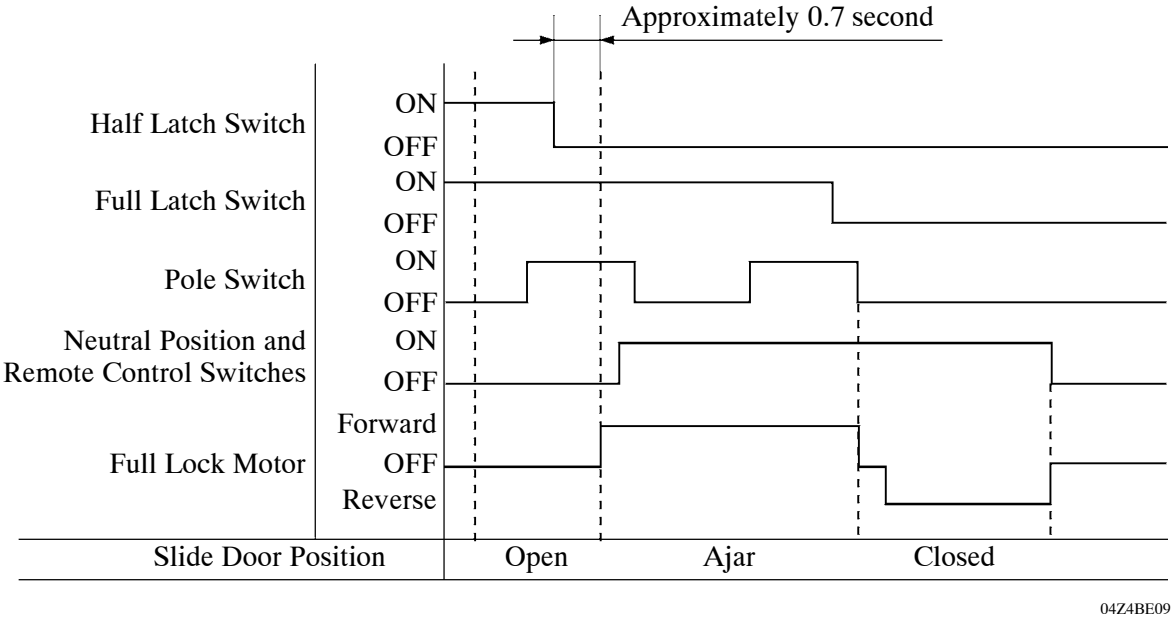
■SLIDE DOOR

1. Slide Door Closer System

Closer Operation (Forward Rotation Control)

- The control specifications of the slide door closer ECU have been changed to extend the time between half closed door detection (Half Latch Switch OFF) and the start of Full Lock Motor operation (from approximately 0.3 second to approximately 0.7 second).



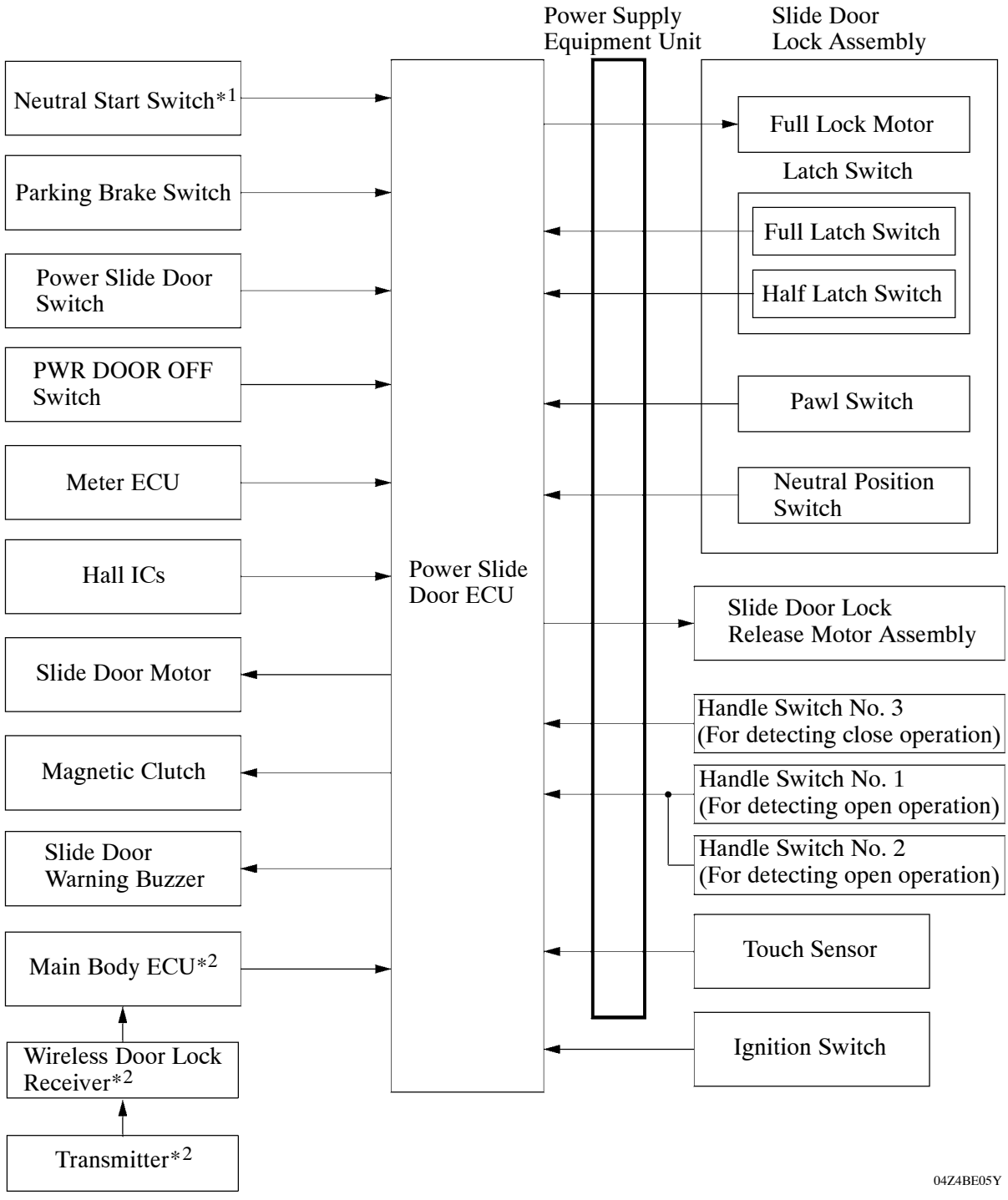
2. Power Slide Door System

Description

- The power slide door system (with slide door closer function) to be installed for the left side slide door is provided as standard for the Super long Commuter models for Singapore and available as an option for the Australia specification Commuter models and the Thailand specification GL grade Commuter models.
- The auto open-and-close operation of the power slide door has become possible with the use of the transmitter. (Excludes Thailand specification models)
- The control method of the power slide door has been changed so that it opens/closes in accordance with the direction in which the outside/inside door handle are operated, improving the operability. Accordingly, the control specifications of the power slide door ECU and the structure of the handle switch (switch for detecting outside/inside door handle operation) of the slide door lock assembly have been changed.
- Some of the buzzer patterns for when the power slide door is operating have been changed (Example: buzzer sounds for approximately 0.5 second before operation starts > buzzer sounds for approximately 0.8 second when operation starts).
- The power slide door system has the following functions:

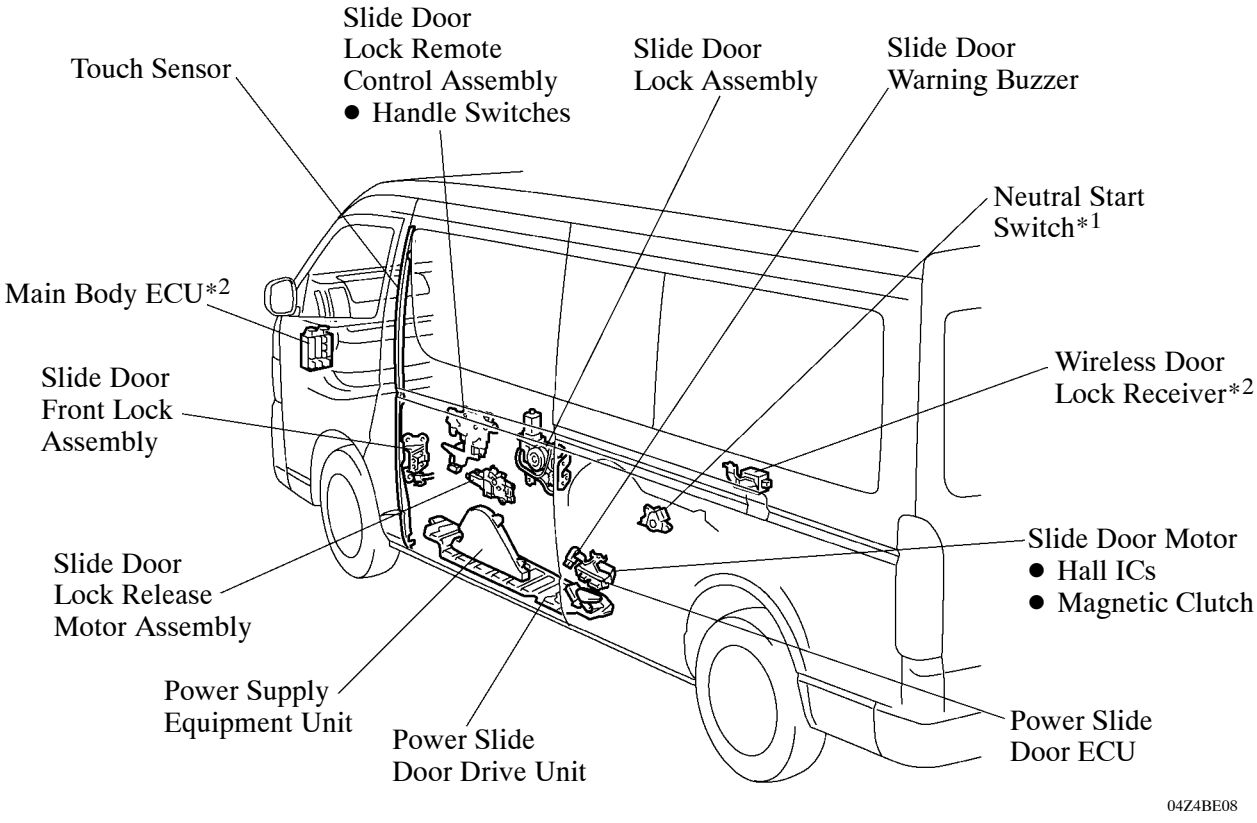
Function	Outline
Auto Open-and-close	Enables the slide door to open or close automatically through the operation of the following switches: – Power slide door switch. – Inside or outside door handle – Transmitter.
Touch Sensor Protection	If the touch sensor that is provided at the front end of the slide door becomes compressed while the slide door is moving in the closing direction, the resistance of the sensor changes. This change in resistance is output to the power slide door ECU to detect the presence of a jammed object. In addition, the power slide door ECU detects the presence of a jammed object when it detects a change in the moving speed of a slide door (by monitoring the motor speed).
Continuous Power Supply System	The adoption of the continuous power supply system for the slide door makes the junction power supply relay unnecessary, resulting in a simpler system.
Diagnosis	When the power slide door ECU detects a malfunction in the power slide door system, it diagnoses the failed section. Intelligent tester II performs DTC check. For details, see the HIACE Repair Manual (Pub. No. RM04Z4E).
Fail-safe	If any of the malfunctions listed below is detected during a power slide door operation, the power slide door ECU stops the power slide door motor. Then, it disengages the magnetic clutch and stops the operation of the system. ● When the ECU does not detect an OFF signal from the full latch switch within 3 seconds after the power slide door motor has started its close operation. ● When the power slide door motor actuation period exceeds 30 seconds.

