How to use Scan tool to match ignition key and remote control key on Nissan

1. Key initialization

Initialize the car key under following conditions:
(1) For earlier models, whose ECU do not support C/U INITIALIZATION, and Scan tool can only read DTCs and clear DTCs from NATS. For such models, the car key can be initialized without decoder.

Operating steps: turn the ignition key to ON position and wait at least 5sec, then pull out the key and wait at least 5sec, after that, the ignition key will be initialized automatically.
(2) For newer models, the initialization should be performed with scanner when the following conditions meet:
(2.1) If the BCM is replaced, to initialize all ignition keys or door keys by decoder.
(2.2) If replace a used ECM, to initialize all keys by decoder.
(2.3) If replace a new ECM, just turn the ignition key on and wait 5sec and then turn off, the ignition key will be initialized automatically. If the engine can't be started, then the ignition key shall be initialized by decoder.

All existed ID numbers will be cleared as long as initialization performed. Therefore, it is necessary to register all the keys again. Otherwise, the engine can't be started, and "DIFFERENCE OF KEY" or "LOCK MODE" will be appeared on the display of scanner when performing scan on OBD.

Before initializing the car key, the PIN codes shall be obtained. Following is the explanation of PIN codes:
PIN codes can be separated into fixed code and random code, which can be differentiated from the printed characters on label which stuck on NATS control unit.
Fixed code: if the label is printed with characters [A] or no characters, then the PIN code is a fixed code. 5523 is default, which is mainly applied on some 2000-2004 models, such as Cefiro A33, SUNNY and the other common models.
Random code(4 digits): can be obtained from Nissan Company. Each car has its unique PIN codes. Before obtaining the PIN, customer must firstly provide a 5-digits identification code(consisted of numbers and letters)written on BCM, or read it from related BCM subsystem via Scan tool.

After obtained PIN code, Scan tool can be used to initialize the ignition key by accessing NATS system and perform appropriate DTCs diagnosis or key replacement via re-programming operation. For details, please refer to steps below:
1. Select "C/U INITIALIZATION" mode;
2. Turn the ignition key to "ON" position;
3. Input password (PIN code);
4. Press "START" button to start the control unit initialization process;
5. "INITIALIZATION COMPLETED" indicates that the initialization of the IMMU and ECM
is finished;
If the fifth step shows "INITIALIZATION STOPPED, or FAILED", it indicates the initialization by decoder uncompleted or failed.
6. Turn the ignition switch to "OFF" position and pull out the key.
7. Turn the ignition switch to "OFF" or "ON" position;
8. Read DTCs;
9. Replace IMMU if displaying "IMMU", and then use X-431 or CONSULT-II to perform C/U INITIALIZATION". Perform "C/U INITIALIZATION again if displaying “No DTCs”,

2. Ignition key registration

1. Insert the 1st key into ignition switch, and turn to "ON" position to remain for more than 5sec, and then turn the ignition key to "OFF" position and pull out the ignition key;
2. After 5sec, when the anti-theft indicator flashing, insert the 2nd key, and turn to "ON" position to remain for more than 5sec, and then turn the ignition key to "OFF" position and pull out the ignition key;
3. Repeat the above-mentioned steps which can match up to five keys;
4. Open the door or start the engine to exit the key registration;
5. Confirm each key (remote controller) can start the engine as the normal.

If the remote control keys can start the engine, pay attention to whether the remote controller can open and lock the door. Otherwise, the remote controller must be matched. There are two matching methods below:

Method 1:

1. Close all the doors (the operator shall be inside the car), and lock the driver's door
2. Within 10 seconds, insert the ignition key and pull out, which shall be repeated for more than six times;
3. Hazard warning lights will flash twice;
4. Turn the ignition switch to ACC position;
5. At this time, press any one button on the new remote controller once. (Hazard warning lights will flash twice);
6. If copy another anti-theft remote controller, turn the "LOCK" button on driver's side to "UNLOCK" and then to "LOCK", then repeat step 5;
7. If matching is completed, just open the car door and pull out the ignition key.

Method 2:

1. After opened the trunk, close and lock all the doors;
2. Within 10 seconds, insert the ignition key and pull out, which shall be repeated for more
than six times;
3. Open the driver's door and then lock;
4. At this time, press "LOCK" button once on new anti-theft remote controller;
5. If copy another anti-theft remote control keys, to repeat the steps 2-4.

**Intelligent Key Registration:**

1. Before the registration of intelligent key, firstly register the ignition key.
2. Turn the ignition key to ON position, register the intelligent key via REGIST I-KEY ID function of I-KEY system. During the registration, the intelligent key shall be inside the car, Besides, press any one button on intelligent key.

Notes: difference between intelligent key and remote control key.
Remote control key: starts the engine by remote control the ignition key chip inside, therefore, after the ignition key registration, just insert the ignition key inside the remote control key can start the vehicle via remote controlling. Such as: TIIDA of 2007 and 2008. However, after such key matching is completed, the remote controller shall be matched for door opening and locking.
Intelligent Key: such key has its own intelligent chip inside, therefore, after the ignition key registration, the intelligent key also must be matched before starting the engine. Refer to Intelligent Key Registration for matching method.

**DTCs of NATS**

The most common DTCs of NATS are P1610, P1611, P1612, P1614, and P1615, etc. Their relative meanings are as follows:
[P1610]: LOCK MODE (dead lock mode);
[P1611]: ID DISCORD, IMMU-ECM (the ID signals between IMMU and ECM are inconsistent, which means the system shall be initialized);
[P1612]: CHAIN OF ECM-IMMU (a fault on NATS communication line between ECM and IMMU);
[P1614]: CHAIN OF IMMU-KEY (a fault on the line between IMMU and KEY which causes the BCM can't receive the key ID signal);
[P1615]: DIFFERENCE OF KEY (BCM has received the ID signal of key and identified it as the illegal)

NATS will enter into dead lock mode if using an unregistered or invalid key to start the engine for more than five times, at this time, even though the correct car key also can not normally start the engine. To unlock the mode, the system shall be initialized again. If the detected DTCs are related to engine system, the related DTCs will also display on ECM. Before clearing the DTCs memory on NATS, firstly check the DTCs on engine system because while deleting the self-diagnostic codes of NATS, the memory on the "engine" self-diagnosis system will also be cleared.