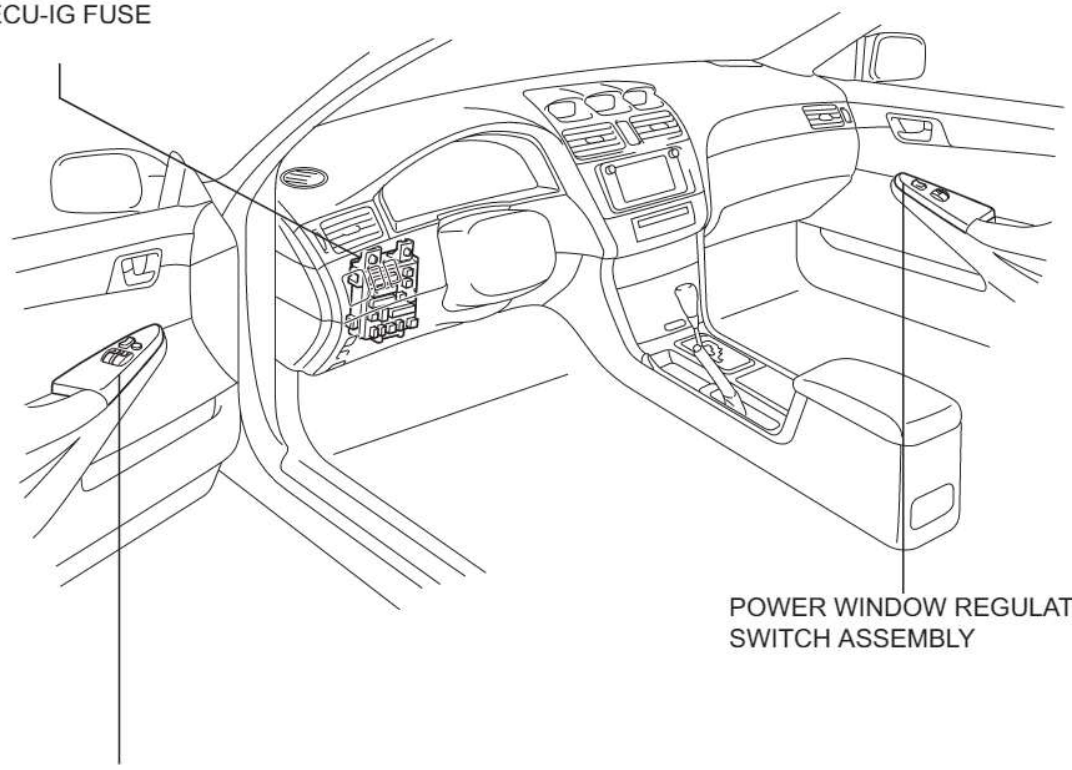
PARTS LOCATION

INSTRUMENT PANEL J/B ASSEMBLY

- MULTIPLEX NETWORK BODY ECU
- IG1 RELAY
- PWR RELAY
- PWR M-FUSE
- P/W FUSE
- ECU-IG FUSE



POWER WINDOW REGULATOR SWITCH ASSEMBLY

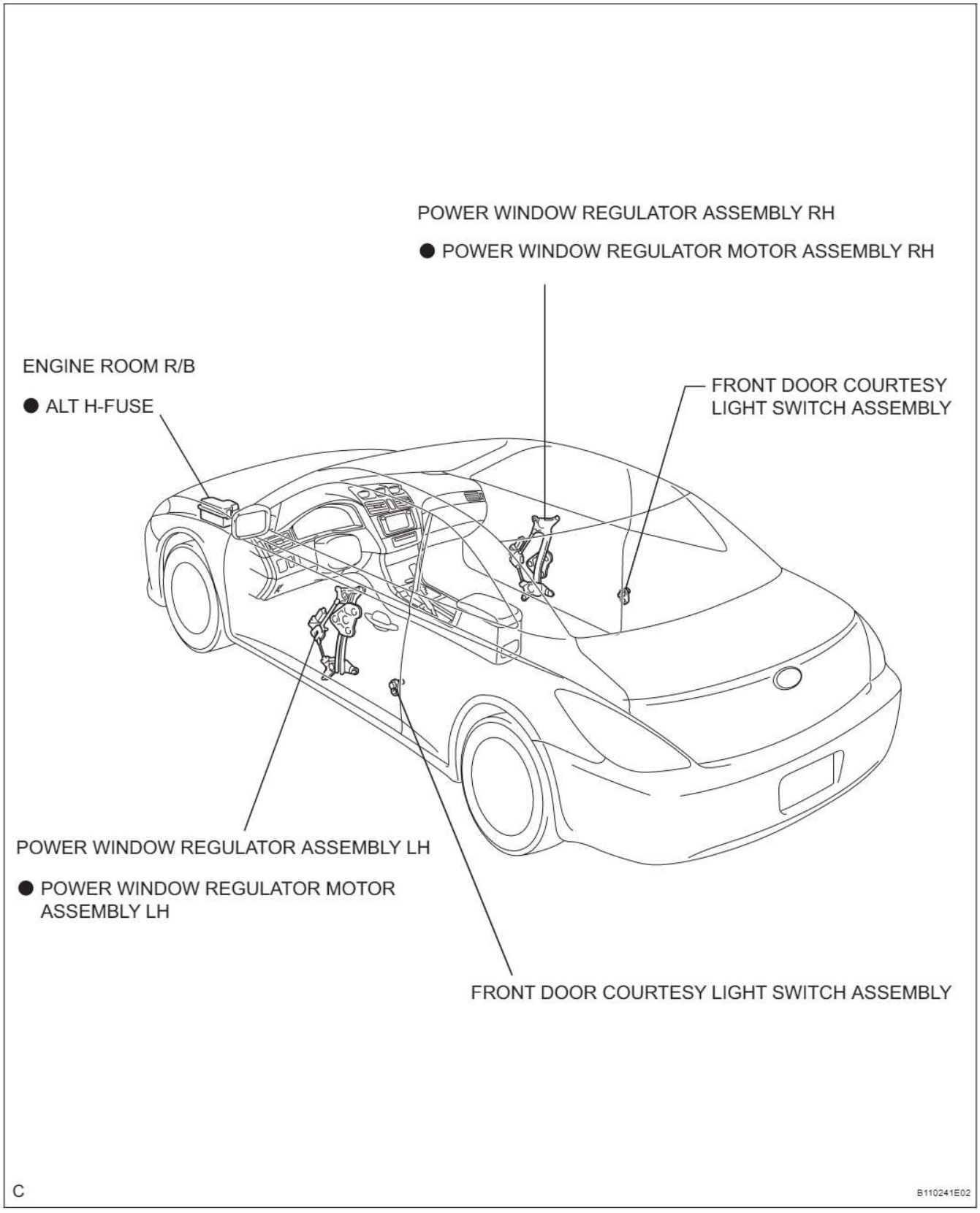
POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

- DRIVER SIDE WINDOW SWITCH
- PASSENGER SIDE WINDOW SWITCH
- WINDOW LOCK SWITCH

C

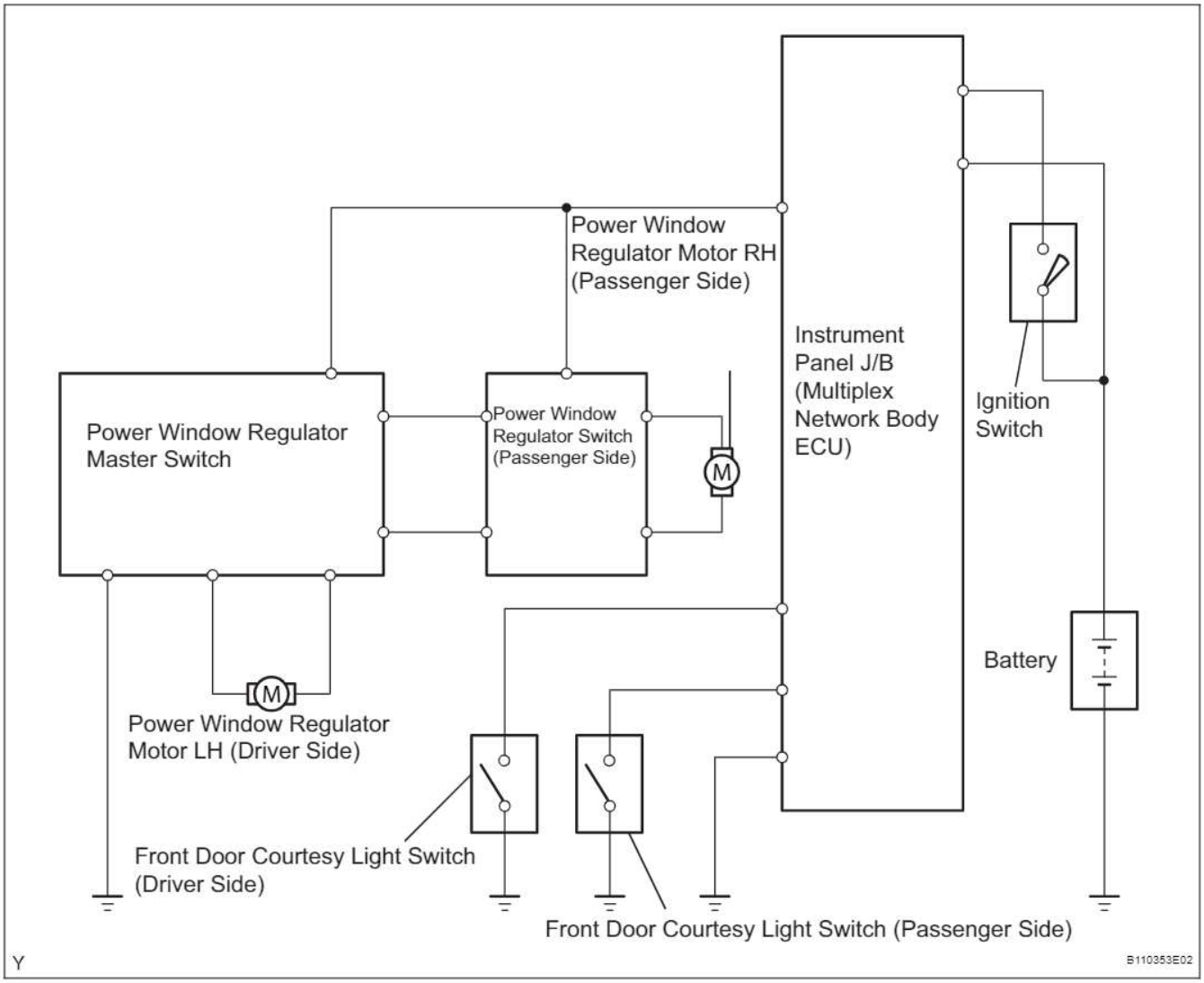
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WS


POWER WINDOW REGULATOR ASSEMBLY RH
● POWER WINDOW REGULATOR MOTOR ASSEMBLY RH
ENGINE ROOM R/B
● ALT H-FUSE
FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY
POWER WINDOW REGULATOR ASSEMBLY LH
● POWER WINDOW REGULATOR MOTOR ASSEMBLY LH
FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY
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WS

SYSTEM DIAGRAM



WS

SYSTEM DESCRIPTION

1. POWER WINDOW CONTROL SYSTEM DESCRIPTION

(a) The power window control system controls the power windows' UP/DOWN function using regulator motors.
The main controls of this system are: the power window regulator master switch, which is built into the driver side door, and the power window regulator switch, which is built into the passenger side door. Pressing the regulator switch or either of the 2 switches on the master switch transmits an UP/DOWN signal to the corresponding power window regulator motor.
The jammed window detection mechanism consists of a magnet on the worm gear of the power window motor assembly and the 2 Hall ICs on the connector.

(b) The power window control system has the following functions:

Function	Outline
Manual UP/DOWN function	Driver side power window: Function that causes window to raise while power window switch is being pulled halfway up, and to lower while pushed halfway down. Window stops as soon as switch is released. Passenger side power window: Function that causes window to raise while power window switch is being pulled up and to lower while pushed down. Window stops as soon as switch is released.
Auto UP/DOWN function	Function that enables window of driver side door to be fully opened or closed by one press or pull of power window switch.
Jam protection function	Function that automatically stops driver side power window and moves it downward if object is jammed in driver side power window during AUTO UP operation. During key-off operation function, jam protection function works for manual UP and AUTO UP operation. Jam protection function is only available on driver side power window.
Remote control function	Function that allows power window master switch to control manual UP/DOWN operations of passenger door power window.
Key-off operation function	Function that makes it possible to operate power window for approx. 43 seconds after ignition switch is turned to ACC or LOCK position and either front door is not opened.
Window lock function	Function where passenger side power window operation is disabled when window lock switch of master switch is pressed. Passenger side power window can be operated when window lock switch is pressed again.
Diagnosis	Function where power window switch can detect malfunctions in power window system and make diagnoses. Power window switch light illuminates or blinks to inform driver.
Fail-safe	Function that disables driver side power window AUTO UP/DOWN function if pulse sensor (Hall IC) in power window regulator motor has malfunction. Manual operation is possible through power window switches.

INITIALIZATION

1. RESET (INITIALIZE) POWER WINDOW REGULATOR MOTOR (DRIVER SIDE)

NOTICE:

- **Resetting the power window regulator motor (initializing the pulse sensor) is necessary if: 1) the battery terminal is disconnected; 2) the power window regulator master switch, wire harness, power window regulator switch, power window regulator and power window regulator motor are replaced or removed/installed; or 3) the PWR fuse, P/W fuse and ECU-IG fuse are replaced. If resetting is not performed, the master switch will not be able to operate the AUTO operation function, jam protection function and remote operation function.**
- **Whenever disconnecting the battery terminal, reset all the other systems besides the power window control system (See page WS-1)**

(a) Turn the ignition switch ON.

(b) Halfway open the power window by pressing the power window switch.

(c) Fully pull up the switch until the power window is fully closed and continue to hold the switch for at least 1 second after the power window is fully closed.

(d) Check that the AUTO UP/DOWN function operates normally.

If the AUTO UP/DOWN function operates normally, reset operations have been completed at this time.

If not normal, follow steps below.

(1) Disconnect the negative battery terminal for 10 seconds.

(2) Connect the battery terminal.

(3) Turn the ignition switch ON.

(4) Halfway open the power window by pressing the power window switch.

(5) If the AUTO UP/DOWN function operates normally, reset operations have been completed at this time.

If not normal, follow steps below.

(6) Turn the ignition switch ON.

(7) Halfway open the power window by pressing the power window switch.

(8) Fully pull up the switch until the power window is fully closed and continue to hold the switch for approx. 12 seconds after the power window is fully closed.

(9) Check that the AUTO UP/DOWN function operates normally.

WS

PROBLEM SYMPTOMS TABLE

POWER WINDOW CONTROL SYSTEM

Symptom	Suspected area	See page
AUTO UP/DOWN function does not operate	1. Refer to troubleshooting	WS-16
	2. Power window regulator motor assembly (driver side)	-
	3. Wire harness	-
	4. Power window regulator master switch assembly	-
Remote UP/DOWN function does not operate	1. Refer to troubleshooting	WS-19
	2. Power window regulator master switch assembly	-
	3. Wire harness	-
Manual UP/DOWN function does not operate on driver side	1. Refer to troubleshooting	WS-35
	2. P/W fuse	-
	3. Power window regulator master switch assembly	-
	4. Power window regulator motor assembly (driver side)	-
	5. Wire harness	-
Manual UP/DOWN function does not operate on passenger side only	1. Refer to troubleshooting	WS-21
	2. Power window regulator switch assembly (passenger side)	-
	3. Power window regulator motor assembly (passenger side)	-
	4. Wire harness	-
Jam protection function does not operate	1. Refer to troubleshooting	WS-34
	2. Power window regulator master switch assembly	-
Power windows do not operate at all	1. Refer to troubleshooting	WS-24
	2. PWR M-fuse, P/W fuse, ECU-IG fuse, AM1 fuse	-
	3. PWR relay, IG1 relay	-
	4. Power window regulator master switch assembly	-
	5. Wire harness	-
	6. Instrument panel J/B assembly (multiplex network body ECU)	-
Power window can be operated after ignition switch is turned OFF even when certain conditions are not met	1. Refer to troubleshooting	WS-29
	2. Power window regulator master switch assembly	-
	3. Front door courtesy light switch	-
	4. Wire harness	-
	5. Multiplex network body ECU	-
AUTO UP operation does not fully close power window (jam protection function is activated)	1. Refer to troubleshooting	WS-32
	2. Front door window regulator assembly	-
	3. Power window regulator motor assembly (driver side)	-
	4. Power window regulator master switch assembly	-

Jam Protection Function does not Operate

DESCRIPTION

The power window regulator master switch controls the driver side power window regulator motor. The jam protection function operates only within the specified range during AUTO UP operation or key-off manual UP operation.
HINT:
The jam protection function is only available on the driver side power window.

1	RESET POWER WINDOW REGULATOR MOTOR

(a) Reset the power window regulator motor (See page WS-6).
(b) Check if the power window AUTO UP/DOWN function operates normally.
OK:
AUTO UP/DOWN function operates normally.

NG → **OTHER PROBLEM**

OK ↓

2	CHECK JAM PROTECTION FUNCTION OPERATING RANGE

(a) Check that the jam protection function operates normally (See page WS-12).
HINT:
The jam protection function does not operate from the fully closed position of the door glass to 4 mm (0.16 in.) below that.

NG → **REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY**

OK ↓

END

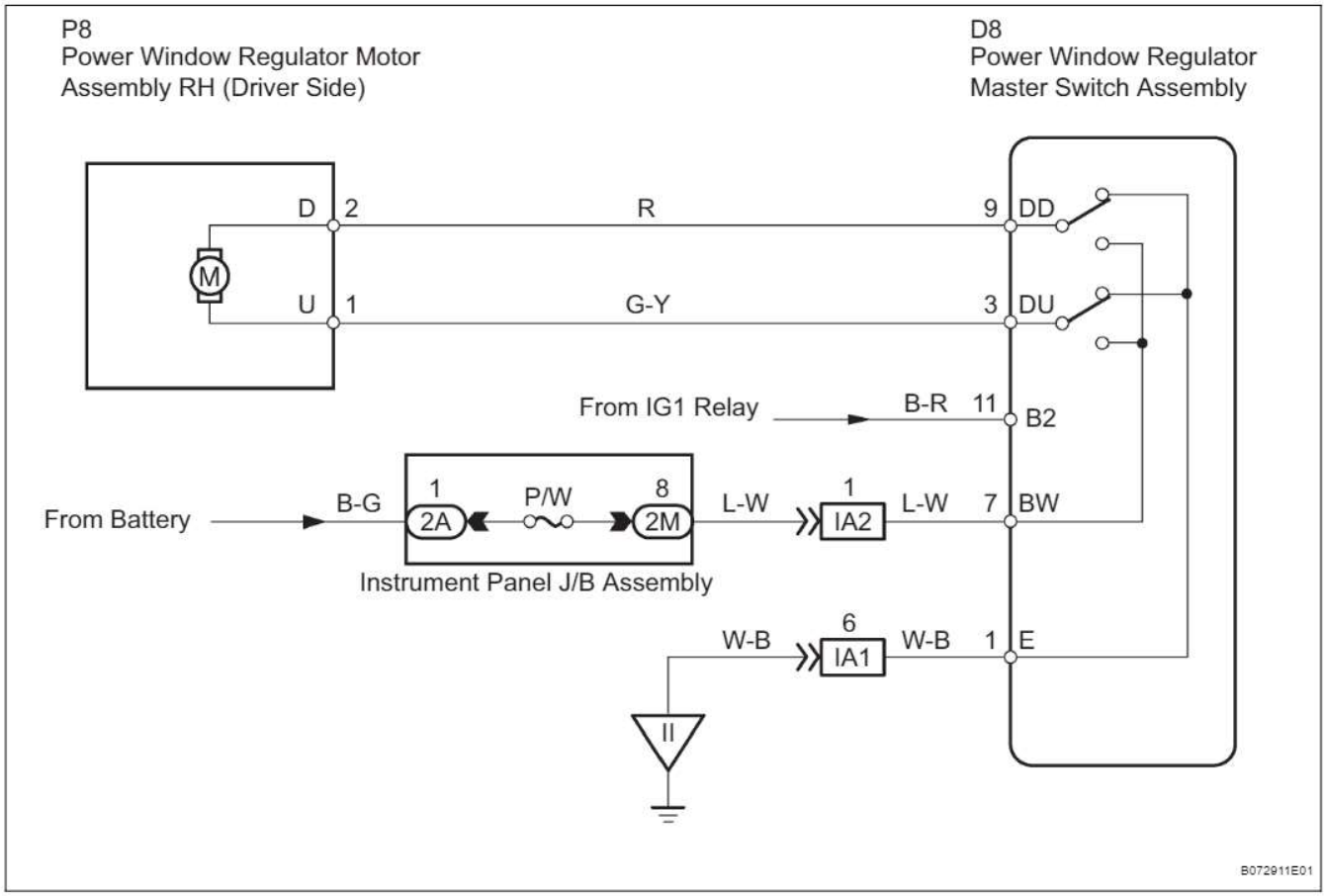
WS

Manual Up / Down Function does not Operate on Driver Side

DESCRIPTION

If the manual UP/DOWN function does not operate, a malfunction may be present in the power window regulator master switch, the power window regulator motor or the wire harness.

WIRING DIAGRAM



1	INSPECT FUSE (P/W)

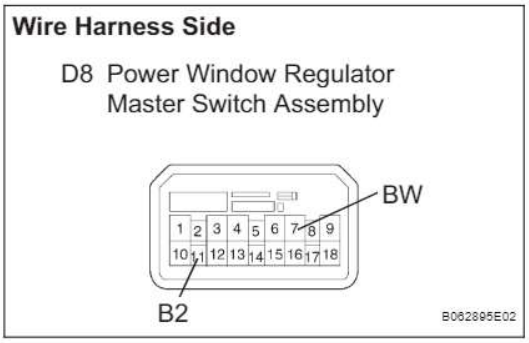
(a) Remove the P/W fuse from the instrument panel J/B assembly.
(b) Measure the resistance of the fuse.
Resistance:
Below 1 Ω

NG → **REPAIR FUSE**

OK

WS

2 CHECK HARNESS AND CONNECTOR (MASTER SWITCH - BATTERY AND BODY GROUND)



(a) Disconnect the D8 master switch connector.
(b) Measure the voltage and resistance of the wire harness side connector.

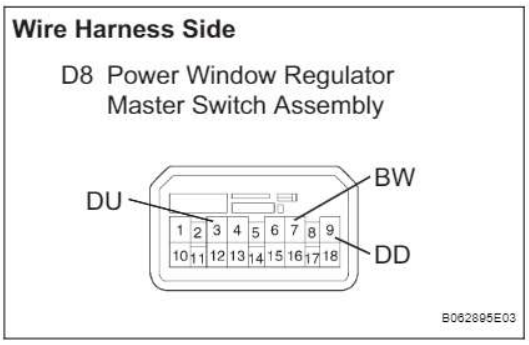
Voltage and resistance

Tester Connection	Condition	Specified Condition
D8-7 (BW) - Body ground	Always	10 to 14 V
D8-11 (B2) - Body ground	Ignition switch ON	10 to 14 V
D8-1 (E) - Body ground	Always	Below 1 Ω

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

3 INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY



(a) Disconnect the D8 master switch connector.
(b) Check operation of the power window regulator motor.

Standard

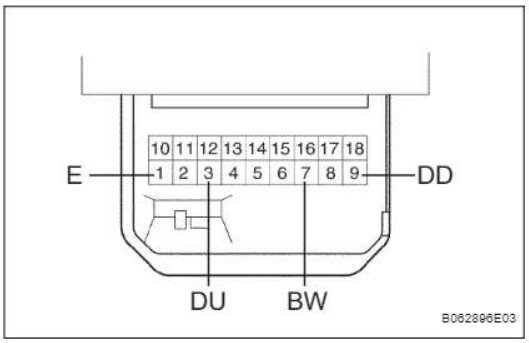
Wire Connection	Specified Condition
D8-3 (DU) - D8-7 (BW) D8-9 (DD) - Body ground	Power window moves UP
D8-3 (DU) - Body ground D8-7 (BW) - D8-9 (DD)	Power window moves DOWN

NG → Go to step 4

OK

REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

4 INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (SWITCH OPERATION)



(a) Disconnect the D8 master switch connector.
(b) Measure the resistance of the switch when the switch is operated.

Resistance

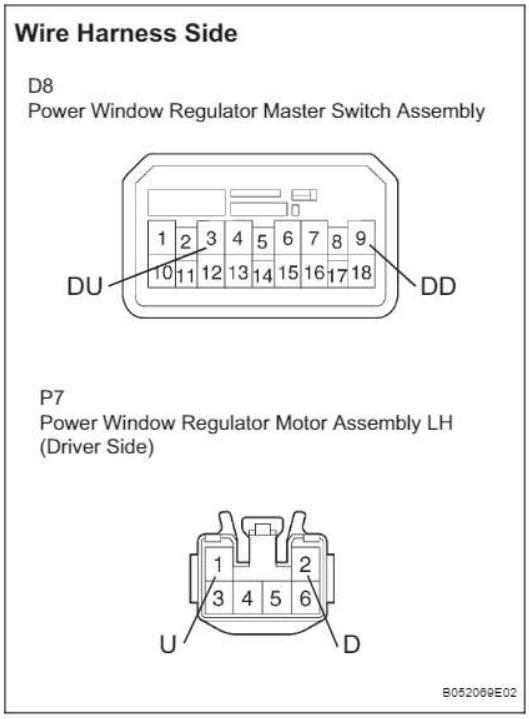
Tester Connection	AUTO Switch Condition	Specified Condition
D8-1 (E) - D8-9 (DD) D8-3 (DU) - D8-7 (BW)	UP	Below 1 Ω
D8-1 (E) - D8-3 (DU) D8-1 (E) - D8-9 (DD)	OFF	Below 1 Ω
D8-1 (E) - D8-3 (DU) D8-7 (BW) - D8-9 (DD)	DOWN	Below 1 Ω

WS

NG → REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

OK

5 CHECK HARNESS AND CONNECTOR (MASTER SWITCH - WINDOW REGULATOR MOTOR LH)



(a) Disconnect the D8 master switch connector.
(b) Disconnect the P7 motor connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D8-9 (DD) - P7-2 (D)	Below 1 Ω
D8-3 (DU) - P7-1 (U)	Below 1 Ω
D8-9 (DD) - Body ground	10 kΩ or higher
D8-3 (DU) - Body ground	10 kΩ or higher

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY

WS

POWER WINDOW CONTROL SYSTEM (for Coupe)

PRECAUTION

NOTICE:
When disconnecting the negative (-) battery terminal, initialize the following system(s) after the terminal is reconnected.

System Name	See Procedure
Power Window Control System (Coupe)	See page IN-24
Sliding Roof System	See page IN-24

WS

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:
Use these procedures to troubleshoot the power window control system (coupe).

1	VEHICLE BROUGHT TO WORKSHOP

NEXT

2	CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK

NEXT

3	PROBLEM SYMPTOMS TABLE

HINT:
See page WS-7
(a) If the fault is not listed on the problem symptoms table, proceed to A.
(b) If the fault is listed on the problem symptoms table, proceed to B.

B → Go to step 5

A

4	OVERALL ANALYSIS AND TROUBLESHOOTING

(a) Terminals of ECU (See page WS-8)
(b) On-vehicle Inspection (See page WS-11)
(c) Inspection (See page WS-13)

NEXT

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 regulator master switch is blinking after the repair, reset the power window motor (See page WS-6).

WS NEXT

7	CONFIRMATION TEST

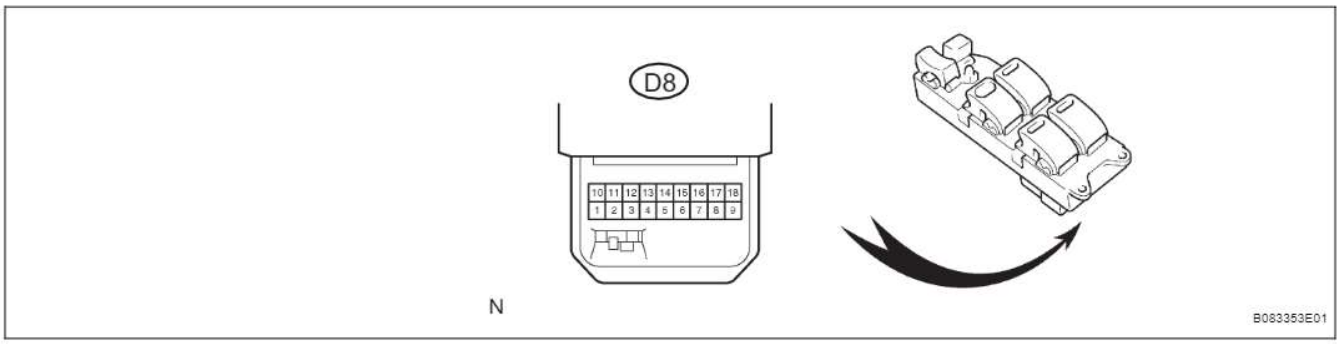
NEXT

END

TERMINALS OF ECU

1. CHECK POWER WINDOW REGULATOR MASTER SWITCH

(a) Disconnect the D8 switch connector.



(b) Measure the voltage and resistance of the wire harness side connector.

Voltage and Resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
E (D8-1) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
BW (D8-7) - E (D8-1)	L-W - W-B	Regulator motor power supply	Always	10 to 14 V
B1 (D8-6) - E (D8-1)	L-O - W-B	Master switch power supply	Ignition switch 1: OFF → 2: ON	1: Below 1 V → 2: 10 to 14 V
B2 (D8-11) - E (D8-1)	B-R - W-B	Master switch power supply	Ignition switch 1: OFF → 2: ON	1: Below 1 V → 2: 10 to 14 V
DU (D8-3) - DD (D8-9)	G-Y - R	• Power window motor UP output • Power window motor DOWN output	Always	Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(c) Reconnect the D8 switch connector.

(d) Reset the power window motor (See page WS-6).

(e) Measure the voltage of the connector.

Voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
DU (D8-3) - E E (D8-1)	G-Y - W-B	Power window motor UP output	Ignition switch ON, driver side power window switch 1: OFF → 2: UP (manual operation)	1: Below 1 V → 2: 10 to 14 V
DU (D8-3) - E (D8-1)	G-Y - W-B	Power window motor UP output	Ignition switch ON 1: Driver side power window fully open → 2: Driver side power window switch UP (AUTO operation) → 3: Driver side power window fully closed	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
DD (D8-9) - E (D8-1)	R - W-B	Power window motor DOWN output	Ignition switch ON, driver side power window switch 1: OFF → 2: DOWN (manual operation)	1: Below 1 V → 2: 10 to 14 V

WS

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
DD (D8-9) - E (D8-1)	R - W-B	Power window motor DOWN output	Ignition switch ON 1: Driver side power window fully closed → 2: Driver side power window switch DOWN (AUTO operation) → 3: Driver side power window fully open	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
PU (D8-13) - E (D8-1)	G-W - W-B	Power window motor UP output	Ignition switch ON, passenger side power window switch 1: OFF → 2: UP	1: Below 1 V → 2: 10 to 14 V
PD (D8-15) - E (D8-1)	R-L - W-B	Power window motor DOWN output	Ignition switch ON, driver side power window switch 1: OFF → 2: DOWN	1: Below 1 V → 2: 10 to 14 V
VCC (D8-5) - SGND (D8-2)	LG-B - W-B	• Power window motor power source • Power window motor sensor ground	Always	10 to 14 V

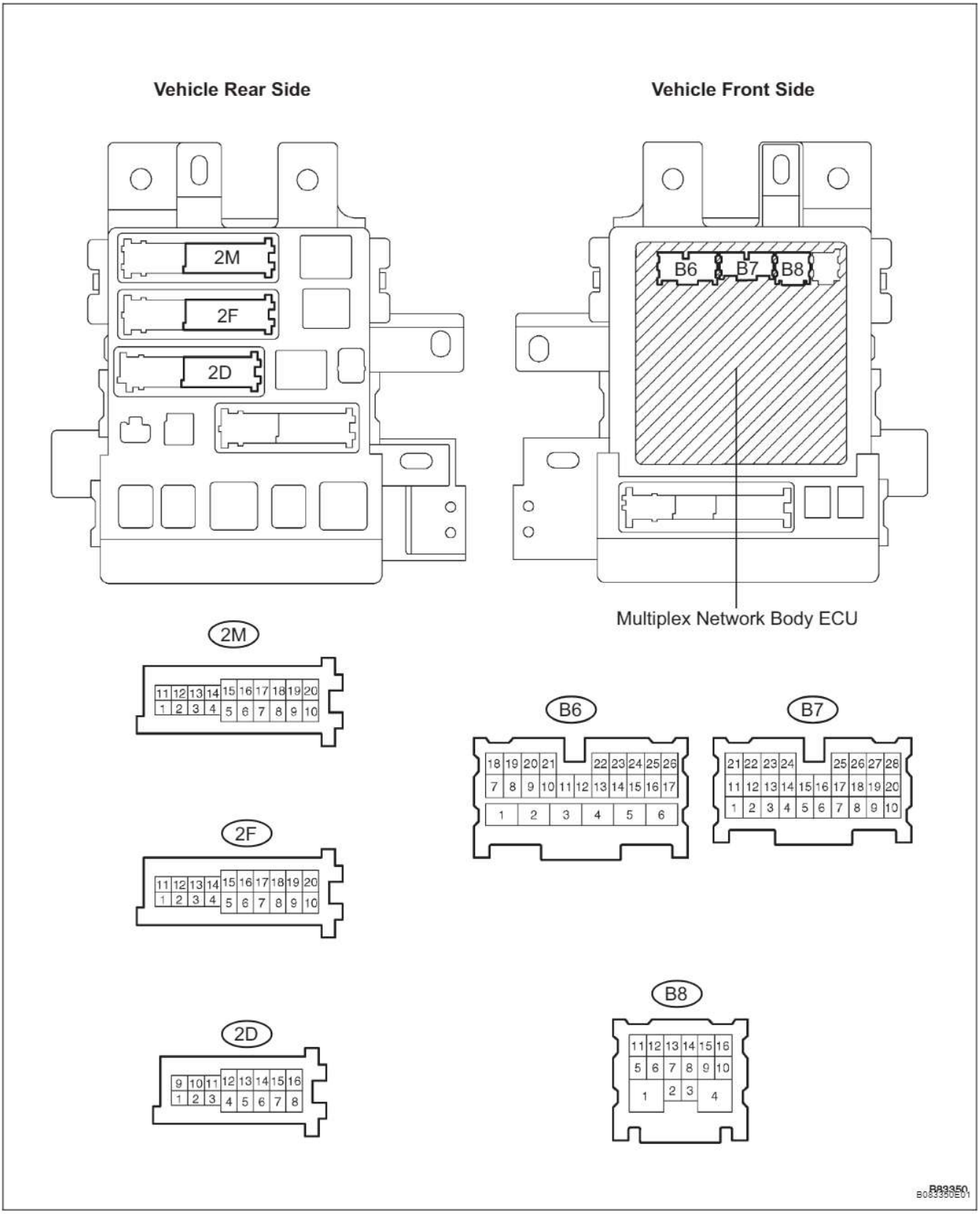
If the result is not as specified, the master switch may have a malfunction.

(f) Check that the AUTO light illuminates.

(1) When the ignition switch is turned from OFF to ON with the connector connected, check that the AUTO light illuminates (green).

2. CHECK INSTRUMENT PANEL J/B ASSEMBLY (MULTIPLEX NETWORK BODY ECU)

(a) Disconnect the B6, B7 and B8 ECU connectors.



(b) Disconnect the 2D, 2F and 2M J/B connectors.

(c) Measure the voltage and resistance of the wire harness side connectors.

Voltage and Resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
BECU (2F-1) - Body ground	W-R - Body ground	+B (BECU) power supply	Always	10 to 14 V
ALTB (2D-16) - Body ground	L-W - Body ground	+B (power system, generator system) power supply	Always	10 to 14 V
GND1 (2F-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND2 (2M-9) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
PWS (2F-10) - Body ground	W-B - Body ground	PWR Relay ON signal	Ignition switch 1: OFF → 2: ON	1: Below 1 V → 2: 10 to 14 V
KSW (B6-21) - Body ground	L - Body ground	Key unlock warning switch input	Ignition key cylinder 1: No key → 2: Key inserted	1: 10 kΩ or higher → 2: Below 1 Ω
DCTY (B8-14) - Body ground	R-G - Body ground	Driver side courtesy switch input	Driver side door 1: Closed → 2: Opened	1: 10 kΩ or higher → 2: Below 1 Ω
PCTY (B7-23) - Body ground	R-G - Body ground	Passenger side courtesy switch input	Passenger side door 1: Closed → 2: Opened	1: 10 kΩ or higher → 2: Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

(d) Reconnect the B6, B7 and B8 ECU connectors.

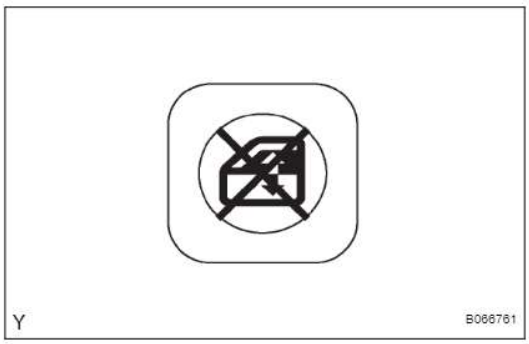
(e) Reconnect the 2D, 2F and 2M J/B connectors

(f) Measure the voltage of the connector.

Voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
KSW (B6-21) - Body ground	L - Body ground	Key unlock warning switch input	Ignition key cylinder 1: No key → 2: Key inserted	1: 10 to 14 V → 2: Below 1 V

If the result is not as specified, the J/B assembly (multiplex network body ECU) may have a malfunction.



ON-VEHICLE INSPECTION

1. CHECK POWER WINDOW LOCK SWITCH

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

(b) Check that the passenger side power window 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 operates as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
Ignition switch ON	Driver side	Pulled halfway up	UP (closed)
Ignition switch ON	Driver side	Pushed halfway down	DOWN (open)

WS

(b) Check that the passenger side power window operates as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
• Ignition switch ON • Window lock switch OFF	Passenger side	Pulled up	UP (closed)
• Ignition switch ON • Window lock switch OFF	Passenger side	Pushed down	DOWN (open)

3. CHECK AUTO UP/DOWN FUNCTION

(a) Check that the driver side power window operates as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
Ignition switch ON	Driver side	Pulled fully up	AUTO UP (fully closed)
Ignition switch ON	Driver side	Pushed fully down	AUTO DOWN (fully open)

4. CHECK REMOTE UP/DOWN FUNCTION

(a) Check that the passenger side power window operates as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
• Ignition switch ON • Window lock switch OFF	Passenger side	Pulled up	UP (closed)
• Ignition switch ON • Window lock switch OFF	Passenger side	Pushed down	DOWN (open)

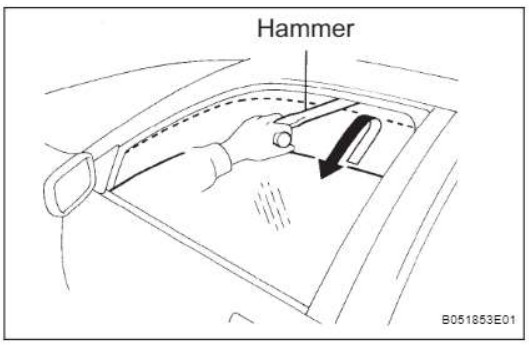
5. CHECK JAM PROTECTION FUNCTION

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.
- The jam protection function is only available on the driver side power window.

NOTICE:

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



(a) Check that the door glass lowers by approximately 50 mm (1.97 in.) when something is 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 continues to move down and does not stop until an opening of 200 mm (7.87 in.) is achieved.

Operative conditions:

- AUTO UP
- AUTO UP function after the ignition switch is turned OFF
- MANUAL UP function after the ignition switch is turned OFF

WS

6. CHECK POWER WINDOW FAIL-SAFE FUNCTION

(a) The power window regulator motor's pulse sensors detect when an object has been jammed in the window. If a pulse sensor has a malfunction, the fail-safe function starts operating and the AUTO UP/ DOWN function will be disabled.

INSPECTION

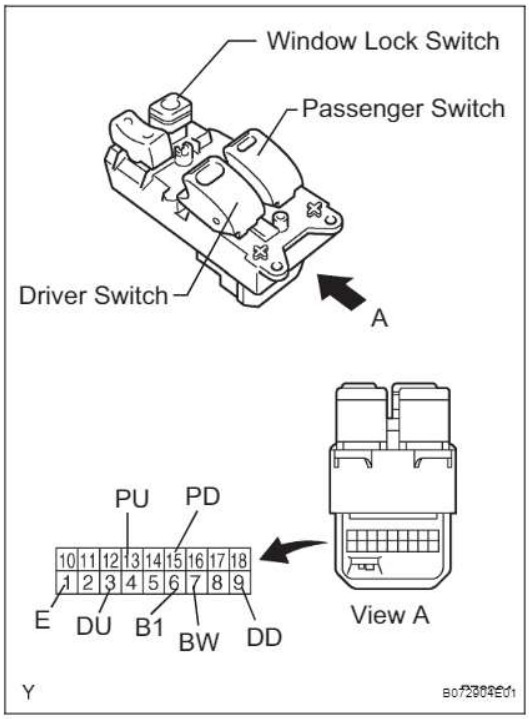
1. INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

(a) Remove the master switch (See page ED-8).

(b) Measure the resistance of the switch when the switch is operated.

Resistance:

Driver switch

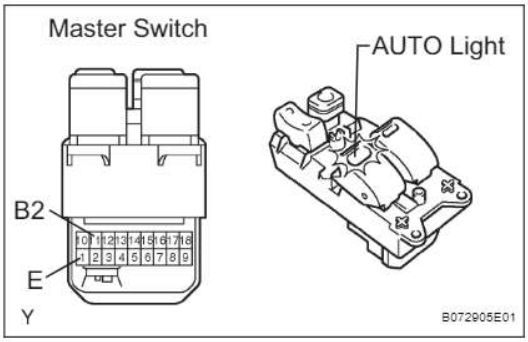


Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
Always (ON/OFF)	UP	1 (E) - 9 (DD) 3 (DU) - 7 (BW)	Below 1 Ω
Always (ON/OFF)	AUTO UP	1 (E) - 9 (DD) 3 (DU) - 7 (BW)	Below 1 Ω
Always (ON/OFF)	OFF	1 (E) - 3 (DU) 1 (E) - 9 (DD)	Below 1 Ω
Always (ON/OFF)	DOWN	1 (E) - 3 (DU) 7 (BW) - 9 (DD)	Below 1 Ω
Always (ON/OFF)	AUTO DOWN	1 (E) - 3 (DU) 7 (BW) - 9 (DD)	Below 1 Ω

Passenger switch

Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
OFF	UP	1 (E) - 15 (PD) 6 (B1) - 13 (PU)	Below 1 Ω
OFF	OFF	1 (E) - 13 (PU) 1 (E) - 15 (PD)	Below 1 Ω
OFF	DOWN	1 (E) - 13 (PU) 6 (B1) - 15 (PD)	Below 1 Ω
ON	UP	6 (B1) - 13 (PU)	Below 1 Ω
ON	OFF	13 (PU) - 15 (PD)	Below 1 Ω
ON	DOWN	6 (B1) - 15 (PD)	Below 1 Ω

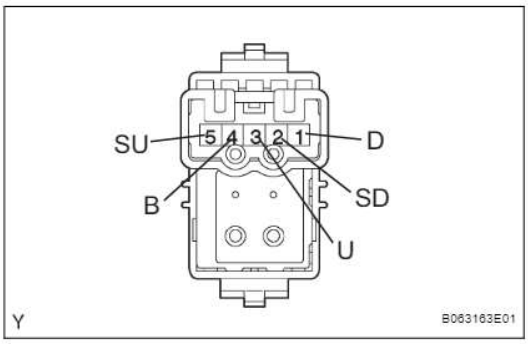
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(c) Check the master switch AUTO light.
OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 11 (B2) Battery negative (-) → Terminal 1 (E)	AUTO light illuminates

If the result is not as specified, replace the master switch assembly.

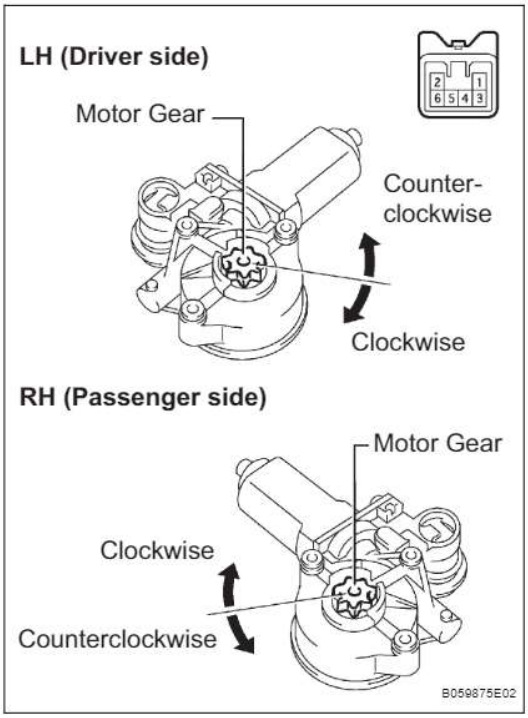


2. INSPECT POWER WINDOW REGULATOR SWITCH ASSEMBLY

(a) Remove the power window regulator switch (See page ED-8).
(b) Measure the resistance of the switch when the switch is operated.
Resistance

Switch Condition	Tester Connection	Specified Condition
UP	1 (D) - 2 (SD) 3 (U) - 4 (B)	Below 1 Ω
OFF	1 (D) - 2 (SD) 3 (U) - 5 (SU)	Below 1 Ω
DOWN	1 (D) - 4 (B) 3 (U) - 5 (SU)	Below 1 Ω

If the result is not as specified, replace the regulator switch assembly.



3. INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY

(a) Check operation of the regulator motor.
(1) Remove the power window regulator motor (See page ED-8).
(2) Apply battery voltage to the motor terminals.
NOTICE:
Do not apply voltage to the terminals except 1 and 2.
(3) Check that the motor operates smoothly.
OK:
LH (Driver side)

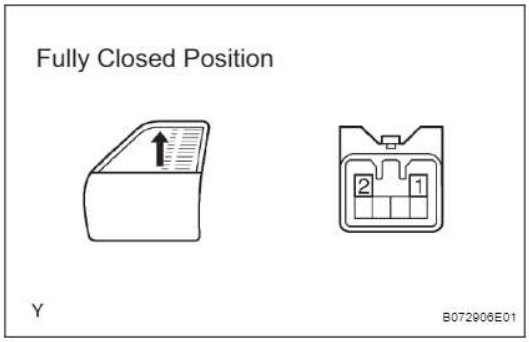
Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates clockwise
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates counterclockwise

RH (Passenger side)

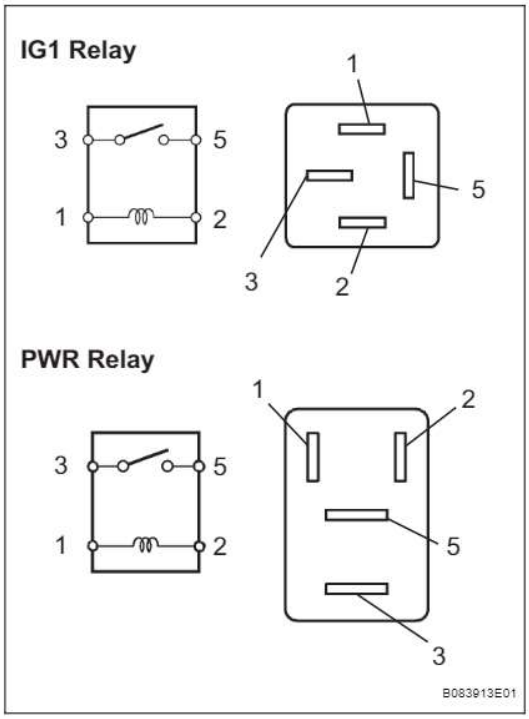
Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates clockwise
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates counterclockwise

If the result is not as specified, replace the motor assembly.

WS



(b) Check the PTC operation inside the regulator motor.
NOTICE:
The work must be performed with the power window regulator and door glass installed in the vehicle.
(1) Disconnect the driver side power window regulator motor.
(2) Connect the ammeter's positive (+) lead to terminal 2 of the wire harness side connector and the negative (-) lead to the battery's negative terminal.
(3) Connect the battery's positive (+) lead to terminal 1 of the wire harness side connector, and raise the window to the fully closed position.
(4) Continue to apply voltage, and check that the current changes to less than 1 A within 4 to 90 seconds.
(5) Disconnect the leads from the terminals.
(6) Approximately 60 seconds later, connect the battery's positive (+) lead to terminal 2 and the negative (-) lead to terminal 1, and check that the window begins to descend.
If the result is not as specified, replace the motor assembly.



4. INSPECT RELAY (MARKING: IG1, PWR)
(a) Remove the IG1 and PWR relays from the instrument panel J/B.
(b) Measure the resistance of the relays.
Resistance

Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

If the result is not as specified, replace the relay.

WS

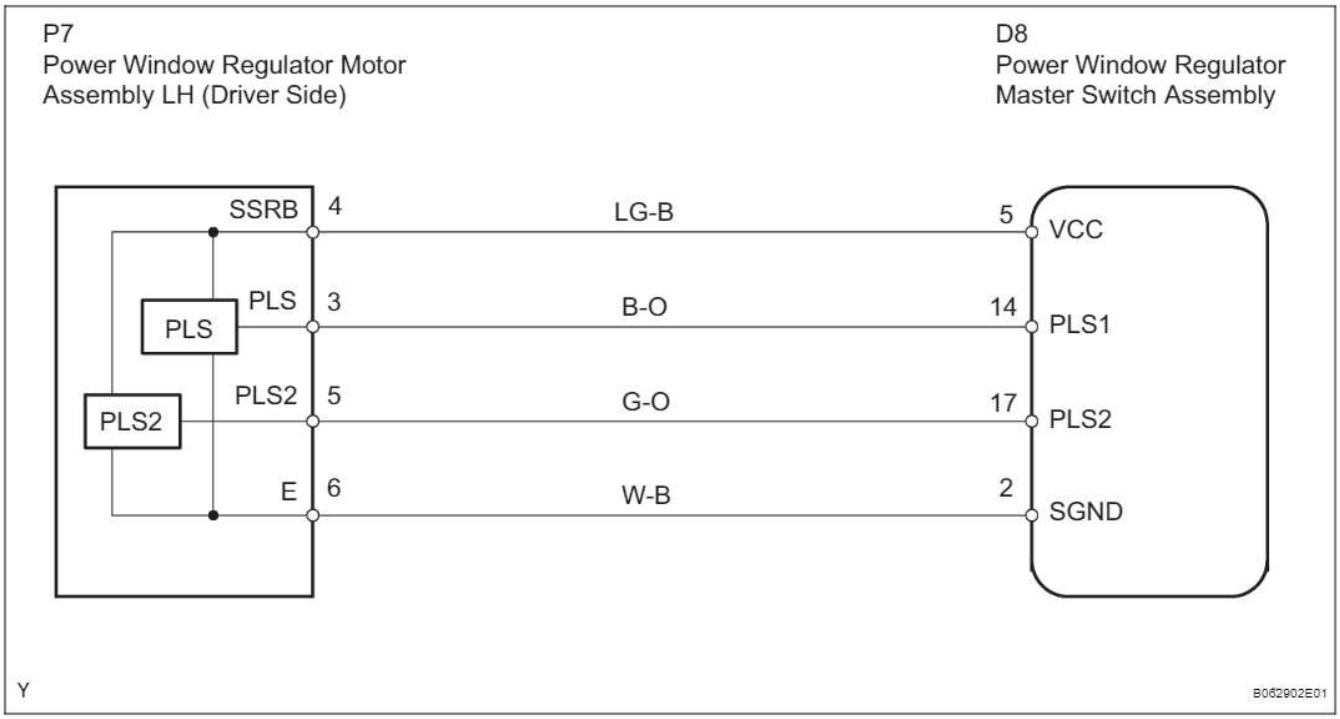
Auto Up / Down Function does not Operate

DESCRIPTION

If the AUTO UP/DOWN function does not operate, the cause may be one or more of the following:

- The recorded power window fully closed position, which is stored in the power window regulator master switch assembly, was erased as a result of: 1) the PWR fuse or the power window relay (PWR) being replaced; or 2) the battery cable and the master switch connector being disconnected.
- The master switch has a malfunction.
- The pulse sensors in the driver side power window regulator motor have a malfunction.
- The wiring between the master switch and the driver side power window regulator motor is open or short circuited.

WIRING DIAGRAM



1	CHECK MANUAL UP/DOWN FUNCTION (DRIVER SIDE)

(a) Check if the manual UP/DOWN function operates normally.

OK:

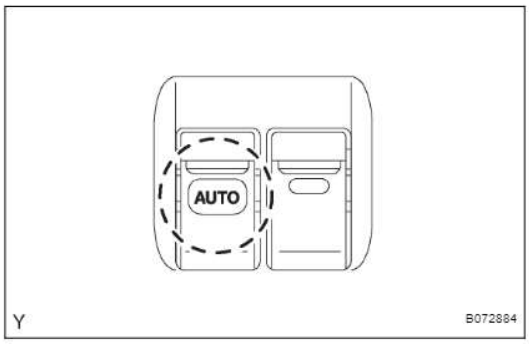
Manual UP/DOWN function operates normally.

NG → **OTHER PROBLEM**

OK

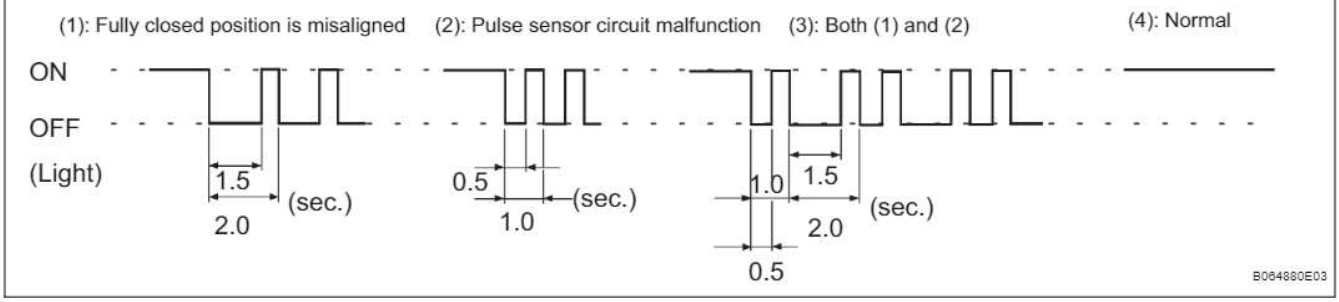
WS

2	CHECK LIGHT OF POWER WINDOW MASTER SWITCH (DRIVER SIDE SWITCH)



(a) Turn the ignition switch ON.
(b) Operate the master switch driver side switch.
(c) Check the blinking pattern of the AUTO light as shown in the illustration.

Blinking Pattern of Light:



Result

Blinking Pattern	Proceed to
1	A
2 or 3	B
4	C

B → Go to step 4

C → REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

A

3	RESET POWER WINDOW REGULATOR MOTOR (DRIVER SIDE)

(a) Check if the power window operates normally after resetting.
OK:
Power window operates normally.

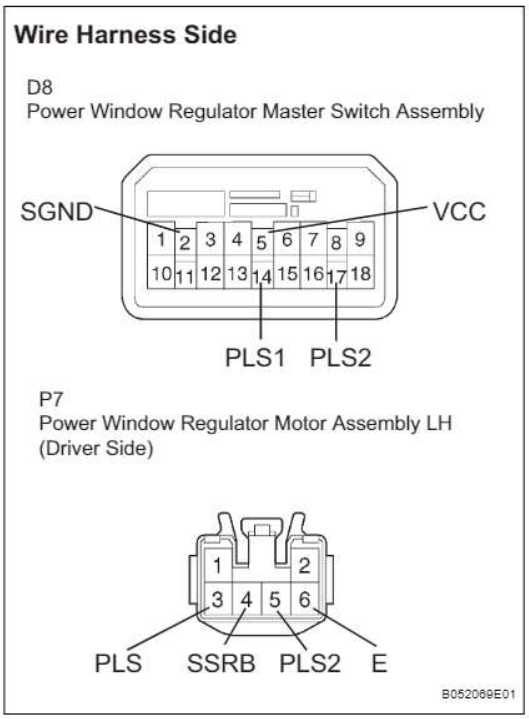
NG → Go to step 4

OK

END

WS

4	CHECK WIRE HARNESS (MASTER SWITCH - WINDOW REGULATOR MOTOR LH)



(a) Disconnect the D8 master switch connector.
(b) Disconnect the P7 motor connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D8-5 (VCC) - P7-4 (SSRB)	Below 1 Ω
D8-14 (PLS1) - P7-3 (PLS)	Below 1 Ω
D8-17 (PLS2) - P7-5 (PLS2)	Below 1 Ω
D8-2 (SGND) - P7-6 (E)	Below 1 Ω
D8-5 (VCC) - Body ground	10 kΩ or higher
D8-14 (PLS1) - Body ground	10 kΩ or higher
D8-17 (PLS2) - Body ground	10 kΩ or higher

NG → REPAIR OR REPLACE WIRE HARNESS AND CONNECTOR

OK

REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY LH (DRIVER SIDE)

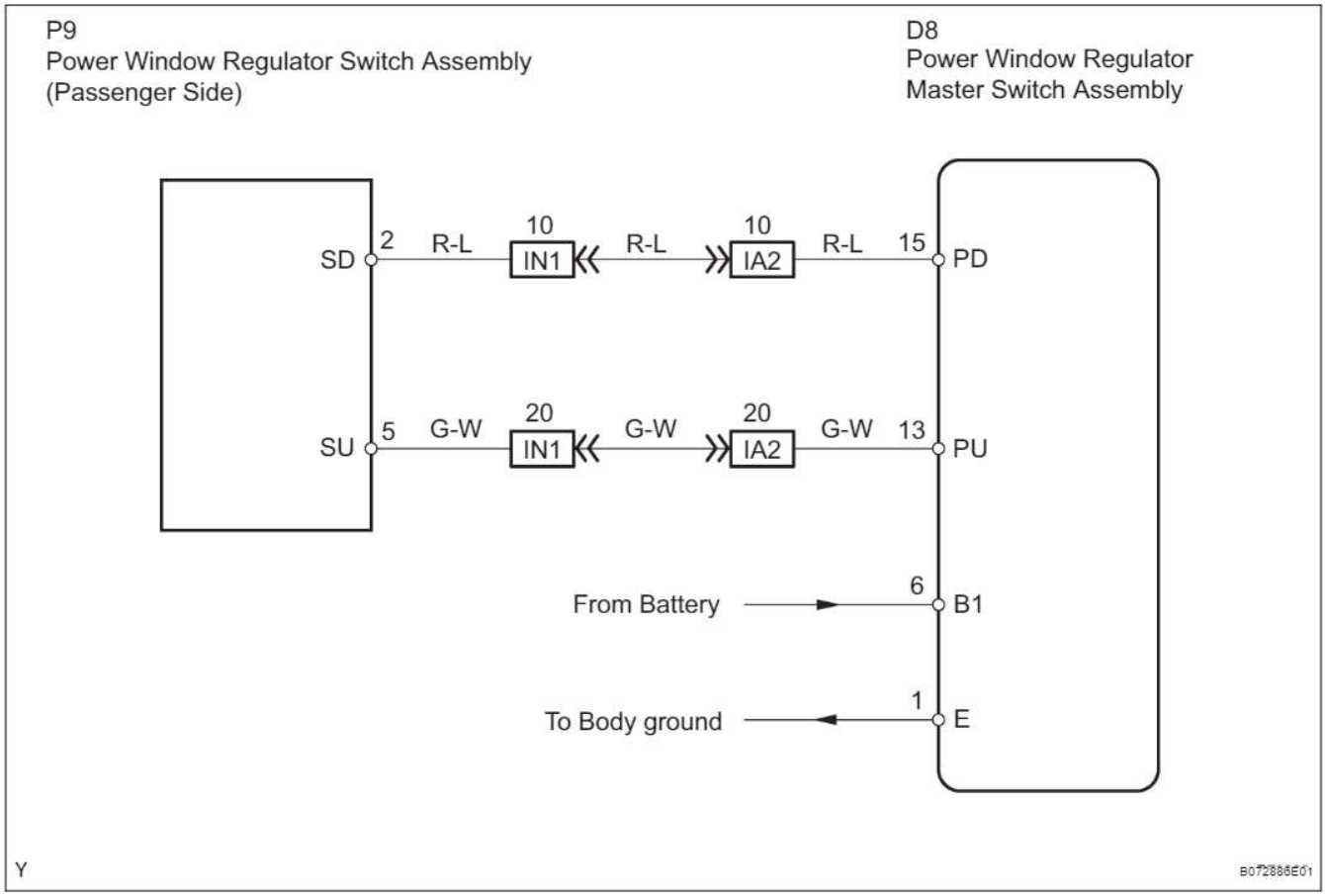
WS

Remote Up / Down Function does not Operate

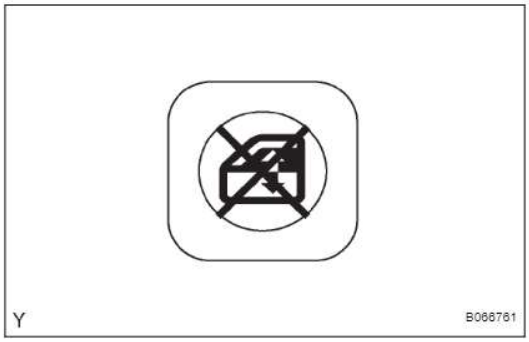
DESCRIPTION

With the ignition switch ON, the power window regulator master switch transmits remote switch signals to the passenger side power window regulator switch. Then, the regulator switch drives the power window regulator motor.

WIRING DIAGRAM



1	CHECK POWER WINDOW LOCK SWITCH



(a) Turn the window lock switch OFF and operate the master switch (passenger side switch). Check that the remote UP/DOWN function operates normally.

OK:

Remote UP/DOWN function operates normally.

NG	Go to step 2

WS

OK

END

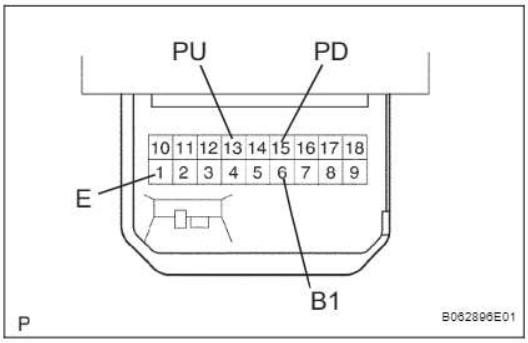
2	CHECK MANUAL UP/DOWN FUNCTION

(a) Check that the passenger side power window manual UP/DOWN function operates normally.
OK:
Manual UP/DOWN function operates normally.

NG → OTHER PROBLEM

OK

3	INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (PASSENGER SIDE SWITCH)



(a) Disconnect the D8 master switch connector.
(b) Measure the resistance of the switch when the switch is operated

Resistance

Tester Connection	Window Lock Switch Condition	Power Window Switch Condition	Specified Condition
1 (E) - 15 (PD) 6 (B1) - 13 (PU)	OFF (Normal)	UP	Below 1 Ω
1 (E) - 13 (PU) 1 (E) - 15 (PD)	OFF (Normal)	OFF	Below 1 Ω
1 (E) - 13 (PU) 6 (B1) - 15 (PD)	OFF (Normal)	DOWN	Below 1 Ω
6 (B1) - 13 (PU)	ON (Lock)	UP	Below 1 Ω
13 (PU) - 15 (PD)	ON (Lock)	OFF	Below 1 Ω
6 (B1) - 15 (PD)	ON (Lock)	DOWN	Below 1 Ω

NG → REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

OK

REPAIR OR REPLACE HARNESS AND CONNECTOR (MASTER SWITCH - REGULATOR SWITCH)

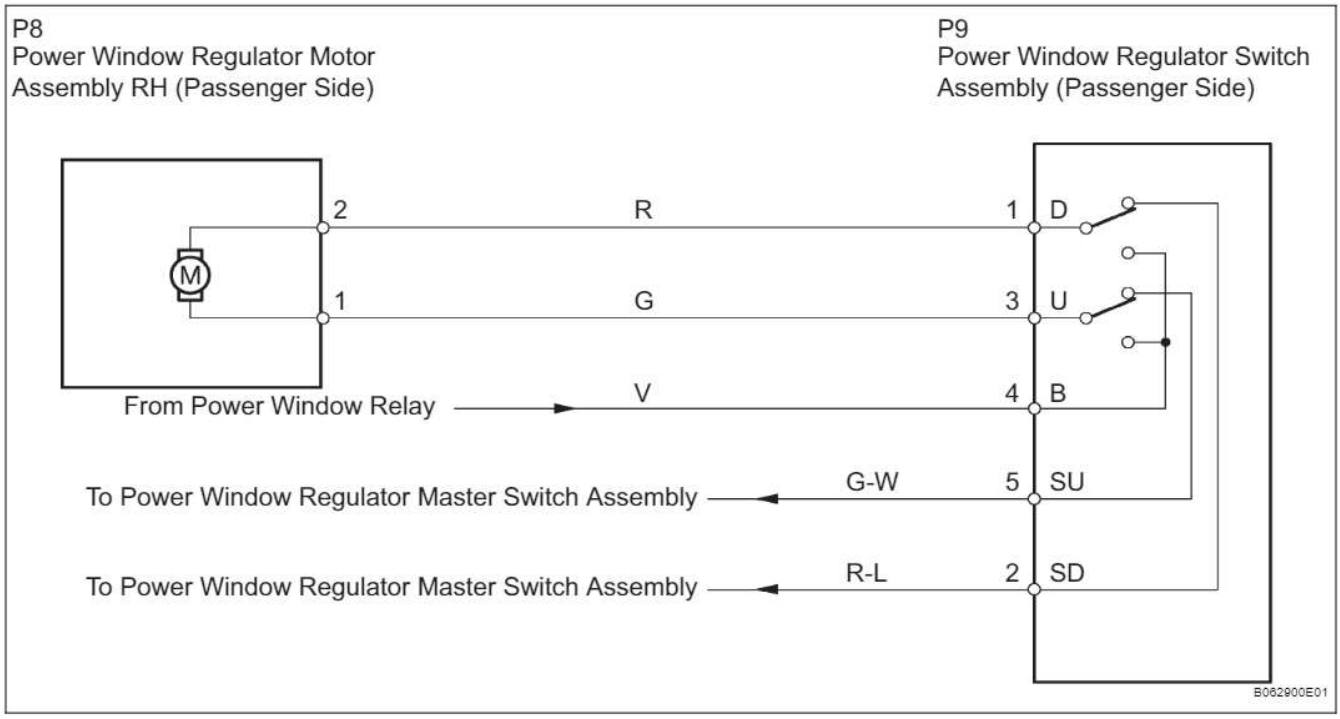
WS

Manual Up / Down and Auto Down Function does not Operate on Passenger Side Only

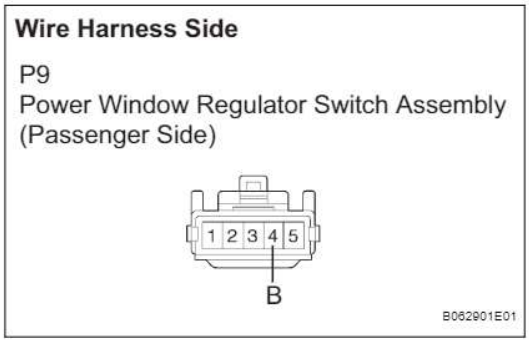
DESCRIPTION

If the passenger side manual UP/DOWN function does not operate, a malfunction may be present in the power window regulator motor, the power window regulator switch or the wire harness.

WIRING DIAGRAM



1 CHECK POWER WINDOW REGULATOR SWITCH ASSEMBLY (B VOLTAGE)



(a) Disconnect the P9 regulator switch connector.
(b) Measure the voltage of the wire harness side connector.

Voltage

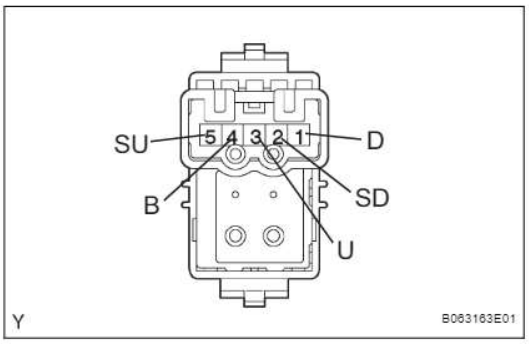
Tester Connection	Condition	Specified Condition
P9-4 (B) - Body ground	Ignition switch ON	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR (INSTRUMENT PANEL J/B - WINDOW SWITCH)**

OK

WS

2 INSPECT POWER WINDOW REGULATOR SWITCH ASSEMBLY (SWITCH OPERATION)



(a) Disconnect the P9 switch connector.
(b) Measure the resistance of the switch when the switch is operated.

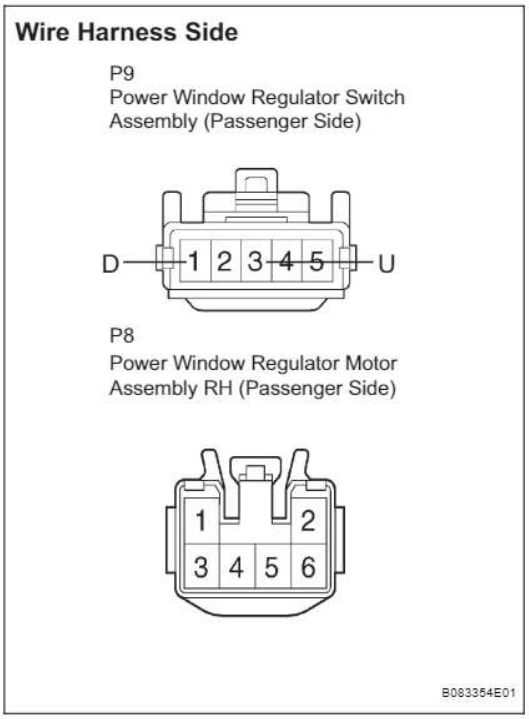
Resistance

Tester Connection	Switch Condition	Specified Condition
P9-1 (D) - P9-2 (SD) P9-3 (U) - P9-4 (B)	UP	Below 1 Ω
P9-1 (D) - P9-2 (SD) P9-3 (U) - P9-5 (SU)	OFF	Below 1 Ω
P9-1 (D) - P9-4(B) P9-3 (U) - P9-5 (SU)	DOWN	Below 1 Ω

NG → REPLACE POWER WINDOW REGULATOR SWITCH ASSEMBLY

OK

3 CHECK HARNESS AND CONNECTOR (WINDOW SWITCH - WINDOW REGULATOR MOTOR)



(a) Disconnect the P9 switch connector.
(b) Disconnect the P8 motor connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

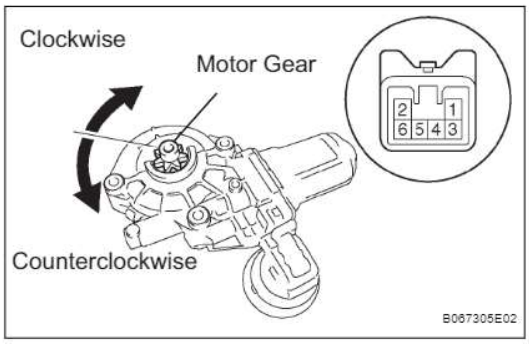
Tester Connection	Specified Condition
P9-1 (D) - P8-2	Below 1 Ω
P9-3 (U) - P8-1	Below 1 Ω
P9-1 (D) - Body ground	10 kΩ or higher
P9-3 (U) - Body ground	10 kΩ or higher

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

WS

4	INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY RH



(a) Apply battery voltage to connector terminals 1 and 2.
NOTICE:
Do not apply battery voltage to any terminals except terminals 1 and 2.

(b) Check that the motor smoothly rotates.
Standard

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates clockwise
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates counterclockwise

NG → **REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY RH**

OK

REPAIR OR REPLACE HARNESS AND CONNECTOR (MASTER SWITCH - WINDOW REGULATOR SWITCH)

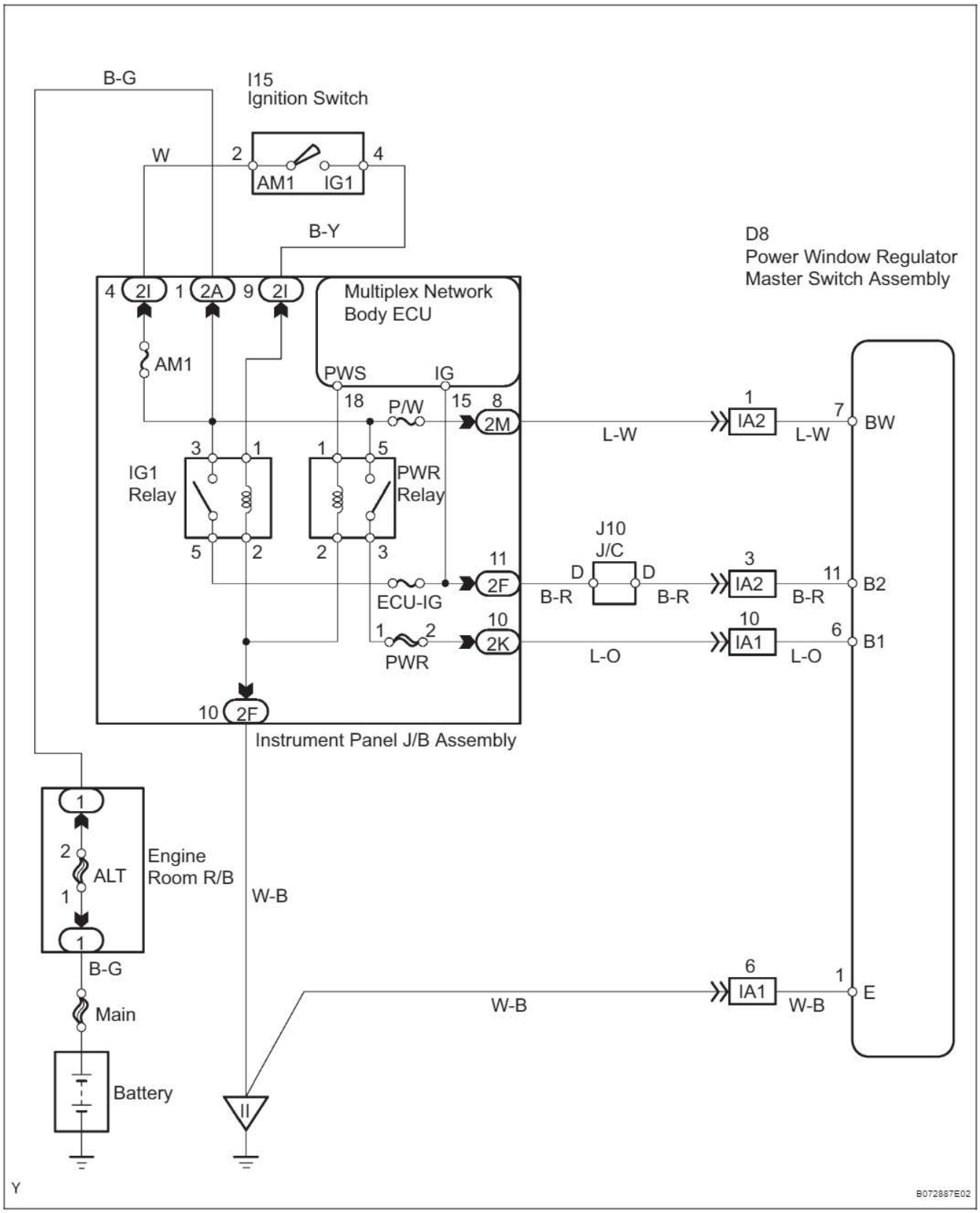
WS

Power Windows do not Operate at All

DESCRIPTION

If all of the door windows do not operate, the power window regulator master switch may not have power or may be malfunctioning.

