

TOYOTA VEHICLE INTRUSION PROTECTION SYSTEM (Except Double Cab)

BE2KY-01

ON-VEHICLE INSPECTION

1. OUTLINE OF TOYOTA VEHICLE INTRUSION PROTECTION (TVIP) SYSTEM

- (a) When the TOYOTA Vehicle Intrusion Protection (TVIP) system detects that the vehicle is being tampered with, the system sets off the alarm, causing the horns to sound and the lights to light up or flash in order to alert people around the vehicle to the theft.
- (b) The TVIP system has 2 modes; one is the active arming mode that is an initially set mode and another is the passive arming mode that can be switched ON/OFF by the specified method (see step 4).
- (c) Each mode (active and passive) has 4 states; the disarmed state, the arming preparation state, the armed state and the alarm sounding state.
 - (1) Disarmed state:
 - The alarm function is not operating.
 - The TVIP system is not operating.
 - (2) Arming preparation state:
 - The TVIP system is not operating.
 - (3) Armed state:
 - The TVIP system is operating.
 - (4) Alarm sounding state:
When the TVIP system detects that the vehicle is being tampered with while in the armed state, the system causes the horns to sound and the lights to light up or flash in order to alert people around the vehicle to the theft.

Refer to table below for alarm method and time:

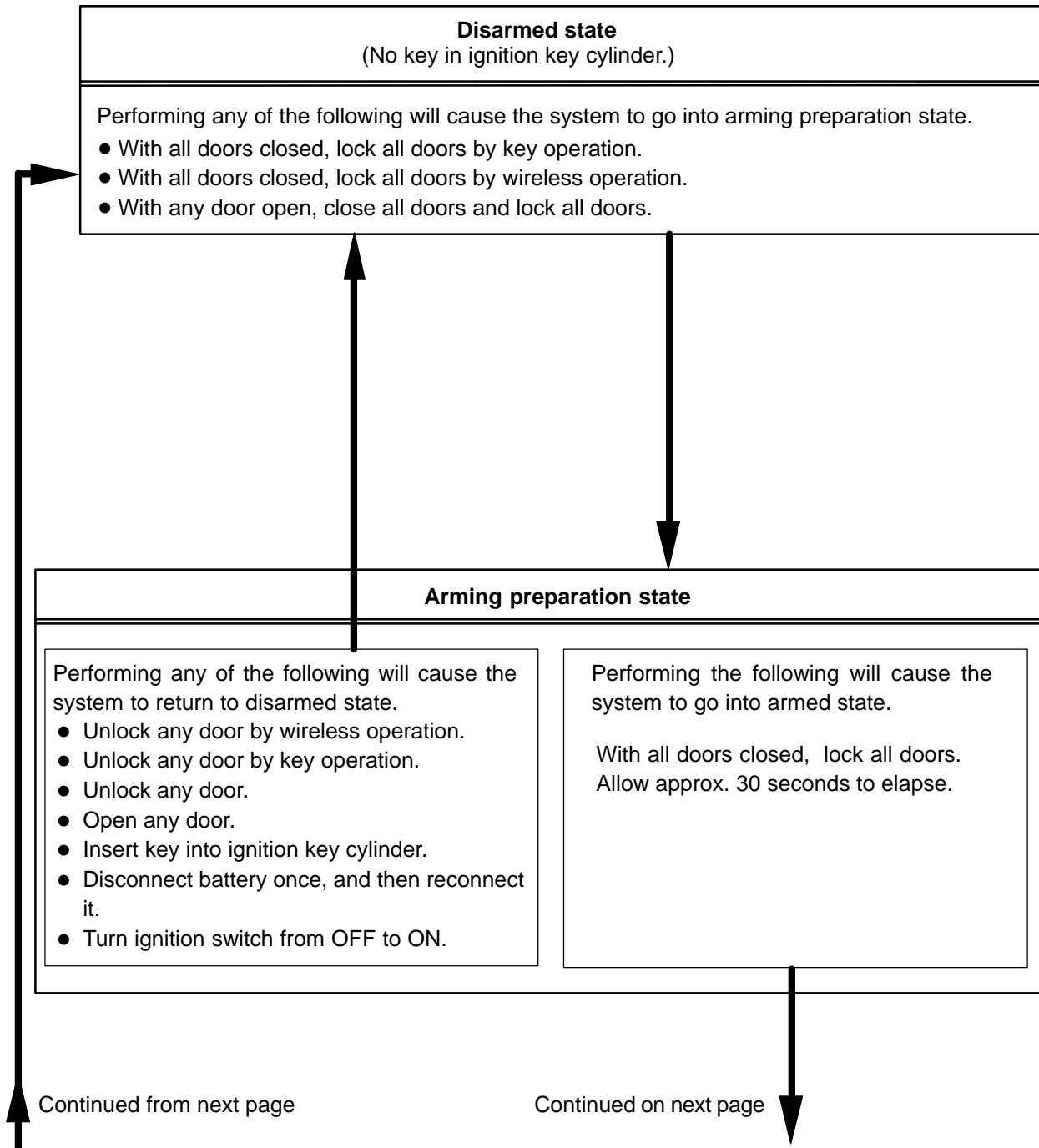
Alarming method	Headlight	Flashing at a cycle of approx. 0.4 seconds
	Taillight	Flashing at a cycle of approx. 0.4 seconds
	Interior light	Illuminating (turn on)
	Vehicle horn	Sounding at a cycle of approx. 0.4 seconds
Alarming time	Approx. 60 seconds	

