

## GROUP 42

### BODY

## GENERAL

### OUTLINE OF CHANGES

- Troubleshooting for the keyless entry system has been changed.
- Due to the change of the transmitter and receiver, “how to replace a battery of the transmitter” and “secret code registration method” have been changed.

## KEYLESS ENTRY SYSTEM

## TROUBLESHOOTING

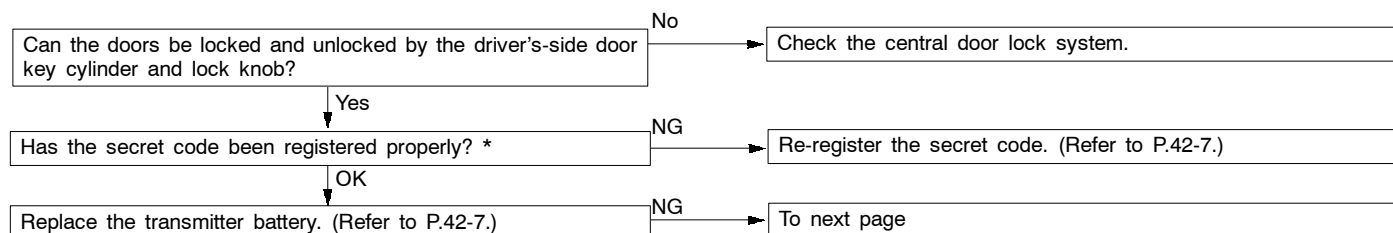
### INSPECTION CHART FOR TROUBLE SYMPTOMS

Trouble symptom	Inspection procedure No.	Reference page
None of the doors can be locked or unlocked using the transmitter.	1	42-1
All of the doors can be locked and unlocked using the transmitter, but the room lamp or turn-signal lamp does not flash or illuminate. (However, the room lamp operates normally when the doors are opened and closed.)	2	42-3
All doors can be locked and unlocked by the transmitter when a door is opened.	3	42-4
All doors can be locked and unlocked by the transmitter when the ignition key is inserted.	4	42-4
Secret codes cannot be registered.	5	42-5

