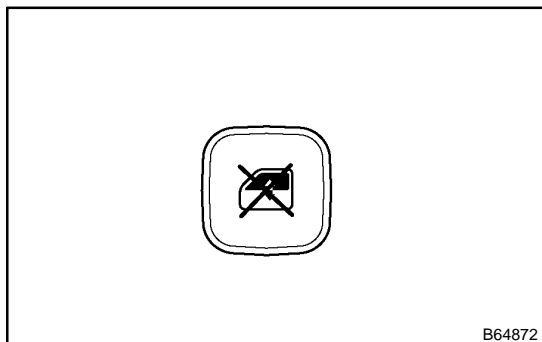


## PRE-CHECK



### 1. CHECK WINDOW LOCK SWITCH

- (a) Check that operation of the door glasses except for the driver side door glass, the back door glass and the sliding roof is disabled when the window lock switch of the power window master switch is pressed.
- (b) Check that the door glasses, the back door glass and the sliding roof can be operated when the window lock switch is pressed again.

### 2. CHECK MANUAL UP/DOWN FUNCTION

- (a) Check that the back power window switch can operate the back door glass as follows.

#### Standard:

Condition	Switch Operation	Door Glass
<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Window lock switch OFF</li> <li>Rear wiper retracts</li> </ul>	Press UP within 0.3 sec.	UP (Close)
	Press DOWN within 0.3 sec.	DOWN (Open)

### 3. CHECK AUTO UP/DOWN FUNCTION

- (a) Check that the back power window switch can operate the back door glass as follows.

#### Standard:

Condition	Switch Operation	Door Glass
<ul style="list-style-type: none"> <li>Ignition switch ON</li> <li>Window lock switch OFF</li> <li>Rear wiper retracts</li> </ul>	Press UP for more than 0.3 sec.	UP (Fully closed)
	Press DOWN for more than 0.3 sec.	DOWN (Fully open)

### 4. CHECK MANUAL UP/DOWN FUNCTION VIA BACK DOOR LOCK KEY CYLINDER

- (a) Check that the back door glass operates as follows, when the key is inserted into the back door lock key cylinder and the back door is locked/unlocked.

#### Standard:

Condition	Key	Door Glass
Rear wiper retracts	Turn right (LOCK) for more than 0.75 sec.	UP (Closed)
	Turn left (UNLOCK) for more than 0.75 sec.	DOWN (Open)

### 5. CHECK MANUAL DOWN FUNCTION VIA TRANSMITTER

- (a) Check that the back door glass keeps opening while the back door power window switch on the transmitter is pressed with the rear wiper in the retract position.

### 6. CHECK POWER WINDOW OPERATION FUNCTION AFTER IGNITION OFF

- (a) Under both of the following conditions, check that the door glasses, the back door glass and the sliding roof can be operated even after the ignition switch is turned OFF:
  - Within 45 seconds after the ignition switch is turned OFF
  - The driver side door is closed

## 7. CHECK JAM PROTECTION FUNCTION

### HINT:

The jam protection function prevents any part of your body from getting caught by accident between the door frame and the door glass during power window operation.

- (a) Check that the door glass goes down by 50 mm (2.0 in.) right when something gets caught between the door frame and door glass during power window operation. However, when the opening amount between the vehicle body and the door glass is less than 200 mm (7.9 in.), the door glass keeps going down until the opening amount reaches 200 mm (7.9 in.) and stops there.

### Operative condition:

- AUTO UP via the back door power window switch
- AUTO/MANUAL UP during power window operation after ignition OFF
- MANUAL UP via the back door lock key cylinder

## 8. CHECK FAIL-SAFE FUNCTION

- (a) If the pulse sensor in the back door power window motor malfunctions (DTC B2221 is output), the power window functions will be disabled:
- The AUTO UP/DOWN function is disabled.
  - The MANUAL DOWN function via the transmitter is disabled.
  - The MANUAL UP/DOWN function via the back door power window switch can be performed (the ignition switch ON).
  - The MANUAL UP/DOWN function via the back door lock key cylinder can be performed (the ignition switch ON).

## 9. CHECK DATA LIST WITH HAND-HELD TESTER

- (a) According to the data list displayed by the hand-held tester, you can read the value of the switch, sensor, actuator and so on without parts removal. Reading the data list as a first step of troubleshooting is one of the method to shorten the labor time.

### DATA LIST of back door ECU:

Measurement Item	Label	Parameter
Rear wiper retract switch	WIPER RTRCT SW	ON/OFF
Rear door lock key switch at LOCK position	KEY SW (UNLK)	ON/OFF
Rear door lock key switch at UNLOCK position	KEY SW (LOCK)	ON/OFF
Back door glass position	P/W POSITION	CLOSE/OPEN
Back door glass position (Fully closed - 1/4)	GLASS POS - 1/4	CAUTION/OK*
Back door glass position (1/4 - 2/4)	GLASS POS - 2/4	CAUTION/OK*
Back door glass position (2/4 - 3/4)	GLASS POS - 3/4	CAUTION/OK*
Back door glass position (3/4 - Fully opened)	GLASS POS - OPEN	CAUTION/OK*

\*: CAUTION is displayed even without applying resistance in each range, there must be a caught somewhere in that range.

## 10. CHECK TEST CODE WITH HAND-HELD TESTER

- (a) DTC B1241 is a test code to inform of the back door power window switch, defogger switch and rear wiper switch condition and will be output when the switches are ON. In that these codes are displayed operating the switch or the switch or the codes are not displayed even with operating the switch, there may be trouble in the switch circuit.

**11. PERFORM ACTIVE TEST WITH HAND-HELD TESTER**

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

**ACTIVE TEST of back door ECU:**

Operation Item	Label	Operation
Operate back door power window UP/DOWN	P/W UP/DOWN	Close/Open