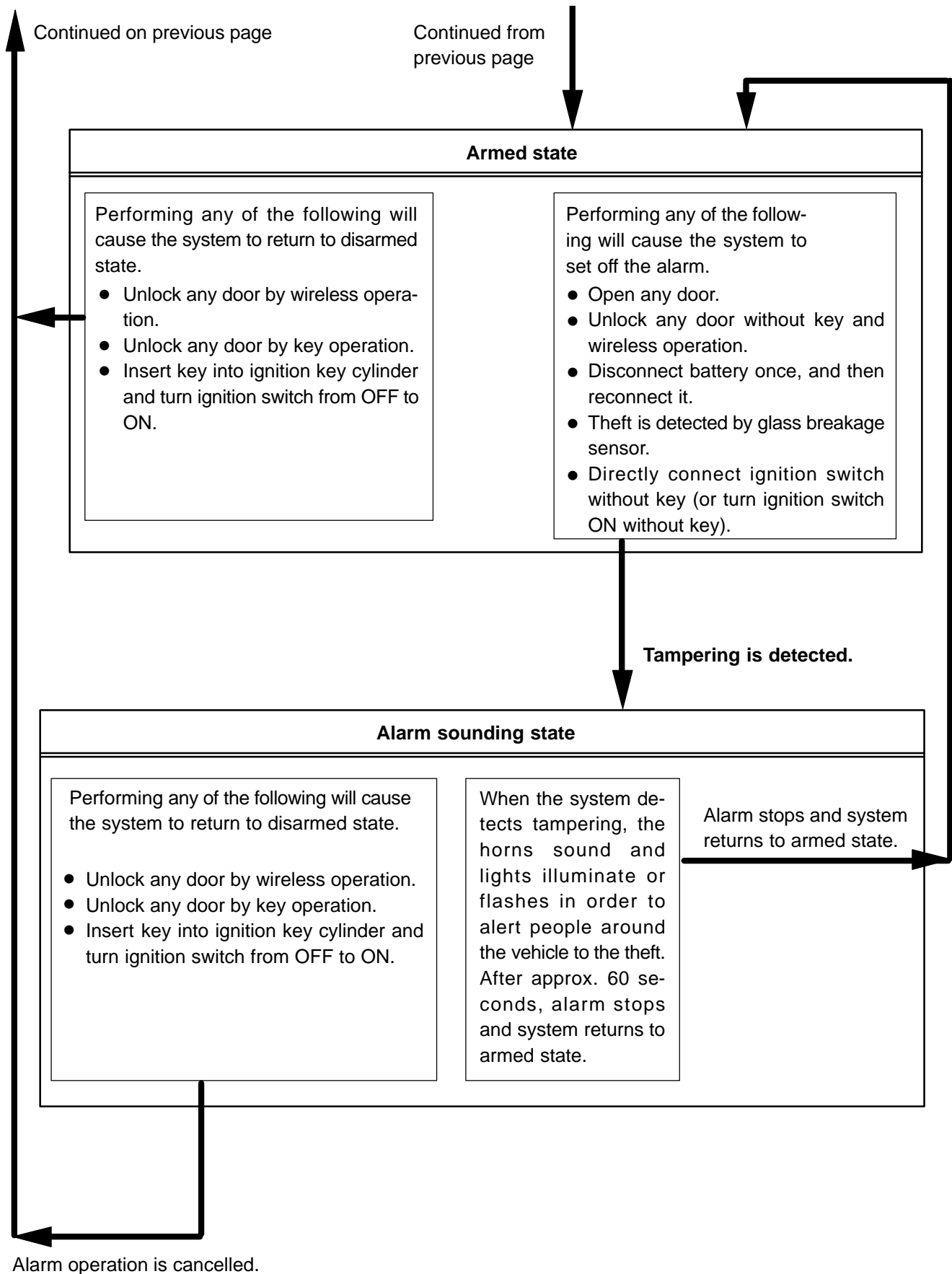
HINT:

If any of the doors are unlocked with no key in the ignition key cylinder during the alarm sounding state, a forced door lock signal will be output (see step 5).

2. ACTIVE ARMING MODE

- Active arming mode starts the alarm control immediately after the doors are locked.





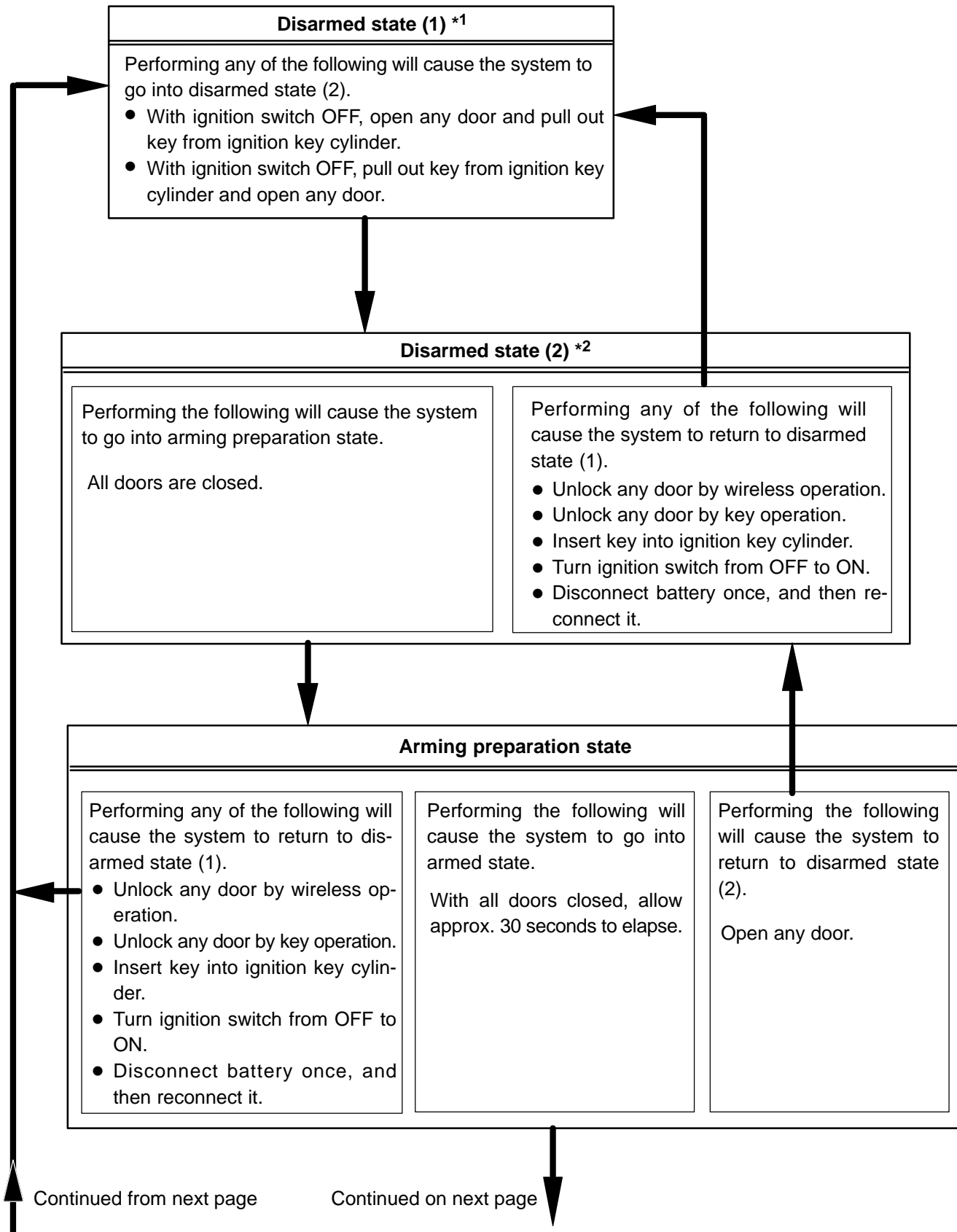
3. PASSIVE ARMING MODE

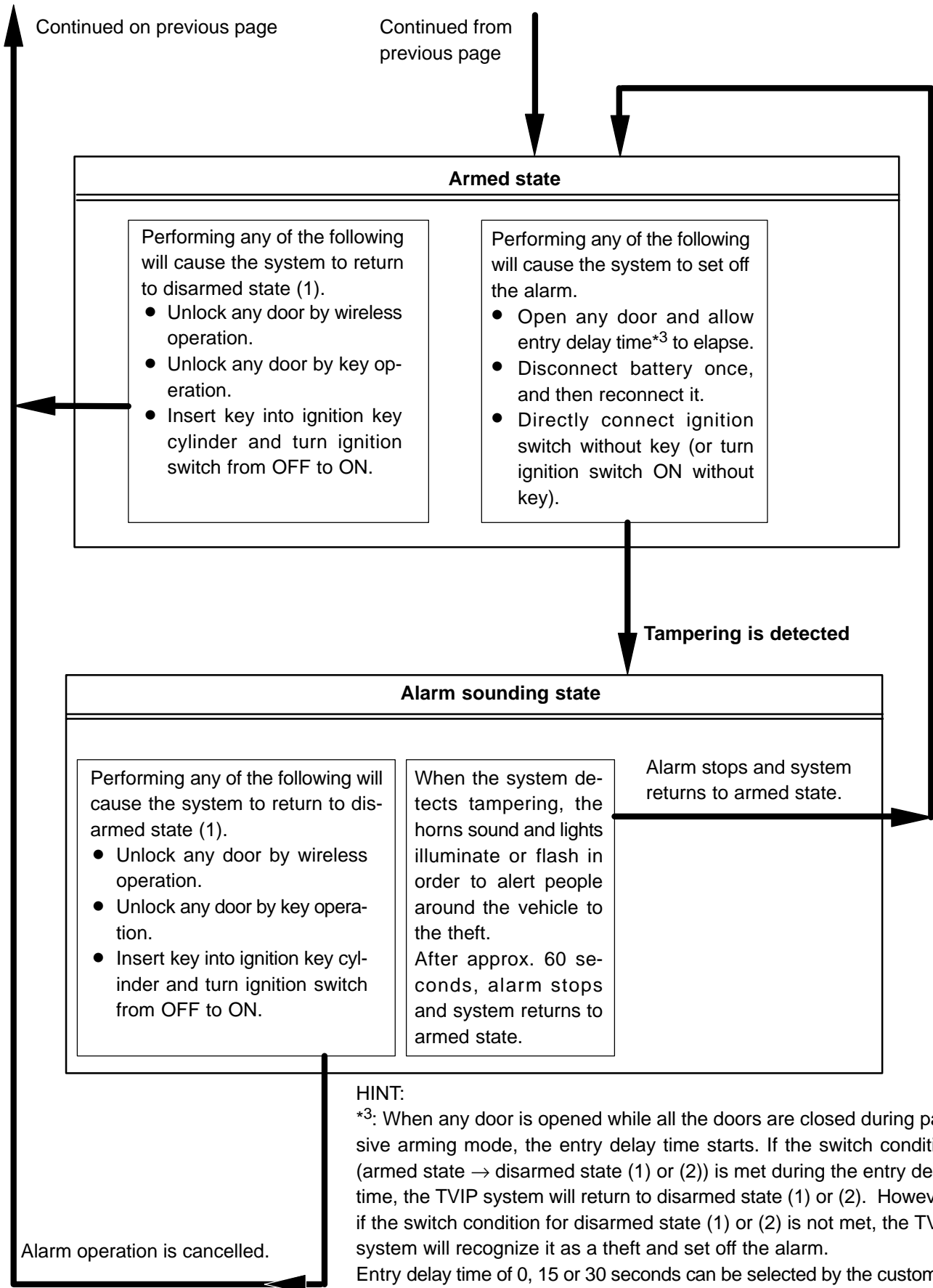
- Passive arming mode can be switched according to the specified method (see step 4).
- The alarm is initially set (when shipped from factory) to active arming mode (not passive arming mode).
- During passive arming mode, the TVIP system goes into the armed state even if the doors are not locked.
- Passive arming mode starts the alarm control after the key is removed from the ignition key cylinder and the doors are closed.
- Detecting that the doors are unlocked does not set off the alarm during passive arming mode.
- A forced door lock signal is not output during passive arming mode (see step 4).
- When the TVIP system detects that the doors are opened during passive arming mode, the alarm is not set off immediately because an entry delay time is set.
- If any of the following conditions is met during passive arming mode, the TVIP system will switch to active arming mode.
 - With all doors closed, lock all doors by key operation.
 - With all doors closed, lock all doors by wireless operation.
 - With any door open, lock all doors and close all doors.

HINT:

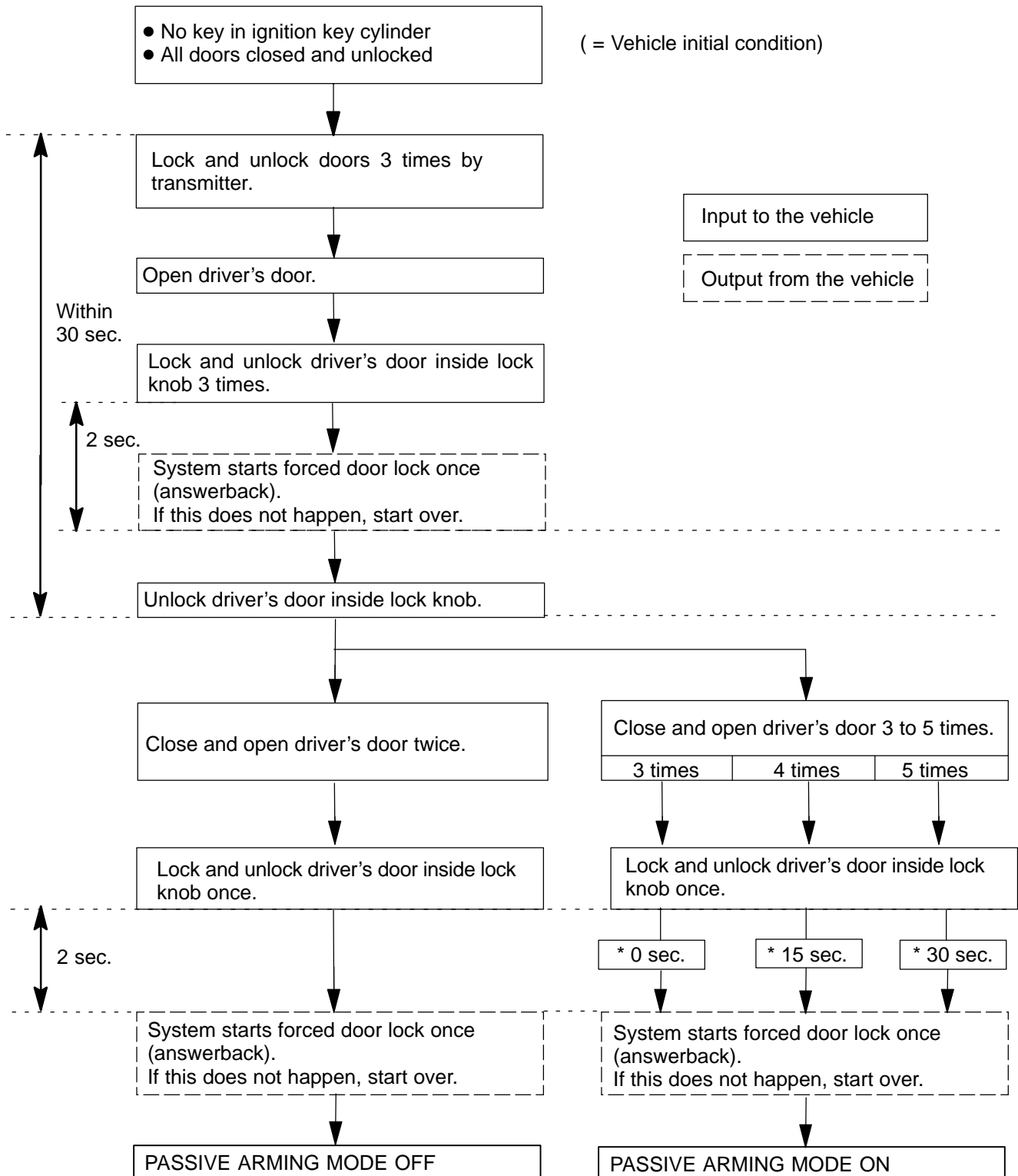
*1: Disarmed state (1) is the normal disarmed state.

*2: Disarmed state (2) is set from either the disarmed state (1) or the arming preparation state.





4. CHANGING METHOD OF PASSIVE ARMING MODE (ON or OFF)



HINT:

- PASSIVE ARMING MODE is OFF in the initial condition.
- If there is a different signal in the middle of changing, it is invalid.
- *: Entry delay time

5. FORCED DOOR LOCK CONTROL

(a) The forced door lock control prevents the vehicle from being tampered with. Immediately after a door is unlocked (alarm starts), the door is forced to lock by a forced door lock signal.

(1) Conditions that force the doors to lock:

When no key is in the ignition key cylinder, the doors will be forced to lock if any of the following conditions is met.

- The TVIP system is in the alarm sounding state of active arming mode.
- All the doors are locked. → Any door is unlocked.
- No key is in the ignition key cylinder.
- Since the previous forced door lock, 0.38 seconds or more have elapsed.

6. Indicator light output

Condition	Indicator light
Disarmed state	OFF
Arming preparation state	ON
Armed state (Entry delay time)	BLINK (ON)
Alarm sounding state	ON

HINT:

Blinking frequency:

0.2 seconds (ON)

1.8 seconds (OFF)

7. PANIC ALARM CONTROL

(a) The panic alarm control makes it possible for you to voluntarily set off the panic alarm by pressing the PANIC switch on the wireless transmitter. However, this control operates independently from the alarm control by the TVIP system (switched to the alarm sounding state from the armed state).

(1) Conditions that cause the panic alarm control to set off the panic alarm:

The panic alarm control sets off the panic alarm by pressing the PANIC switch on the wireless transmitter under the following conditions.

- The ignition switch is OFF.
- The TVIP system is not in the alarm sounding state (common to active arming mode and passive arming mode).
- The panic alarm control is not operating (the alarm is not set off).

(2) Conditions that cause the panic alarm control to shut off the alarm:

The panic alarm control shuts off the panic alarm when any of the following conditions is met during panic alarm operation.

- The ignition switch is turned ON.
- Any of the switches on the wireless transmitter (PANIC/LOCK/UNLOCK) is pressed.
- The panic alarm ends (60 seconds have passed).
- The TVIP system switches to the alarm sounding state (common to active arming mode and passive arming mode). However, the alarm is still sounding, because the TVIP system has switched to the alarm sounding state. Conditions for canceling the panic alarm are the same as for the alarm control.

HINT:

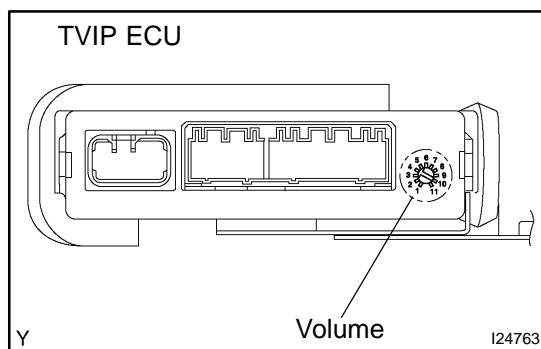
Active arming mode: See step 2

Passive arming mode: See step 3

8. Switch to the active arming mode**HINT:**

In each state of the passive arming mode, when the switch condition to the active arming mode (disarmed state of active arming mode → arming preparation state of active arming mode) is satisfied, the system will switch to each state of the active arming mode. In this case, the active arming mode will continue until the system switches to the disarmed state.

State of Passive Arming Mode Before Switch	State of Active Arming Mode After Switch
Disarmed state	Arming preparation state
Arming preparation state	Arming preparation state (continuing for 30 seconds)
Armed state (except during entry delay time)	Armed state
Armed state (during entry delay time)	After alarming time has elapsed, the system will switch to the armed state
Alarm sounding state	After alarming time has elapsed, the system will switch to the armed state

**9. OPERATE GLASS BREAKAGE SENSOR****HINT:**

The glass breakage sensor functions only during the active arming mode.

- (a) If the glass breakage sensor detects that the glass is broken (at 1st time), the sensor will set off an alarm for 20 seconds (pre-alarm). If the glass breakage sensor detects that the glass is broken furthermore (at 2nd time), the sensor will set off an alarm for 60 seconds.

HINT:

If the 2nd detection is performed during the pre-alarming time (20 seconds), the sensor will continuously set off the 2nd alarm. At this time, the total alarming time of the 1st alarm (pre-alarm) and 2nd alarm is 60 seconds.

- (b) The sensitivity of the glass breakage sensor can be adjusted by the volume switch in the glass breakage sensor.

HINT:

Because the glass breakage sensor has a high sensitivity, it might set off a wrong alarm if the volume switch is adjusted to high sensitivity.