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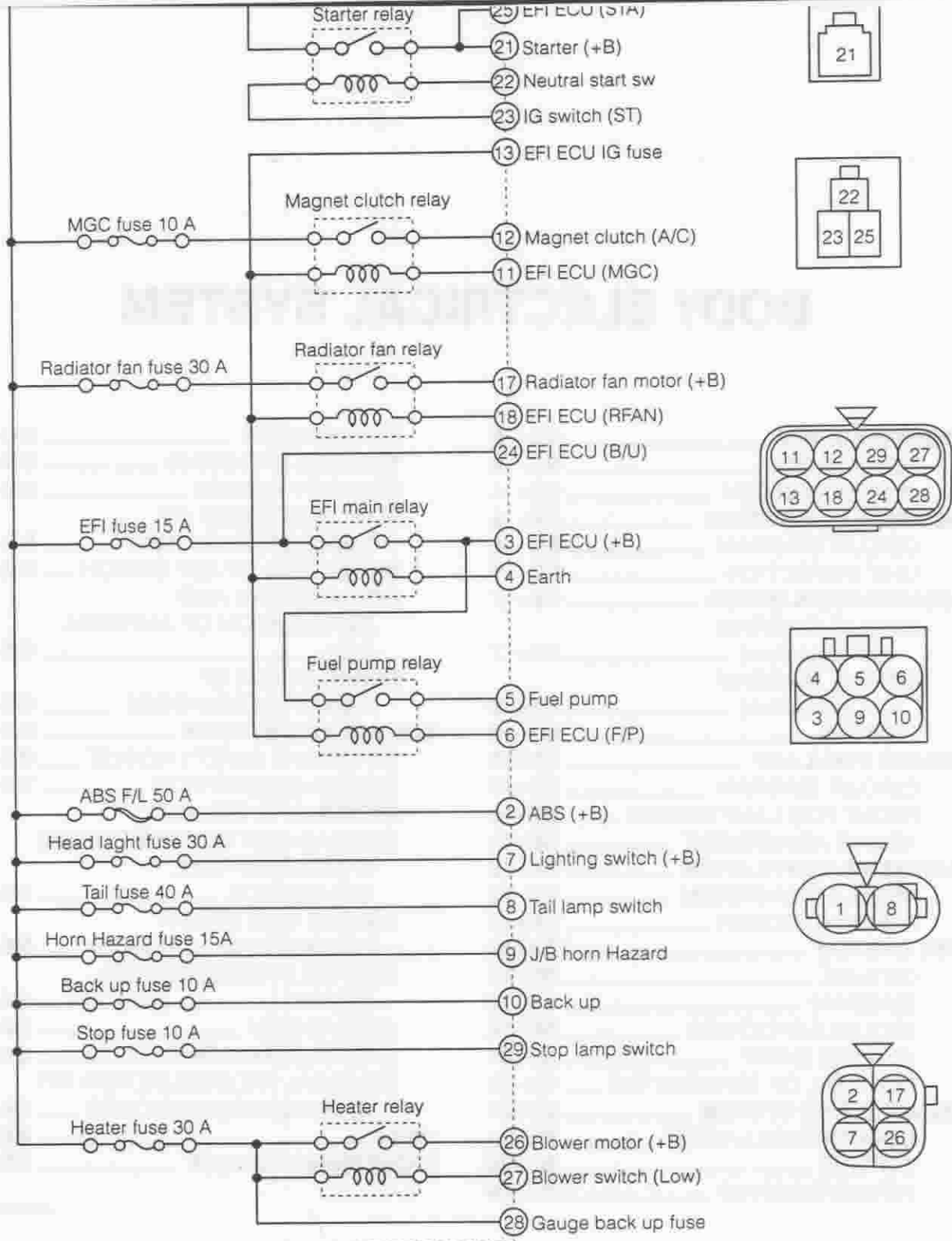


# BODY ELECTRICAL SYSTEM

**BE**

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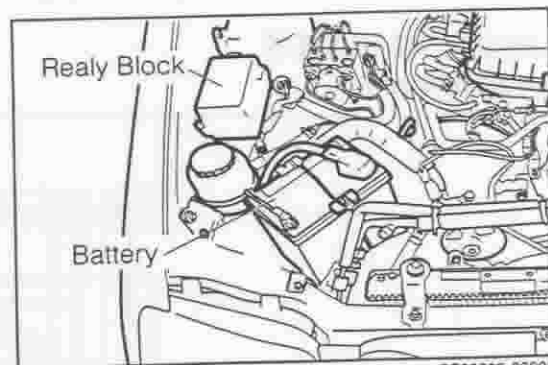
JBE0001-0000



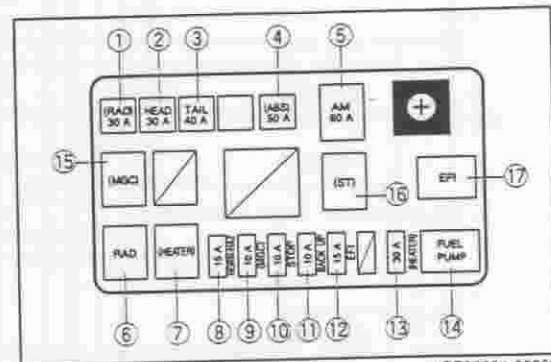
JBEC0002-00001

**Location of the Relay block**

The relay block is located near the battery in the engine compartment.



JBE00003-00002

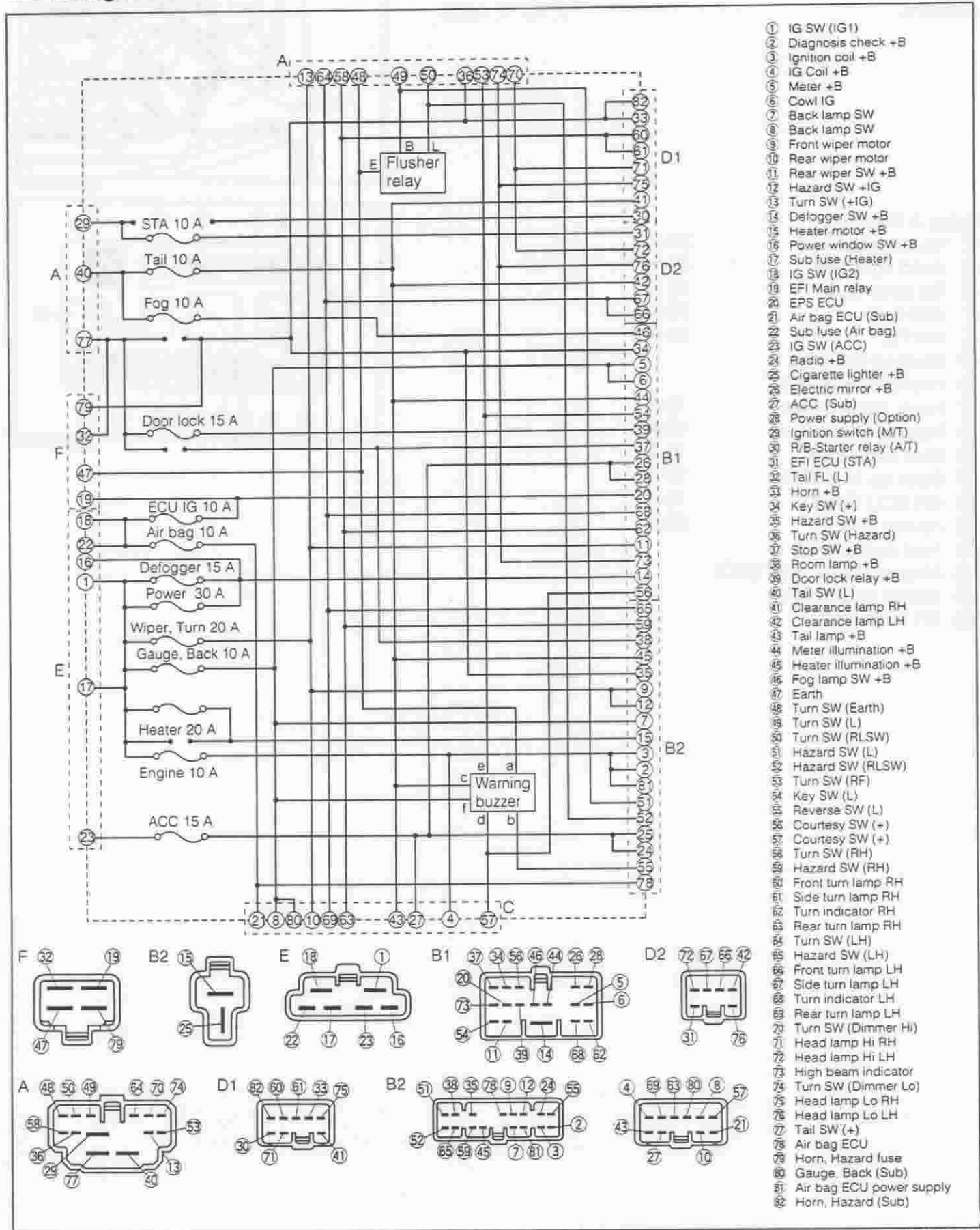


JBE00004-00003

**Relay & Fuse**

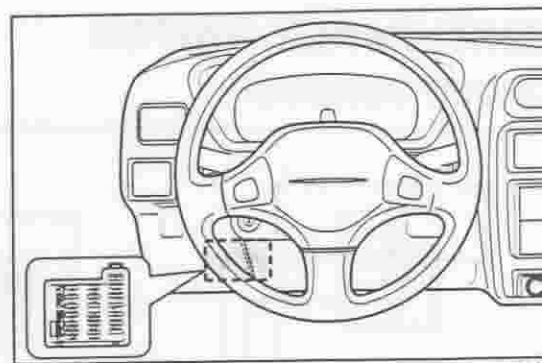
- |                             |      |
|-----------------------------|------|
| ① Radiator fan fuse         | 30 A |
| ② Head light fuse           | 30 A |
| ③ Tail lamp fuse            | 40 A |
| ④ ABS fuse                  | 50 A |
| ⑤ AM F/L                    | 60 A |
| ⑥ Radiator fan relay        |      |
| ⑦ Heater blower relay       |      |
| ⑧ Horn, Hazard fuse         | 15 A |
| ⑨ Magnet clutch fuse        | 10 A |
| ⑩ Stop lamp fuse            | 10 A |
| ⑪ Back up fuse (EFI)        | 10 A |
| ⑫ EFI ECU (BATT)            | 15 A |
| ⑬ Heater fuse               | 30 A |
| ⑭ Fuel pump relay           |      |
| ⑮ Magnet clutch relay (A/C) |      |
| ⑯ Starter relay (A/T)       |      |
| ⑰ EFI main relay            |      |

JUNCTION BLOCK  
Circuit diagram



**Location of the Junction block (Main fuse block)**

The main fuse block is located underneath the steering post at the driver's seat side.



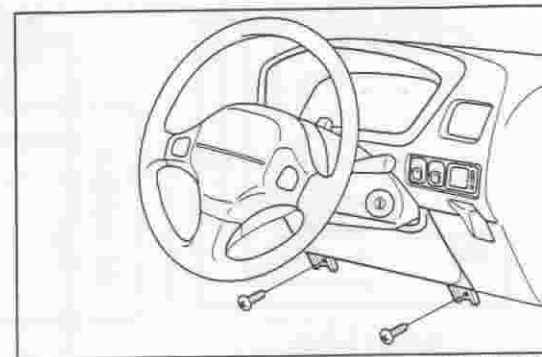
JBE00006-00005

**Replacement of the fuse**

**CAUTION:**

- Locate the cause and remedy the problem before installing a new fuse.

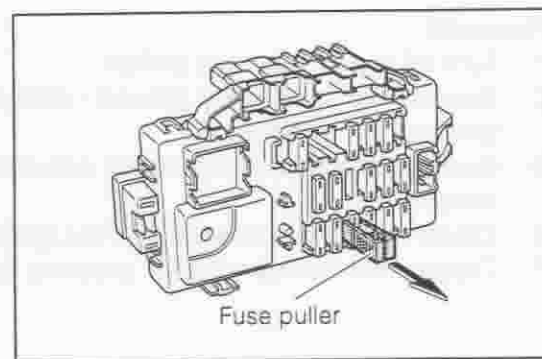
1. Turn the ignition switch off and remove the instrument panel cover.
2. Remove the fuse box cover, while pushing the protruding section.
3. Make sure that the switch of the malfunctioning component is off.
4. Insert the fuse puller and pull out the fuse you want to check.



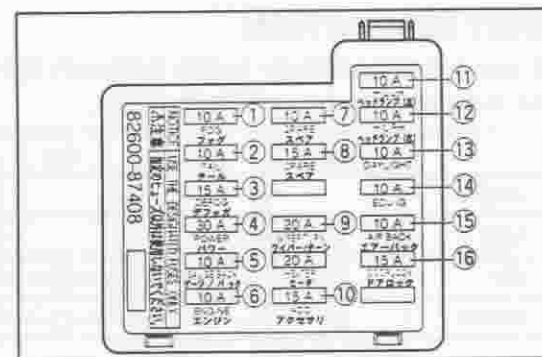
JBE00007-00006

**Fuse**

① Fog lamp	10 A
② Tail lamp	10 A
③ Defogger	15 A
④ Power Window	30 A
⑤ Gauge and Back up	10 A
⑥ Engine	10 A
⑦ Spare	10 A
⑧ Spare	15 A
⑨ Wiper and Turn signal lights	10 A
⑩ Accessory	15 A
⑪ Head Light (Left)	10 A
⑫ Head Light (Right)	10 A
⑬ Day Light	10 A
⑭ EFI IG	10 A
⑮ Air bag	10 A
⑯ Door Lock	15 A

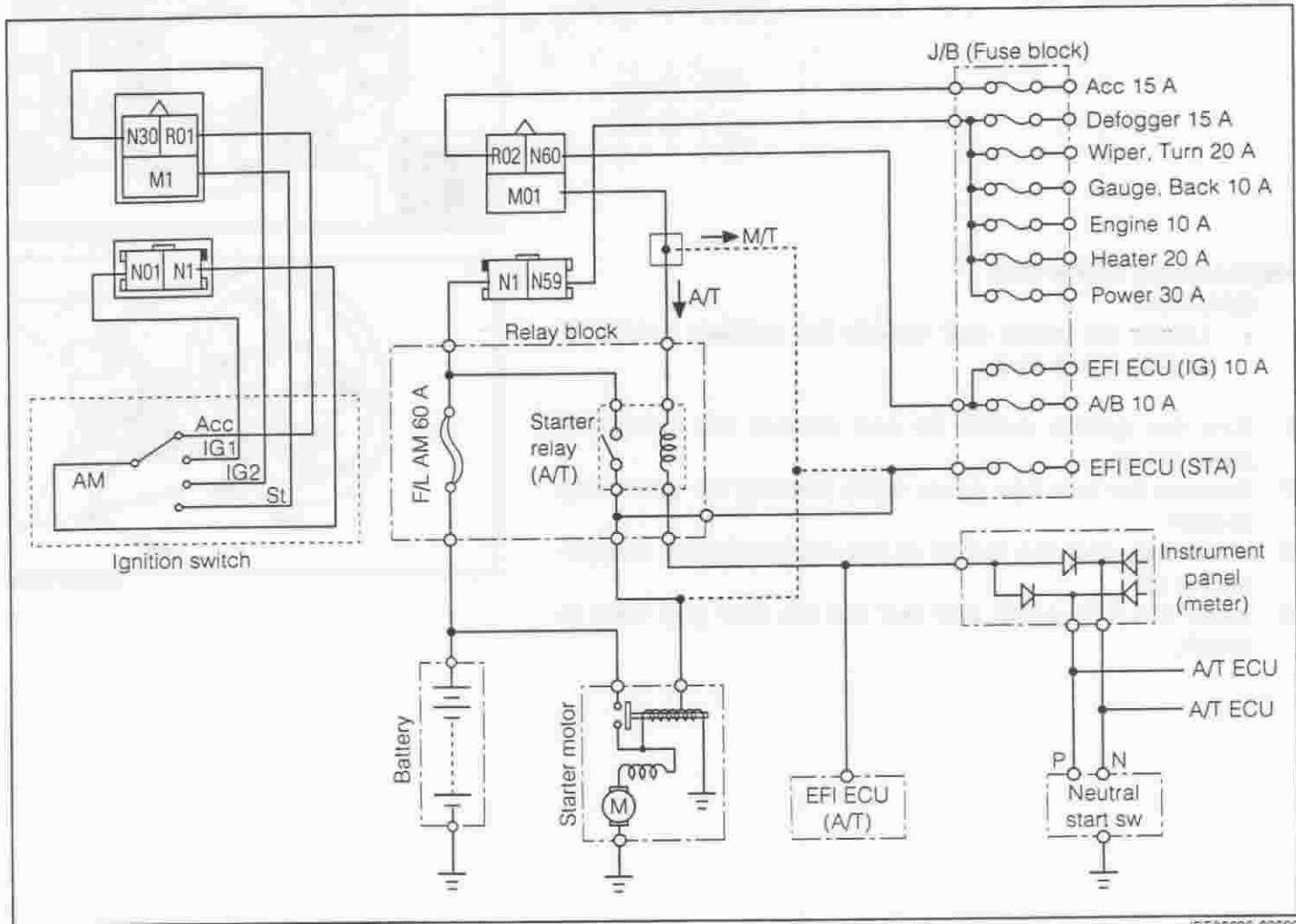


JBE00008-00007



JBE00000-00008

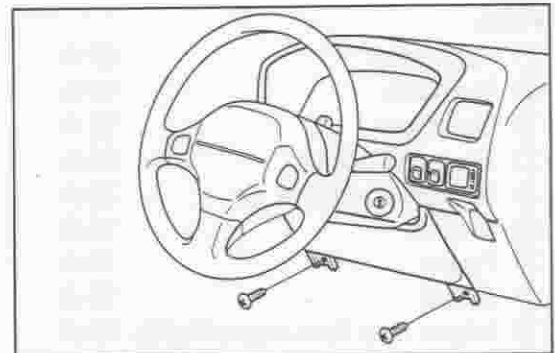
IGNITION KEY SWITCH  
CIRCUIT DIAGRAM



JBE0009-0009

Removal

1. Turn off the ignition key switch.
2. Disconnect the battery ground cable from the negative (-) terminal of the battery.
3. Remove the instrument lower panel and steering column lower cover.
4. Disconnect the connectors of the ignition switch.
5. Disconnect the immobilizer antenna terminal, if equipped.

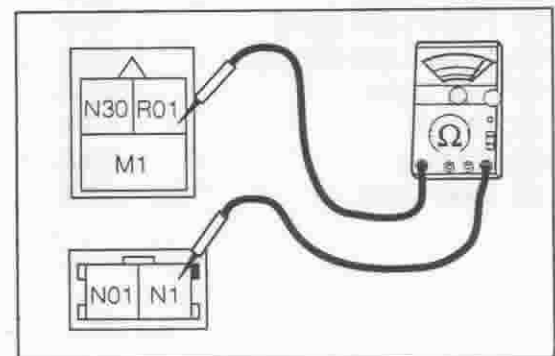


JBE0010-00010

UNIT INSPECTION

Ensure that continuity exists between the respective terminals as indicated in the continuity table.

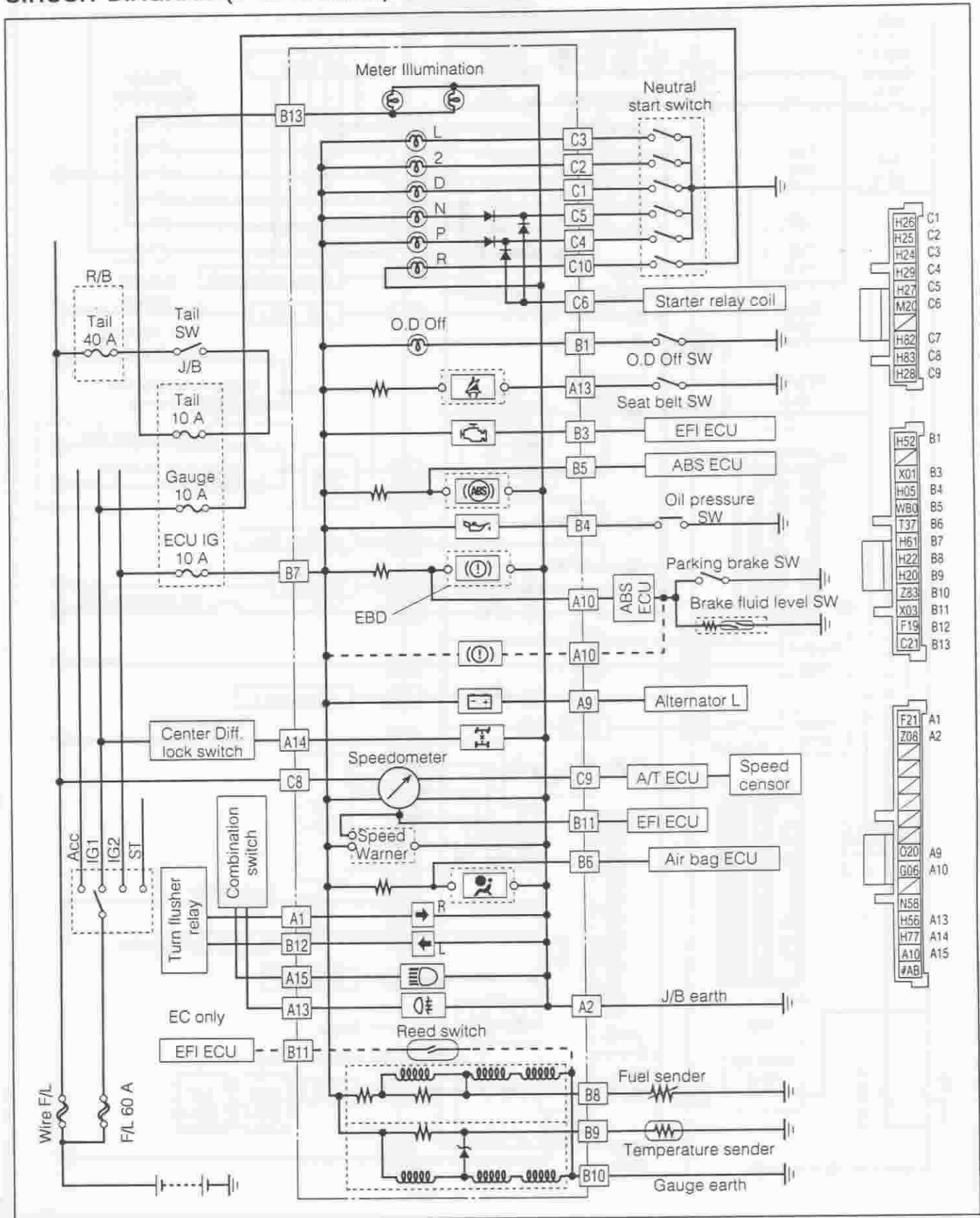
	AM	ACC	IG1	IG2	ST
LOCK					
ACC	○—○				
ON	○—○	○—○	○—○	○—○	
START	○—○		○—○	○—○	○—○



JBE0011-00011

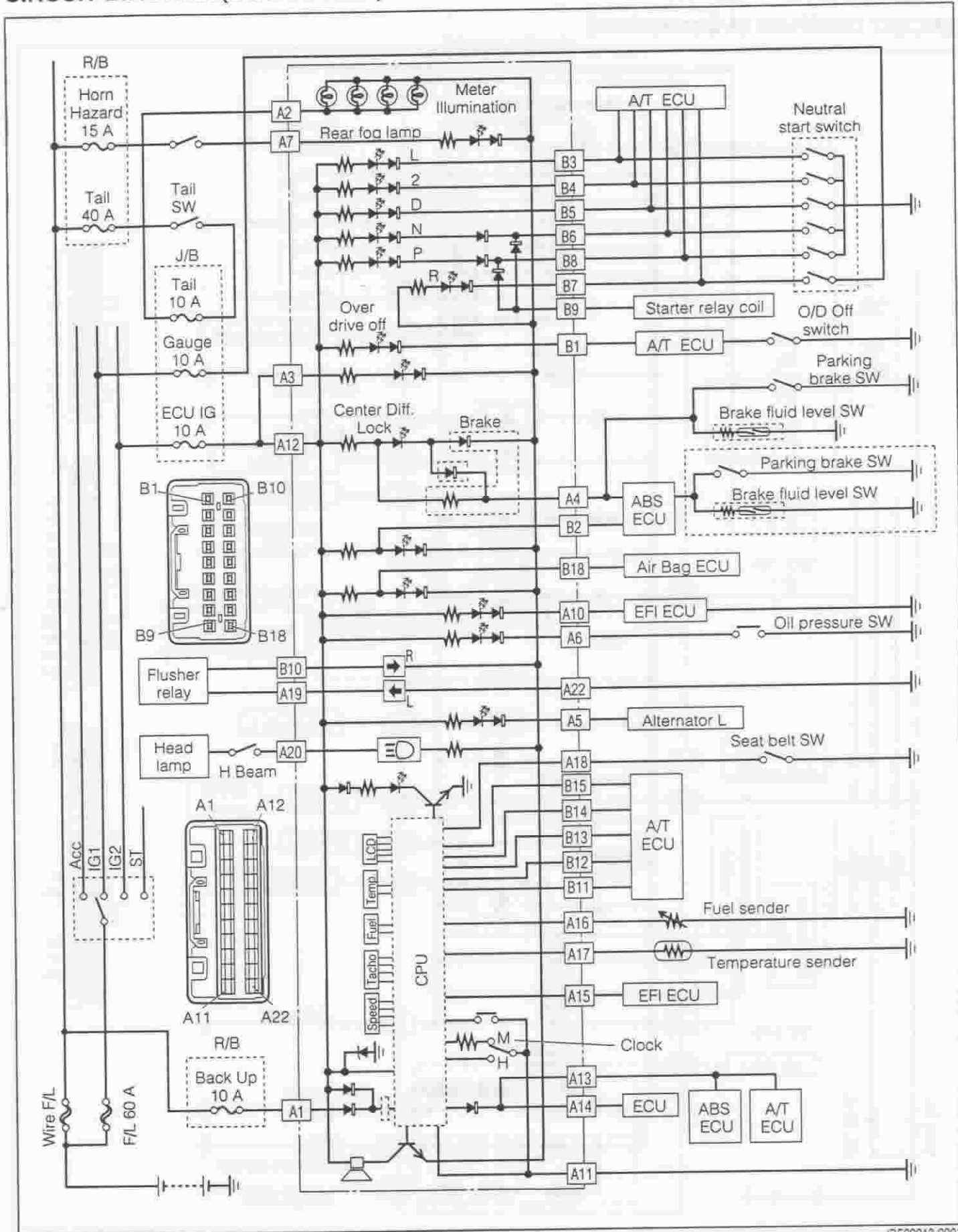
# COMBINATION METER

## CIRCUIT DIAGRAM (3 Connectors)



JBE00G12-00012

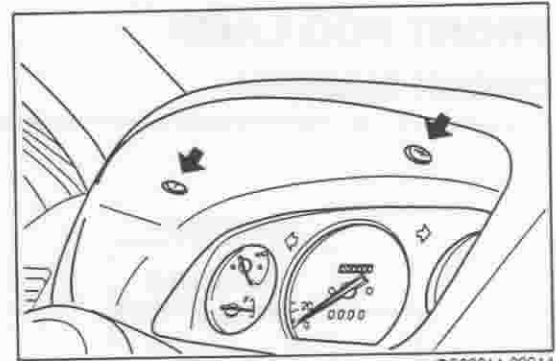
CIRCUIT DIAGRAM (2 Connectors)





**REMOVAL**

1. Remove the instrument cluster finish panel from the instrument panel by removing the screws.
2. Remove the attaching screws of the combination meter assembly.
4. Disconnect the wire harness couplers at the back side of the combination meter assembly.
5. Remove the combination meter assembly.



