DIBBA–01

PRE–CHECK

1. OUTLINE OF THEFT DETERRENT SYSTEM

The security has an ”Alarm Control” and the control consists of 2 modes.

- Active mode
  This mode begins ”Alarm Control” as the user locks the vehicle by intention (See the reference step 2).
- Passive mode
  This mode begins ”Alarm Control” even if the user forgets locking the vehicle (See the reference step 5). (This mode begins ”Alarm Control” when the user closed all doors and the engine hood.)

HINT:

- ”Alarm Control” refers to the function that detects intrusion into the vehicle and sounds an alarm.
- Even when the ”Alarm Control” operates in the passive mode, it works as in the active mode if a condition to begin the active mode is met.

2. ACTIVE ARMING MODE

There are 4 modes in active mode.

(1) Disarmed state
- The alarm system is not set (theft detection is impossible), and the alarm does not sound. The system does not detect any theft.

(2) Arming preparation (for 30 seconds)
- The waiting period when the alarm set requirements are met to when the system is actually set.

(3) Armed state
The state the alarm is set (operation is possible). The system can detect theft.

(4) Alarm sounding:
The system detects theft and informs using sounds and lights.
- The state of waiting to switch to armed state again to have alarming interval after finishing alarming time.

- Perform forced door lock when the door is unlocked.

Disarmed state (Key not inserted in ignition.)

Perform any of the followings, and the system will go no to ”Arming preparation”:
- With all the doors, engine hood and luggage compartment door closed, lock all doors with the key.
- With all the doors, engine hood and luggage compartment door closed, lock all doors with the wireless remote.
- With all the doors, engine hood and luggage compartment door closed, open and close any of doors, engine hood or luggage compartment door, then close and lock all doors, engine hood and luggage compartment door.

Arming preparation

Perform any of the followings, and the system will return to ”Disarmed state”: ● Open any of the doors, engine hood or luggage compartment door. ● Unlock any of the doors. ● Insert the key in the ignition. ● Reconnect the battery. ● Turn the ignition from OFF to ON.	Perform the following, and the system will go on to ”Armed state”: ● Let 30 seconds elapse with all the doors, engine hood and luggage compartment door closed and locked.

Armed state

Perform any of the followings, and the system will return to ”Disarmed state”: ● Unlock any of the doors or open the luggage compartment door with the wireless remote (★). ● Unlock the doors or open the luggage compartment door with the key (★). ● Put the key in the ignition and turn it to ON.	Perform any of the followings, and the system will go on to ”Alarm sounding”: ● Open any of the doors. ● Unlock any of the doors in any way other than with a key or the wireless remote. ● Open the luggage compartment door in any way other than with a key or the wireless remote. ● Open the engine hood. ● Reconnect the battery. ● Turn the ignition from OFF to ON.

Alarm sounding

Perform any of the followings, and the system will return to ”Disarmed state”: ● Unlock any of the doors or open the luggage compartment door with the wireless remote. ● Unlock the doors or open the luggage compartment door with the key. ● Put the key in the ignition and turn it to ON.	The vehicle’s horn and security horn will sound, and the hazard,Tail and Head lights flash for 60 seconds. After the alarm has ended, the system will return to ”Armed state”.

3. PASSIVE ARMING MODE

There are 4 modes in active mode.

