THEFT DETERRENT SYSTEM

730F4–01

ON–VEHICLE INSPECTION

1. OUTLINE OF THEFT DETERRENT SYSTEM

(a) When the theft deterrent 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 blink in order to alert people around the vehicle to the theft.

(b) The theft deterrent system has 2 modes; one is active arming mode and the other is passive arming mode (Except Europe). Passive arming mode can be switched ON/OFF by the specified method (See step 4).

(c) Each mode has 4 states; disarmed state, arming preparation state, armed state, alarm sounding state.

(1) Disarmed state:
- The alarm function is not operating.
- The theft deterrent system is not operating.

(2) Arming preparation state:
- The time until the system goes into the armed state.
- The theft deterrent system is not operating.

(3) Armed state:
- The theft deterrent system is operating.

HINT:
If the vehicle remains in a condition that sets off the alarm (any door remains open, engine hood remains open, ignition switch remains directly connected) after the alarm ends, the alarm will be set off repeatedly a maximum of 10 times for every one of the above specified conditions.
Alarm time: (27.5 ± 2.5 sec.) x 10

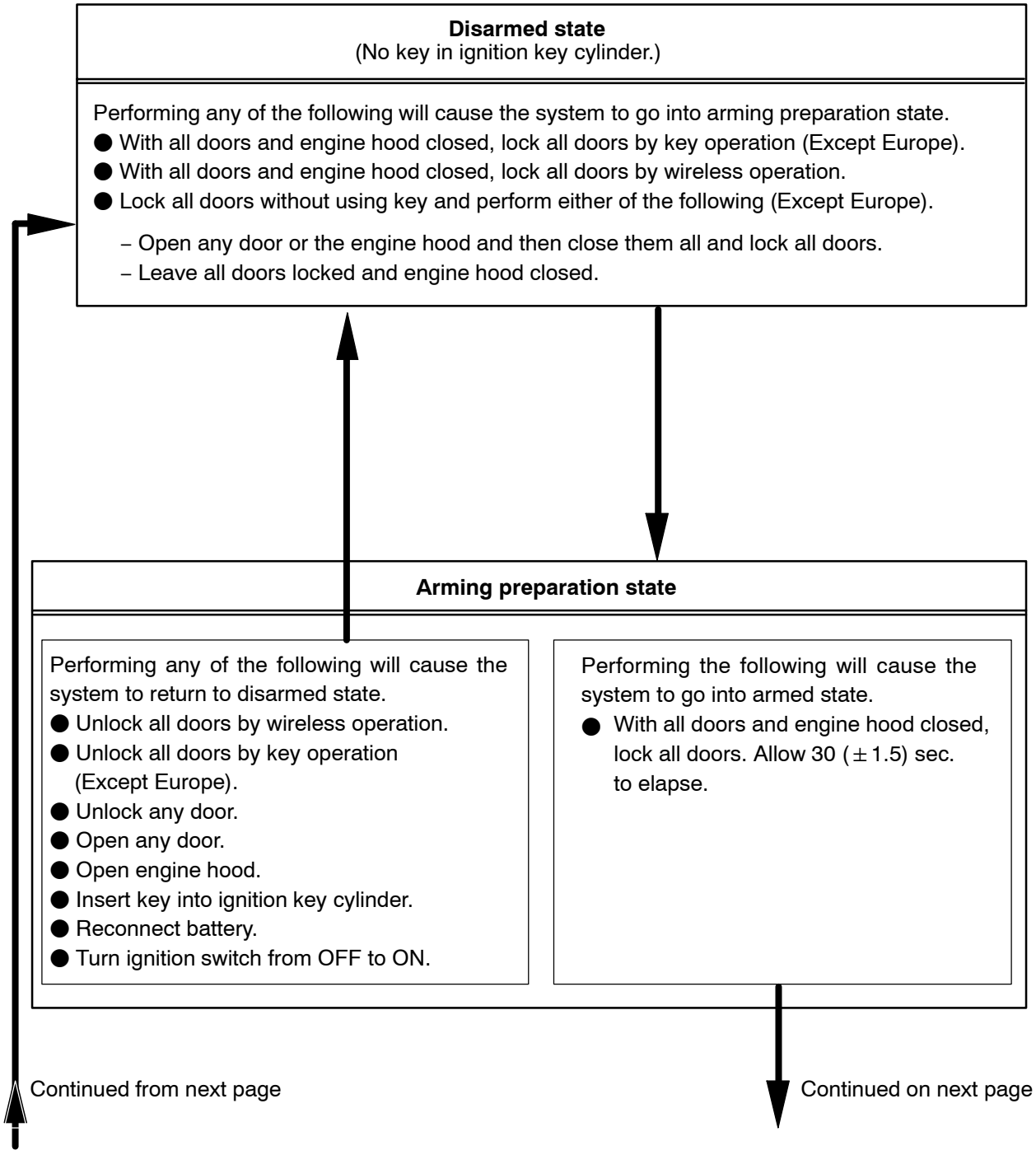
(4) Alarm sounding state:
When the theft deterrent system detects that the vehicle is being tampered with while in the armed state, the system causes the horns to sound and the lights to light up or blink in order to alert people around the vehicle to the theft.
Refer to the table below for the alarm method and time:

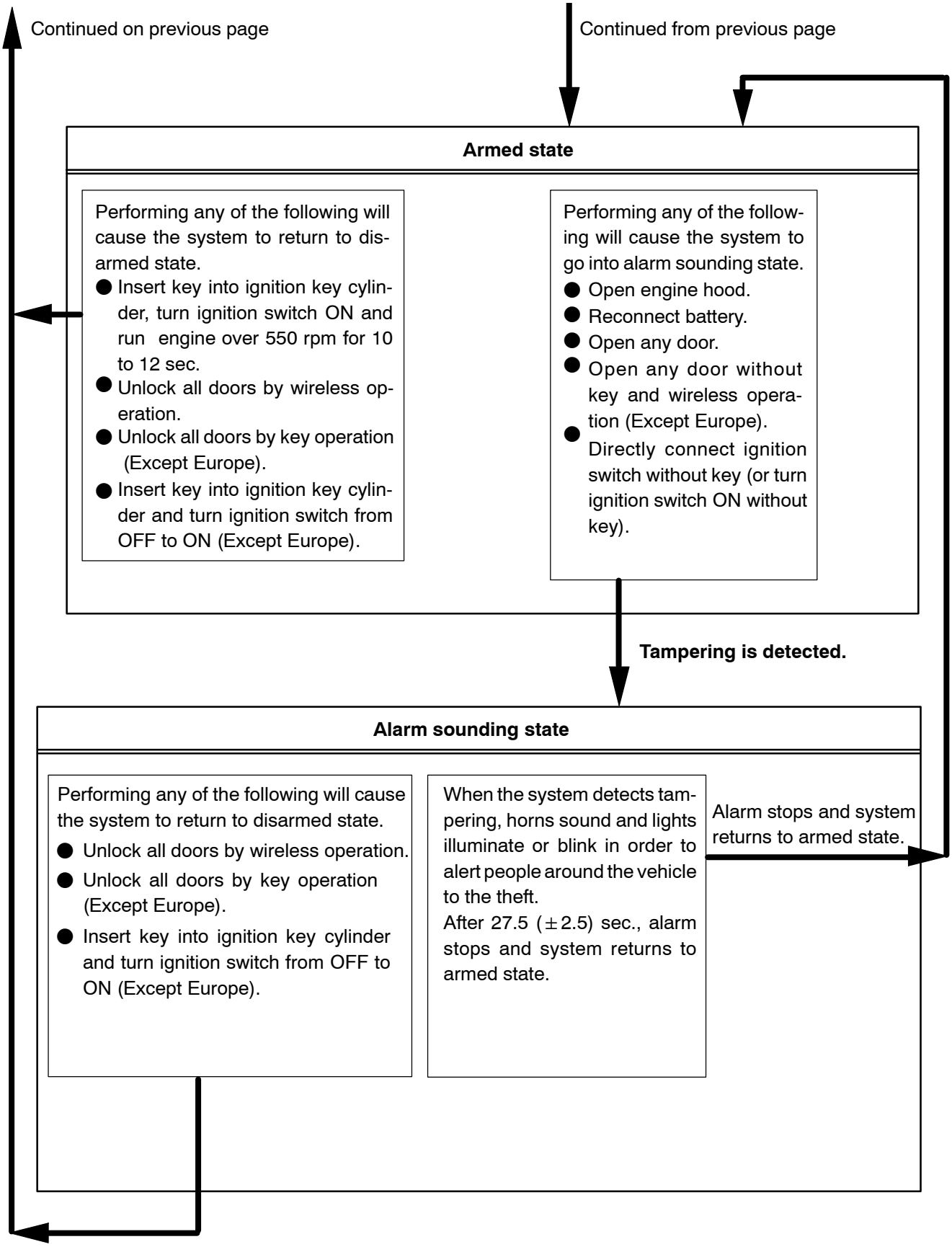
Alarm Method	Headlight	Blinking (cycle of 0.4 sec.)	(Except Europe)
	Taillight	Blinking (cycle of 0.4 sec.)	(Except Europe)
	Hazard Warning Light	Blinking (cycle of flasher relay)	
	Room Light	Illuminating	
	Vehicle Horn	Sounding (cycle of 0.4 sec.)	
	Theft Deterrent Horn	Sounding (cycle of 0.4 sec.)	(Europe only)
	Self Power Siren	Sounding (cycle of 0.4 sec.)	(Europe only)
Alarm Time	27.5 ± 2.5 sec. (maximum 10 times)		

HINT:
If any of the doors is unlocked and there is also no key in the ignition key cylinder during the armed state, a forced door lock signal will be output (See step 5).

2. ACTIVE ARMING MODE

- Active arming mode starts the alarm control right when the doors are locked.

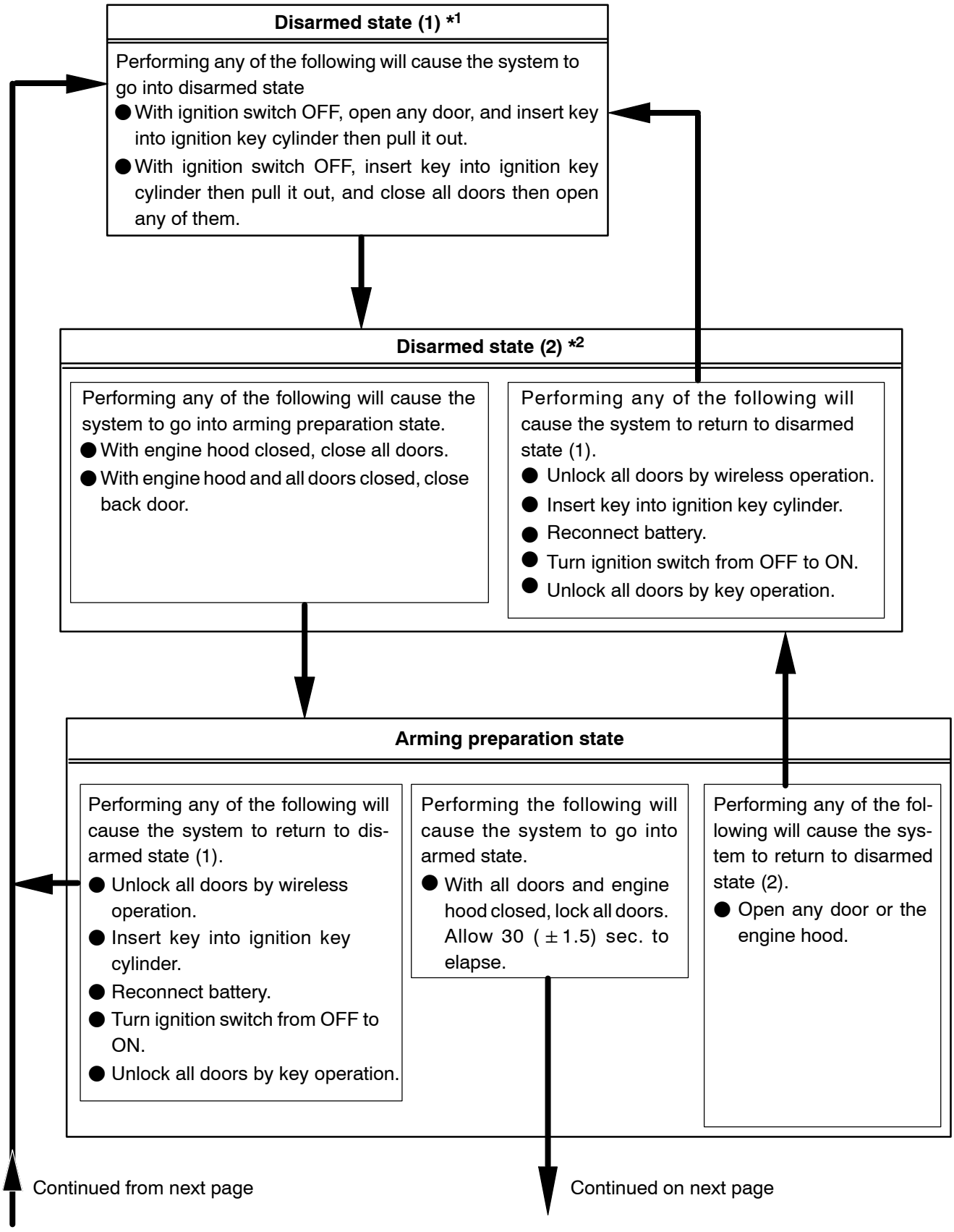


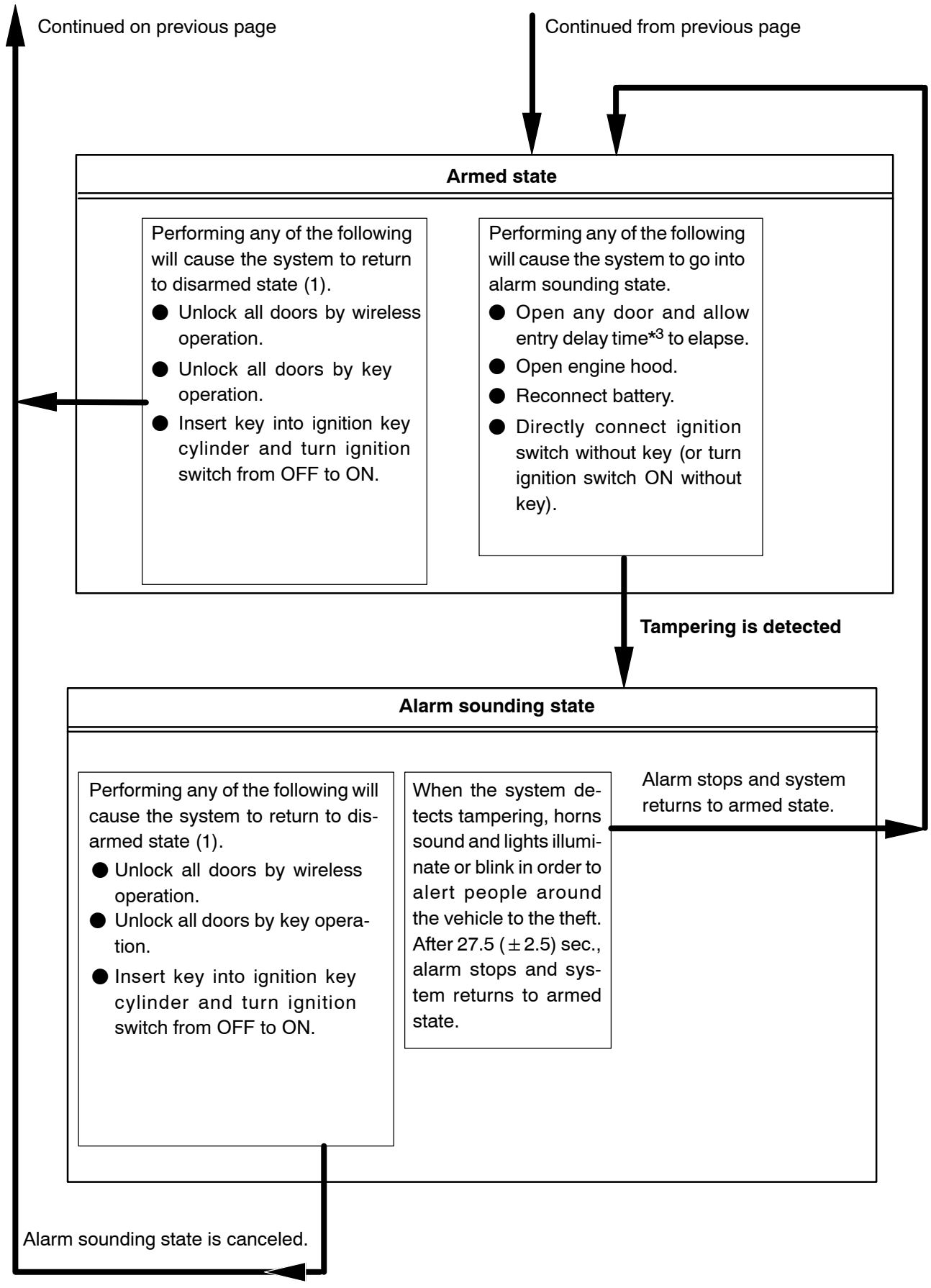

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Armed state
Performing any of the following will cause the system to return to disarmed state.
● Insert key into ignition key cylinder, turn ignition switch ON and run engine over 550 rpm for 10 to 12 sec.
● Unlock all doors by wireless operation.
● Unlock all doors by key operation (Except Europe).
● Insert key into ignition key cylinder and turn ignition switch from OFF to ON (Except Europe).
Performing any of the following will cause the system to go into alarm sounding state.
