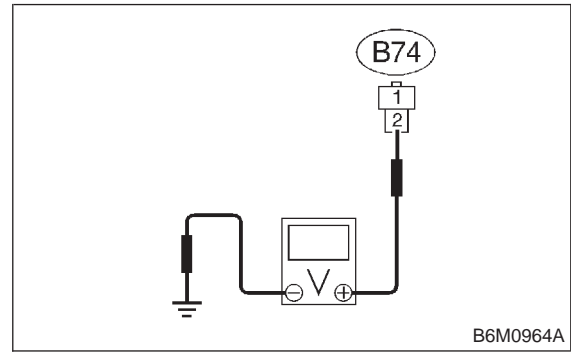


- CHECK** : *Is the voltage more than 10 V?*
- YES** : Replace keyless entry control module.  
<Ref. to 6-2 [W13A0].>
- NO** : Go to step **6F3**.

**6F3 : CHECK HARNESS CONNECTOR BETWEEN BATTERY AND KEY WARNING SWITCH.**

- 1) Disconnect connector from key warning switch.
- 2) Measure voltage between key warning switch connector (B74) and chassis ground.

**Connector & terminal**  
**(B74) No. 2 (+) — Chassis ground (-):**

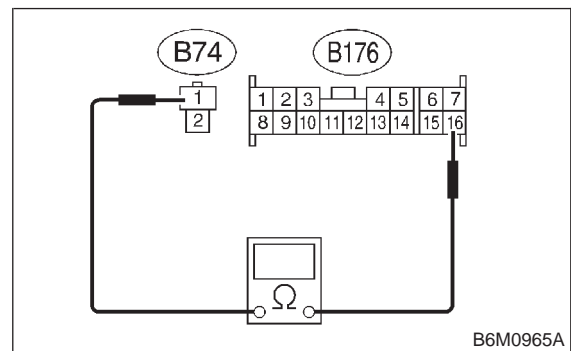


- CHECK** : *Is the voltage more than 10 V?*
- YES** : Go to step **6F4**.
- NO** : Repair wiring harness between battery and key warning switch.

**6F4 : CHECK HARNESS CONNECTOR BETWEEN KEY WARNING SWITCH AND KEYLESS ENTRY CONTROL MODULE.**

Measure resistance between key warning switch connector (B74) and keyless entry control module connector (B176).

**Connector & terminal**  
**(B74) No. 1 — (B176) No. 16:**



- CHECK** : *Is the resistance less than 10 Ω?*
- YES** : Replace key warning switch.
- NO** : Repair wiring harness between key warning switch and keyless entry control module.



MEMO: