

6. Diagnostics Procedure

A: BASIC DIAGNOSTICS PROCEDURE

6A1 : CHECK KEYLESS ENTRY FUNCTION.

- 1) Perform pre-inspection.
<Ref. to 6-2c [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 [W26A1].>

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 [W26A1].>

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 [W26A1].>

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 [W26A1].>

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 [W26A1].>

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 [W26A1].>

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 [W26A1].>

6-2C [T6A10] BODY ELECTRICAL SYSTEM (KEYLESS ENTRY)

6. Diagnostics Procedure

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.

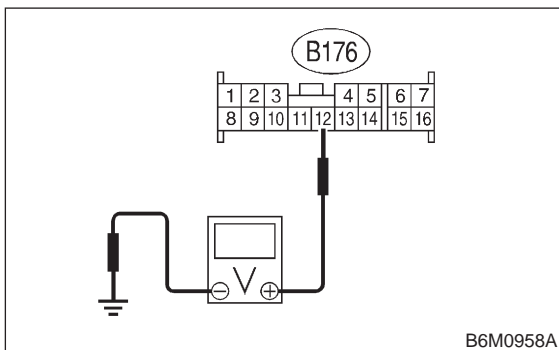
Keep both LOCK/ARM and UNLOCK/DISARM buttons pressed for more than 1.5 seconds.

- CHECK** : *Does the horn chirp one time?*
- YES** : Go to step **6B2**.
- NO** : Replace keyless entry control module.
<Ref. to 6-2 [W26A1].>

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 (-):



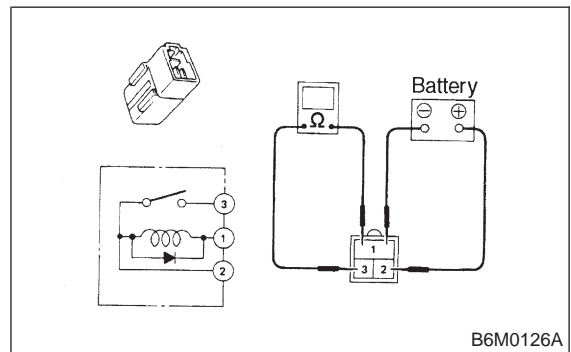
- CHECK** : *Is the voltage more than 10 V?*
- YES** : Go to step **6B3**.
- NO** : Go to step **6B6**.

6B3 : CHECK HORN RELAY.

- 1) Remove horn relay.
- 2) Check continuity between horn relay terminals.

Terminals

No. 2 — No. 3:



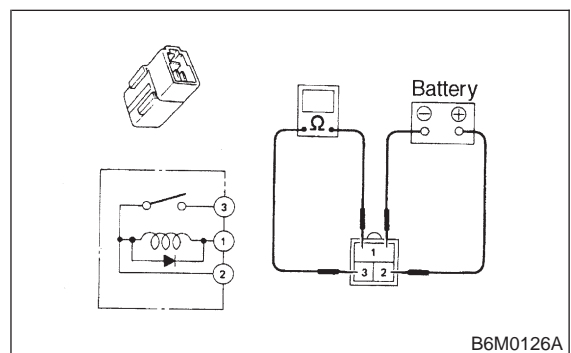
- CHECK** : *Does continuity exist?*
- YES** : Replace horn relay.
- NO** : Go to step **6B4**.

6B4 : CHECK HORN RELAY.

Check continuity between horn relay terminals.

Terminals

No. 1 — No. 2:



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

6-2C [T6B5] BODY ELECTRICAL SYSTEM (KEYLESS ENTRY)

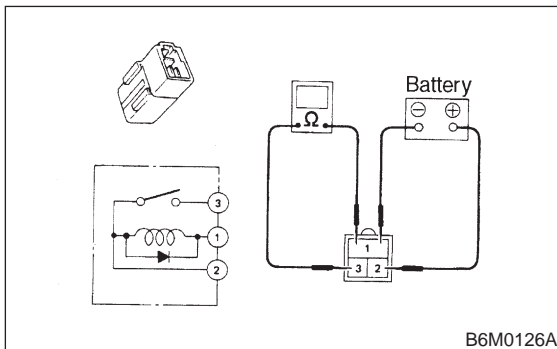
6. Diagnostics Procedure

6B5 : CHECK HORN RELAY.

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

Terminals

No. 2 — No. 3:



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

6B6 : CHECK FUSE NO. 12.

Remove and visually check the fuse No. 12 (in fuse box).

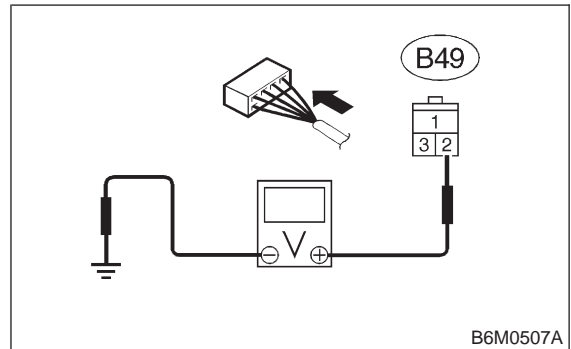
- CHECK** : **Is the fuse No. 12 blown?**
YES : Replace fuse (20 A).
NO : Go to step 6B7.

