SLIDE DOOR

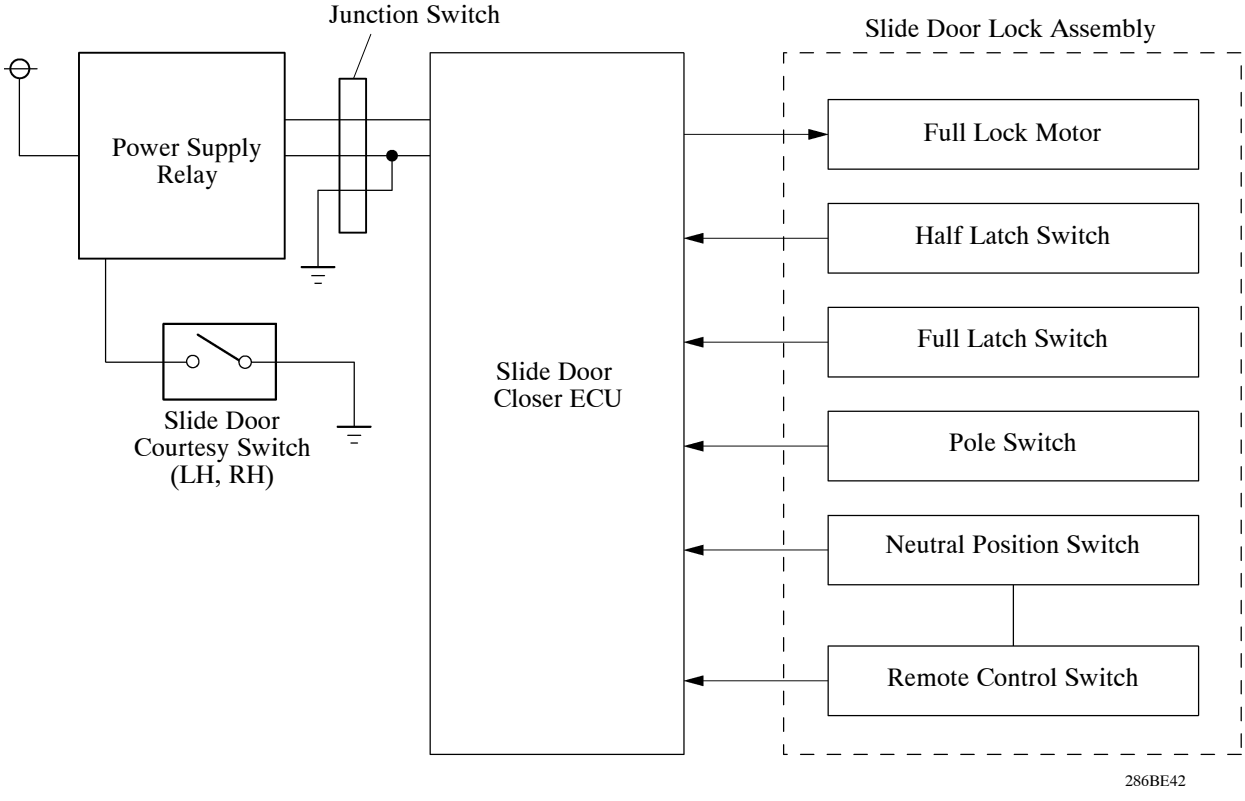
■SLIDE DOOR CLOSER SYSTEM

1. General

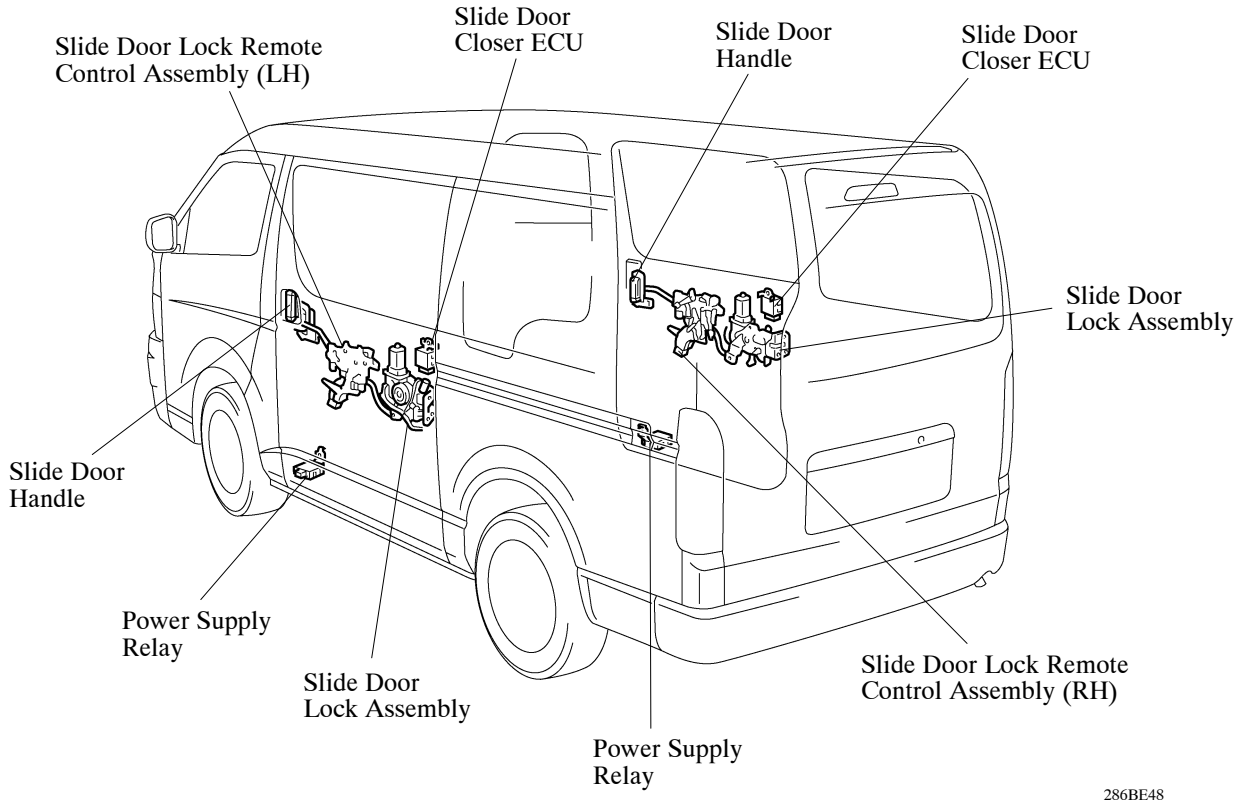
- When the right and left slide door closer system detects that the right and left slide doors are ajar, it automatically actuates the motors to fully close the right and left slide doors.
- A mechanism cancels the door closer system operation by operating an inside/outside door handle has been provided in the slide door lock assembly.
- This system is controlled by the slide door closer ECU.
- The slide door closer system is used on the super wagon for Thailand as standard equipment.
- The slide door closer system has the following functions:

Function		Outline
Slide Door Operation	Unlatching slide door lock	Slide door lock is manually disengaged by operating the slide door outside or inside handle.
	Closing a door fully (a door that is closed halfway)	Full lock motor actuates to fully close the slide door automatically.

▶ System Diagram ◀



2. Layout of Main Components



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3. Function of Main Components

The functions of the main components are described below:

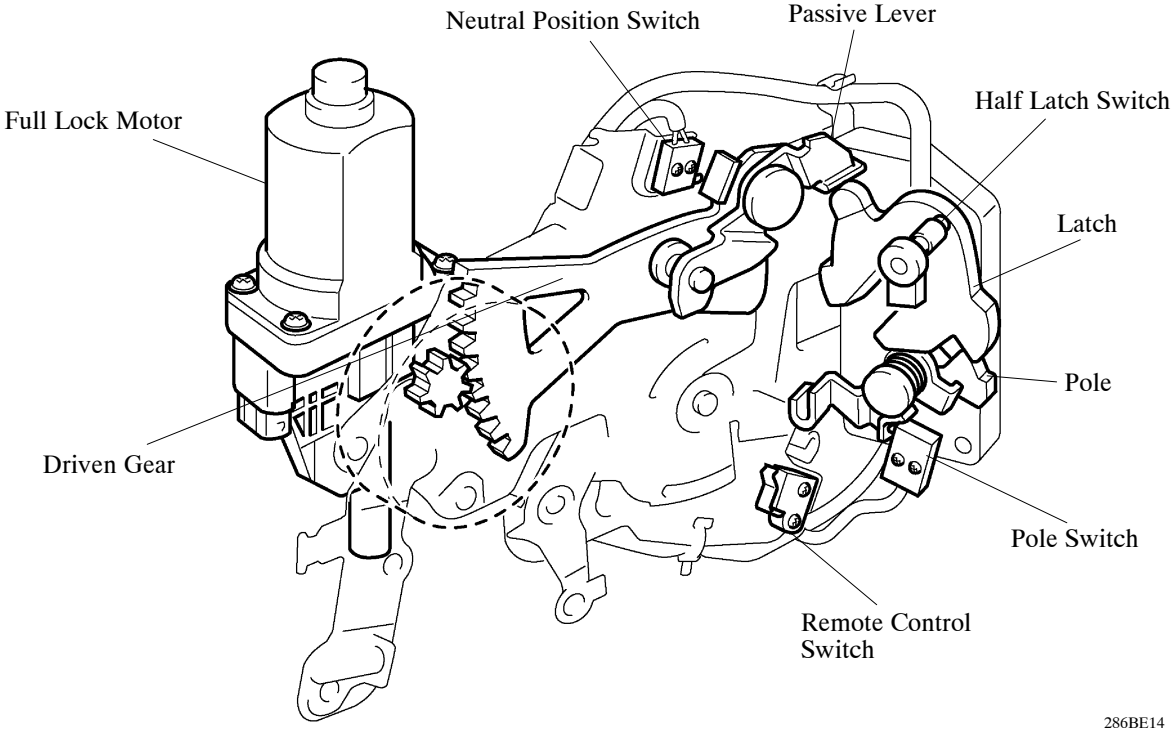
Components	Function
Slide Door Lock Assembly (with Closer Motor)	Actuates the built-in closer motor forward or backward to fully close the slide door if it is ajar, or to open it to the ajar position if it is fully closed.
Slide Door Lock Remote Control Assembly	Actuates the built-in door lock control motor forward or backward to lock or unlock the slide door.
Slide Door Handle (Inside/Outside)	Cancels operation of the slide door closer system.

4. Slide Door Lock Assembly

General

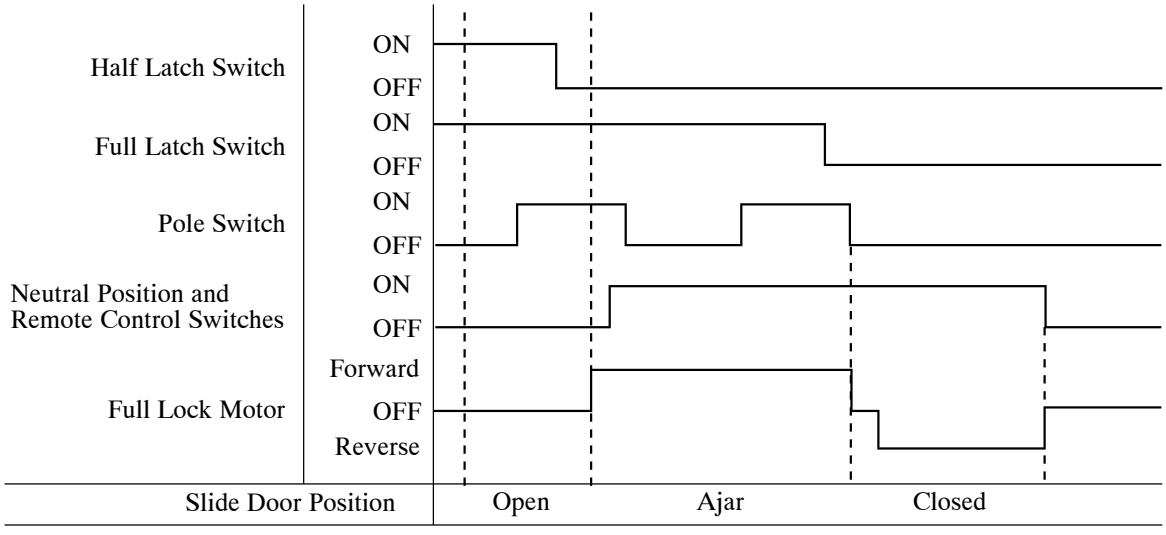
- In the slide door lock assembly, the motor is actuated to close the slide door lock from the half latch to the full latch state.
- When the rotational movement of the full lock motor is transferred to the driven gear, the latch turns with the passive lever. Thus, the latch changes to the full latch state, fully closing the slide door.
- The slide lock assembly contains four switches to detect the locked state. The detection functions of the switches are the following:

Detection Switch	Function
Half Latch Switch	Detects the latch half door position. It turns ON when the door moves from a fully open position to just before a half door position, and OFF in other positions.
Full Latch Switch	Detects the latch fully closed position. It turns ON when the door moves from a fully open position to just before a fully closed position, and turns OFF in the fully closed position.
Pole Switch	Detects the pole position. It is OFF for the fully closed state and turns ON while the latch is turning.
Neutral Position Switch	Detects the initial position of the driven gear. It is ON while the motor is operating, and turns OFF when the driven gear returns to its initial position.
Remote Control Switch	Detects whether or not a slide door inside/outside handle has been operated by observing the movement of the open lever. It turns OFF when a handle is operated, and turns ON when no handle is operated.



Closer Operation (Forward Rotation Control)

- The slide door relay rotates the full lock motor forward in order to move the latch in the full latch direction via the driven gear. Also, the neutral position switch turns ON. When the full latch switch and the pole switch turn OFF thereafter, the full lock motor stops.
- If the remote control switch turns OFF (by the operation of the inside handle or outside handle) while the full lock motor is rotating forward, the slide door relay stops the full lock motor. Then (0.1 second later), the slide door relay rotates the motor in reverse to stop the system until the half latch switch is turned ON.
- After the slide door is fully closed and the motor has stopped, the slide door relay rotates the full lock motor in reverse until the neutral position switch turns OFF, in order to return the latch and pole to their initial positions.



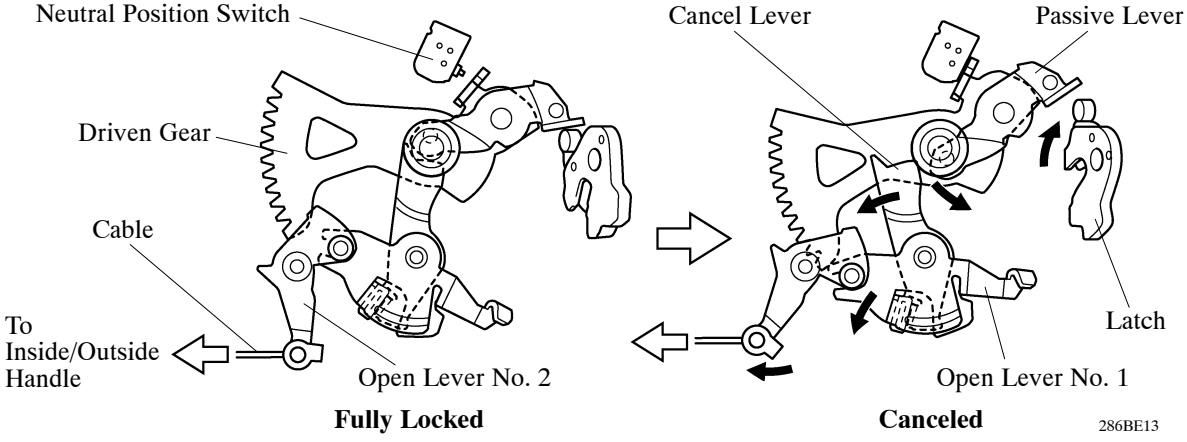
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Cancellation System

A cancellation system enables the slide door to be opened by operating an inside or outside handle if a cancellation system object is jammed while the slide door that is ajar becomes fully closed. If the rotational movement of the full lock motor is interrupted, the slide door will be unlocked by disrupting the actuation transmission path of the full lock motor (by releasing the cancel lever). The mechanism of the cancel system is described below.

Operating an inside or outside door handle pulls the cable. At this time, the open lever No. 2 turns clockwise, and the open lever No. 1 turns counterclockwise via a pin.
The cancel lever, which is synchronized with the open lever No. 1, turns counterclockwise. Simultaneously, the passive lever turns counterclockwise, which releases the latch.



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