● Open engine hood.
● Reconnect battery.
● Open any door.
● Open any door without key and wireless operation (Except Europe).
● Directly connect ignition switch without key (or turn ignition switch ON without key).
Tampering is detected.
Alarm sounding state
Performing any of the following will cause the system to return to disarmed state.
● Unlock all doors by wireless operation.
● Unlock all doors by key operation (Except Europe).
● Insert key into ignition key cylinder and turn ignition switch from OFF to ON (Except Europe).
When the system detects tampering, horns sound and lights illuminate or blink in order to alert people around the vehicle to the theft.
After 27.5 (±2.5) sec., alarm stops and system returns to armed state.
Alarm stops and system returns to armed state.
Alarm sounding state is canceled.

3. PASSIVE ARMING MODE (Except Europe)

- Passive arming mode can be switched ON/OFF by the specified method (See step 4).
- The mode set initially (shipped from factory) is active arming mode (not passive arming mode).
- During passive arming mode, the theft deterrent 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.
- No forced door lock signal is output during passive arming mode (See step 5).
- When the theft deterrent 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 fulfilled during passive arming mode, the theft deterrent system will switch to active arming mode.
  - With all doors and engine hood closed, lock all doors by key operation.
  - With all doors and engine hood closed, lock all doors by wireless operation.
  - Lock all doors without using key and perform either of the following.
    Open any door or the engine hood and then close them all and lock all doors./Leave all doors locked and engine hood closed.

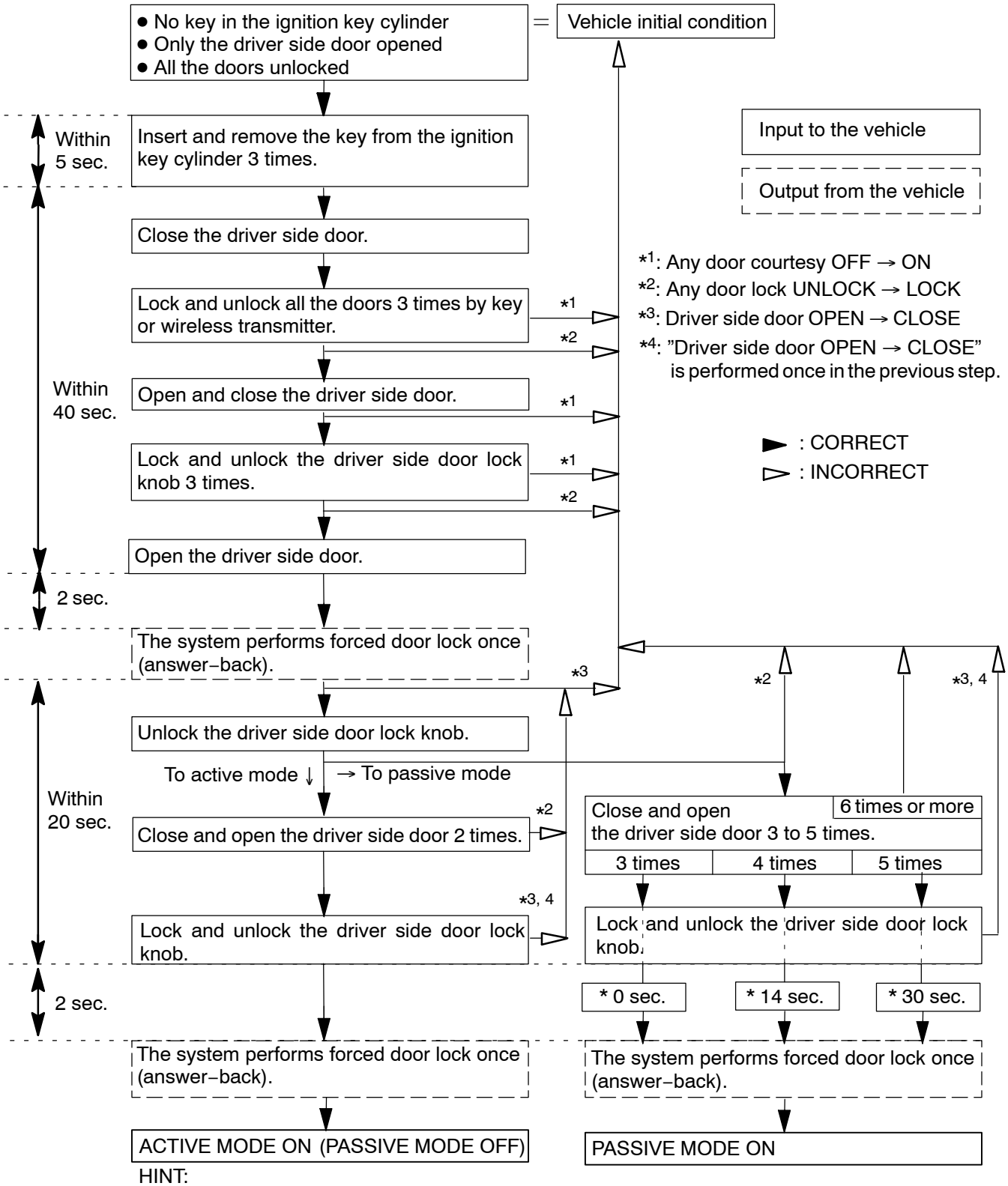
*1: Disarmed state (1) is the normal disarmed state.
*2: Disarmed state (2) is set from either the disarmed state (1) or the arming preparation state.




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Armed state
Performing any of the following will cause the system to return to disarmed state (1).
● Unlock all doors by wireless operation.
● Unlock all doors by key operation.
● Insert key into ignition key cylinder and turn ignition switch from OFF to ON.
Performing any of the following will cause the system to go into alarm sounding state.
● Open any door and allow entry delay time*3 to elapse.
● Open engine hood.
● Reconnect battery.
● Directly connect ignition switch without key (or turn ignition switch ON without key).
Tampering is detected
Alarm sounding state
Performing any of the following will cause the system to return to disarmed state (1).
● Unlock all doors by wireless operation.
● Unlock all doors by key operation.
● Insert key into ignition key cylinder and turn ignition switch from OFF to ON.
When the system detects tampering, horns sound and lights illuminate or blink in order to alert people around the vehicle to the theft. After 27.5 (±2.5) sec., alarm stops and system returns to armed state.
Alarm stops and system returns to armed state.
Alarm sounding state is canceled.