### INSPECTION PROCEDURE FOR TROUBLE SYMPTOMS

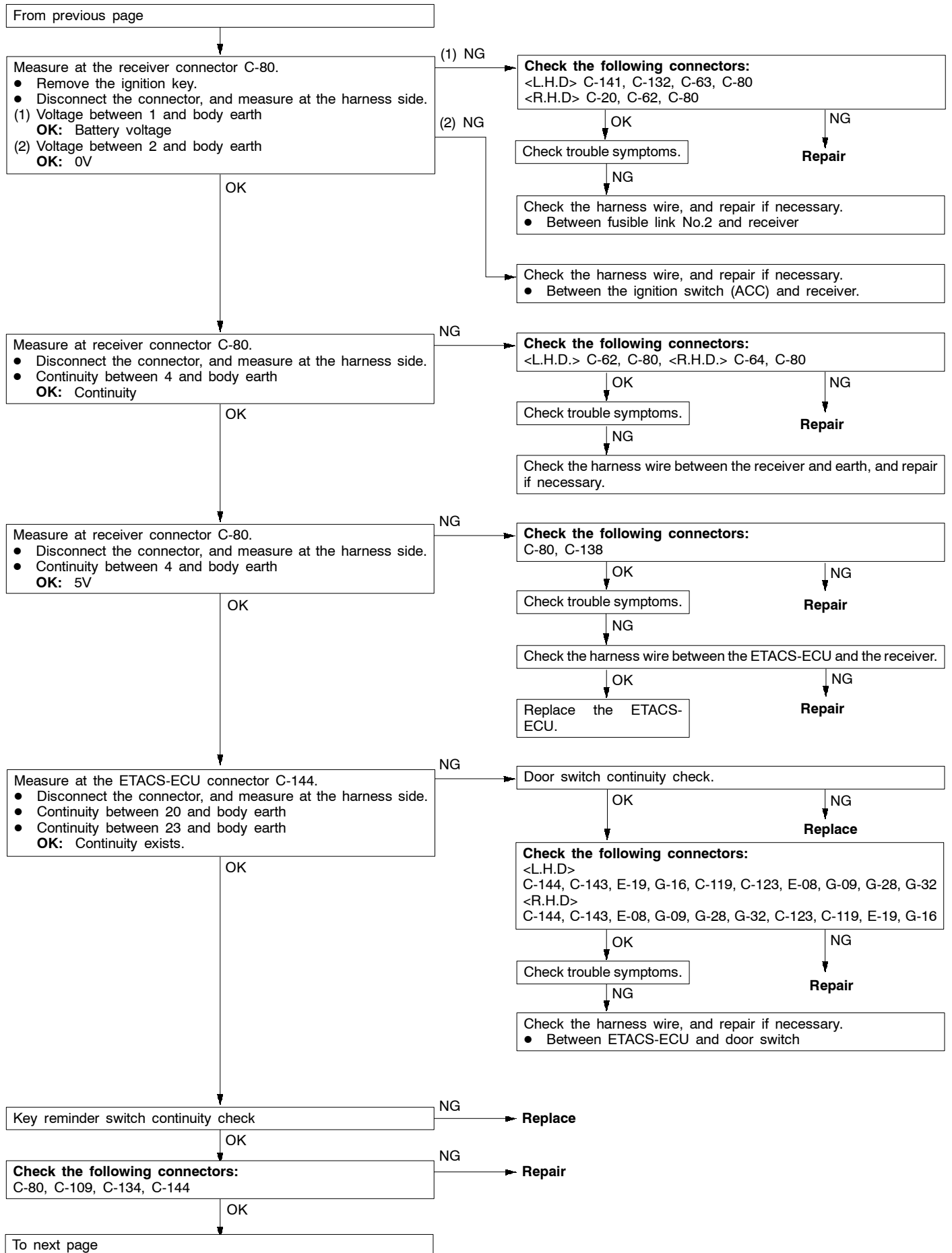
#### INSPECTION PROCEDURE 1

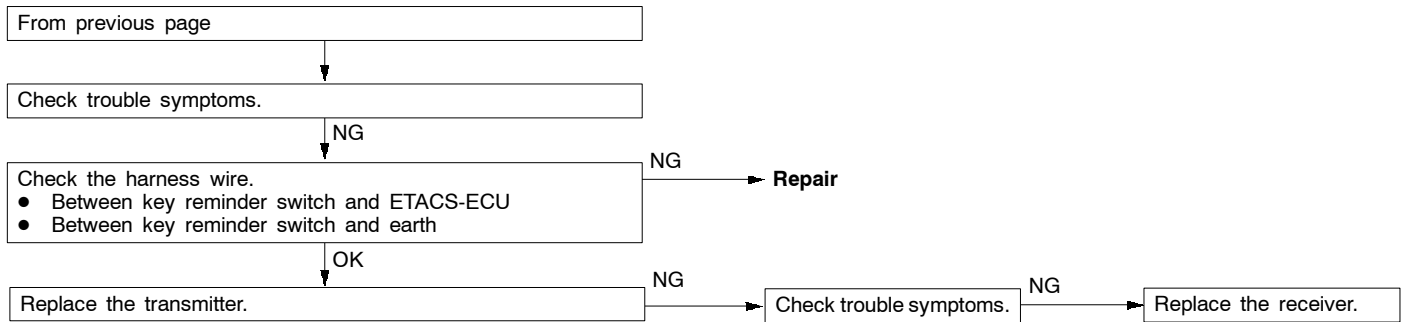
None of the doors can be locked or unlocked using the transmitter.	Probable cause
The cause may be a malfunction of the transmitter, a malfunction of the receiver or the lock and unlock signals are not being sent to the ETACS-ECU. It is also likely that the keyless entry system is disabled due to abnormal key reminder switch or door switch input signals.	<ul style="list-style-type: none"> <li>• Malfunction of transmitter</li> <li>• Malfunction of receiver</li> <li>• Malfunction of ETACS-ECU</li> <li>• Malfunction of wiring harness or connector</li> <li>• Malfunction of key reminder switch</li> <li>• Malfunction of door switch</li> </ul>