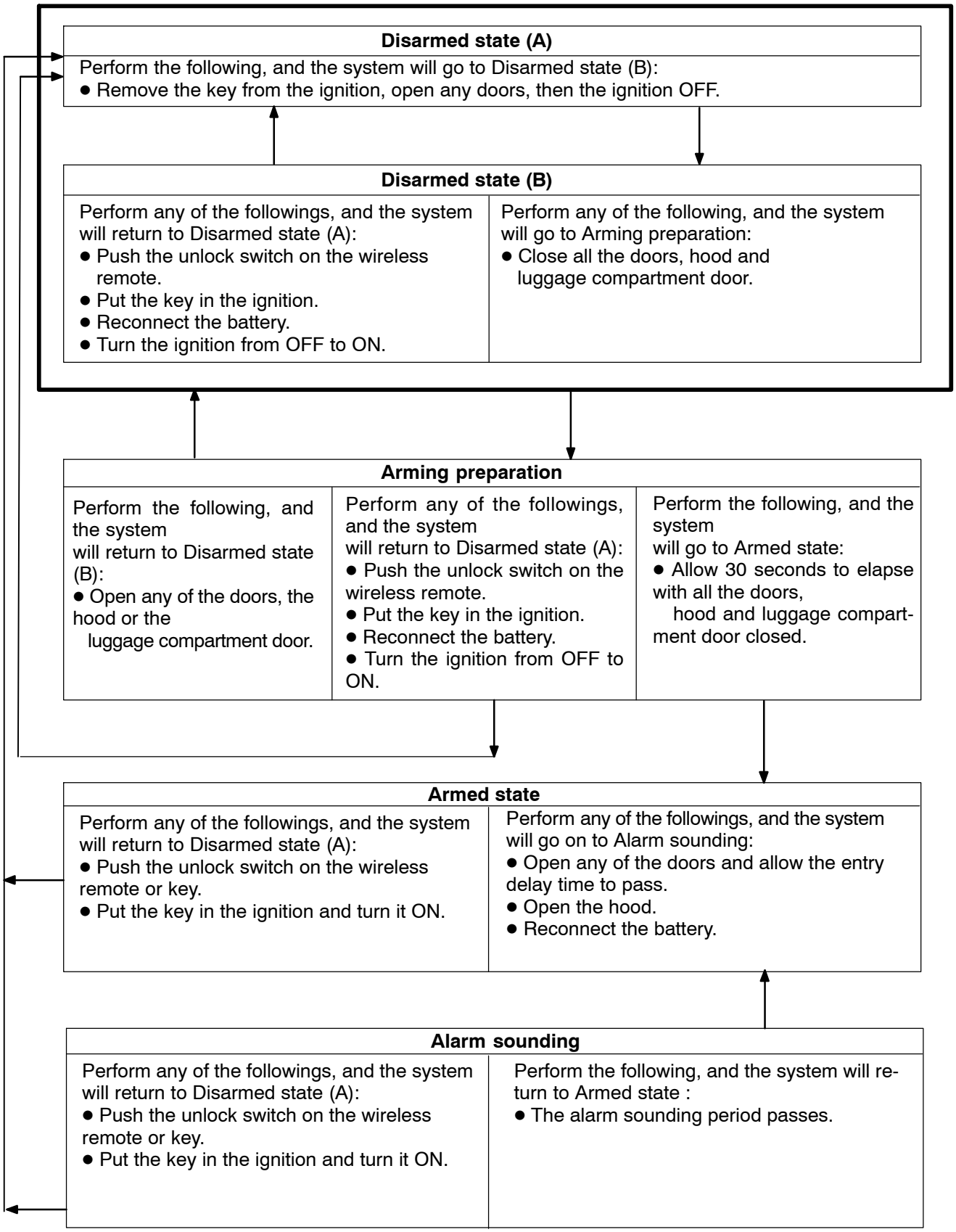
(1) Disarmed state (1)
- The state is same as the disarmed state in active mode.

(2) Disarmed state (2)
- The alarm is not set. Pulling out the key and any of the doors is/are opened. (= the state if the opened door(s) and the engine hood are closed, the alarm is set.)

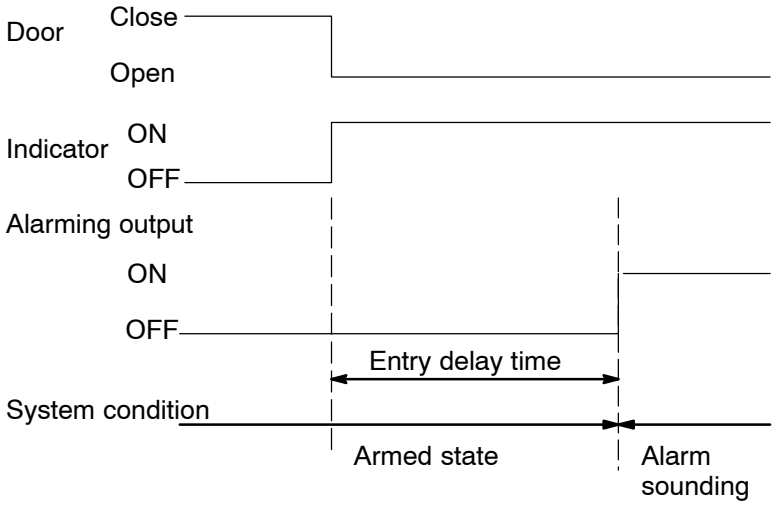
(3) Arming preparation (for 30 seconds)
The state is same as the arming preparation in active mode.