▶ System Diagram ◀

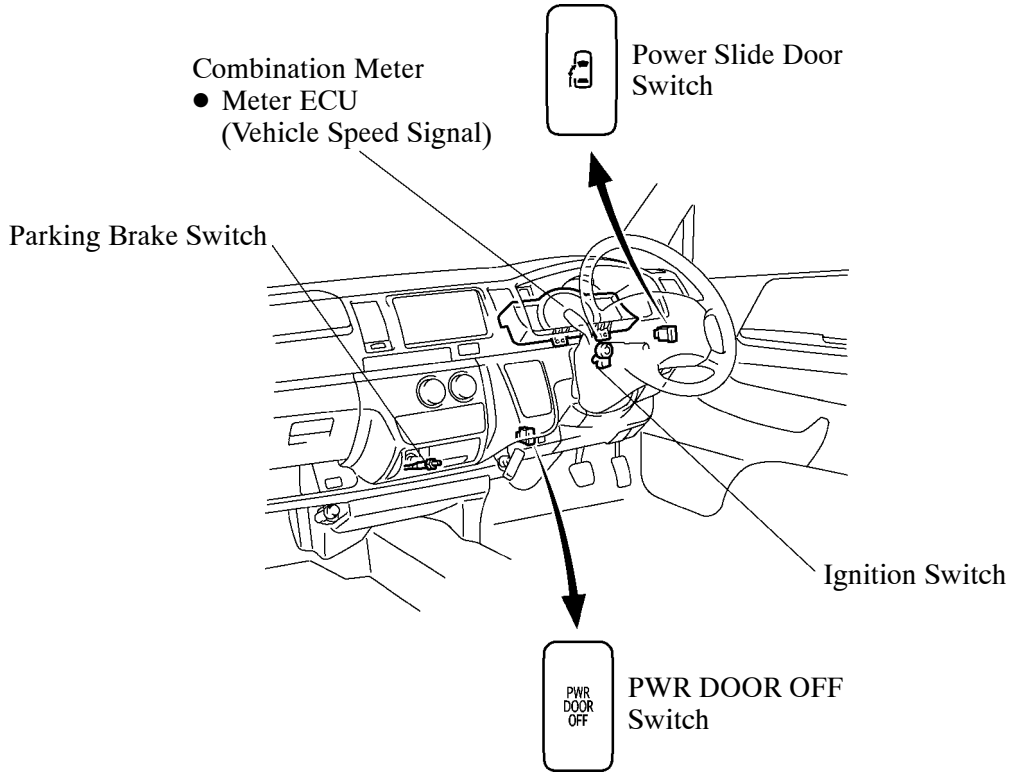


*1: Models of Automatic Transmission
*2: Models with Wireless Door Lock Remote Control System

Layout of Main Components



*1: Models of Automatic Transmission
*2: Models with Wireless Door Lock Remote Control System



Function of Main Components

Descriptions of the functions of the transmitter, the wireless door lock receiver, and the main body ECU have been added to the table of functions for the main components of the power slide door system. (Only for wireless door lock remote control system equipped models)

Components	Function
Power Slide Door Drive Unit	Automatically opens or closes the slide door by actuating the slide door motor in accordance with the operation request signal received from the power slide door ECU.
Slide Door Lock Assembly (with Full Lock Motor)	Actuates the built-in full lock motor forward or backward to fully close the slide door if it is ajar.
Slide Door Lock Release Motor Assembly	Releases the slide door front lock assembly and the slide door lock assembly if the slide door was closed by the power slide door switch. It cancels the full-open stopper if the slide door is open.
Slide Door Lock Remote Control Assembly	Operates the full lock motor, which is built into the slide door lock remote control assembly, forward or order to lock or unlock the slide door.
Slide Door Front Lock Assembly	Releases or locks the latch in front of the slide door.
Full Open Stopper	The full open stopper prevents the slide door from closing accidentally by its own weight when the vehicle is parked on a slope.
Touch Sensor	Detects the presence of a jammed object while the slide door is moving in the closing direction.
Power Supply Equipment Unit	Provides continuous power to the various units in the power slide door system.
PWR DOOR OFF Switch	Turns the power slide door system ON/OFF.
Power Slide Door Switch	Opens and closes the slide door.
Inside/Outside Door Handle	Transmits slide door open and close signals to the power slide door ECU.
Power Slide Door ECU	Control the slide door in accordance with the signal received from the switches and ECU.
Transmitter*	Transmits slide door open and close signals to the wireless door lock receiver.
Wireless Door Lock Receiver*	Receives slide door open and close signals from the transmitter.
Main Body ECU*	Receives slide door open and close signals from the wireless door lock receiver and outputs them to the power slide door ECU.

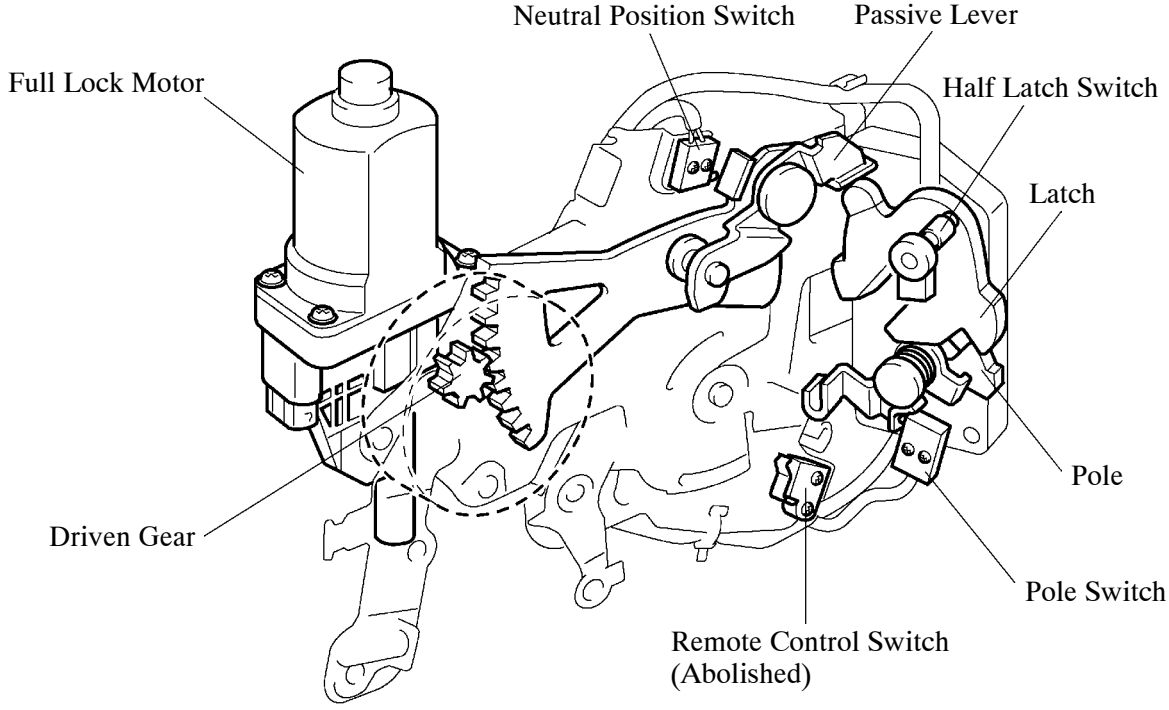
*: Models with Wireless Door Lock Remote Control System

Construction and Operation

1) Slide Door Lock Assembly

- With the adoption of opening/closing control corresponding to the operation direction of the inside/outside door handle, the remote control switch that was installed in the slide door lock assembly has been abolished. (Only for power slide door system equipped doors)
- The control specifications of the power slide door ECU have been changed to extend the time between half closed door detection (Half Latch Switch OFF) and the start of Full Lock Motor operation (from approximately 0.4 second to approximately 1.0 second).

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 (abolished)	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.

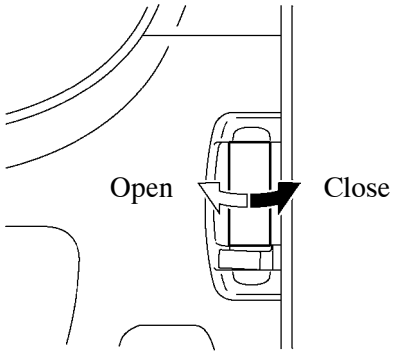


Slide Door Lock Assembly of
Power Slide Door System Equipped Door
(Left Side Slide Door)

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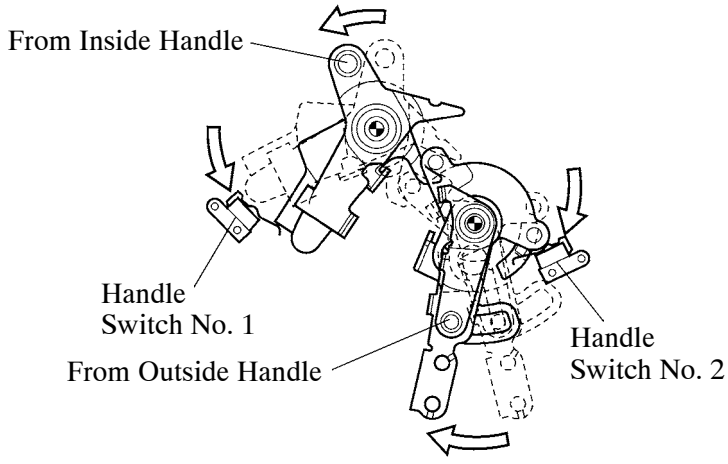
2) Slide Door Lock Remote Control Assembly (With Handle Switch)

- In order to detect the operation direction of the outside/inside door handle, the wiring of the three handle switches installed in the slide door lock remote control assembly has been changed. There is no change in the structure or connections of parts such as the cables, levers, and links.
- By separately outputting the handle switch No. 3 signals, against the conventional wiring method (handle operation signals are output when any of the handle switches (No. 1, 2 or 3) is turned on), the configuration to output signals to the power slide door ECU from any of the terminals in accordance with the operation direction of the outside/inside door handle has been provided.



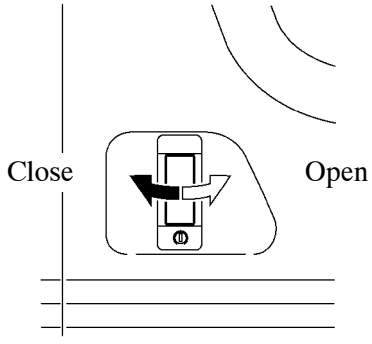
Inside Door Handle

04Z4BE10



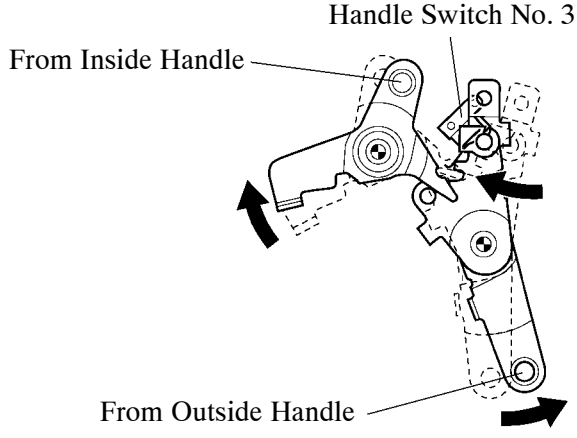
Slide Door Open

04Z4BE11



Outside Door Handle

04Z4BE06



Slide Door Closed

04Z4BE12

System Control

1) General

- The following slide door operations are available: assist operation (to slightly open and close the slide door manually), inside/outside door handle operation, power slide door switch operation, and transmitter operation*.

*: Excludes Thailand specification models

2) Operating Conditions

- The power slide door warning buzzer pattern for when the operating condition is not established (operation rejected buzzer pattern) has been changed to sounding twice for approximately 0.13 second at a time.