6B7 : CHECK POWER SUPPLY FOR HORN RELAY.

Measure voltage between horn relay connector (B49) and chassis ground.

Connector & terminal

(B49) No. 2 (+) — Chassis ground (-):



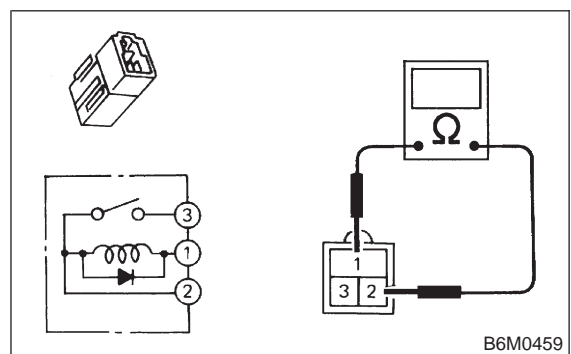
- CHECK** : **Is the voltage more than 10 V?**
YES : Go to step 6B8.
NO : Repair wiring harness between horn relay and battery.

6B8 : CHECK HORN RELAY CONTINUITY.

- 1) Remove horn relay.
- 2) Check continuity between horn relay terminals.

Terminals

No. 1 — No. 2:

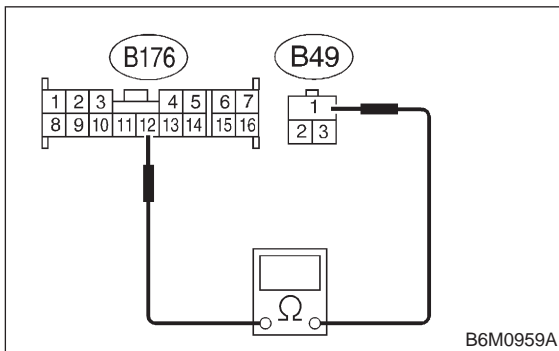


- CHECK** : **Does continuity exist?**
YES : Go to step 6B9.
NO : Replace horn relay.

6B9 : CHECK HARNESS CONNECTOR BETWEEN HORN RELAY AND KEYLESS ENTRY CONTROL MODULE.

- 1) Disconnect connector from horn relay and keyless entry control module.
- 2) Measure resistance between keyless entry control module connector (B176) and horn relay connector (B49).

Connector & terminal
(B176) No. 12 — (B49) No. 1:



- CHECK** : *Is the resistance less than 10 Ω?*
- YES** : Replace keyless entry control module. <Ref. to 6-2 [W26A1].>
- NO** : Repair wiring harness between horn relay and keyless entry control module.

C: DIAGNOSTICS ITEM 2

6C1 : CHECK FUSE NO. 25.

Remove and visually check the fuse No. 25 (in main fuse box).

- CHECK** : *Is fuse No. 25 blown?*
- YES** : Replace fuse (15 A).
- NO** : Go to step 6C2.

6C2 : CHECK ROOM LIGHT BULB.

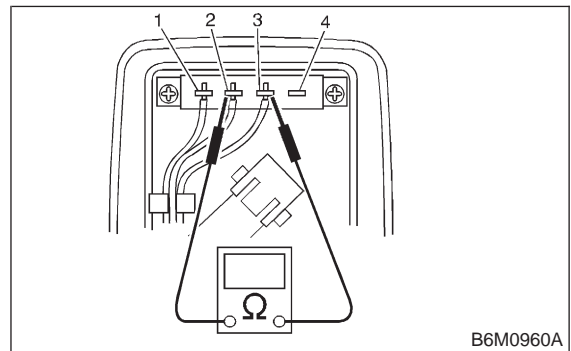
Remove and visually check the room light bulb.

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

6C3 : CHECK ROOM LIGHT SWITCH.

- 1) Remove room light. <Ref. to 6-2 [W900].>
- 2) Measure resistance of room light switch terminal at the middle position.

Terminals
No. 2 — No. 3:

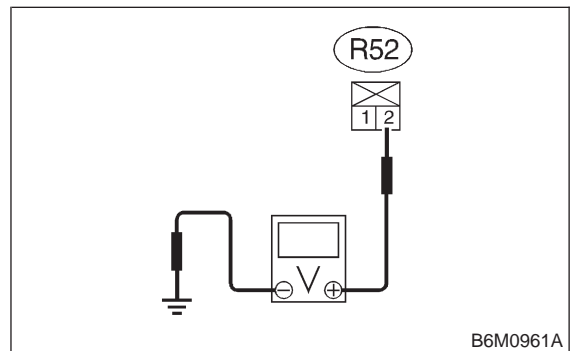


- CHECK** : *Is the resistance less than 1 Ω?*
- YES** : Repair or replace room light.
- NO** : Go to step 6C4.

