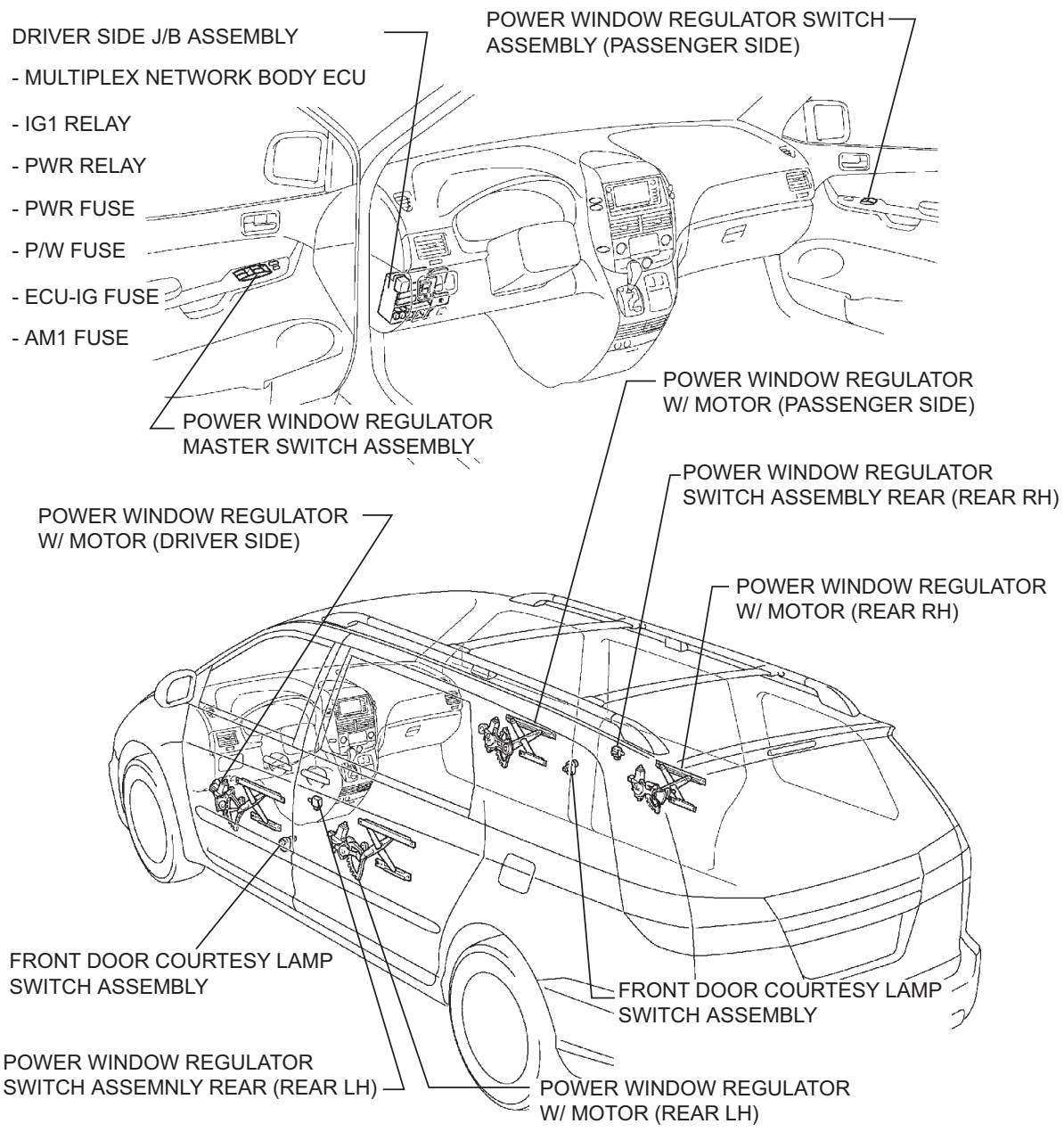
POWER WINDOW CONTROL SYSTEM (w/ Jam Protection Function)

PARTS LOCATION



WS

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:
Troubleshoot in accordance with the procedures on the following pages.

1	VEHICLE BROUGHT TO WORKSHOP

NEXT

2	CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK

NEXT

3	PROBLEM SYMPTOMS TABLE

(a) When problem is not listed on problem symptoms table, proceed to A.
(b) When problem is listed on problem symptoms table, proceed to B.

B → GO TO STEP 5

A

4	PERFORM TROUBLESHOOTING ACCORDING TO MALFUNCTION SYMPTOM

(a) Data list / Active test.
HINT:
See page WS-8
(b) Circuit inspection.

NEXT

WS

5	ADJUST, REPAIR OR REPLACE

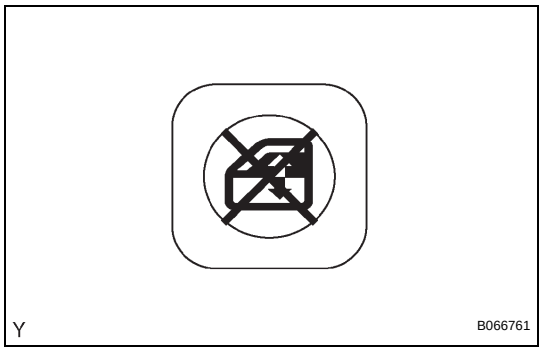
NEXT

6	RESET POWER WINDOW REGULATOR MOTOR

(a) If the AUTO switch (driver side switch) light of the power window master switch is blinking after the repair, reset the power window motor (See page WS-5).

NEXT

END



OPERATION CHECK

1. CHECK WINDOW LOCK SWITCH

(a) Check that the passenger side power window and slide door power window operation is disabled when the window lock switch of the power window master switch is pressed.

(b) Check that the passenger side power window and slide door power windows can be operated when the window lock switch is pressed again.

2. CHECK MANUAL UP/DOWN FUNCTION

(a) Check that the driver side power window can be operated using the AUTO (driver side) switch of the power window master switch as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
Ignition switch ON	AUTO (driver side)	Pull halfway up	UP (Closed)
		Push halfway down	DOWN (Open)

(b) Check that the passenger power window and slide door power windows can be operated using each power window regulator switch as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
• Ignition switch ON • Window lock switch OFF	Passenger side	Pull up	UP (Closed)
		Push down	DOWN (Open)
	Rear LH	Pull up	UP (Closed)
		Push down	DOWN (Open)
	Rear RH	Pull up	UP (Closed)
		Push down	DOWN (Open)

3. CHECK AUTO UP/DOWN FUNCTION

(a) Check that the driver side power window can be operated using the AUTO (driver side) switch of the power window master switch as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
Ignition switch ON	AUTO (driver side)	Pull halfway up	AUTO UP (Fully closed)
		Push halfway down	AUTO DOWN (Fully open)

WS

4. CHECK REMOTE MANUAL UP/DOWN FUNCTION

(a) Check that the passenger side power window and slide door power window can be operated using each switch of the power window master switch as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
• Ignition switch ON • Window lock switch OFF	Passenger side	Pull up	UP (Closed)
		Push down	DOWN (Open)
	Rear LH	Pull up	UP (Closed)
		Push down	DOWN (Open)
	Rear RH	Pull up	UP (Closed)
		Push down	DOWN (Open)

5. CHECK MANUAL DOWN FUNCTION VIA TRANSMITTER

(a) Check that all power windows and sliding roof (standard type only) operate as follows when operating the transmitter:

Standard

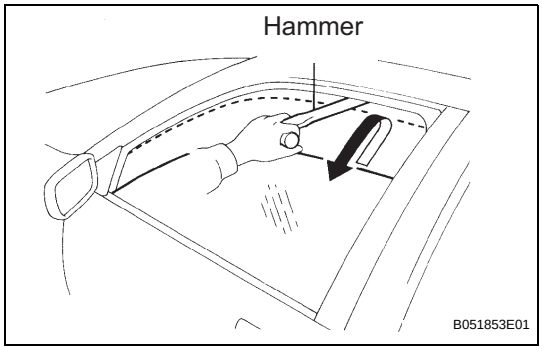
Condition	Transmitter Operation	Position/Operation
• No key in ignition key cylinder • Any door UNLOCK	Press UNLOCK switch pressed for 1.5 sec. or more	All power windows go DOWN
• No key in ignition key cylinder • All doors CLOSE • All doors LOCK	Press LOCK switch pressed for 1.5 sec. or more	All power windows go UP

HINT:

For a sign for starting operation, the wireless door lock buzzer sounds once (answer-back).

6. CHECK POWER WINDOW OPERATION FUNCTION AFTER IGNITION SWITCH IS TURNED OFF

(a) When both of the following conditions are fulfilled, check that the power windows can be operated even after the ignition switch is turned off.
   (1) Within 45 seconds after the ignition switch is turned off.
   (2) The front doors are 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.

NOTICE:

If the power window motor has been reset, raise and lower the door glass several times using MANUAL function before performing the check.

(a) Check that the door glass goes down by approx. 50 mm (1.97 in.) right when something gets caught between the door frame and door glass during power window operation. However, when the opening between the door frame and the door glass is less than 200 mm (7.87 in.), the door glass keeps going down until the operation reaches 200 mm (7.87 in.) and stops there.
   - AUTO UP
   - AUTO UP operation after the ignition switch OFF
   - MANUAL UP operation after the ignition switch OFF

8. CHECK POWER WINDOW FAIL-SAFE FUNCTION

(a) If there is a malfunction in the pulse sensor of the power window motor, the power window function will be restricted to partial operation.

Power Window Function (Switch Operation)	Ignition Switch ON	Ignition Switch OFF
Manual UP (Pull halfway up)	Disabled *	Disabled

WS

Power Window Function (Switch Operation)	Ignition Switch ON	Ignition Switch OFF
Manual DOWN (Push halfway down)	Operative	Disabled
AUTO UP (Pull fully up)	Disabled	Disabled
AUTO DOWN (Push fully down)	Disabled	Disabled

*: However, manual UP function of the power window is operative when fully pulling up the power window switch.