

INTRODUCTION: REPAIR INSTRUCTION: INITIALIZATION

INITIALIZATION

1. Procedures necessary when battery terminal is disconnected / reconnected

Procedures necessary when battery terminal is disconnected / reconnected

Necessary Procedures	Procedure Details	Effects / Inoperative Functions When Necessary Procedures are not Performed	Notes
Navigation system initialization	After turning the ignition switch on (IG), insert the map disc.	Navigation system	If the map disc is inside when disconnecting the cable from the battery terminal, this procedure is not necessary

NOTE: After the ignition switch is turned OFF, the navigation system requires approximately 90 seconds to record various types of memory and settings. As a result, after turning the ignition switch OFF, wait 90 seconds or more before disconnecting the cable from the negative (-) battery terminal.

2. Procedures necessary when ECU or other parts are replaced

Procedures necessary when ECU or other parts are replaced

Replacement Part	Necessary Procedures	Effects / Inoperative Functions When Necessary Procedures are not Performed	Notes
ECM	Register VIN	DTC P0630 is output	-
<ul style="list-style-type: none"> Automatic transmission assembly Engine assembly ECM 	Reset memory	Large shift shock	-
Tire pressure warning ECU	<ol style="list-style-type: none"> Register transmitter IDs Initialize tire pressure warning system 	<ul style="list-style-type: none"> When DTC detection conditions of "transmitter ID not received" DTC is met, tire pressure warning light blinks for 1 minute, and then illuminates Tire pressure monitoring function 	-
Tire pressure warning valve and transmitter	<ol style="list-style-type: none"> Register transmitter IDs Initialize tire pressure warning system 	<ul style="list-style-type: none"> When DTC detection conditions of "transmitter ID not received" DTC is met, tire pressure warning light blinks for 1 minute, and then illuminates Tire pressure monitoring function of replaced wheel 	Even if only one wheel is replaced, IDs for all 4 wheels must be registered.
Skid control ECU	<ul style="list-style-type: none"> Deceleration sensor zero point calibration Master cylinder pressure sensor zero point calibration 	<ul style="list-style-type: none"> ABS warning light illumination VSC OFF indicator light illumination 	-
Yaw rate sensor	<ul style="list-style-type: none"> Zero point calibration data clearance Deceleration sensor zero point calibration 	<ul style="list-style-type: none"> ABS warning light illumination VSC OFF indicator light illumination VSC control is prohibited or operation is incorrect 	-
Front Wheel Alignment Adjustment	<ul style="list-style-type: none"> Zero point calibration data clearance Deceleration sensor zero point calibration Perform initialization of steering angle sensor 	<ul style="list-style-type: none"> ABS warning light illumination VSC OFF indicator light illumination 	Complete the adjustment of the steering wheel and wheel alignment, and then initialize the steering angle sensor. If the order is reversed, the steering wheel and wheel alignment will become misaligned.
Occupant classification ECU	<ul style="list-style-type: none"> Zero point calibration Sensitivity check 	<ul style="list-style-type: none"> Occupant classification system Passenger airbag ON/OFF indicator Airbag system (Front passenger side) Seat belt warning system (Front passenger side) 	-
<ul style="list-style-type: none"> Transponder key ECU ECM Key 	Registration	Engine starting	-

Replacement Part	Necessary Procedures	Effects / Inoperative Functions When Necessary Procedures are not Performed	Notes
<ul style="list-style-type: none"> Door control transmitter Door control receiver 	Register recognition code	Wireless door lock operation	-
Inner rear view mirror	<ul style="list-style-type: none"> Compass zone setting Compass calibration Register transmitter code 	<ul style="list-style-type: none"> Direction is not displayed correctly Garage door opener system 	-
<ul style="list-style-type: none"> Sliding roof driver gear (Sliding roof ECU) Sliding roof housing Sliding roof glass 	Initialize sliding roof system	<ul style="list-style-type: none"> Auto operation Jam protection function Sliding roof operation after ignition switch is turned OFF Key-linked operation function (Driver side door only) 	-

3. DESCRIPTION

HINT: This registration section consists of two parts: Read VIN and Write VIN.

(a)Read VIN: Explains the VIN reading process in a flowchart. This process allows the VIN stored in the ECM to be read in order to confirm that the two VINs, provided with the vehicle and stored in the vehicle's ECM, are the same.

(b)Write VIN: Explains the VIN writing process in a flowchart. This process allows the VIN to be input into the ECM. If the ECM is changed, or the ECM VIN and vehicle VIN do not match, the VIN can be registered, or overwritten in the ECM by following this procedure.

4. READ VIN

(a)Confirm the vehicle VIN.

(b)Connect Techstream to the DLC3.

(c)Turn the ignition switch ON.

(d)Turn the tester ON.

(e)Enter the following menus: Powertrain / Engine and ECT / Utility / VIN / VIN Read.

5. WRITE VIN

(a)Confirm the vehicle VIN.

(b)Connect Techstream to the DLC3.

(c)Turn the ignition switch ON.

(d)Turn the tester ON.

(e)Enter the following menus: Powertrain / Engine and ECT / Utility / VIN / VIN Write.

6. RESET MEMORY

NOTICE:

- Perform the RESET MEMORY (AT initialization) when replacing the automatic transmission assembly, engine assembly or ECM.
- The RESET MEMORY can be performed only with the Techstream.

HINT: The ECM memorizes the control conditions of the automatic transmission assembly and engine assembly. Therefore, when the automatic transmission assembly, engine assembly, or ECM has been replaced, it is necessary to reset the memory so that the ECM can memorize the new information.

Reset procedure is as follows.

(a)Connect the Techstream to the DLC3.

(b)Turn the ignition switch ON and push the tester switch ON.

(c)Enter the following menus:

(1)Select: Powertrain / Engine and ECT / Utility / Reset Memory.

NOTE: After performing the RESET MEMORY, be sure to perform the ROAD TEST described earlier.

HINT: The ECM learns through the ROAD TEST.

7. DESCRIPTION OF CODE REGISTRATION

It is necessary to register the transmitter ID in the tire pressure warning ECU when replacing the tire pressure warning valve and transmitter and/or tire pressure warning ECU.

Prepare all transmitter ID data before starting registration.

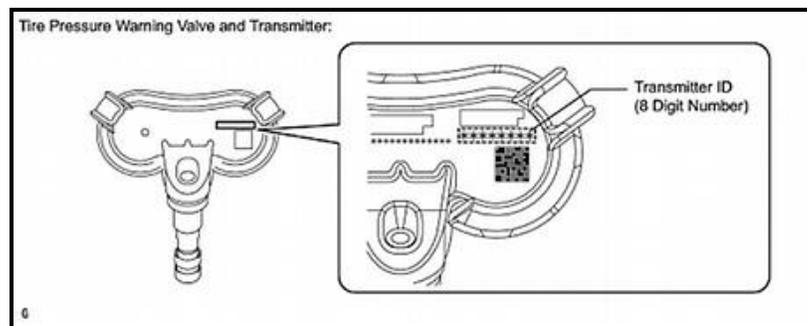
(a)Before registration

(1)In case of tire pressure warning ECU replacement:

- Read the registered transmitter IDs that are stored in the old ECU using the Techstream and note them down.
- If reading stored transmitter IDs is impossible due to malfunctions of components such as the tire pressure warning antenna and receiver, remove the tires from the wheels and check the IDs located on the tire pressure warning valves and transmitters.

(2)In case of tire pressure warning valve and transmitter replacement:

- Take a note of the 8 digit number (transmitter ID) written on the tire pressure warning valve and transmitter.



NOTE: The transmitter ID is written on the tire pressure warning valve and transmitter. It will be unable to be read after installing the tire pressure warning valve and transmitter on the tire and wheel. Therefore, take a note of the transmitter ID before installing the tire pressure warning valve and transmitter.

8. DESCRIPTION OF INITIALIZATION

(a) Perform initialization in the following cases:

- Before delivery of a new vehicle.
- After replacement of the tire pressure warning ECU*.
- After replacement of the tire pressure warning valve and transmitter*.

HINT: *: Perform initialization after the transmitter ID registration is completed.

(b) Before initialization

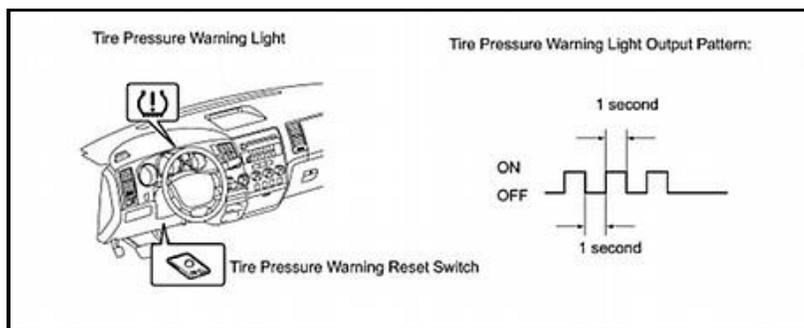
(1) Set the tire pressure of all tires to the specified value(s).

NOTE: Make sure the tires are cooled down.

9. INITIALIZATION PROCEDURE

(a) Turn the ignition switch to ON.

(b) Press and hold the tire pressure warning reset switch for 3 seconds or more so that the tire pressure warning light blinks 3 times.

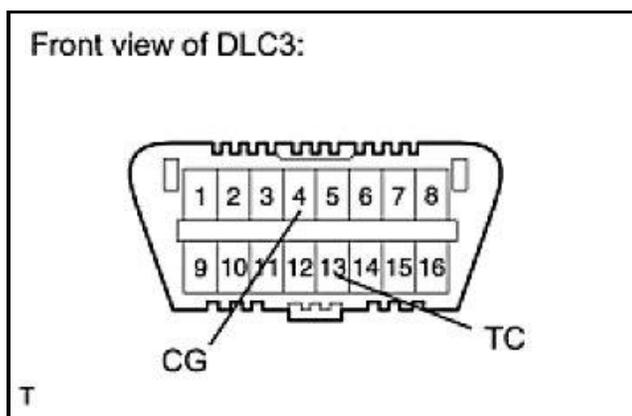


(c) Turn the ignition switch off.

(d) Connect the Techstream to the DLC3.

(e) Turn the ignition switch to ON and the Techstream on.

(f) Enter the following menus: Chassis / Tire Pressure Monitor / Data List.



(g) Confirm that the tire pressure data of all tires are displayed on the Techstream screen in order to check the completion.

- The initialization is normally completed within 5 to 6 minutes.
- If the initialization has not been completed successfully, DTC C2177/77 is set after the vehicle is driven for 20 minutes or more.
- The initialization can be terminated by connecting terminals 13 (TC) and 4 (CG) of the DLC3.

- (b) Obtain the zero points of the master cylinder pressure sensor and deceleration sensor.
 (1) Keep the vehicle stationary on a level surface for 1 second or more.

HINT:

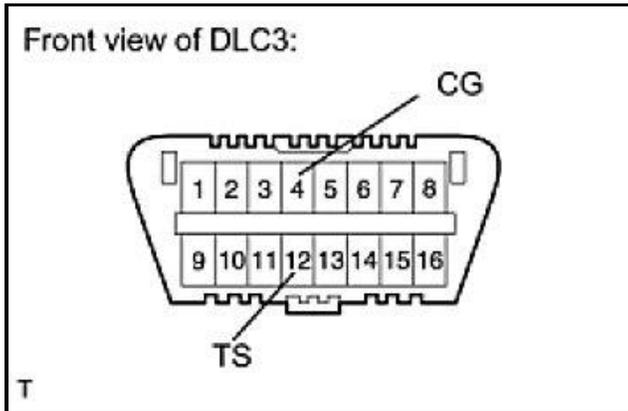
- The zero point calibration is performed only once after the system enters test mode.
- Calibration cannot be performed again until the stored data is cleared once.

(2) Check that the buzzer sounds for 3 seconds and DTC C1336 is erased.

(3) Turn the ignition switch OFF.

12. CLEAR ZERO POINT CALIBRATION DATA (WHEN USING SST CHECK WIRE)

- (a) Turn the ignition switch ON.



- (b) Using SST, connect and disconnect terminals 12 (TS) and 4 (CG) of the DLC3 4 times or more within 8 seconds.

SST: 09843-18040

(c) Check that the VSC OFF indicator light comes on.

(d) Using a check wire, perform the zero point calibration of the deceleration sensor.

13. PERFORM ZERO POINT CALIBRATION OF MASTER CYLINDER PRESSURE SENSOR AND DECELERATION SENSOR (WHEN USING SST CHECK WIRE)

NOTICE:

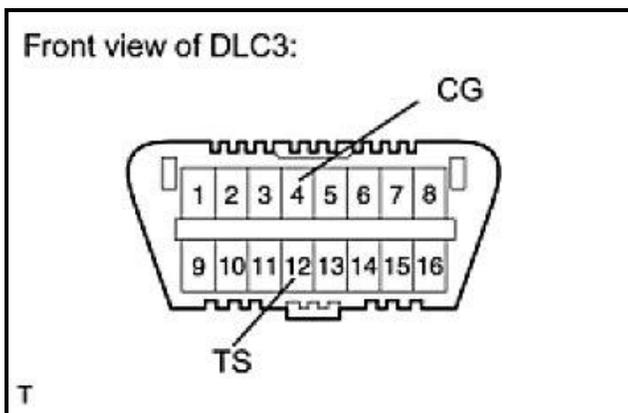
- While obtaining the zero point, do not vibrate the vehicle by tilting, moving or shaking it and keep it stationary. (Do not start the engine.)
- While obtaining the zero point, do not depress the brake pedal.
- Obtain the zero point on a level surface (with an inclination of less than 1°).

(a) Enter Test Mode.

(1) Turn the ignition switch OFF.

(2) Check that the shift lever is in parking or neutral and apply the parking brake.

CAUTION: Application of the parking brake is not necessary for entering test mode. However, apply the parking brake for safety.



(3) Using SST, connect terminals 12 (TS) and 4 (CG) of the DLC3.

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(4) Turn the ignition switch ON.

NOTE: Do not start the engine.

(b) Obtain the zero points of the master cylinder pressure sensor and deceleration sensor.

(1) Keep the vehicle stationary on a level surface for 1 second or more.

HINT:

- The zero point calibration is performed only once after the system enters test mode.
- Calibration cannot be performed again until the stored data is cleared once.

(2) Check that the buzzer sounds for 3 seconds and DTC C1336 is erased.

(3) Turn the ignition switch OFF.

14. PERFORM INITIALIZATION OF STEERING ANGLE SENSOR

NOTE: Complete the adjustment of the steering wheel and wheel alignment, and then initialize the steering angle sensor. If the order is reversed, the steering wheel and wheel alignment will become misaligned.

(a) Check that the steering wheel is in the centered position.

(b) Disconnect the negative battery terminal for more than 2 seconds.

NOTE: After the ignition switch is turned OFF, the navigation system requires approximately 90 seconds to record various types of memory and settings. As a result, after turning the ignition switch OFF, wait 90 seconds or more before disconnecting the cable from the negative (-) battery terminal.

(c) Reconnect the negative battery terminal.

15. ZERO POINT CALIBRATION

(a) Zero point calibration procedures:

HINT: Make sure that the zero point calibration has finished normally, and then perform the sensitivity check.

(1) Check that all of the following conditions are met:

- The vehicle is parked on a level surface.
- No objects are placed on the front seat RH.
- The front seat inner belt RH (passenger side buckle switch) is off.

(2) Adjust the seat position in accordance with the table below.

Adjustment Item	Position
Slide Direction	Rearmost position
Reclining Angle	Upright position
Headrest Height	Lowest position
Lifter Height	Lowest position

(3) Connect the Techstream to the DLC3.

(4) Turn the ignition switch ON.

(5) Perform the zero point calibration by following the prompts on the tester screen.

HINT:

- Refer to the Techstream operator's manual for further details.
- If the zero point calibration has not finished normally, replace the front seat RH.

16. SENSITIVITY CHECK

(a) Sensitivity check procedures:

(1) Connect the Techstream to the DLC3.

(2) Turn the ignition switch ON.

(3) Perform the sensitivity check by following the prompts on the tester screen.

HINT: Refer to the Techstream operator's manual for further details.

(4) Confirm that the beginning sensor reading is within the standard range.

Standard range:

-3.2 to 3.2 kg (-7.0 to 7.0 lb)

(5) Place a 30 kg (66.2 lb) weight (e.g. a lead mass) onto the front passenger seat.

(6) Confirm that the sensitivity is within the standard range.

Standard range:

27 to 33 kg (59.5 to 72.8 lb)

HINT:

- When performing the sensitivity check, use a solid metal weight (the check result may not be accurate if a liquid weight is used).
- If the sensitivity deviates from the standard range, retighten the bolts of the front seat RH taking care not to deform the seat rail.