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. 2 (+) — Chassis ground (-):



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

6-2c [T6C5] BODY ELECTRICAL SYSTEM (KEYLESS ENTRY)

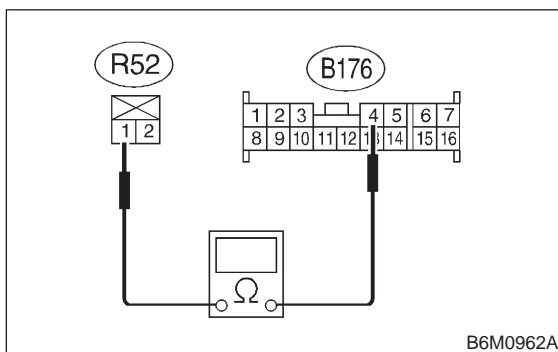
6. Diagnostics Procedure

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. 1 — (B176) No.4:



- CHECK** : **Is the resistance less than 10 Ω?**
- YES** : Replace keyless entry control module. <Ref. to 6-2 [W26A1].>
- NO** : Repair wiring harness between room light and keyless entry control module.

D: DIAGNOSTICS ITEM 3

6D1 : CHECK DOOR SWITCH.

Perform inspection for each door switch.
<Ref. to 6-2 [W900].>

- CHECK** : **Does any fault exist in the switch?**
- YES** : Replace switch. <Ref. to 6-2 [W900].>
- NO** : Replace keyless entry control module. <Ref. to 6-2 [W26A1].>

E: DIAGNOSTICS ITEM 4

6E1 : CHECK IGNITION SWITCH.

Perform inspection for ignition switch.
<Ref. to 6-2 [W300].>

- CHECK** : **Is the ignition switch faulty?**
- YES** : Replace ignition switch. <Ref. to 6-2 [W300].>
- NO** : Replace keyless entry control module. <Ref. to 6-2 [W26A1].>

F: DIAGNOSTICS ITEM 5

6F1 : CHECK FUSE NO. 22.

Remove and visually check the fuse No. 22 (in main fuse box).

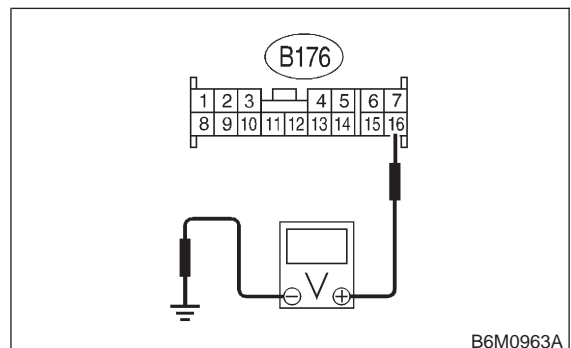
- CHECK** : **Is fuse No. 22 blown?**
- YES** : Replace fuse (15 A).
- NO** : Go to step 6F2.

6F2 : CHECK KEYLESS ENTRY CONTROL MODULE.

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

Connector & terminal

(B176) No. 16 (+) — Chassis ground (-):



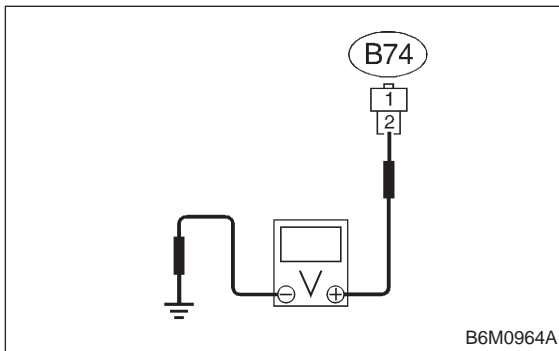
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Replace keyless entry control module. <Ref. to 6-2 [W26A1].>
- NO** : Go to step 6F3.

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 (-):



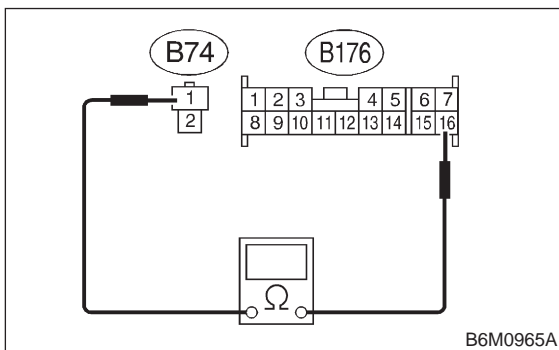
- CHECK** : **Is the voltage more than 10 V?**
- YES** : Go to step **6F4**.
- NO** : Repair wiring harness between battery and key warning switch.

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.

6-2c

BODY ELECTRICAL SYSTEM (KEYLESS ENTRY)

MEMO: