

IMMOBILIZER SYSTEM

SECURITY AND LOCKS

6. Immobilizer System

A: CONSTRUCTION

The immobilizer system consists of the following components: combination meter, body integrated unit, engine control module (ECM), transponder inside the ignition key, and an antenna fitted to the key cylinder.

The antenna receives a vehicle ID code emitted from the transponder when the key is inserted into the key cylinder.

The ID code is transmitted to the body integrated unit. The body integrated unit compares the code with a one that has been registered in it. The body integrated unit also compares the ID code with the ECM and the combination meter. If these ID codes match with each other, the system allows the engine to be started. The engine may be able to start when the key is inserted even if the codes do not match. The engine, however, will automatically stop after a few seconds.

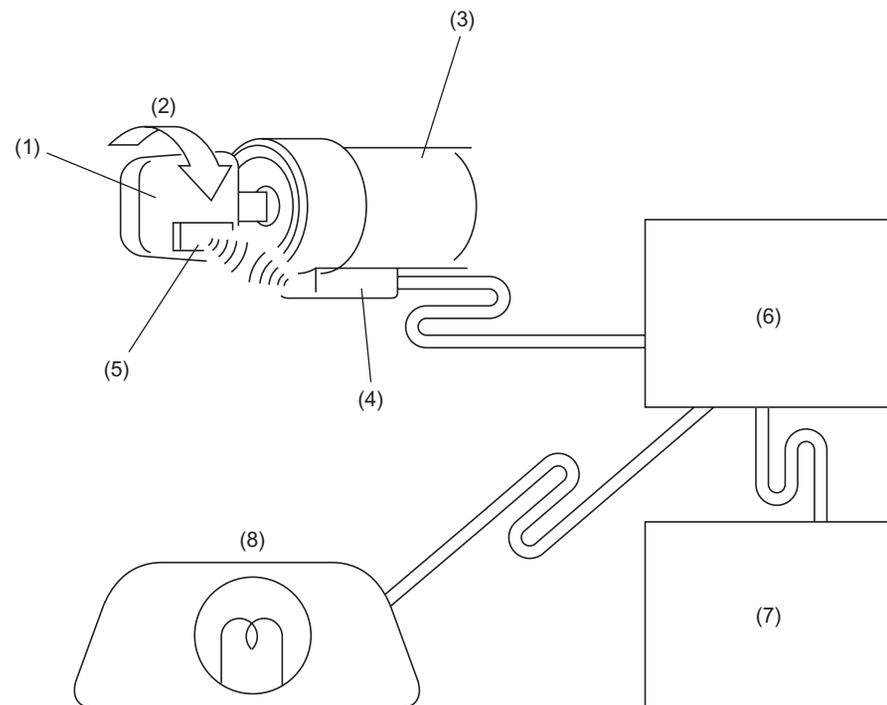
The immobilizer function is activated automatically when the key is removed from the key cylinder and when 60 seconds have passed after the ignition switch was turned to the "ACC" or "OFF" position. When the function is activated, the indicator light on the combination meter flashes at intervals of 0.2 seconds ON and 2.8 seconds OFF. (When security system is not set)

This indicator light flashing indicates to the thief that the system is ready to function.

If the immobilizer system fails, an incorrect key is used or an incorrect ECM is installed, the immobilizer indicator light will illuminate when the key is inserted into the key cylinder or when the ignition switch is turned ON.

NOTE:

To heighten the anti-theft performance of the immobilizer system, the system is designed in a way that the immobilizer cannot be deactivated by simply reconnecting the wiring or by replacing parts. Therefore, care must be taken when replacing or repairing the related components.



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| (1) Key | (5) Transponder |
| (2) Ignition switch ON | (6) Body integrated unit |
| (3) Key cylinder | (7) Engine control module |
| (4) Antenna | (8) Combination meter
(immobilizer indicator light) |

B: REGISTRATION

Registration is a procedure that must be carried out when an additional key is purchased or when either a key, ECM or combination meter is replaced. The procedure includes initialization of the system and re-registration of the ID code. Once initialized, the system loses the ID code it has retained so far and has no code until a new code is registered. ID codes for up to four keys (transponders) can be registered with a body integrated unit.

To prevent a copied key to be used, any set of keys (four maximum) can be registered only with one body integrated unit. Therefore, if a body integrated unit is replaced with a new one, the keys having been used with the old body integrated unit cannot be used with the new body integrated unit. The keys must be replaced simultaneously with the body integrated unit.

Registration is carried out by an authorized person using a select monitor and a special program. Access to the program is strictly controlled for reasons of security. The security ID (kept by customer) is required for registration. As the ID code for all registered keys are cleared when registration is started, registration must be performed with all keys including spares handed from the customer.