JBE00014-00014



REMOVAL OF THE INSTRUMENT CLUSTER

1. Disconnect the negative (-) terminal of the battery.

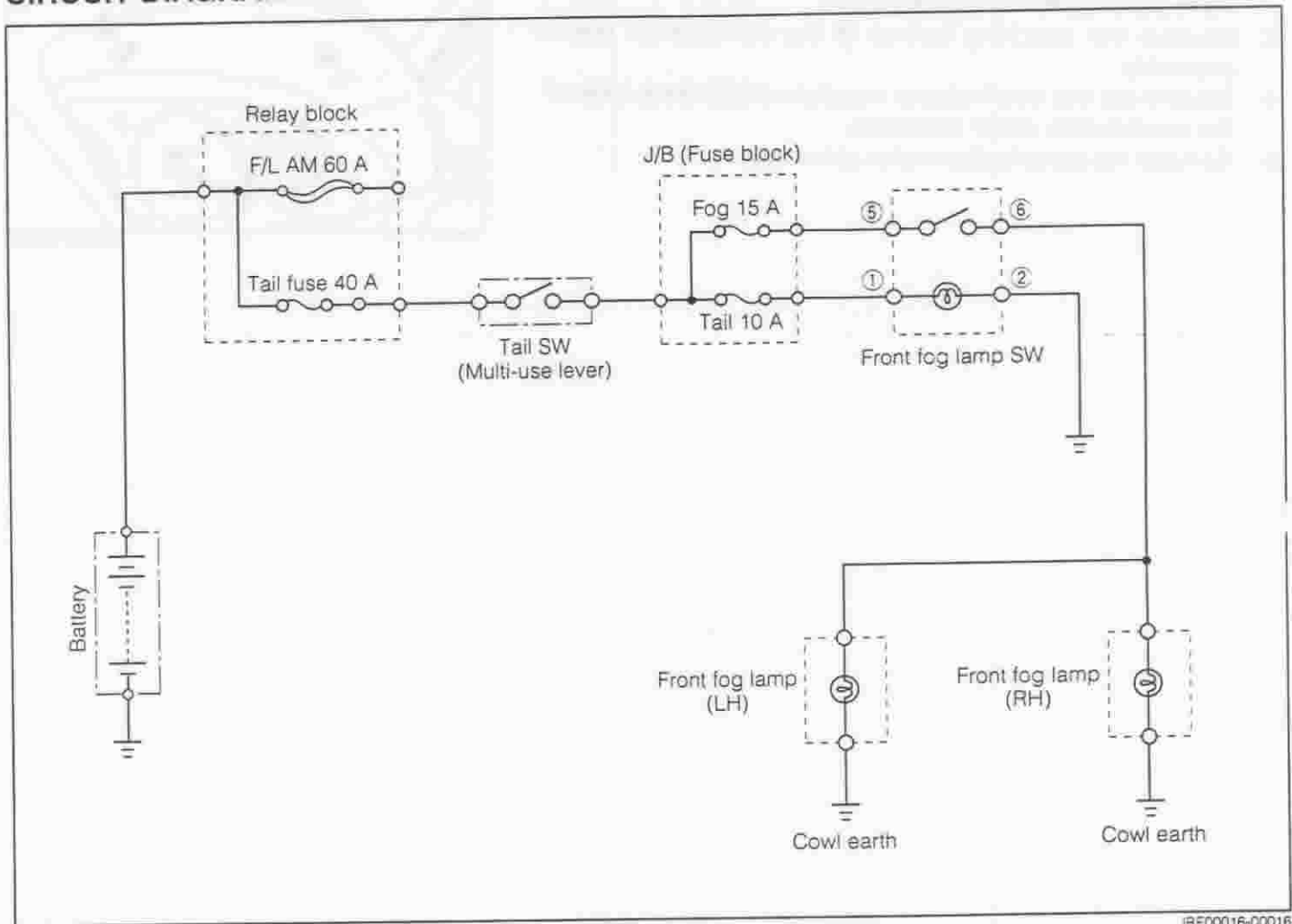
2. Remove the screws that secure the instrument cluster to the instrument panel.

3. Carefully pull the instrument cluster out of the instrument panel.

4. Disconnect the wire harness couplers at the back side of the combination meter assembly.

5. Remove the combination meter assembly.

**FRONT FOG LAMP  
CIRCUIT DIAGRAM**

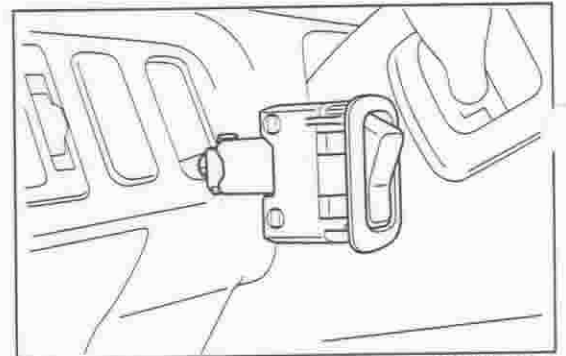


JBE00016-00016

**FRONT FOG LAMP SWITCH**

**Removal**

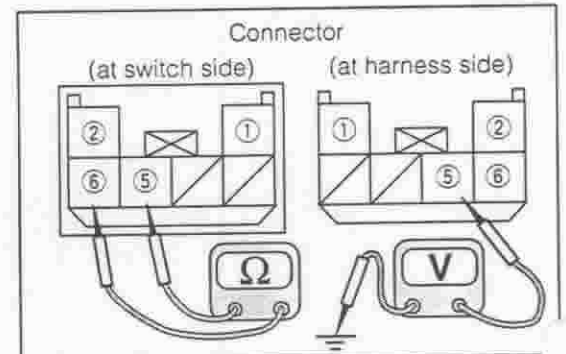
1. Remove the instrument cluster finish lower panel by loosening the attaching screws.
2. Pull out the front fog lamp switch from the instrument panel.
3. Disconnect the connector of the wire harness.



JBE00017-00017

**Inspection**

1. Connect an ohmmeter to the front fog lamp switch side terminals.
  - Between Terminal ⑤ and ⑥:  
Continuity exists while the switch is turned ON.
2. Connect a voltmeter to the wire harness side terminal and the body earth.
  - Between Terminal ⑤ and Body Earth:  
Battery voltage is applied while the lighting switch (at the multi-use lever) is turned ON.



JBE00018-00018

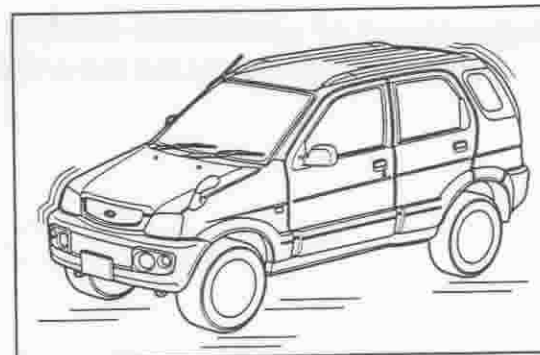
## AIMING ADJUSTMENT

### Performing Of following operation in advance

1. Seat one person (weighing about 75 kg) at the driver's seat.
2. Set the tire inflation pressure to the specified values.
3. Ensure that a spare tire, tools, a jack are mounted at the specified points.
4. Check to see if the engine oil, transmission oil, window washer fluid, etc. are filled to the specified levels. Fill them, as required. Further more, fuel in the tank is filled up.

JBE00019-00000

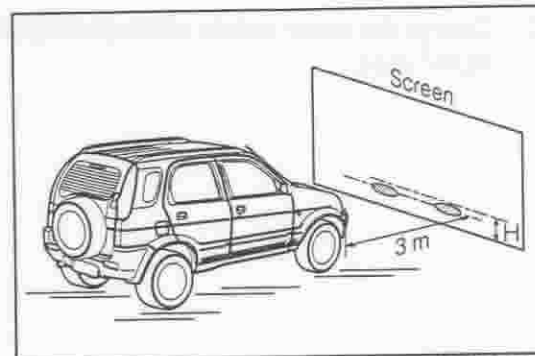
5. Rock the vehicle in up-&-down and right-&-left directions so that the suspensions may support the load evenly and the vehicle may assume the proper vehicle posture.



JBE00020-00019

### Setting of reference points on screen

1. Set a screen at 3 m from the front fog lamp lens surface.
2. Measure the center height "H" of the front fog lamps.
3. Draw an "H" line on the screen.

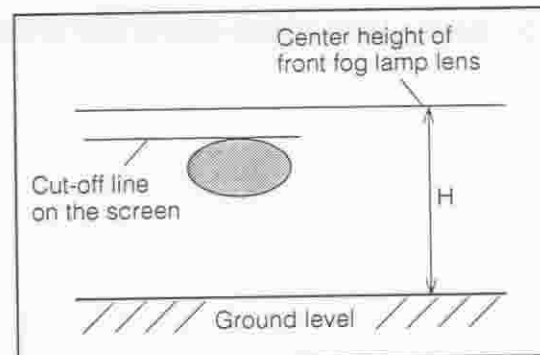


JBE00021-00020

4. Ensure that the cut-off line of the front fog lamp light projected on the screen is below the "H" line.

#### NOTE:

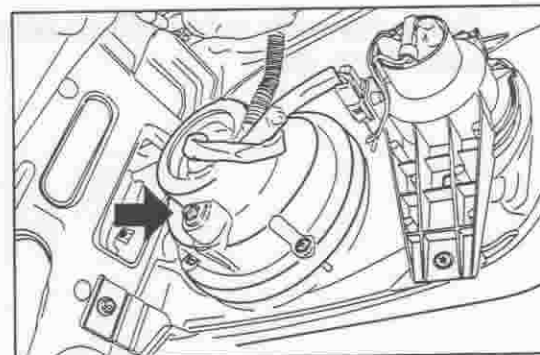
- Keep the engine speed at 1500 rpm or more during the aiming adjustment.



JBE00022-00021

### Adjusting of photometric axis

1. If the photometric axis is deviated, adjust the photometric axis by following procedure.
  - (1) Remove the front fender liner by detaching the clips.
  - (2) Adjust the photometric axis adjusting screw provided at the back side of the front fog lamp.
2. After completion of the adjustment, install the front fender liner to the front bumper.

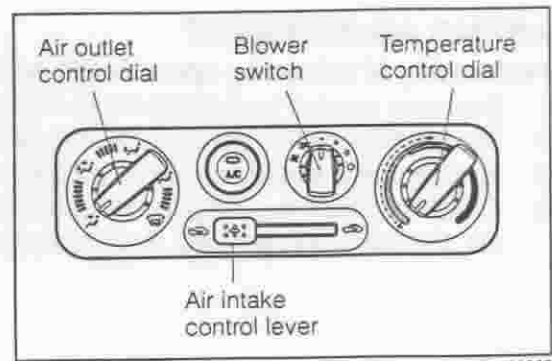


JBE00023-00022

## HEATER & VENTILATION

### VENTILATION SYSTEM

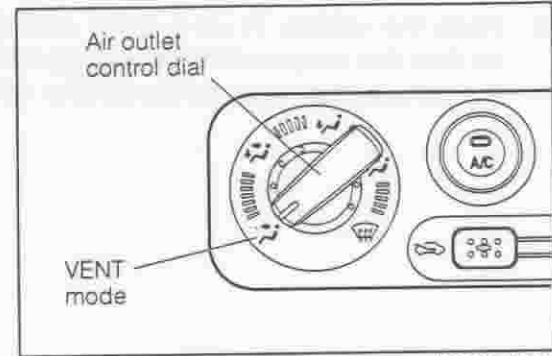
Ensure that the control dials and lever move in a right-and-left direction without stiffness and binding over the full range .



JBE00024-00023

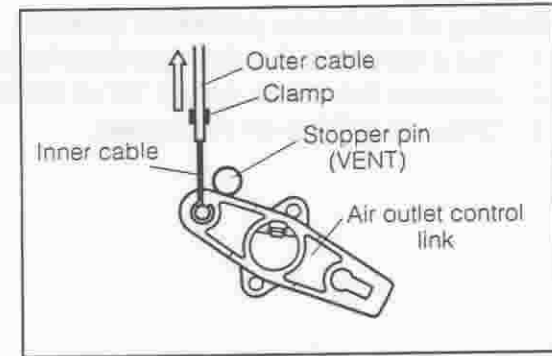
### Adjustment of ventilation control

1. Set the air outlet control dial to the VENT mode.



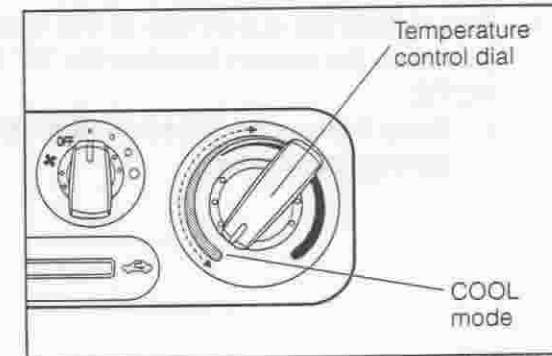
JBE00025-00024

2. Clamp the outer cable while pulling the outer cable toward VENT side.



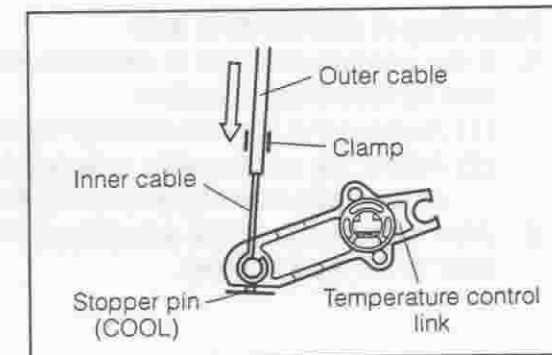
JBE00026-00025

3. Set the temperature control dial to the COOL mode.



JBE00027-00026

4. Clamp the outer cable while pushing the outer cable toward COOL side.

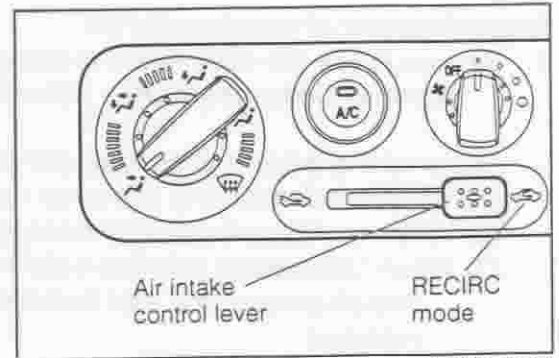


JBE00028-00027

5. Set the air intake control lever to the RECIRC mode.

**NOTE:**

- The right figure indicates the LHD vehicle.  
The mode mechanism is symmetrical between the LHD vehicle and the RHD vehicle.

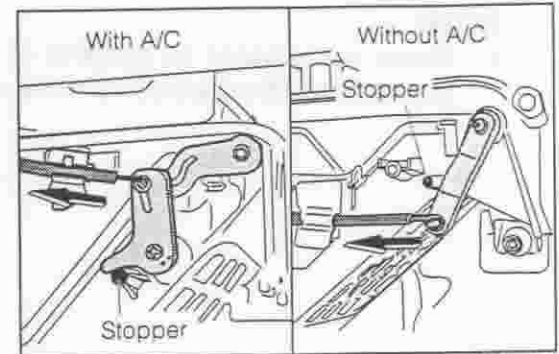


JSE00029-00028

6. Clamp the outer cable while pulling the outer cable toward RECIRC side.

**NOTE:**

- The right figure indicates the LHD vehicle.  
The RHD vehicle is symmetrical to the LHD vehicle.



JBE00030-00029

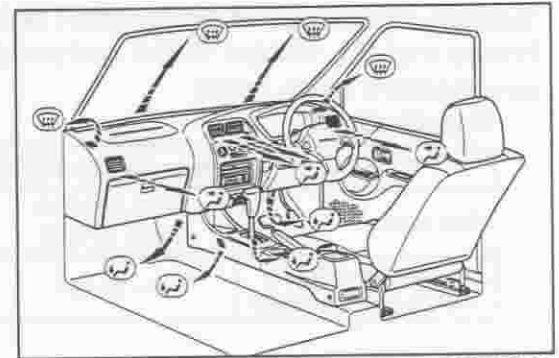
7. After completion of the adjustments in the steps 1 through 6, set the blower switch to the most highest position. Check the following items.

Connect the connectors of the blower switch and A/C switch to the harness connectors at the vehicle side.

- When the VENT mode is selected, ensure that no air leaks from the foot side outlet and defroster.
- When the DEF mode is selected, ensure that no air leaks from the foot side outlet and register.
- When the FOOT mode is selected, ensure that no air leaks from the register. If not, readjust the control cable.

**NOTE:**

- The air is discharged in a lesser volume under the FOOT mode, compared with that under the "VENT".



JBE00031-00030

## AIR CONDITIONER

### Replenishing amount of refrigerant gas

**WARNING:**

- When the refrigerant gas is replenished from the high pressure side, never start the engine. Failure to observe this warning may cause a reverse flow of the refrigerant gas, resulting in burst of the gas can, cylinder, etc.

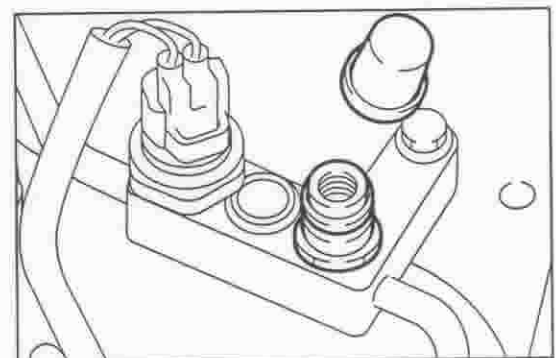
**NOTE:**

- Excessive charging of the refrigerant gas will affect the cooling performance adversely.

- Replenish the refrigerant gas, until you see no bubbles through the sight glass.
- After you confirm that bubbles have disappeared by seeing through the sight glass, add another 100 g of refrigerant gas.

**Replenishing Amount of Refrigerant Gas:**

- 400 ± 30 g (Other than tropical specifications)
- 420 ± 30 g (Tropical specifications)



JBE00032-00032

**Replenishment of compressor oil**

1. Be sure to use the designated compressor oil.

Name of Compressor Oil: ND—OIL—8

2. Replenishing amount of compressor oil.

- (1) When condenser only has been replaced: 40 cc
- (2) When cooling unit only has been replaced: 40 cc
- (3) When compressor only has been replaced:

The oil amount of a new compressor should be the same as that of the compressor that has been replaced.

**NOTE:**

- Some compressor oil remains in the cooling unit or condenser. Hence, the oil of that remaining amount must be drained from the new compressor.

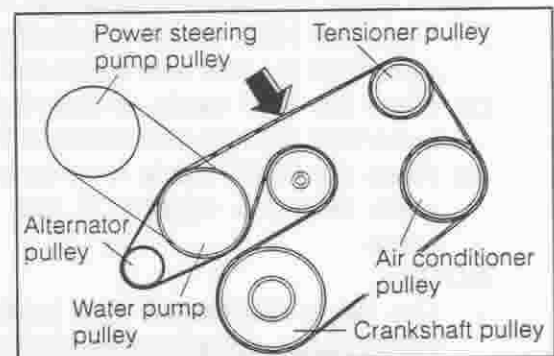
JBE00034-00000

**Tension adjustment of compressor belt**

Ensure that the tension of the compressor belt is within the specifications given below.

**Specifications:**

	When a new belt is installed	When a used belt is installed
Belt tension	590 ± 100 N·m (60 ± 10 kgf)	390 ± 50 N·m (40 ± 5 kgf)
Deflection when a force of 100 N·m (10 kgf) is applied	9 - 11 mm	13 - 15 mm



JBE00035-00033

**NOTE:**

- If the tension does not comply with the specifications above, adjust it by loosening the bolt.
- For the detailed procedure for the belt tension adjustment, refer to the Section CH of the relative service manual of the engine concerned.

## ITC SYSTEM

### OUTLINE

For enhanced safety of the motor vehicle, the ITC system (Integrated Timer Control system) has the following functions.

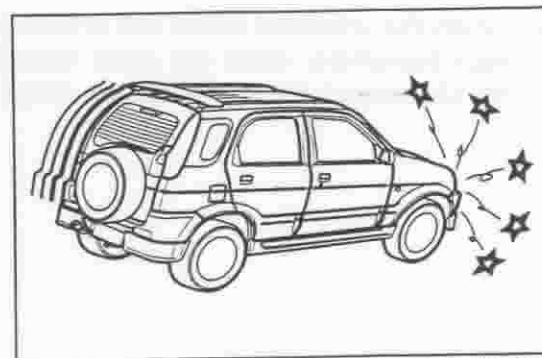
1. Impact-detecting door unlocking system
2. All-door lock, interlocked with door lock button
3. Room lamp timer
4. Function to prevent battery from becoming "dead"

JBE00036-00000

#### Impact-detecting door unlocking system

In the event that an impact beyond the specified value is applied to the vehicle, all of the doors are unlocked three seconds after the impact detection. When the switch of the room is set to positions in which the illumination of those lamps is interlocked with the door, the lamp will go on simultaneously as the hazard lamp goes on.

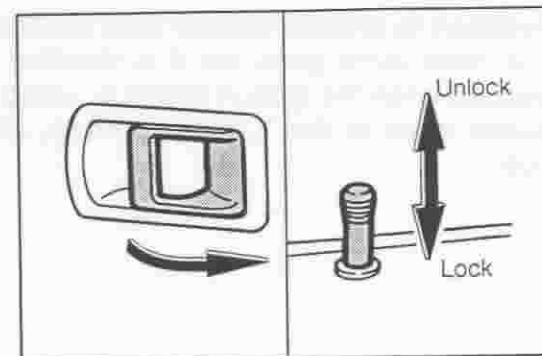
Moreover, the impact is detected in all around horizontal directions.



JBE00037-00034

#### All-door lock, interlocked with door lock button

All of the side doors can be locked and unlocked, interlocked with the door lock button switch at the driver's seat side.

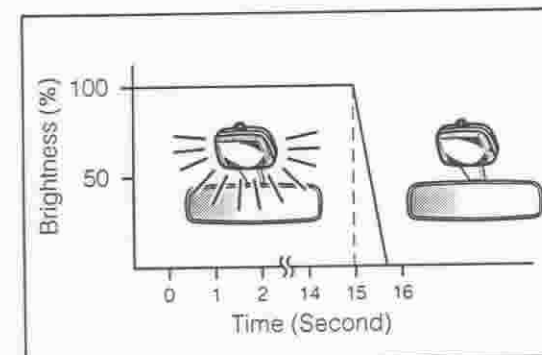


JBE00038-00035

#### Room lamp timer

The room lamp timer is illuminated when any door is open with the ignition switch set to the OFF position.

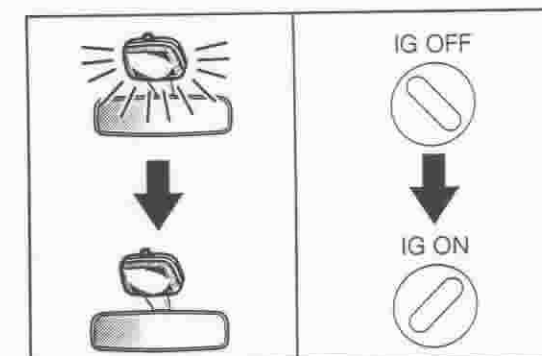
The room lamp is illuminated for 15 seconds and starts to dim when all doors which are closed and locked are unlocked by the keyless transmitter.



JBE00039-00036

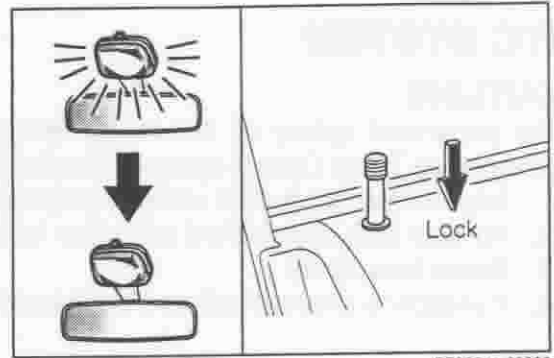
In the following cases, however, the room lamp will not go on for 15 seconds, but starts to dim immediately.

1. With the ignition switch set to the ON position, when any open door is closed, thereby making all doors closed:
2. When the ignition switch is switched from the OFF position to ON position while the room lamp is being illuminated for 15 seconds by the lamp timer.



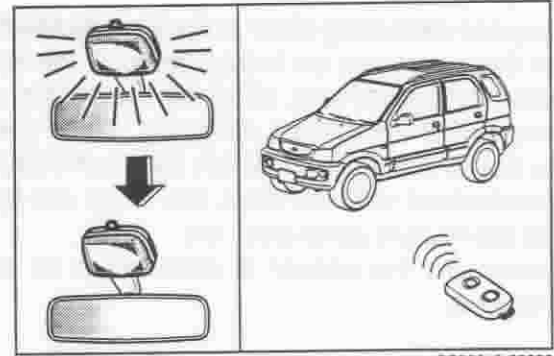
JBE00040-00037

3. When any open door is closed, thereby making all doors closed, and the doors are locked by means of the door lock button.
4. When the doors are locked by means of the door lock button while the room lamp is being illuminated for 15 seconds by the room lamp timer.



JBE00041-00038

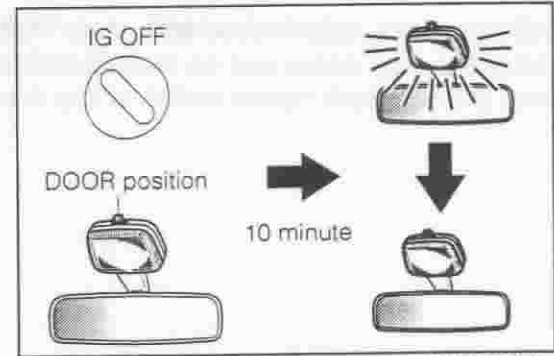
5. When the unlocked doors are locked by means of the keyless transmitter while the room lamp is being illuminated for 15 seconds by the room lamp timer.



JBE00042-00039

**Function to prevent battery from becoming "dead"**

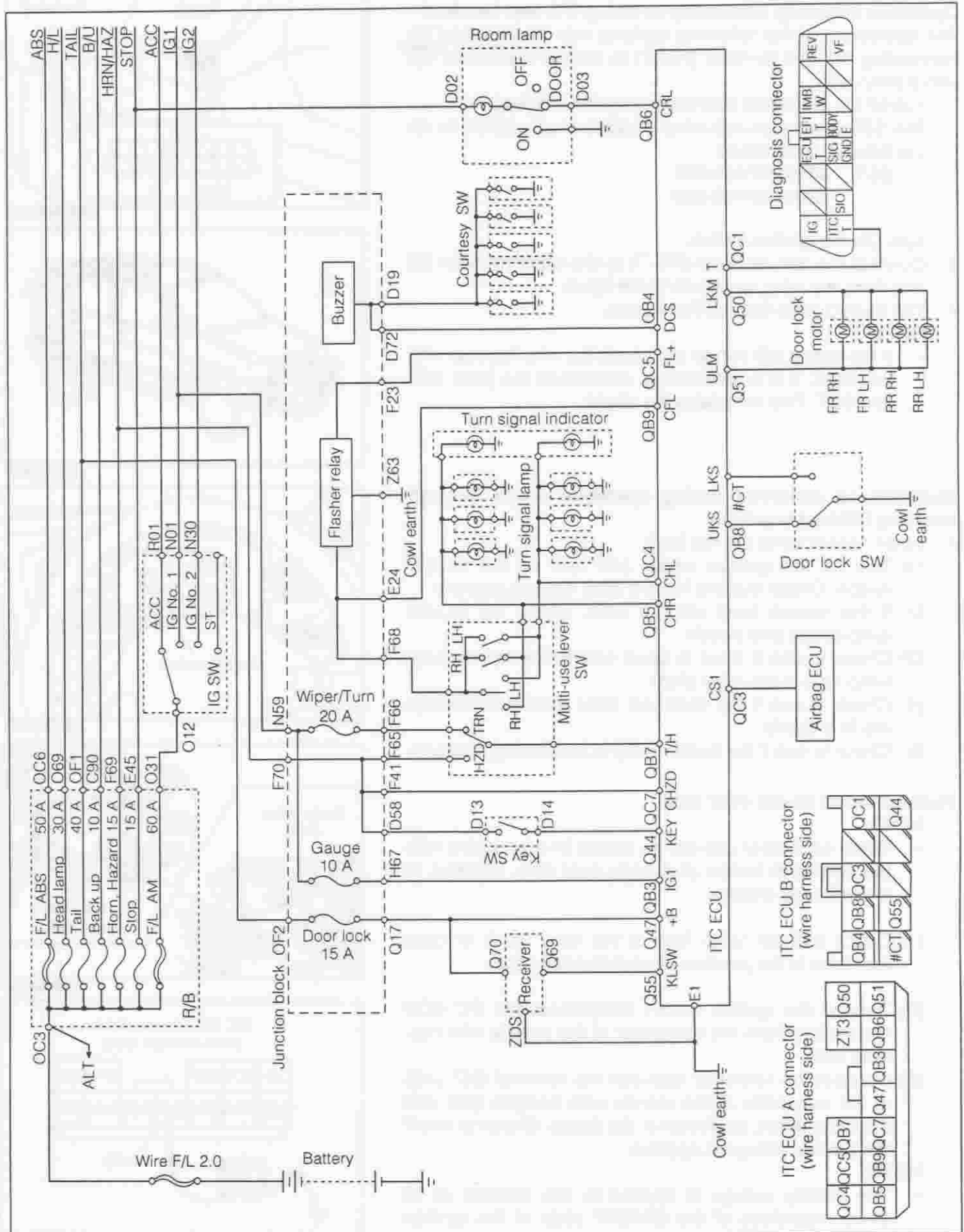
The room lamp goes out if a duration of 10 minutes has elapsed when the ignition switch is turned OFF, the room lamp switch is set to the "DOOR" position, and also any door is open.



JBE00043-00040



DIAGRAM



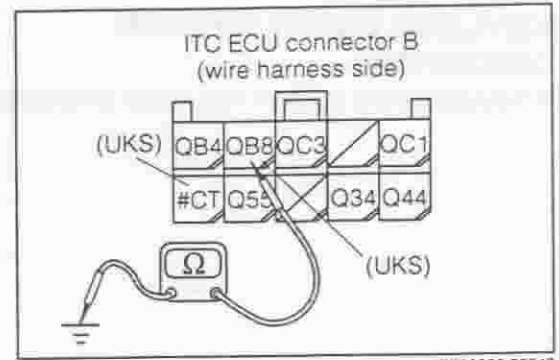
JBE00044-00041



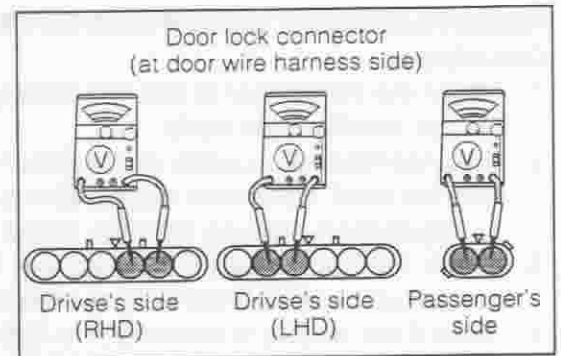
- (4) Connect the ohmmeter between the ITC ECU B connector terminal and body earth. Ensure that the continuity exists between the terminal and body earth.
- Between Terminal QB8 (UKS) and Body Earth:  
Continuity exists.
- Between Terminal #CT (LKS) and Body Earth:  
Continuity exists.

**NOTE:**

- This terminal has no continuity when the door lock button at driver's seat side is locked. Conversely, it has continuity when the door lock button at the driver's seat is not locked.
- If this check reveals abnormality, check the door lock control switch and wire harness.



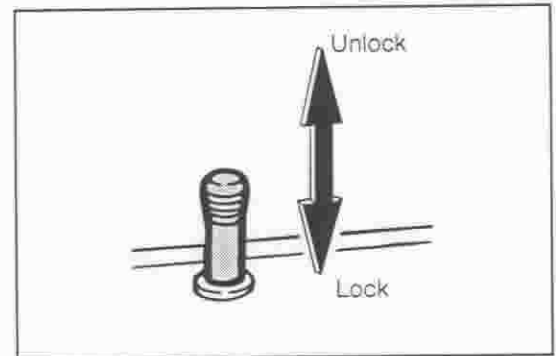
- (5) Connect the ITC ECU connector with the connector at the vehicle wire harness side. (Connect the connectors that were disconnected at Step (2) into the original positions.)
- (6) Disconnect the door lock motor connector at the door side whose locking is inoperative from the connector at the vehicle wire harness side. Connect a circuit tester in its voltmeter mode, as shown in the figure.



- (7) Turn on the ignition switch and lock or unlock the door lock button at the driver's seat. Check to see if the voltmeter registers the battery voltage. If there is abnormality, check the wire harness.

**NOTE:**

- The current during the locking state flows in the reverse direction, as opposed to the current during the unlocking state.



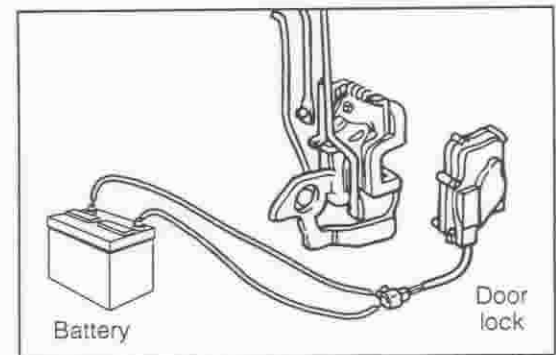
- (8) If there is no abnormality in the check at Step (7), apply the battery voltage directly to the door lock motor terminal to see if the door lock functions.

**CAUTION:**

- Never let the current flow for ten seconds or more continuously.

**NOTE:**

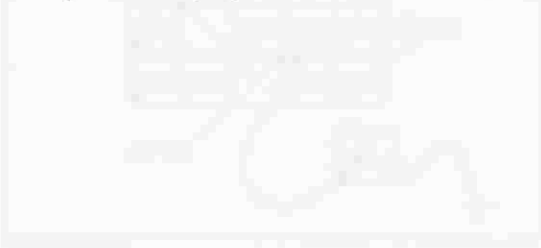
- If the lock motor has no abnormality, the ITC ECU is regarded as faulty. Replace the ITC ECU.



**KEYLESS ENTRY SYSTEM****DESCRIPTION**

A keyless entry system has been employed on some grades. All doors can be locked by a remote control.

JBE00054-00000

**OUTLINE OF OPERATION**

1. When a transmitter switch is pushed, weak electric waves are emitted. In this way, all doors can be locked by a remote control.
2. The remote control is possible within an about three-meter radius of the vehicle center. However, this operation range may be narrowed or the system may not function when the battery is weak or there are strong electric waves or noises. Moreover, there is an area where the system is difficult to function, depending upon the shape of a vehicle body.

JBE00055-00000

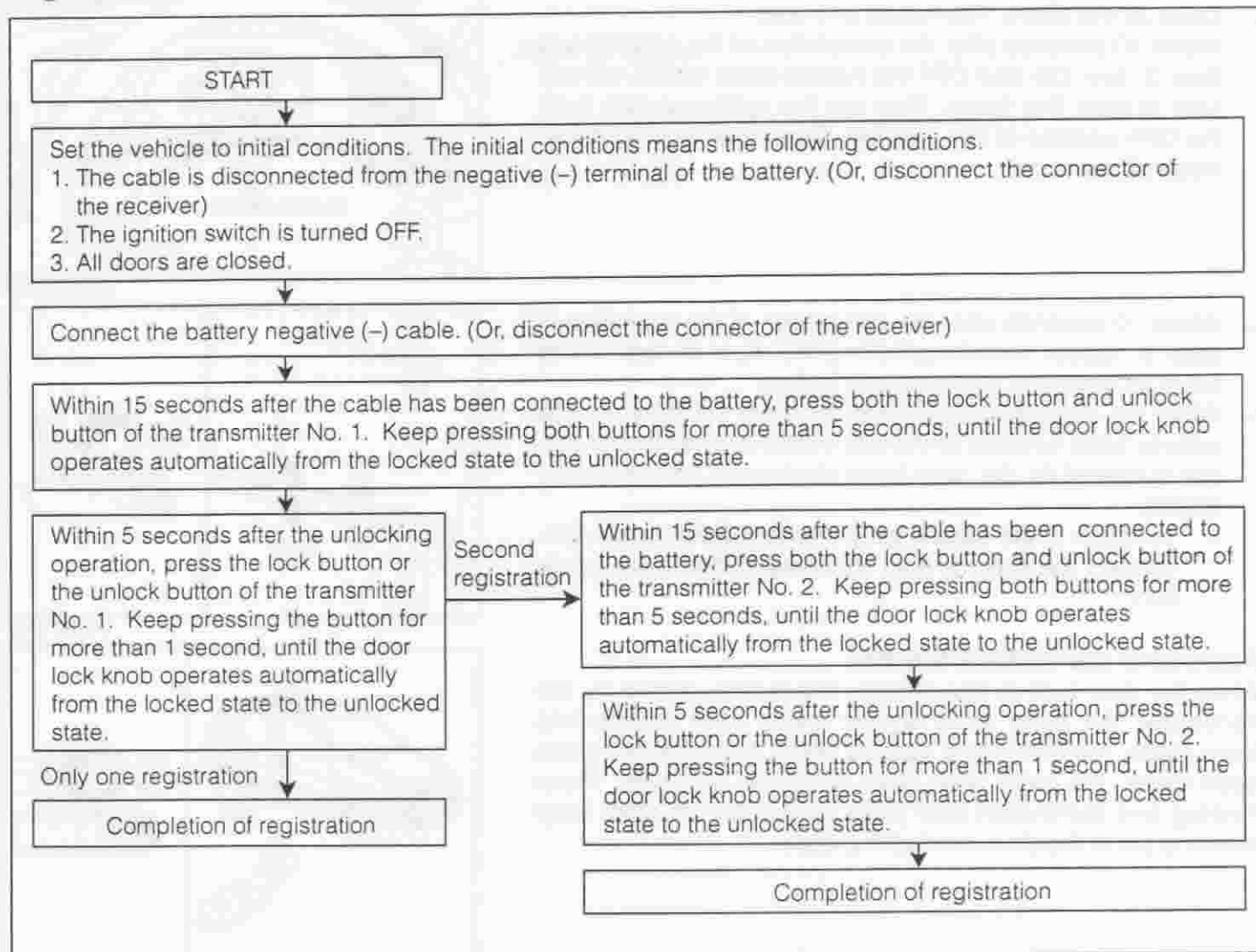
**REGISTRATION OF IDENTIFICATION CODE****Description**

1. When the transmitter is lost, the battery is dead, or another transmitter is added, it is necessary to register the identification code.
2. Two identification codes at maximum can be registered at each receiver. Therefore, two transmitters can be used. Each time registration is made for the third time or more, one code will be erased in order of registration, starting from the oldest one.
3. When the transmitter is lost, register the identification code twice successively. This will erase the old identification code that has been memorized in the receiver.
4. Even if the battery is removed, no identification code will be lost.

JBE00056-00000



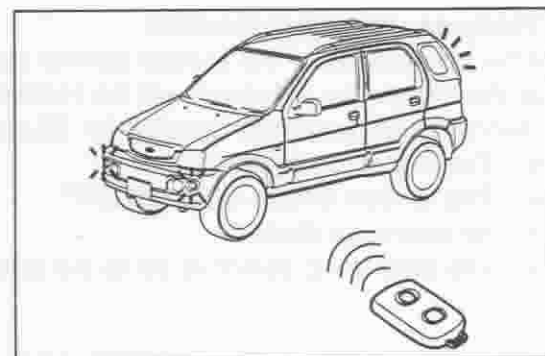
## Registration method of identification code



JBE00057-00000

## Hazard answer back function

When the door lock is operated by the remote control by the transmitter, the hazard lamp and the room lamp answer back. After locking has been made, the hazard lamp flashes once. After unlocking has been made, the hazard lamp flashes twice and the room lamp goes on fifteen seconds. The room lamp illumination takes place only when the room lamp switch is set to the door-interlocking state.



JBE00058-00051

## Customizing function

If the user does not opt to have the hazard lamp answer back function, it is possible to change the hazard lamp answer back function to the room lamp answer back function by executing the customizing function.

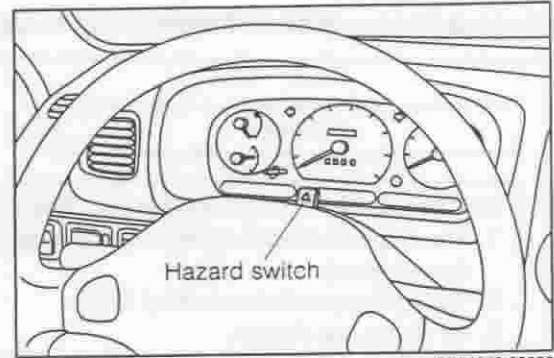
The following indicates the switching procedure.

## NOTE:

- The initial condition when the battery is installed is the hazard lamp answer back mode.

JBE00059-00000

1. Turn OFF the ignition switch.
2. Close all the doors. Then open any door.
3. Within 10 seconds after the completion of the operation in Step 2, turn ON and OFF the hazard lamp switch repeatedly at least five times. Then set the ignition switch from the OFF position to ON position. Then open any door and close all the doors.

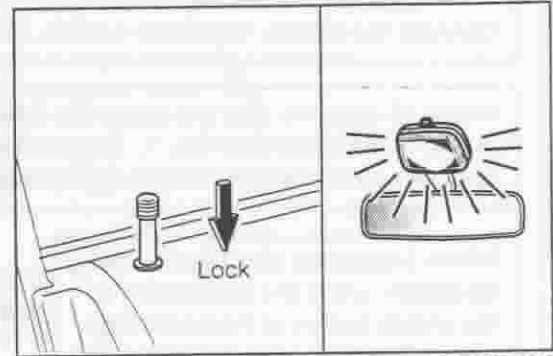


JBE00060-00052

4. Within 10 seconds after the completion of the operation in Step 3, repeat unlocking/locking the door at least three times by means of the door lock button.
5. When the mode has been changed from the hazard lamp answer back function to the room lamp answer back function successfully, the room lamp goes on for two seconds.

**NOTE:**

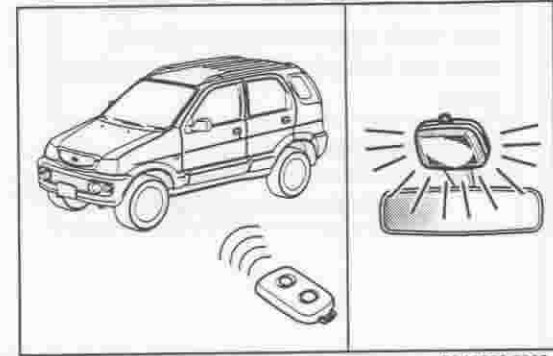
- To return to the hazard lamp answer back function, disconnect the battery, thus returning to the initial condition.



JBE00061-00053

**Room lamp answer back function**

When the door lock is operated by the remote control by the transmitter, the room lamp answer back. After locking has been made, the room lamp flashes twice. After unlocking has been made, the room lamp goes on for fifteen seconds. These flashing and illumination take place only when the room lamp switch is set to the door-interlocking state.



JBE00062-00054

**Thirty-second timer function**

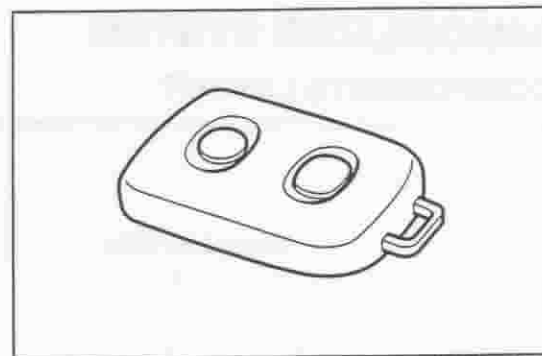
After completion of the remote control door locking by means of the transmitter, all doors will be locked if the following conditions given below are satisfied for 30 seconds:

- The key is not inserted.
- The ignition switch is turned OFF.
- All doors are closed.
- The door knob switch is set to the unlock side.

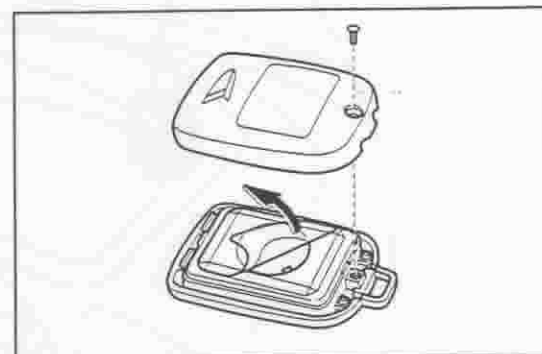
JBE00063-00000

**DISPOSAL OF TRANSMITTER**

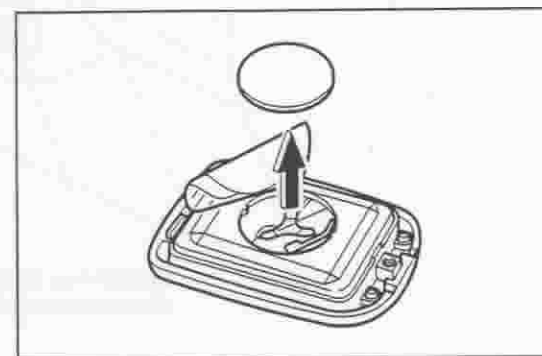
1. When the transmitter battery is dead or a vehicle with the keyless system is to be disposed, it is necessary to disassemble the transmitter and dispose its components separately.
2. Remove the cover by loosening the attaching screw.
3. Peel of the seal.
4. Remove the lithium battery. Dispose the battery, circuit board and case separately.



JBE00064-00055



JBE00065-00056



JBE00066-00057

**Part for replacement**

BATTERY SET, TRANSMITTER

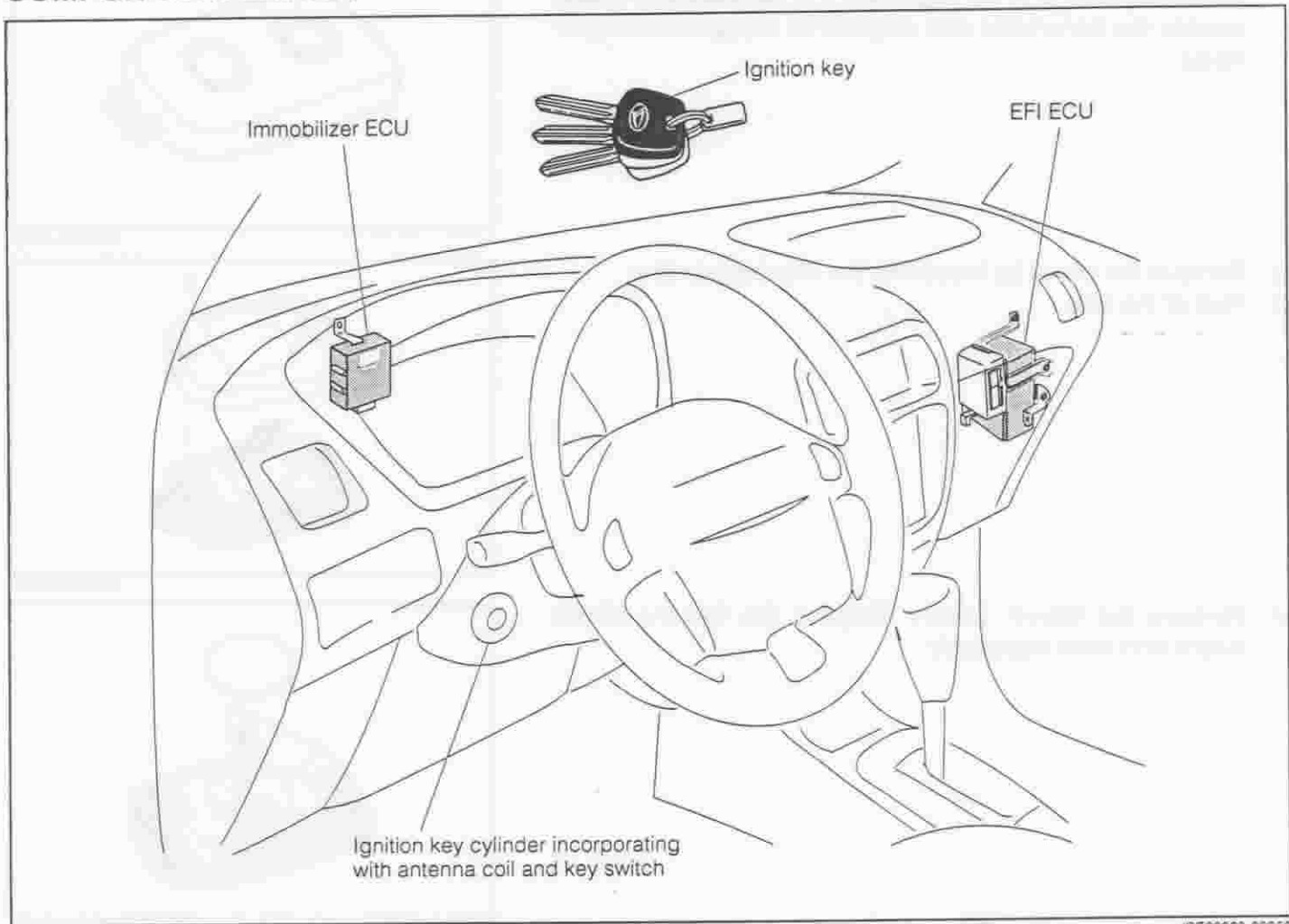
Part No.: 89706-87701

**NOTE:**

- The battery set consists of a battery, a seal and a screw.

JBE00067-00000

## IMMOBILIZER SYSTEM COMPONENTS LAYOUT



JBE00069-00058

### OUTLINE

This system consists of a transponder-built-in key, an antenna coil, an immobilizer ECU and EFI ECU. In this immobilizer system.

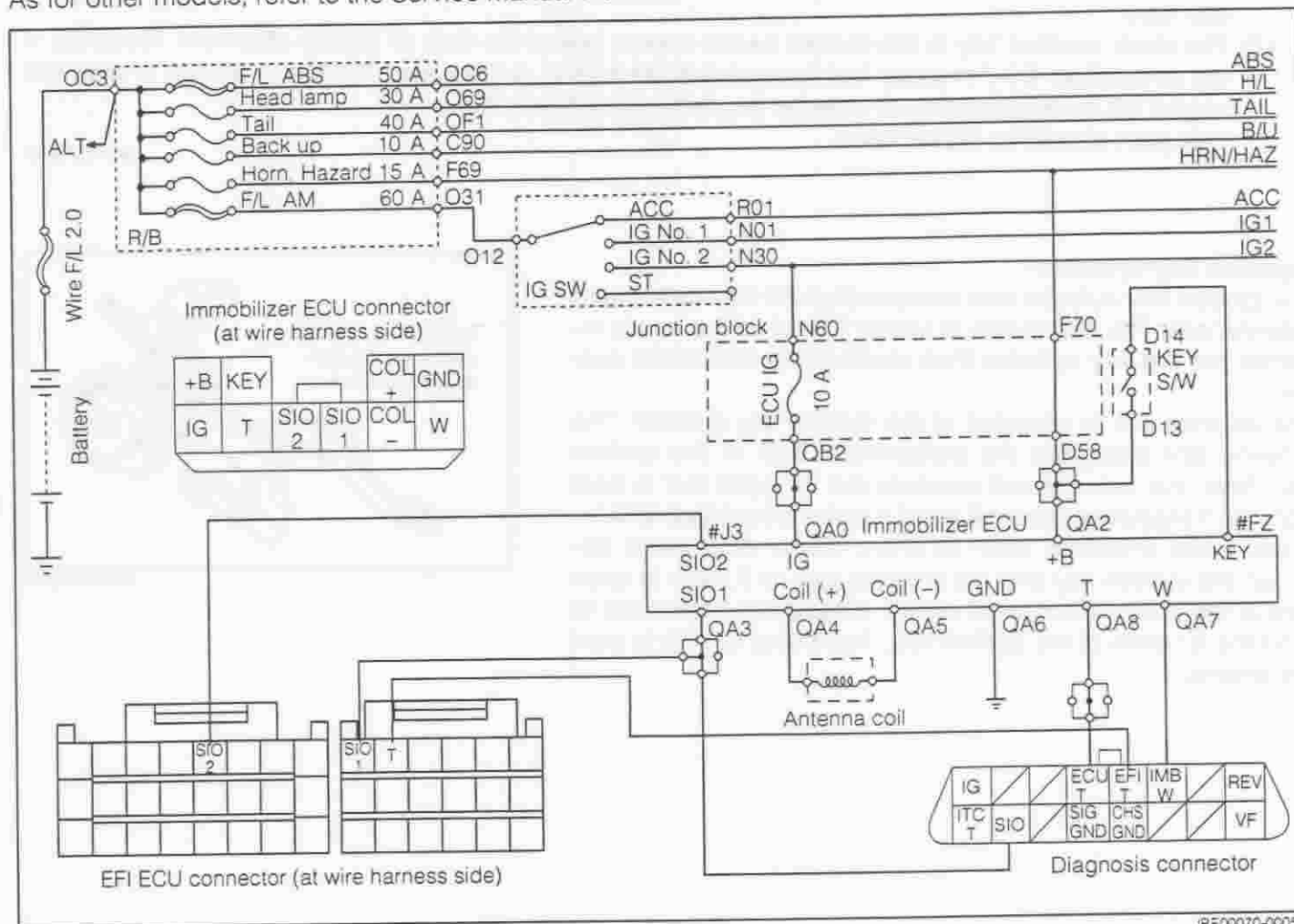
In this immobilizer system, when the key is inserted into the ignition key cylinder, the key switch is turned ON, thus starting the system. Then, comparison is made between the code memorized in the immobilizer ECU and the code memorized in the key. When both codes match with each other, the immobilizer ECU sends to the EFI ECU the permission signals for ignition and fuel injection. The key ID code is a transponder intrinsic code, whereas the rolling code takes a different value every time the engine is started. This code is renewed and memorized in the EFI ECU and immobilizer ECU as the rolling code for the next starting.

JBE00069-00000



**WIRING DIAGRAM**

This figure applies to EC (1.0-liter and 1.3-liter) and AUS (1.3-liter).  
As for other models, refer to the Service Manual No. 9721.



JBE00070-00059

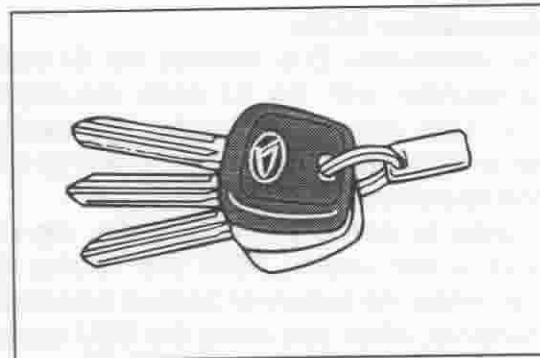
**COMPONENTS**

**<Ignition key>**

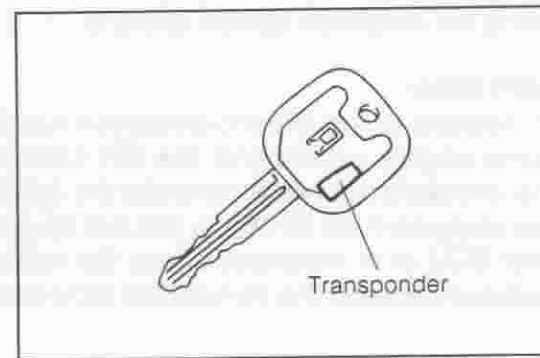
The vehicle is provided with three ignition keys.

1. A black-covered master key
2. Two gray-covered sub keys

The transponder is built in the cover of each of the three keys. Each key has a different recorded ID code. In this system, the operation/releasing of the system can be performed by comparing and collating the ID code with the data memorized in the immobilizer ECU. Although two sub keys are provided for the vehicle, up to three keys can be registered, as required, by means of the sub key registration function of the master key.



JBE00071-00060



JBE00072-00061

**CAUTION:**

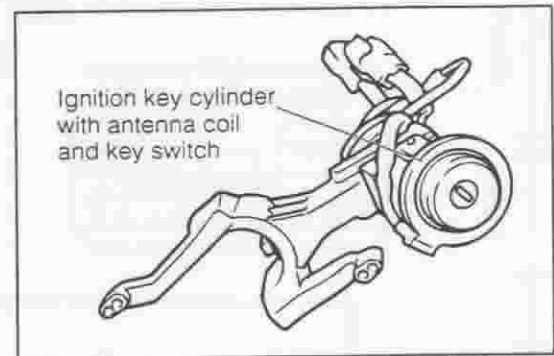
- The master key has the following functions. Utmost care must be paid as to its handling.
  - (1) Using the master key (black cover), it is possible to perform the new registration and renewal of the sub keys.
  - (2) The black covered key is memorized as the master key at the time of factory shipment. However, if the immobilizer ECU memory has been cleared at time of repairs, etc., the key used first to start the engine will be registered as the master key in the immobilizer ECU. This point should be kept in mind.

JBE00073-00000

**<Ignition key cylinder>**

The ignition key cylinder has incorporated the key switch and antenna coil. The key switch is turned ON when the key is inserted into the key cylinder, thus starting the immobilizer system.

The antenna coil is provided at the ignition key cylinder. The antenna coil energizes the transponder built in the ignition key. Also, the antenna coil receives the ID code that is sent from the transponder and will send it to the immobilizer ECU. If any metal shielding, such as a key holder ring, exists between the ignition key and the antenna coil, or if there is open wire in the antenna coil or its circuit, it becomes impossible to read the ID code of the ignition key, thus being unable to start the engine.



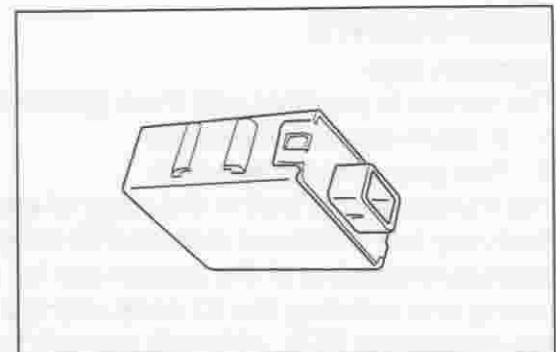
JBE00074-00062

**<Immobilizer ECU>**

The immobilizer ECU collates the ID code sent from the key transponder with the ID code recorded in the immobilizer ECU. Only when the ID codes are matched with each other, the immobilizer ECU sends the signal of continuation of engine operation to the EFI ECU.

In order to memorize the ID code, the immobilizer ECU employs a non-volatile ROM that retains the memorized data even when the battery or backup fuse is disconnected.

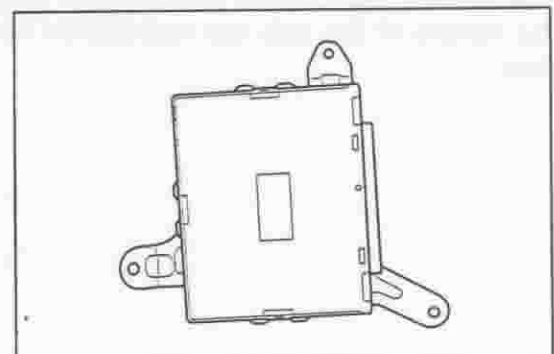
Therefore, when you erase the ECU memory and register the master key ID code newly, you have to erase the memory, using the diagnosis system (DS-21).



JBE00075-00063

**<EFI ECU>**

In addition to the hitherto-employed functions as the conventional engine control unit, the EFI ECU has the functions as the immobilizer function whereby the ignition and fuel injection are stopped if the ID codes can not be collated in the immobilizer ECU or in instances where the rolling codes can not be collated between the immobilizer ECU and the EFI ECU.



JBE00076-00064

**TROUBLE-SHOOTING****TROUBLE-SHOOTING HINTS**

Before checking the immobilizer system, check the diagnosis code of the EFI system to determine whether the malfunction is caused by the immobilizer system or by the EFI system.

**CAUTION:**

- In the immobilizer system, the system is composed with the same rolling code shared in common among the ignition key, immobilizer ECU and EFI ECU. Hence, if the immobilizer ECU and/or EFI ECU are replaced with that of another vehicle during the checking of the immobilizer ECU or EFI system, the immobilizer system will be regarded as malfunctioning. Therefore, do not replace the immobilizer ECU and/or EFI ECU with that of another vehicle unnecessarily.
- If you have to replace the immobilizer ECU and/or EFI ECU, erase the rolling codes memorized in the immobilizer ECU and EFI ECU. Then, register the ID code of the ignition key to the immobilizer ECU.

JBE00077-0000

**DESCRIPTION**

1. A self-diagnosis system is built in the ECU. If any abnormality should occur in the immobilizer system, the self-diagnosis system memorizes the malfunction phenomenon in the ECU in the form of malfunction code number.
2. When the test terminal of the check connector is connected with the ground terminal, the malfunction code number that has been memorized in the ECU will be indicated in a form of blinking of the check lamp in the SST.
3. This memorized malfunction code number is erased when the battery ground cable is disconnected from the negative (-) terminal of the battery or when the backup fuse in the relay block assembly is disconnected with the ignition key switch turned off.

JBE00078-0000

**READ OUT OF DIAGNOSIS CODE****Method using check lamp**

In the method using the check lamp, a two-digit code number will be indicated.

1. Connect the test terminal of the diagnosis connector with the ground terminal, using a jump wire.
2. Connect a check lamp between the terminals as illustration.

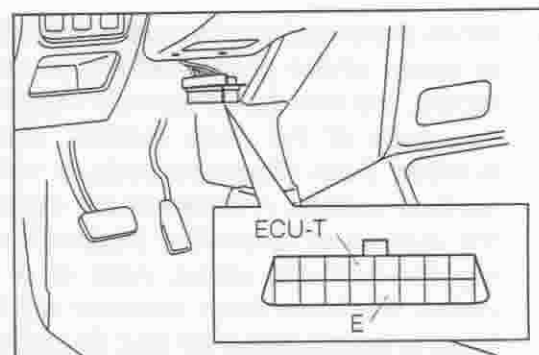
**NOTE:**

- Prepare the following SST.  
SST: 09991-97201-000

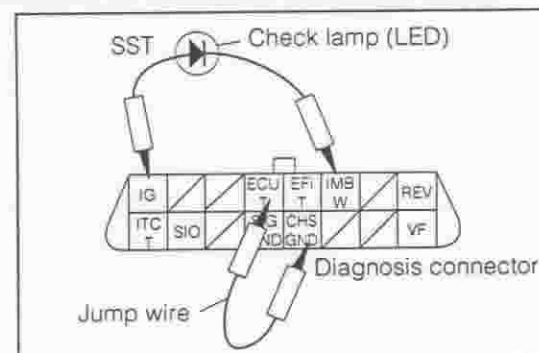
**CAUTION:**

- As for the check lamp, make sure to use a LED (light emitting diode) type. Bulb type check lamp is not suitable for this system.

3. Set the ignition switch to the ON position.
4. Read the diagnosis code by observing the number of blinking of the indicator lamp.



JBE00079-0005

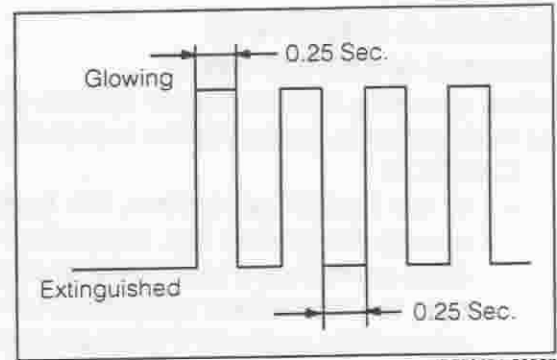


JBE00080-0006

**EXPLANATION OF DIAGNOSIS CODE**

1. Indication of normal code

The check lamp glows for 0.25 second, 0.25 second later after the ignition switch has been turned ON. After a lapse of 0.25 second, the check lamp again glows for 0.25 second. Then, this pattern will be repeated.



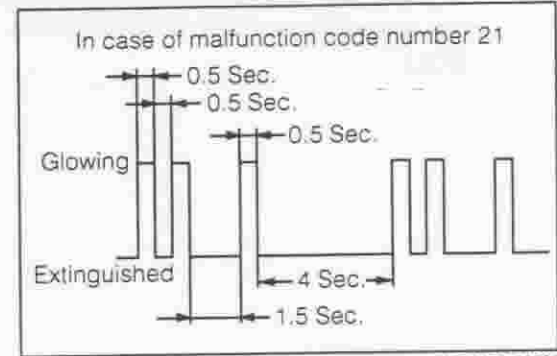
JBE00081-00067

2. Indication of malfunction code

• When a single malfunction code is indicated:

The diagnosis malfunction code is composed of two digits. Those two numbers are indicated by blinking of the check lamp. Four seconds later after the ignition switch has been turned on, the check lamp indicates first the number of the tens digit of the diagnosis code by blowing the same times as the number. The lamp glows for 0.5 second each time and then it is extinguished for 0.5 second. After a pause of 1.5 seconds, the check lamp indicates the number of the units digit of the diagnosis code by glowing the same times as the number.

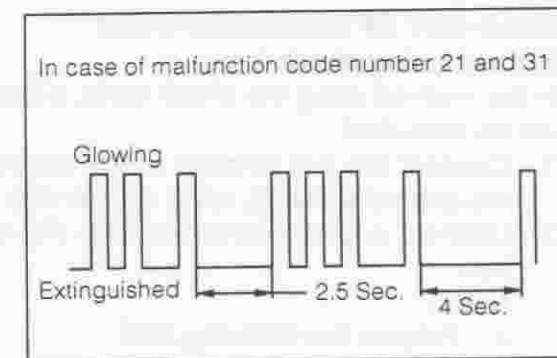
The lamp glows for 0.5 second each time and then it is extinguished for 0.5 second. Then, this pattern will be repeated after a pause of 4.0 seconds.



JBE00082-00068

• When plural malfunction codes are indicated:

In cases where plural malfunction codes have been detected, the two-digit diagnosis codes are indicated in the sequence of the code number, starting from a smaller number. Each diagnosis code is indicated in above described pattern. A pause of 2.5 seconds occurs between the outputs of respective diagnosis codes, thus separating one from the others. After all of the plural diagnosis codes that have been detected are indicated, the check lamp is extinguished for four seconds. Then, the detected plural diagnosis codes will be indicated again.

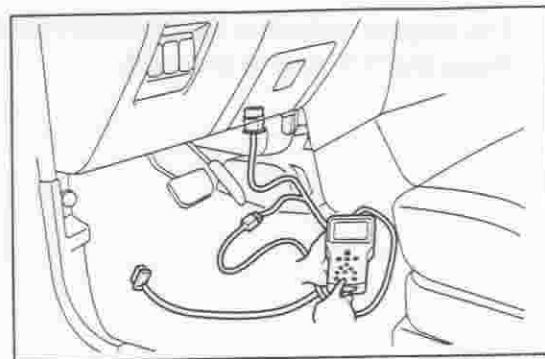


JBE00083-00069



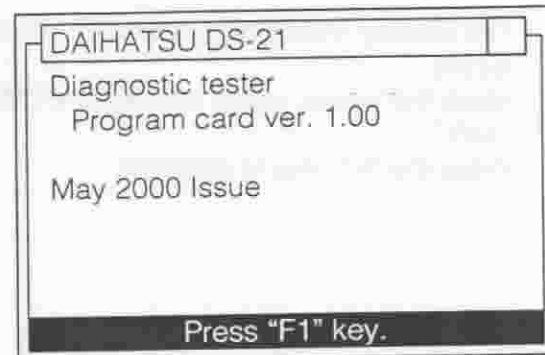
**Method Using Diagnostic Tester (DS-21)**

1. Connect the diagnostic tester (DS-21) to the diagnosis check connector.



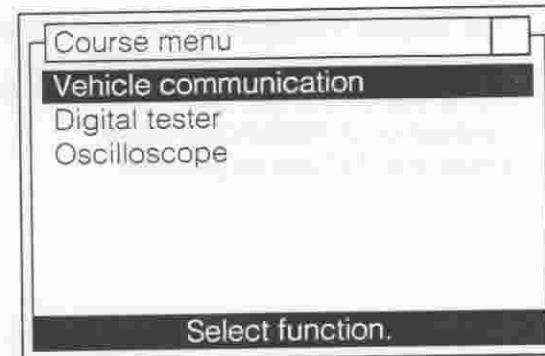
JBE00084-00070

2. Turn ON the ignition key.
3. Turn ON the power supply of the tester. Then, the display indicates the screen of the figure on the right. Press the "F1" key to proceed.



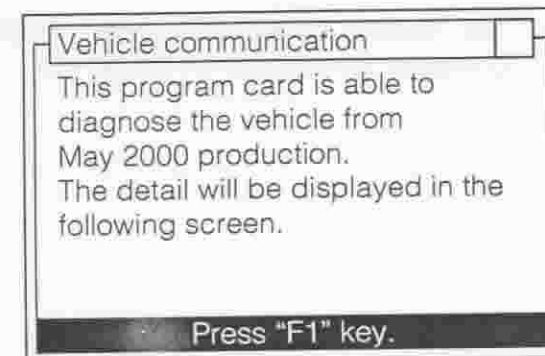
JBE00085-00071

4. The display indicates a screen in which a course menu is selected. Move the cursor, using the [▲] and [▼] keys, to select the "Vehicle communication." Press the "F1" key to proceed.



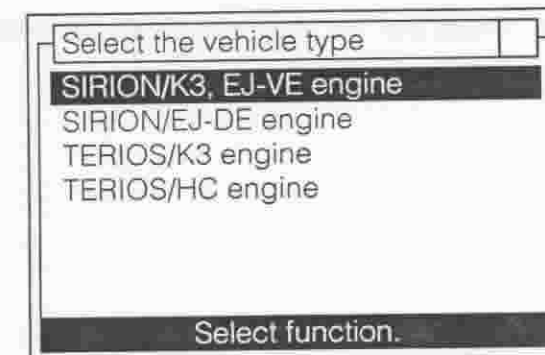
JBE00086-00072

5. The display indicates the comment screen. Press the "F1" key to proceed.



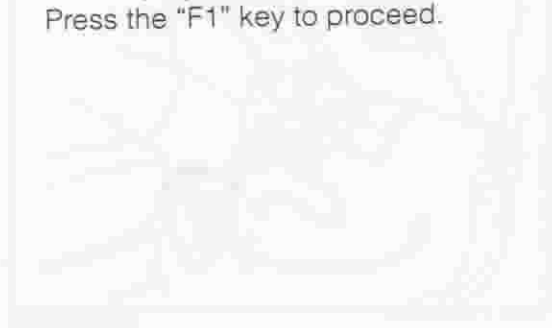
JBE00087-00073

6. The display indicates a screen in which the vehicle model is selected. Move the cursor, using the [▲] and [▼] keys, to select the applicable vehicle. Press the "F1" key to proceed.

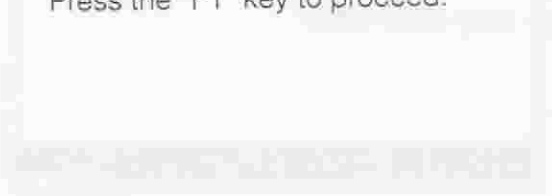


JBE00088-00074

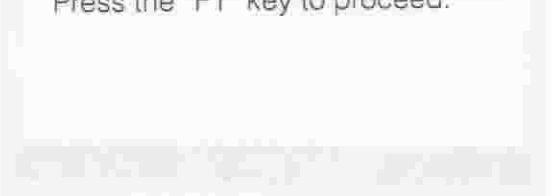
7. The display indicates the comment screen.  
Press the "F1" key to proceed.



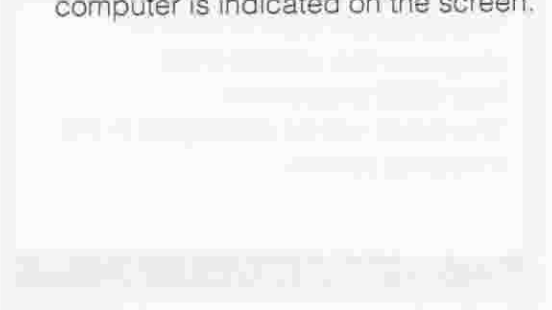
8. The display indicates a screen in which the system is selected.  
Move the cursor, using the [▲] and [▼] keys, to select the "IMB."  
Press the "F1" key to proceed.



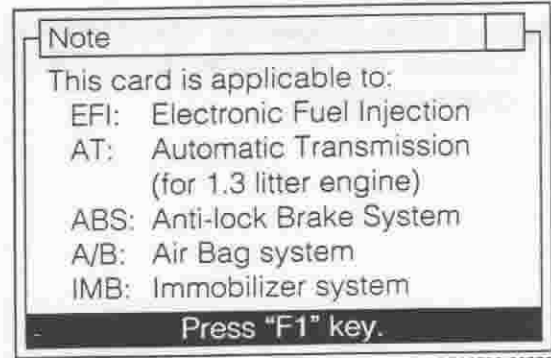
9. The display indicates a screen in which the vehicle communication item of the IMB is selected.  
Move the cursor, using the [▲] and [▼] keys, to select the "Indication of malfunction code."  
Press the "F1" key to proceed.



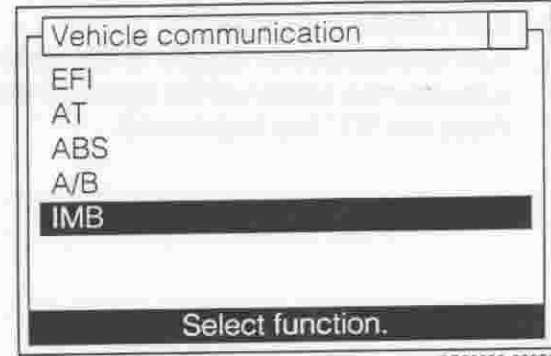
10. The number of all malfunction codes memorized in the computer is indicated on the screen.



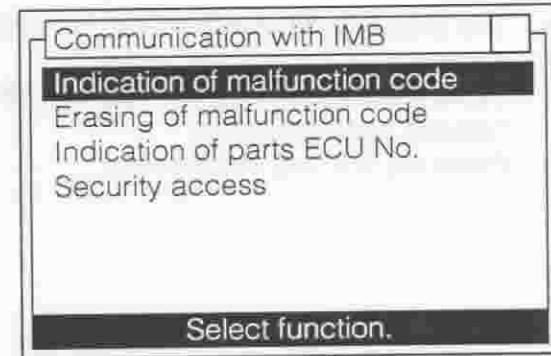
11. Press the "F1" key to indicate the malfunction code numbers.



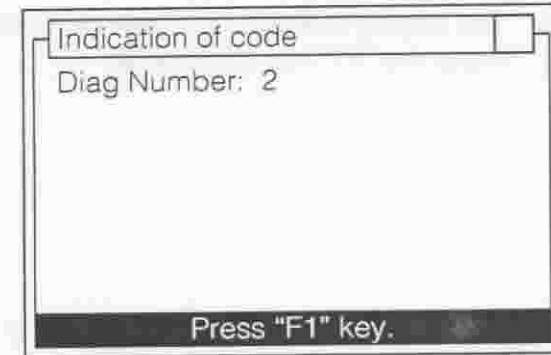
JBE00089-00075



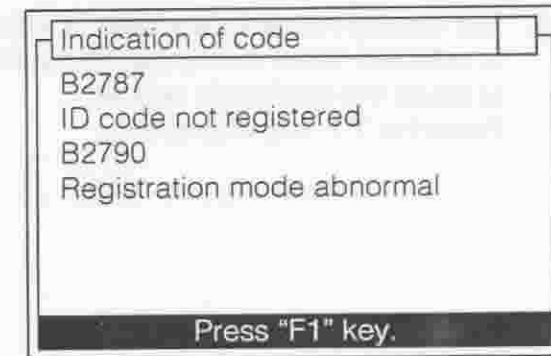
JBE00090-00076



JBE00091-00077



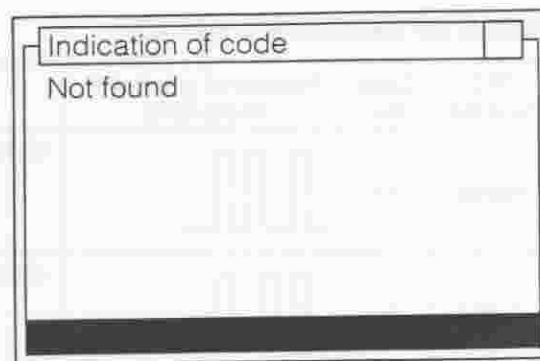
JBE00092-00078



JBE00093-00079

## REFERENCE:

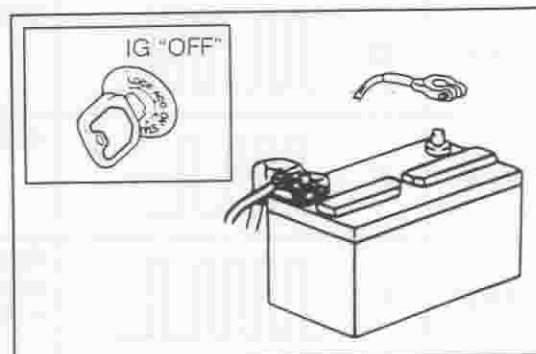
- If there is no malfunction code, the message in the figure on the right is indicated.



JBE00094-00080

**ERASING METHOD OF DIAGNOSIS CODES**

To erase the diagnosis codes memorized in the ECU after malfunctions have been repaired, disconnect the battery ground cable from the negative (-) terminal of the battery for at least 10 seconds with the ignition switch turned off.



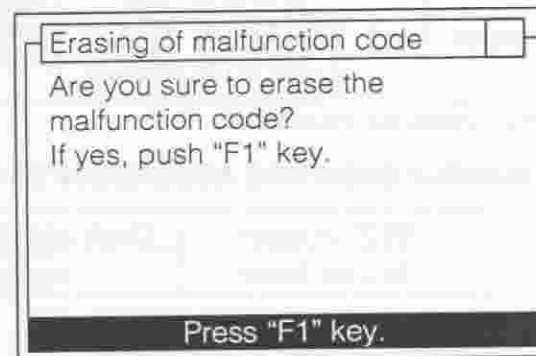
JBE00095-00081

**Method Using Diagnostic Tester (DS-21)**

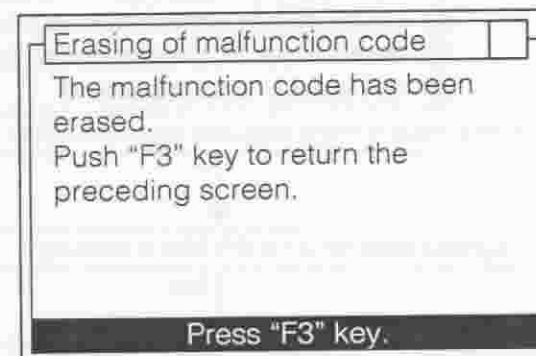
## REFERENCE:

- Even after the malfunction code has been erased, the data at the time of malfunction remains memorized.
- To erase the data at the time of malfunction, it is necessary to perform the above-mentioned operation.

- On the screen in Step 8 on the preceding page, select the "Erasing of malfunction code." Press the "F1" key to proceed.
- Press the "F1" key to erase the malfunction codes.



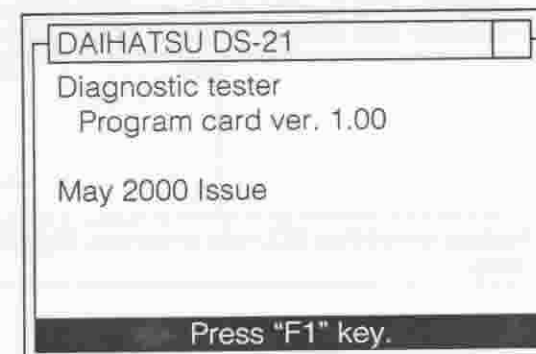
JBE00096-00082



JBE00097-00083







**SECURITY ACCESS****Releasing method**

- Insert the trouble shooting program into the DS-21 and turn it ON.
- With the screen of the right figure indicated, input the keys in the sequence of "Δ", "▽", "F2", "F2" and "F1". Then, the security is released.
- After gaining access, it becomes possible to execute the items Initializing of EEPROM.



JBE00098-00084

TABLE OF DIAGNOSIS CODES

DTC Code No.	Code No.	Number of glowing of check lamp	Diagnosis Item	Diagnosis contents
B2796	12		Malfunction of transponder	When there is no reply from key transponder after the coil has energized key transponder. (This diagnosis code is cleared if ID code can be read normally next time.)
B2795	21		Unmatching of ID codes	When immobilizer ECU determines that an attempt was made to start engine, using an unregistered key:
B2787	23		Unregistered ID codes	When transponder code to immobilizer ECU is unregistered: (Code to backup RAM is not memorized.)
B2790	31		Abnormality of registration mode	At time of registration of sub key, terminal T is not connected to ground, or an attempt is made to make registration, using a sub key. (Code to backup RAM is not memorized.)
B2788	41		Faulty communication between immobilizer ECU and EFI ECU • Non-matching of codes	When a signal of non-matching of code is received at time of communication with EFI ECU:
B2789	42		Faulty communication between immobilizer ECU and EFI ECU • When there is no reply of code:	When reply of code has not been received within specified time from EFI ECU at time of communication with EFI ECU:

DTC: Diagnostic Trouble Code

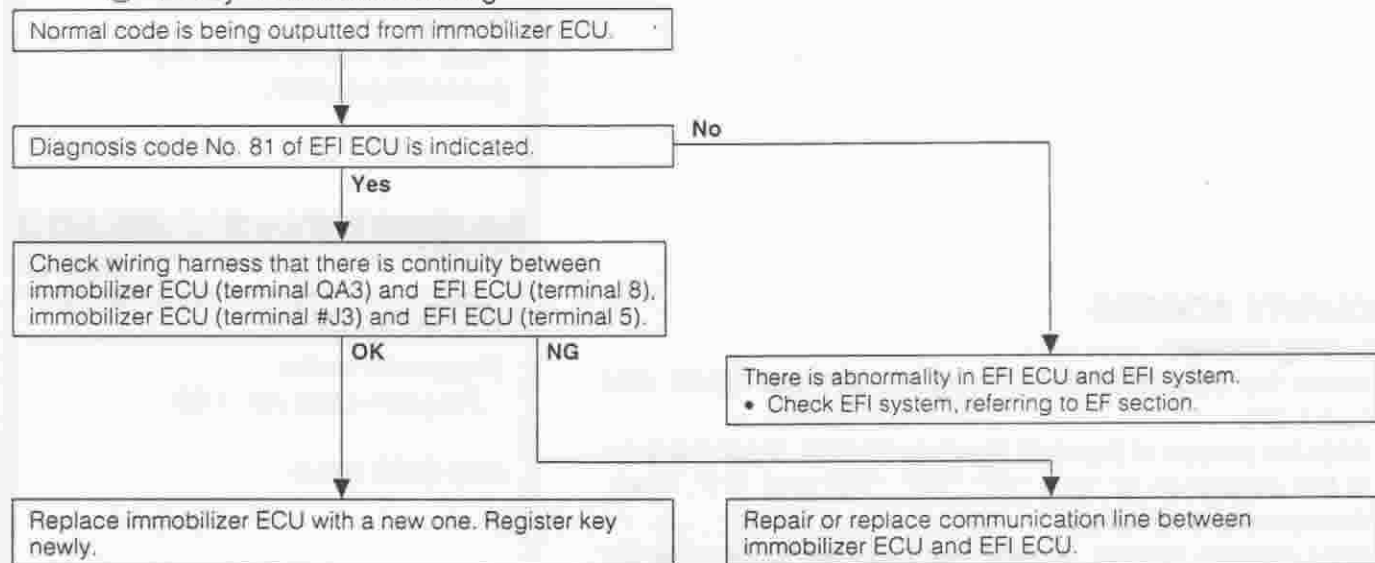
JBE00099-00085

TROUBLE SHOOTING ACCORDING TO DIAGNOSIS CODE

1	DS-21 on screen	Check lamp indication
	DTC No. B0000	Normal

NOTE:

- In this case, the followings are possible causes.
  - Open wire or short between immobilizer ECU and EFI ECU
  - Immobilizer ECU malfunctioning
  - EFI system malfunctioning



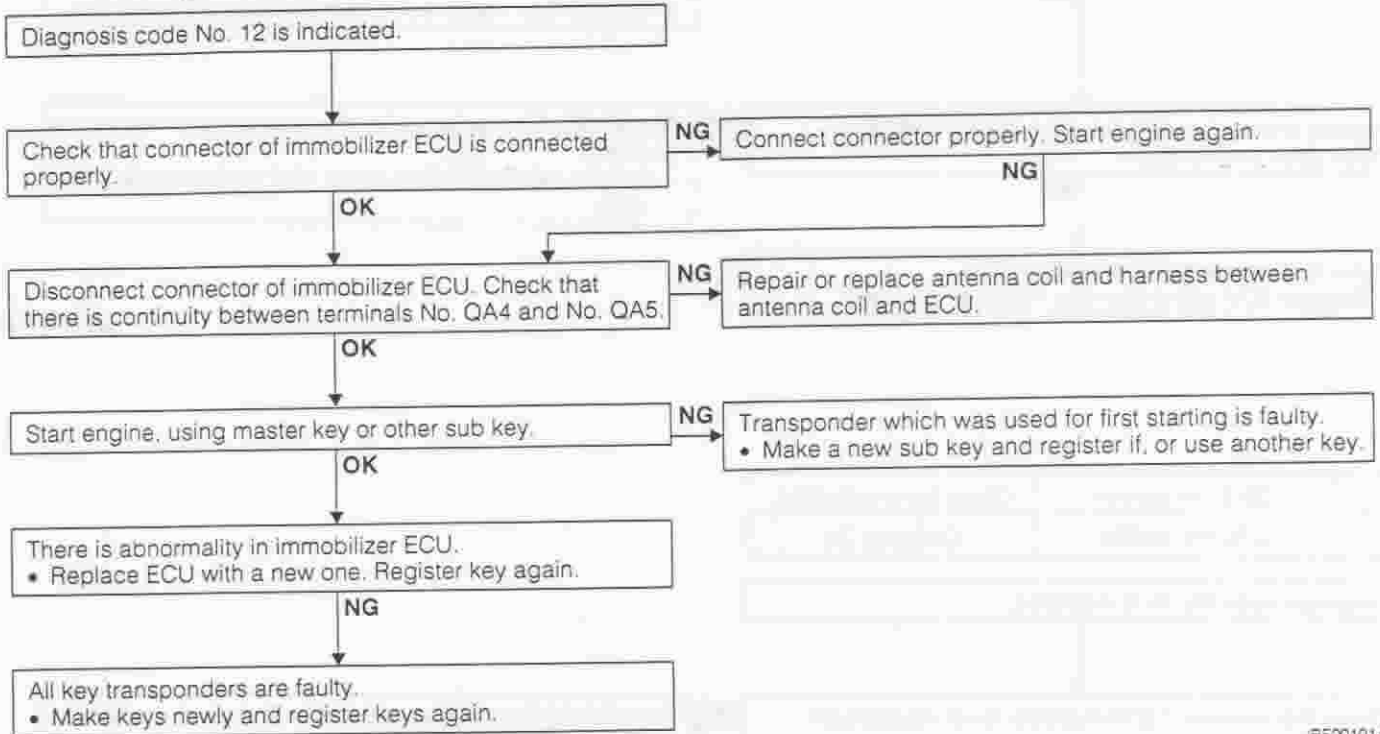
JBE00100-00000



2	DS-21 on screen	Check lamp indication
	DTC No. B2796	Code No. 12

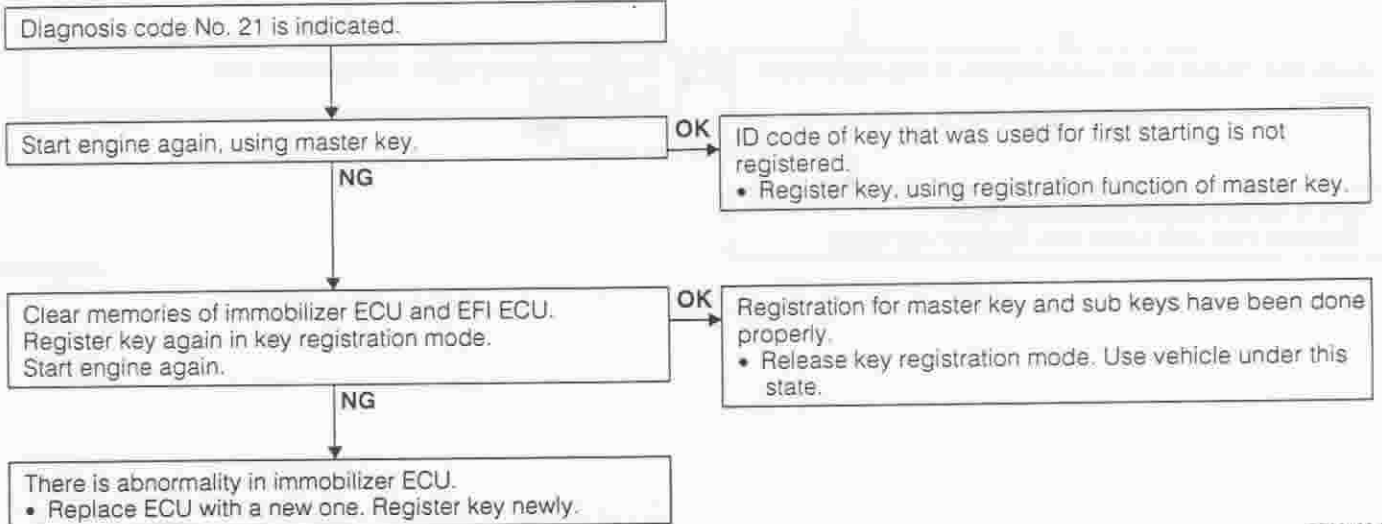
**NOTE:**

- In this case, the followings are possible causes.
  - ① Poor contacts in ECU connector or terminal
  - ② Open wire or short in antenna coil or harness
  - ③ Key transponder malfunctioning



JBE00101-00000

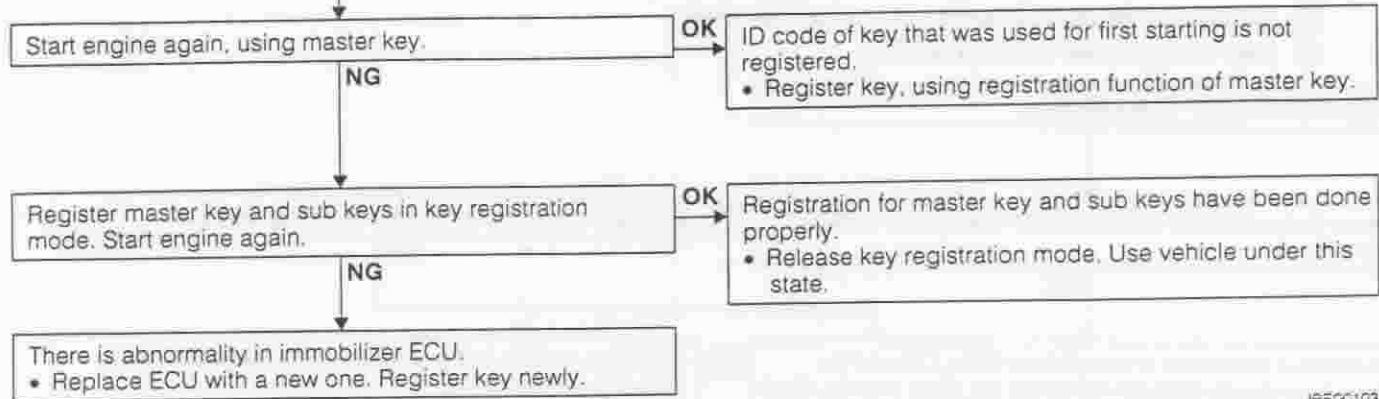
3	DS-21 on screen	Check lamp indication
	DTC No. B2795	Code No. 21



JBE00102-00000

4	DS-21 on screen	Check lamp indication
	DTC No. B2787	Code No. 23

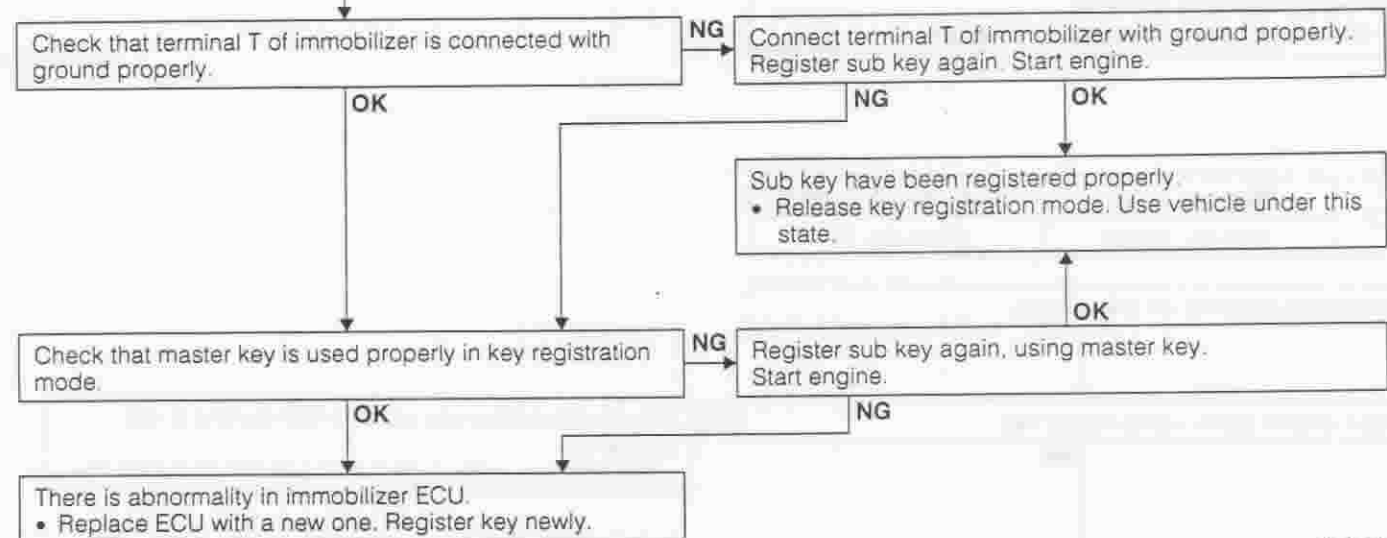
Diagnosis code No. 23 is indicated.



JBEEG103-00000

5	DS-21 on screen	Check lamp indication
	DTC No. B2790	Code No. 31

Diagnosis code No. 31 is indicated.

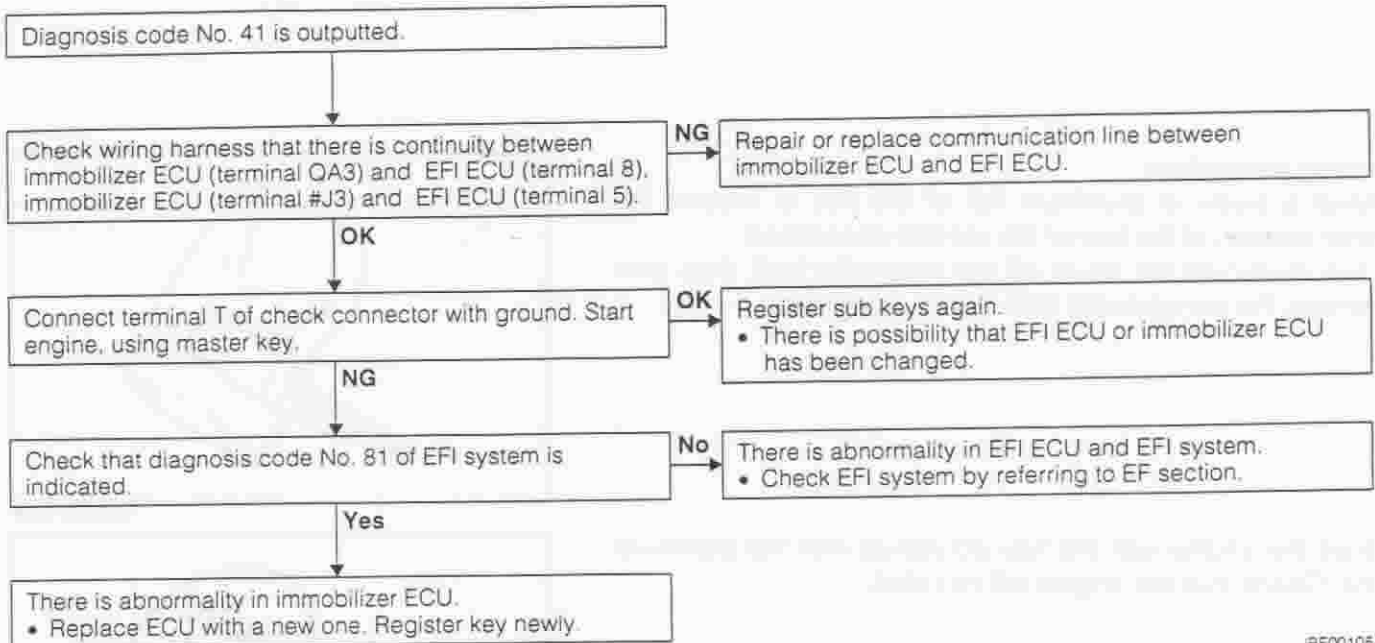


JBED0104-00000

6	DS-21 on screen	Check lamp indication
	DTC No. B2788	Code No. 41

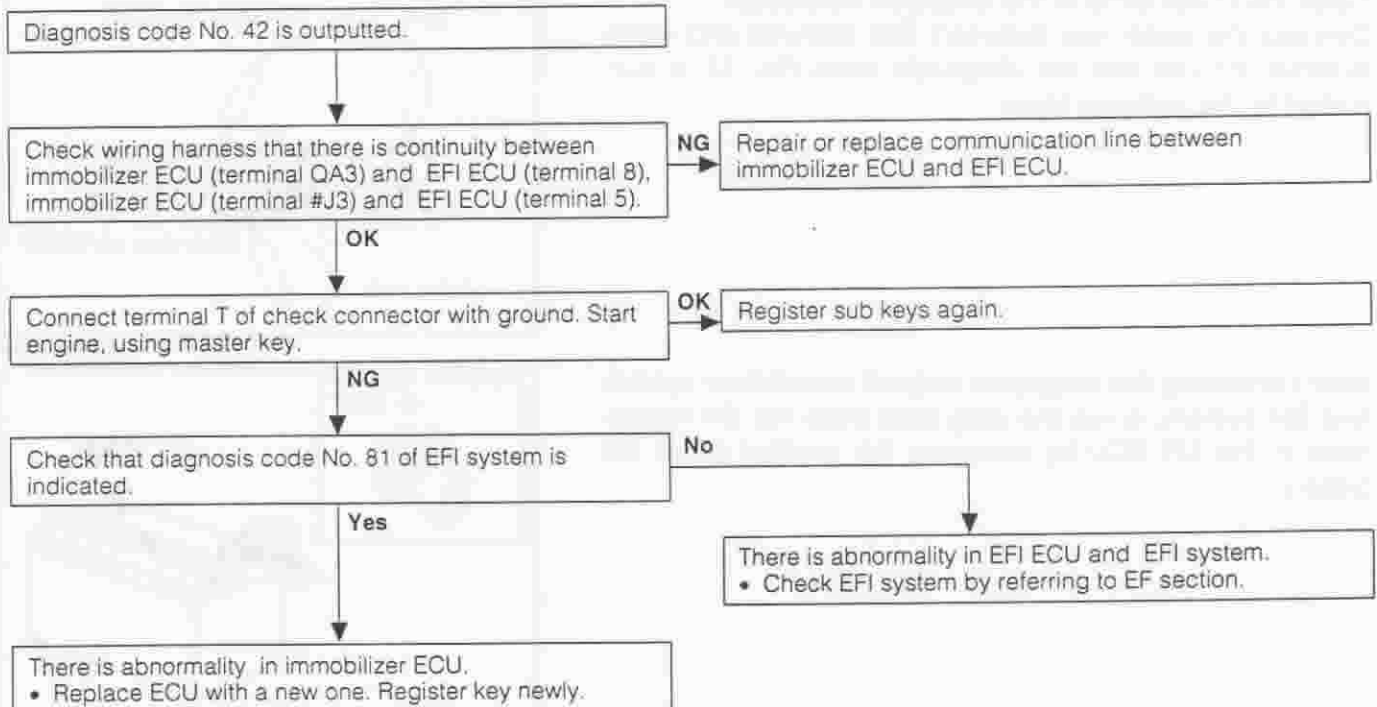
**NOTE:**

- There are cases that this code is outputted when the EFI ECU or immobilizer ECU is borrowed from other vehicles.



JBE00105-00000

7	DS-21 on screen	Check lamp indication
	DTC No. B2789	Code No. 42



JBE00106-00000

## FUNCTION CHECK OF IMMOBILIZER SYSTEM

The function check of the immobilizer system can be performed by doing the following two checks.

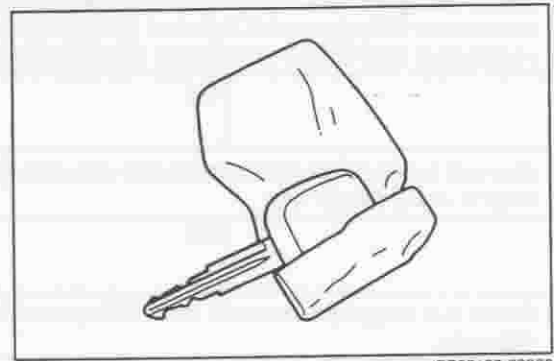
1. Ensure that the engine starts by using the master key and sub key.
2. Ensure that the engine will not start with a key without the transponder.

In the check 1, the system can be checked easily by using the master key and sub key. Now we explain that the check can be made in the following method as one of the check method of 2.

JBE00107-00000

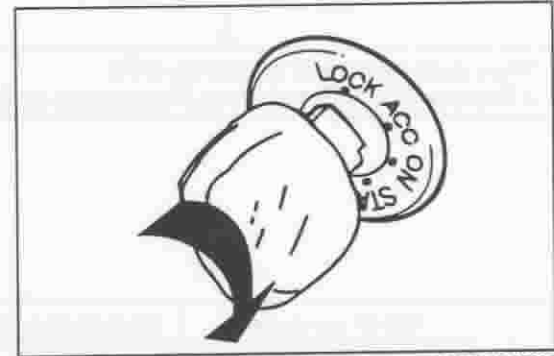
### Checking procedure

1. Wind a piece of aluminum foil or the like at around the resin section of the key of the vehicle concerned.  
(The aluminum foil shuts off the magnetic field, thus preventing the transponder from being energized.)



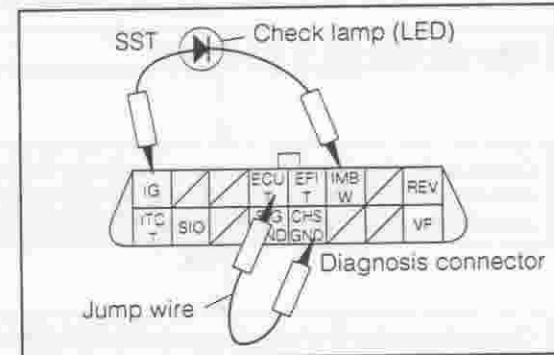
JBE00108-00086

2. Start the engine with the key wound up with the aluminum foil. Check that the engine will not start.



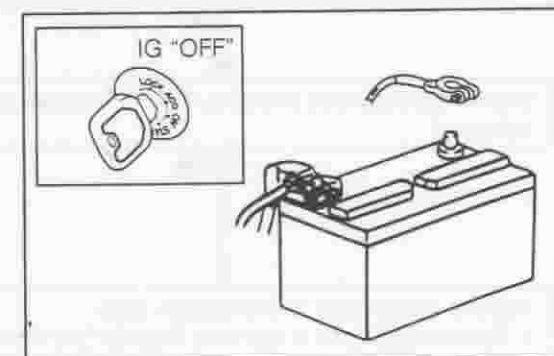
JBE00109-00087

3. Install the check lamp to the diagnosis connector.  
Connect the jump wire between Test terminal and earth terminal. Ensure that the diagnosis code No. 12 is outputted by the indicator lamp.



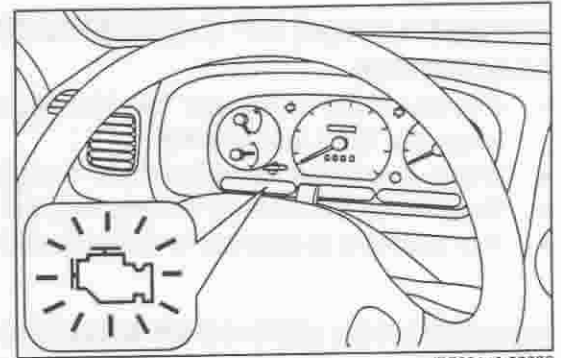
JBE00110-00088

4. After confirming the diagnosis code of immobilizer system and EFI system, erase the diagnosis code No. 81 memorized in the EFI ECU by removing the terminal (-) of the battery



JBE00111-00089

5. Ensure that the diagnosis code No. 81 has been erased and that the normal code is being outputted. Remove the check lamp and jump wire from the diagnosis connector.



JBE00112-00090

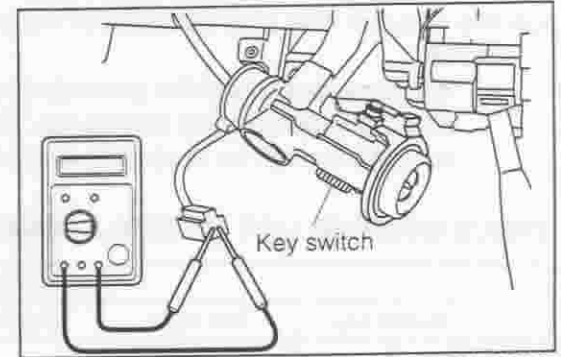
### INSPECTION OF KEY SWITCH

1. Disconnect the connector of the wire harness.
2. Confirm the continuity of the key switch connector at the time when the key is inserted into or pulled out from the key cylinder.

Specification:

With the Key Inserted: Continuity exists.

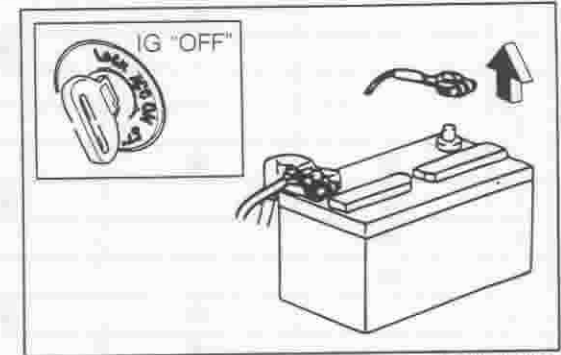
With the Key Not Inserted: No continuity exists.



JBE00113-00091

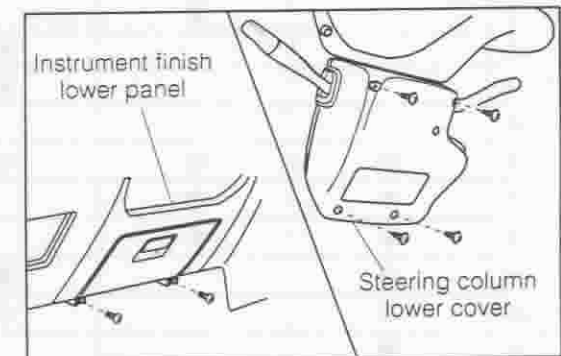
### REPLACEMENT AND INSTALLATION OF ANTENNA COIL

1. Disconnect the battery ground cable from the negative (-) terminal of the battery.



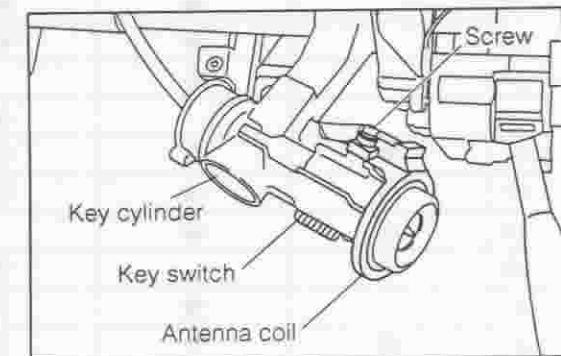
JBE00114-00092

2. Remove the instrument lower finish panel and steering column lower cover by loosening the attaching screws.
3. Remove the steering column upper cover.
4. Disconnect the connector of the antenna coil and remove the wire band.
5. Removal of antenna coil.
  - (1) Loosen the antenna coil attaching screw.
  - (2) Remove the antenna coil from the ignition key cylinder.



JBE00115-00093

6. Attach a new antenna coil to the ignition key cylinder and tighten the attaching screw.
7. Attach a new wire band.
8. Connect the connector of the antenna coil.
9. Install the steering column upper cover.
10. Install the steering column lower cover and instrument lower finish panel with attaching screws.
11. Connect the battery ground cable to the negative (-) terminal of the battery.



JBE00116-00094

**REGISTRATION OF IDENTIFICATION CODE**

**DESCRIPTION**

- It is essential to register the identification code at the time when the transmitter is lost or added and when the ECU is replaced.
- When a new identification code is registered, the old identification code will be erased.
- Even when the battery is removed, the identification code memory will not be lost.
- It is possible to register an identification code for one master key and three sub keys at the maximum.

JBE00117-00000

**REGISTRATION METHOD OF IDENTIFICATION CODE**

When replacing the parts bearing a [●] mark in the following table or changing the identification code, follow the relevant flow chart to register the identification code.

**NOTE:**

- We have described the procedure on the assumption that the immobilizer ECU is a new part and has no identification code registered. Therefore, as regards the immobilizer ECU already memorizing registration codes, be sure to perform initializing, using the DS-21. (Refer to BE-31 page)

JBE00118-00000

**TABLE SHORING LIST OF REPLACEMENT PARTS**

	Replacement parts					Relevant flow chart No.
	Master key	Sub key 1	Sub key 2	Immobilizer ECU	EFI ECU	
1	●					A
2		●				B
3			●			B
4				●		C
5					●	C
6	●	●				D
7	●		●			D
8	●			●		E
9	●				●	A
10		●	●			F
11		●		●		G
12		●			●	G
13			●	●		G
14			●		●	G
15				●	●	C
16	●	●	●			H
17	●	●		●		I
18	●	●			●	I
19	●		●	●		I
20	●		●		●	I
21	●			●	●	A
22		●	●	●		J
23		●	●		●	J
24		●		●	●	G
25			●	●	●	G
26	●	●	●	●		K
27	●	●	●		●	K
28	●	●		●	●	L
29	●		●	●	●	L
30		●	●	●	●	J
31	●	●	●	●	●	K

JBE00119-00000

**Flow chart No. [A]**

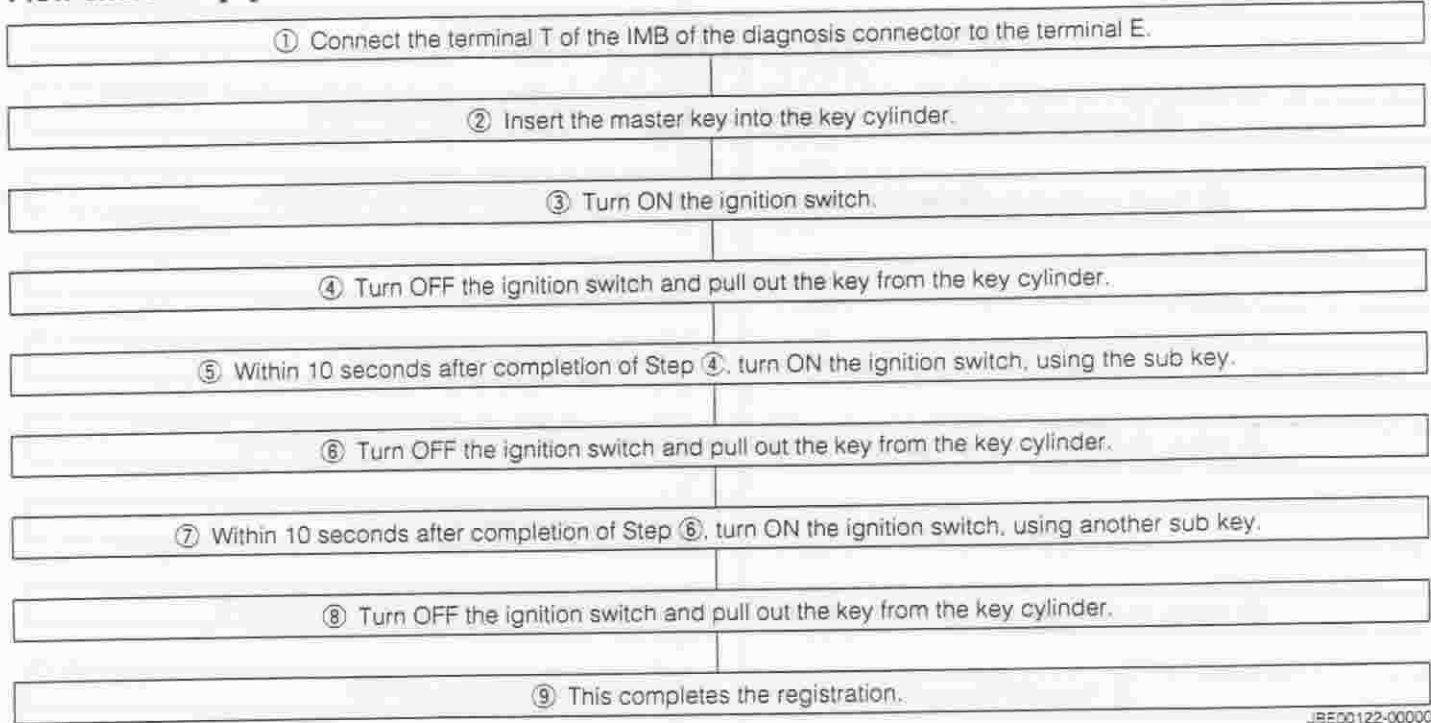
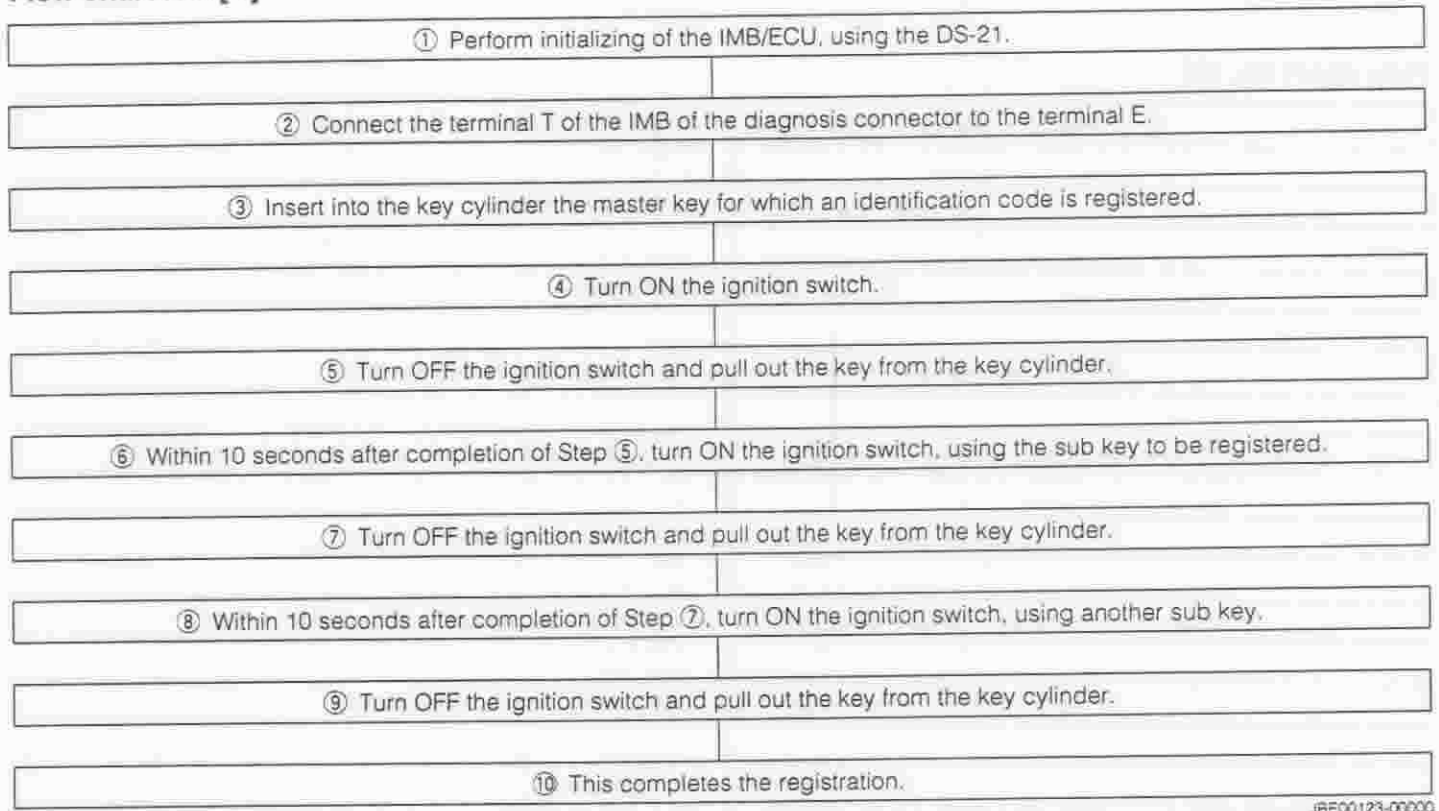
- ① Perform initializing of the IMB/ECU, using the DS-21.
- ② Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
- ③ Insert into the key cylinder the master key for which an identification code is registered.
- ④ Turn ON the ignition switch.
- ⑤ Turn OFF the ignition switch and pull out the key from the key cylinder.
- ⑥ Within 10 seconds after completion of Step ⑤, turn ON the ignition switch, using the sub key 1.
- ⑦ Turn OFF the ignition switch and pull out the key from the key cylinder.
- ⑧ Within 10 seconds after completion of Step ⑦, turn ON the ignition switch, using the sub key 2.
- ⑨ Turn OFF the ignition switch and pull out the key from the key cylinder.
- ⑩ This completes the registration.

JBE00120-00000

**Flow chart No. [B]**

- ① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
- ② Insert the master key into the key cylinder.
- ③ Turn ON the ignition switch.
- ④ Turn OFF the ignition switch and pull out the key from the key cylinder.
- ⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key to be registered.
- ⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
- ⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key.
- ⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
- ⑨ This completes the registration.

JBE00121-00000

**Flow chart No. [C]****Flow chart No. [D]**



## Flow chart No. [E]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
② Insert into the key cylinder the master key for which an identification code is registered.
③ Turn ON the ignition switch.
④ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key.
⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key.
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑨ This completes the registration.

JBE00124-00000

## Flow chart No. [F]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
② Insert the master key into the key cylinder.
③ Turn ON the ignition switch.
④ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key to be registered.
⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key to be registered.
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑨ This completes the registration.

JBE00125-00000

## Flow chart No. [G]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
② Insert the master key into the key cylinder.
③ Turn ON the ignition switch.
④ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key to be registered.
⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key.
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑨ This completes the registration.

JBE00126-00000

## Flow chart No. [H]

① Perform initializing of the IMB/ECU, using the DS-21.
② Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
③ Insert into the key cylinder the master key for which an identification code is registered.
④ Turn ON the ignition switch.
⑤ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑥ Within 10 seconds after completion of Step ⑤, turn ON the ignition switch, using the sub key 1 for which an identification code is registered.
⑦ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑧ Within 10 seconds after completion of Step ⑦, turn ON the ignition switch, using the sub key 2 for which an identification code is registered.
⑨ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑩ This completes the registration.

JBE00127-00000

## Flow chart No. [I]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
② Insert into the key cylinder the master key for which an identification code is registered.
③ Turn ON the ignition switch.
④ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key for which an identification code is registered.
⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key.
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑨ This completes the registration.

JBE00128-00000

## Flow chart No. [J]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
② Insert the master key into the key cylinder.
③ Turn ON the ignition switch.
④ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key for which an identification code is registered.
⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key for which an identification code is registered.
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑨ This completes the registration.

JBE00129-00000

## Flow chart No. [K]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
② Insert into the key cylinder the master key for which an identification code is registered.
③ Turn ON the ignition switch.
④ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key for which an identification code is registered.
⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key for which an identification code is registered.
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑨ This completes the registration.

JBED0130-00000

## Flow chart No. [L]

① Connect the terminal T of the IMB of the diagnosis connector to the terminal E.
② Insert into the key cylinder the master key for which an identification code is registered.
③ Turn ON the ignition switch.
④ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑤ Within 10 seconds after completion of Step ④, turn ON the ignition switch, using the sub key for which an identification code is registered.
⑥ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑦ Within 10 seconds after completion of Step ⑥, turn ON the ignition switch, using another sub key.
⑧ Turn OFF the ignition switch and pull out the key from the key cylinder.
⑨ This completes the registration.

JBED0131-00000

## SRS AIR BAG SYSTEM

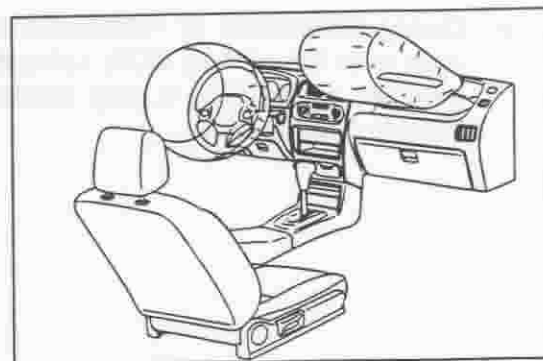
### IMPORTANT SAFETY NOTICE

#### SRS AIR BAG SYSTEM

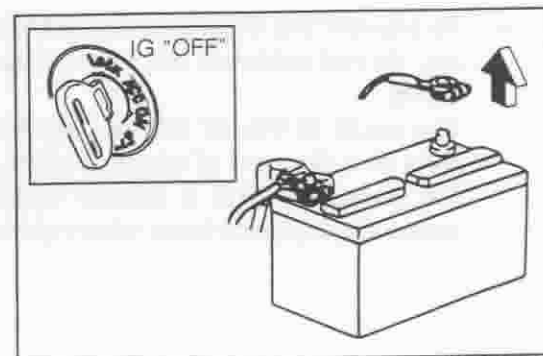
##### WARNING:

- Make certain to perform operations of the air bag system according to the correct procedure and method. Failure to observe this notice may cause the air bag system to operate unexpectedly during the service operation, resulting in serious accidents. Furthermore, if wrong repairs should be performed, there are the possibilities that the air bag system fail to operate when required.
- Before servicing the air bag components or the seat belt pretensioner device, perform the following procedures:
  - (1) Check the status of the air bag warning lamp, or confirm whether or not any abnormality code is present, using the DS-21.
  - (2) Read the diagnosis codes and put it on record.
  - (3) Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then, wait for at least 90 seconds to prevent the air bag from the deployment.
- It should be noted that, when the negative (-) terminal of the battery is detached, the memory of the ECU control of the other system will be erased at the same time.
- Never bring your face, arms and body to the front of the air bag unit during the removal.

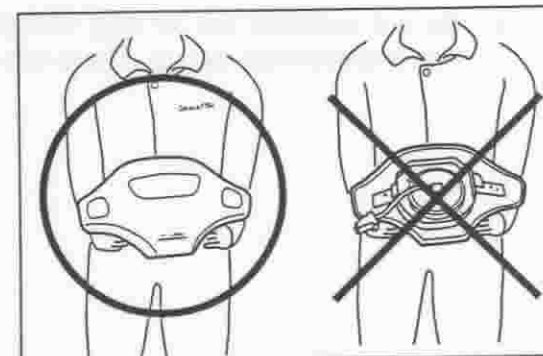
- Be sure to place the removed air bag pad assembly with the pad surface facing upward. The assembly with the pad surface facing downward is potentially hazardous. Failure to observe this warning may cause unexpected deployment of the air bag, resulting in scattered pad assembly.
- Furthermore, store the pad assembly and seat belt pretensioner device at a low place close to the ground level where no heat source (85°C or more) exists in close proximity, and store at a place where is not exposed to direct sun rays.
- If the air bag components or seat belt pretensioner device are dropped, be sure to dispose of the unit according to the disposal procedure. Be sure to mount a new unit to the vehicle.



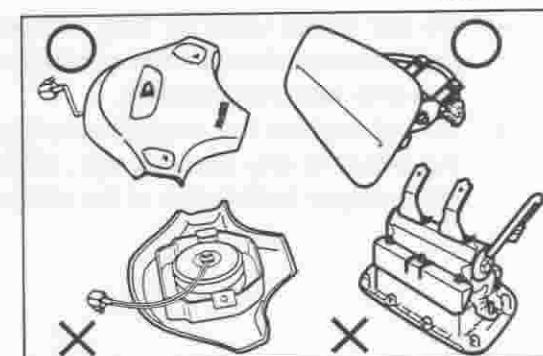
JBE00132-00095



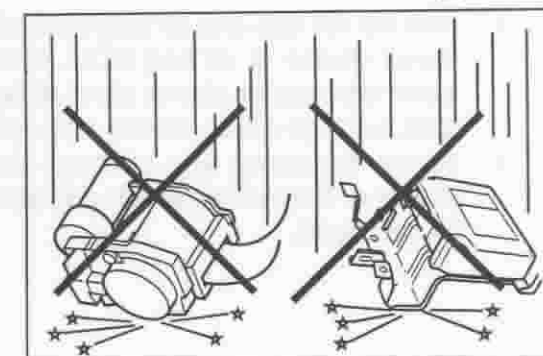
JBE00133-00096



JBE00134-00097

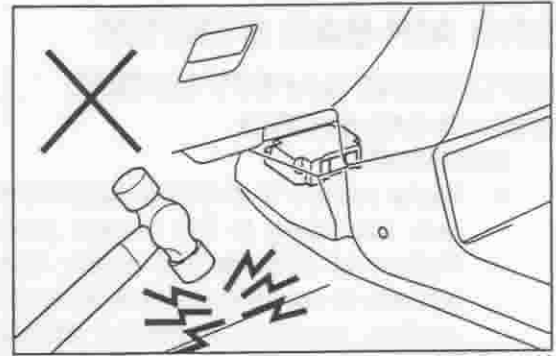


JBE00135-00098



JBE00136-00099

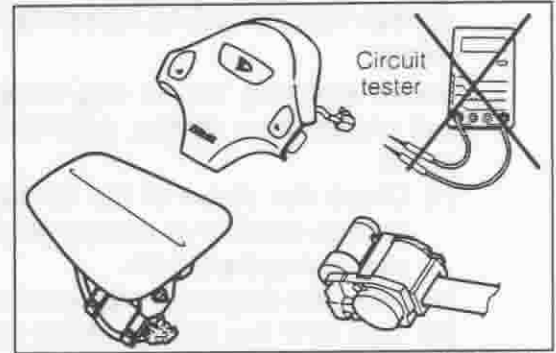
- During installation or replacement, do not bump the area near the air bag ECU, using an impact wrench, a hammer or the like. It may cause the sensor in the ECU to operate.



JEE00137-00100

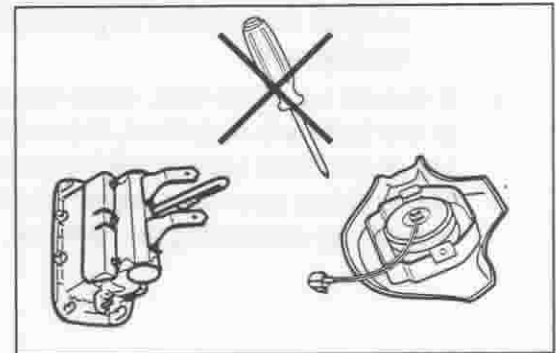
- To prevent the air bag or the pretensioner from deploying, do not measure the resistance of the inflator squib easily.

The squib of the air bag or seat belt pretensioner consists of a filament of about 2 ohms. Therefore, there is the possibility that a current which is big enough to cause deployment flows when ohmmeter is connected.



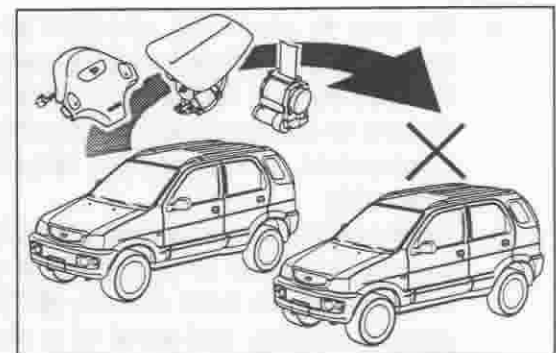
JEE00138-00101

- Do not overhaul the air bag components and the seat belt pretensioner device. There are no supply parts.



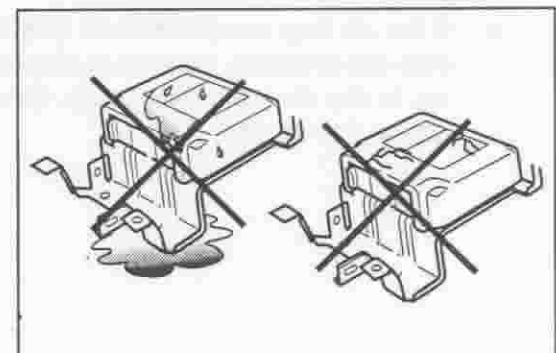
JEE00139-00102

- Do not install used air bag components and seat belt pretensioner device from another car. When repairing, use only new components.
- Do not replace the original steering wheel with a steering wheel of any other design, since it will make impossible proper installation of the air bag.



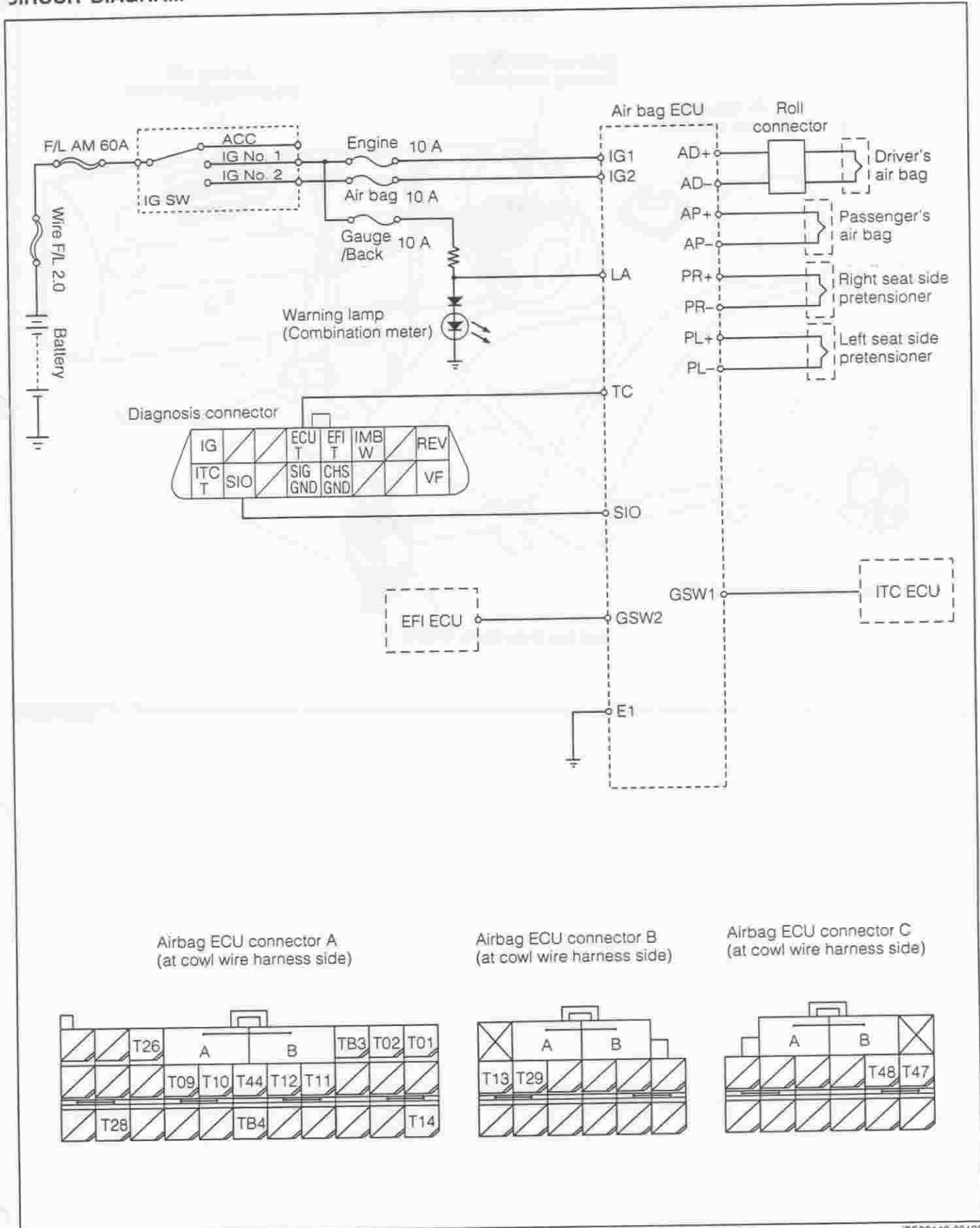
JEE00140-00103

- Also do not use any air bag assembly, seat belt pretensioner device or air bag ECU, which was subjected to water damage or shows signs of being improperly handled, such as dents, cracks and deformation.
- Before scrapping any air bag, seat belt pretensioner device or the vehicle which contains them, they have to be deployed.

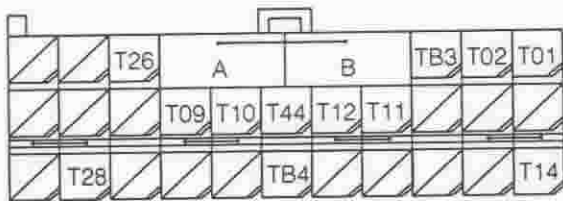


JEE00141-00104

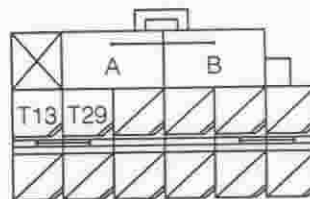
SYSTEM DESCRIPTION  
CIRCUIT DIAGRAM



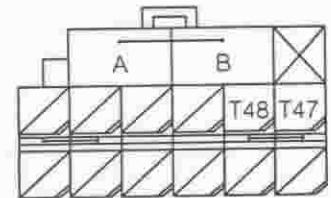
Airbag ECU connector A  
(at cowl wire harness side)



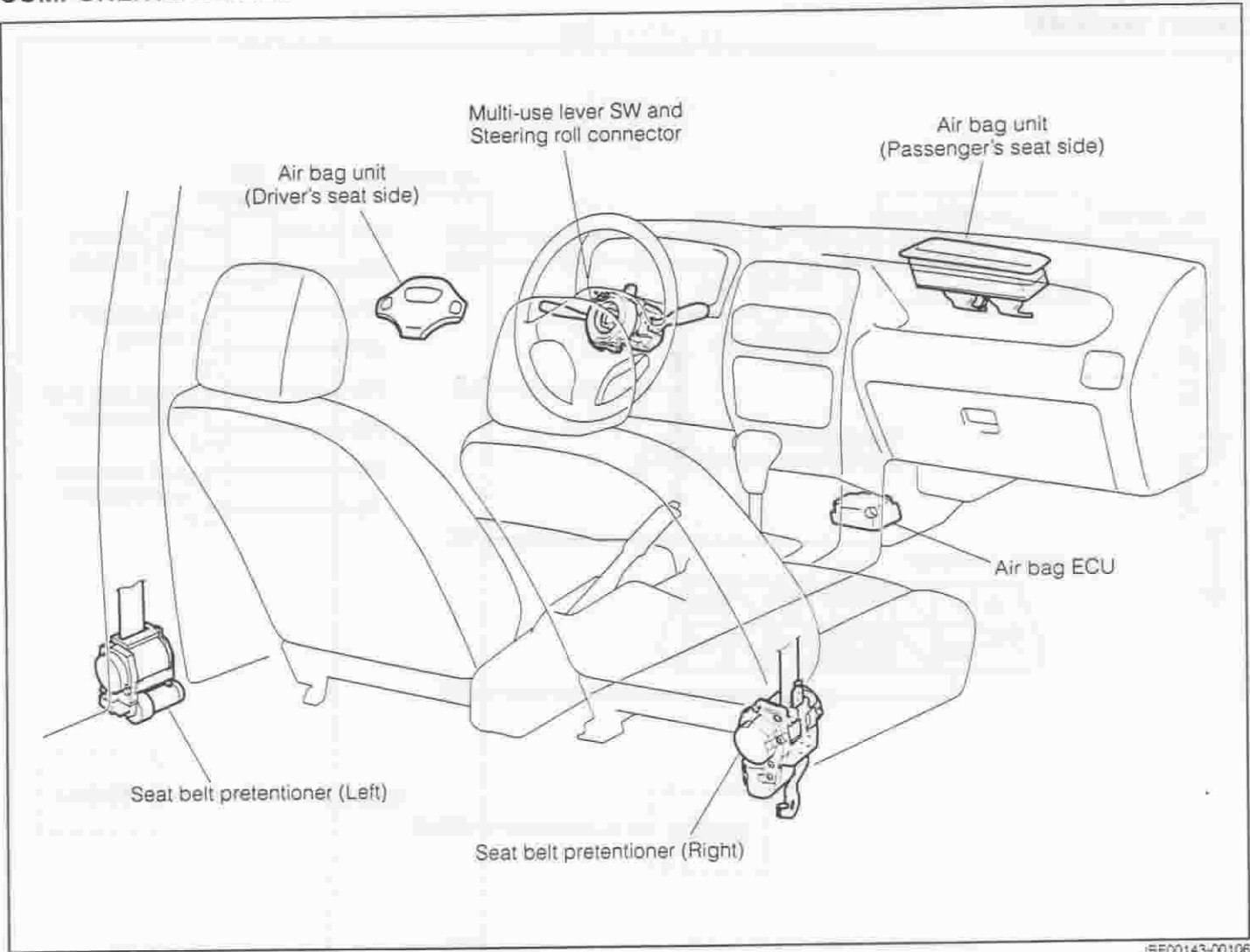
Airbag ECU connector B  
(at cowl wire harness side)



Airbag ECU connector C  
(at cowl wire harness side)



COMPONENTS LAYOUT



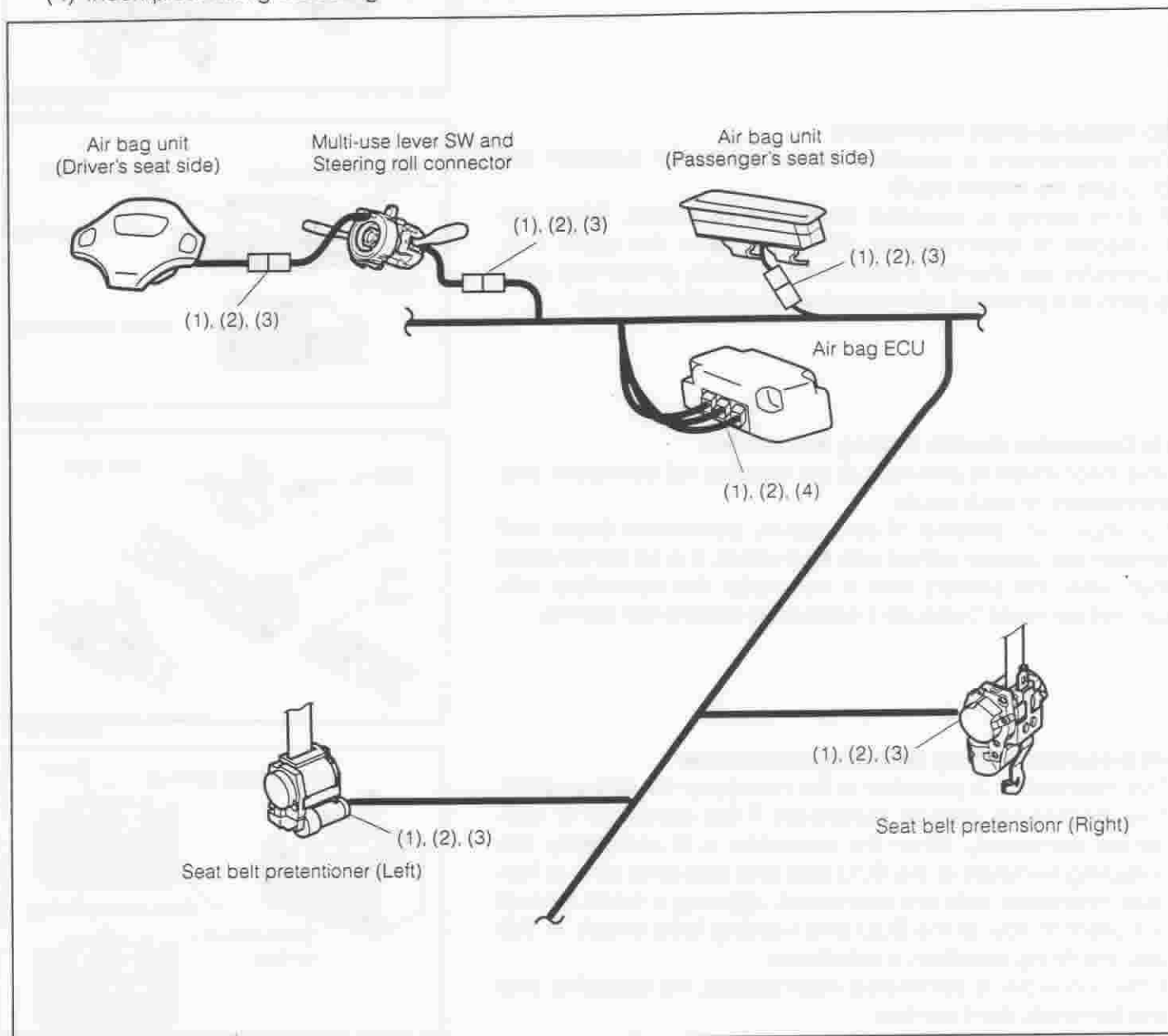
JEE00143-00106



**WIRING HARNESS CONNECTOR OF AIR BAG SYSTEM**

All wire harnesses and connectors related to the side air bag system are colored yellow uniformly. The following sections have connectors with special functions.

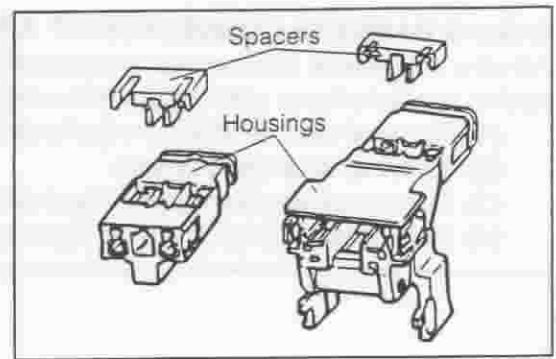
- (1) Terminal double locking mechanism
- (2) Terminal short mechanism
- (3) Connector double locking mechanism
- (4) Incomplete fitting detecting mechanism



JBE00144-00107

**(1) Terminal double locking mechanism**

This mechanism is provided with all connectors of this system. The connector is of a two-piece construction consisting of a terminal housing and a spacer. The terminal holding is double-locked by the lance in the housing (primary one) and the spacer (secondary one).

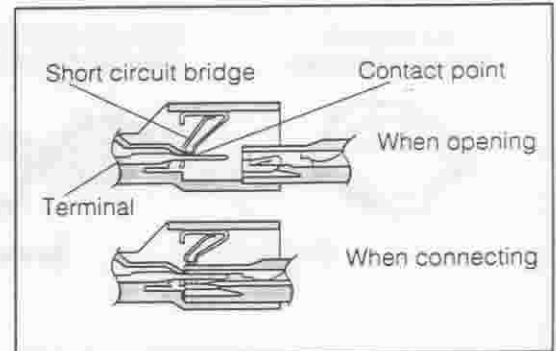


JBE00145-00108

**(2) Terminal short mechanism**

This mechanism is provided at the connector between the ECU and the inflator squib.

A short spring is provided inside the connector. When the connector is disconnected, the terminals in the squib side connector are shorted automatically, thereby preventing generation of a potential difference between both terminals.

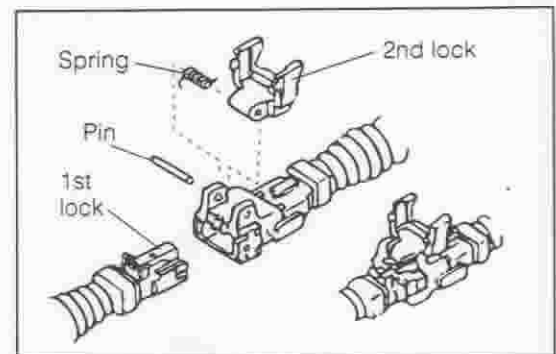


JBE00146-00109

**(3) Connector double locking mechanism**

This mechanism is provided at the steering roll connector and connectors to each squib.

For improved reliability of connection, connectors (male and female) are double locked with each other. It is so constructed that, when the primary lock is not made, the secondary lock can not be made because a protrusion hinders the locking.

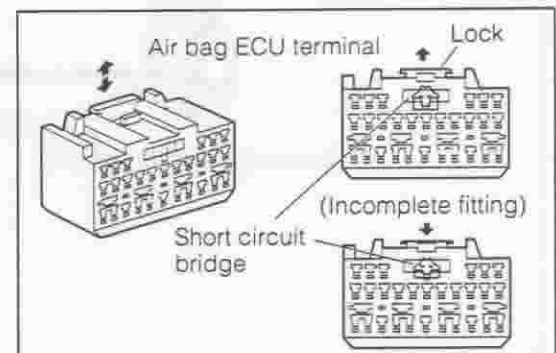


JBE00147-00110

**(4) Incomplete fitting detecting mechanism**

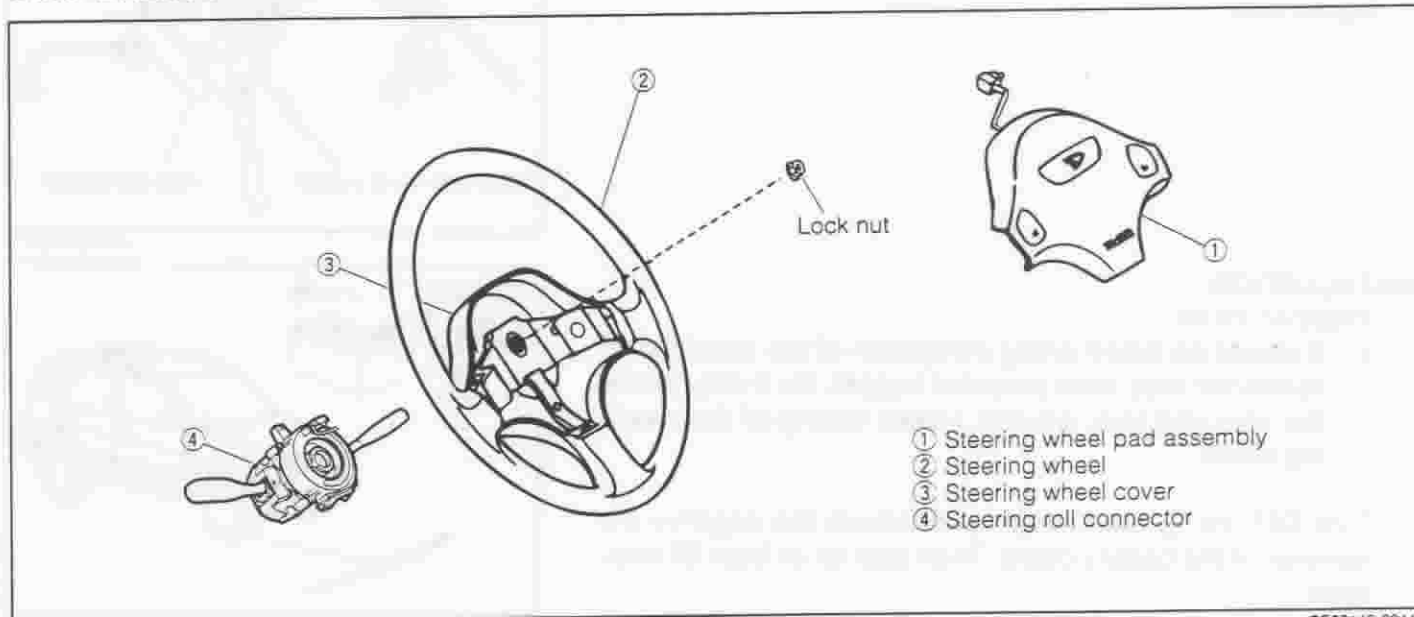
This mechanism is provided at the connector for air bag ECU. This mechanism detects electrically if the connector is connected completely. When the connector is fit completely, the detecting terminals at the ECU side and detecting pins at harness connector side are connected, allowing a small amount of current to flow to the ECU and warning lamp circuit. In this way, the fitting condition is monitored.

If the connector is connected incompletely, the detecting pins and terminals don't contact.



JBE00148-00111

## STEERING WHEEL PAD (AIR BAG UNIT FOR THE DRIVER) & STEERING ROLL CONNECTOR COMPONENTS

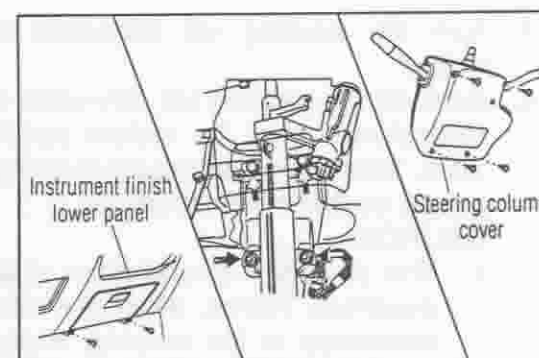
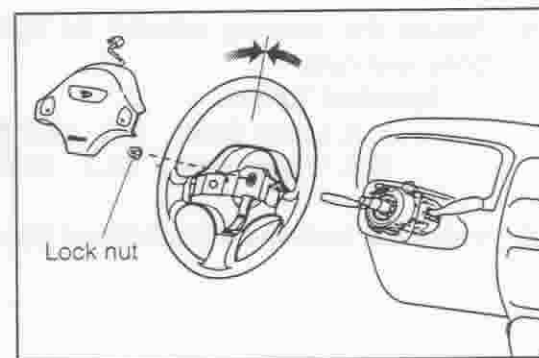
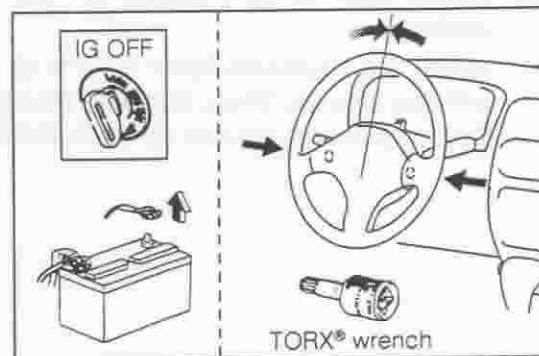


### REMOVAL

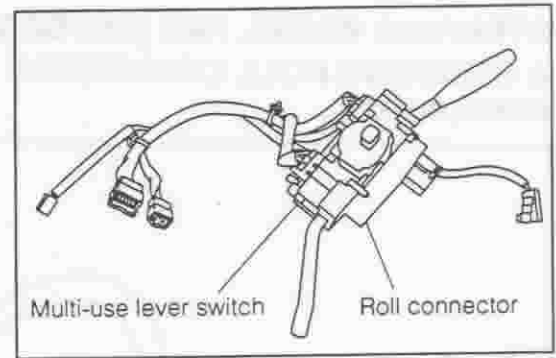
#### WARNING:

- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Set the steering wheel to a straight-ahead position.
3. Remove the attaching bolts (TORX®) at the right and left sides of the steering wheel cover side.
4. Separate the pad assembly and steering wheel.
5. Disconnect the connector for the air bag and connector for the horn provided at the reverse side of the pad assembly.
6. After each connector is disconnected, remove the pad assembly from the steering wheel.
7. Check the steering wheel to a straight-ahead position.
8. Remove the lock nut of the steering wheel.
9. Remove the steering wheel.
10. Remove the instrument finish lower panel and lower the steering column by temporarily loosening the attaching bolts and nuts.
11. Remove the steering column cover by the removing attaching screws.



12. Disconnect the connectors and detach the wiring harness from the clamp.
13. Remove the multi-use lever switch by removing the attaching screws.

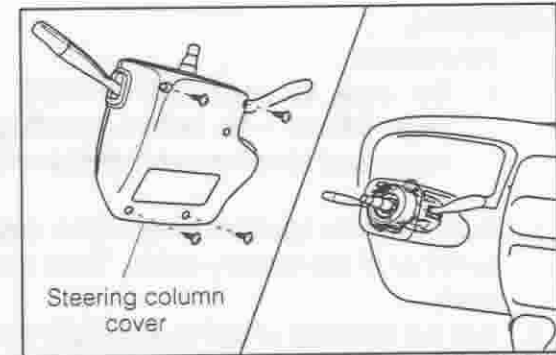
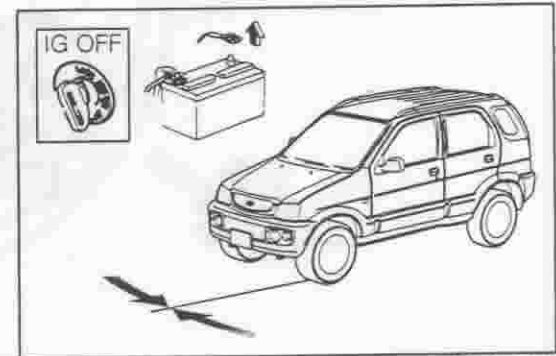


## INSTALLATION

### PRECAUTION:

- It should be noted wrong installation of the steering roll connector may pose potential hazard, for it may break the wire and also, prevent proper turning of the steering wheel.

1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Ensure that the front wheels are set to the straight-ahead position.
3. Install the multi-use lever switch to the steering column with the screws. Then, connect the connectors.
4. Set the steering column cover to the steering column.



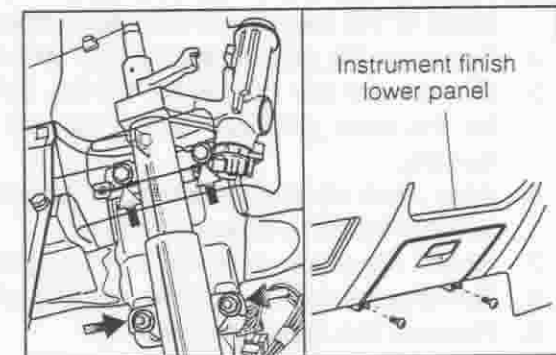
5. Secure the steering column by tightening the attaching bolts and nuts.

### Specified Torque:

Nut, Lower Side: 9.8 - 15.7 N·m

Bolt, Upper Side: 14.7 - 21.6 N·m

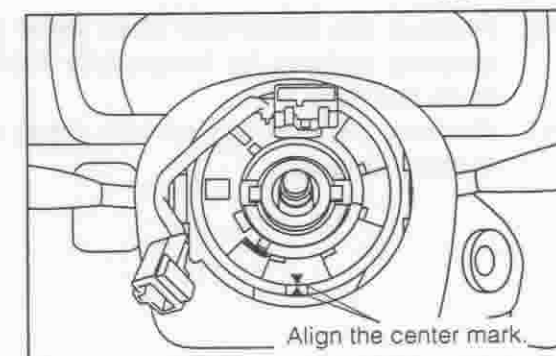
6. Install the instrument finish lower panel.



7. Turn the steering roll connector clockwise, until it is locked.
8. Back off the steering roll connector about 3.0 turns counterclockwise from the locked position. Align the center mark. Temporarily secure the steering roll connector, using a tape, so that it may not move.

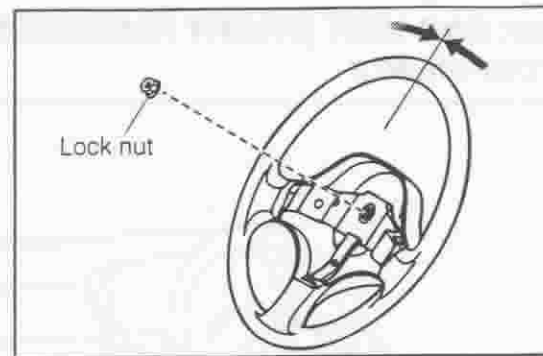
### CAUTION:

- The steering roll connector makes five turns at the maximum. Hence, when the steering roll connector is connected to the steering wheel, be sure to set the steering roll connector to the midpoint of the rotation.



9. Install the steering wheel assembly to the steering shaft and tighten the lock nut.

Specified Torque: 34.3 - 53.9 N·m



JBE00158-00121

10. Install the pad assembly

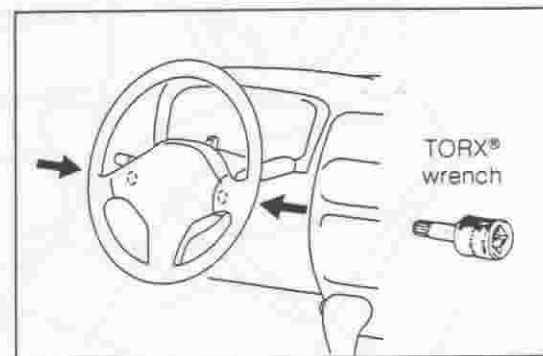
(1) Connect the connector for the air bag and connector for the horn.

(2) Secure the pad assembly to the steering wheel assembly with the TORX® bolt.

Specified Torque: 5.2 - 9.6 N·m

**CAUTION:**

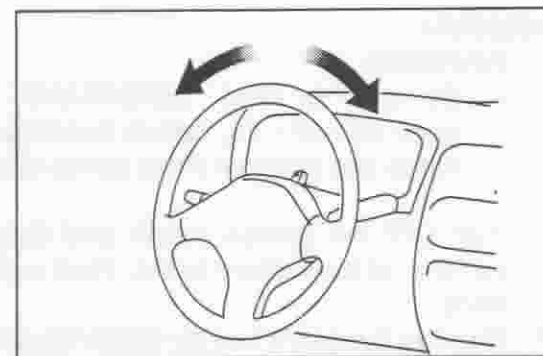
- Make sure that the yellow connector of the airbag circuit is connected securely. Furthermore, make certain to engage the double lock of the connector and set the connector to the connector holder, while sliding it. Utmost care must be exercised during the assembling so that the harness may not interfere with the flange of the steering or ride over it.



JBE00159-00122

**CHECK AFTER INSTALLATION**

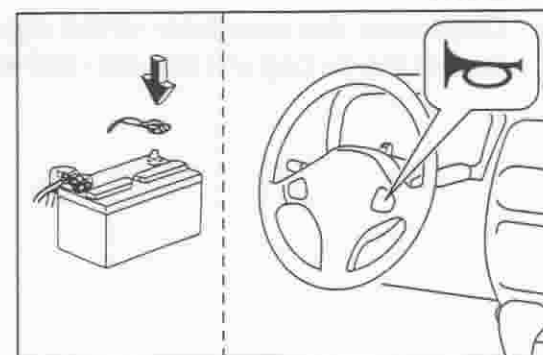
1. Turn the steering wheel to the right and left sides respectively, as far as it will go. Ensure that no malfunction exists.



JBE00160-00123

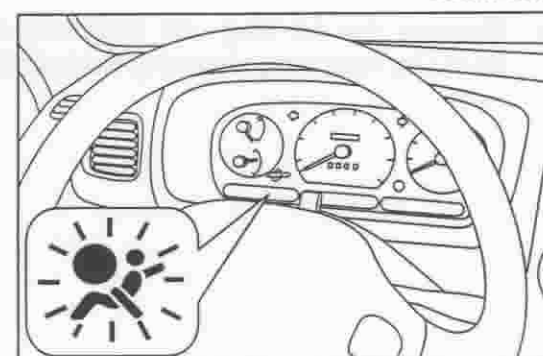
2. Connect the negative (-) terminal of the battery cable to the battery terminal.

