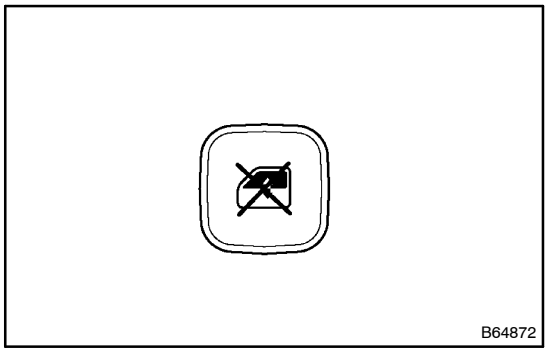
05AE7–01

# PRE–CHECK

HINT:

- *1: For 5–door models
- *2: CAUTION is displayed even when no resistance is applied in each position. In this case there must be something caught somewhere in that position.




**1. CHECK WINDOW LOCK SWITCH**

(a) Check that operation of the door glasses except for the driver side door glass and the roof glass is disabled when the window lock switch of the power window master switch is pressed.

(b) Check that the door glasses and the roof glass can be operated when the window lock switch is pressed again.

**2. CHECK MANUAL UP/DOWN FUNCTION**

(a) The driver side power window operates as the follows.

**Standard:**

| Condition | Master Switch | Switch Operation | Door Glass |
|---|---|---|---|
| Ignition switch ON | Driver side | Halfway pushed DOWN | DOWN (Open) |
| | | Halfway pulled UP | UP (Closed) |

(b) The power windows except the driver side power window operate as follows.

**Standard:**

| Condition | Switch | Switch Operation | Door Glass |
|---|---|---|---|
| • Ignition switch ON<br>• Window lock switch OFF | Passenger side | Halfway pushed DOWN | DOWN (Open) |
| | | Halfway pulled UP | UP (Closed) |
| | Rear LH*1 | Halfway pushed DOWN | DOWN (Open) |
| | | Halfway pulled UP | UP (Closed) |
| | Rear RH*1 | Halfway pushed DOWN | DOWN (Open) |
| | | Halfway pulled UP | UP (Closed) |

**3. CHECK AUTO UP/DOWN FUNCTION**

(a) The driver side power window operates as the follows.

**Standard:**

| Condition | Master Switch | Switch Operation | Door Glass |
|---|---|---|---|
| Ignition switch ON | Driver side | Fully pushed DOWN | AUTO DOWN (Fully open) |
| | | Fully pulled UP | AUTO UP (Fully closed) |

(b) The power windows except the driver side power window operate as follows.

**Standard:**

| Condition | Switch | Switch Operation | Door Glass |
|---|---|---|---|
| • Ignition switch ON<br>• Window lock switch OFF | Passenger side | Fully pushed DOWN | AUTO DOWN (Fully open) |
| | | Fully pulled UP | AUTO UP (Fully closed) |
| | Rear LH*1 | Fully pushed DOWN | AUTO DOWN (Fully open) |
| | | Fully pulled UP | AUTO UP (Fully closed) |
| | Rear RH*1 | Fully pushed DOWN | AUTO DOWN (Fully open) |
| | | Fully pulled UP | AUTO UP (Fully closed) |

### 4. CHECK REMOTE MANUAL UP/DOWN FUNCTION

(a) The power windows except the driver side power window operate as follows.

**Standard:**

| Condition | Master Switch | Switch Operation | Door Glass |
|---|---|---|---|
| • Ignition switch ON<br>• Window lock switch OFF | Passenger side | Halfway pushed DOWN | DOWN (Open) |
| | | Halfway pulled UP | UP (Closed) |
| | Rear LH*1 | Halfway pushed DOWN | DOWN (Open) |
| | | Halfway pulled UP | UP (Closed) |
| | Rear RH*1 | Halfway pushed DOWN | DOWN (Open) |
| | | Halfway pulled UP | UP (Closed) |

### 5. CHECK REMOTE AUTO UP/DOWN FUNCTION

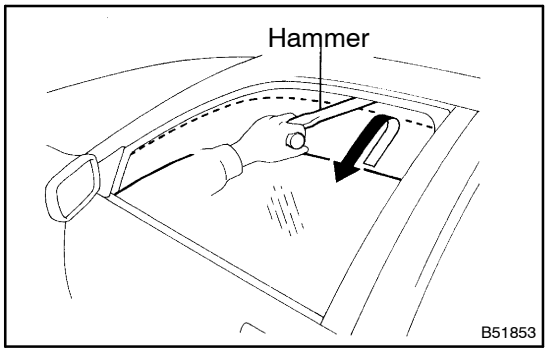
(a) The power windows except the driver side power window operate as follows.

