

## PRE-CHECK

### 1. POWER WINDOW OPERATION MODE

HINT:

The initial condition that the customizing function by the hand-held tester is not chosen is shown.

**Standard:**

Power window operation	Ignition switch ON	Ignition switch OFF Operative after key-OFF	Ignition switch OFF Inoperative after key-OFF
Manual UP	Operative	Jam protection function operative	Inoperative
Manual DOWN	Operative	Operative	Inoperative
AUTO UP	Jam protection function operative	Jam protection function operative	Inoperative
AUTO DOWN	Operative	Operative	Inoperative
UP operation interlocked with key	Inoperative	Jam protection function operative	Jam protection function operative
DOWN operation interlocked with key	Inoperative	Operative	Operative

### 2. POWER WINDOW FAIL-SAFE FUNCTION

- (a) When an abnormality is detected in the limit switch and pulse sensor for operating the jam protection function (DTC: B1231/31, B1232/32), the following power window operations will be prohibited by the fail-safe function.

**Standard:**

Power window operation	Ignition switch ON	Ignition switch OFF Operative after key-OFF	Ignition switch OFF Inoperative after key-OFF
Manual UP	Operative	Operation prohibited	-
Manual DOWN	Operative	Operation prohibited	-
AUTO UP	Operation prohibited	Operation prohibited	-
AUTO DOWN	Operation prohibited	Operation prohibited	-
UP operation interlocked with key	-	Operation prohibited	Operation prohibited
DOWN operation interlocked with key	-	Operation prohibited	Operation prohibited

HINT:

In case of normal limit switch, the prohibition (fail-safe function) will be cancelled by fully opening the door glass that is fully closed by the manual operation, then AUTO operations will be possible.

### 3. CHECK HAND-HELD TESTER

- (a) ECU Data Monitor:

- (1) The ECU data monitor will indicate if the part is normal or malfunctioning.

**Standard:**

#### Door ECU (driver side) (switch condition)

Item	Inspecting condition	Standard value
Driver side power window AUTO switch	Pressed → Not pressed	ON/OFF
Jam protection limit switch	Power window fully open → fully closed	ON/OFF

**Door ECU (driver side) (jam protection threshold)**

Item	Inspecting condition	Standard value
Window full-close position → 1/4 open position	Power window is going UP by manual operation	OK/CAUTION*
Window 1/4 open position → 2/4 open position	Power window is going UP by manual operation	OK/CAUTION*
Window 2/4 open position → 3/4 open position	Power window is going UP by manual operation	OK/CAUTION*
Window 3/4 open position → full-open position	Power window is going UP by manual operation	OK/CAUTION*

**HINT:**

\* : "CAUTION" is indicated when something is detected in being caught in the window.

**(b) Active Test:**

- (1) The active test will indicate if the part is normal or malfunctioning.

**Standard:****Door ECU (driver side)**

Item	Operation
Power window	UP/DOWN

**(c) Customizing Function (reference):**

- (1) Using the hand-held tester, select a setting from the following items on the power window.

**Standard:****Door ECU (driver side)**

Item	Setting
Power window UP operation interlocked with door	With/Without function
Power window DOWN operation interlocked with door	With/Without function