(4) Armed state
The state is same as the armed state in the active mode (However, it does not performs the theft deterrent by unlock operation).

(5) Alarm sounding:
The system detects theft and informs using sounds and lights.
- The state is same as the alarming sounding in the active mode (However, it does not performs forced door lock output).


Disarmed state (A)
Perform the following, and the system will go to Disarmed state (B):
● Remove the key from the ignition, open any doors, then the ignition OFF.
Disarmed state (B)
Perform any of the followings, and the system will return to Disarmed state (A):
● Push the unlock switch on the wireless remote.
● Put the key in the ignition.
● Reconnect the battery.
● Turn the ignition from OFF to ON.
Perform any of the following, and the system will go to Arming preparation:
● Close all the doors, hood and luggage compartment door.
Arming preparation
Perform the following, and the system will return to Disarmed state (B):
● Open any of the doors, the hood or the luggage compartment door.
Perform any of the followings, and the system will return to Disarmed state (A):
● Push the unlock switch on the wireless remote.
● Put the key in the ignition.
● Reconnect the battery.
● Turn the ignition from OFF to ON.
Perform the following, and the system will go to Armed state:
● Allow 30 seconds to elapse with all the doors, hood and luggage compartment door closed.
Armed state
Perform any of the followings, and the system will return to Disarmed state (A):
● Push the unlock switch on the wireless remote or key.
● Put the key in the ignition and turn it ON.
Perform any of the followings, and the system will go on to Alarm sounding:
● Open any of the doors and allow the entry delay time to pass.
● Open the hood.
● Reconnect the battery.
Alarm sounding
Perform any of the followings, and the system will return to Disarmed state (A):
● Push the unlock switch on the wireless remote or key.
● Put the key in the ignition and turn it ON.
Perform the following, and the system will return to Armed state :
● The alarm sounding period passes.

HINT:
In the armed state, if one of the doors is opened, entry delay occurs. (14 secs.)
During this time, the mode transfers to the disarmed state when the condition described on the previous page (★) is met.
When the condition is not met, the system judges as a theft occurred, and the mode transfers to alarm sounding.



4. INDICATOR LIGHT OUTPUT

The indicator output the condition of the alarm control and the intrusion sensor control as shown below.

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

HINT:

Even in disarmed state, the indicator light flashes. (Due to the signal output from immobiliser system). The indicator always flashes by receiving the signal from the immobiliser system at any time in the arming condition.

Flashing frequency:

0.2 seconds (ON)

1.8 seconds (OFF)

Response:

The hazard lights flash under the following conditions.

(1) When the system is set.
When arming preparation is set from disarmed state using the wireless door lock, the hazard lights flash once.

(2) When the system is released.
When disarmed state is set from either arming preparation, armed state or alarm sounding using the wireless door lock, the hazard lights flash twice.

5. SWITCH TO ACTIVE MODE

In each passive mode, when ”disarmed state of active mode → arming preparation switch condition” is met, the active mode switch to each condition. In this case, active mode continues till disarmed state.

Passive mode when transfer condition is met.	Active mode transfer condition
Disarmed state	Arming preparation condition
Arming preparation condition	Arming preparation condition
Armed state (During entry delay time)	Arming condition (After alarming time has elapsed, arming condition if all the doors, engine hood and luggage compartment door is closed, all the doors are locked.)
Alarm sounding	After alarming time has elapsed, arming condition if all the doors, engine hood and luggage compartment door is closed, all the doors are locked.

6. FORCED DOOR LOCK CONTROL

While detecting intrusion into the vehicle and sounding alarm, alarm control outputs the door lock at the moment the door is unlocked, and prevents intrusion into the vehicle.

(1) Condition for Starting Forced Door Lock
Detecting any of the following conditions activates the forced door lock.
- Alarm system is in alarm status in active mode.
- Except for the case that the key unlock/luggage unlock switch is turned on.
- No key is in the ignition key cylinder.
- Some of the doors are unlocked.
- Since the start of the last forced lock, 0.38 sec. or more has been elapsed.