*3: When any door is opened while all the doors are closed during the armed state in passive arming mode, the entry delay time starts. If the switch condition (armed state → disarmed state (1) or (2)) is fulfilled during the entry delay time, the theft deterrent system will return to the disarmed state (1) or (2). However, if the switch condition to the disarmed state (1) or (2) is not fulfilled, the theft deterrent system will recognize it as a theft and go into the alarm sounding state.
Entry delay time of 0, 14 or 30 sec. can be selected by the customizing function.

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



HINT:
- Initial mode is PASSIVE MODE OFF.
- If the ignition switch is turned ON, changing operation will be cancelled.

*: 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 and 0.4 second has elapsed after the previous output of a forced door lock signal, the doors will be forced to lock if any of the following conditions is fulfilled.

- The theft deterrent system is in the armed state of active arming mode.
- All the doors are locked. → Any door is unlocked.
- Any door is unlocked state.

HINT:

Only Europe:

Forced door lock control does not operate if any door is unlocked by key.

6. ALARM MEMORY FUNCTION

(a) If the alarm is set off (tampering is detected) while the theft deterrent system is set, the alarm memory function will record it. Whenever you cancel the theft deterrent system, the alarm memory function causes the taillights to light up for 2 seconds in order to inform you that the alarm has been set off.

(1) Conditions of the alarm memory function that cause the taillights to light up:

When the theft deterrent system has entered into the alarm sounding state (tampering has been detected) even once, the taillights will light up for 2 seconds if any of the following conditions is fulfilled.

- Switched to the disarmed state from the armed state during active arming mode.
- Switched to the disarmed state (1) from the armed state during passive arming mode.
- Switched to the disarmed state (2) from the armed state during passive arming mode.

HINT:

Active arming mode: See step 2

Passive arming mode: See step 3

7. SECURITY INDICATOR LIGHT OUTPUT

(a) The theft warning ECU assy outputs a signal to light up the security indicator light, according to the state of the theft deterrent system. However, some of the actual lighting conditions of the security indicator light are different from the outputs of the theft warning ECU assy.

	Security indicator light	
State of theft deterrent system*1	Output signals from the theft warning ECU assy	Actual lighting condition
Disarmed state	OFF	**OFF** (Immobiliser system unset) **BLINKING** (Immobiliser system set)
Arming preparation state	ON	**ON**
Armed state	OFF	**BLINKING**
Alarm sounding state	ON	**ON**

*1: Common to active arming mode and passive arming mode

Blinking cycle:

Time	Security indicator light
0.2 sec.	ON
1.8 sec.	OFF

HINT:
When the immobiliser system is set, the security indicator light blinks during the disarmed state (1), (2) and the armed state, due to the output signals from the immobiliser system.

8. INTRUSION SENSOR

(a) Function of the intrusion sensor:
The intrusion sensor senses any moving object by using ultrasonic waves and outputs the signals to communicate an intrusion to the theft warning ECU assy, so that the theft deterrent system can set off the alarm.
When the theft deterrent system is switched to the arming preparation state, the intrusion sensor is supplied with +B by the theft warning ECU assy. This causes the theft deterrent system to set off the alarm when the signal is input from the intrusion sensor in such a situation as the window glass being broken.

(b) Turn the intrusion sensor OFF.

HINT:

The theft deterrent system can be set (switched to the arming preparation state) with the intrusion sensor OFF when such moving object as an animal is left inside the vehicle.

(1) Make sure that the theft deterrent system is in the disarmed state.
(2) Press the intrusion sensor OFF switch once.

HINT:

The intrusion sensor and the OFF switch are provided on the roof console box assy in the vehicle front interior.

NOTICE:

The intrusion sensor returns to ON (initial state) when the doors are unlocked by the wireless operation.

9. SELF POWER SIREN

(a) The self power siren has an internal battery. If any of the vehicle's battery or communication line is opened, the self power siren detects it by itself and sounds. Although the self power siren sounds by receiving a signal from the theft warning ECU assy usually, the self power siren can sound by its internal battery in case that the vehicle's battery is opened.

(b) The theft warning ECU assy sends an arming signal to the self power siren while transferring to the armed state, and it also sends a disarming signal to the siren while transferring to the disarmed state. Besides, the theft warning ECU assy can sound the self power siren by sending an alarming signal in the alarm sounding state.