**Standard:**

| Condition | Master Switch | Switch Operation | Door Glass |
|---|---|---|---|
| • Ignition switch ON<br>• Window lock switch OFF | Passenger side | Fully pushed DOWN | AUTO DOWN (Fully open) |
| | | Fully pulled UP | AUTO UP (Fully closed) |
| | Rear LH*1 | Fully pushed DOWN | AUTO DOWN (Fully open) |
| | | Fully pulled UP | AUTO UP (Fully closed) |
| | Rear RH*1 | Fully pushed DOWN | AUTO DOWN (Fully open) |
| | | Fully pulled UP | AUTO UP (Fully closed) |

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

(a) When both of the following conditions are fulfilled, check that the door glasses, the back door glass and the sliding roof can be operated even after the ignition switch is turned OFF:
   (1) Within 45 seconds after the ignition switch is turned OFF.
   (2) All the doors are closed.




### 7. CHECK JAM PROTECTION

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 approximately 50 mm (2.0 in.) right when something gets caught between the door frame and the 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
- AUTO UP function after the ignition switch is turned OFF
- MANUAL UP function after the ignition switch is turned OFF

## 8. CHECK POWER WINDOW FAIL–SAFE FUNCTION

(a) If there is a malfunction in the power window system, some of the power window functions will be disabled.

**Driver side power window:**

| Malfunction Part | Disabled Function | Operative Function |
|---|---|---|
| Pulse sensor circuit in power window motor | • AUTO UP/DOWN function<br>• Power window operation function after ignition OFF | • Manual UP function (fully pulled UP switch)<br>• Manual DOWN function<br>• Remote function (AUTO and manual)<br>• Remote function after ignition OFF (AUTO and manual) |
| CPU in power window master switch | • AUTO UP/DOWN function<br>• Remote function (AUTO and manual) | • Manual UP (held switch UP)<br>• Manual DOWN |

**Power windows except driver side power window:**

| Malfunction Part | Disabled Function | Operative Function |
|---|---|---|
| • Pulse sensor circuit in power window motor<br>• CPU in power window master switch<br>• Communication between master switch and each power window switch | • AUTO UP/DOWN unction<br>• Power window operation function after ignition OFF | • Manual UP function (fully pulled UP switch)<br>• Manual DOWN function |

## 9. FUNCTION 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 in D–DOOR ECU:**

| Measurement Item | Label | Parameter |
|---|---|---|
| Driver switch on master switch | P/W AUTO SW | ON/OFF |
| Passenger switch on master switch | P P/W AUTO SW | ON/OFF |
| Rear RH switch on master switch*1 | RR P/W AUTO SW | ON/OFF |
| Rear LH switch on master switch*1 | RL P/W AUTO SW | ON/OFF |
| Door glass position (Fully closed – 1/4 open) | GLASS POS–1/4 | CAUTION/OK *2 |
| Door glass position (1/4 open – 2/4 open) | GLASS POS–2/4 | CAUTION/OK *2 |
| Door glass position (2/4 open – 3/4 open) | GLASS POS–3/4 | CAUTION/OK *2 |
| Door glass position (3/4 open – Fully opened) | GLASS POS–OPEN | CAUTION/OK *2 |

## 10. INSPECT TEST CODE WITH HAND–HELD TESTER

(a) DTC No. B1221 is the test code to inform you of the master switch condition and the code is output when the switches are ON. If this DTC is displayed no switch is operated, or if this DTC is not displayed when any of the switches are operated, there may be a trouble in the switch circuit.

## 11. INSPECT ACTIVE TEST WITH HAND–HELD TESTER

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

**ACTIVE TEST in D–DOOR ECU:**

| Operation Item | Label | Operation |
|---|---|---|
| Driver side power window UP/DOWN | P/W UP/DOWN | UP/DOWN |

**ACTIVE TEST in BODY ECU:**

| Operation Item | Label | Operation |
|---|---|---|
| Passenger side power window UP/DOWN | P P/W UP/DOWN | UP/DOWN |
| Rear LH power window UP/DOWN *1 | RL P/W UP/DOWN | UP/DOWN |
| Rear RH power window UP/DOWN *1 | RR P/W UP/DOWN | UP/DOWN |