3. Ensure that the horn will sound by pushing the horn button.



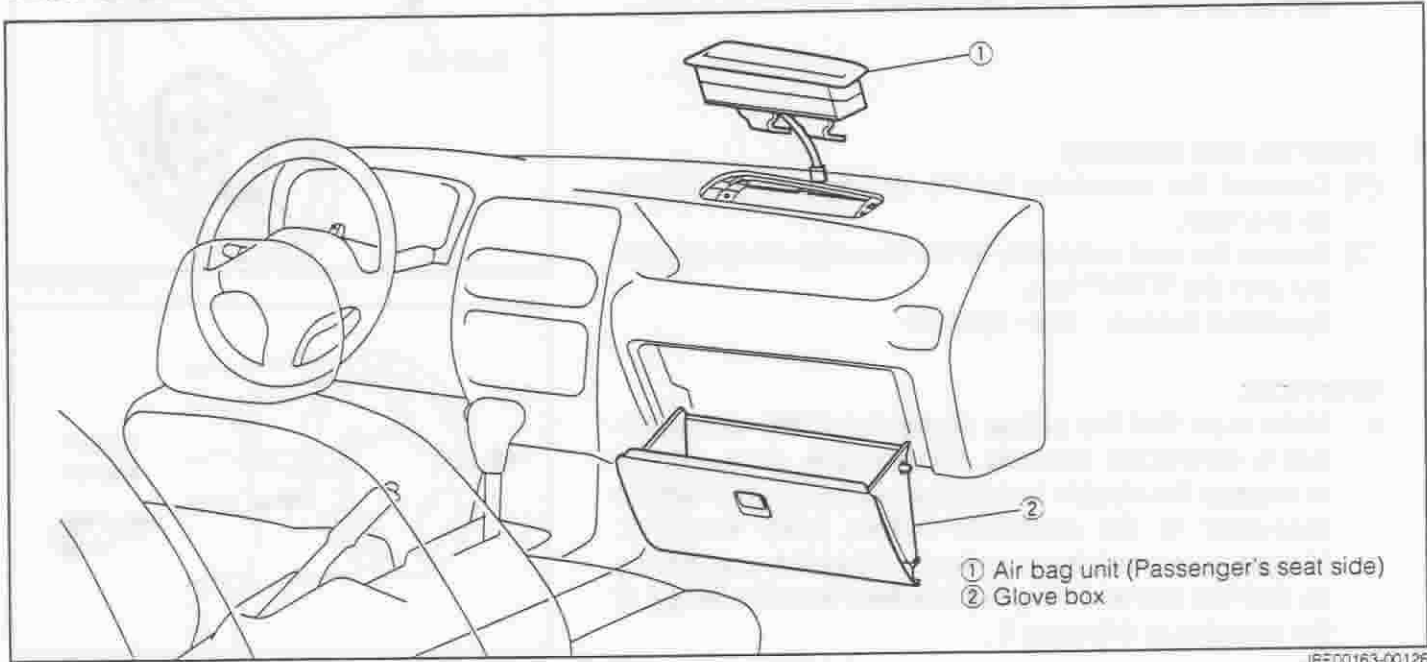
JBE00161-00124

4. Turn ON the ignition switch. Ensure that the air bag warning lamp illuminates for six seconds.



JBE00162-00125

## AIR BAG UNIT (FRONT PASSENGER'S SEAT SIDE) COMPONENTS



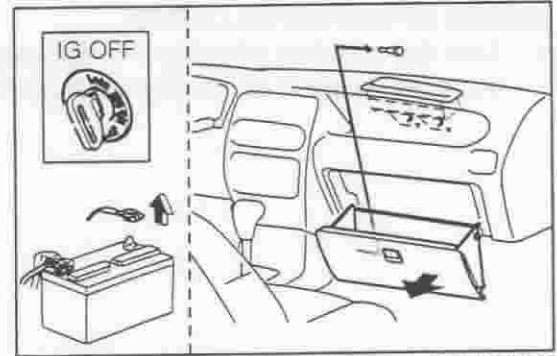
JBE00163-00126

### REMOVAL

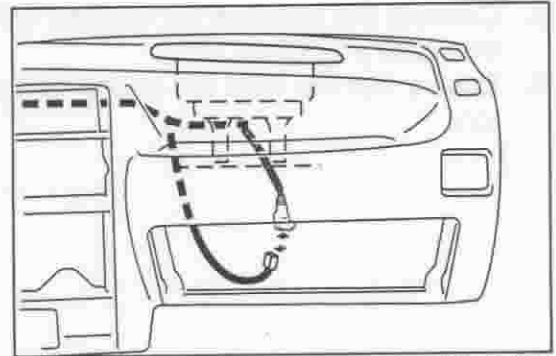
#### WARNING:

- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

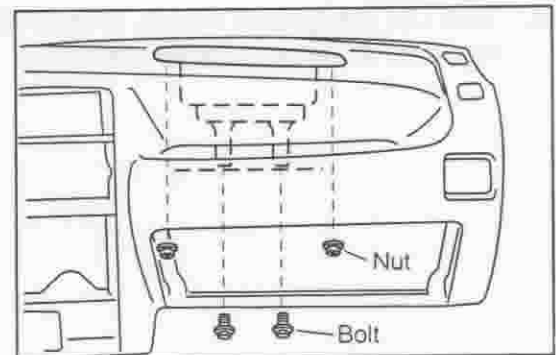
1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Remove the glove box by removing attaching clip.
3. Disconnect the connector which connects the wire harness of the air bag unit and the cowl wire.
4. Remove the air bag unit assembly from the instrument panel by removing attaching bolts and nuts.



JBE00164-00127



JBE00165-00128



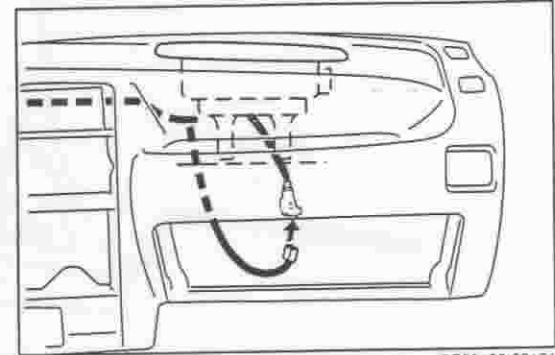
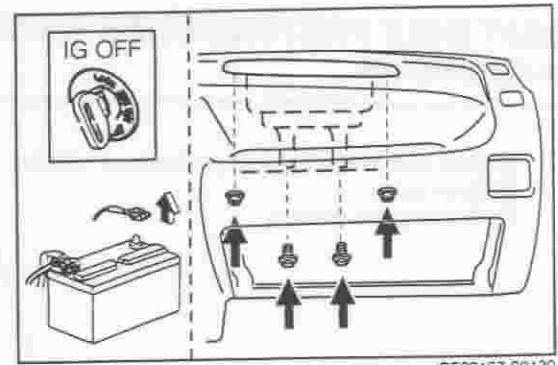
JBE00166-00129

**INSTALLATION**

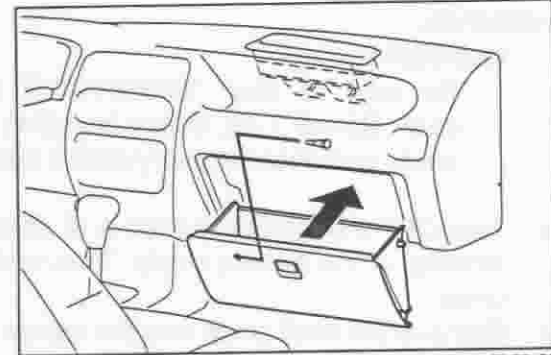
**WARNING:**

- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Install the air bag unit to the instrument panel and tighten the bolts and nuts.  
 Specified Torque for the Bolt: 6.7 - 9.5 N·m  
 Specified Torque for the Nut: 6.7 - 9.5 N·m
3. Connect the connector.

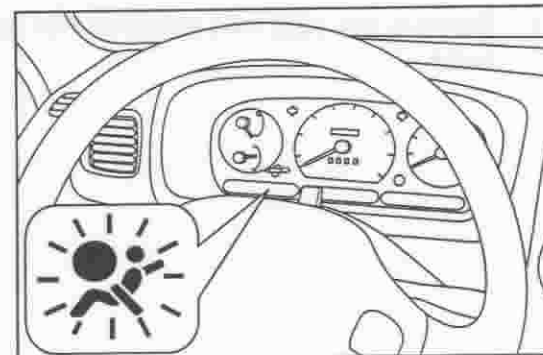
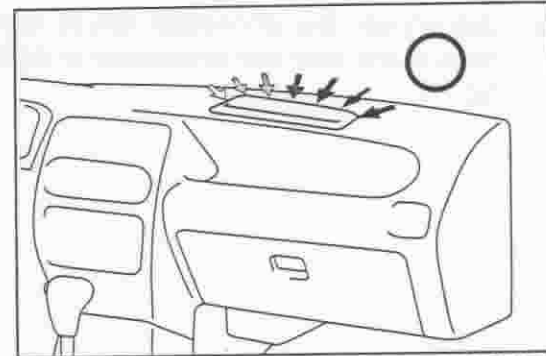


4. Install the glove box.

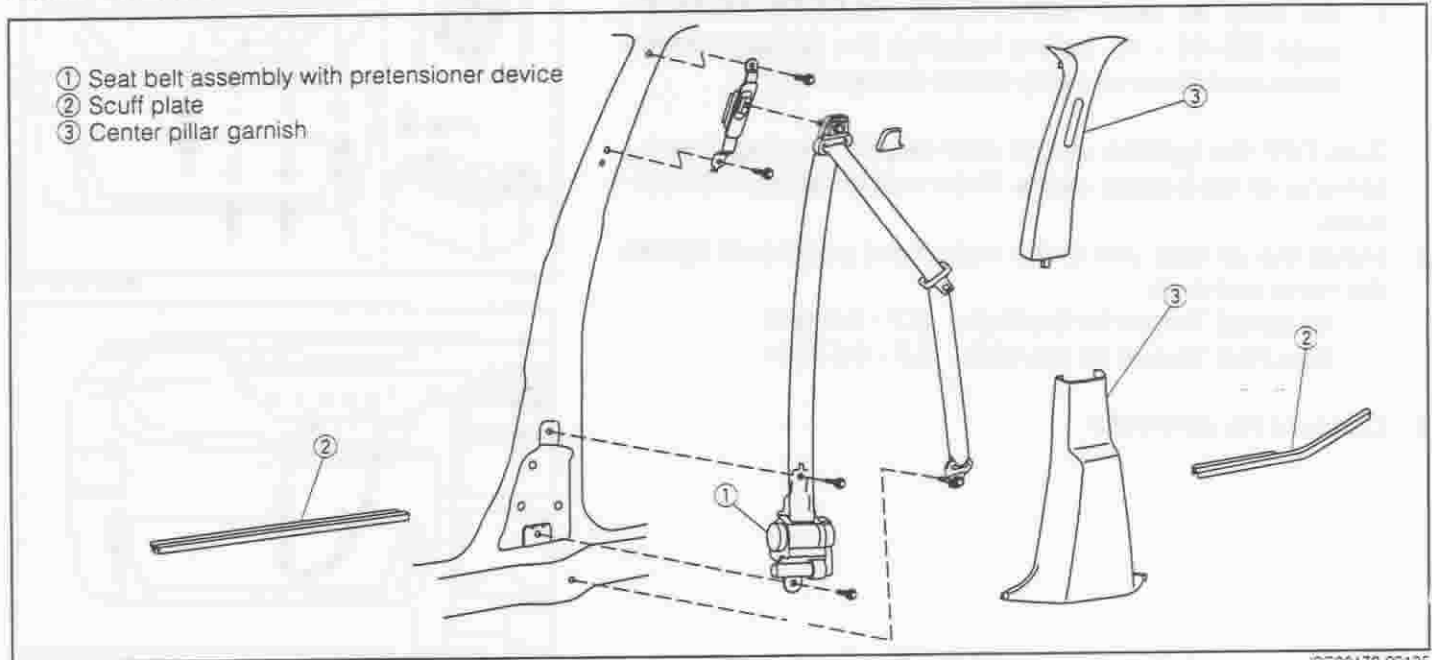


**CHECK AFTER INSTALLATION**

1. Ensure that the pad of the air bag unit fits properly to the instrument panel.
2. Connect the negative (-) terminal of the battery cable to the battery terminal.
3. Turn ON the ignition switch. Ensure that the air bag warning lamp illuminates for six seconds.



## SEAT BELT PRETENSIONER DEVICE COMPONENTS

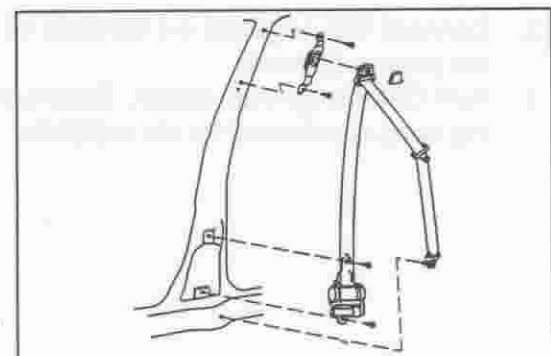
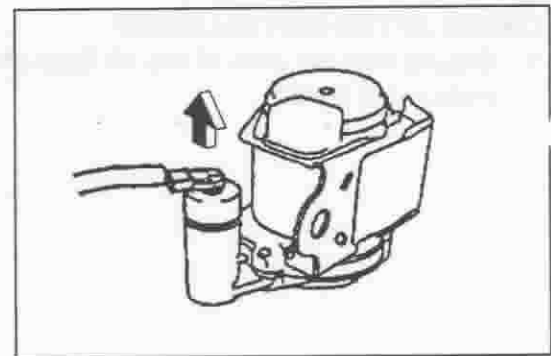
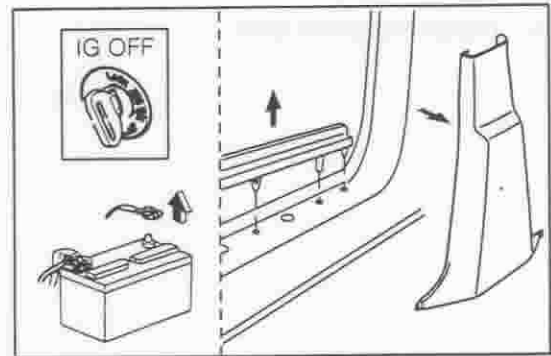


### REMOVAL

#### WARNING:

- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Remove the scuff plate and the center pillar garnish.
3. Disconnect the connector which connects the wire harness of the seat belt pretensioner device and the floor wire No. 1.
4. Remove the seat belt pretensioner by removing attaching bolts.





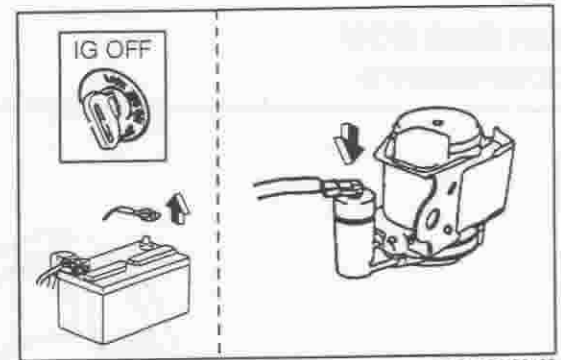
**INSTALLATION****WARNING:**

- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

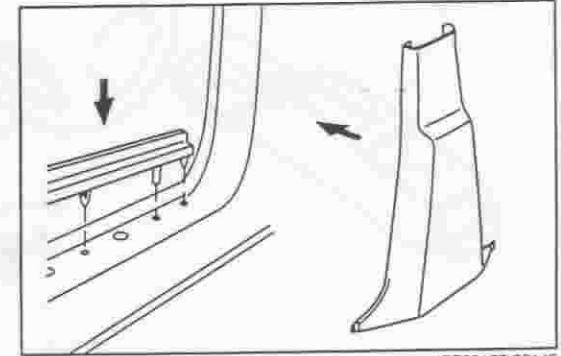
1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Install the seat belt pretensioner.
3. Connect the connector.
4. Install the center pillar garnish and the scuff plate.

**NOTE:**

- As regards the installation procedures of garnish and scuff plate, refer to BO section of the service manual.



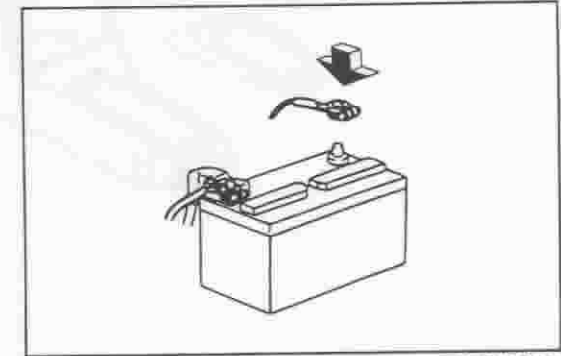
JBE00176-00139



JBE00177-00140

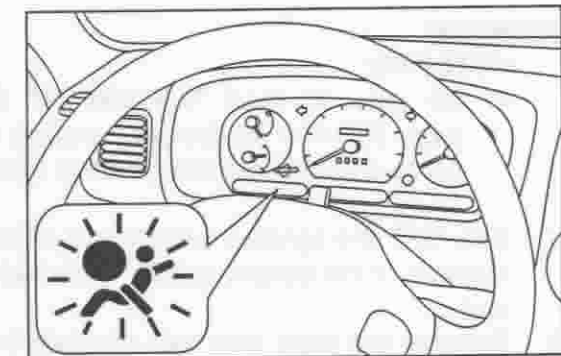
**CHECK AFTER INSTALLATION**

1. Connect the negative (-) terminal of the battery cable to the battery terminal.



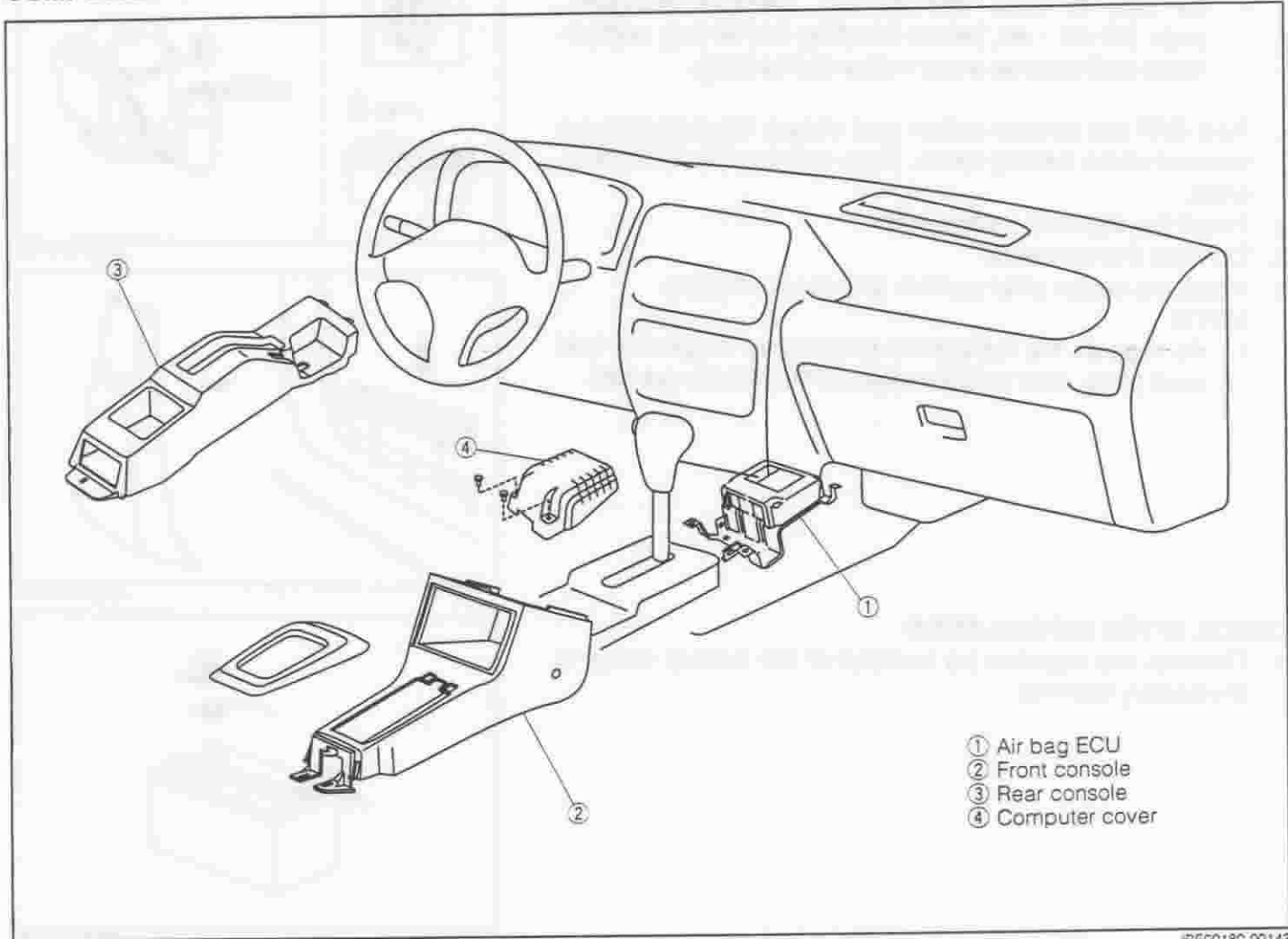
JBE00178-00141

2. Turn ON the ignition switch. Ensure that the air bag warning lamp illuminates for six seconds.



JBE00179-00142

## AIR BAG ECU COMPONENTS



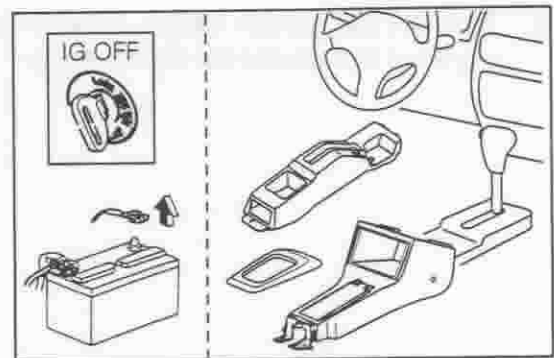
JBEC0180-00143

### REMOVAL

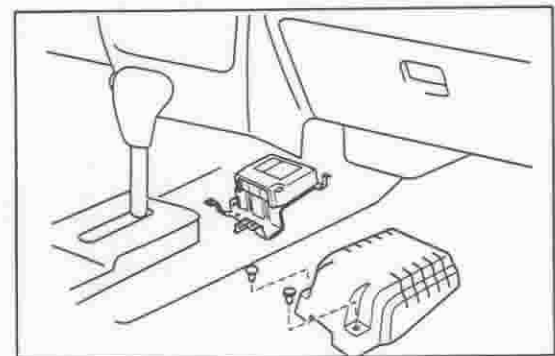
#### WARNING:

- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Remove the front and rear console box by removing attaching screws.
3. Remove the computer cover.



JBEC0181-00144

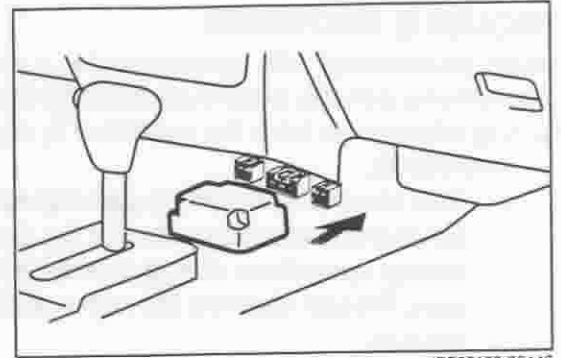


JBEC0182-00145

4. Disconnect the connector from the air bag ECU.
5. Remove the air bag ECU by removing attaching bolts.

**NOTE:**

- Before removing the ECU, ensure that the connector is disconnected in advance.



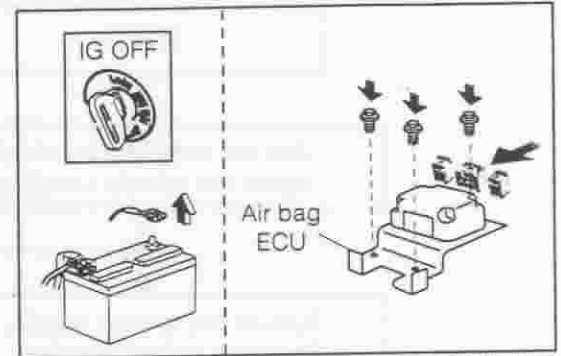
JBE00183-00146

**INSTALLATION**

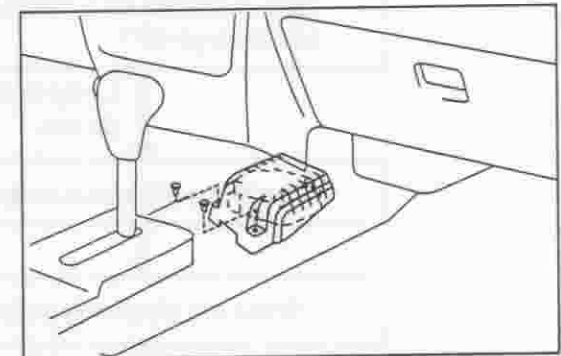
**WARNING:**

- Be sure to read "IMPORTANT SAFETY NOTICE", page BE-45 - 46, before handling the air bag components and observe every notice during work.

1. Turn OFF the ignition switch and detach the negative (-) terminal of the battery cable. Then wait for at least 90 seconds.
2. Install the air bag ECU.
3. Connect the connector.
4. Install the computer cover.

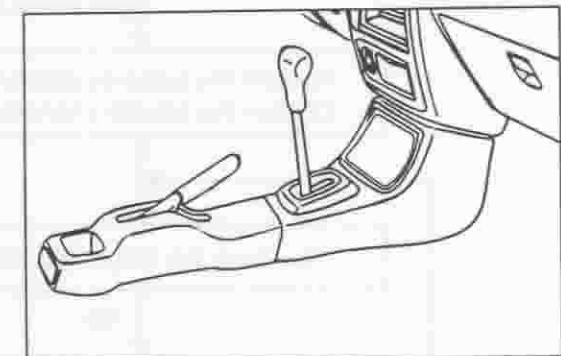


JBE00184-00147



JBE00185-00148

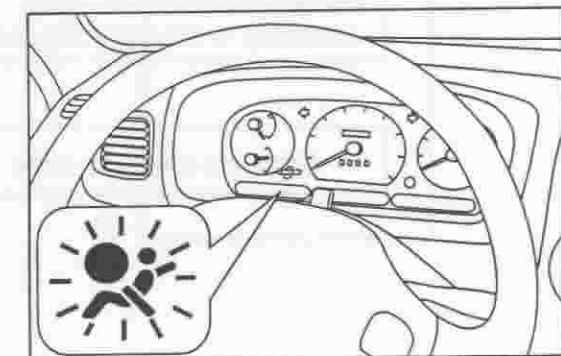
5. Install the console panel.



JBE00186-00149

**CHECK AFTER INSTALLATION**

1. Connect the negative (-) terminal of the battery cable to the battery terminal.
2. Turn ON the ignition switch. Ensure that the air bag warning lamp illuminates for six seconds.



JBE00187-00150