Power Source Mode	Operating Condition (The slide door operates only when all the conditions below have been met.)
IG-ON*1	PWR DOOR OFF switch is OFF (System ON Mode)
	Slide door is unlocked*2
	Battery voltage is 11 V or more
	Shift lever is in P position or parking brake is ON*3
	Parking brake is ON*4
	The vehicle speed is 3 km/h (1.9 mph) or less
IG-OFF	PWR DOOR OFF switch is OFF (System ON Mode)
	Slide door is unlocked*2
	Battery voltage is 11 V or more

*1: If the ignition key is turned on (IG-ON) or the key is inserted in the key cylinder (when the key unlock warning switch is ON), operations using the transmitter cannot be performed.
*2: An open slide door can be closed even if it is locked.
*3: Models of Automatic Transmission
*4: Models of Manual Transmission

3) Auto Open Function

- The operation direction of the inside/outside door handle for opening the door is restricted to the door opening direction (towards the rear of the vehicle)(Even if the handle is moved to the door closing direction while the power slide door is fully closed, the Auto Open operation will not start).
- The timing of the power slide door warning buzzer has been changed so that it sounds at the start of power slide door operation, and the buzzer sounding time for each operation method (power slide door switch, inside/outside door handle, and transmitter*) has been set to approximately 0.8 second. In addition, the intermittent buzzer cycle during auto close operation has been changed to approximately 0.8 second.

*: Excludes Thailand specification models

▶ Switch Operation ◀

Operation	Power Slide Door Warning Buzzer
Power slide door switch is operated for 0.5 seconds or more	Sounds for approximately 0.8 seconds.
Inside/outside door handle is operated to the door opening direction (towards rear of vehicle)	Sounds for approximately 0.8 seconds.
Transmitter is operated for approximately 0.5 second or more*	Sounds for approximately 0.8 seconds.

*: Excludes Thailand specification models

4) Auto Close Function

- The operation direction of the inside/outside door handle for closing the door is restricted to the door closing direction (towards the front of the vehicle) (Even if the handle is moved to the door opening direction while the power slide door is fully open, the Auto Close operation will not start)
- The timing of the power slide door warning buzzer has been changed so that it sounds at the start of power slide door operation, and the buzzer sounding time for each operation method (power slide door switch, inside/outside door handle, and transmitter*) has been set to approximately 0.8 second. In addition, the intermittent buzzer cycle during auto close operation has been changed to approximately 0.8 second.

*: Excludes Thailand specification models

▶ Switch Operation ◀

Operation	Power Slide Door Warning Buzzer
Power slide door switch is operated for 0.5 seconds or more	Sounds for approximately 0.8 seconds.
Inside/outside door handle is operated to the door closing direction (towards front of vehicle).	Sounds for approximately 0.8 seconds.
Transmitter is operated for approximately 0.5 second or more*	Sounds for approximately 0.8 seconds.

*: Excludes Thailand specification models

5) Transmitter Operation (Excluding Thailand specification models)

- When the transmitter button is pressed for approximately 0.5 second while the slide door is fully closed, the door opens automatically after the warning buzzer sounds for approximately 0.8 second.
- When the transmitter button is pressed for approximately 0.5 second while the slide door is fully open, the door closes automatically and the warning buzzer sounds intermittently (approximately 0.8 second cycle: ON for 0.4 second/OFF for 0.4 second) after the warning buzzer sounds for approximately 0.8 second.

6) Reverse operation

- If any of the operations shown in the table below is performed while the power slide door is operating, the power slide door warning buzzer sounds for approximately 0.2 second and the door moves in the opposite direction, such as closing when it is being opened or opening when it is being closed.
- The reverse operation control of the inside/outside door handle can only be performed if the door handle is operated to the opposite direction to that in which the door is operating. (Example: Even if the handle is operated to the door opening direction while the door is opening, the reverse operation is not activated and the door opening operation continues.)

▶ Operation methods for performing reverse operation ◀

Operation Method
Operate the power slide door switch.
Operate the inside/outside door handle to the opposite direction to that in which the door is operating.
Operate the transmitter.* (Extended pressing is not required.)

*: Excludes Thailand specification models

Jam Protection Function

1) General

- The power slide door warning buzzer pattern for when the jam protection function is operating (when operated by the Hall ICs or the touch sensor) has been changed from sounding for approximately 0.1 second to sounding twice for approximately 0.13 second at a time.