■POWER WINDOW SYSTEM

General

- The power window regulator motor assembly contains a power window ECU and Hall IC.
- A non-volatile flash memory is used in the power window ECU, thus enabling the ECU to memorize the position of the door glass. This makes initialization unnecessary, such as after removing and reinstalling the battery, and enhances serviceability.

Service Tip

The power window regulator motor assembly stores the initial position of each door window. The memory is not cleared if battery terminals, fuses or power window motor connectors are disconnected. However, the power window regulator motor assembly needs to be initialized if it is replaced with a new one or it is reinstalled. When necessary, perform the initialization as follows:

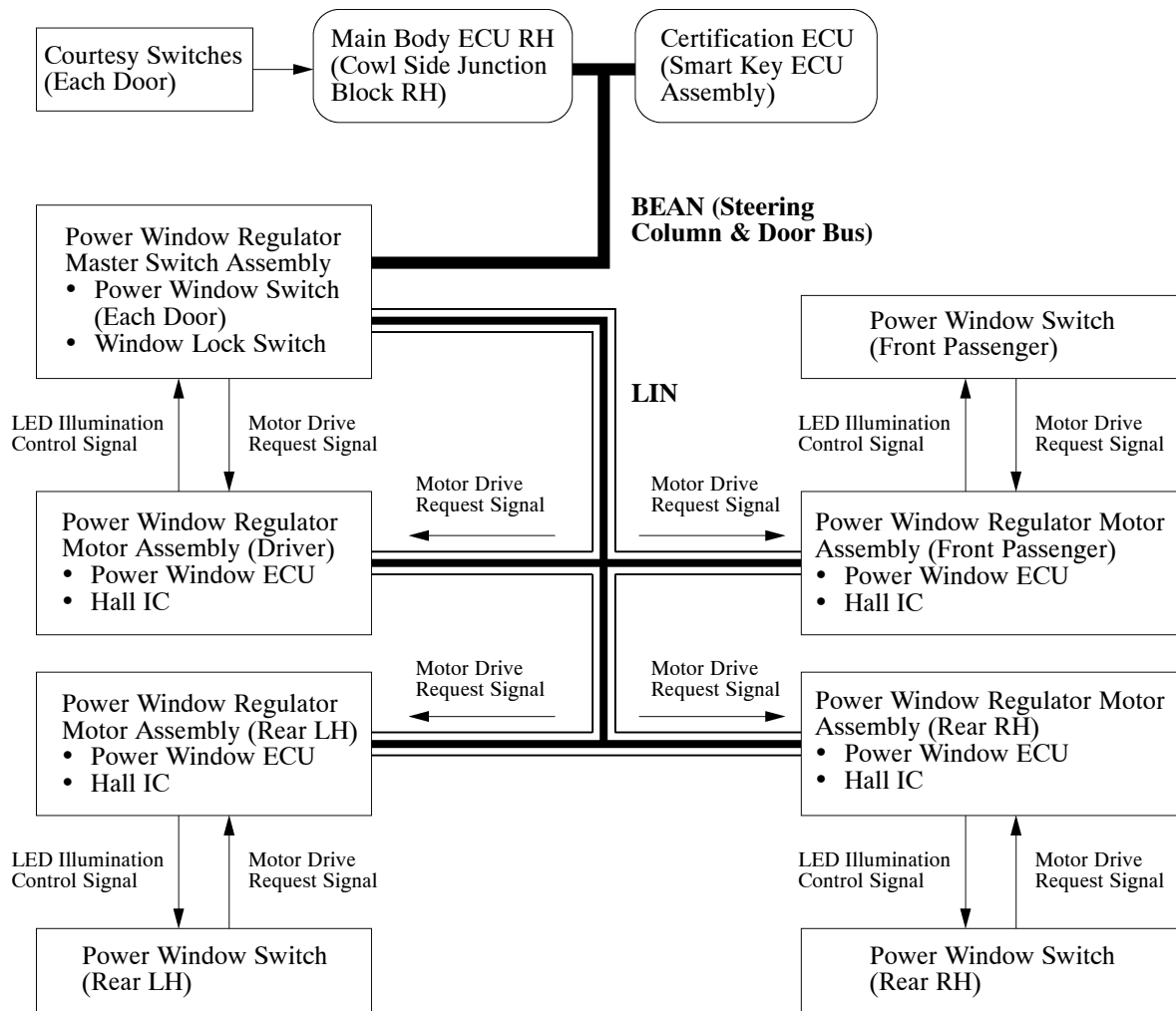**Initialization after Reinstallation of the Power Window Regulator Motor Assembly**

(1) Connect the battery and turn the power source ON.
(2) Pull up the power window switch to the AUTO UP position and hold it until the window is fully closed.
(3) Hold the power window switch in the AUTO UP position for at least 6 seconds after the window is fully closed.
(4) Push down the power window switch until the window is fully opened.
(5) Hold the power window switch for at least 1 second after the window is fully opened.
(6) Release the switch once, push down the power window switch in the AUTO DOWN position and hold it for at least 4 seconds.
(7) Pull up the power window switch to the AUTO UP position and hold it until the window is fully closed.
(8) Hold the power window switch in the AUTO UP position for at least 1 second after the window is fully closed.
(9) Check that the power window switch illumination has changed from flashing to being illuminated.
(10) Make sure that the window opens and closes automatically using the one touch function.

Initialization after Replacement of the Power Window Regulator Motor Assembly

(1) Connect the battery and turn the power source ON.
(2) Check that the power window switch illumination blinks after the power source is turned on.
(3) Push down the power window switch until the window is fully opened.
(4) Hold the power window switch for at least 1 second after the window is fully opened.
(5) Pull up the power window switch to the AUTO UP position and hold it until the window is fully closed.
(6) Hold the power window switch in the AUTO UP position for at least 1 second after the window is fully closed.
(7) Check that the power window switch illumination has changed from flashing to being illuminated.
(8) Make sure that the window opens and closes automatically using the one touch function.

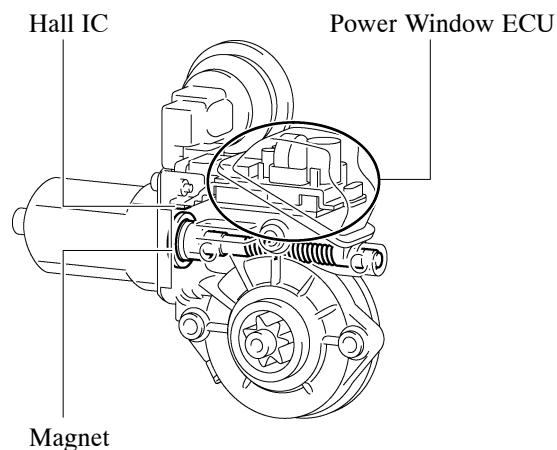For details, refer to the LEXUS IS F Repair Manual (RM08E1E).

System Diagram

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┌─────────────────┐     ┌──────────────────┐     ┌──────────────────┐
│ Courtesy Switches│────▶│ Main Body ECU RH │─────│ Certification ECU│
│ (Each Door)     │     │ (Cowl Side Junction│    │ (Smart Key ECU   │
│                 │     │ Block RH)        │     │ Assembly)        │
└─────────────────┘     └──────────────────┘     └──────────────────┘
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BEAN (Steering Column & Door Bus)

Power Window Regulator Master Switch Assembly
• Power Window Switch (Each Door)
• Window Lock Switch

LIN

Power Window Switch (Front Passenger)

LED Illumination Control Signal — Motor Drive Request Signal

LED Illumination Control Signal — Motor Drive Request Signal

Power Window Regulator Motor Assembly (Driver)
• Power Window ECU
• Hall IC

Motor Drive Request Signal ◀

Motor Drive Request Signal ▶

Power Window Regulator Motor Assembly (Front Passenger)
• Power Window ECU
• Hall IC

Motor Drive Request Signal ◀

Motor Drive Request Signal ▶

Power Window Regulator Motor Assembly (Rear LH)
• Power Window ECU
• Hall IC

Power Window Regulator Motor Assembly (Rear RH)
• Power Window ECU
• Hall IC

LED Illumination Control Signal — Motor Drive Request Signal

LED Illumination Control Signal — Motor Drive Request Signal

Power Window Switch (Rear LH)

Power Window Switch (Rear RH)

0155NF07C

Power Window Regulator Motor Assembly

The power window regulator motor assembly contains a power window ECU and Hall IC.
● The power window ECU controls power window actuation, and the Hall IC detects the position and the direction of the motor.

Hall IC   Power Window ECU
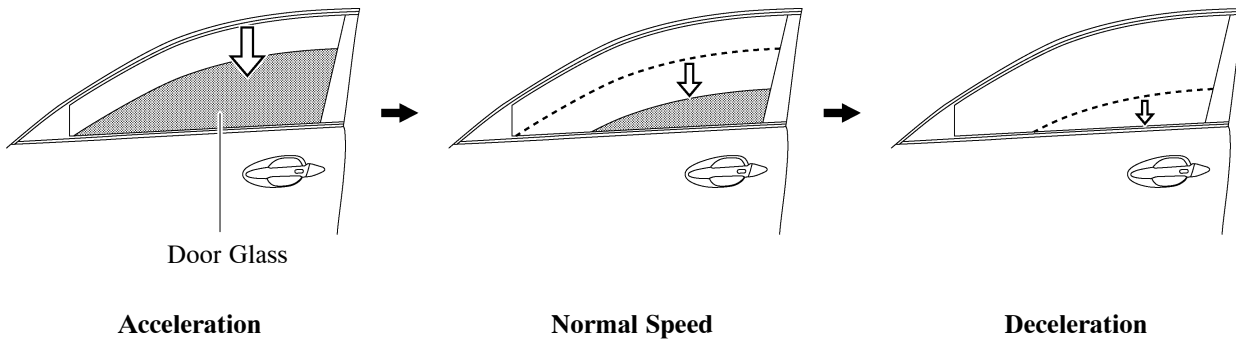
Magnet   0155NF06C

Variable Speed Control

General

The variable speed control minimizes the occurrence of noise during the power window open/close operation by changing the operating speed of the power window regulator motor assembly.
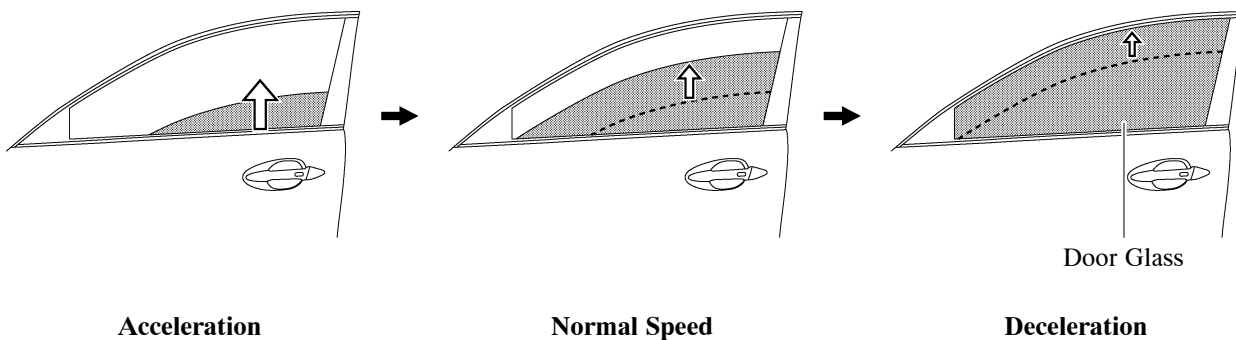
Opening Power Window

- In order to minimize the noise when the power window open function starts operating, the power window ECU accelerates the window opening speed within approximately 30 mm (1.2 in.) of the window fully closed position.
- In order to minimize the noise when the power window is opened fully, the power window ECU decelerates the window opening speed within approximately 80 mm (3.1 in.) of the window fully open position.
- The power window ECU stops the power window just before it reaches fully open position of the power window regulator assembly to minimize the noise when the window is opened fully.

Door Glass

Acceleration   **Normal Speed**   **Deceleration**

10L0NF23C

Closing Power Window

- In order to minimize the noise when the power window close function starts operating, the power window ECU accelerates the window closing speed within approximately 30 mm (1.2 in.) of the window fully open position.
- In order to minimize the noise when the power window is closed fully, the power window ECU decelerates the window closing speed within approximately 80 mm (3.1 in.) of the window fully closed position.

Door Glass

Acceleration   **Normal Speed**   **Deceleration**

10L0NF24C