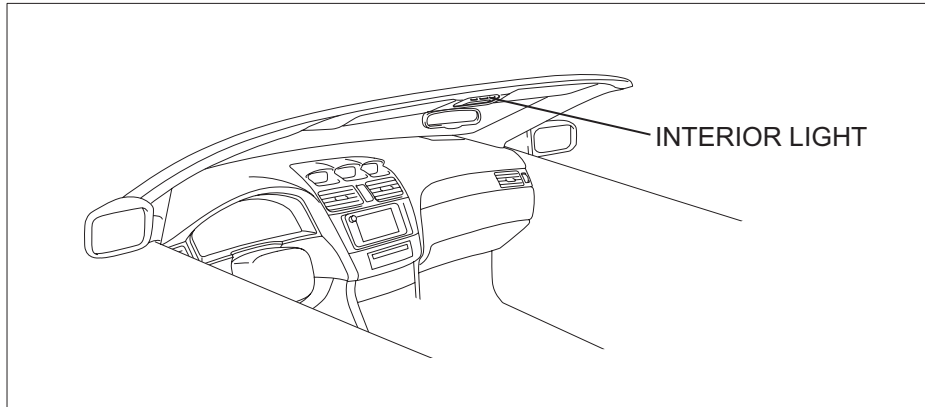


## PARTS LOCATION

## CONVERTIBLE



## INSTRUMENT PANEL J/B ASSEMBLY

- MULTIPLEX NETWORK BODY ECU
- IG1 RELAY
- ECU-IG FUSE
- AM1 FUSE

## IGNITION SWITCH ASSEMBLY

## PASSENGER SWITCH ASSEMBLY

## INTERIOR LIGHT

## FRONT DOOR LOCK (RH)

## FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY

## SECURITY INDICATOR LIGHT ASSEMBLY



## FRONT DOOR LOCK (LH)

## FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY

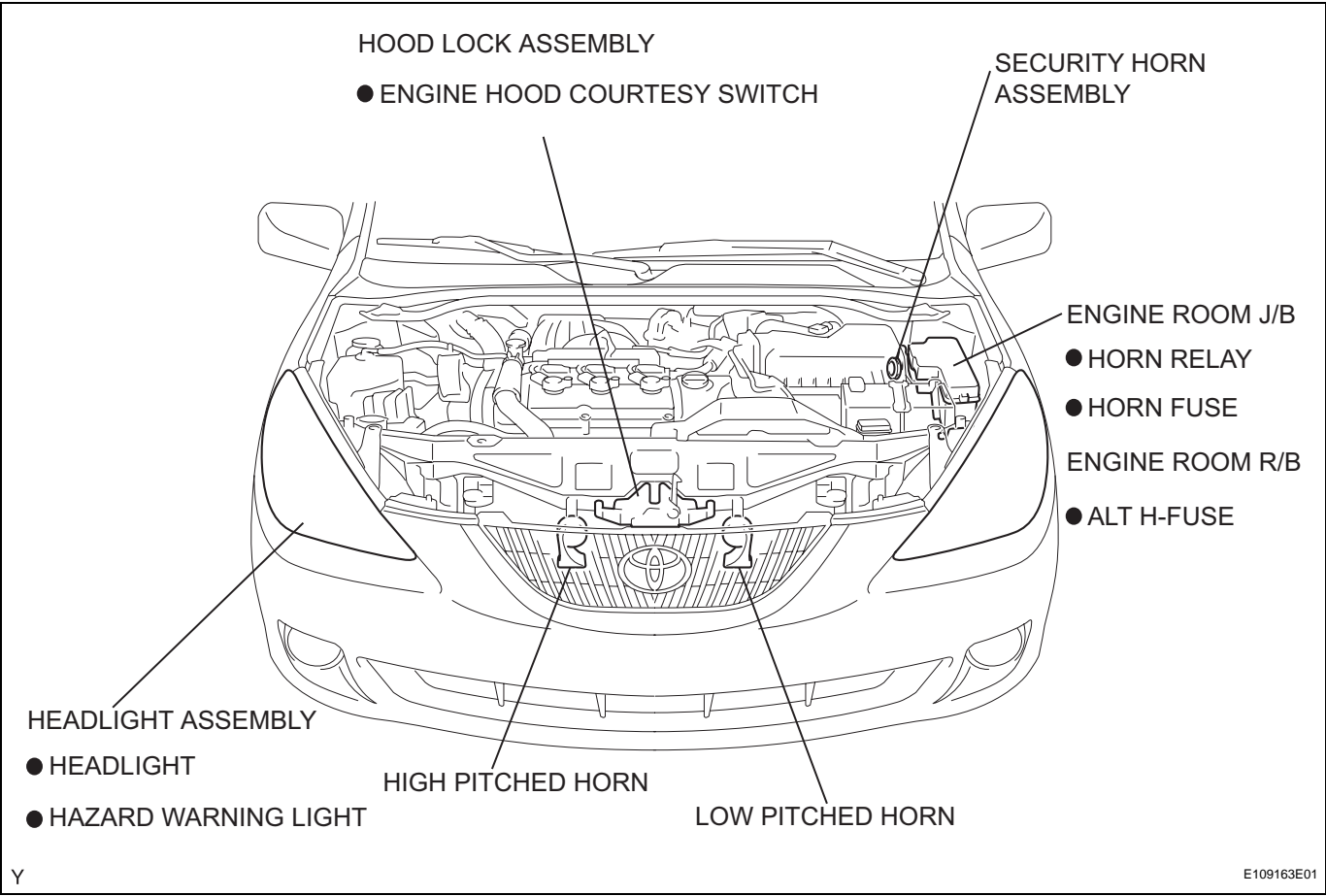
## LUGGAGE COMPARTMENT DOOR LOCK ASSEMBLY

- LUGGAGE COMPARTMENT DOOR COURTESY LIGHT SWITCH

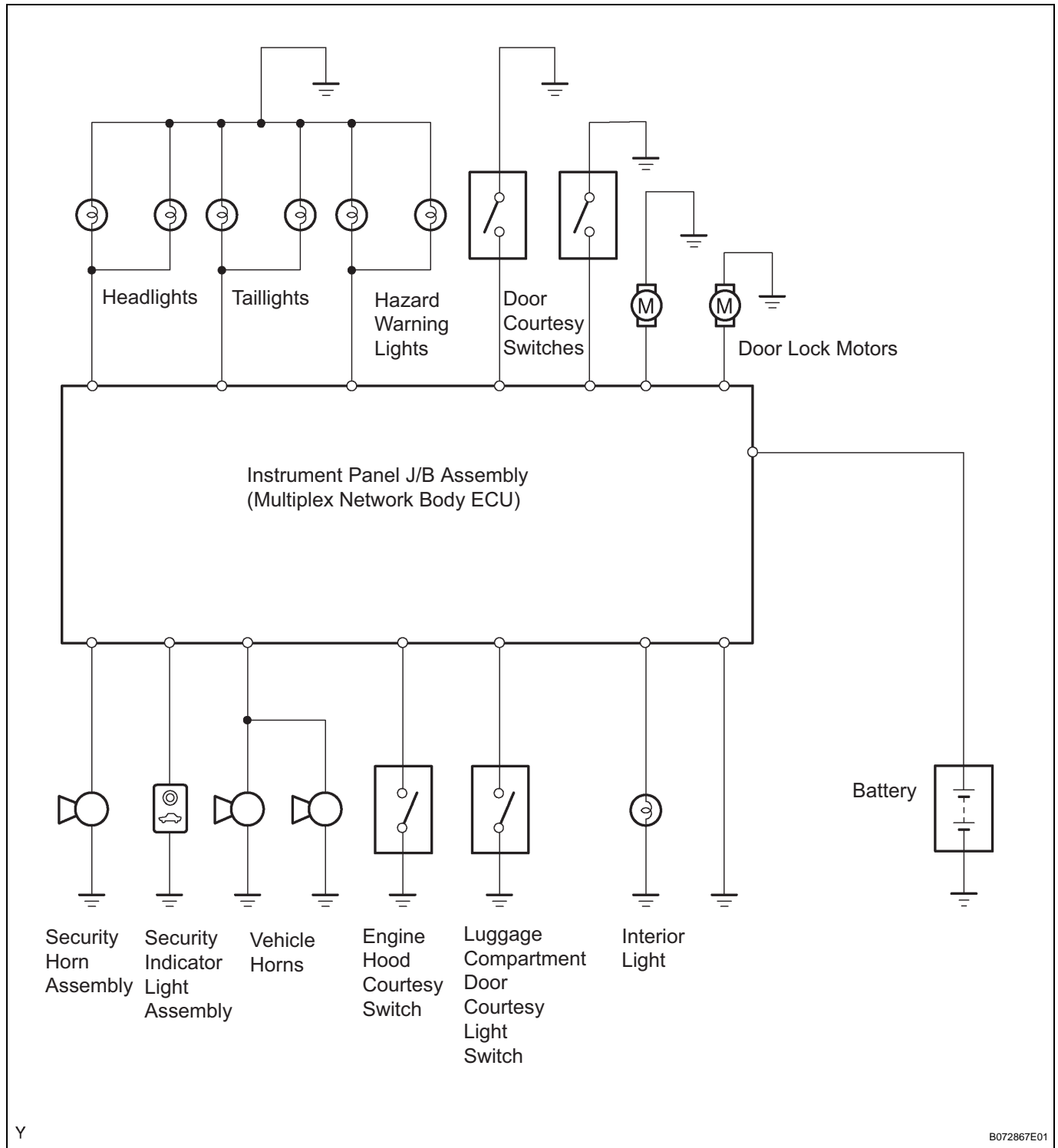
## REAR COMBINATION LIGHT ASSEMBLY

- TAILLIGHT
- HAZARD WARNING LIGHT

TD



## SYSTEM DIAGRAM



## SYSTEM DESCRIPTION

### 1. THEFT DETERRENT SYSTEM DESCRIPTION

The theft deterrent system is designed to deter break-in and theft. If an attempted break-in or theft is detected, the vehicle horns and security horn will sound; room lights will turn on; and hazard warning lights, taillights and headlights will flash continuously. The system uses the following cues to detect an attempted break-in or theft: 1) vehicle is forcibly entered, 2) engine hood is forcibly opened, 3) doors are unlocked without the use of a key, or 4) the battery terminals are disconnected and then reconnected.

