Buick Excelle Immobilizer Programing

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Buick Excelle engine immobilizer system uses an ignition key with transponder (chip) to confirm the identification of user for guide against theft purpose. After turning ignition key on, immobilizer system will check the ignition key and compare the code in the ignition key with the code memorized in the immobilizer control unit (ICU). If the two match, the immobilizer control unit (ICU) will send a unblock signal to engine control module (ECM) so that the engine operates normally. If ECM receives an incorrect unblock signal, ECM will automatically cut off injection control circuit, fuel pump control circuit and ignition coil control circuit to prevent engine from start-up.

Immobilizer system consists of:
Ignition key
Immobilizer control module ICU(with inside antenna) in steering column
Transponder(installed within ignition key)
Engine control module(ECM)

Now let's introduce how and when to program immobilizer of Buick Execlle with X431.

Conditions:

You must program immobilizer for the following 5 conditions:

1. to exchange engine control module of two cars;

2. to exchange immobilizer control module(ICU) of two cars;

3. to exchange keys/transponders of two cars(Do exchange the two keys simultaneously);

Note:

To ensure normal operation to customer vehicle, the operation of three items above is just for technician to confirm fault in service or emergency. Do not use other vehicle's ECM, engine anti-start control module, ignition key to faulty vehicle after being anti-theft programmed in this ways above.

4. add a new ignition key or disable a lost ignition key;

5. Replace a new immobilizer control module (ICU).

Note:

If you want to replace new Excelle engine control module (ECM), you don't need to program immobilizer because new ECM will accept the first immobilizer signal.

Procedures for programming immobilizer with X-431:

1. Turn ignition to ON position;

2. Connect diagnostic device X-431;

3. Enter X-431 menu: Buick Excelle-immobilizer-program-immobilizer program function;

4. Program each key as instructions in X-431 user manual;

5. Do ignition cycles three times circles as the prompt in X-431.

Note:
After program is complete, ignition on/off three times (engine-off). Keep ignition key in ON position more than 3 seconds, and in OFF position more than 2 seconds. After three times cycles, unplug ignition key and wait for more then 10 seconds, then use the programmed key to turn on engine to verify if program is ok.

6. Keep ignition key to LOCK position for more than 10 seconds. Disconnect diagnostic device X-431 and test all keys;
7. If any key doesn't start up engine, reprogram all keys.
8. If any key can't be programmed, replace it and reprogram all keys.

Note:
There are two types of chip in transponder on 2007 model, and they can't be exchanged.

Note:

1. If you want to program immobilizer system, you would have two keys at least, four keys at most.

2. If you want to disable a lost key, you just do immobilizer programming to old keys and new keys at the same time. For more safety, you should suggest the costumer to replace whole door locks.

Explanation for "Switch to neutral mode" function:
After switching to neutral mode, the data link (for VIN mainly) between ignition key (chip), ECM and immobilizer will be switched to a default status temporarily: for a normal vehicle, the VIN in its immobilizer and ECM can be ignored temporarily not to take part in the program of safe data of engine immobilizer control. On this condition, the ignition key of the original vehicle can be used to start up any vehicle; however, since startup is OK, the connection (for VIN mainly) between ignition key (chip), ECM and immobilizer will be founded again.
For example, if we suspect that engine can't be started up is caused by the inactive ECM of A car; we can replace other car's ECM to confirm. We just do F2 to A car, switch to neutral mode, replace ECM of B car. If ECM (A) is damaged, we don't need to do F0(immobilizer program) to ECM (B) in A car, engine can start up normally. But after ECM (B) is reinstalled back in B car, the engine can't start up at once. We should reprogram immobilizer or switch to neutral mode for further operation.