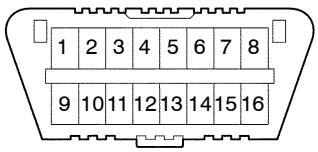
(2) Conditions for Stopping Forced Door Lock
Detecting any of the following conditions stops the forced door lock.
- All doors are locked.
- An alarm is stopped.
- A key is inserted into the key cylinder.

7. PANIC CONTROL

The function to sound the alarm when the user presses the panic switch of the wireless key.

8. ALARM MEMORY CONTROL

If an alarm is activated while a user leaves the vehicle, when the user comes back to the vehicle and reset the security system, the tail lights will come on for 2 sec. to show the alarm occurrence.



DLC3

A04550

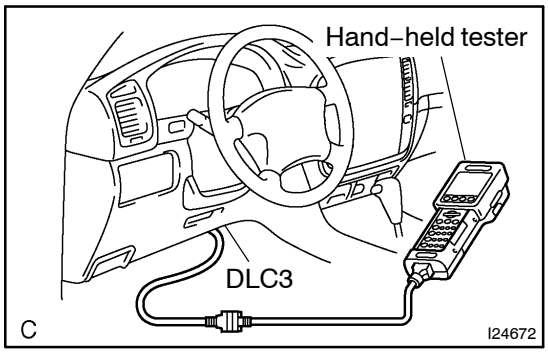
9. DIAGNOSIS SYSTEM

(a) Inspect the DLC3.
The vehicle's ECM uses ISO 9141–2 for communication. The terminal arrangement of DLC3 complies with SAEJ1962 and matches the ISO 9141–2 format.

HINT:

If the display shows "UNABLE TO CONNECT TO VEHICLE" when the cable of hand–held tester is connected to DLC3, the ignition switch is turned ON and the scan tool is operated, there is a problem either on the vehicle side or the tool side.

- If communication is normal when the tool is connected to another vehicle, inspect DLC3 on the original vehicle.
- If communication does not function when the tool is connected to another vehicle, the problem is probably in the tool itself, so consult the Service Department listed in the tool's instruction manual.



(b) Prepare the hand–held tester.
(c) Connect the hand–held to DLC3.
(d) Turn the ignition switch ON and the hand–held tester main switch ON.
(e) Use the hand–held tester to check the DTCs, note them down. (For opening instructions, see the hand–held tester's intrusion book).

10. DATA LIST

HINT:

By the DATA LIST displayed on the Hand–held tester, you can read the value of the switch, sensor, actuator and so on without removing any parts. Reading the DATA LIST as a first step of troubleshooting is one of the method to shorten the labor time.

(a) Turn the ignition switch OFF.
(b) Connect the hand–held tester to DLC3.
(c) Turn the ignition switch ON.
(d) According to the display on the tester, read the "DATA LIST".

THEFT DETERRENT ECU:

Item	Condition	Specified Condition
HOOD COURTSY SW	Engine hood Close → Open	OFF/ON
INTRS DETECT	Intrusion sensor detection OFF → ON	OFF/ON
GLS BRK DETECT	Glass broken sensor detection OFF → ON	OFF/ON
KEY UNLK WRN SW	Insert key	OFF/ON
IG SW	IG switch ON or other	OFF/ON
PASSIVE MODE	Passive mode → other mode	OFF/ON
WARN BY GLS SEN	Warning by glass broken sensor OFF → ON	OFF/ON
INTRUSION SEN	Intrusion sensor OFF → ON	OFF/ON
WARNING (HORN)	Warning by Horn OFF → ON	OFF/ON
ENTRY DELAY	Entry delay time	0 s/14 s /30 s

11. ACTIVE TEST

HINT:

Performing ACTIVE TEST using the Hand–held tester allows the relay, and so on to operate without removing any parts. Performing ACTIVE TEST as a first step of troubleshooting is one of the method to shorten the labor time.

DATA LIST can be displayed during ACTIVE TEST.

(a) Turn the ignition switch OFF.
(b) Connect the Hand–held tester to DLC3.
(c) Turn the ignition switch ON.
(d) According to the display on tester, perform the "ACTIVE TEST".

THEFT DETERRENT ECU:

Item	Test details	Diagnostic note
SECURITY INDIC	Turns security indicator ON/OFF	Connect terminals TC and E1 of DLC1
SECURITY HORN2	Turns security horn2 ON/OFF	–