#### NOTE

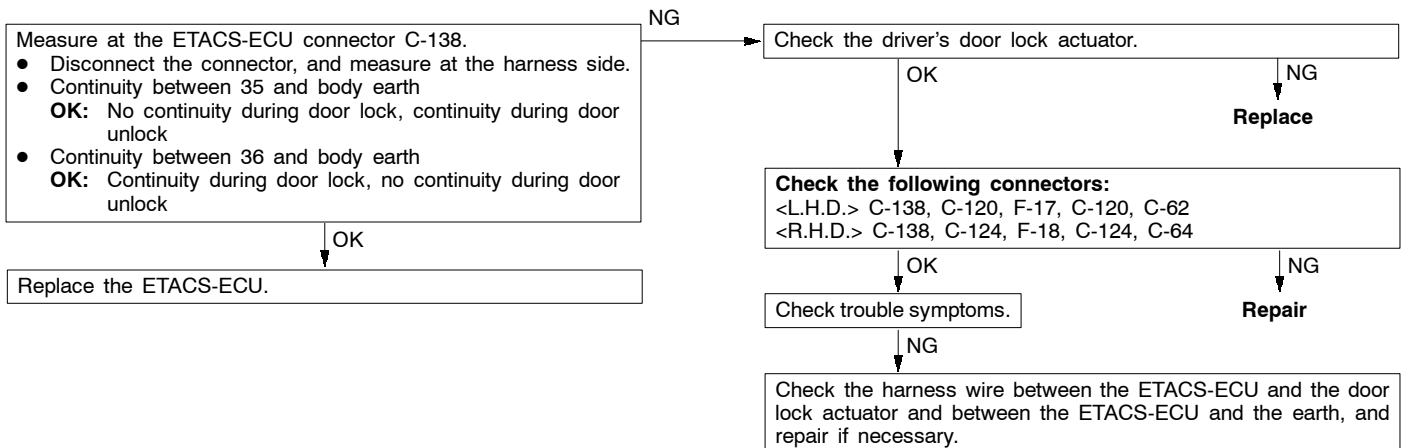
- \*: This should be done if a transmitter or receiver has been replaced, and if a secret code has not been registered properly.





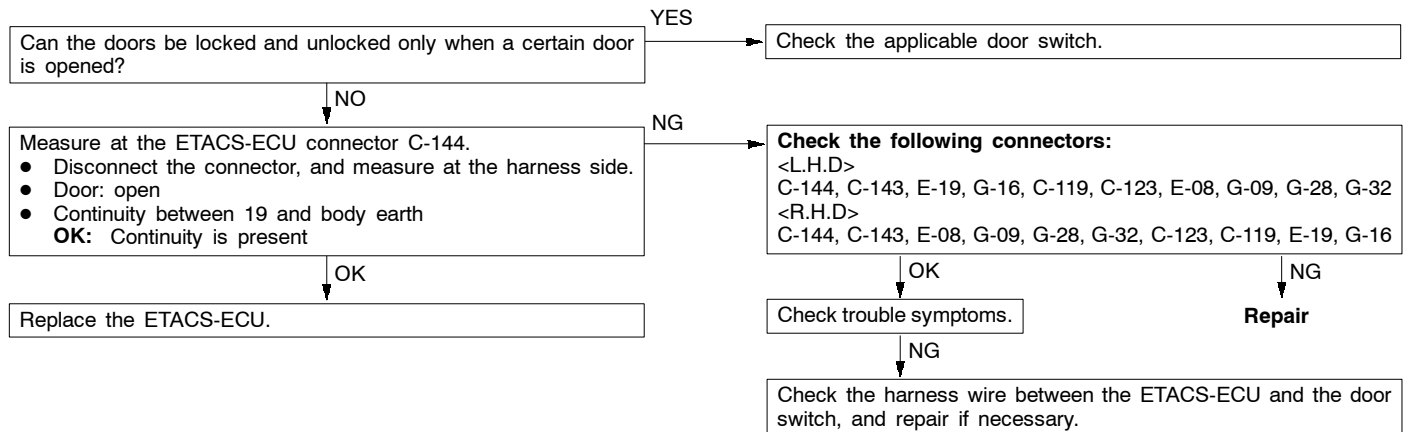
## INSPECTION PROCEDURE 2

<p><b>All of the doors can be locked and unlocked using the transmitter, but the room lamp or turn-signal lamp does not flash or illuminate. (However, the room lamp operates normally when the doors are opened and closed.)</b></p>	<p><b>Probable cause</b></p>
<p>If the room lamp operates normally when the doors are opened and closed, the cause of the problem may be a malfunction of the ETACS-ECU or a malfunction of the driver's-side door lock actuator.</p>	<ul style="list-style-type: none"> <li>• Malfunction of ETACS-ECU</li> <li>• Malfunction of driver's door lock actuator</li> <li>• Malfunction of connector or wiring harness</li> </ul>