If the system enters the alarm sounding state, any unlocked doors will automatically lock.

The system has 2 modes: active arming mode (see On-Vehicle Inspection, step 2) and passive arming mode (see On-Vehicle Inspection, step 3). Passive arming mode can be toggled ON and OFF (see On-Vehicle Inspection, step 4).

Each mode has 4 states: disarmed state, arming preparation state, armed state and alarm sounding state.

(a) Disarmed state:

- The alarm function is not operating.
- The theft deterrent system is not operating.

(b) Arming preparation state:

- The theft deterrent system is not operating.

(c) Armed state:

- The theft deterrent system is operating (60 + - 5 seconds).

(d) Alarm sounding state:

- The alarm function is operating.

## PROBLEM SYMPTOMS TABLE

Proceed to the reference page shown in the table below for each malfunction symptom and troubleshoot each circuit.

### HINT:

The theft deterrent system is based on the premise that the door lock control system and the wireless door lock control system are operating normally. Check these systems first before troubleshooting the theft deterrent system.

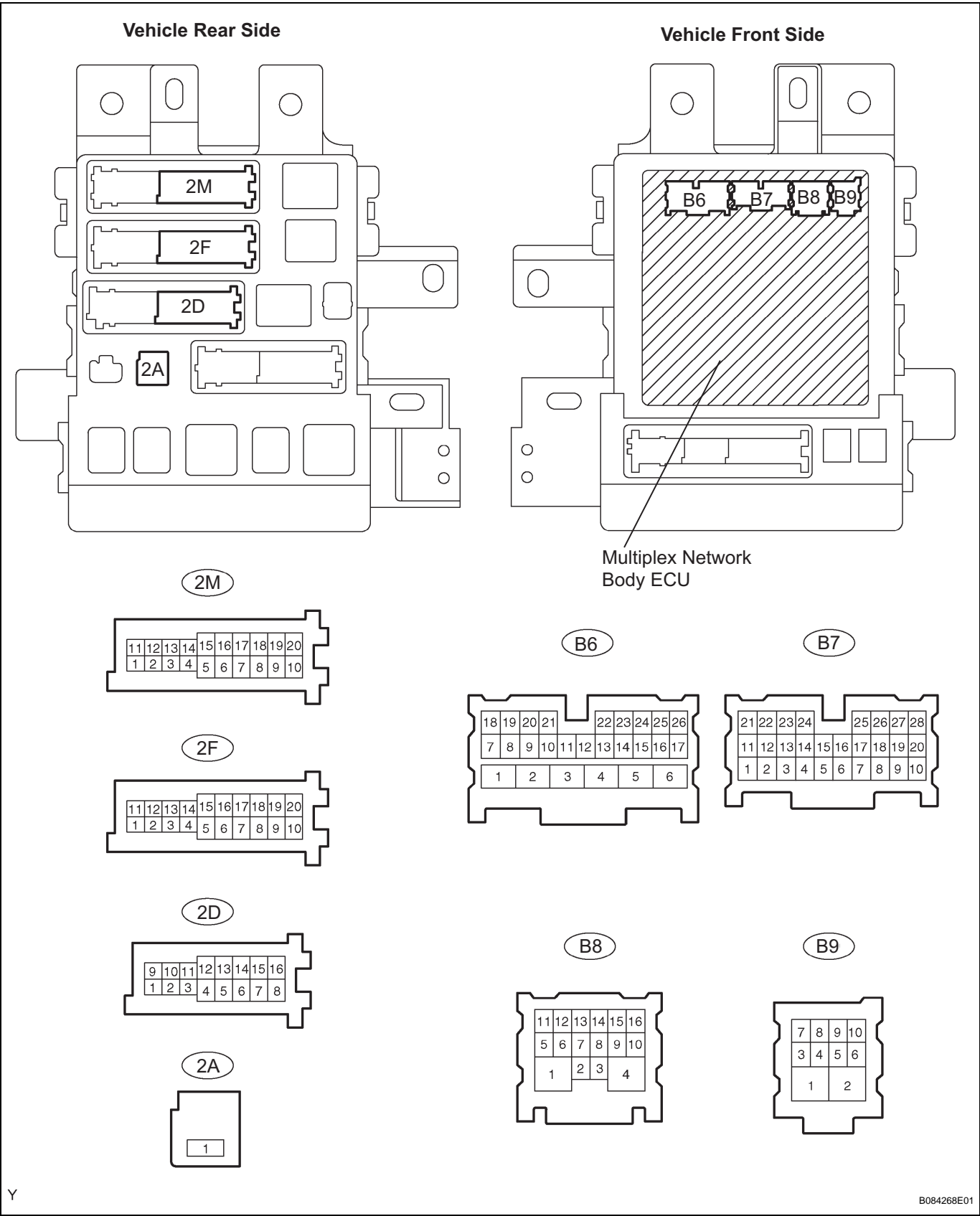
### Theft Deterrent System

Symptom	Suspected area	See page
Theft deterrent system cannot be set	1.Security indicator circuit	<a href="#">TD-31</a>
	2.ECU power source circuit	<a href="#">TD-34</a>
	3.Unlock warning switch circuit	<a href="#">DL-70</a>
	4.Door key lock and unlock switch	<a href="#">DL-75</a>
	5.Door courtesy switch circuit	<a href="#">LI-21</a>
	6.Luggage compartment door courtesy switch circuit	<a href="#">LI-21</a>
	7.Engine hood courtesy switch circuit	<a href="#">TD-20</a>
Security indicator does not blink when theft deterrent system is set	1.Security indicator circuit	<a href="#">TD-31</a>
Alarm sounding state cannot be canceled when ignition switch is turned from ON to OFF 10 times within 15 seconds	1.Ignition switch circuit	<a href="#">TD-28</a>
	2.Unlock warning switch circuit	<a href="#">DL-70</a>
Theft deterrent system can be set even when a door is open	1.Door courtesy switch circuit	<a href="#">LI-21</a>
Horns (low pitched, high pitched) do not sound while theft deterrent system is in warning operation	1.Horn (low pitched, high pitched) circuit	<a href="#">HO-3</a>
Headlights do not flash while theft deterrent system is in warning operation	1.Headlight circuit	<a href="#">LI-12</a>
Taillights do not flash while theft deterrent system is in warning operation	1.Taillight circuit	<a href="#">LI-12</a>
Hazard warning lights do not flash while theft deterrent system is in warning operation	1.Hazard warning circuit	<a href="#">LI-12</a>
Interior light does not illuminate while theft deterrent system is in warning operation	1.Interior light circuit	<a href="#">LI-12</a>
Security horn does not sound while theft deterrent system is in warning operation	1.Security horn circuit	<a href="#">TD-26</a>
Headlights flash even when theft deterrent system is not set	1.Headlight circuit	<a href="#">LI-12</a>
Taillights flash even when theft deterrent system is not set	1.Taillight circuit	<a href="#">LI-12</a>
Hazard warning lights flash even when theft deterrent system is not set	1.Hazard warning switch circuit	<a href="#">LI-12</a>
Interior light illuminates even when theft deterrent system is not set	1.Interior light circuit	<a href="#">LI-12</a>

If the suspected areas are found to be functioning normally, replace the instrument panel J/B assembly (multiplex network body ECU).

TERMINALS OF ECU

1. CHECK INSTRUMENT PANEL J/B ASSEMBLY (MULTIPLEX NETWORK BODY ECU)



(a) Disconnect the B6, B7, B8 and B9 ECU connectors.

- (b) Disconnect the 2A, 2F and 2M J/B connectors.
- (c) Measure the voltage and resistance of the wire harness side connectors.

**Standard**

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
IG (2A-1) - Body ground	B-G - Body ground	Ignition power supply	Always	10 to 14 V
BECU (2F-1) - Body ground	W-R - Body ground	+B (BECU) power supply	Always	10 to 14 V
KSW (B6-21) - Body ground	L - Body ground	Key unlock warning switch input	1: No key in ignition key cylinder → 2: Key inserted	1: 10 kΩ or higher → 2: Below 1 Ω
HCTY (B9-10) - Body ground	B <sup>*3</sup> - Body ground	Engine hood courtesy switch	1: Engine hood closed → 2: Open	1: 10 kΩ or higher → 2: Below 1 Ω
DCTY (B8-14) - Body ground	R-G - Body ground	Driver side courtesy switch	1: Driver side door closed → 2: Open	1: 10 kΩ or higher → 2: Below 1 Ω
PCTY (B7-23) - Body ground	R-G - Body ground	Passenger side courtesy switch	1: Passenger side door closed → 2: Open	1: 10 kΩ or higher → 2: Below 1 Ω
LGCY (B7-25) - Body ground	G-R <sup>*1</sup> - Body ground	Luggage compartment door courtesy switch	1: Back door closed → 2: Open	1: 10 kΩ or higher → 2: Below 1 Ω
LGCY (B7-25) - Body ground	R <sup>*2</sup> - Body ground	Luggage compartment door courtesy switch	1: Back door closed → 2: Open	1: 10 kΩ or higher → 2: Below 1 Ω
GND1 (2F-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND2 (2M-9) - Body ground	W-B <sup>*1</sup> - Body ground	Ground	Always	Below 1 Ω
GND2 (2M-9) - Body ground	BR <sup>*2</sup> - Body ground	Ground	Always	Below 1 Ω

\*1:

**Coupe**

\*2:

**Convertible**

\*3:

**Coupe, Convertible w/ VSC**

If the result is not as specified, there may be a malfunction on the wire harness side.

- (d) Reconnect the B6, B7, B8 and B9 ECU connectors.
- (e) Reconnect the 2A, 2F and 2M J/B connectors.
- (f) Measure the voltage of the connectors.

**Standard**

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
IND (B6-24) - Body ground	R-W <sup>*1</sup> - Body ground	Security indicator	Security indicator illuminates (illuminates for 30 sec. in alarm sounding state and flashes when immobilizer system is operating)	3 to 6 V
IND (B6-24) - Body ground	V <sup>*2</sup> - Body ground	Security indicator	Security indicator illuminates (illuminates for 30 sec. in alarm sounding state and flashes when immobilizer system is operating)	3 to 6 V
SH (B9-1) - Body ground	GR <sup>*3</sup> - Body ground	Security horn	Security horn is sounding (theft deterrent system is in alarm sounding state)	Pulse generation

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
HAZ (B6-2) - Body ground	LG - Body ground	Hazard light drive	Answer-back OFF → Answer-back ON	Pulse generation
HORN (2D-11) - Body ground	G-B - Body ground	Vehicle horns (low pitched and high pitched)	Vehicle horns are sounding (theft deterrent system is in alarm sounding state)	Pulse generation
TRLY (2A-1) - Body ground	B-G - Body ground	Taillights	Taillights are flashing (theft deterrent system is in alarm sounding state)	Pulse generation
HRLY (2D-3) - Body ground	R-B - Body ground	Headlights (low)	Headlights are flashing (theft deterrent system is in alarm sounding state)	Pulse generation
DRL (2D-9) - Body ground	R - Body ground	Headlights (high)	Headlights are flashing (theft deterrent system is in alarm sounding state)	Pulse generation

\*1:

**Coupe**

\*2:

**Convertible**

\*3:

**Coupe, Convertible w/ VSC**

If the result is not as specified, the J/B assembly (body ECU) may have a malfunction.



# THEFT DETERRENT SYSTEM

## PRECAUTION

**NOTICE:**

When disconnecting the negative (-) battery terminal, initialize the following system(s) after the terminal is reconnected.

System Name	See Procedure
Power Window Control System (Coupe)	IN-24
Sliding Roof System	

# HOW TO PROCEED WITH TROUBLESHOOTING

HINT:  
Use these procedures to troubleshoot the theft deterrent system.

1

VEHICLE BROUGHT TO WORKSHOP

NEXT

2

CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK

NEXT

3

PROBLEM SYMPTOMS TABLE

HINT:  
See page [TD-6](#)  
(a) If the fault is not listed on the problem symptoms table, proceed to A.  
(b) If the fault is listed on the problem symptoms table, proceed to B.

B

Go to step 5

A

4

OVERALL ANALYSIS AND TROUBLESHOOTING

- (a) Terminals of ECU (See page [TD-8](#))
- (b) On-vehicle inspection (See page [TD-10](#))

NEXT

5

ADJUST, REPAIR OR REPLACE

NEXT

6

CONFIRMATION TEST

NEXT

END

## ON-VEHICLE INSPECTION

### 1. OUTLINE OF THEFT DETERRENT SYSTEM

- (a) When the theft deterrent system detects that the vehicle is being tampered with, the vehicle horn and security horn will sound; interior lights will illuminate; and hazard warning lights, taillights and headlights will flash continuously.
- (b) The system has 2 modes: active arming mode (see ACTIVE ARMING MODE) and passive arming mode (see PASSIVE ARMING MODE). Passive arming mode can be turned ON and OFF (see METHOD FOR CHANGING OF PASSIVE MODE).
- (c) Each mode has 4 states: disarmed state, arming preparation state, armed state and alarm sounding state.
  - (1) Disarmed state:
    - The alarm function is not operating.
    - The theft deterrent system is not operating.
  - (2) Arming preparation state:
    - The theft deterrent system is not operating.
  - (3) Armed state:
    - The theft deterrent system is operating.

#### Alarm time:

**60 +- 5 seconds**

- (4) Alarm sounding state:
  - The alarm function is operating.

Refer to table below for alarm method and time:

Alarm Method	Headlight	Blinking (cycle of 0.4 seconds)
	Taillight	Blinking (cycle of 0.4 seconds)
	Hazard Warning Lamp	Blinking (cycle of flasher relay)
	Interior Light	Illuminating
	Vehicle Horn	Sounding (cycle of 0.4 seconds)
	Security Horn	Sounding (cycle of 0.4 seconds)
Alarm Time	60 +- 5 seconds	

#### HINT:

If, during the alarm sounding state, a door is unlocked and no key is in the ignition key cylinder, a forced door lock signal will be output (see FORCED DOOR LOCK CONTROL).

### 2. ACTIVE ARMING MODE

#### HINT:

- Active arming mode starts the alarm control immediately after the doors are locked.

System State	State switching condition	Go to
1. Disarmed State	Performing any of the following will cause the system to switch to Arming Preparation State. (No key in ignition key cylinder) 1. With all doors and engine hood closed, lock all doors by wireless operation. 2. With all doors and engine hood closed, lock all doors by wireless operation. 3. With any door or the engine hood open, lock all doors and close all doors and engine hood.	2. Arming Preparation State

System State	State switching condition	Go to
2. Arming Preparation State	Performing any of the following will cause the system to return to Disarmed State. 1. Unlock all doors by wireless operation. 2. Unlock all doors by key operation. 3. Unlock a door. 4. Open a door. 5. Open engine hood. 6. Insert key into ignition key cylinder. 7. Reconnect battery. 8. Turn ignition switch from OFF to ON.	1. Disarmed State
	Performing the following will cause the system to switch to Armed State. 1. With all doors and engine hood closed, lock all doors. Allow 30 (+- 1.5) seconds to elapse.	3. Armed State
3. Armed State	Performing any of the following will cause the system to return to Disarmed State. 1. Insert key into the ignition key cylinder, turn ignition switch ON and run engine over 550 rpm for 10 to 12 seconds. 2. Unlock any door by wireless operation. 3. Unlock any door by key operation.	1. Disarmed State
	Performing any of the following will cause the system to switch to Alarm Sounding State. 1. Open engine hood. 2. Reconnect battery. 3. Open a door. 4. Unlock any door without key and wireless operation. 5. Directly connect ignition switch without key (or turn ignition switch ON without key).	4. Alarm Sounding State
4. Alarm Sounding State	Performing any of the following will cause the system to return to Disarmed State. 1. Unlock all doors by wireless operation. 2. Unlock any door by key operation. 3. Insert key into ignition key cylinder and turn ignition switch from OFF to ON.	1. Disarmed State
	When the system detects tampering, the horns sound and lights illuminate or blink. After 60 (+- 5) seconds, alarm stops and system returns to Armed State.	3. Armed State (alarm stops sounding)

### 3. PASSIVE ARMING MODE

#### HINT:

- Passive arming mode can be turned on and off (see METHOD FOR CHANGING OF PASSIVE MODE).
- The vehicle's initial alarm setting is active arming mode.
- During passive arming mode, the theft deterrent system enters the armed state even if the doors are not locked.
- Passive arming mode starts the alarm control after the doors are closed.
- Detecting that the doors are unlocked does not set off the alarm during passive arming mode.
- A forced door lock signal is not output during passive arming mode (see FORCED DOOR LOCK CONTROL).

- When the theft deterrent system detects that the doors are opened during passive arming mode, the alarm is not set off immediately depending on the entry delay time setting.
- If any of the following conditions is fulfilled during passive arming mode, the theft deterrent system will switch to active arming mode.
  - With all doors and engine hood closed, lock all doors by key operation.
  - With all doors and engine hood closed, lock all doors by wireless operation.
  - With any door or engine hood open, lock all doors and close all doors and engine hood.

System state	State switching condition	Go to
1. Disarmed State (1) <sup>*1</sup>	Performing any of the following will cause the system to switch to Disarmed State (2). 1. With ignition switch OFF, open any door or the engine hood, and pull out key from ignition key cylinder. 2. With ignition switch OFF, pull out key from ignition key cylinder, and open any door or the engine hood.	2. Disarmed State (2)
2. Disarmed State (2) <sup>*2</sup>	Performing the following will cause the system to switch to Arming Preparation State. 1. Close all doors and engine hood.	3. Arming Preparation State
	Performing any of the following will cause the system to return to Disarmed State (1). 1. Unlock all doors by wireless operation. 2. Insert key into ignition key cylinder. 3. Reconnect battery. 4. Turn ignition switch from OFF to ON. 5. Unlock all doors by key operation.	1. Disarmed State (1)
3. Arming Preparation State	Performing any of the following will cause the system to return to Disarmed State (1). 1. Unlock all doors by wireless operation. 2. Insert key into ignition key cylinder. 3. Reconnect battery. 4. Turn ignition switch from OFF to ON. 5. Unlock all doors by key operation.	1. Disarmed State (1)
	Performing the following will cause the system to switch to Armed State. 1. With all doors and engine hood closed, allow 30 (+/- 1.5) seconds to elapse.	4. Armed State
	Performing the following will cause the system to return to Disarmed State (2). 1. Open a door or engine hood.	2. Disarmed State (2)
4. Armed State	Performing any of the following will cause the system to return to Disarmed State (1). 1. Unlock all doors by wireless operation. 2. Unlock all doors by key operation. 3. Insert key into ignition key cylinder and turn ignition switch from OFF to ON.	1. Disarmed State (1)
	Performing any of the following will cause the system to start the alarm. 1. Open a door and allow entry delay time <sup>*3</sup> to elapse. 2. Open engine hood. 3. Reconnect battery. 4. Directly connect ignition switch without key (or turn ignition switch ON without key).	5. Alarm Sounding State

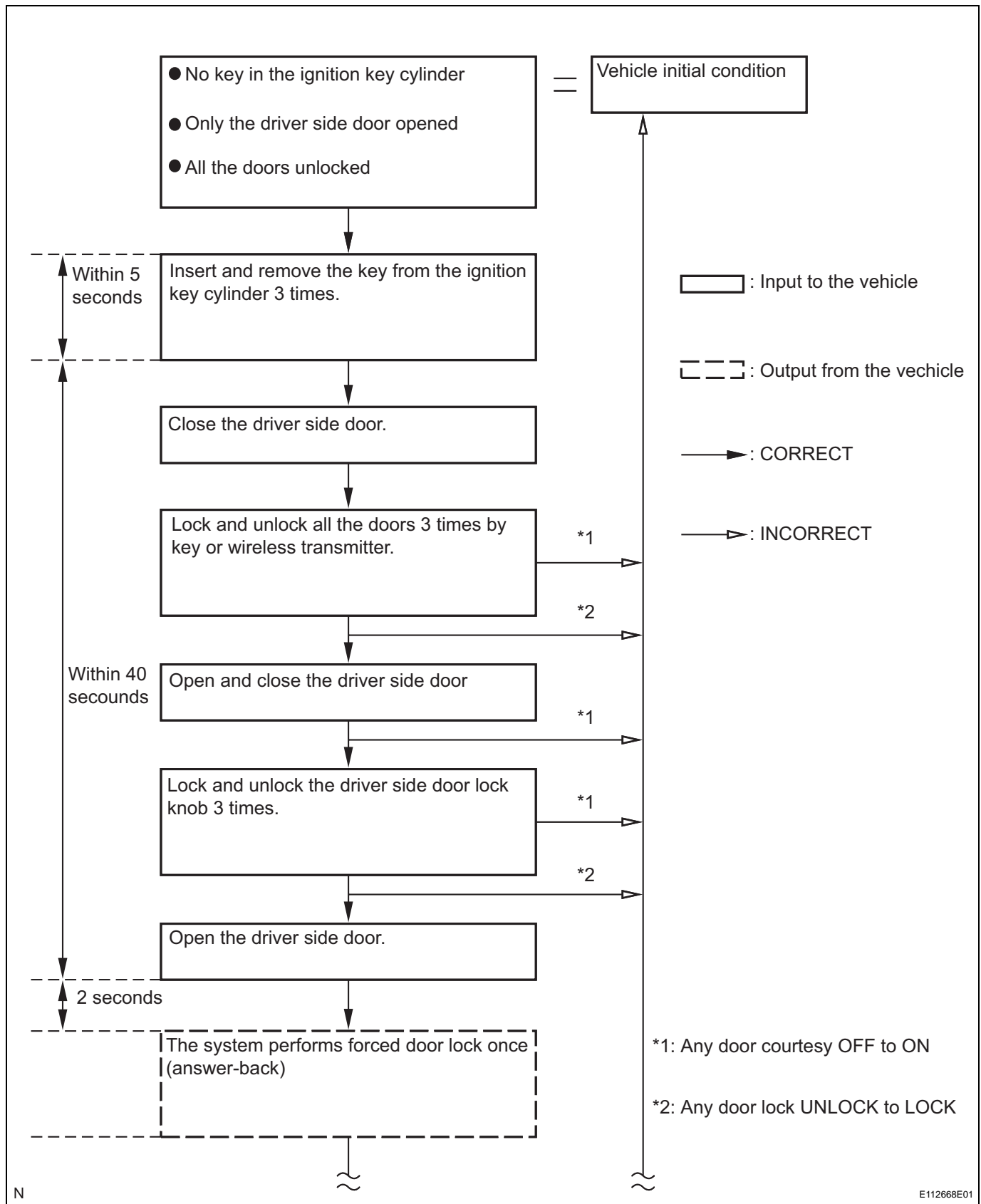
System state	State switching condition	Go to
5. Alarm Sounding State	Performing any of the following will cause the system to return to Disarmed State (1) 1. Unlock all doors by wireless operation. 2. Unlock all doors by key operation. 3. Insert key into ignition key cylinder and turn ignition switch from OFF to ON.	1. Disarmed State (1)
	When the system detects tampering, the horns sound and lights illuminate or blink. After 60 (+- 5) seconds, alarm stops and system returns to Armed State.	4. Armed State (alarm stops)

**HINT:**

- \*1: Disarmed state (1) is the normal disarmed state.
- \*2: Disarmed state (2) is set from either the disarmed state (1) or the arming preparation.
- \*3: When a door is opened while all doors are closed during passive arming mode, the entry delay time starts. If the state switching condition (from armed state to disarmed state (1) or (2)) is fulfilled, during the entry delay time, the theft deterrent system will return to disarmed state (1) or (2). However, if the state transfer condition is not fulfilled, the theft deterrent system will assume that a break-in or theft is occurring and sound the alarm.

The entry delay time can be customized to 0, 14 or 30 seconds.

#### 4. METHOD FOR CHANGING OF PASSIVE MODE (ON OR OFF)





- HINT:**
- Initial mode is PASSIVE MODE OFF.
  - If the ignition switch is turned ON, change will be cancelled.
  - \* Entry delay time.



**5. FORCED DOOR LOCK CONTROL**

- (a) The forced door lock control also helps to prevent the vehicle from being tampered with. When a door is unlocked and the alarm starts, the door is forced to lock by a forced door lock signal.
- (1) Conditions that force the doors to lock:
- No key is in the ignition key cylinder.
  - 0.4 seconds have elapsed after the previous output of a forced door lock signal.
  - The theft deterrent system is in the alarm sounding state of active arming mode.
  - A door is unlocked.

**6. PANIC ALARM CONTROL**

- (a) The panic alarm control activates the panic alarm when the wireless transmitter PANIC switch is pressed. The panic alarm control operates independently from the theft deterrent system's alarm control's change from the armed state to the alarm sounding state.
- (1) Conditions that cause the panic alarm control to set off the panic alarm:  
The panic alarm control sets off the panic alarm when the PANIC switch on the wireless transmitter is pressed for over 2.4 seconds under the following conditions.
- The engine switch is OFF.
  - The theft deterrent system is not in the alarm sounding state. (This condition is common both to active arming mode and to passive arming mode.)
  - The panic alarm control is not operating (the alarm is not set off).
- (2) Conditions that cause the panic alarm control to shut off the alarm:  
The panic alarm control shuts off the panic alarm when any of the following conditions is fulfilled during panic alarm operation.
- The engine switch is turned ON.
  - The wireless transmitter LOCK/UNLOCK switch is pressed.
  - 60 +- 5 seconds have passed and the panic alarm has ended.
  - The theft deterrent system switches to the alarm sounding state. (This condition is common both to active arming mode and to passive arming mode.) However, the alarm is still sounding, because the theft deterrent system has switched to the alarm sounding state.
- Conditions for canceling the panic alarm are the same as the alarm control.

**HINT:**

For more information about the active arming mode, see ACTIVE ARMING MODE. For more information about the passive arming mode, see PASSIVE ARMING MODE.

**7. ALARM MEMORY FUNCTION**

- (a) If the alarm is set off (tampering is detected) while the theft deterrent system is in the armed state, the alarm memory function will record it. Whenever the theft deterrent system is cancelled, the alarm memory function causes the taillights to illuminate for 2 seconds in order to inform you that the alarm has been set off.

- (1) Conditions of the alarm memory function that cause the taillights to illuminate:

When the theft deterrent system has entered into the alarm sounding state (tampering has been detected) even once, the taillights will illuminate for 2 seconds if any of the following conditions is fulfilled.

- Switched to the disarmed state from the armed state during active arming mode.
- Switched to the disarmed state (1) from the armed state during passive arming mode.

**HINT:**

For more information about the active arming mode, see ACTIVE ARMING MODE. For more information about the passive arming mode, see PASSIVE ARMING MODE.

**8. SECURITY INDICATOR OUTPUT**

- (a) The security indicator turn on and off based on output signals from the multiplex network body ECU. However, in some cases the actual status of the security indicator is different from the output signals of the multiplex network body ECU.

**Output:**

State of Theft Deterrent System*	Security Indicator	
	Output Signals from Body ECU	Actual Lighting Condition
Disarmed state (1), (2)	OFF	OFF (Immobilizer system not set) BLINKING (immobilizer system set)
Arming preparation state	ON	ON
Armed state	OFF	BLINKING
Alarm sounding state	ON	ON

**Blinking cycle:**

Time	Security Indicator
0.2 seconds	ON
1.8 seconds	OFF

**HINT:**

- The above condition is common both to active arming mode and to passive arming mode.

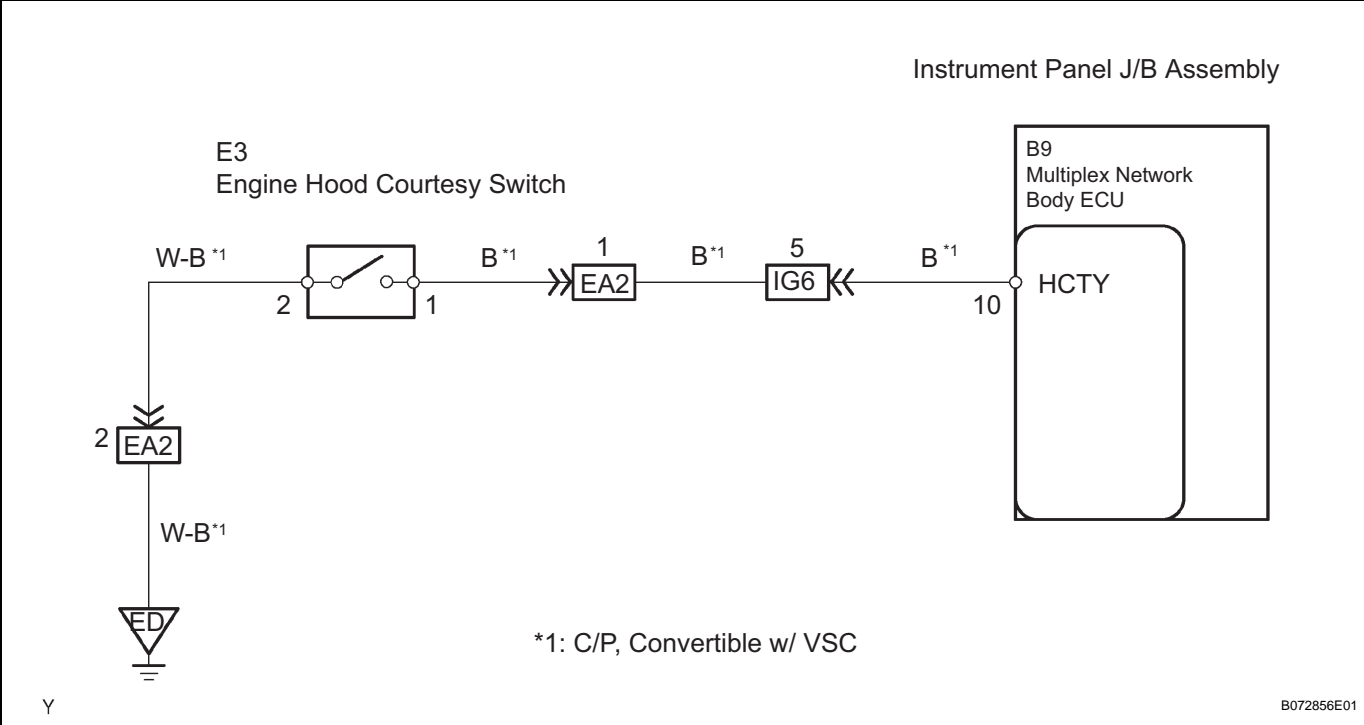
- When the immobilizer system is set, the security indicator blinks during the disarmed state and the armed state due to the output signals from the immobilizer system.

Engine Hood Courtesy Switch Circuit

DESCRIPTION

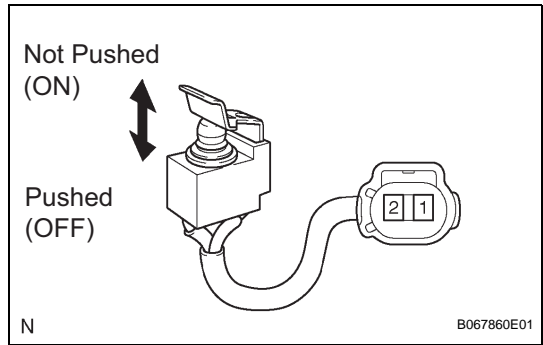
The engine hood switch is installed together with the hood lock. This switch turns ON when the engine hood is opened and turns OFF when the engine hood is closed.

WIRING DIAGRAM



TD

1 INSPECT ENGINE HOOD COURTESY SWITCH



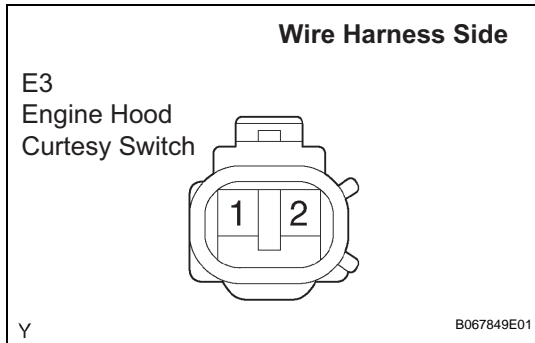
- (a) Remove the courtesy switch from the hood lock.
- (b) Measure the resistance of the switch.

Resistance

Tester Connection	Switch Condition	Specified Condition
1 - 2	Pushed (OFF)	10 kΩ or higher
1 - 2	Not pushed (ON)	Below 1 Ω

NG REPLACE ENGINE HOOD COURTESY SWITCH

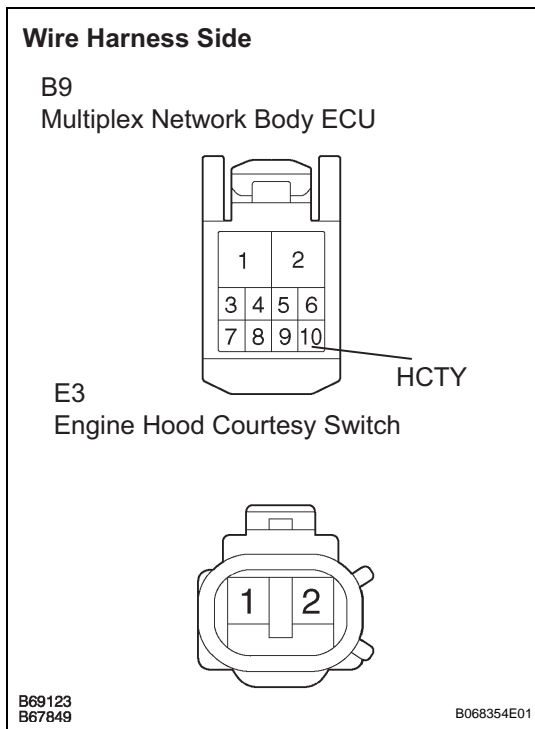
OK

**2 CHECK WIRE HARNESS (ENGINE HOOD COURTESY SWITCH - BODY GROUND)**

- (a) Disconnect the E3 connector.
- (b) Measure the resistance of the wire harness side connector.

**Resistance**

Tester Connection	Specified Condition
E3-2 - Body ground	Below 1 $\Omega$

**NG****REPAIR OR REPLACE HARNESS AND CONNECTOR****OK****3 CHECK WIRE HARNESS (MULTIPLEX NETWORK BODY ECU - ENGINE HOOD COURTESY SWITCH)**

- (a) Disconnect the B9 ECU connector.
- (b) Disconnect the E3 switch connector.
- (c) Measure the resistance of the wire harness side connectors.

**Resistance**

Tester Connection	Specified Condition
B9-10 (HCTY) - E3-1	Below 1 $\Omega$
B9-10 (HCTY) or E3-1 - Body ground	10 k $\Omega$ or higher

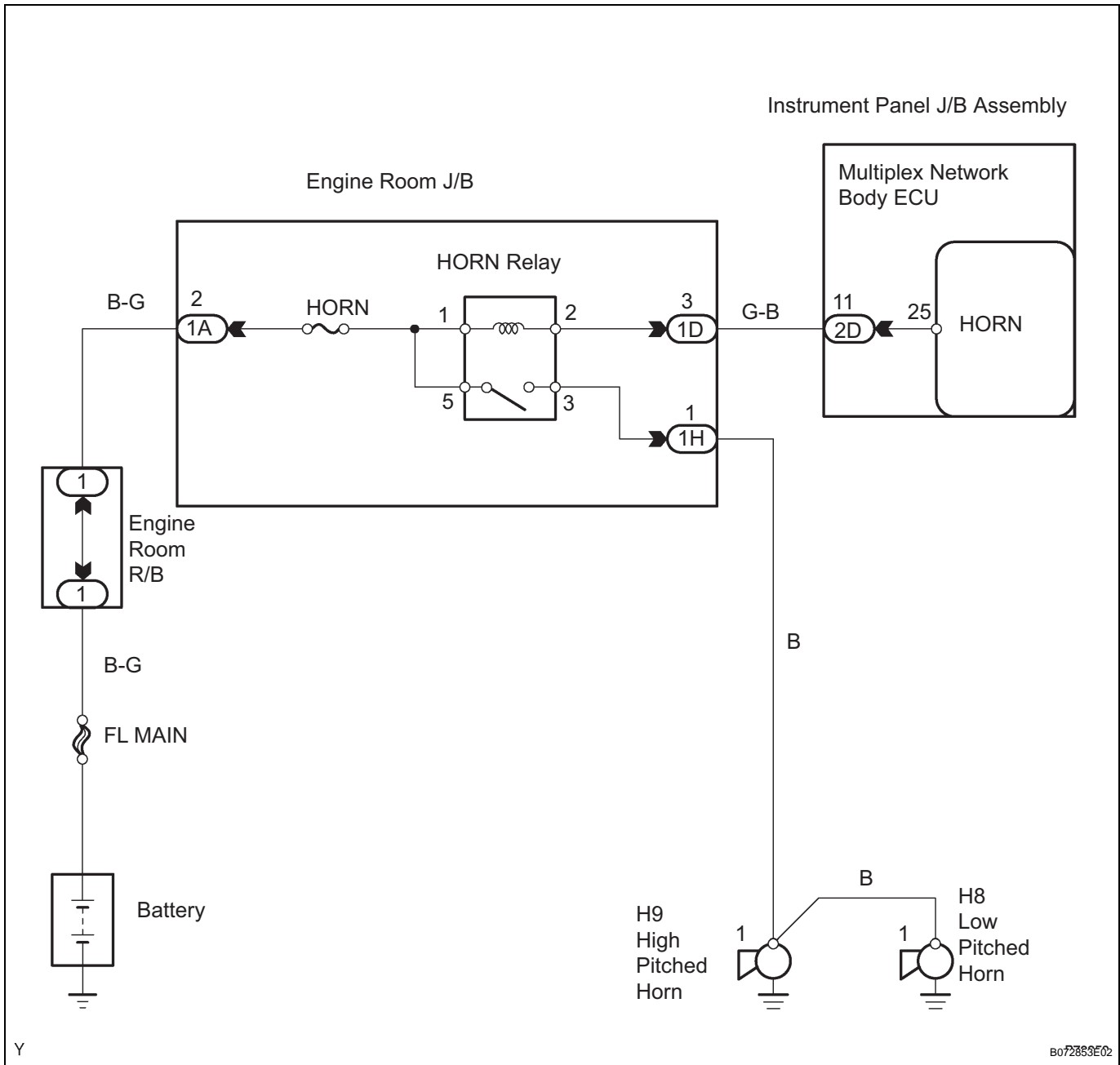
**NG****REPAIR OR REPLACE HARNESS AND CONNECTOR****TD****OK****PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE**

## Horn Circuit

### DESCRIPTION

When the theft deterrent system is switched from the armed state to the alarm sounding state, the multiplex network body ECU turns on the HORN relay, causing the vehicle's horns to sound at intervals of 0.4 seconds.

### WIRING DIAGRAM



1

### CHECK HORN ASSEMBLY

- (a) Press the horn switch and check if the horns sound.
  - (1) If the horns sound, proceed to A.

(2) If the horns do not sound, proceed to B.

**B**

**Go to step 2**

**A**

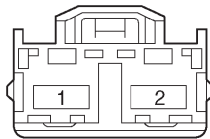
## REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

**2**

### CHECK WIRE HARNESS (ENGINE ROOM R/B - BATTERY)

Wire Harness Side

1A  
Engine Room J/B



Y

B072875E02

- (a) Disconnect the 1A J/B connector.
- (b) Measure the voltage of the wire harness side connector.

#### Voltage

Tester Connection	Specified Condition
1A-2 - Body ground	10 to 14 V

**NG**

**REPAIR OR REPLACE HARNESS AND CONNECTOR**

**OK**

**3**

### CHECK HORN ASSEMBLY

- (a) Connect terminals 3 and 5 of the HORN relay on the engine room J/B side and check if the horns sound normally.
  - (1) If the high and low pitched horns sound, proceed to A.
  - (2) If only the low pitched horn sounds, proceed to B.
  - (3) If only the high pitched horn sounds, proceed to C.
  - (4) If the high and low pitched horns do not sound, proceed to D.

**B**

**REPLACE HIGH PITCHED HORN ASSEMBLY**

**C**

**REPLACE LOW PITCHED HORN ASSEMBLY**

**D**

**Go to step 7**

**A**

**4**

### INSPECT FUSE (HORN)

- (a) Remove the HORN fuse from the engine room J/B.
- (b) Measure the resistance of the fuse.

#### Resistance:

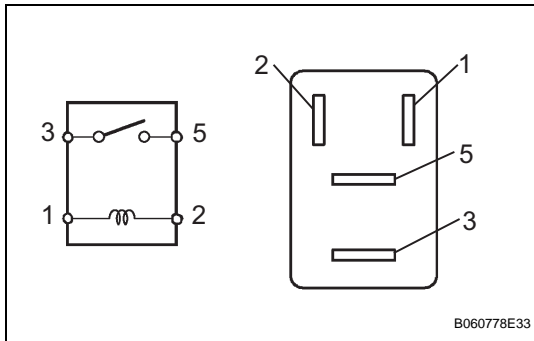
**Below 1  $\Omega$**

**NG**

**REPLACE FUSE**

**TD**

OK

**5 INSPECT HORN RELAY**

- (a) Remove the HORN relay from the engine room J/B.  
 (b) Measure the resistance of the relay.

**Resistance**

Tester Connection	Specified Condition
3 - 5	10 k $\Omega$ or higher
3 - 5	Below 1 $\Omega$ (when battery voltage is applied to terminals 1 and 2)

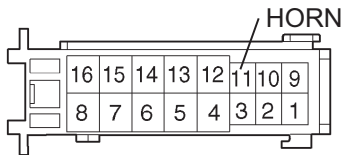
NG

**REPLACE HORN ASSEMBLY**

OK

**6 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY****Wire Harness Side**

2D  
Instrument Panel J/B Assembly



- (a) Disconnect the 2D J/B connector.  
 (b) Measure the voltage of the wire harness side connector.

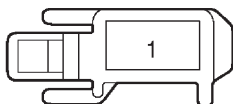
**Voltage**

Tester Connection	Specified Condition
2D-11 (HORN) - Body ground	10 to 14 V

NG

**REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

**REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY****7 CHECK HORN ASSEMBLY****Wire Harness Side**

H8, H9  
Horn Assembly

- (a) Disconnect the H8 and H9 connectors.  
 (b) Measure the voltage of the wire harness side connectors.

**Voltage**

Tester Connection	Specified Condition
H8-1 - Body ground	10 to 14 V
H9-1 - Body ground	10 to 14 V

NG

**REPAIR OR REPLACE HARNESS AND CONNECTOR**



OK

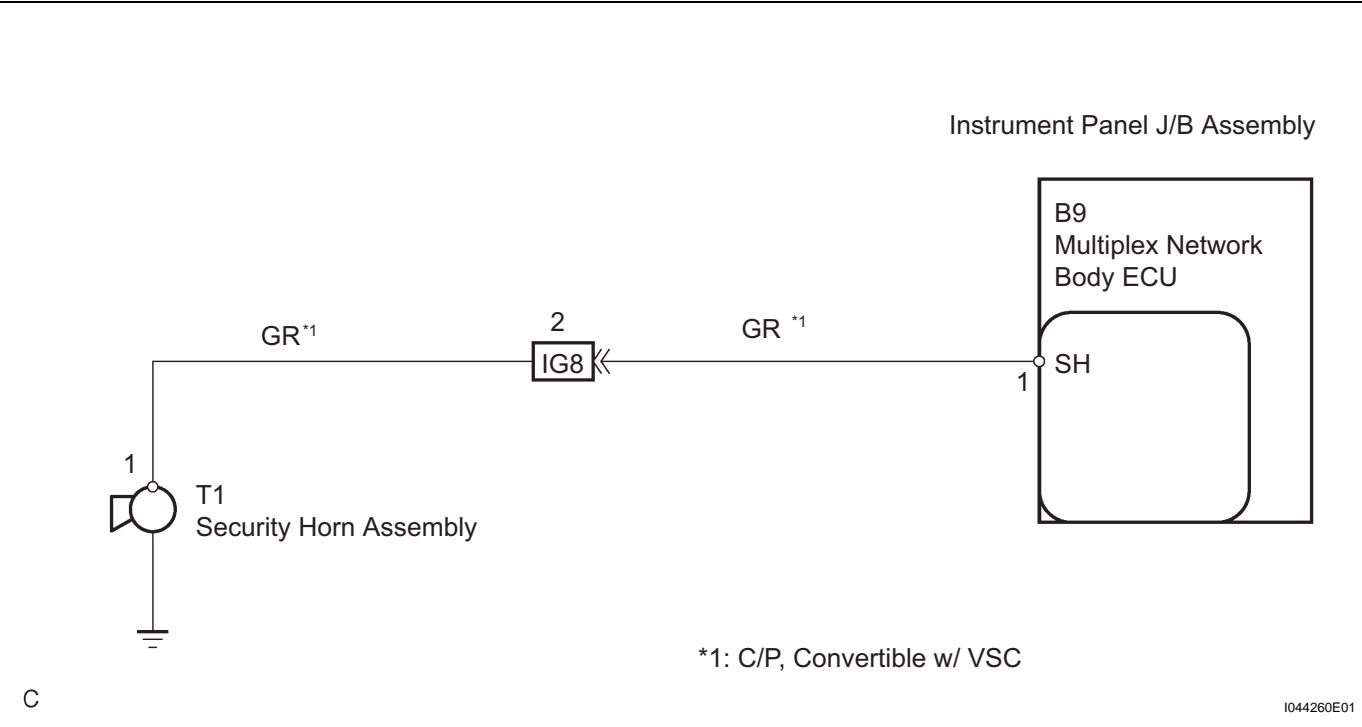
REPLACE HORN ASSEMBLY

# Security Horn Circuit

## DESCRIPTION

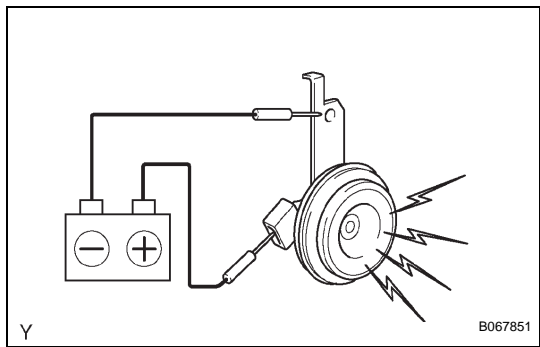
When the theft deterrent system is operating, a relay in the multiplex network body ECU turns ON and OFF continuously at 0.2 second intervals, causing the security horn to sound.

## WIRING DIAGRAM



TD

## 1 INSPECT SECURITY HORN ASSEMBLY



(a) Apply battery voltage to the horn and check operation of the horn.

### Standard

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Horn bracket	Horn sounds

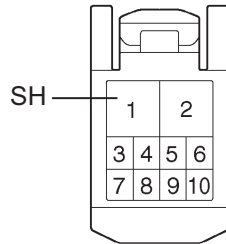
NG

REPLACE SECURITY HORN ASSEMBLY

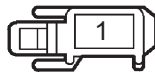
OK

**2****CHECK WIRE HARNESS (MULTIPLEX NETWORK BODY ECU - SECURITY HORN ASSEMBLY)****Wire Harness Side**

B9  
Multiplex Network Body ECU



T1  
Security Horn Assembly



B068016E04

- (a) Disconnect the B9 ECU connector.
- (b) Disconnect the T1 horn connector.
- (c) Measure the resistance of the wire harness side connectors.

**Resistance**

Tester Connection	Specified Condition
B9-1 (SH) - T1-1	Below 1 $\Omega$
B9-1 (SH) or T1-1 - Body ground	10 k $\Omega$ or higher

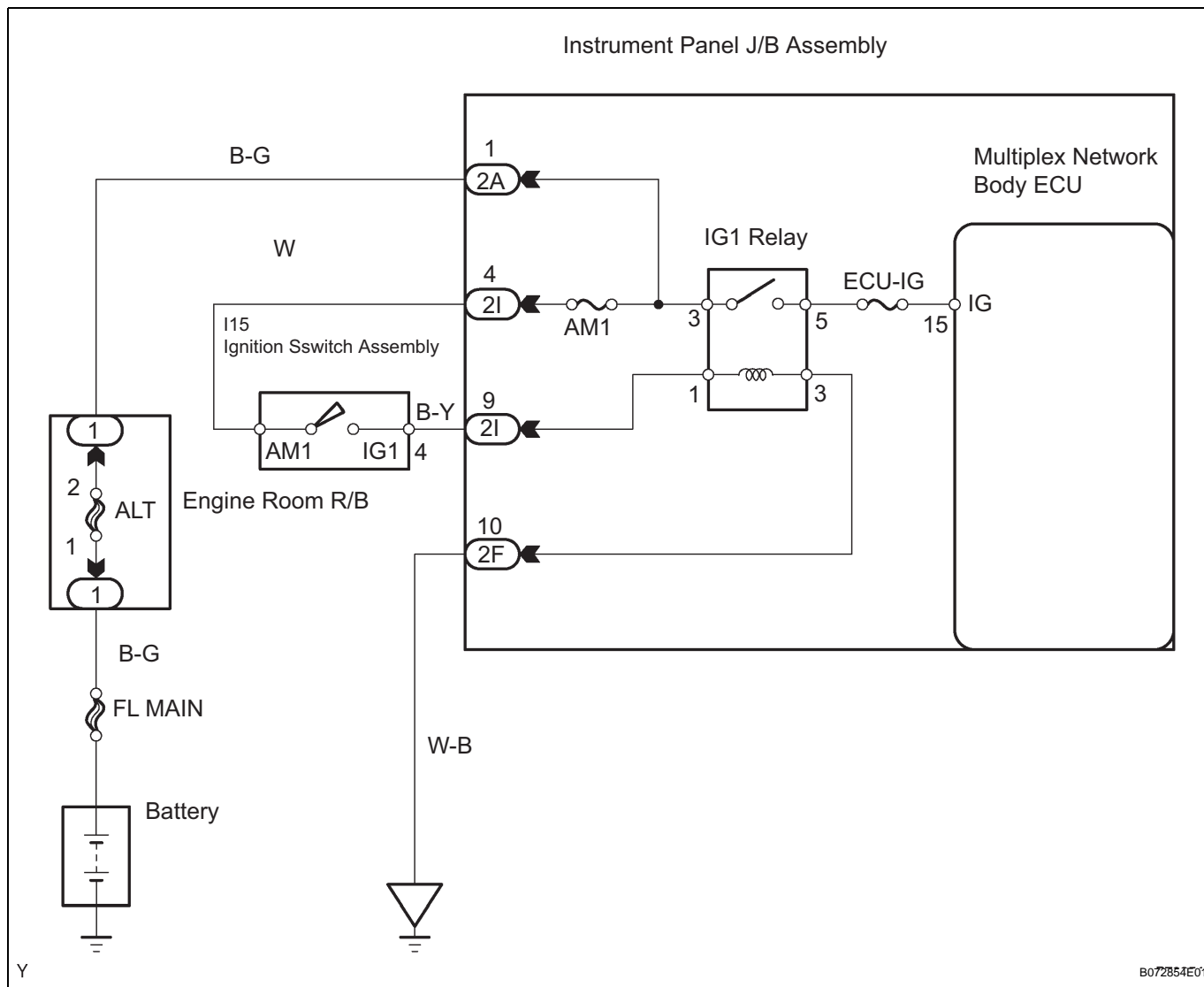
**NG****REPAIR OR REPLACE HARNESS AND CONNECTOR****OK****REPLACE MULTIPLEX NETWORK BODY ECU****TD**

## Ignition Switch Circuit

## DESCRIPTION

When the ignition switch is turned ON, the battery positive voltage is applied to terminal IG of the multiplex network body ECU.

## WIRING DIAGRAM



## 1 INSPECT FUSE (ECU-IG, AM1)

- Remove the ECU-IG and AM1 fuses from the instrument panel J/B.
- Measure the resistance of the switch.

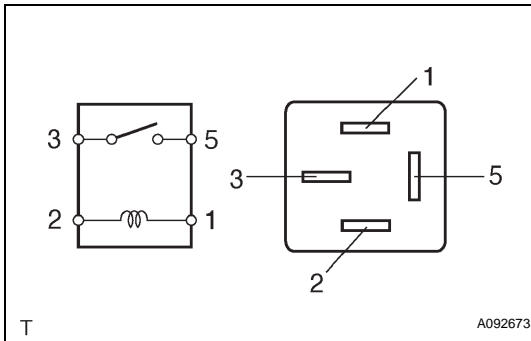
**Resistance:**

### Below 1 $\Omega$

NG

## REPLACE FUSE

OK

**2 INSPECT IG1 RELAY**

- (a) Remove the IG1 relay from the instrument panel J/B.  
 (b) Check the resistance of the relay.

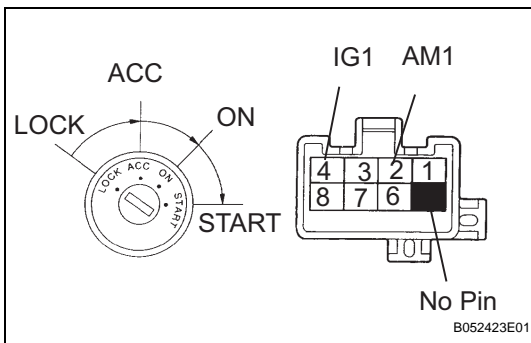
**Resistance**

Tester Connection	Specified Condition
3 - 5	10 k $\Omega$ or higher
3 - 5	Below 1 $\Omega$ (when battery voltage is applied to terminals 1 and 2)

NG

**REPLACE IG1 RELAY**

OK

**3 INSPECT IGNITION SWITCH ASSEMBLY**

- (a) Measure the resistance of the switch.

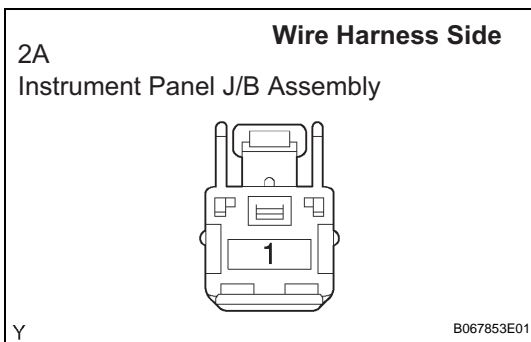
**Resistance**

Tester Connection	Switch Condition	Specified Condition
2 - 4	ON	Below 1 $\Omega$

NG

**REPLACE IGNITION SWITCH ASSEMBLY**

OK

**4 CHECK WIRE HARNESS (INSTRUMENT PANEL J/B ASSEMBLY - BATTERY)**

- (a) Disconnect the 2A J/B connector.  
 (b) Measure the voltage of the wire harness side connector.

**Voltage**

Tester Connection	Specified Condition
2A-1 - Body ground	10 to 14 V

NG

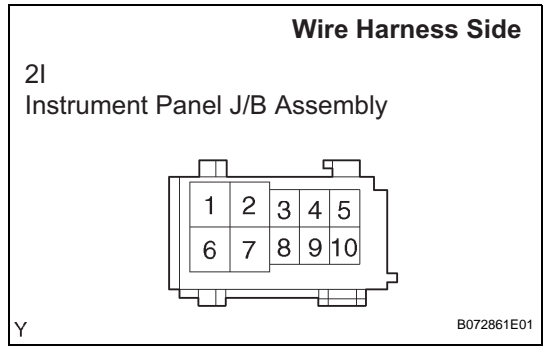
**REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

TD

5

CHECK WIRE HARNESS (INSTRUMENT PANEL J/B ASSEMBLY - IGNITION SWITCH ASSEMBLY)



- (a) Disconnect the 2I J/B connector.
- (b) Measure the resistance of the wire harness side connector.

Resistance

Tester Connection	Condition	Specified Condition
2I-4 - 2I-9	Ignition switch ON	Below 1 Ω

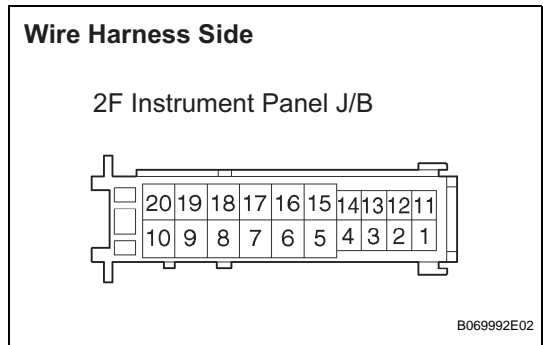
NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

6

CHECK WIRE HARNESS (INSTRUMENT PANEL J/B ASSEMBLY - BODY GROUND)



- (a) Disconnect the 2F J/B connector.
- (b) Measure the resistance of the wire harness side connector.

Resistance

Tester Connection	Specified Condition
2F-10 - Body ground	Below 1 Ω

NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

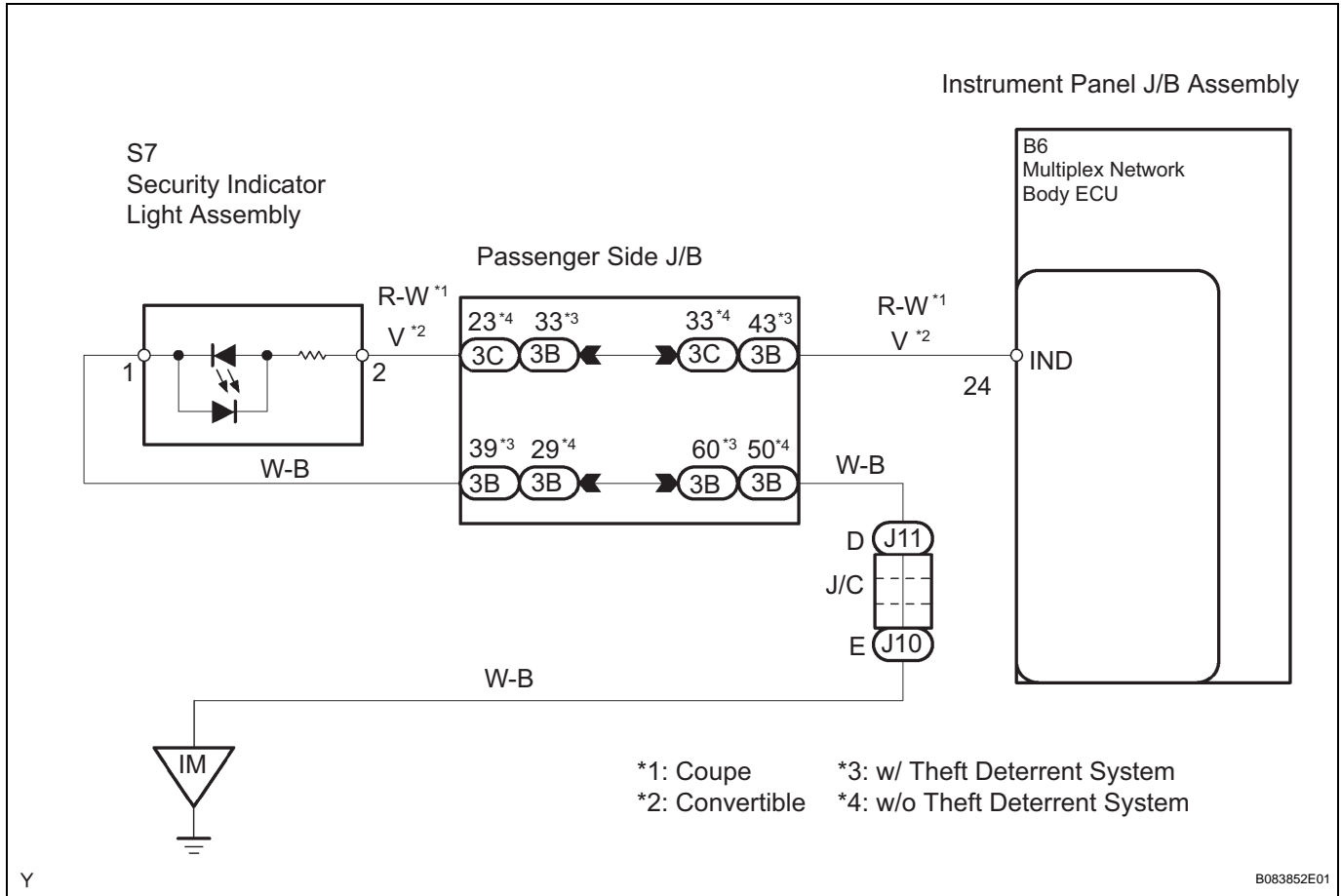
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE

## Security Indicator Light Circuit

### DESCRIPTION

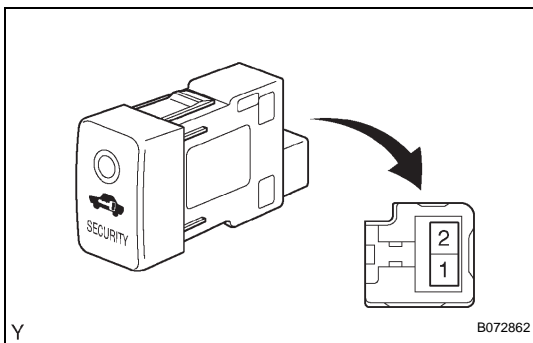
When the theft deterrent system is in the disarmed state, the security indicator will flash continuously if the immobilizer system is set, or not illuminate if the immobilizer system is not set. When the theft deterrent system is in the armed state, the immobilizer system is automatically set and the security indicator will flash continuously. When the theft deterrent system is in the arming preparation state or alarm sounding state, the multiplex network body ECU causes the security indicator to be illuminated.

### WIRING DIAGRAM



1

### INSPECT SECURITY INDICATOR LIGHT ASSEMBLY



- Remove the security indicator light.
- Apply 12 V positive voltage between the terminals of the indicator, and check the lighting condition of the security indicator.

#### Standard

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Turns on

**NOTICE:**

- If the positive (+) lead and the negative (-) lead are incorrectly connected, the security indicator will not turn on.
- A voltage of more than 12 V will damage the security indicator.
- If the voltage is too low, the security indicator will not turn on.

NG

**REPLACE SECURITY INDICATOR LIGHT ASSEMBLY**

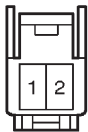
OK

**2**

**CHECK WIRE HARNESS (SECURITY INDICATOR LIGHT ASSEMBLY - BODY GROUND)**

S7  
Security Indicator  
Light Assembly

Wire Harness Side



B073655E01

- (a) Disconnect the S7 indicator connector.  
(b) Measure the resistance of the wire harness side connector.

**Resistance**

Tester Connection	Specified Condition
S7-1 - Body ground	Below 1 $\Omega$

NG

**REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

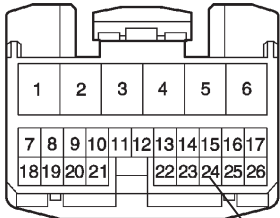
TD

**3**

**CHECK WIRE HARNESS (MULTIPLEX NETWORK BODY ECU - SECURITY INDICATOR LIGHT)**

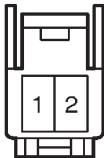
Wire Harness Side

B6  
Multiplex Network Body ECU



IND

S7  
Security Indicator Light Assembly



B073654E01

- (a) Disconnect the B6 ECU connector.  
(b) Disconnect the S7 indicator connector.  
(c) Measure the resistance of the harness side connectors.

**Resistance**

Tester Connection	Specified Condition
B6-24 (IND) - S7-2	Below 1 $\Omega$
B6-24 (IND) or S7-2 - Body ground	10 k $\Omega$ or higher

NG

**REPAIR OR REPLACE HARNESS AND CONNECTOR**



OK

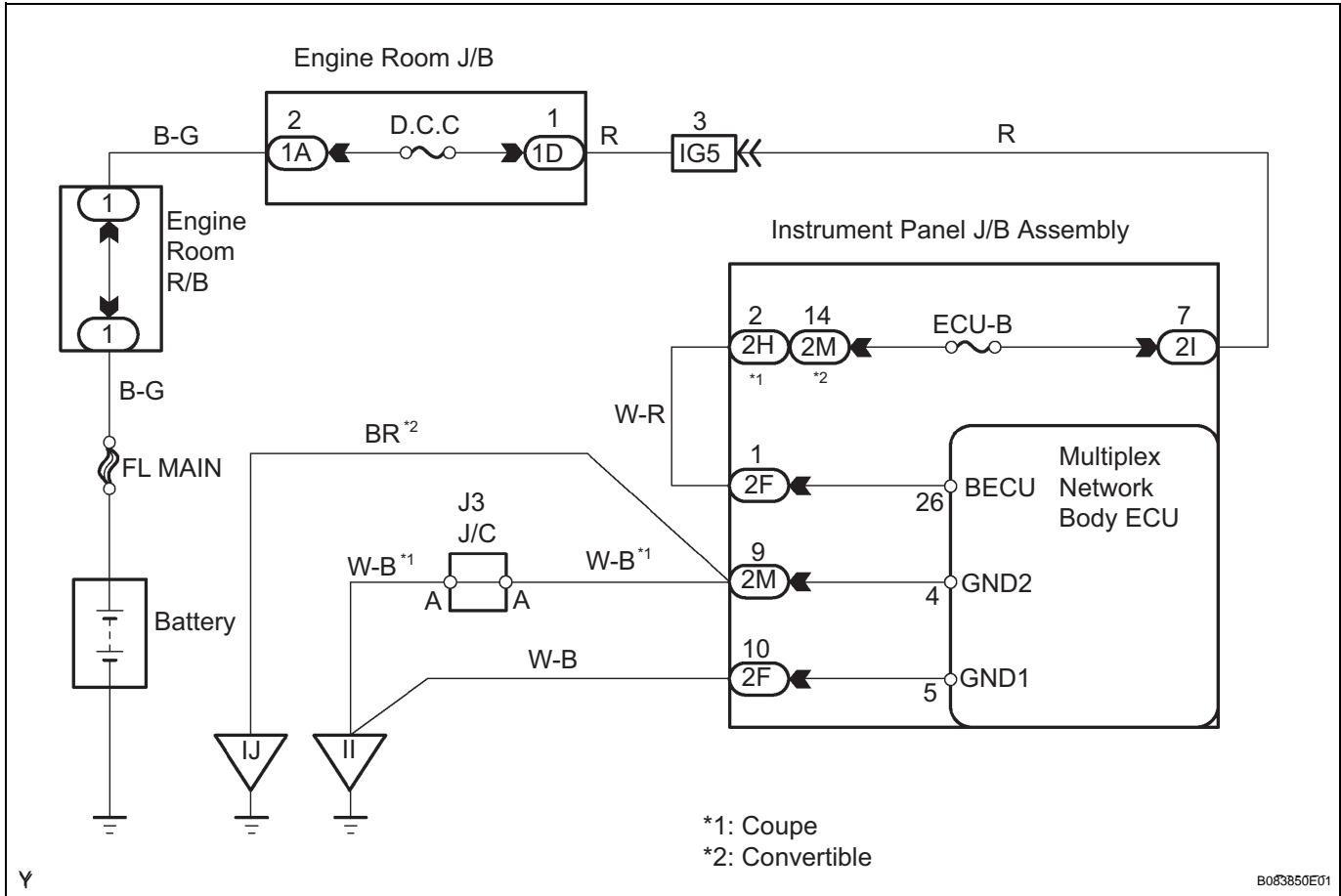
PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE

## ECU Power Source Circuit

### DESCRIPTION

This circuit provides power to operate the multiplex network body ECU.

### WIRING DIAGRAM



1

### INSPECT FUSE (ECU-B)

- Remove the ECU-B fuse from the instrument panel J/B.
- Measure the resistance of the fuse.

**Resistance:**

**Below 1  $\Omega$**

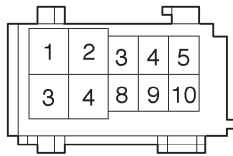
NG

**REPLACE FUSE**

OK

**2****CHECK WIRE HARNESS (INSTRUMENT PANEL J/B ASSEMBLY - BATTERY)****Wire Harness Side**

2I  
Instrument Panel J/B Assembly



B069996E02

- (a) Disconnect the 2I J/B connector.  
(b) Measure the voltage of the wire harness side connector.

**Voltage**

Tester Connection	Specified Condition
2I-7 - Body ground	10 to 14 V

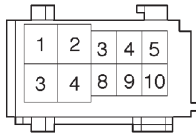
**NG**

**REPAIR OR REPLACE HARNESS AND CONNECTOR**

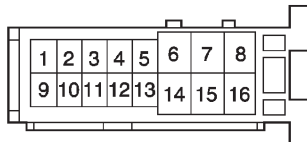
**OK****3****INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY****Wire Harness Side**

\*1: Coupe  
\*2: Convertible

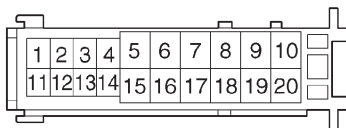
2I  
Instrument Panel J/B Assembly



2H \*1  
Instrument Panel J/B Assembly



2M \*2  
Instrument Panel J/B Assembly



B084473E01

- (a) Disconnect the 2I and 2H\*<sub>1</sub> or 2M\*<sub>2</sub> J/B connectors.  
(b) Measure the resistance of the J/B.

**Resistance**

Tester Connection	Specified Condition
2I-7 - 2H-2* <sup>1</sup>	Below 1 Ω
2I-7 - 2M-14* <sup>2</sup>	Below 1 Ω

\*1: Coupe

\*2: Convertible

**NG**

**REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY**

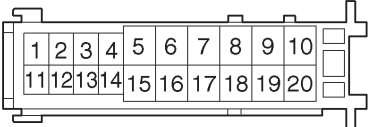
**TD****OK**

4

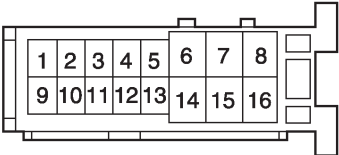
CHECK WIRE HARNESS (INSTRUMENT PANEL J/B ASSEMBLY - BODY GROUND)

Wire Harness Side

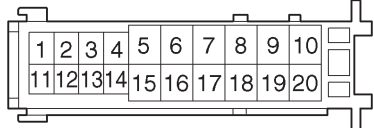
2F  
Instrument Panel J/B Assembly



2H  
Instrument Panel J/B Assembly



2M  
Instrument Panel J/B Assembly



B084293E02

- (a) Disconnect the 2F, 2H<sup>\*1</sup> and 2M J/B connectors.
- (b) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
2F-1 - 2H-2 <sup>*1</sup>	Below 1 Ω
2F-1 - 2M-14 <sup>*2</sup>	Below 1 Ω
2M-9 - Body ground	Below 1 Ω
2F-10 - Body ground	Below 1 Ω

<sup>\*1</sup>: Coupe

<sup>\*2</sup>: Convertible

NG

REPAIR OR REPLACE HARNESS AND CONNECTOR

TD

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE