

THEFT DETERRENT SYSTEM

PRECAUTION

NOTICE:

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

System Name	See procedure
Power Window Control System	IN-36
Sliding Roof System	IN-36

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1. EXPRESSIONS OF IGNITION SWITCH

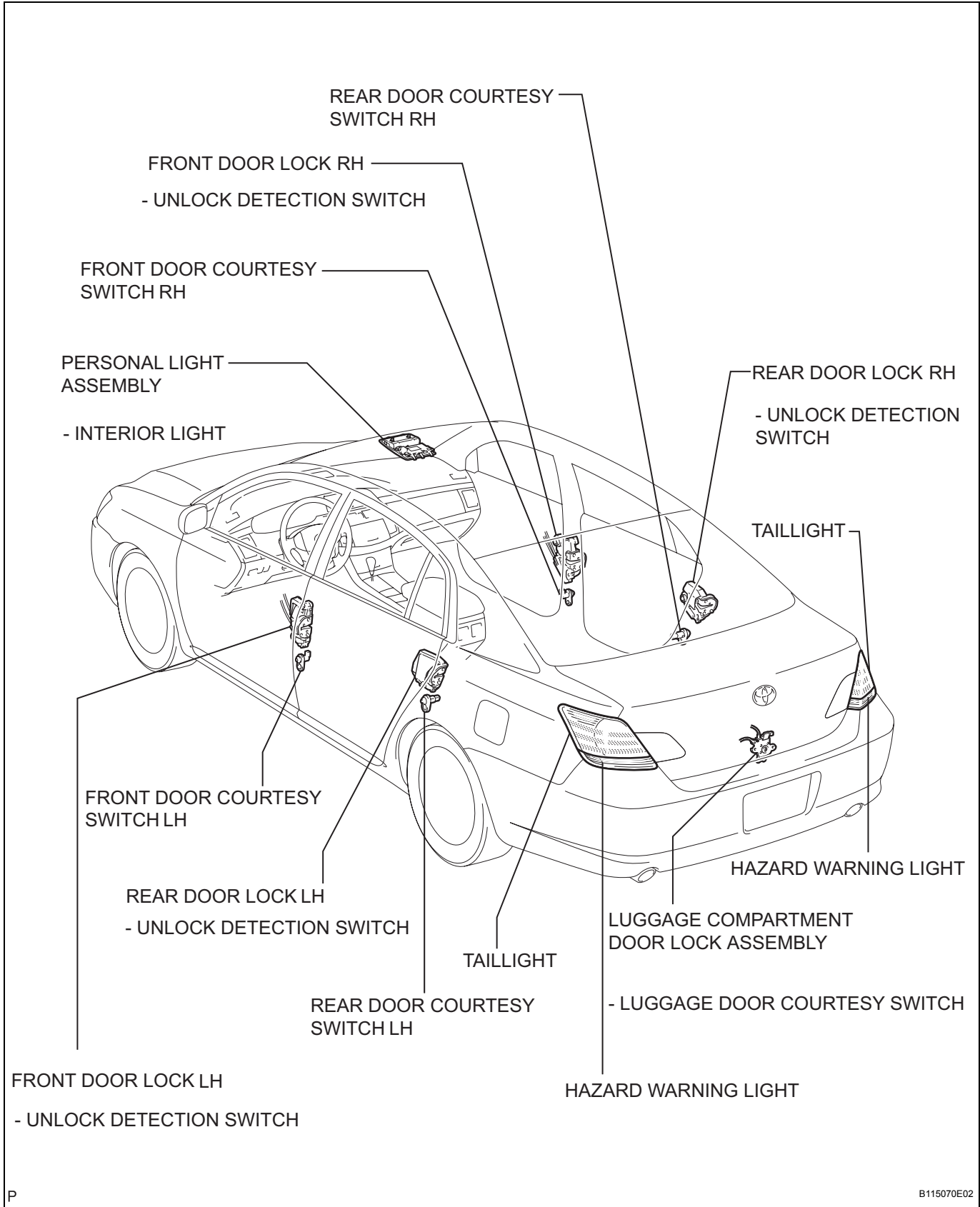
The type of ignition switch used on this model differs according to the specifications of the vehicle.

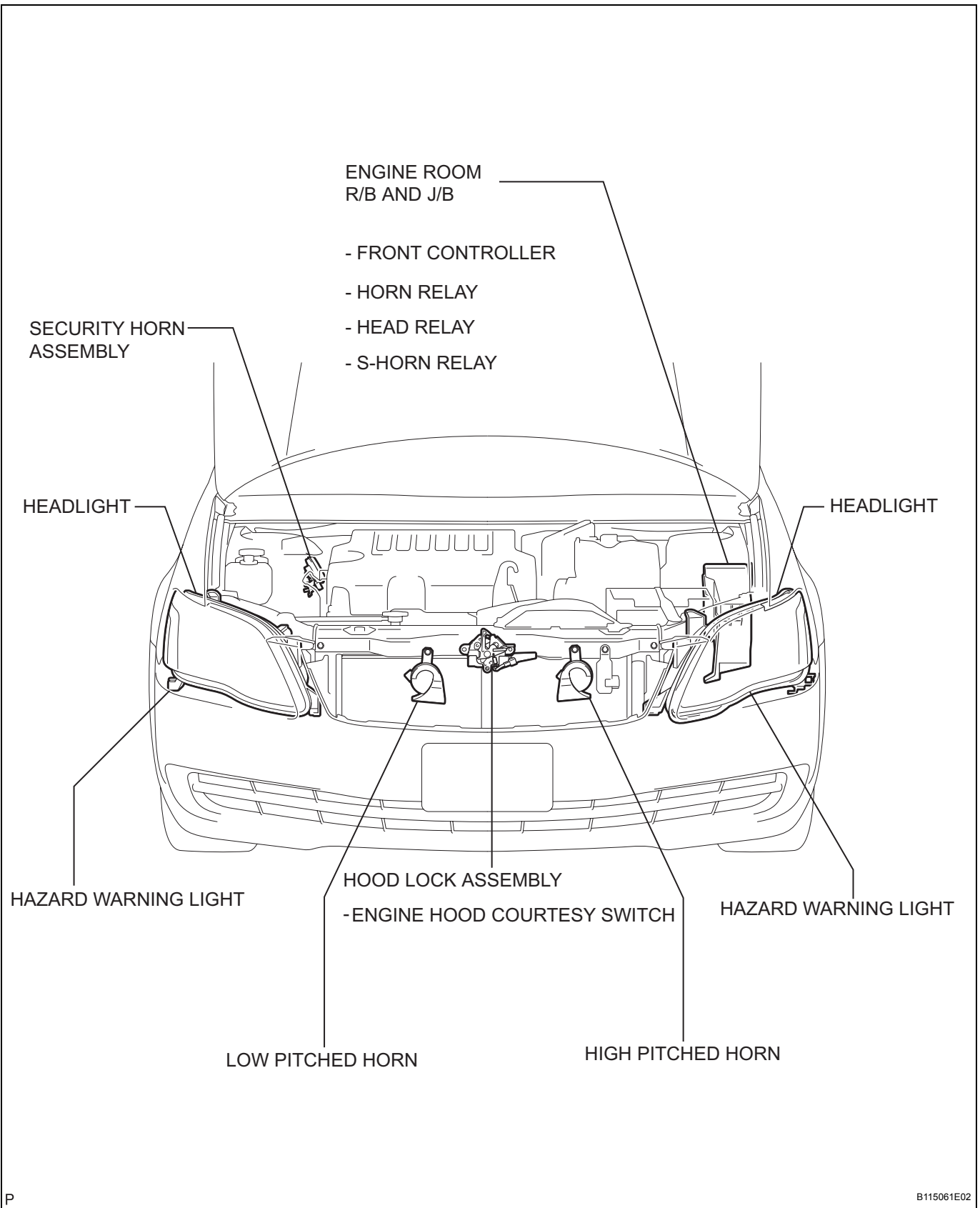
The expressions listed in the table below are used in this section.

Switch Type	Ignition Switch (position)	Engine Switch (condition)	
Expression	Ignition Switch off	LOCK	Off
	Ignition Switch on (IG)	ON	On (IG)
	Ignition Switch on (ACC)	ACC	On (ACC)
	Engine Start	START	Start

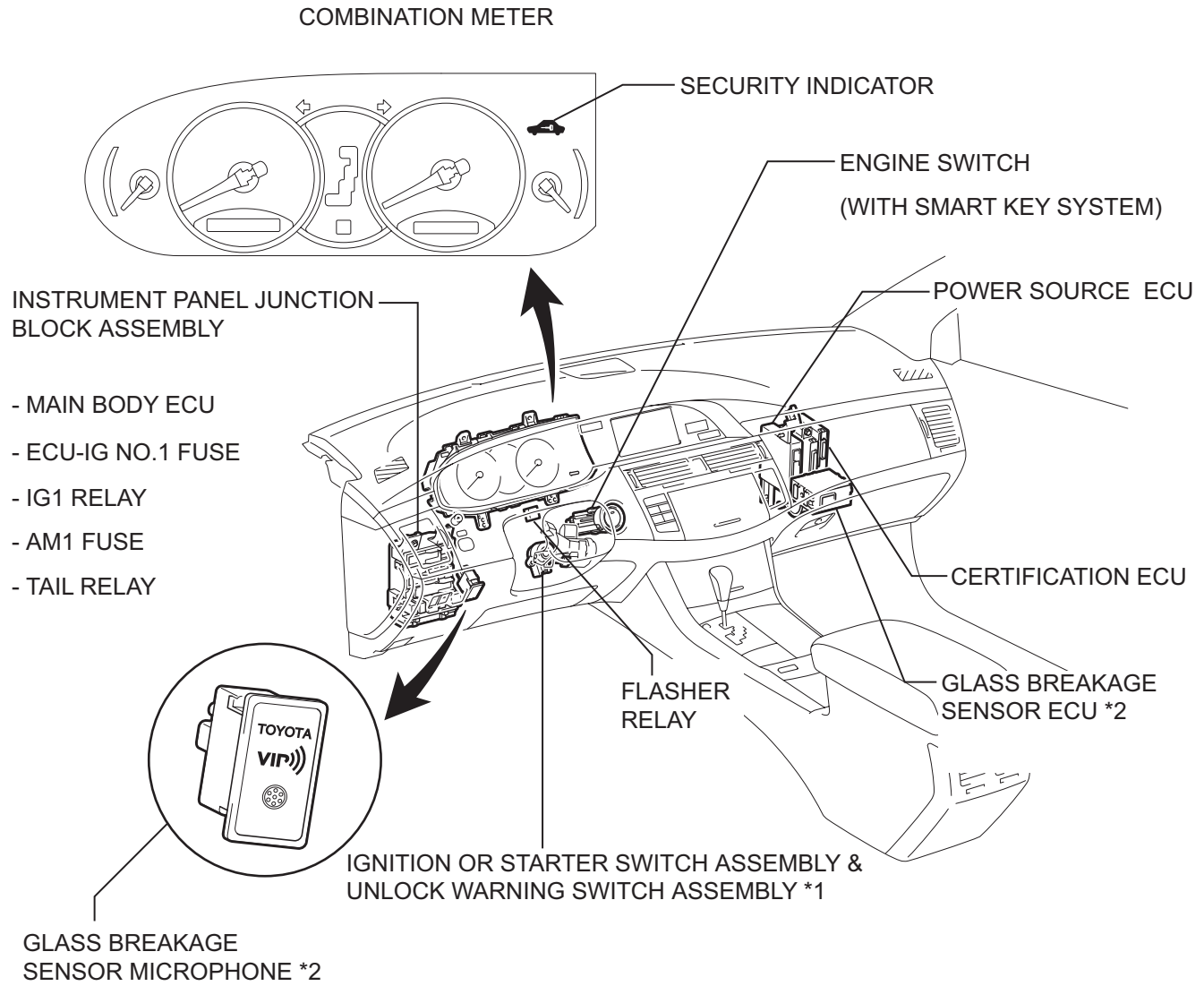
PARTS LOCATION

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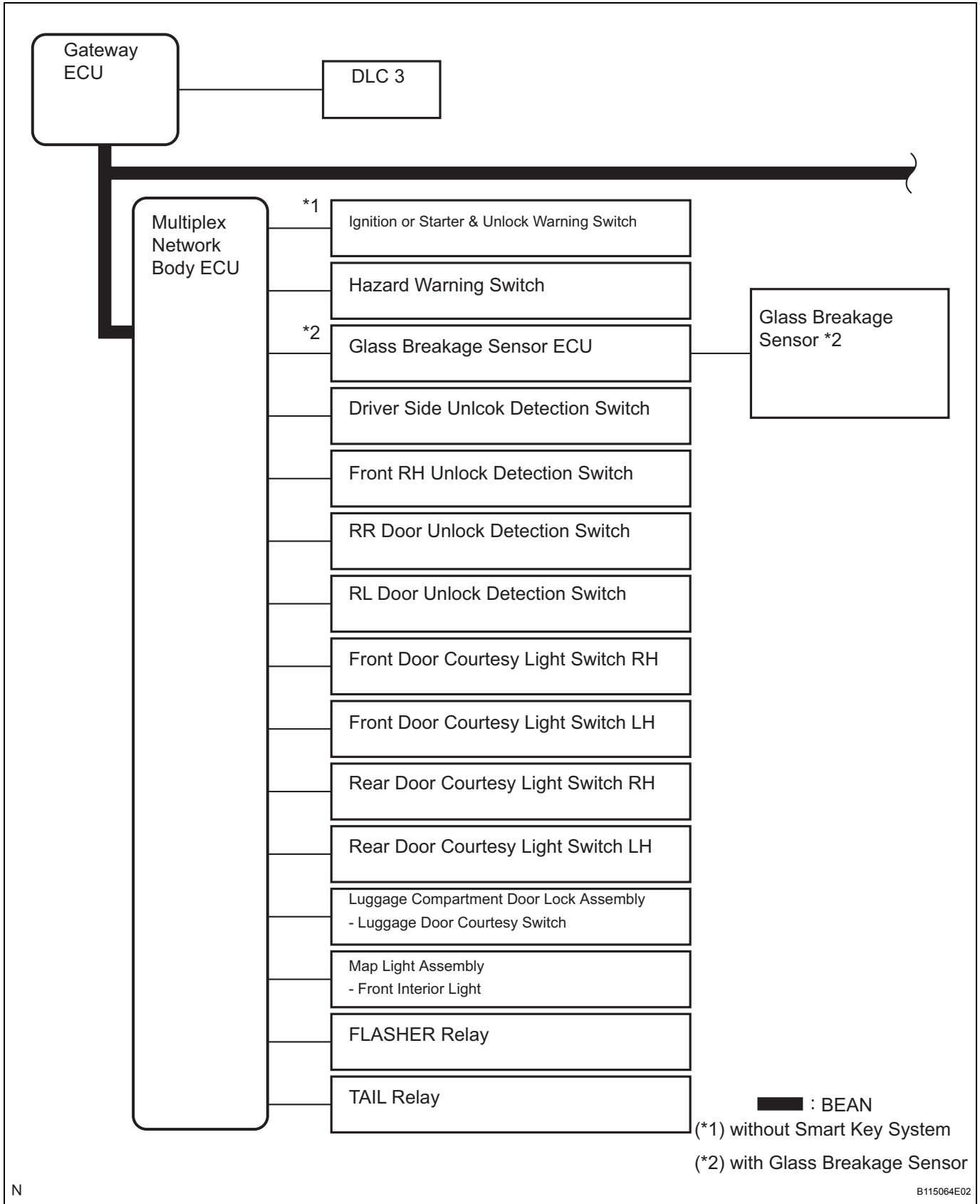


*1 : without Smart Key System

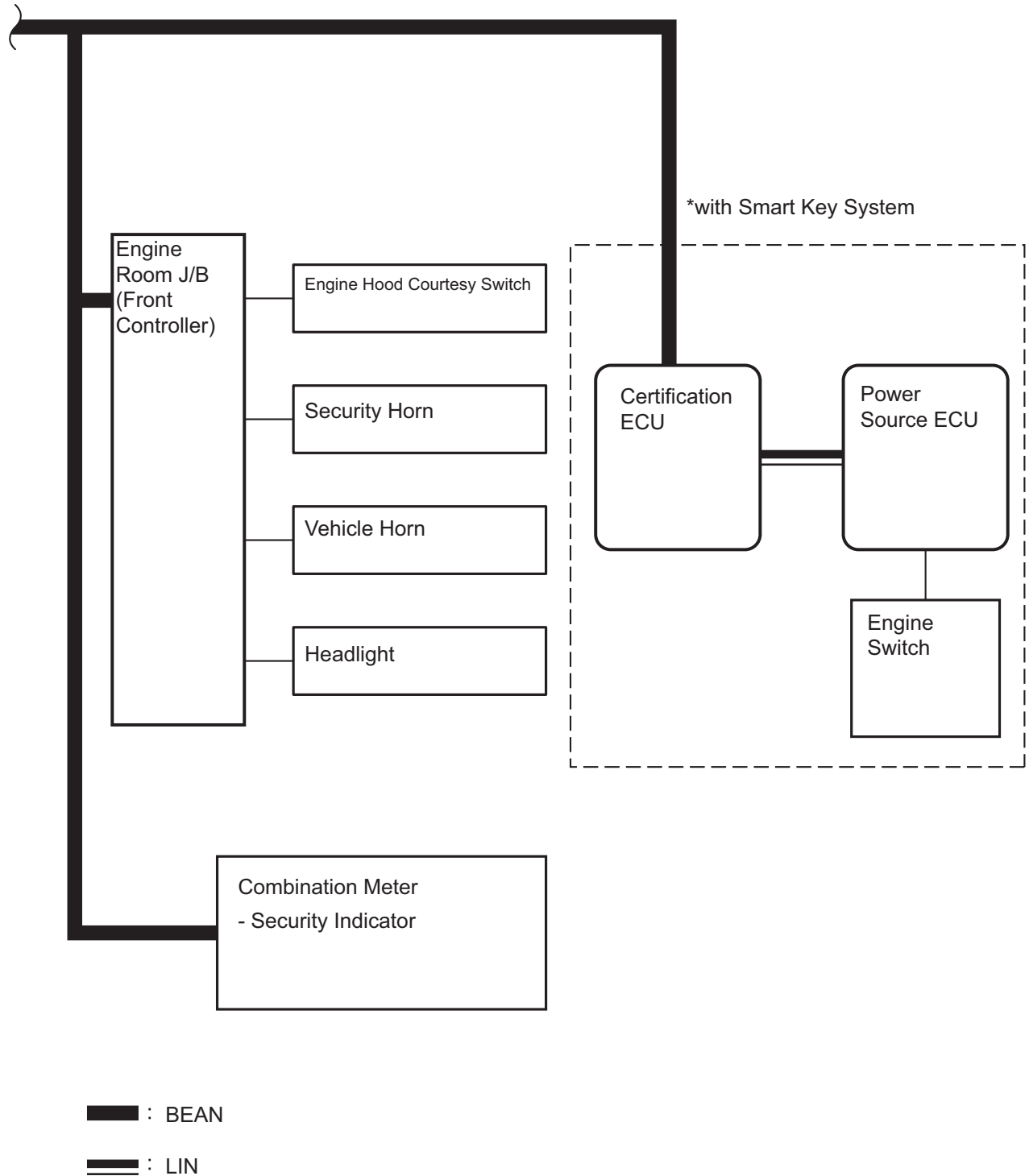
*2 : with Glass Breakage Sensor

SYSTEM DIAGRAM

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Communication Table:

Transmitting ECU (Transmitter)	Receiving ECU (Receiver)	Signal	Line
Multiplex Network Body ECU	Front Controller	<ul style="list-style-type: none"> • Security horn sound request • Vehicle horn sound request • Headlight on request 	BEAN

Transmitting ECU (Transmitter)	Receiving ECU (Receiver)	Signal	Line
Certification ECU	Multiplex Network Body ECU	Engine switch signal (with Smart key system)	BEAN
Front Controller	Multiplex Network Body ECU	Hood courtesy switch signal	BEAN
Multiplex Network Body ECU	Combination Meter	Security indicator operation signal	BEAN

SYSTEM DESCRIPTION

The theft deterrent system will operate when somebody attempts to forcibly enter the vehicle, open the engine hood or the luggage compartment door, or unlock any door or the luggage compartment door without using the key, or when the battery terminals are removed and reconnected.

- The system consists of door lock control system parts, wireless door lock remote control system parts, and smart key system parts, security horn, and security indicator light.
- The multiplex network body ECU controls this system.

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:

- Use this procedure to troubleshoot the theft deterrent system.
- The intelligent tester should be used in step 3.

1 VEHICLE BROUGHT TO WORKSHOP

NEXT

2 CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK

- (a) Interview the customer to confirm the trouble (See page [IN-36](#)).

NEXT

3 INSPECT COMMUNICATION FUNCTION OF MULTIPLEX COMMUNICATION SYSTEM (BEAN)

- (a) Use the intelligent tester to check for normal function of the multiplex communication system.
- (1) (ECU unconnected, communication line malfunctioning) If no code is outputs, proceed to A.
 - (2) (ECU unconnected, communication line malfunctioning) If any code is outputs, proceed to B.

B

Go to **MULTIPLEX COMMUNICATION SECTION**

A

4 PROBLEM SYMPTOMS TABLE

- (a) If the fault is not listed in the problem symptoms table, proceed to A.
- (b) If the fault is listed in the problem symptoms table, proceed to B.

B

Go to **step 6**

A

5 PERFORM TROUBLESHOOTING ACCORDING TO MALFUNCTION SYMPTOM

- (a) Terminals of ECU (See page [TD-11](#))
- (b) On-vehicle inspection (See page [TD-16](#))

NEXT

6	ADJUST, REPAIR OR REPLACE
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NEXT

7	CONFIRMATION TEST
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NEXT

END

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CUSTOMIZE PARAMETERS

HINT:

The following items can be customized.

NOTICE:

- After confirming whether the items requested by the customer are applicable or not for customization, perform customizing operations.
- Be sure to record the current settings before customization.
- When troubleshooting, make sure that the item in question is not set to "OFF" as a result of customization (Example: For the symptom "the wireless function does not operate", first check that the wireless function is not set to "OFF", then perform troubleshooting).

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THEFT DETERRENT SYSTEM

DISPLAY (ITEM)	DEFAULT	CONTENTS	SETTING
PASSIVE MODE	OFF	For vehicles with the smart key system, PASSIVE MODE is the function that sets the theft deterrent system 30 seconds after the driver's door is closed from the open condition with the key removed from the ignition key cylinder. For vehicles without the smart key system, PASSIVE MODE is the function that sets the theft deterrent system 30 seconds after the driver's door is closed from the open condition with the ignition switch turned from on (IG) to off.	ON/OFF
WARN BY GLS SEN	ON	Function that turns the glass break sensor on/off. This function is only effective for vehicles with glass break sensors.	ON/OFF
ENTRY DELAY	14s	Function that changes the entry delay time (period before starting the warning) for the passive mode.	0s/14s/30s
WARNING BY HORN	ON	Function to make the horn warning available.	ON/OFF

PROBLEM SYMPTOMS TABLE

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

HINT:

Troubleshooting of the theft deterrent system is based on the premise that the smart key system, the door lock control system and the wireless door lock control system are operating normally. Therefore, before troubleshooting the theft deterrent system, first make certain that the above 3 systems are operating normally.

THEFT DETERRENT SYSTEM

Symptom	Suspected area	See page
Theft deterrent system cannot be set	1. Security Indicator Light Circuit	TD-40
	2. ECU Power Source Circuit	TD-48
	3. Unlock Warning Switch Circuit (*1)	EI-22
	4. Door Key Lock and Unlock Switch Circuit	DL-57
	5. Door Courtesy Switch Circuit	LI-65
	6. Luggage Compartment Door Courtesy Switch Circuit	DL-51
	7. Engine Hood Courtesy Switch Circuit.	TD-23
	8. Replace Instrument Panel J/B Assembly (Multiplex Network Body ECU)	-
Security indicator does not blink when theft deterrent system is set	Security Indicator Light Circuit	TD-40
Alarm sounding state can not be canceled when ignition switch is turned ON-OFF 10 times within 15 seconds (*1)	1. Ignition Switch Circuit	TD-33
	2. Unlock Warning Switch Circuit (*1)	EI-22
Theft deterrent system can be set even when a door is open	Door Courtesy Switch Circuit	LI-65
Vehicle horns (low pitched, high pitched) do not sound while theft deterrent system is in warning operation	Horn Circuit	TD-26
Headlights do not flash while theft deterrent system is in warning operation	Headlight Relay Circuit	LI-40
Taillights do not flash while theft deterrent system is in warning operation	Taillight Relay Circuit	LI-84
Hazard warning lights do not flash while theft deterrent system is in warning operation	Hazard Warning Switch Circuit	LI-58
Interior light does not light up while theft deterrent system is in warning operation	Illumination Circuit	LI-77
Security horn does not sound while theft deterrent system is in warning operation	Security Horn Circuit	TD-30
Headlights flash even when theft deterrent system is not set	Headlight Relay Circuit	LI-40
Taillights flash even when theft deterrent system is not set	Taillight Relay Circuit	LI-84
Hazard warning lights flash even when theft deterrent system is not set	Hazard Warning Switch Circuit	LI-58
Interior lights comes on even when theft deterrent system is not set	Illumination Circuit	LI-77
Glass breakage sensor does not operate (*2)	Glass Breakage Sensor Circuit	TD-43

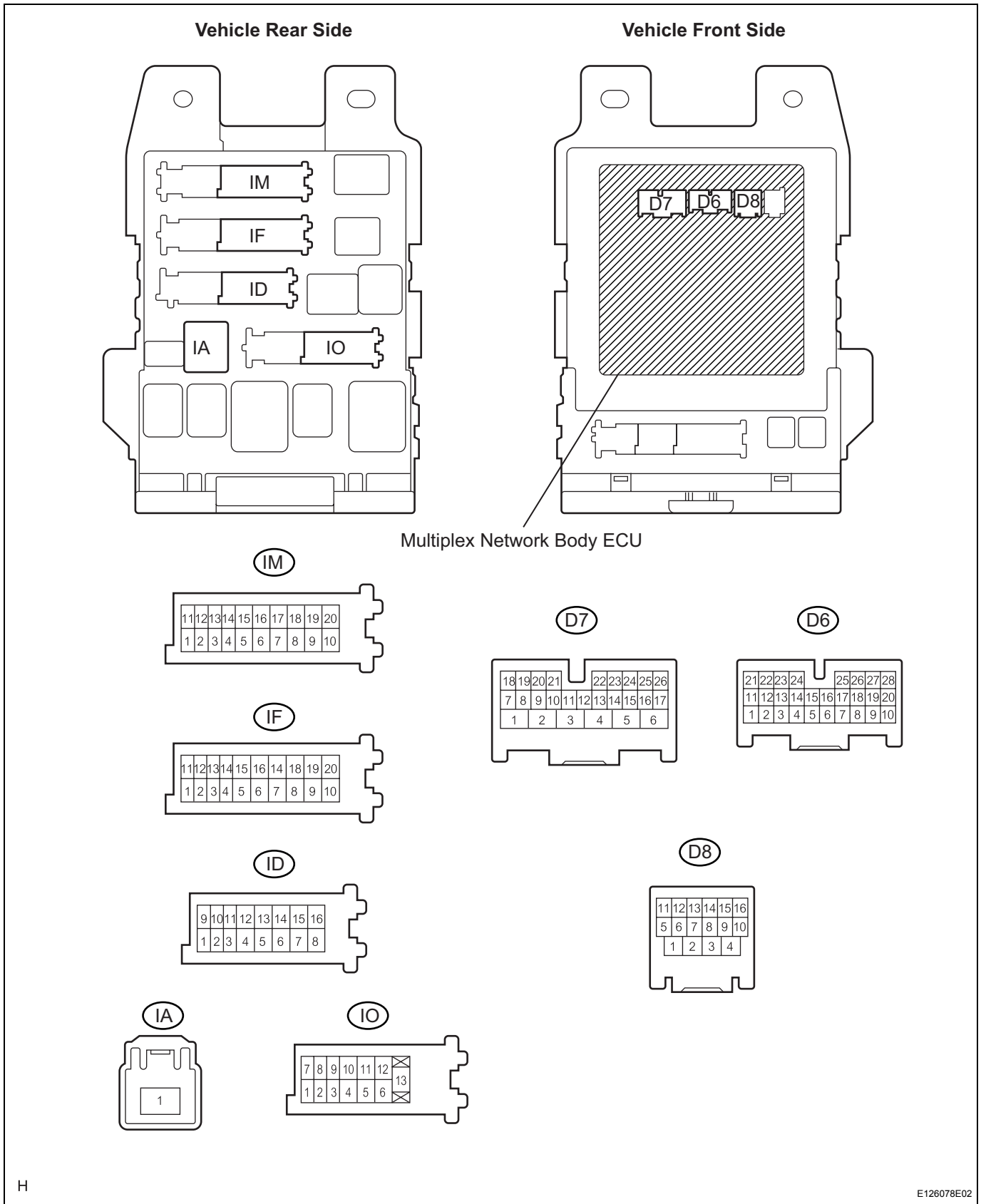
HINT:

- *1: without Smart Key System
- *2: with Glass Breakage Sensor

TERMINALS OF ECU

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

(a) Disconnect the D6, D7 and D8 ECU connectors.



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- (b) Disconnect the IA, ID, IF and IM J/B connectors.
 (c) Check the voltage and resistance between each terminal of the wire harness side connectors and body ground.

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
(IA-1) - Body ground	B - Body ground	Ignition power supply	Always	10 to 14 V
(ID-10) - Body ground	O - Body ground	+B (BECU) power supply	Always	10 to 14 V
(IF-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
(IM-9) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
(IO-7) - Body ground	B - Body ground	Rear LH courtesy switch	Rear door LH CLOSED (OFF) → OPEN (ON)	10 k Ω or higher → Below 1 Ω
PCTY (D6-23) - Body ground	L - Body ground	Passenger side courtesy switch	Passenger side door CLOSED (OFF) → OPEN (ON)	10 k Ω or higher → Below 1 Ω
LGCY (D6-25) - Body ground	V - Body ground	Luggage compartment door courtesy switch	Luggage compartment door CLOSED (OFF) → OPEN (ON)	10 k Ω or higher → Below 1 Ω
KSW (D7-21) - Body ground	*1 B - Body ground	Key unlock warning switch input	No key in ignition key cylinder (OFF) → Key inserted (ON)	10 k Ω or higher → Below 1 Ω
DCTY (D8-14) - Body ground	L - Body ground	Driver side courtesy switch	Driver side door CLOSED (OFF) → OPEN (ON)	10 k Ω or higher → Below 1 Ω
RCTY (D8-16) - Body ground	GR - Body ground	Rear RH courtesy switch	Rear door RH CLOSED (OFF) → OPEN (ON)	10 k Ω or higher → Below 1 Ω

HINT:

*1: without Smart key system

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

- (d) Reconnect the D6, D7 and D8 ECU connectors.
 (e) Reconnect the 1A, 1D, 1F and 1M J/B connectors.
 (f) Check the voltage between each terminal of the connectors and the body ground.

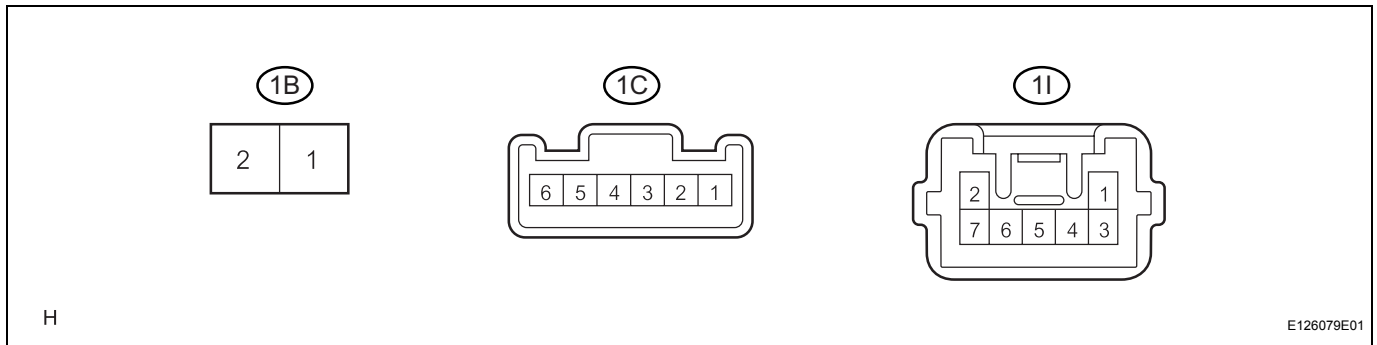
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
HAZ (D7-2) - Body ground	P - Body ground	Hazard warning light drive	Answer-back OFF → Answer-back ON	Below 1 V → Pulse generation
GBS (D7-14) - Body ground	*1 G - Body ground	Glass breakage sensor ECU communication	Armed stated → Alarm sounds (on glass breakage detection)	Below 1 V → Pulse generation
IND (D7-24) - Body ground	W - Body ground	Security indicator	Security indicator lights up (It lights up only for 30 sec. in alarm sounding state. If flashes when immobiliser system is operating.)	3 to 6 V

HINT:

*1: with Glass breakage sensor

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

2. CHECK ENGINE ROOM J/B ASSEMBLY (FRONT CONTROLLER)



- (a) Disconnect the 1B, 1C and 1I ECU connectors.
- (b) Check the resistance between each terminal of the wire harness connectors and body ground.

Terminal No.	Wiring Color	Terminal Description	Condition	Specified Condition
1I-7 - Body ground	L - Body ground	Engine hood courtesy switch	Engine hood CLOSED (OFF) → OPEN (ON)	10 k Ω or higher → Below 1 Ω

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

- (c) Reconnect the 1B, 1C and 1I ECU connectors.
- (d) Check the voltage between each terminal of the connectors and the body ground.

Terminal No.	Wiring Color	Terminal Description	Condition	Specified Condition
1B-2 - Body ground	L - Body ground	Security horn	Security horn is sounding (Theft deterrent system is in alarm sounding state)	10 to 14 V
1C-1 - Body ground	GR - Body ground	Vehicle horn	Vehicle horn is sounding	10 to 14 V

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

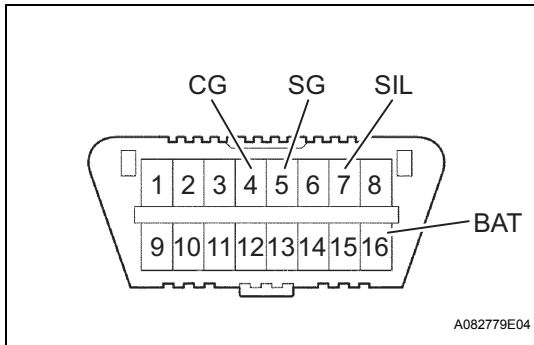
DIAGNOSIS SYSTEM

1. DESCRIPTION

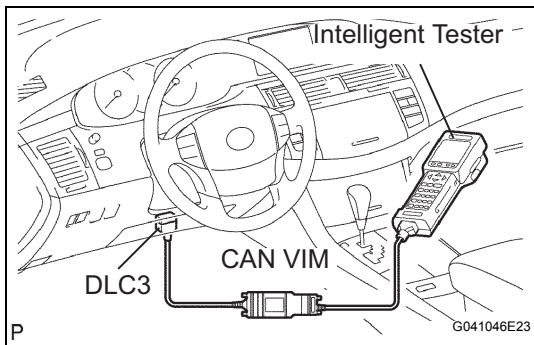
- (a) The multiplex network body ECU controls the functions of the theft deterrent system on the vehicle. Theft deterrent system data can be read in the Data Link Connector 3 (DLC3) of the vehicle. When the system seems to be malfunctioning, use the intelligent tester to check for a malfunction and perform repairs.

2. DLC3 CHECK

- (a) The multiplex network body ECU uses ISO 9141-2 BEAN for its communication protocol. The terminal arrangement of the DLC3 complies with SAEJ1962 and matches the ISO 9141-2 format.



Symbol	Terminal No.	Name	Reference terminal	Result	Condition
SIL	7	Bus "+" line	5-Signal ground	Pulse generation	During transmission
CG	4	Chassis ground	Body ground	1 Ω or less	Always
SG	5	Signal ground	Body ground	1 Ω or less	Always
BAT	16	Battery positive	Body ground	9 to 14 V	Always



- (b) Connect the cable of the intelligent tester (with CAN VIM) to the DLC3, turn the ignition switch on and attempt to use the intelligent tester. If the display indicates that a communication error has occurred, there is a problem either with the vehicle or with the tester.
- If communication is normal when the tool is connected to another vehicle, inspect the DLC3 on the original vehicle.
 - If communication is still impossible when the tool is connected to another vehicle, the problem is probably in the tool itself. Consult the Service Department listed in the tool's instruction manual.

3. CHECK BATTERY VOLTAGE

Standard voltage:

11 to 14 V

If voltage is below 11 V, replace the battery.

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the intelligent tester DATA LIST allows switch, sensor, actuator and other item values to be read without removing any parts. Reading the DATA LIST early in the troubleshooting process is one way to shorten labor time.

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch on (IG).
- (c) Read the DATA LIST following to the display on the tester.

BODY (Multiplex Network body ECU):

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
WARN BY HORN	Warning by horn/ ON or OFF	ON: When switched from armed state to alarm sounding state OFF: When switched from alarm sounding state to armed state or disarmed state	-
PASSIVE MODE	Passive mode/ON or OFF	ON: Passive mode ON OFF: Passive mode OFF	-
WARN BY GLS SEN	Warning by glass breakage sensor/ON or OFF	ON: Warns when glass breakage is detected OFF: Does not warn when glass breakage is detected	-
ENTRY DELAY	Entry delay time during Passive Mode	0s: Entry delay time is 0 sec. 14s: Entry delay time is 14 sec. 30s: Entry delay time is 30 sec.	-
KEY UNLK WRN SW	Unlock warning switch signal/ON or OFF	ON: Key is inserted into the ignition key cylinder OFF: Key is removed from the ignition key cylinder	-
LUGG COURTSY SW	Luggage courtesy switch/ ON or OFF	ON: Luggage compartment door is OPEN OFF: Luggage compartment door is CLOSED	-
D DOR CTY SW	D door courtesy switch/ ON or OFF	ON: Driver side door is OPEN OFF: Driver side door is CLOSED	-
P DOR CTY SW	P door courtesy switch/ON or OFF	ON: Front passenger side door is OPEN OFF: Front passenger side door is CLOSED	-
Rr DOR CTY SW	Rear door courtesy switch/ ON or OFF	ON: Rear door is OPEN OFF: Rear door is CLOSED	-
Rr LOCK POS SW	Rear lock position switch/ ON or OFF	ON: Rear door is UNLOCKED OFF: Rear door is LOCKED	-
P LOCK POS SW	Passenger lock pos switch/ON or OFF	ON: Front passenger side door is UNLOCKED OFF: Front passenger side door is LOCKED	-
D LOCK POS SW	D-door lock pos switch/ON or OFF	ON: Driver side door is UNLOCKED OFF: Driver side door is LOCKED	-
IG SW	Ignition switch signal/ON or OFF	ON: Key is in ON or START position OFF: Key is in OFF or ACC position	-
D/L SW-LOCK	Door lock switch signal/ ON or OFF	ON: Door lock switch is pushed/turned to LOCK position OFF: Door lock switch is not pushed / not turned to LOCK position	-
D/L SW-UNLOCK	Door unlock switch signal/ ON or OFF	ON: Door lock switch is pushed/turned to UNLOCK position OFF: Door lock switch is not pushed/not turned to UNLOCK position	-
GLS BRK DETECT	Glass break sen detect/ ON or OFF	ON: Glass breakage sensor operates OFF: Glass breakage sensor does not operate	-

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BODY NO.5 (Engine room J/B assembly):

Item	Measurement Item/ Display (Range)	Normal Condition	Diagnostic Note
HOOD COURTESY SW	Engine hood courtesy switch signal/ON or OFF	ON: Engine hood is OPEN OFF: Engine hood is CLOSED	-

2. ACTIVE TEST**HINT:**

Performing the intelligent tester ACTIVE TEST allows relay, VSV, actuator and other items to be operated without removing any parts. Performing the ACTIVE TEST early in the troubleshooting process is one way to shorten labor time. The DATA LIST can be displayed during the ACTIVE TEST.

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch on (IG).
- (c) Perform the ACTIVE TEST following to the display on the tester.

BODY (Multiplex Network body ECU):

Item	Tester Detail	Diagnostic Note
SECURITY INDIC	Security indicator light ON/OFF	-
HAZARD	Hazard warning light ON/OFF	-

BODY NO.5 (Engine room J/B assembly):

Item	Tester Detail	Diagnostic Note
SECURITY HORN	Security horn ON/OFF	-
HORN RELAY	Horn relay ON/OFF	-

ON-VEHICLE INSPECTION

1. OUTLINE OF THEFT DETERRENT SYSTEM

- (a) When the theft deterrent system detects that the vehicle is being tampered with, the system sets off the alarm, causing the horns to sound and the lights to light up or blink in order to alert people around the vehicle to the theft.
- (b) The theft deterrent system has 2 modes; one is the active arming mode and the other is passive arming mode. The passive arming mode can be switched ON/OFF using the specified method.
- (c) Each mode has 4 states; a disarmed state, an arming preparation state, an armed state and an alarm sounding state.
 - (1) Disarmed state:
 - The alarm function is not operating.
 - The theft deterrent system is not operating.
 - (2) Arming preparation state:
 - The time until the system goes into the armed state.
 - The theft deterrent system is not operating.
 - (3) Armed state:
 - The theft deterrent system is operating.
 - (4) Alarm sounding state:
 - Alarm function is operating.

Alarm time:

Approx. 60 seconds

Refer to table below for alarm method and time:

Alarm Method	Headlight	Blinking
	Taillight	Blinking
	Hazard Warning Light	Blinking
	Interior Light	Illuminating
	Vehicle Horn	Sounding (approx. 0.4 second cycles)
	Security Horn	Sounding (approx. 0.4 second cycles)
	Door Lock Motor	Locking
Alarm Time	Approx. 60 sec.	

HINT:

If any of the doors are unlocked with no key in the ignition key cylinder during the armed state, a forced door lock signal will be output (see FORCED DOOR LOCK CONTROL). (without Smart key system)

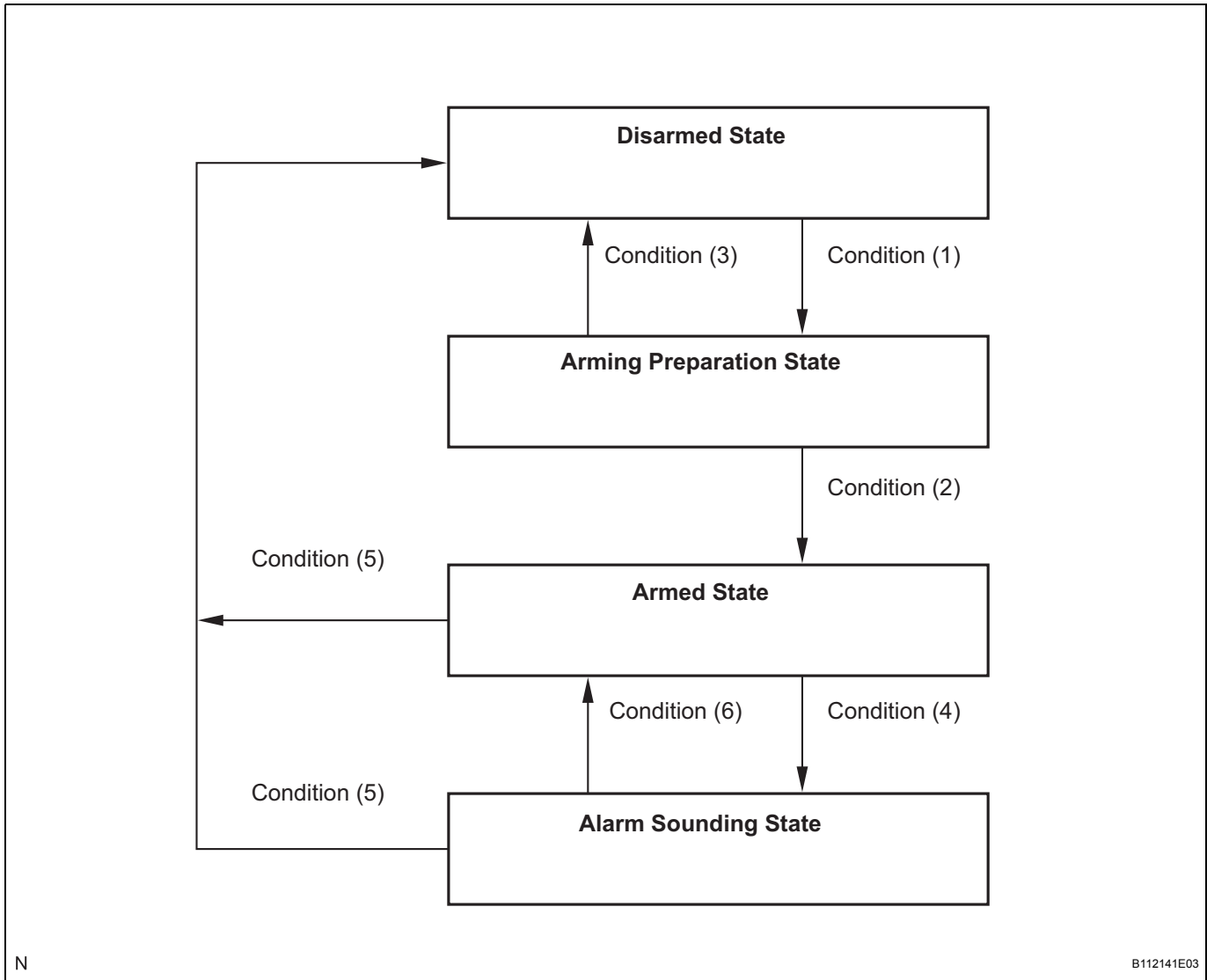
2. ACTIVE ARMING MODE

HINT:

- Active arming mode starts the alarm control immediately after the doors are locked.
- This system activates as described in the diagram below when one of items for each condition is met.

(a) Active arming mode

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Condition	Item
Condition (1)	(No key in ignition key cylinder) 1. With all doors and engine hood closed, lock all doors by key operation. 2. With all doors and engine hood closed, lock all doors by wireless operation. 3. With any door open, close all doors and lock all doors by the key-less lock system.
Condition (2)	With all doors and engine hood closed, lock all doors. Allow approx. 30 sec. to elapse.
Condition (3)	1. Unlock any door by wireless operation. 2. Unlock any door by key operation. 3. Unlock any door. 4. Open any door. 5. Open engine hood. 6. Open luggage compartment door. 7. Insert key into ignition key cylinder. *1 8. Reconnect battery. 9. Turn ignition switch from off to on (IG). *2

Condition	Item
Condition (4)	<ol style="list-style-type: none"> 1. Open engine hood. 2. Open luggage compartment door. 3. Reconnect battery. 4. Open any door. 5. Unlock any door without key and wireless operation. 6. The glass breakage sensor detects the sound of breaking glass from the 2nd time and afterward.
Condition (5)	<ol style="list-style-type: none"> 1. Unlock any door 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 (IG). *1 4. Turn ignition switch from off to on (IG). *2
Condition (6)	After approx. 65 sec., alarm stops and system returns to armed state.

HINT:

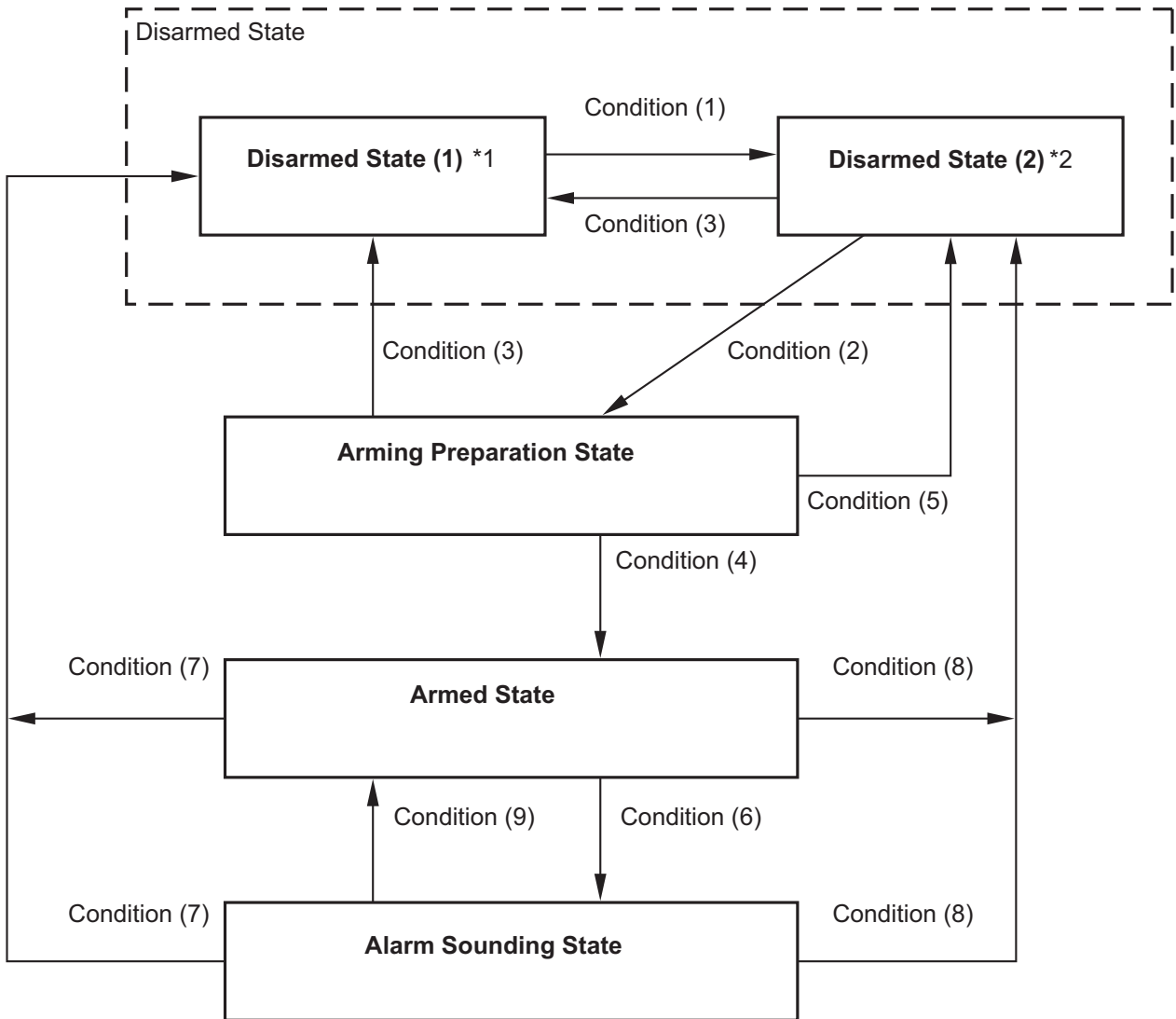
- *1: without Smart key system
- *2: with Smart key system

3. PASSIVE ARMING MODE

HINT:

- Passive arming mode starts the alarm control after the key is removed from the ignition key cylinder and doors are closed. (without Smart key system)
- Passive arming mode can be switched ON/OFF by using the intelligent tester.
- The alarm is initially set (when shipped from factory) to active arming mode (not passive arming mode).
- During passive arming mode, the theft deterrent system goes into the armed state even if the doors are not locked.
- 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).
- Although the theft deterrent system detects that the doors are opened during passive arming mode, the alarm will not go off immediately because an entry delay time is set.
- If any of the following conditions is met 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 open, close all doors and lock all doors by the key-less lock system.
- This system activates as described in the diagram below when one of items for each condition is met.

(a) Passive arming mode



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*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 state.

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Condition	Item
Condition (1)	1. With ignition switch off, open any door or the engine hood, and pull key out of ignition key cylinder. *1 2. With ignition switch off, pull key out of ignition key cylinder, and open any door or the engine hood. *1 3. Turn the ignition switch off when any of the doors are open. *2 4. Open any of the doors with the ignition switch on (ACC) or off. *2
Condition (2)	All doors and engine hood are closed.

Condition	Item
Condition (3)	<ol style="list-style-type: none"> 1. Unlock any door by wireless operation. 2. Insert key into ignition key cylinder. *1 3. Reconnect battery. 4. Turn ignition switch from off to on (ACC or IG). *1 5. Turn the ignition switch on (IG) to off. *2 6. Unlock any door by key operation.
Condition (4)	With all doors and engine hood closed, allow approx. 30 sec. to elapse.
Condition (5)	<ol style="list-style-type: none"> 1. Open any door. 2. Open engine hood. 3. Open luggage compartment door. 4. Unlock luggage compartment door by key operation.
Condition (6)	<ol style="list-style-type: none"> 1. Open any door and allow entry delay time *3 to elapse. 2. Open engine hood. 3. Open luggage compartment door. 4. Reconnect battery.
Condition (7)	<ol style="list-style-type: none"> 1. Unlock any door 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 (IG). *1 4. Turn the ignition switch on (ACC or IG) within 7 seconds after turning it off. *2
Condition (8)	<ol style="list-style-type: none"> 1. Open luggage compartment door by wireless operation. 2. Unlock luggage compartment door by key operation.
Condition (9)	After approx. 65 sec., alarm stops and system returns to armed state.

HINT:

- *1: without Smart key system
- *2: with Smart key system
- *3: When any door is opened while all the doors are closed during passive arming mode, the entry delay time starts. If the switch condition (armed state → disarmed state (1) or (2)) is met during the entry delay time, the theft deterrent system will return to disarmed state (1) or (2). However, if the switch condition for disarmed state (1) or (2) is not met, the set off the alarm. Entry delay time of 0, 14 or 30 sec. can be selected by the customizing function.

4. FORCED DOOR LOCK CONTROL

- (a) The forced door lock control prevents the vehicle from being tampered with. Immediately after a door is unlocked (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 and both of the following conditions are met. (without Smart key system)
- The theft deterrent system is in the armed state od active arming mode.
 - All the doors are locked.

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5. ALARM MEMORY FUNCTION

(a) If the alarm is set off (tampering is detected) while the theft deterrent system is armed, it will be recorded by the alarm memory function. Whenever you cancel the theft deterrent system, the alarm memory function causes the taillights to light up 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 light up:

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

- 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:

Active arming mode: See ACTIVE ARMING MODE

Passive arming mode: See PASSIVE ARMING MODE

6. PANIC ALARM CONTROL

(a) The panic alarm control makes it possible to voluntarily set off the panic alarm by pressing the PANIC switch on the wireless transmitter. However, this control operates independently from the alarm control by the theft deterrent system (switched to the alarm sounding state from the armed state).

(1) Conditions that cause the panic alarm control to set off the panic alarm:

The panic alarm control sets off the panic alarm by pressing the PANIC switch on the wireless transmitter under the following conditions:

- The ignition 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 met during panic alarm operation:

- The ignition switch is on (IG) position.
- The panic alarm switch is turned on again.
- Any of the switches on the wireless transmitter (LOCK/UNLOCK or LUGGAGE OPEN) is pressed.

- The panic alarm ends (60 sec. have passed).
- The theft deterrent system switches to the alarm sounding state. Under this condition, the theft deterrent system is controlling the alarm rather than the panic alarm control. In order to cancel this alarm, refer to the theft deterrent system alarm sounding state cancellation procedure. (This condition is common both to active arming mode to passive mode.)

HINT:

Active arming mode: See ACTIVE ARMING MODE

Passive arming mode: See PASSIVE ARMING MODE

7. SECURITY INDICATOR OUTPUT

- (a) The main body ECU outputs a signal to light up the security indicator, according to the state of the theft deterrent system. However, some of the actual lighting conditions of the security indicator are different from the output signals of the main body ECU.

Output:

State of Theft Deterrent System*	Security Indicator	
	Output Signals from Body ECU	Actual Lighting Condition
Disarmed state (1), (2)	OFF	OFF (Immobiliser system unset) BLINKING (Immobiliser system set)
Arming preparation state	ON	ON
Armed state	OFF	BLINKING
Alarm sounding state	ON	ON

Blinking cycle:

Time	Security Indicator
0.2 sec.	ON
1.8 sec.	OFF

HINT:

- *: The above condition is common both to active arming mode and to passive arming mode.
- When the immobiliser system is set, the security indicator blinks during both the disarmed state and the armed state, due to the output signals from the immobiliser system.

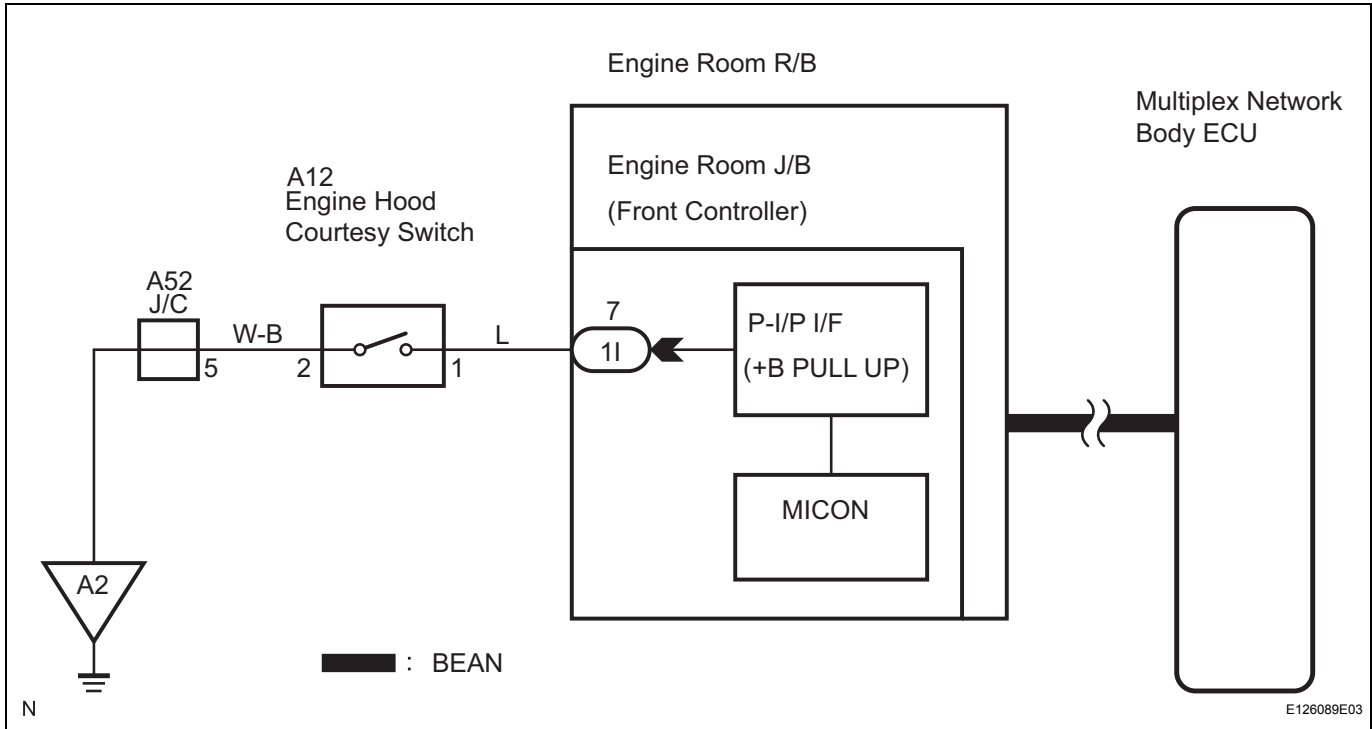
Engine Hood Courtesy Switch Circuit

DESCRIPTION

The engine hood courtesy 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.

TD

WIRING DIAGRAM



INSPECTION PROCEDURE

1 READ VALUE OF INTELLIGENT TESTER

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch on (IG).
- (c) Press the intelligent tester main switch on.
- (d) Select the item below in the DATA LIST and then check that the indicator operates.

BODY NO.5 (Engine room J/B assembly):

Item	Test Details	Diagnostic Note
HOOD COURTSY SW	Engine hood courtesy switch signal / ON or OFF	-

OK:

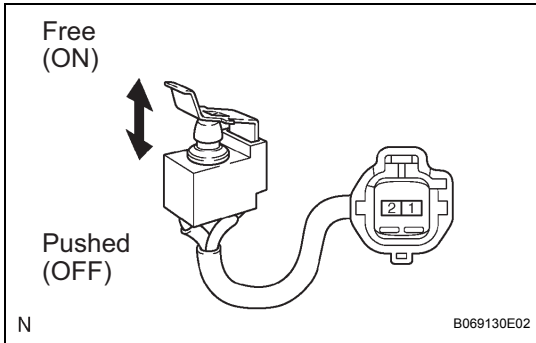
The indicator on the tester switches between ON and OFF in accordance with the engine hood courtesy switch status.

NG Go to step 2

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT ENGINE HOOD COURTESY SWITCH



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

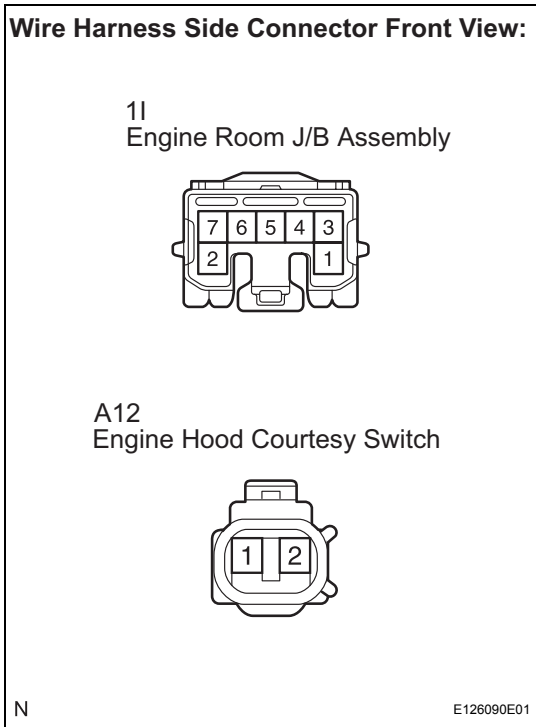
Standard resistance

Tester Connection	Switch Position	Specified Condition
1 - 2	Pushed (OFF)	10 kΩ or higher
	Free (ON)	Below 1 Ω

NG → **REPLACE ENGINE HOOD COURTESY SWITCH**

OK

3 CHECK WIRE HARNESS (ENGINE ROOM J/B ASSEMBLY - ENGINE HOOD COURTESY SWITCH)



- (a) Disconnect the 11 J/B connector.
- (b) Disconnect the A12 switch connector.
- (c) Check the resistance between the wire harness side connectors.

Standard resistance

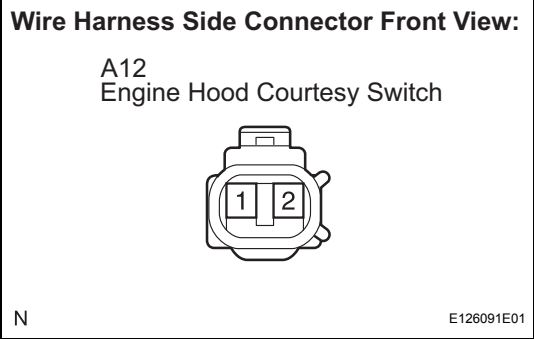
Tester Connection	Specified Condition
11-7 - A12-1	Below 1 Ω
11-7 or A12-1 - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

TD

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



- (a) Disconnect the A12 switch connector.
- (b) Check the resistance between the wire harness side connector and the body ground.

Standard resistance

Tester Connection	Specified Condition
A12-2 - Body ground	Below 1 Ω

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY

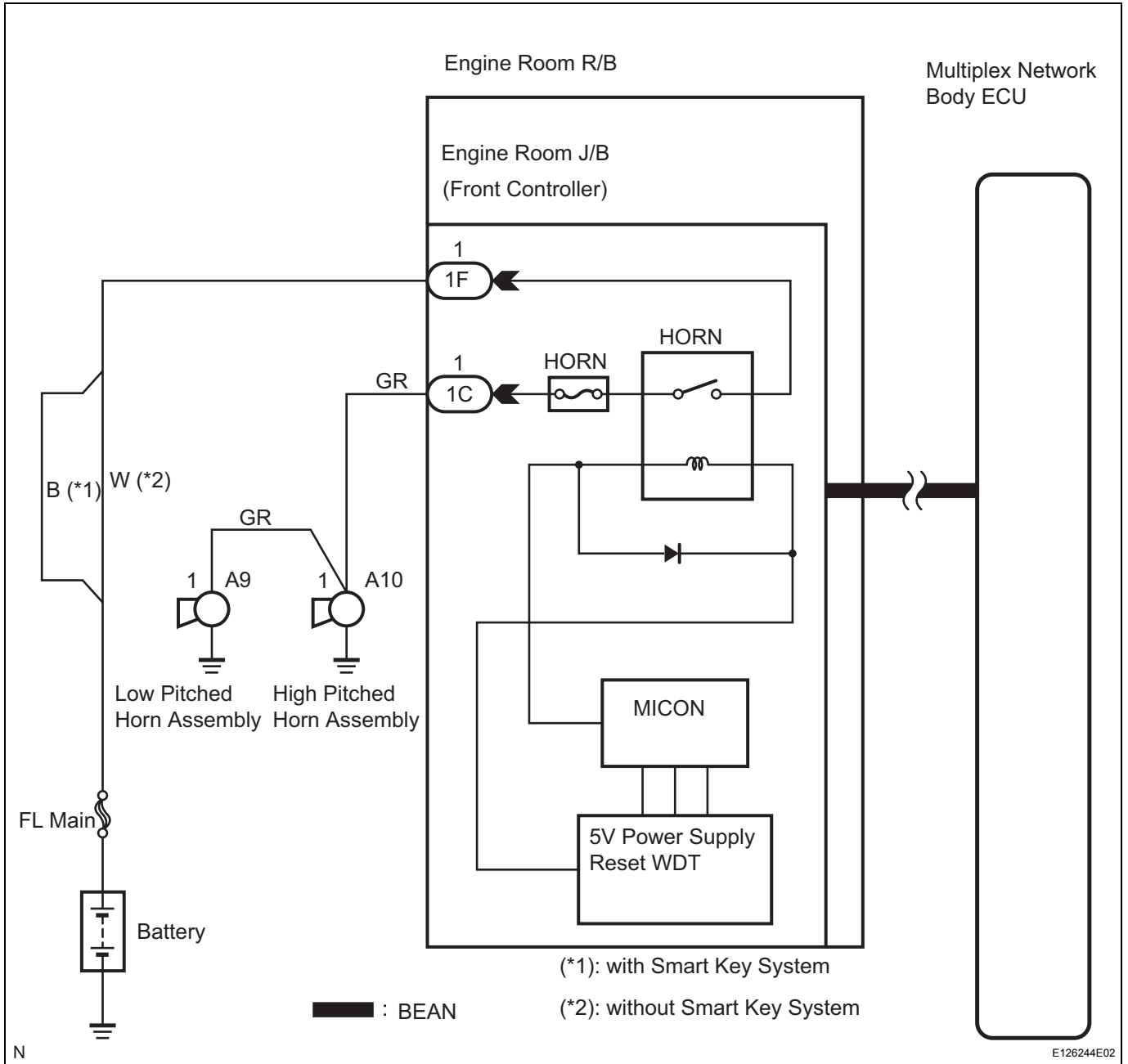
TD

Horn Circuit

DESCRIPTION

When the theft deterrent system is switched from the armed state to the alarm sounding state, the multiplex network body ECU transmits a signal to cause the horn to sound at intervals of 0.4 seconds.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 PERFORM ACTIVE TEST BY INTELLIGENT TESTER

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.

- (b) Turn the ignition switch on (IG).
- (c) Press the intelligent tester main switch on.
- (d) Select the item below in the ACTIVE TEST and then check that the indicator operates.

BODY NO.5 (Engine room J/B assembly):

Item	Test Details	Diagnostic Note
HORN RELAY	Horn relay ON/OFF	-

TD

OK:

The horn sounds or stops correctly when operating it through the intelligent tester.

NG →

Go to step 2

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT FUSE (HORN)

- (a) Remove the HORN fuse from the engine room R/B and J/B.
- (b) Check the resistance.
Standard resistance:
Below 1 Ω

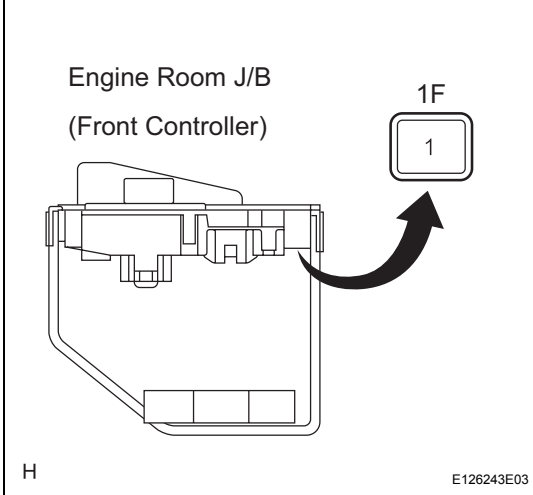
NG →

REPLACE FUSE

OK

3 CHECK WIRE HARNESS (ENGINE ROOM J/B - BATTERY)

Connector Wire Harness View:



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

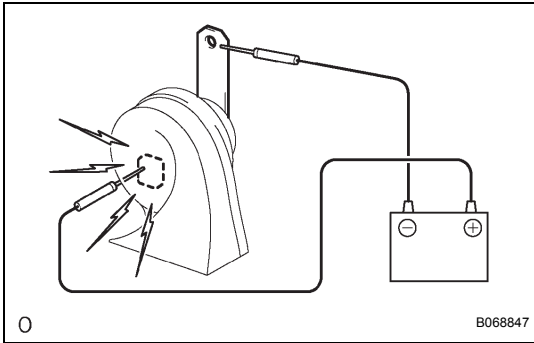
Terminal No.	Specified Condition
1F-1 - Body ground	10 to 14 V

NG →

REPAIR OR REPLACE HARNESS OR CONNECTOR

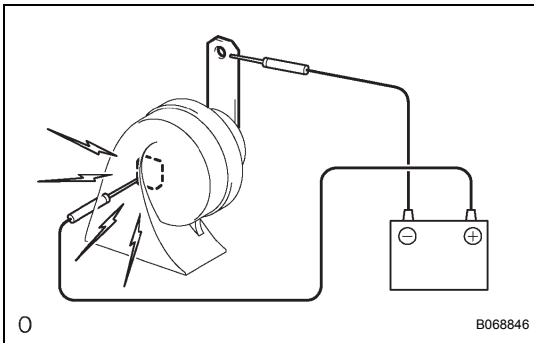
OK

4 INSPECT HORN ASSEMBLY



- (a) Low pitched horn:
 (1) Apply battery voltage and check operation of the low pitched horn.
OK

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



- (b) High pitched horn:
 (1) Apply battery voltage and check operation of the high pitched horn.
OK

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

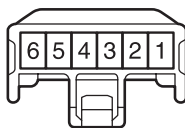
NG → **REPLACE HORN ASSEMBLY**

OK

5 CHECK WIRE HARNESS (ENGINE ROOM J/B - HORN ASSEMBLY)

Wire Harness Side Connector Front View:

1C
Engine Room J/B Assembly



A9
Low Pitched
Horn Assembly



A10
High Pitched
Horn Assembly



- (a) Disconnect 1C J/B connector.
 (b) Disconnect A9 or A10 horn connector.
 (c) Check the resistance between the wire harness side connectors.

Standard resistance

Terminal No.	Specified Condition
1C-1 - A9-1	Below 1 Ω
1C-1 - A10-1	Below 1 Ω
1C-1 or A9-1 - Body ground	10 kΩ or higher
1C-1 or A10-1 - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY

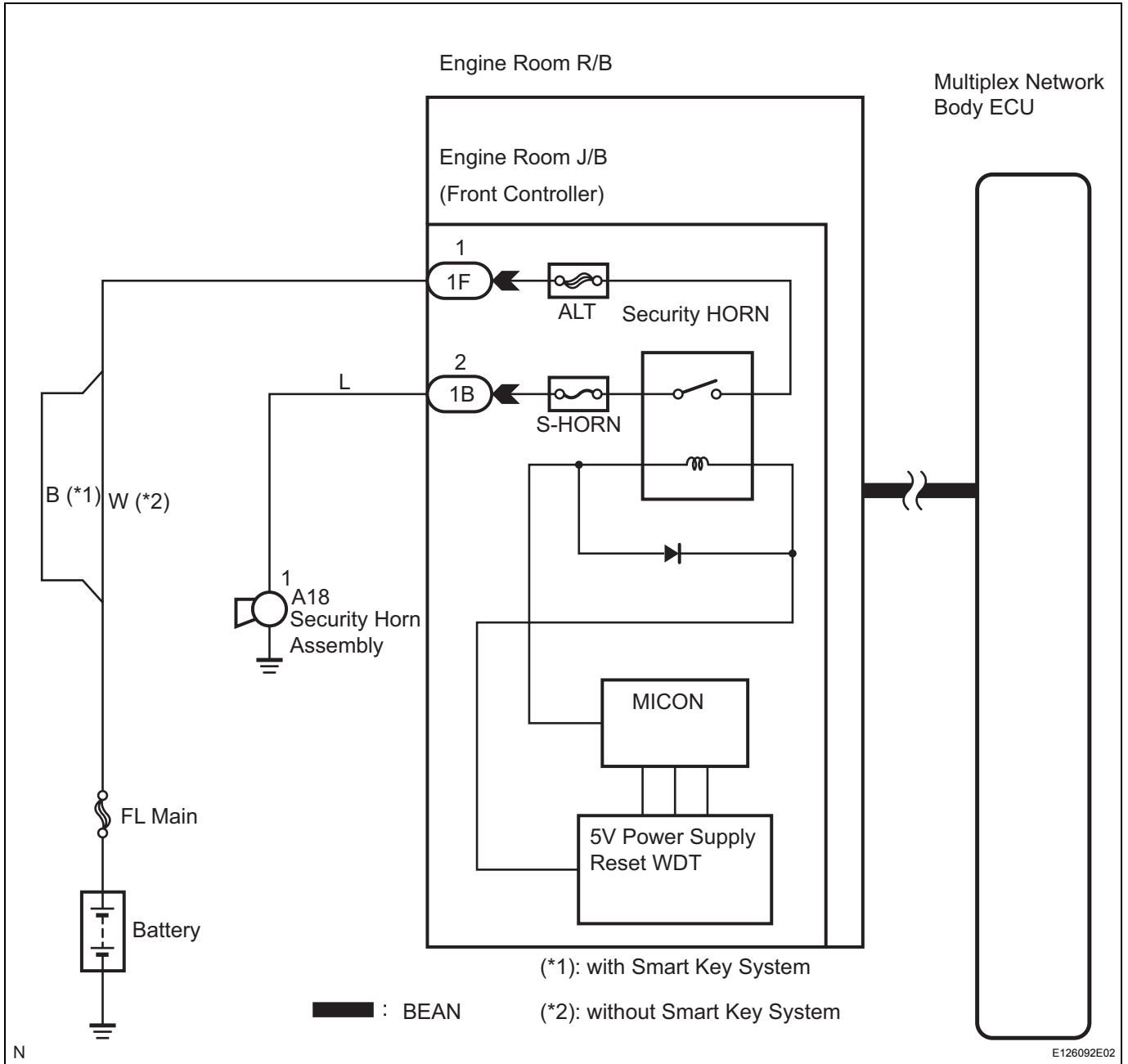
TD

Security Horn Circuit

DESCRIPTION

When the theft deterrent system is operating, the relay in the multiplex network body ECU turns on and off in a cycle of 0.4 seconds, causing the security horn to sound.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 PERFORM ACTIVE TEST BY INTELLIGENT TESTER

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.

- (b) Turn the ignition switch on (IG).
- (c) Press the intelligent tester main switch on.
- (d) Select the item below in the ACTIVE TEST and then check that the indicator operates.

BODY NO.5 (Engine room J/B assembly):

Item	Test Details	Diagnostic Note
SECURITY HORN	Security horn ON/OFF	-

TD

OK:

The security horn sounds or stops correctly when operating it through the intelligent tester.

NG →

Go to step 2

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT FUSE (S-HORN)

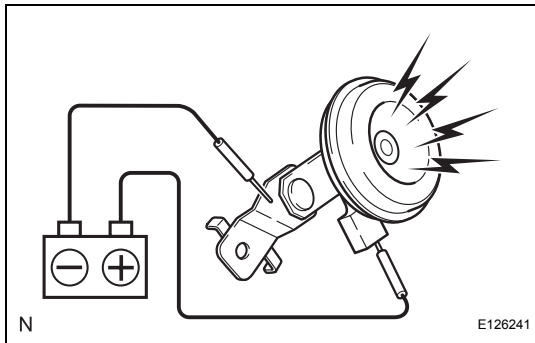
- (a) Remove the S-HORN fuse from the engine room R/B and J/B.
- (b) Check the resistance.
Standard resistance:
Below 1 Ω

NG →

REPLACE FUSE

OK

3 INSPECT SECURITY HORN ASSEMBLY



- (a) Check operation of the horn.
Standard resistance

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

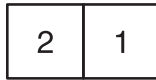
NG →

REPAIR OR REPLACE SECURITY HORN ASSEMBLY

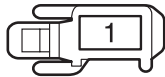
OK

4 CHECK WIRE HARNESS (ENGINE ROOM J/B ASSEMBLY - SECURITY HORN ASSEMBLY)**Wire Harness Side Connector
Front View:**

1B
Multiplex Network Body ECU



A18
Security Horn Assembly



N

E126242E01

- Disconnect the 1B J/B connector.
- Disconnect the A18 horn connector.
- Check the resistance between the wire harness side connectors.

Standard resistance

Terminal No.	Specified Condition
1B-2 - A18-1	Below 1 Ω
1B-2 or A18-1 - Body ground	10 k Ω or higher

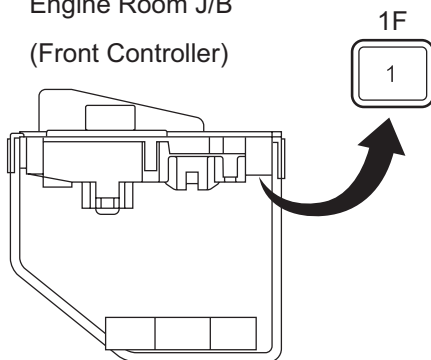
NG

**REPAIR OR REPLACE HARNESS OR
CONNECTOR**

OK

5 CHECK WIRE HARNESS (ENGINE ROOM J/B - BATTERY)**Wire Harness Side Connector Front
View:**

Engine Room J/B
(Front Controller)



H

E126243E01

- Disconnect 1F J/B connector.
- Measure the voltage of the wire harness side connector.

Standard voltage

Terminal No.	Specified Condition
1F-1 - Body ground	10 to 14 V

NG

**REPAIR OR REPLACE HARNESS OR
CONNECTOR**

OK

REPLACE ENGINE ROOM JUNCTION BLOCK ASSEMBLY

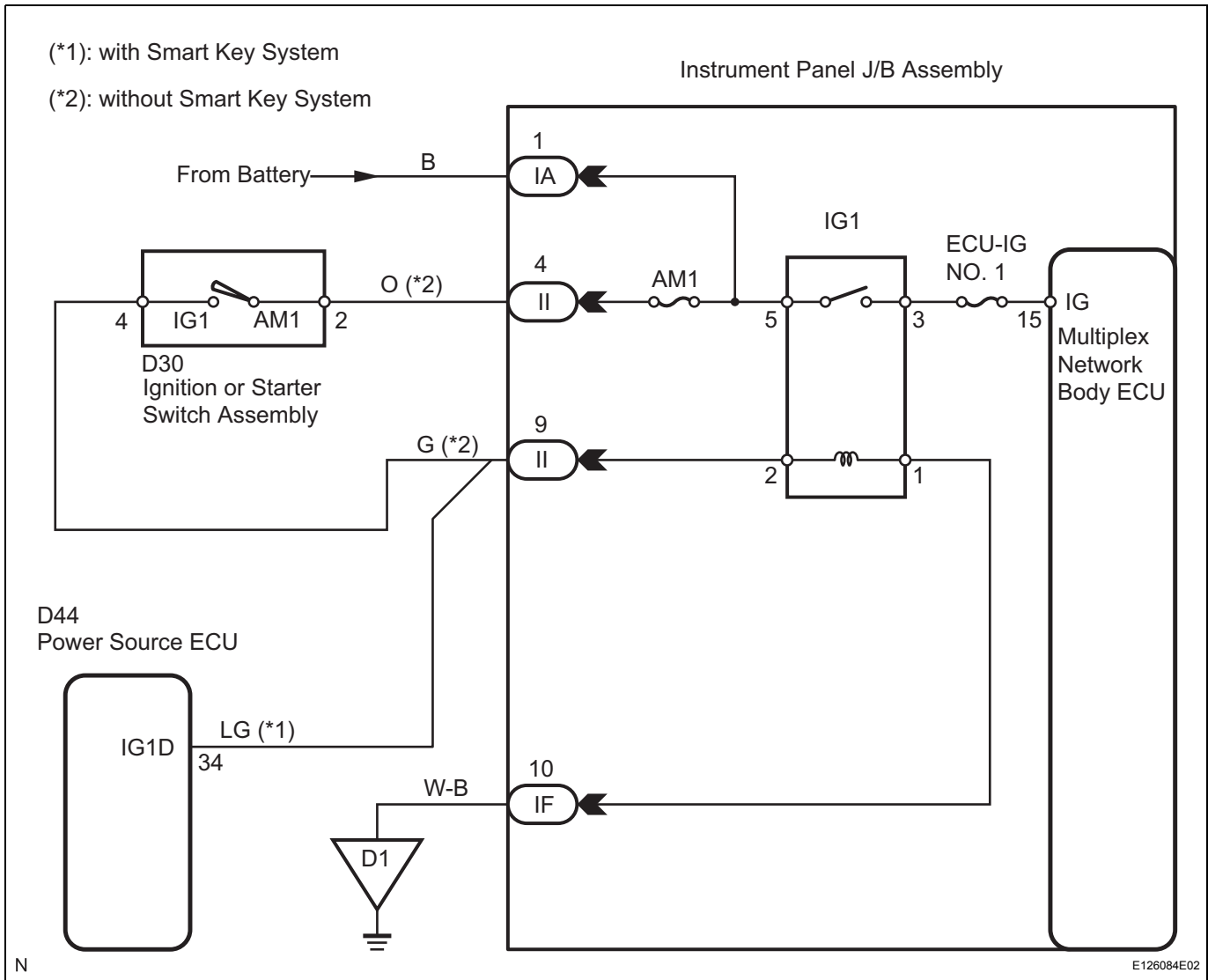
TD

Ignition Switch Circuit

DESCRIPTION

When the ignition switch is on (IG) position, battery positive voltage is applied to terminal IG of the multiplex network body ECU.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 READ VALUE OF INTELLIGENT TESTER

- Connect the intelligent tester (with CAN VIM) to the DLC3.
- Turn the ignition switch on (IG).
- Press the intelligent tester main switch on.

- (d) Select the item below in the DATA LIST and then check that the indicator operates.

BODY (Multiplex network body ECU):

Item	Test Details	Diagnostic Note
IG SW	Ignition switch signal ON/OFF	-

OK:

When turning the ignition switch on and off, the intelligent tester display changes between "ON" and "OFF".

NG

Go to step 2

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 CHECK SMART KEY SYSTEM

- (a) Choose the system to be inspected.

Apparatus	Go to step
without smart key system	A
with smart key system	B

B

Go to step 9

A

3 INSPECT FUSE (ECU-IG, AM1)

- (a) Remove the ECU-IG and AM1 fuses from the instrument panel J/B.
 (b) Check the resistance.

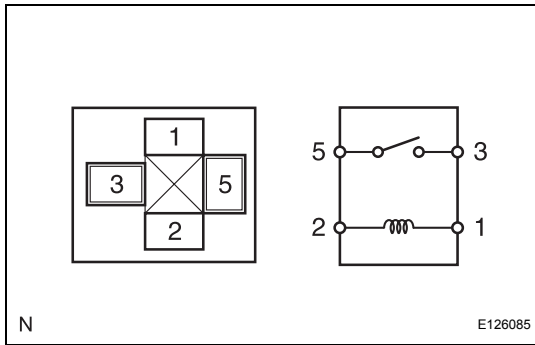
Standard resistance:**Below 1 Ω**

NG

REPLACE FUSE

OK

4 INSPECT RELAY (IG1)



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

Standard resistance

Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 and 2)

NG

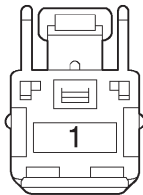
REPLACE RELAY

OK

5 CHECK WIRE HARNESS (POWER SOURCE)

Wire Harness Side Connector Front View:

IA
Instrument Panel J/B Assembly



- (a) Disconnect the IA J/B connector.
- (b) Check the voltage between the wire harness side connector and the body ground.

Standard voltage

Tester Connection	Condition	Specified Condition
IA-1 - Body ground	Always	10 to 14 V

NG

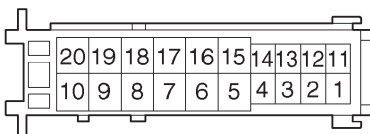
REPAIR OR REPLACE HARNESS OR CONNECTOR (POWER SOURCE)

OK

6 CHECK WIRE HARNESS (MULTIPLEX NETWORK BODY ECU) - BODY GROUND)

Wire Harness Side Connector Front View:

IF
Instrument Panel J/B Assembly



- (a) Disconnect the IF J/B connector.
- (b) Check the resistance between the wire harness side connector and the body ground.

Standard resistance

Tester Connection	Specified Condition
IF-10 - Body ground	Below 1 Ω

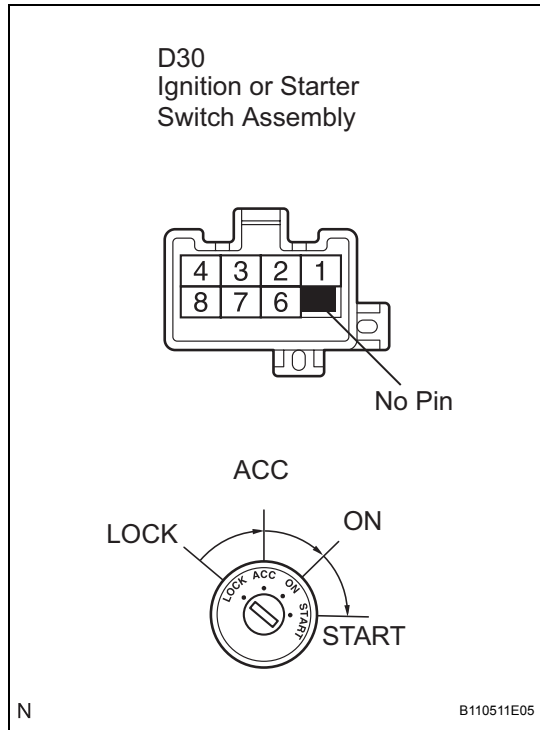
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

TD

7 INSPECT IGNITION OR STARTER SWITCH ASSEMBLY



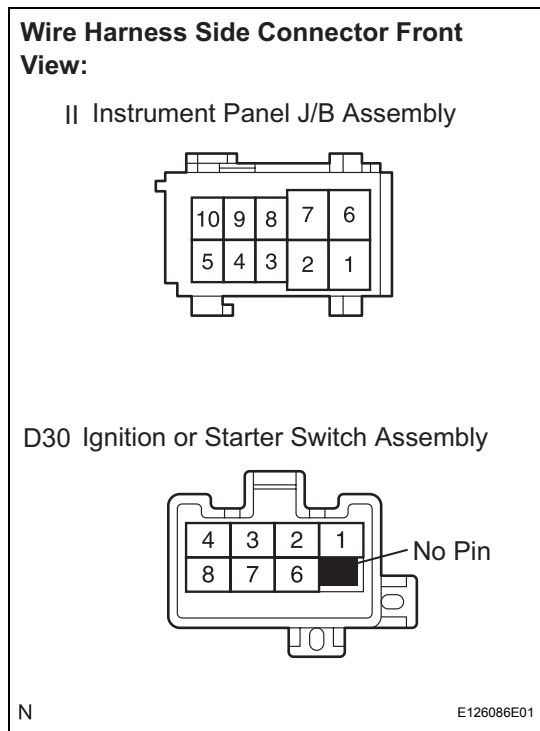
- (a) Disconnect the connector from the ignition or starter switch.
 - (b) Check the switch resistance.
- Standard resistance**

Tester Connection	Condition	Specified Condition
2 - 4	ON	Below 1 Ω

NG → **REPLACE IGNITION OR STARTER SWITCH ASSEMBLY**

OK

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



- (a) Disconnect the II J/B connector.
 - (b) Disconnect the D30 switch connector.
 - (c) Check the resistance between the wire harness side connectors.
- Standard resistance**

Symbol (Tester Connection)	Specified Condition
II-9 - D30-4	Below 1 Ω
II-9 - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

TD

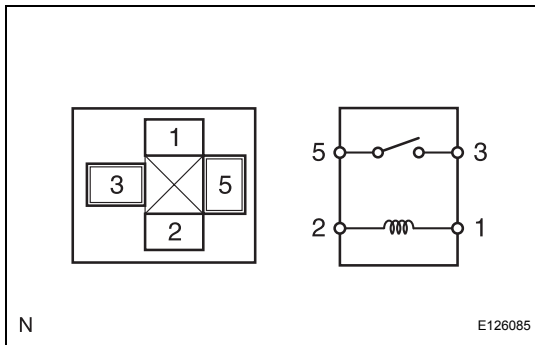
9 INSPECT FUSE (ECU-IG)

- (a) Remove the ECU-IG fuse from the instrument panel J/B.
- (b) Check the resistance.
Standard resistance:
Below 1 Ω

NG **REPLACE FUSE**

OK

10 INSPECT RELAY (IG1)



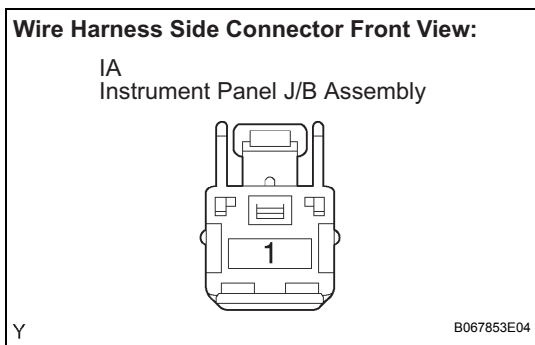
- (a) Remove the IG1 relay from the instrument panel J/B.
- (b) Check the resistance of the IG1 relay.
Standard resistance

Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (When battery voltage is applied to terminals 1 and 2)

NG **REPLACE RELAY**

OK

11 CHECK INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU - BODY GROUND) (POWER SOURCE)



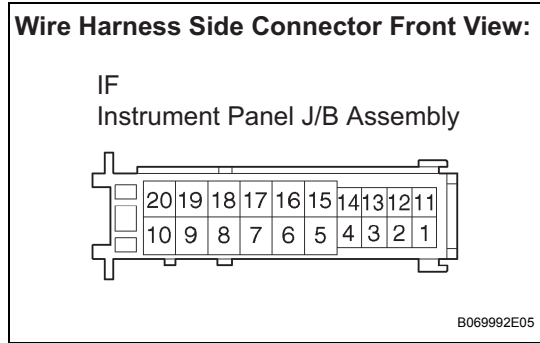
- (a) Disconnect the IA J/B connector.
- (b) Check the voltage between the wire harness side connector and the body ground.
Standard resistance

Tester Connection	Condition	Specified Condition
IA-1 - Body ground	Always	10 to 14 V

NG **REPAIR OR REPLACE HARNESS OR CONNECTOR (POWER SOURCE)**

OK

12 CHECK WIRE HARNESS (MULTIPLEX NETWORK BODY ECU - BODY GROUND)



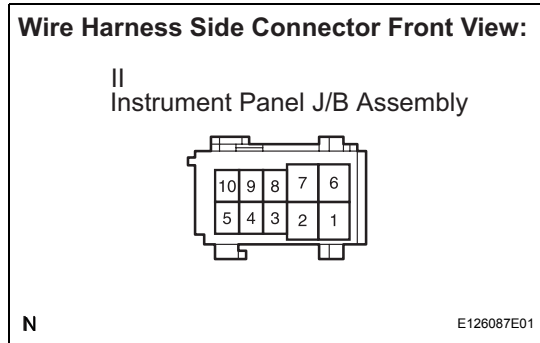
- (a) Disconnect the IF J/B connector.
 - (b) Check the resistance between the wire harness side connector and the body ground.
- Standard resistance**

Tester Connection	Specified Condition
IF-10 - Body ground	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (GROUND CIRCUIT)**

OK

13 CHECK WIRE HARNESS (INSTRUMENT PANEL J/B - INSTRUMENT PANEL J/B)



- (a) Disconnect the II J/B connector.
 - (b) Check the resistance of the wire harness side connectors.
- Standard resistance**

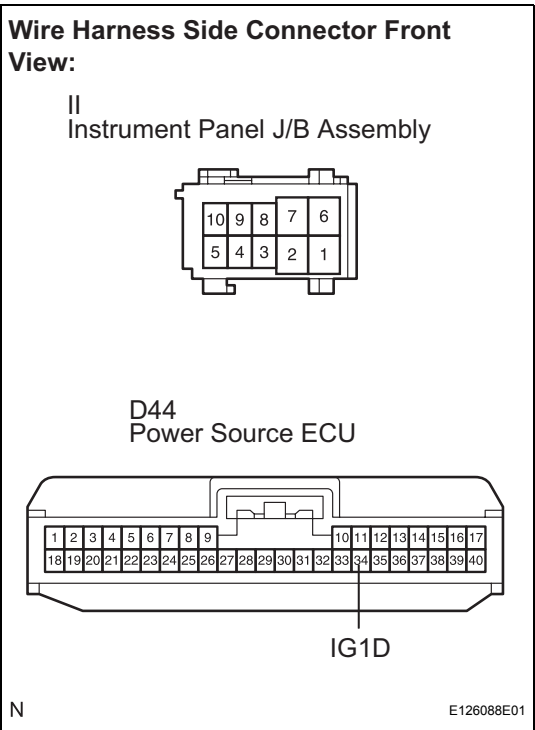
Tester Connection	Switch Position	Specified Condition
II-4 - II-9	Ignition switch ON	Below 1 Ω

NG → **Go to step 14**

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

14 CHECK WIRE HARNESS (INSTRUMENT PANEL J/B ASSEMBLY - POWER SOURCE ECU)



- (a) Disconnect the II J/B connector.
- (b) Disconnect the D44 ECU connector.
- (c) Check the resistance between the wire harness side connectors.

Standard resistance

Symbol (Tester Connection)	Specified Condition
(II-9) - IG1D (D44-34)	Below 1 Ω
(II-9) - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

GO TO SMART KEY SYSTEM

TD

OK:

The security indicator light flashes or goes off correctly when operating it through the intelligent tester.

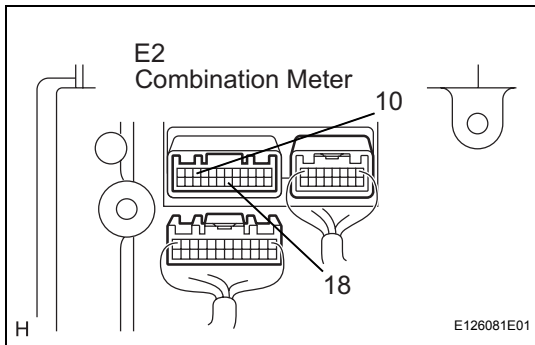
NG Go to step 2

OK

TD

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT COMBINATION METER ASSEMBLY



- (a) Remove the E2 combination meter assembly.
- (b) Apply 12 V positive voltage between the terminals of the indicator, and check the lighting condition of the security indicator.

OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 18 and 2	Illuminates
Battery negative (-) → Terminal 10	

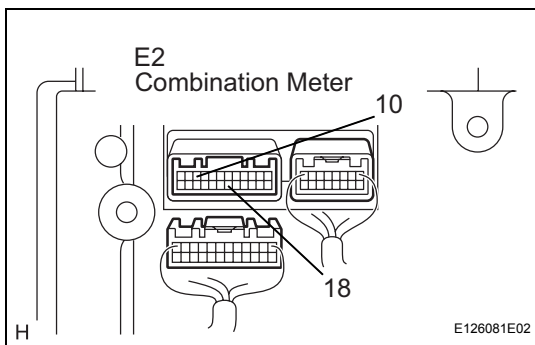
NOTICE:

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

NG REPLACE COMBINATION METER ASSEMBLY

OK

3 CHECK WIRE HARNESS (POWER SOURCE)



- (a) Remove the E2 combination meter assembly.
- (b) Check the voltage between wire harness side connector and body ground.

Standard resistance

Tester Connection	Condition	Specified Condition
E2-2 - Body ground	Always	10 to 14 V

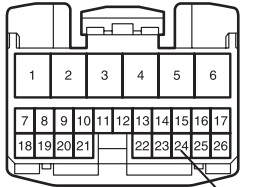
NG REPAIR OR REPLACE HARNESS OR CONNECTOR (POWER SOURCE)

OK

4 CHECK WIRE HARNESS (COMBINATION METER - MULTIPLEX NETWORK BODY ECU - BODY GROUND)

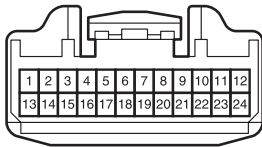
Wire Harness Side Connector Front View:

D7
Multiplex Network Body ECU



IND

E2
Combination Meter



N

E126082E02

- Disconnect the D7 ECU connector.
- Disconnect the E2 meter connector.
- Measure the resistance of the wire harness side connectors.

Resistance

Symbol (Tester Connection)	Specified Condition
(E2-18) - IND (D7-24)	Below 1 Ω
(E2-18) - Body ground	10 k Ω or higher
(E2-10) - Body ground	Below 1 Ω

NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE INSTRUMENT PANEL J/B ASSEMBLY

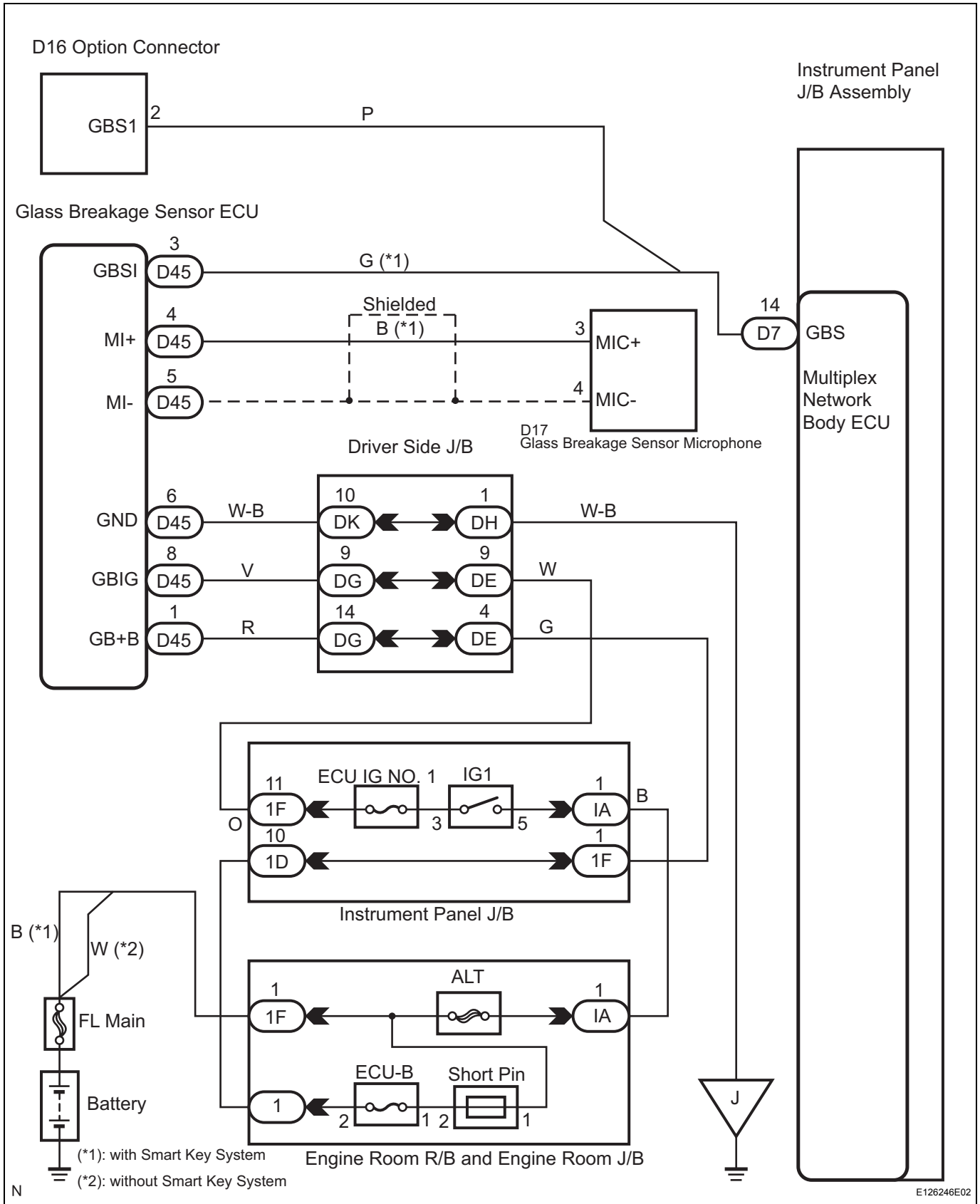
TD

Glass Breakage Sensor Circuit**DESCRIPTION**

When the glass breakage sensor detects the glass is broken (1st time), the sensor will set off an alarm for 20 seconds (pre-alarm). If the glass breakage sensor detects that more glass is broken (a 2nd time or more), the sensor will set off an alarm for 60 seconds.

TD

WIRING DIAGRAM



TD

INSPECTION PROCEDURE

TD

1 READ VALUE OF INTELLIGENT TESTER

- (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
- (b) Turn the ignition switch on (IG).
- (c) Press the intelligent tester main switch on.
- (d) Select the item below in the DATA LIST and then check that the indicator operates.

BODY (Multiplex network body ECU):

Item	Test Details	Diagnostic Note
GLS BRK DETECT	Glass Break Sen Detect / ON or OFF	-

OK:

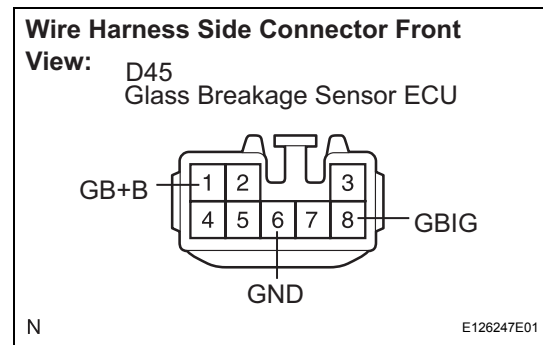
When tapping on the glass with your finger, "ON" is displayed on the intelligent tester screen.

NG → **Go to step 2**

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

2 INSPECT GLASS BREAKAGE SENSOR ECU



- (a) Disconnect the D45 glass breakage sensor ECU connector.
- (b) Check the voltage between the wire harness side connectors.

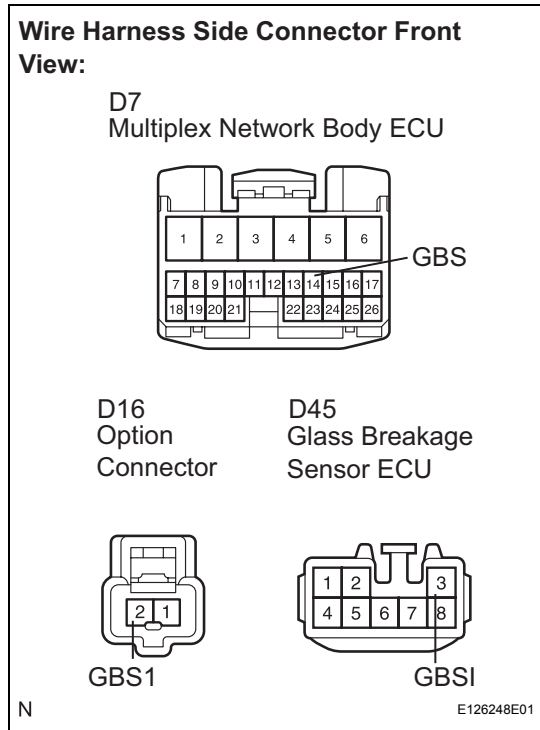
Standard voltage

Symbol (Tester Connection)	Condition	Specified Condition
GB+B (D45-1) - GND (D45-6)	Always	10 to 14 V
GBIG (D45-8) - GND (D45-6)	Ignition Switch on (IG)	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

3 CHECK WIRE HARNESS (BODY ECU - GLASS BREAKAGE SENSOR ECU - OPTION CONNECTOR)



- (a) Disconnect the D7 body ECU connector.
- (b) Disconnect the D45 GBS ECU connector and D16 option connector.
- (c) Check the resistance between the wire harness side connectors.

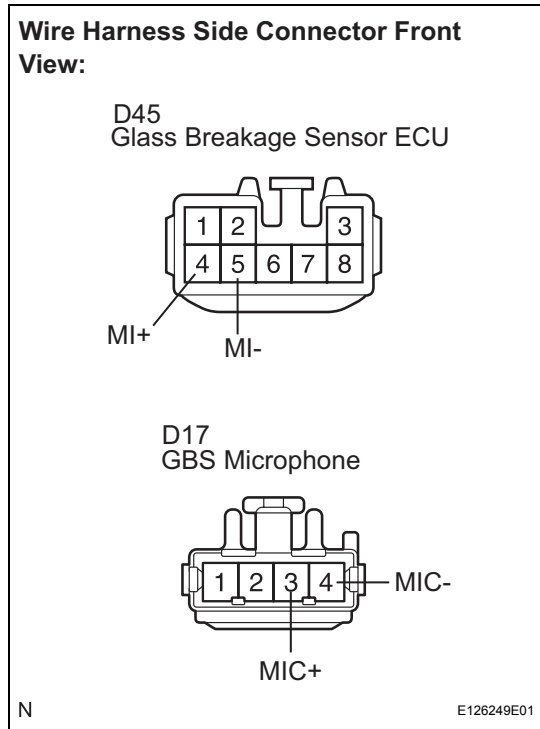
Standard Resistance

Symbol (Terminal No.)	Specified Condition
GBS (D7-14) - GBSI (D45-3)	Below 1 Ω
GBS (D7-14) - GBS1 (D16-2)	Below 1 Ω
GBS (D7-14) or GBSI (D45-3) - Body ground	10 kΩ or higher
GBS (D7-14) or GBS1 (D16-2) - Body ground	10 kΩ or higher

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4 CHECK WIRE HARNESS (GLASS BREAKAGE SENSOR ECU - GLASS BREAKAGE SENSOR MICROPHONE)



- (a) Disconnect the D45 GBS ECU connector.
- (b) Disconnect the D17 GBS microphone connector.
- (c) Check the resistance between the wire harness side connectors.

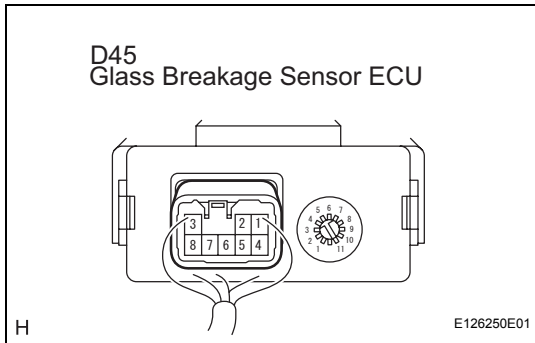
Standard Resistance

Symbol (Terminal No.)	Specified Condition
MI+ (D45-4) - MIC+ (D17-3)	Below 1 Ω
MI- (D45-5) - MIC- (D17-4)	Below 1 Ω
MI+ (D45-4) or MIC+ (D17-3) - Body ground	10 kΩ or higher

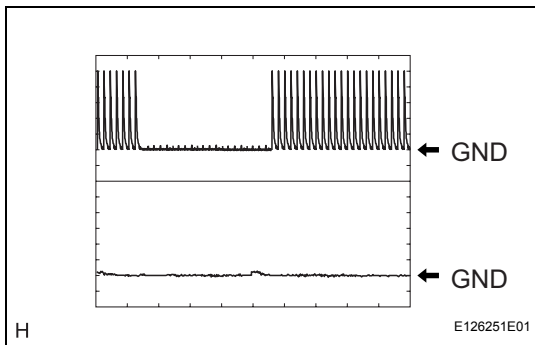
NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

5 INSPECT GLASS BREAKAGE SENSOR ECU (MICROPHONE OUTPUT)



- (a) Reconnect the glass breakage sensor ECU, glass breakage sensor microphone and multiplex network body ECU connectors.
- (b) Connect an oscilloscope to terminal D45-3 of the glass breakage sensor ECU and body ground.
- (c) Turn the ignition switch on (IG).



- (d) Check the signal waveform according to the condition(s) in the table below.

Item	Condition
Tool setting	1 V/DIV, 50 ms/DIV
Vehicle condition	Tap the glass breakage sensor microphone with a hard object such as your fingernail.

OK:
As shown in the illustration

NG **REPLACE GLASS BREAKAGE SENSOR MICROPHONE**

OK

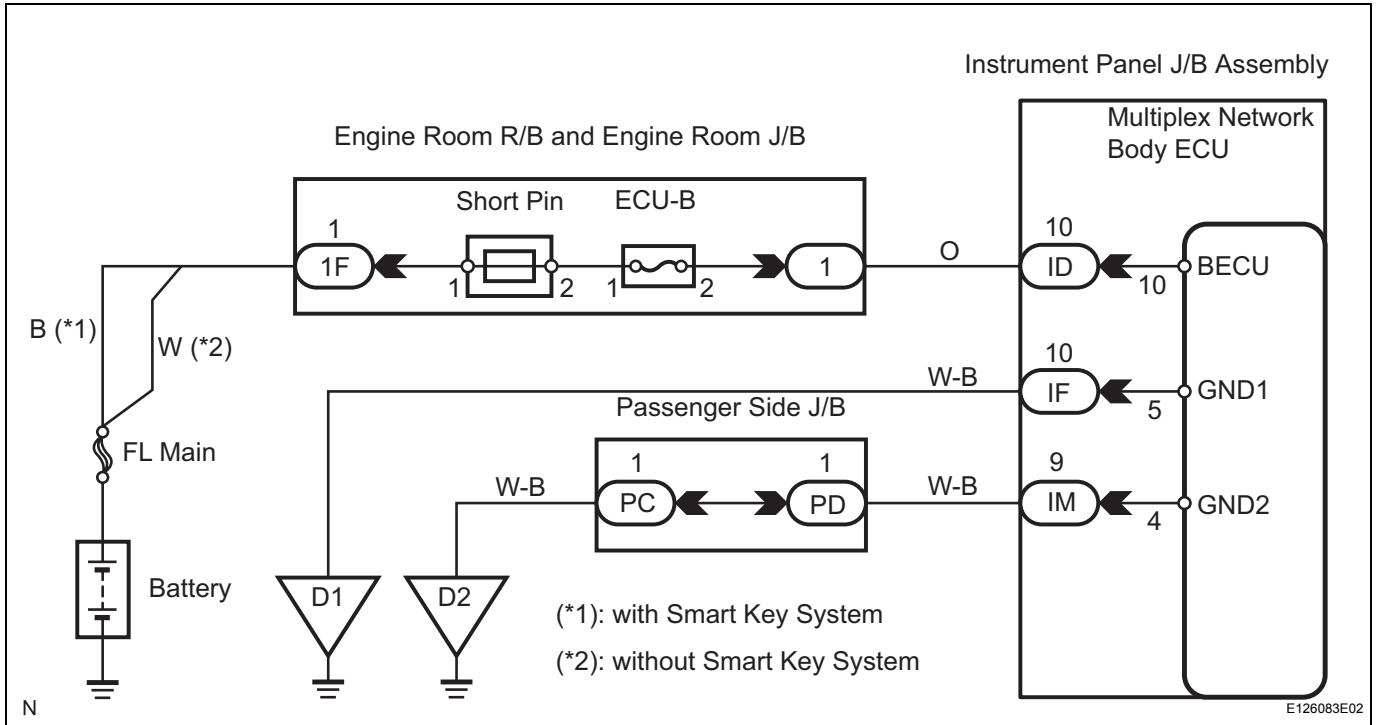
REPLACE GLASS BREAKAGE SENSOR ECU

ECU Power Source Circuit

DESCRIPTION

This circuit provides power for multiplex network body ECU operation.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT FUSE (ECU-B)

- Remove the ECU-B fuse from the engine room R/B and J/B.
- Check the resistance.

Standard resistance:

Below 1 Ω

NG

REPLACE FUSE

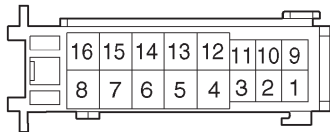
OK

TD

2 INSPECT INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY (MULTIPLEX NETWORK BODY ECU) (POWER SOURCE)

Connector Front View:

ID
Instrument Panel J/B Assembly



B069990E06

- (a) Disconnect the ID J/B connector.
- (b) Check the voltage between the wire harness side connector and the body ground.

Standard voltage

Tester Connection	Condition	Specified Condition
ID-10 - Body ground	Always	10 to 14 V

NG

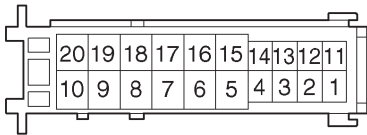
REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

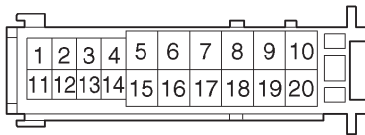
3 CHECK WIRE HARNESS (INSTRUMENT PANEL J/B ASSEMBLY - BODY GROUND)

Wire Harness Side
Connector Front View:

IF
Instrument Panel J/B Assembly



IM
Instrument Panel J/B Assembly



B069986E02

- (a) Disconnect the IF and IM J/B connectors.
- (b) Check the resistance between the wire harness side connector and the body ground.

Standard resistance

Tester Connection	Specified Condition
IF-10 - Body ground	Below 1 Ω
IM-9 - Body ground	Below 1 Ω

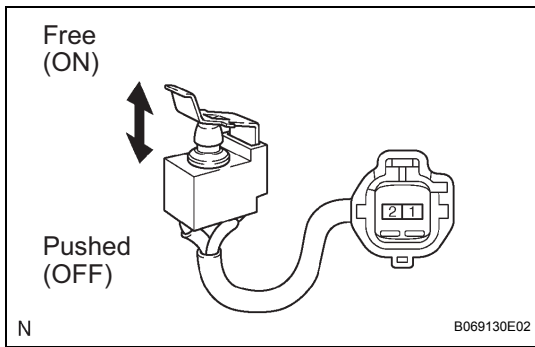
NG

REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

PROCEED TO NEXT CIRCUIT INSPECTION SHOWN IN PROBLEM SYMPTOMS TABLE

TD



ENGINE HOOD COURTESY SWITCH

INSPECTION

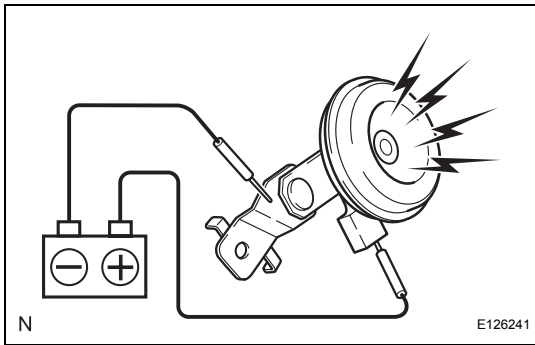
1. INSPECT ENGINE HOOD COURTESY SWITCH

- (a) Measure the resistance according to the value(s) in the table below.

Standard resistance

Tester Connection	Switch Position	Specified Condition
1 - 2	Free (OFF)	10 kΩ or higher
	Pushed (ON)	Below 1 Ω

If the result is not as specified, replace the hood lock assembly.



SECURITY HORN ASSEMBLY

INSPECTION

1. INSPECT SECURITY HORN ASSEMBLY

- (a) Check operation of the horn.

Standard

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

If the result is not as specified, replace the security horn assembly.