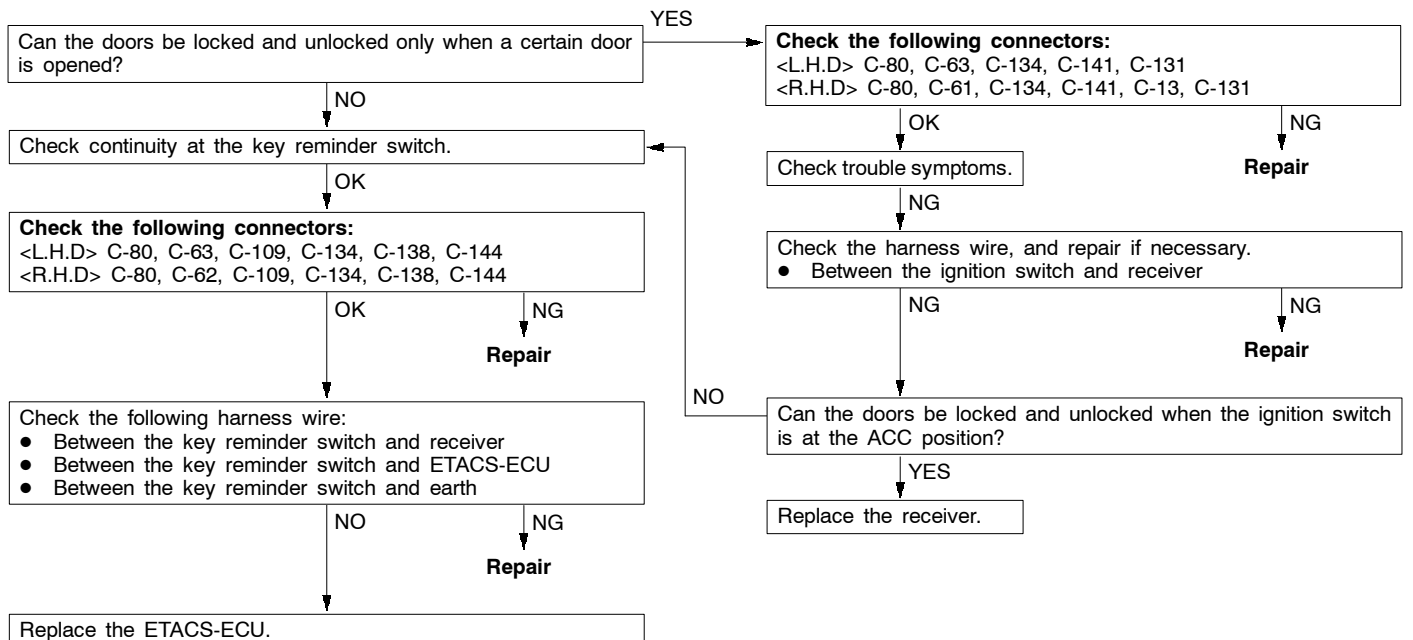
## INSPECTION PROCEDURE 3

All door can be locked and unlocked by the transmitter when a door is opened.	Probable cause
<p>The ETACS-ECU should disable a door lock and unlock by the transmitter when a door is opened (door switch: ON). If all doors can be locked and unlocked by the transmitter when a door is opened, there may be a malfunction of the door switch or a problem on the door switch input circuit at the ETACS-ECU.</p>	<ul style="list-style-type: none"> <li>• Malfunction of ETACS-ECU</li> <li>• Malfunction of connector or wiring harness</li> <li>• Malfunction of door switch</li> </ul>



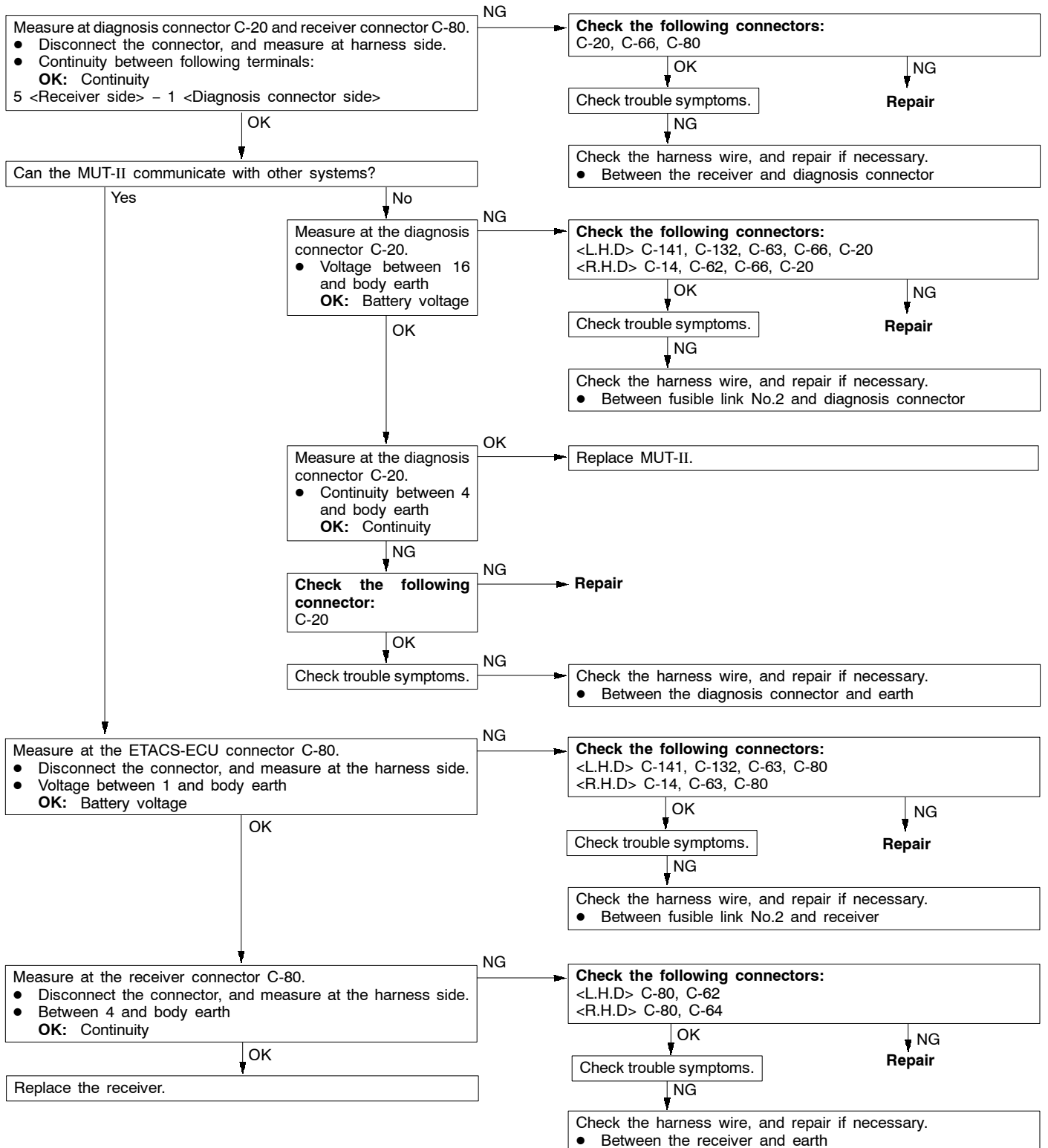
## INSPECTION PROCEDURE 4

All door can be locked and unlocked by the transmitter when the ignition key is inserted.	Probable cause
<p>The ETACS-ECU should disable a door lock and unlock by the transmitter when the ignition key is inserted (key reminder switch: OFF). Besides that, the receiver monitors power supply at ignition switch ACC position, and disables a door lock and unlock by the transmitter when the power supply reaches battery voltage. If all doors can be locked and unlocked by the transmitter when the ignition key is inserted, there may be a malfunction of the key reminder switch, a problem on the reminder switch input circuit at the ETACS-ECU, or the ignition switch (ACC position) input circuit at the receiver.</p>	<ul style="list-style-type: none"> <li>• Malfunction of ETACS-ECU</li> <li>• Malfunction of connector or wiring harness</li> <li>• Malfunction of key reminder switch</li> <li>• Malfunction of receiver</li> </ul>

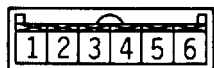


INSPECTION PROCEDURE 5

Secret codes cannot be registered.	Probable cause
The cause may be a malfunction of the diagnosis connector,a malfunction of the ETACS-ECU or a malfunction of the diagnosis output circuit.	<ul style="list-style-type: none"> <li>• Malfunction of MUT-II</li> <li>• Malfunction of connector or wiring harness</li> <li>• Malfunction of receiver</li> </ul>

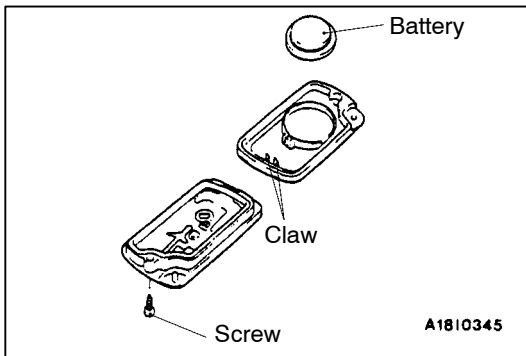


## MEASUREMENT AT THE RECEIVER TERMINALS



1410065

Terminal	Signal	Requirement	Terminal voltage
1	Receiver power supply	Always	Battery voltage
2	Ignition switch (ACC) signal	Ignition switch: ACC or ON	Battery voltage
		Ignition switch: OFF	0V
4	Earth	Always	0V
5	Diagnosis switching input	Connect the MUT-II	0V
		Disconnect the MUT-II	Battery voltage
6	Multiplex communication	Always	5V



## ON-VEHICLE SERVICE

### HOW TO REPLACE A BATTERY OF THE TRANSMITTER

1. Remove the set screw to remove the battery from the transmitter.
2. Install a battery with its (+) side face-down.

**Battery required for replacement:**  
**Coin type battery CR2032**

3. Insert the claw, and then assemble the transmitter.

#### Caution

**Do not let water or dust stick to the inside of the transmitter when it is open. Also, do not touch the precision electronic device.**

4. Check to see if the keyless entry system operates.

### SECRET CODE REGISTRATION METHOD

Each individual secret code is registered inside the transmitter, and so it is necessary to register these codes with the EEPROM inside the ETACS-ECU in the following cases.

- When either the transmitter or ETACS-ECU is replaced;
- If a second transmitter is to be used;
- If it appears that a problem is occurring because of faulty registration of a code.

A maximum of four different codes can be stored in the memory area of the EEPROM (four different transmitters can be used). When the code for the first transmitter is registered, the previously-registered codes for four transmitters are cleared. Therefore, if you are using more than two transmitters or are adding a second transmitter, the codes for all the transmitters must be registered at the same time.

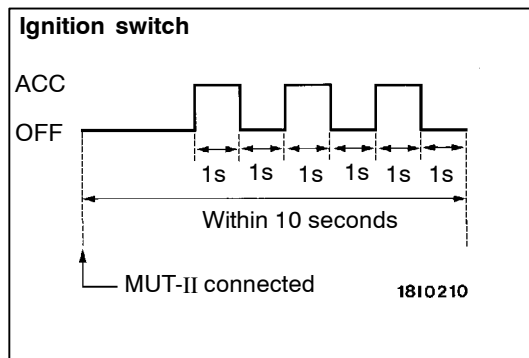
1. Check that the doors lock normally when the key is used.
2. Connect the MUT-II to the diagnosis connector.

#### NOTE

This will connect terminal (1) of the diagnosis connector to earth, and the system will be in secret code registration standby mode.

#### Caution

**Always turn the ignition switch to OFF before connecting and disconnecting the MUT-II.**



3. Within 10 seconds after connecting the MUT-II, turn the ignition switch to ACC ON for 1 second and then to OFF for 1 second; repeat this procedure three times.

**NOTE**

The doors will lock and unlock once at this time and the system will switch to registration mode.

4. Press the lock switch or unlock switch of the transmitter switch, and then press it two times within 10 seconds of the first press. This will register the code.
5. After registration is completed, the doors will be automatically locked and unlocked once.
6. If you are using more than two transmitters or have added a second transmitter, the same registration procedure should be carried out for the remaining transmitters, and it should be carried out within one minute after registration of the code for the first transmitter has been completed. The registration procedure are all the same for all transmitters.
7. Registration mode will be terminated under the following conditions.
  - When the secret codes for four transmitters have been registered;
  - When one minute has passed after registration mode started;
  - If the MUT-II is disconnected (earth is released);
  - If the ignition switch is turned to ON;
8. After registration mode has been completed, carry out the followings to make sure that the keyless entry system operates.
  - Pull the ignition key out.
  - Close the all windows.