Area Application : Europe, General, Australia

Model Name   : LAND CRUISER

Model Code   : UZJ100, FZJ105, HDJ100, HZJ105

Subject : ENGINE IMMOBILISER SYSTEM

This is inform you of the key code registration procedure for the engine immobiliser system.

- 2UZ−FE engine : Page 2 − 9
- Except 2UZ−FE engine : Page 10 − 16

The attached pages are to be used with the following manual.

Pub. No.	Publication Name
RM616E	Land Cruiser Chassis & Body Repair Manual

Production Effective :

Frame No.	Production Date
−−−	January, 1998

REGISTRATION PROCEDURE (2UZ–FE)

HINT:

In case of having lost all the already registered master keys, you are not able to do additional registration or deletion. Change the engine and ECT ECU and then must register the new key codes according to the following registration procedure of the automatic registration mode.

1. KEY REGISTRATION IN AUTOMATIC REGISTRATION MODE
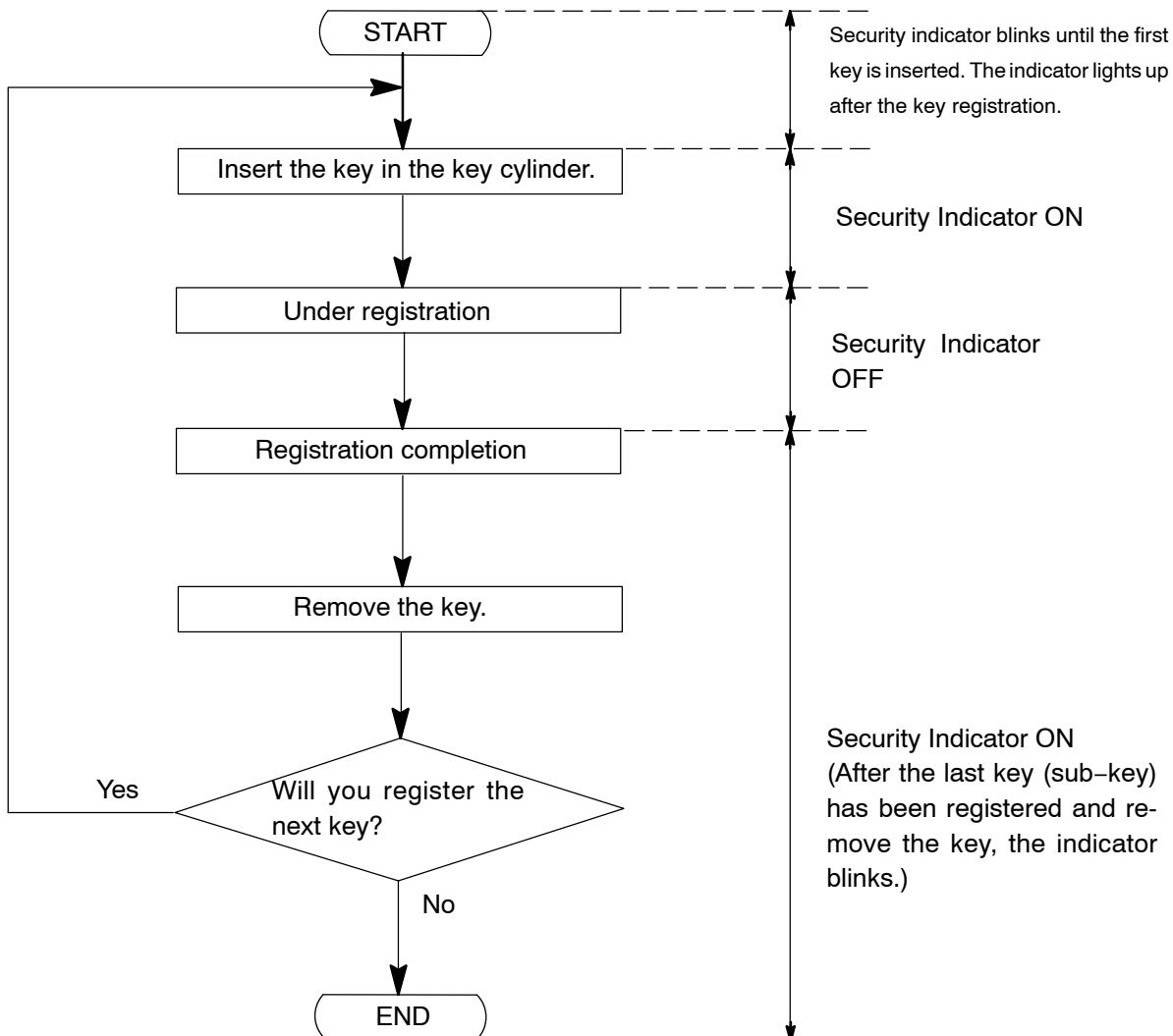
(a) Registration of a new transponder key.

HINT:

• This must be done when you install a new Engine and ECT ECU.

• The new Engine and ECT ECU is on the automatic key code registration mode. The already fixed number of key codes for this Engine and ECT ECU can be registered.
   On this type of vehicle, up to 3 or 4 key codes can be registered.

      3 key codes : General

      4 key codes : Europe, Australia

• In the automatic registration mode, the last key registered becomes sub–key.

```
          START ────────────────────────────┐   Security indicator blinks until the first
            │                                │   key is inserted. The indicator lights up
            │                                │   after the key registration.
            ▼
  ┌───────────────────────────────┐ ──────── │
  │ Insert the key in the key cylinder. │      │
  └───────────────────────────────┘          │   Security Indicator ON
            │
            ▼
  ┌───────────────────────────────┐ ──────── │
  │        Under registration       │          │
  └───────────────────────────────┘          │   Security Indicator
            │                                     OFF
            ▼
  ┌───────────────────────────────┐ ──────── │
  │     Registration completion     │          │
  └───────────────────────────────┘
            │
            ▼
  ┌───────────────────────────────┐
  │        Remove the key.          │
  └───────────────────────────────┘
            │
            ▼                                     Security Indicator ON
  Yes    ◇─────────────────────◇                 (After the last key (sub–key)
  ┌──────│ Will you register the │                has been registered and re-
  │      │     next key?         │                move the key, the indicator
  │      ◇─────────────────────◇                 blinks.)
  │            │
  │            │ No
  │            ▼
  │         ( END ) ──────────────────────────┘
  └────────────────┘
```

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HINT:
- When a key is not inserted in the key cylinder on the automatic registration mode, the security indicator always lights on.
- When the immobiliser system operates normally and the key is pull out, the security indicator blinks.
- When key code registration could not be performed on the automatic registration mode, code 2–1 is output from the security indicator and when inserting the already registered key, code 2–2 is output.

(b) Automatic registration mode completion
   If completing the mode forcibly when more than 1 key code have been registered on the automatic registration mode, perform the following procedures.
   After 1 more key code have been registered with master key, perform step (1) or (2) without pulling the key out or inserting the already registered key.
       (1) Depress and release brake pedal 5 times or more within 15 sec.
       (2) With the hand–held tester, require automatic registration mode completion.

2. REGISTRATION OF ADDITIONAL MASTER KEY
There are 2 ways for registration of additional master key, one way is depressing brake pedal and acceleration pedal and the other way is using hand–held tester.
HINT:
- It is possible to register up to 7 master key codes including the already registered key code.
- When any operation time described below is over, registration mode completes.
- When the next procedure is performed while the timer is working, the timer completes counting time, then next timer starts.
- When replacing "Ignition Cylinder Key Set" or "Lock Cylinder Set" and register according to the following procedure using the original master key. However, after the registration of the additional master key, as the original master key and the original sub–key is not necessary any more, so erase registration of those key codes.

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           (Revised 2)
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(1)   Depressing brake pedal and acceleration pedal:

```
        ┌─────────────────────────────────────────┐ ─ ─ ─ ─ ┐
        │ Insert already registered master key in │         │
        │ the key cylinder                          │        │
        └─────────────────────────────────────────┘         │ Within 15 sec.
                         │                                   │
                         ▼                                   │
        ┌─────────────────────────────────────────┐ ─ ─ ─ ─ ┘
        │ Depress and release the acceleration    │         ┐
        │ pedal 5 times.                           │         │
        └─────────────────────────────────────────┘         │ Within 20 sec.
                         │                                   │
                         ▼                                   │
        ┌─────────────────────────────────────────┐ ─ ─ ─ ─ ┘
        │ Depress and release the brake pedal 6    │         ┐
        │ times, and remove the master key.        │         │
        └─────────────────────────────────────────┘         │ Within 10 sec.
                         │                                   │
                         ▼                                   │
        ┌─────────────────────────────────────────┐ ─ ─ ─ ─ ┘
        │ Insert key to be registered in key       │         ┐
        │ cylinder.                                │         │
        └─────────────────────────────────────────┘         │ Within 10 sec.
                         │                                   │
                         ▼                                   │
        ┌─────────────────────────────────────────┐ ─ ─ ─ ─ ┘
        │ Depress and release the acceleration    │
        │ pedal 1 time. (Security indicator blinks)│
        └─────────────────────────────────────────┘
```

Within 15 sec.

Within 20 sec.

Within 10 sec.

Within 10 sec.

Within 10 sec.

After 60 sec. additional master key is registered. (Security indicator is OFF)

Will you register the next key?

Yes

No

The registration mode completes when pulling out the key and depressing and releasing the brake pedal once or more within 10 secs. after indicator has been off or 10 sec. have passed.

(2) Using hand-held tester:

```
┌─────────────────────────────────────────────┐
│ Insert already registered master key in the  │
│ key cylinder and turn the ignition switch ON. │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│ Using hand-held tester select master key     │
│ registration.                                 │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│ Remove the master key.                        │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│ Insert key to be registered in key cylinder.  │
│ (Security indicator blinks)                   │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│ After 60 sec., additional master key is       │
│ registered.                                   │
│ (Security indicator OFF)                      │
└─────────────────────────────────────────────┘
                      │
                      ▼
┌─────────────────────────────────────────────┐
│ The registration mode completes when pulling  │
│ out the key and depressing and releasing the  │
│ brake pedal once or more within 10 sec. after │
│ indicator has been off or 10 sec. have passed.│
└─────────────────────────────────────────────┘
```

Within 20 sec.

Within 10 sec.

HINT:
Please follow the screen of the hand-held tester for more detailed procedure.

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3. REGISTRATION OF ADDITIONAL SUB-KEY

There are 2 ways for registration of additional sub-key, one way is depressing brake pedal and acceleration pedal and the other way is using hand-held tester.
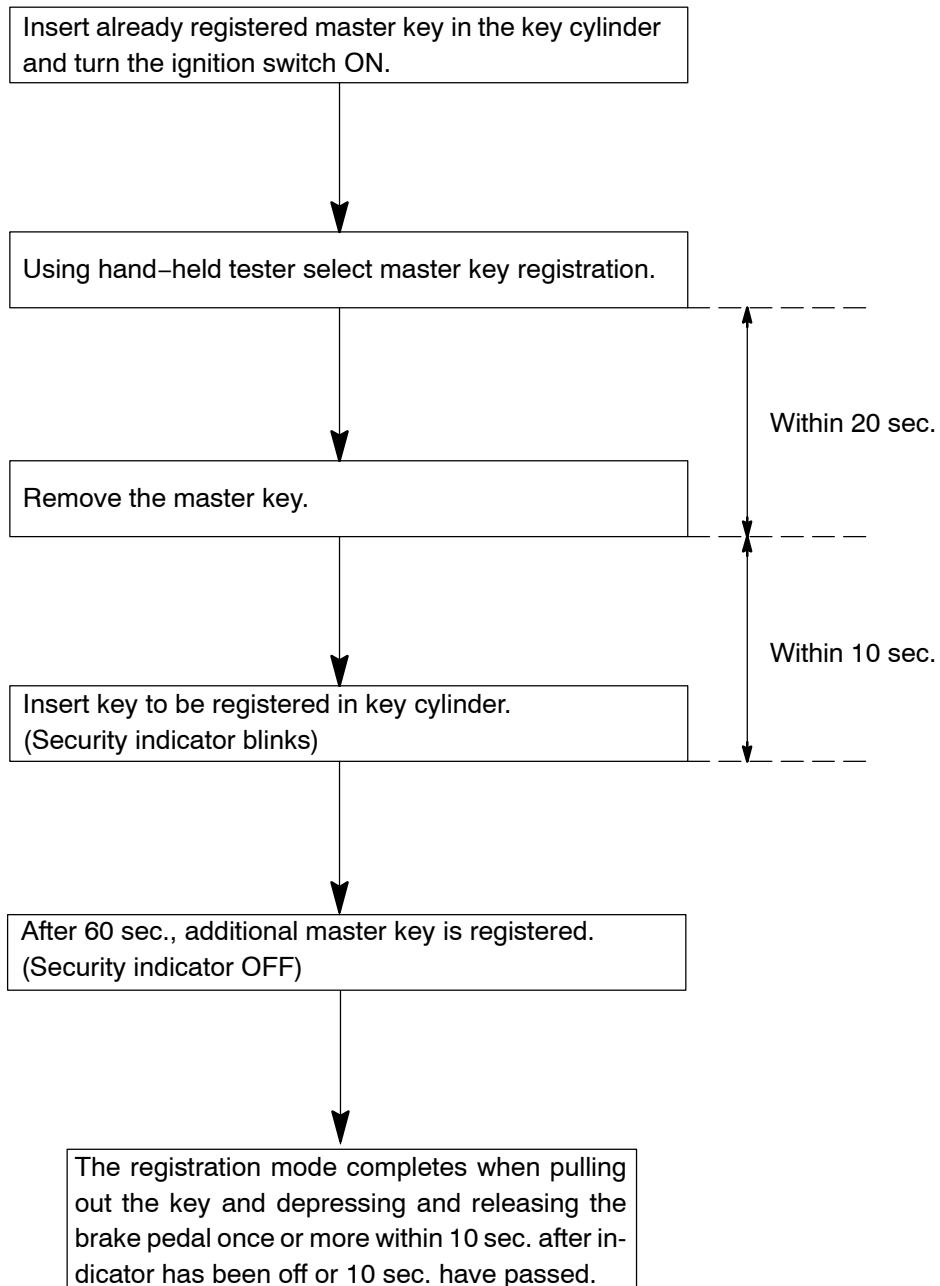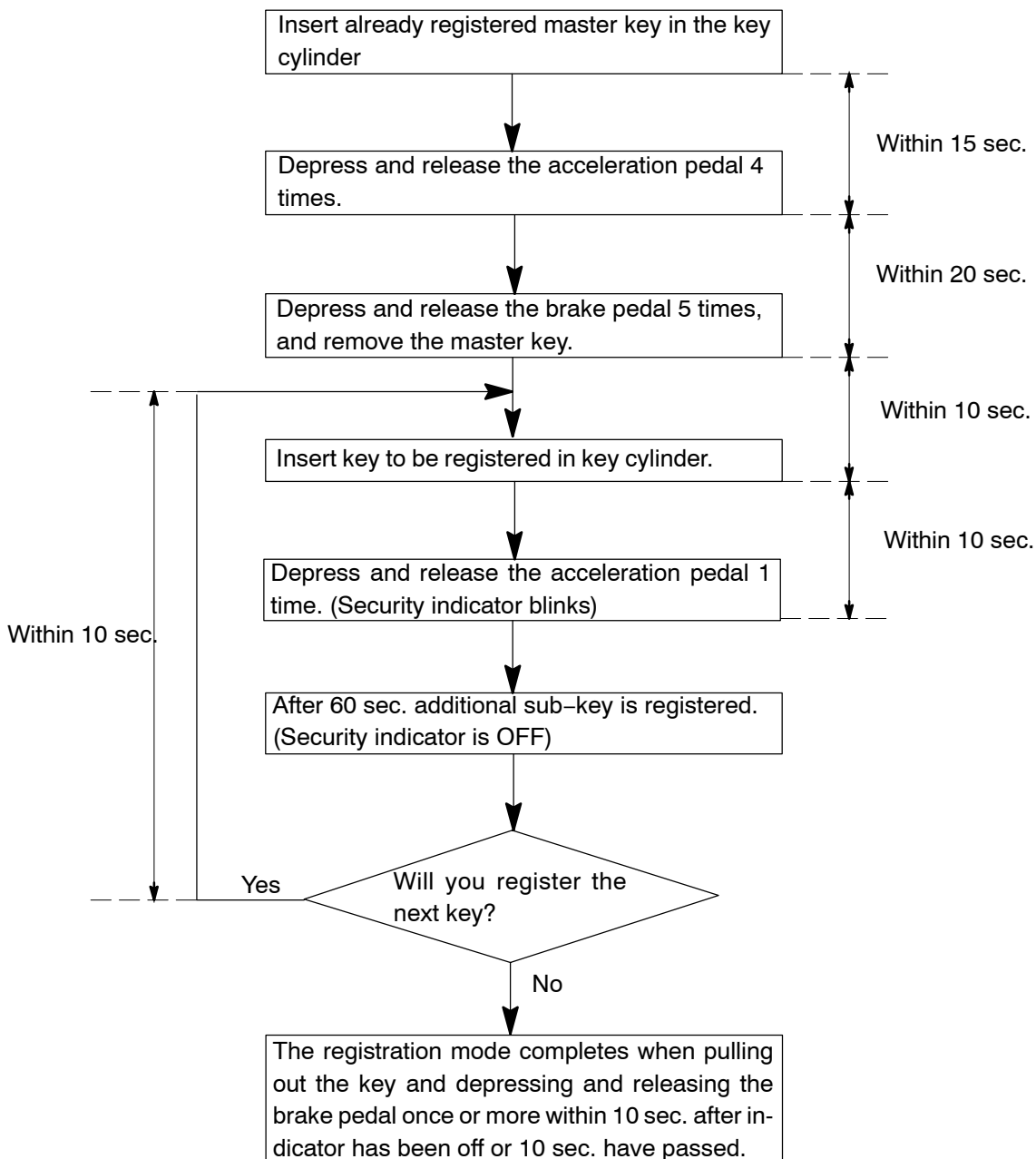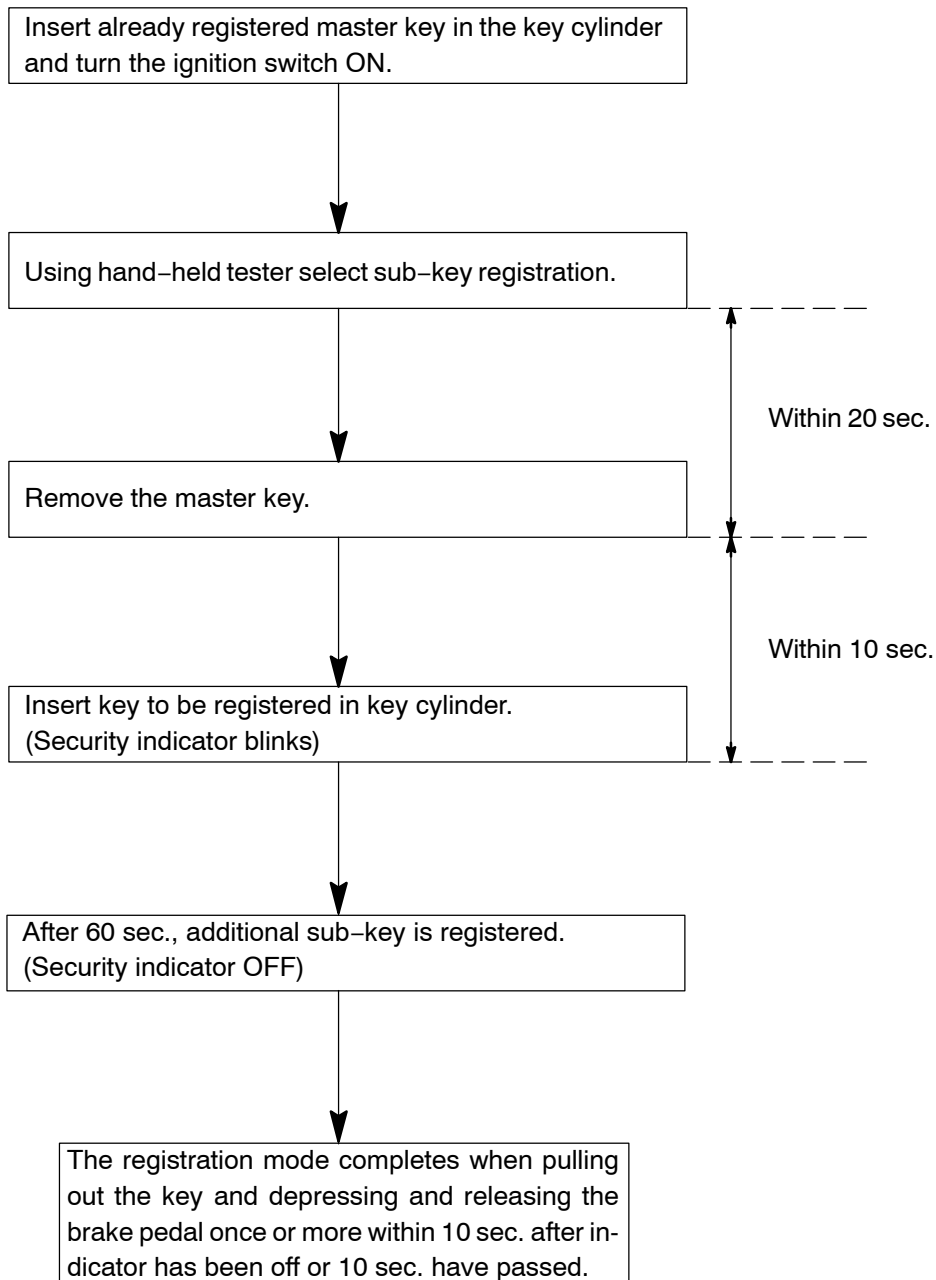
HINT:

- It is possible to register up to 3 sub-key codes including the already registered key code.
- When any operation time described below is over, registration mode completes.
- When the next procedure is performed while the timer is working, the timer completes counting time, then next timer starts.

(1) Depressing brake pedal and acceleration pedal:

```
┌─────────────────────────────────────┐
│ Insert already registered master key │
│ in the key cylinder                  │
└─────────────────────────────────────┘
                 │
                 ▼                          Within 15 sec.
┌─────────────────────────────────────┐
│ Depress and release the acceleration │
│ pedal 4 times.                       │
└─────────────────────────────────────┘
                 │
                 ▼                          Within 20 sec.
┌─────────────────────────────────────┐
│ Depress and release the brake pedal  │
│ 5 times, and remove the master key.  │
└─────────────────────────────────────┘
                 │
                 ▼                          Within 10 sec.
┌─────────────────────────────────────┐
│ Insert key to be registered in key   │
│ cylinder.                            │
└─────────────────────────────────────┘
                 │
                 ▼                          Within 10 sec.
┌─────────────────────────────────────┐
│ Depress and release the acceleration │
│ pedal 1 time. (Security indicator    │
│ blinks)                              │
└─────────────────────────────────────┘
                 │
                 ▼
┌─────────────────────────────────────┐
│ After 60 sec. additional sub-key is  │
│ registered. (Security indicator is   │
│ OFF)                                 │
└─────────────────────────────────────┘
                 │
                 ▼
          Yes  ◇ Will you register the
          ◄──── next key?  ◇
                 │
                 │ No
                 ▼
┌─────────────────────────────────────┐
│ The registration mode completes when │
│ pulling out the key and depressing   │
│ and releasing the brake pedal once   │
│ or more within 10 sec. after         │
│ indicator has been off or 10 sec.    │
│ have passed.                         │
└─────────────────────────────────────┘
```

Within 10 sec. (Yes branch returns to "Insert key to be registered in key cylinder.")

(2)   Using hand–held tester:

```
┌─────────────────────────────────────────────────┐
│ Insert already registered master key in the key │
│ cylinder and turn the ignition switch ON.        │
└─────────────────────────────────────────────────┘
                        │
                        ▼
┌─────────────────────────────────────────────────┐
│ Using hand–held tester select sub–key           │
│ registration.                                    │
└─────────────────────────────────────────────────┘
                        │                    Within 20 sec.
                        ▼
┌─────────────────────────────────────────────────┐
│ Remove the master key.                           │
└─────────────────────────────────────────────────┘
                        │                    Within 10 sec.
                        ▼
┌─────────────────────────────────────────────────┐
│ Insert key to be registered in key cylinder.     │
│ (Security indicator blinks)                      │
└─────────────────────────────────────────────────┘
                        │
                        ▼
┌─────────────────────────────────────────────────┐
│ After 60 sec., additional sub–key is registered. │
│ (Security indicator OFF)                         │
└─────────────────────────────────────────────────┘
                        │
                        ▼
┌─────────────────────────────────────────────────┐
│ The registration mode completes when pulling     │
│ out the key and depressing and releasing the     │
│ brake pedal once or more within 10 sec. after in-│
│ dicator has been off or 10 sec. have passed.     │
└─────────────────────────────────────────────────┘
```

HINT:
Please follow the screen of the hand–held tester for more detailed procedure.
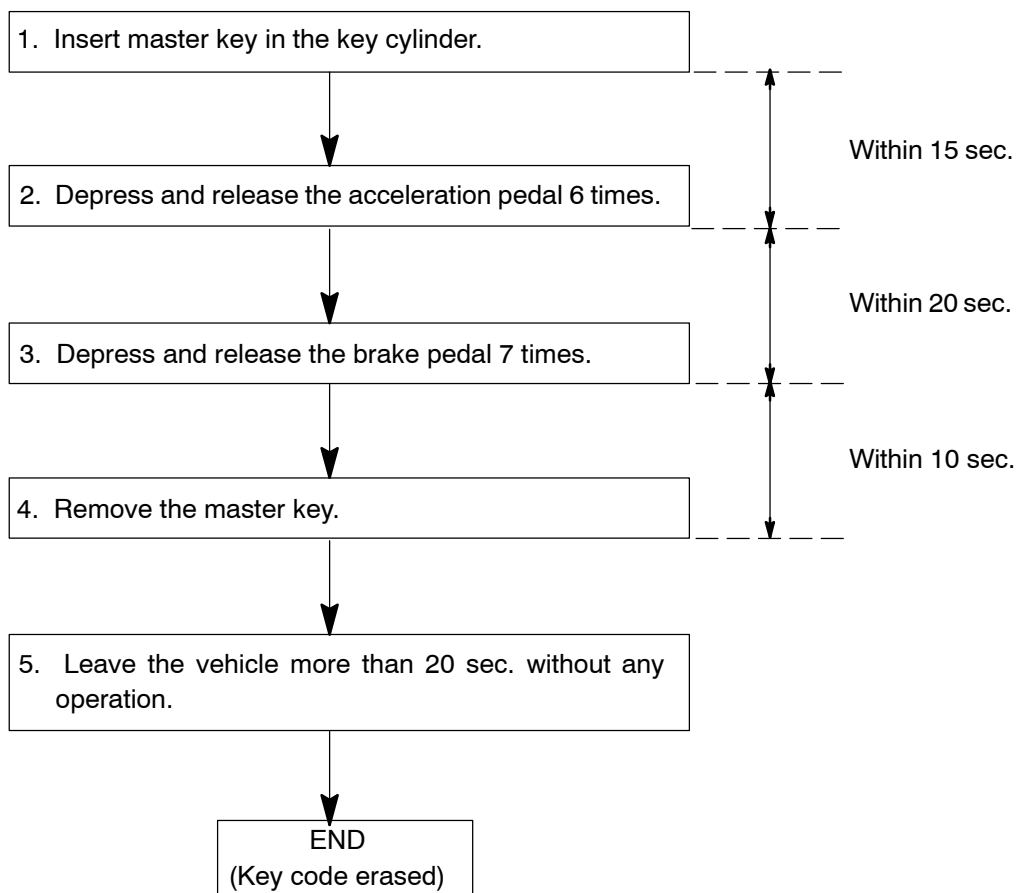
4. ERASURE OF TRANSPONDER KEY CODE

There are 2 ways for erasure of transponder key code, one way is depressing brake pedal and acceleration pedal and the other way is using hand–held tester.

HINT:

- Delete all other master and sub–key codes leaving the master key code to use the operation. When using the key which was used before deletion, it is necessary to register the code again.
- When any operation time described below is over, registration mode completes.
- When the next procedure is performed while the timer is working, the timer completes counting time, then next timer starts.
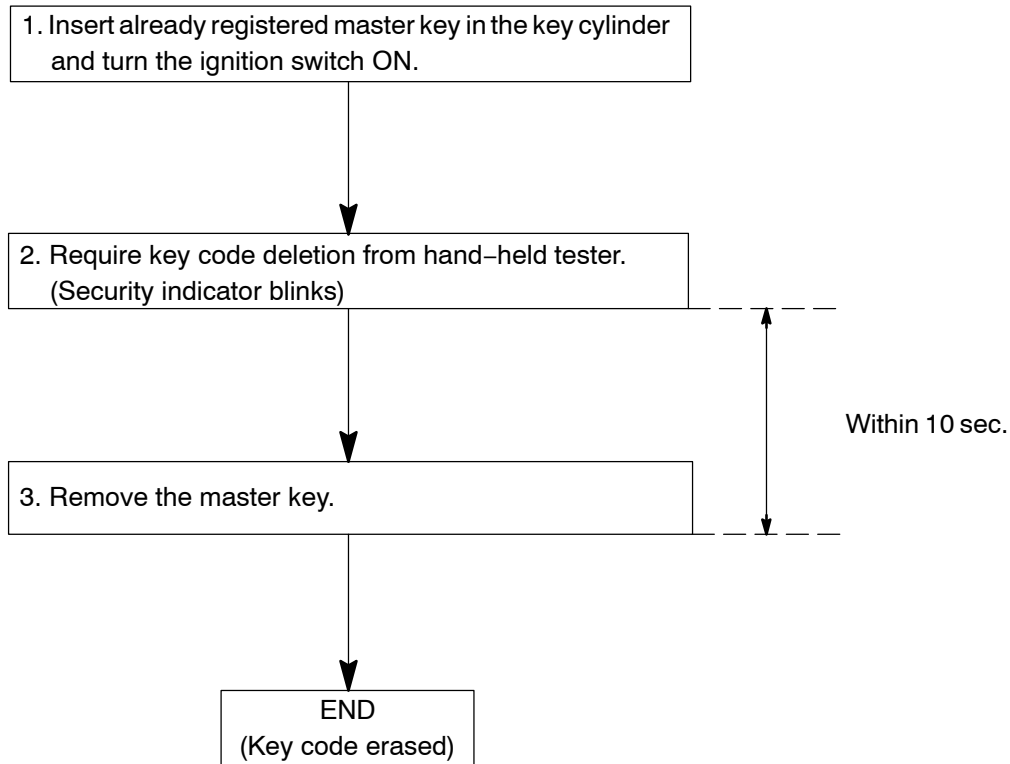
(1) Depressing brake pedal and acceleration pedal:

1. Insert master key in the key cylinder.	
↓	Within 15 sec.
2. Depress and release the acceleration pedal 6 times.	
↓	Within 20 sec.
3. Depress and release the brake pedal 7 times.	
↓	Within 10 sec.
4. Remove the master key.	

5. Leave the vehicle more than 20 sec. without any operation.

↓

END
(Key code erased)

HINT:

If the key cannot be pulled out within 30 sec. from the first brake depression in the step 3, the key code deletion is canceled.

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(2)   Using hand−held tester:

```
┌─────────────────────────────────────────────────────┐
│ 1. Insert already registered master key in the key   │
│    cylinder and turn the ignition switch ON.          │
└─────────────────────────────────────────────────────┘
                         │
                         ▼
┌─────────────────────────────────────────────────────┐
│ 2. Require key code deletion from hand−held tester.   │
│    (Security indicator blinks)                        │
└─────────────────────────────────────────────────────┘
                         │                    ╎
                         ▼                    ╎  Within 10 sec.
┌─────────────────────────────────────────────────────┐
│ 3. Remove the master key.                             │
└─────────────────────────────────────────────────────┘
                         │
                         ▼
              ┌──────────────────────┐
              │         END          │
              │  (Key code erased)   │
              └──────────────────────┘
```

HINT:

- When the key cannot be pulled out in the step 3, key code deletion is canceled.
   (Security indicator is OFF.)
- Please follow the screen of the hand−held tester for more detailed procedure.
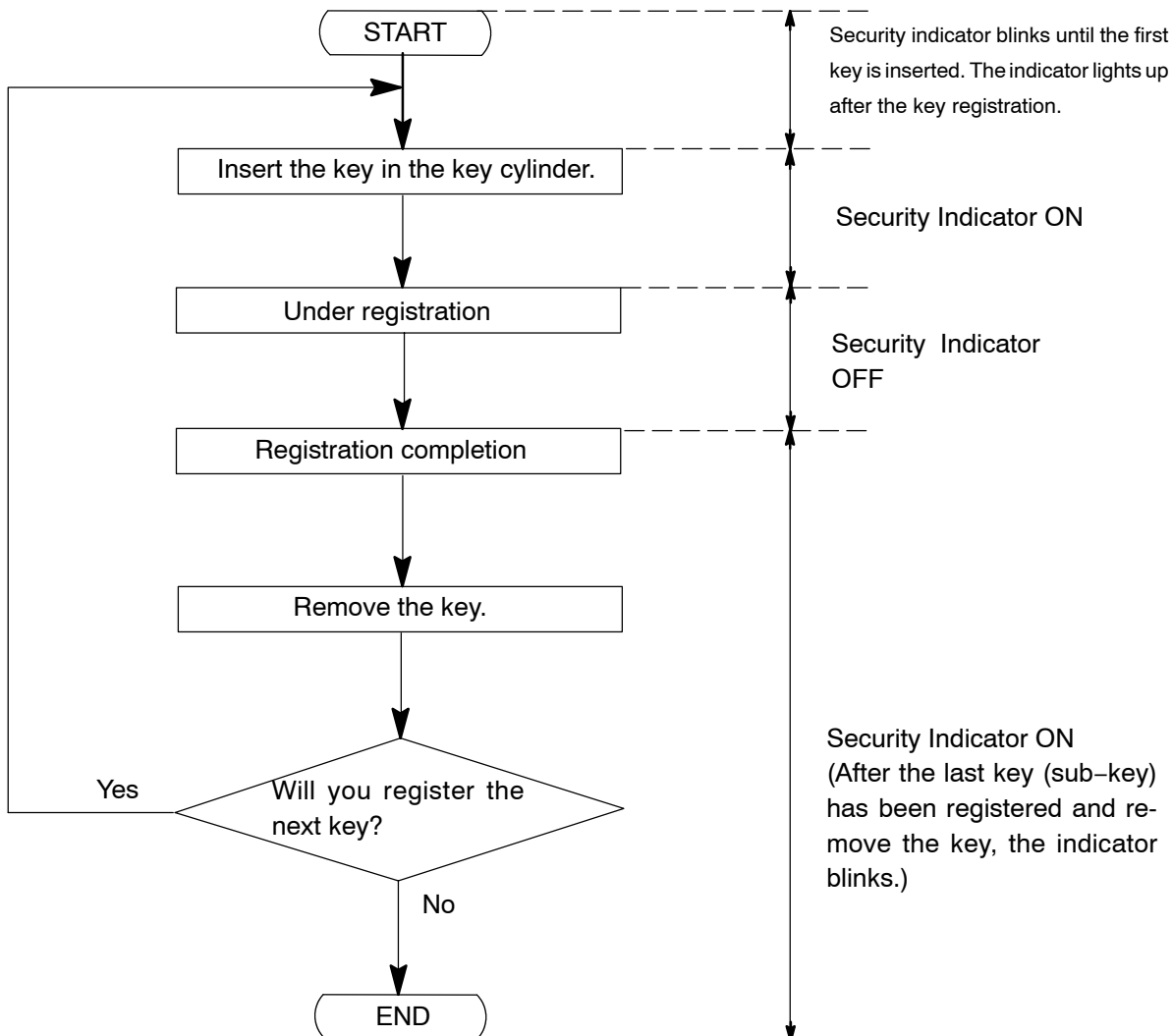
REGISTRATION PROCEDURE (Except 2UZ–FE)

HINT:

In case of having lost all the already registered master keys, you are not able to do additional regis-tration or deletion. Change the transponder key computer and then must register the new key codes according to the following registration procedure of the automatic registration mode.

1.   KEY REGISTRATION IN AUTOMATIC REGISTRATION MODE
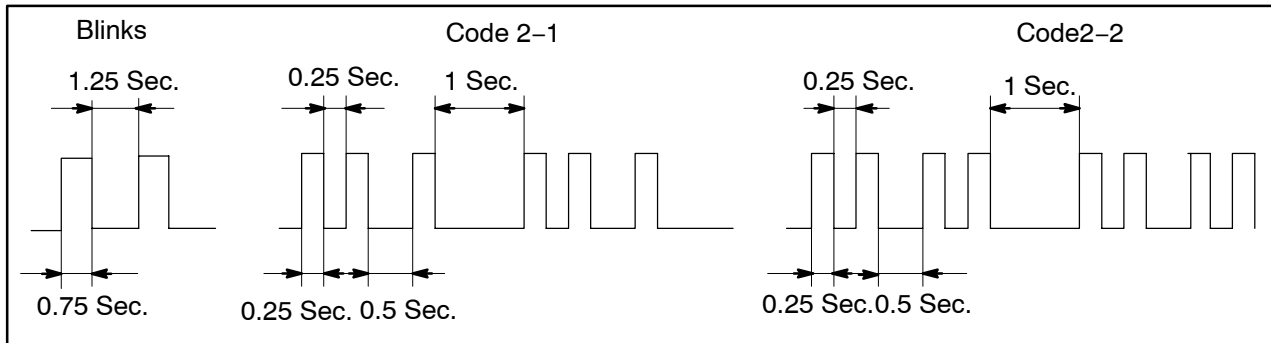
(a)   Registration of a new transponder key.

HINT:

•   This must be done when you install a new transponder key computer.

•   It is possible to register up to 3 or 4 key codes.

         3 key codes : General

         4 key codes : Europe, Australia

•   In the automatic registration mode, the last key registered becomes sub–key.

```
                    ┌─────────────┐
                    │    START    │ ─ ─ ─ ─ ─ ─ ─ ─     Security indicator blinks until the first
                    └─────────────┘              │      key is inserted. The indicator lights up
                           │                      │      after the key registration.
                           ▼                      │
        ┌──────────────────────────────────┐ ─ ─ │
        │  Insert the key in the key cylinder. │    │
        └──────────────────────────────────┘      │      Security Indicator ON
                           │                       │
                           ▼                       │
        ┌──────────────────────────────────┐ ─ ─ │
        │         Under registration        │       │     Security  Indicator
        └──────────────────────────────────┘       │     OFF
                           │                        │
                           ▼                        │
        ┌──────────────────────────────────┐ ─ ─  │
        │       Registration completion      │       │
        └──────────────────────────────────┘       │
                           │
                           ▼
        ┌──────────────────────────────────┐
        │           Remove the key.          │
        └──────────────────────────────────┘
                           │
                           ▼
       Yes           ◇───────────────◇            Security Indicator ON
      ┌──────────────│ Will you register the │    (After the last key (sub–key)
      │              │     next key?         │    has been registered and re-
      │              ◇───────────────◇       move the key, the indicator
      │                      │                    blinks.)
      │                      │ No
      │                      ▼
      │              ┌─────────────┐
      │              │     END     │ ─ ─ ─ ─ ─ ─ ─
      │              └─────────────┘
```

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HINT:
- When a key is not inserted in the key cylinder on the automatic registration mode, the security indicator always lights on.
- When the immobiliser system operates normally and the key is pull out, the security indicator blinks.
- When key code registration could not be performed on the automatic registration mode, code 2–1 is output from the security indicator and when inserting the already registered key, code 2–2 is output.

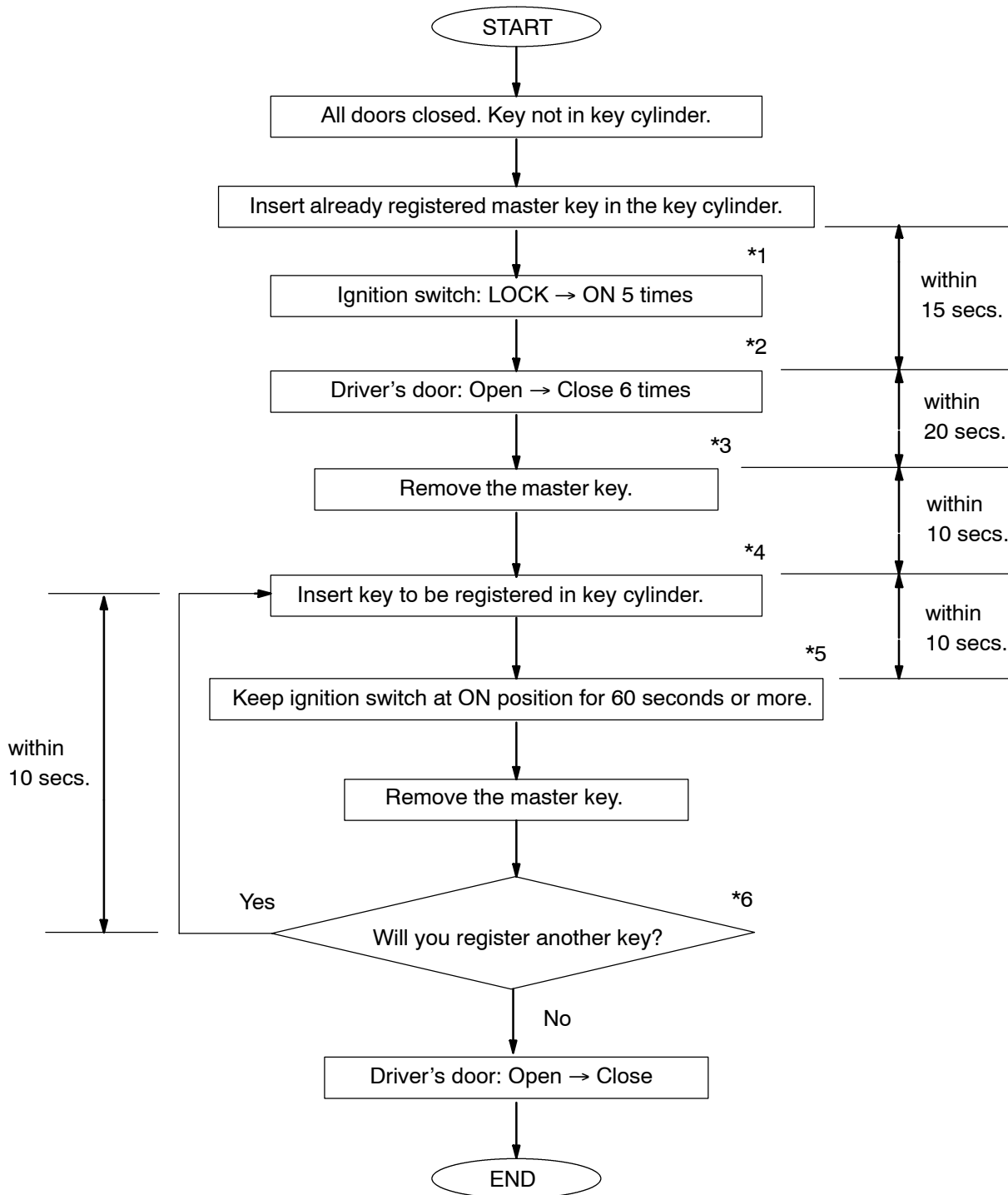| Blinks	Code 2–1	Code2–2
1.25 Sec.	0.25 Sec. 1 Sec.	0.25 Sec. 1 Sec.
0.75 Sec.	0.25 Sec. 0.5 Sec.	0.25 Sec. 0.5 Sec.

(b) Automatic registration mode completion
   If completing the mode forcibly when more than 1 key code have been registered on the automatic registration mode, perform the following procedures.
   After 1 more key code have been registered with master key, turn the ignition switch LOCK → ON 5 times within 10 secs. of inserting the already registered key or without pulling the key out.

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2. REGISTRATION OF ADDITIONAL MASTER KEY

Do this operation to register an additional master key.

```
                    ( START )
                        │
                        ▼
        ┌───────────────────────────────────────┐
        │ All doors closed. Key not in key cylinder. │
        └───────────────────────────────────────┘
                        │
                        ▼
        ┌───────────────────────────────────────┐                    ┐
        │ Insert already registered master key in the key cylinder. │
        └───────────────────────────────────────┘                    │
                        │                          *1                 │ within
                        ▼                                             │ 15 secs.
        ┌───────────────────────────────────────┐                    │
        │ Ignition switch: LOCK → ON 5 times    │                    ┘
        └───────────────────────────────────────┘
                        │                          *2                 ┐
                        ▼                                             │ within
        ┌───────────────────────────────────────┐                    │ 20 secs.
        │ Driver's door: Open → Close 6 times   │                    │
        └───────────────────────────────────────┘                    ┘
                        │                          *3                 ┐
                        ▼                                             │ within
        ┌───────────────────────────────────────┐                    │ 10 secs.
        │ Remove the master key.                │                    │
        └───────────────────────────────────────┘                    ┘
                        │                          *4                 ┐
                        ▼                                             │ within
        ┌───────────────────────────────────────┐                    │ 10 secs.
   ──── │ Insert key to be registered in key cylinder. │             ┘
  │     └───────────────────────────────────────┘
  │                     │                          *5
  │                     ▼
  │     ┌───────────────────────────────────────┐
  │     │ Keep ignition switch at ON position for 60 seconds or more. │
  │     └───────────────────────────────────────┘
  │                     │
  │                     ▼
  │     ┌───────────────────────────────────────┐
  │     │ Remove the master key.                │
  │     └───────────────────────────────────────┘
  │                     │
within │            Yes  ▼                          *6
10 secs.          ◇─────────────────────────────◇
  │       ────────│  Will you register another key?  │
  │               ◇─────────────────────────────◇
  │                     │ No
  │                     ▼
  │     ┌───────────────────────────────────────┐
  │     │ Driver's door: Open → Close           │
  │     └───────────────────────────────────────┘
  │                     │
                        ▼
                    ( END )
```
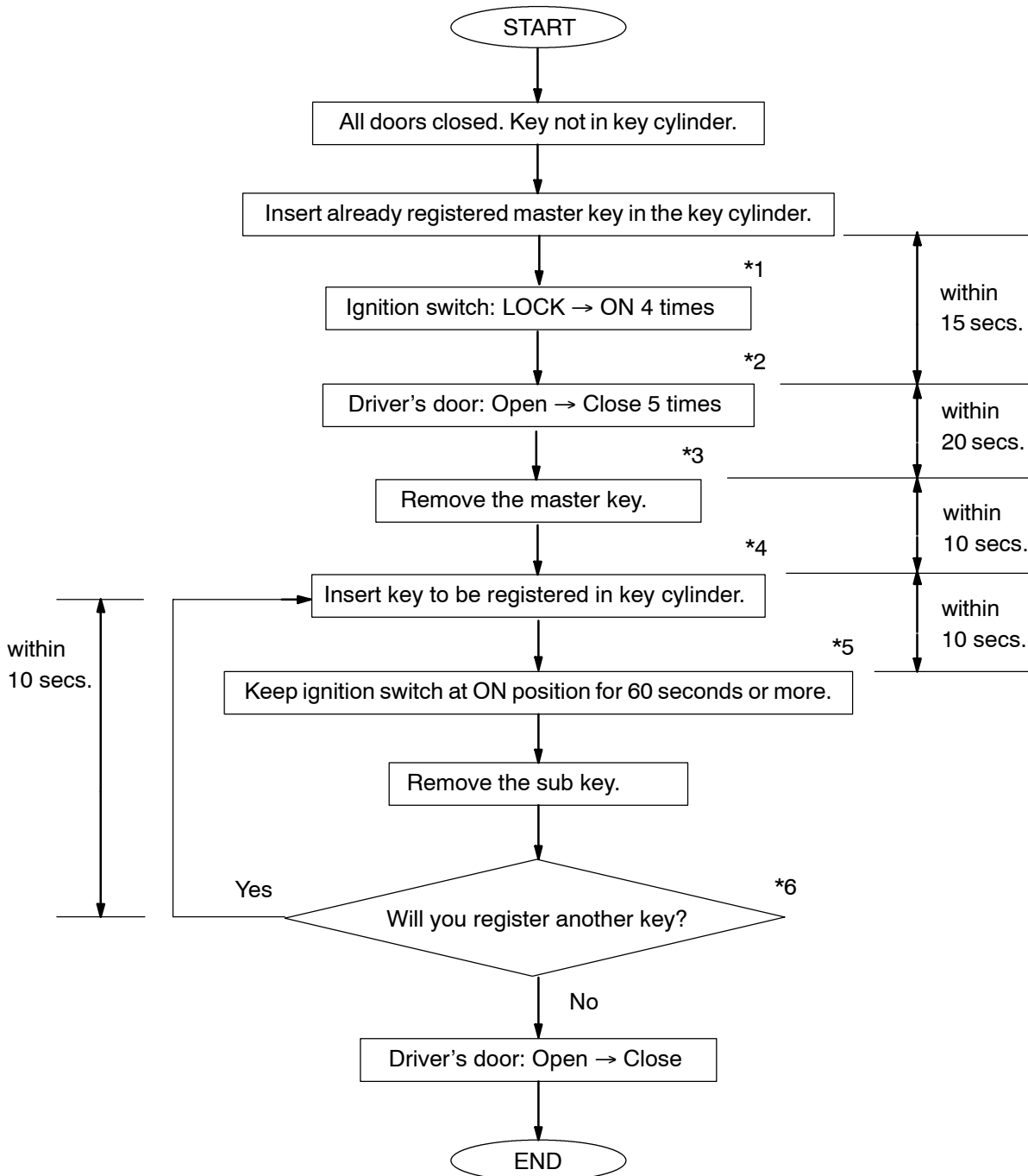
*1: Turn the ignition switch LOCK → ON 5 times within 15 secs. of inserting the master key in the key cylinder. The ignition switch must finally remain in position ON, or the registration will not be carried out, then go on to the next operation.

*2: Open and close the driver's door the first time within 15 secs. of inserting the master key in the key cylinder. Then open and close the driver's door another 5 times within 20 secs. of closing the driver's door the first time.

*3: Remove the master key from the ignition switch within 20 secs. of closing the driver's door the first time.

*4: Insert the key to be registered in the key cylinder within 10 secs. of removing the master key.

*5: Turn the ignition switch LOCK → ON within 10 secs. of inserting the key.

*6: If you are to register another key, insert the next key within 10 secs. of removing the previous key.

HINT:
- It is possible to register up to 4 master key codes including the already registered key code.
- When any operation time described below is over, registration mode completes.
- When the next procedure is performed while the timer is working, the timer completes counting time, then next timer starts.

3. ADDITIONAL REGISTRATION OF SUB KEY

Do this operation to register an additional sub key.

```
                          ┌──────────┐
                          │  START   │
                          └────┬─────┘
                               │
              ┌────────────────▼───────────────────┐
              │ All doors closed. Key not in key     │
              │ cylinder.                            │
              └────────────────┬───────────────────┘
                               │
         ┌─────────────────────▼────────────────────┐
         │ Insert already registered master key in    │
         │ the key cylinder.                          │
         └─────────────────────┬────────────────────┘        ▲
                               │                    *1        │ within
         ┌─────────────────────▼────────────────────┐        │ 15 secs.
         │ Ignition switch: LOCK → ON 4 times         │        │
         └─────────────────────┬────────────────────┘        │ ───
                               │                    *2        │ within
         ┌─────────────────────▼────────────────────┐        │ 20 secs.
         │ Driver's door: Open → Close 5 times        │        │
         └─────────────────────┬────────────────────┘        │ ───
                               │                    *3        │ within
         ┌─────────────────────▼────────────────────┐        │ 10 secs.
         │ Remove the master key.                     │        │
         └─────────────────────┬────────────────────┘        │ ───
                               │                    *4        │ within
         ┌─────────────────────▼────────────────────┐        │ 10 secs.
    ┌───►│ Insert key to be registered in key cylinder. │     │
    │    └─────────────────────┬────────────────────┘        ▼
    │                          │                    *5
    │  ┌───────────────────────▼──────────────────────┐
    │  │ Keep ignition switch at ON position for         │
    │  │ 60 seconds or more.                             │
    │  └───────────────────────┬──────────────────────┘
    │                          │
    │          ┌───────────────▼──────────────┐
    │          │ Remove the sub key.           │
    │          └───────────────┬──────────────┘
    │                          │
within│          Yes           ◇               *6
10 secs│ ◄──────────────◇ Will you register another key? ◇
    └──────────────────◇                       ◇
                          └───────────┬──────────┘
                               No     │
              ┌───────────────────────▼──────────────────┐
              │ Driver's door: Open → Close                │
              └───────────────────────┬──────────────────┘
                                      │
                               ┌──────▼─────┐
                               │    END     │
                               └────────────┘
```

*1: Turn the ignition switch LOCK → ON 4 times within 15 secs. of inserting the master key in the key cylinder. The ignition switch must finally remain in position ON, or the registration will not be carried out, then go on to the next operation.

*2: Open and close the driver's door the first time within 15 secs. of inserting the master key in the key cylinder. Then open and close the driver's door another 4 times within 20 secs. of closing the driver's door the first time.

*3: Remove the master key from the ignition switch within 20 secs. of closing the driver's door the first time.

*4: Insert the key to be registered in the key cylinder within 10 secs. of removing the master key.

*5: Turn the ignition switch LOCK → ON within 10 secs. of inserting the key.

*6: If you are to register another key, insert the next key within 10 secs. of removing the previous key.
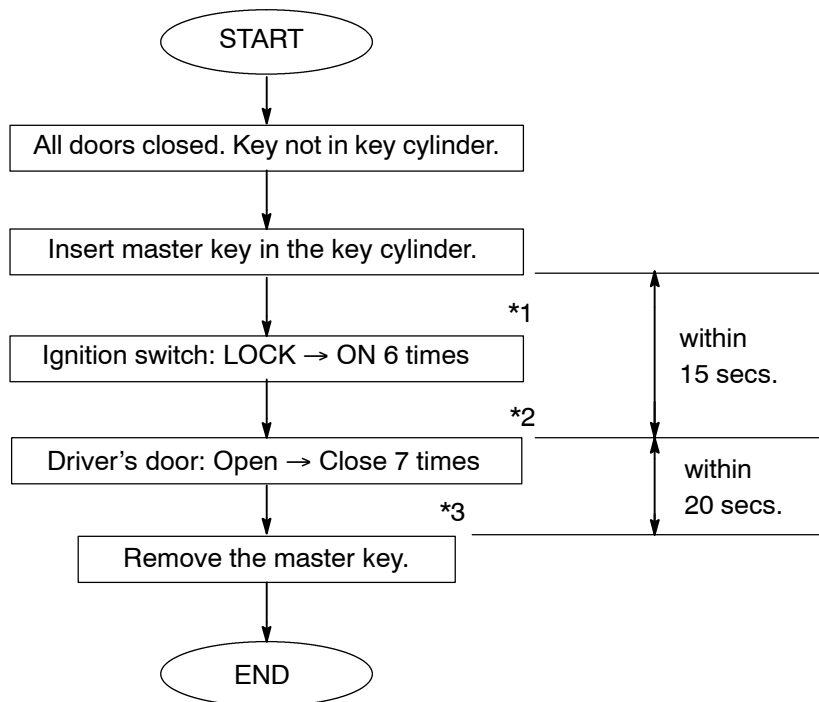
HINT:
- It is possible to register up to 2 sub−key codes including the already registered key code.
- When any operation time described below is over, registration mode completes.
- When the next procedure is performed while the timer is working, the timer completes counting time, then next timer starts.

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4. ERASURE OF TRANSPONDER KEY CODE

Do this operation to erase transponder key registration from the transponder key computer.
HINT:
Delete all other master and sub–key codes leaving the master key code to use the operation. When using the key which was used before deletion, it is necessary to register the code again.

```
                    ┌──────────┐
                    │  START   │
                    └────┬─────┘
                         ↓
        ┌─────────────────────────────────────────┐
        │ All doors closed. Key not in key cylinder. │
        └────────────────┬────────────────────────┘
                         ↓
        ┌─────────────────────────────────────────┐
        │    Insert master key in the key cylinder.  │
        └────────────────┬────────────────────────┘
                         ↓                    *1    ┐
        ┌─────────────────────────────────────────┐ │ within
        │   Ignition switch: LOCK → ON 6 times      │ │ 15 secs.
        └────────────────┬────────────────────────┘ │
                         ↓                    *2    ┘┐
        ┌─────────────────────────────────────────┐ │ within
        │   Driver's door: Open → Close 7 times     │ │ 20 secs.
        └────────────────┬────────────────────────┘ │
                         ↓                    *3     ┘
        ┌─────────────────────────────────────────┐
        │        Remove the master key.            │
        └────────────────┬────────────────────────┘
                         ↓
                    ┌──────────┐
                    │   END    │
                    └──────────┘
```

*1: Turn the ignition switch LOCK → ON 6 times within 15 secs. of inserting the master key in the key cylinder.

*2: Open and close the driver's door the first time within 15 secs. of inserting the master key in the key cylinder. Then open and close the driver's door another 6 times within 20 secs. of closing the driver's door the first time.

*3: Remove the master key from the ignition switch within 20 secs. of closing the driver's door the first time.

HINT:
• When any operation time described below is over, registration mode completes.
• When the next procedure is performed while the timer is working, the timer completes counting time, then next timer starts.

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