After performing this procedure, if the sensitivity is not within the standard range, replace the front seat RH.

17. DESCRIPTION OF CODE REGISTRATION

(a) When adding master keys or sub-keys (additional registration).

(1) Register key code in the transponder key ECU.

Target ECU	See Procedure
Transponder key ECU	Procedure "A"

(b) After replacing the transponder key ECU (New key code registration).

(1) Register the key code (immobiliser code) in the new transponder key ECU.

Target ECU	See Procedure
Transponder key ECU	Procedure "B"

(2) Register the ECU - ECM COMMUNICATION ID between the ECM and the new transponder key ECU.

Target ECU	See Procedure
ECM	Procedure "C"

(c) After replacing the ECM.

(1) Reregister the ECU - ECM COMMUNICATION ID between the new ECM and the transponder key ECU.

Target ECU	See Procedure
Transponder key ECU	Procedure "C"

(d) After replacing the transponder key ECU and ECM.

(1) Register the ECU - ECM COMMUNICATION ID between the new ECM and the new transponder key ECU.

Target ECU	See Procedure
Transponder key ECU	Procedure "C"

(e) Erasure of key codes.

(1) Erase all of the key codes except master key.

Target ECU	See Procedure
Transponder key ECU	Procedure "D"

(2) Erase all of the key codes.

Target ECU	See Procedure
Transponder key ECU	Procedure "D"

18. NEW KEY REGISTRATION (PROCEDURE "B")

(a) New key code registration

HINT:

- This mode operates normally when no key codes are registered in the transponder key ECU.
- When a new transponder key ECU is installed, key codes must be registered in the transponder key ECU.
- In this mode, a maximum of 3 key codes for 2 master keys and 1 sub-key can be registered. The master keys and sub-key can be registered in any order because the transponder key ECU can distinguish between different types of keys.
- New key codes must be registered with the battery connected. The ignition switch can be either ON or OFF.

Procedure	Security Indicator Light Condition
1. Start registration.	Security indicator light is blinking.
2. Insert one of master keys into the ignition key cylinder.	Security indicator light turned on.
3. Select following items on the tester: (1) Body (2) Immobiliser (3) ID Utility (4) Immobiliser Code Registration After above operation, proceed to next step in accordance with prompts on the tester screen.	Security indicator light turned off for 1 sec. and then turned on.
4. Remove the key.	Security indicator light turned on. When the maximum number of the key codes is registered, the security indicator light remains off until the last key registered is removed. After it is removed, the security indicator light starts blinking.
5. Register another key? YES: Go to step 6. NO: Go to step 7. Key codes for a maximum of 2 master keys and 1 sub-key can be registered.	
6. Insert another key into the ignition key cylinder. Then go to step 4.	Security indicator light turned off for 1 sec. and then turned on.
7. End of registration.	

(b) End the new key code registration mode (when not using Techstream)

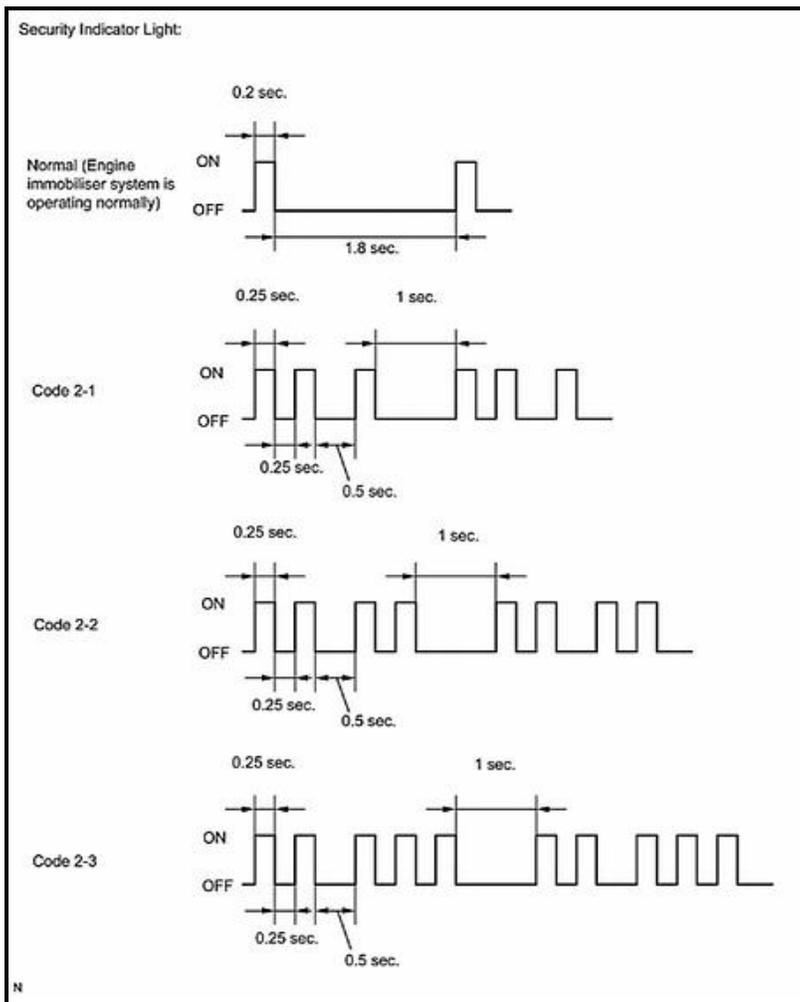
HINT: The automatic key code registration mode can be forced to end when at least 1 key code (immobiliser code) for a master key has been registered.

- (1) Turn the ignition switch ON and OFF 5 times within 10 seconds using a master key that has already been registered.

(c) End the new key code registration mode (when using Techstream)

HINT: The automatic key code registration mode can be forced to end when at least 1 key code (immobiliser code) for a master key has been registered.

- (1) Insert the key into the ignition key cylinder and turn the Techstream ON.
- (2) Follow the instructions on the Techstream screen to end the new key code registration mode.



HINT:

- When the engine immobiliser system is operating normally and the key is pulled out, the security indicator light blinks continuously.
- If the new key code registration fails, code 2-1 is output by the security indicator light. Trying to reregister an already registered key causes code 2-2 to be output when the key is inserted. If the number of registered key codes exceeds the limit, code 2-3 is output by the security indicator light. The output details are shown below.

19. REGISTRATION OF ADDITIONAL KEY (PROCEDURE "A")

(a) Additional key code registration

HINT:

- At least one key code must be registered in the transponder key ECU in order for this mode to operate normally.
- In this mode, a maximum of 5 master key codes and 3 sub-key codes can be registered.
- This mode ends if each step is not completed within the specified time.
- When the ignition key cylinder or the ignition key cylinder set is replaced, remove the transmitter module from the original master key. Then install this transmitter module to a new key and use the new key as the master key. If necessary, use this master key to register other keys.

NOTE: When only the ignition key cylinder has been replaced, the new key cannot be used to lock or unlock doors. Therefore, keep the original key for locking and unlocking doors in order to avoid being locked out of the vehicle if the transmitter battery becomes depleted.

Procedure	Security Indicator Light Condition	Time (Completion of operation)
1. Start registration.	Security indicator light is blinking.	-
2. Insert an already registered master key into the ignition key cylinder, turn the ignition switch ON, and turn the tester ON.	Security indicator light turned off.	Within 120 sec.
3. Select following items on the tester: (1) Body (2) Immobiliser (3) ID Utility (4) Immobiliser Code Registration	Security indicator light turned on.	
4. Remove the master key and then push NEXT button on tester.	Security indicator light turned on.	
5. Insert unregistered key into the ignition key cylinder.	Security indicator light is blinking. Registration is being performed.	
6. After 60 sec., key is registered. The security indicator light turns off.	Security indicator light turned off.	-
7. Remove the key.	Security indicator light is blinking.	
8. Tester screen displays number of registered keys.		
9. Register another key? YES: Go to step 2. NO: Go to step 10.		
10. End of registration.		

HINT:

- A brief outline of the procedures for key code registration is shown above. For more detailed information, refer to the screen of the Techstream.
- When the engine immobiliser system is operating normally and the key is pulled out, the security indicator light blinks continuously.
- If the additional key code registration fails, code 2-1 is output by the security indicator light. Trying to reregister a previously registered key causes code 2-2 to be output when the key is inserted. If the number of registered key codes exceeds the limit, code 2-3 is output by the security indicator light. The output details are shown in procedure "B".