WIRING DIAGRAM



WS

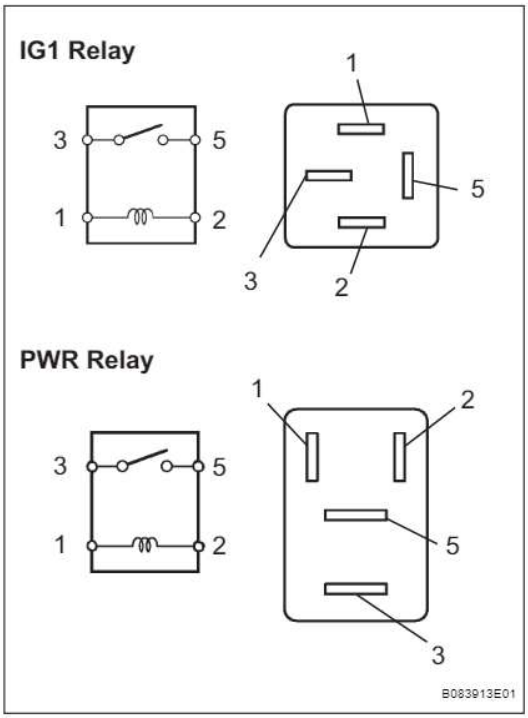
1	INSPECT FUSES (PWR, ECU-IG, P/W, AM1)

(a) Remove the PWR M-fuse, ECU-IG P/W and AM1 fuses from the instrument panel J/B.
(b) Measure the resistance of the fuses.
Voltage:
Below 1 Ω

NG → **REPLACE FUSE**

OK

2	INSPECT RELAY (MARKING: IG1, PWR)



(a) Remove the IG1 and PWR relays from the instrument panel J/B.
(b) Measure the resistance of the relays.
Resistance

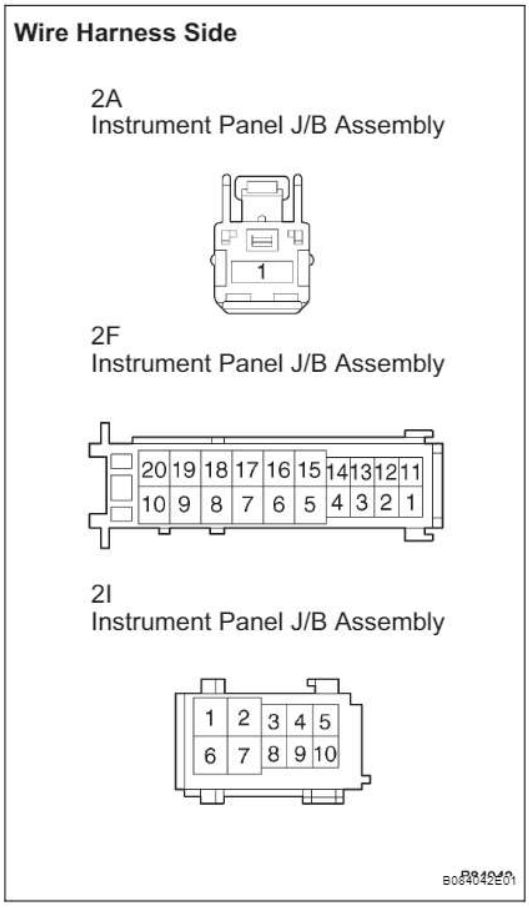
Terminal Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

NG → **REPLACE RELAY**

OK

WS

3 CHECK WIRE HARNESS (FOR POWER SOURCE OF INSTRUMENT PANEL J/B ASSEMBLY)



(a) Disconnect the 2A, 2F and 2I J/B connectors.
(b) Measure the voltage and resistance of the wire harness side connectors.

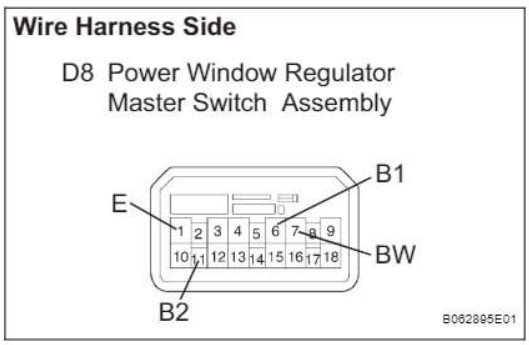
Voltage and resistance

Tester Connection	Condition	Specified Condition
2A-1 - Body ground	Always	10 to 14 V
2F-10 - Body ground	Always	Below 1 Ω
2I-4 - 2I-9	Ignition switch ON	Below 1 Ω

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

4 CHECK WIRE HARNESS (REGULATOR MASTER SWITCH - BATTERY AND BODY GROUND)



(a) Disconnect the D8 master switch connector.
(b) Measure the voltage and resistance of the wire harness side connector.

Voltage and resistance

Tester Connection	Condition	Specified Condition
D8-6 (B1) - Body ground	Ignition switch ON	10 to 14 V
D8-11 (B2) - Body ground	Ignition switch ON	10 to 14 V
D8-7 (BW) - Body ground	Always	10 to 14 V
D8-1 (E) - Body ground	Always	Below 1 Ω

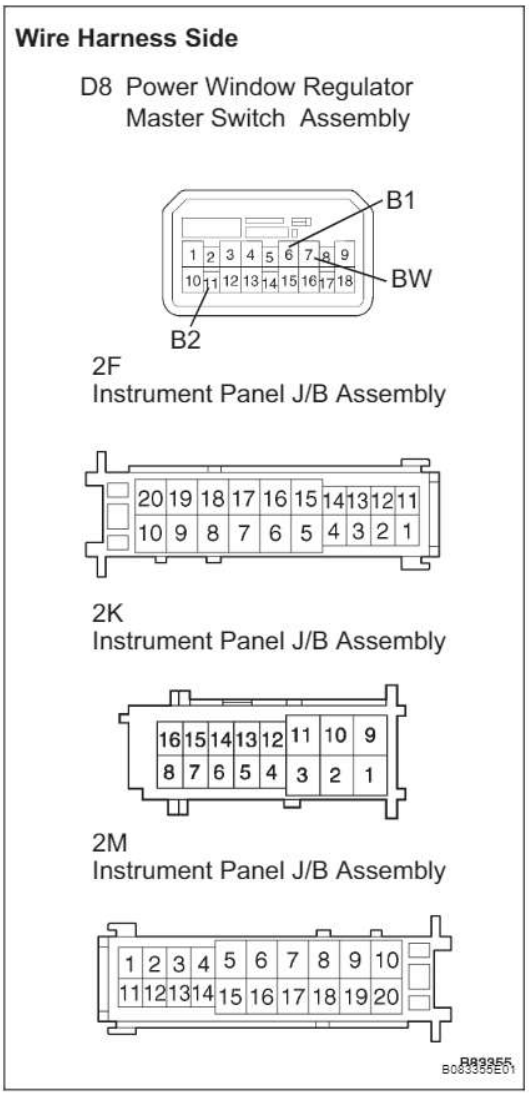
NG → Go to step 5

WS

OK

REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

5	CHECK WIRE HARNESS (INSTURMENT PANEL J/B ASSEMBLY - REGULATOR MASTER SWITCH)



(a) Disconnect the 2F, 2K and 2M J/B connectors.
(b) Disconnect the D8 master switch connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Terminal Connection	Specified Condition
2K-10 - D8-6 (B1)	Below 1 Ω
2F-11 - D8-11 (B2)	Below 1 Ω
2M-8 - D8-7 (BW)	Below 1 Ω

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK

REPLACE INSTRUMENT PANEL JUNCTION BLOCK ASSEMBLY

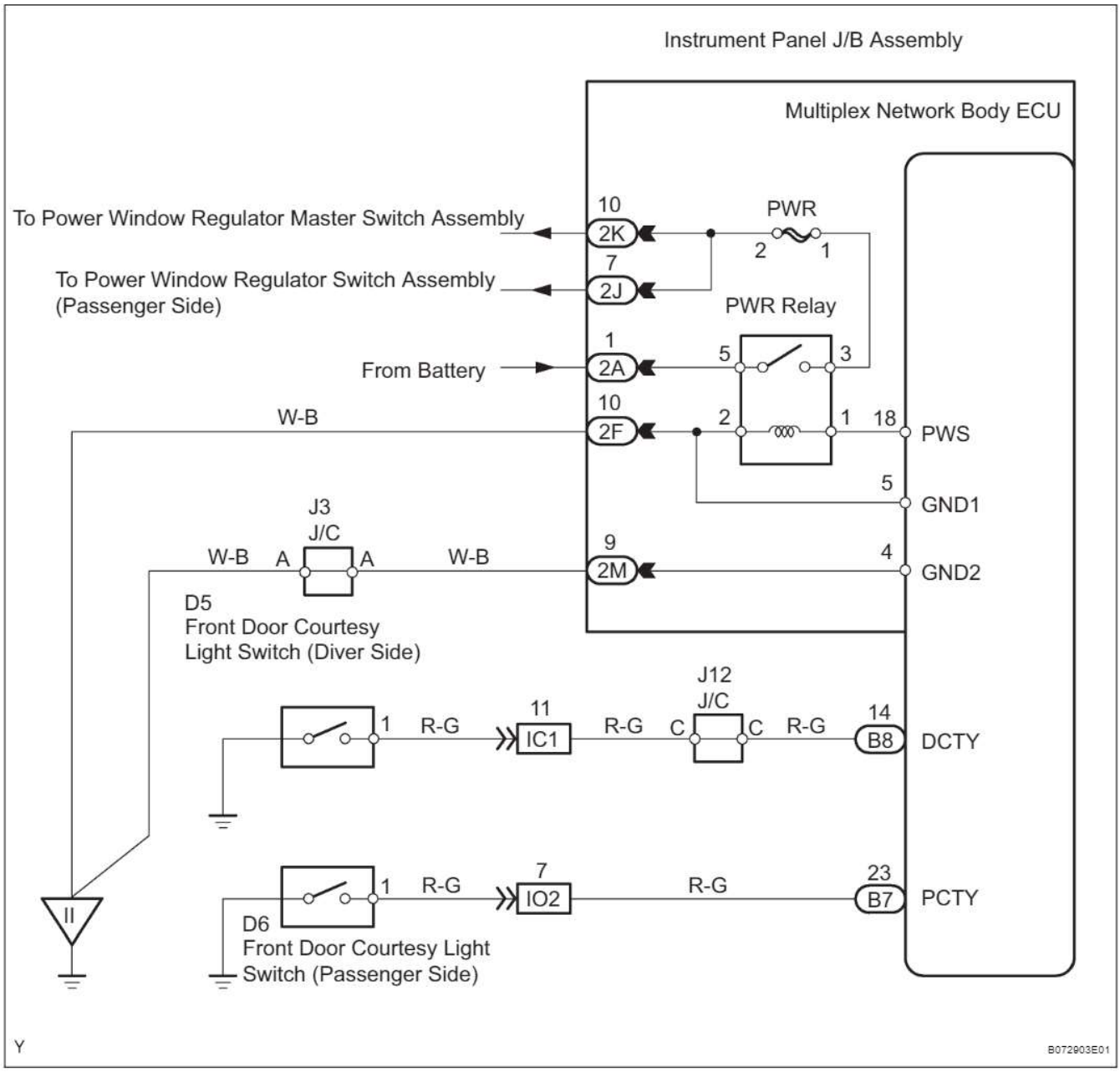
WS

Power Window can be Operated After Ignition Switch is Turned OFF Even if Operative Conditions are not Met

DESCRIPTION

The multiplex network body ECU keeps power supplied to the power window regulator master switch and the regulator switch for 43 seconds after the ignition switch is turned OFF. However, the body ECU will cut power to the master switch if: 1) either front door is opened within 43 seconds, 2) a signal from any door courtesy light switches is input to the ECU within 43 seconds, or 3) no power window activity occurs within 43 seconds.

WIRING DIAGRAM



1 CHECK OPERATION FUNCTION AFTER IGNITION SWITCH IS TURNED OFF

(a) Check the power window operation function after the ignition switch is turned OFF.

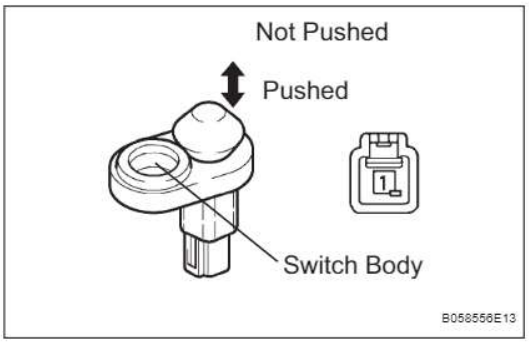
Result

	Proceed to
Either front door is opened within 43 seconds but the power window can still operate	A
43 seconds pass and the power window can still operate	B

B → **REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY**

A

2 INSPECT FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY



(a) Measure the switch resistance of the switch.
Resistance

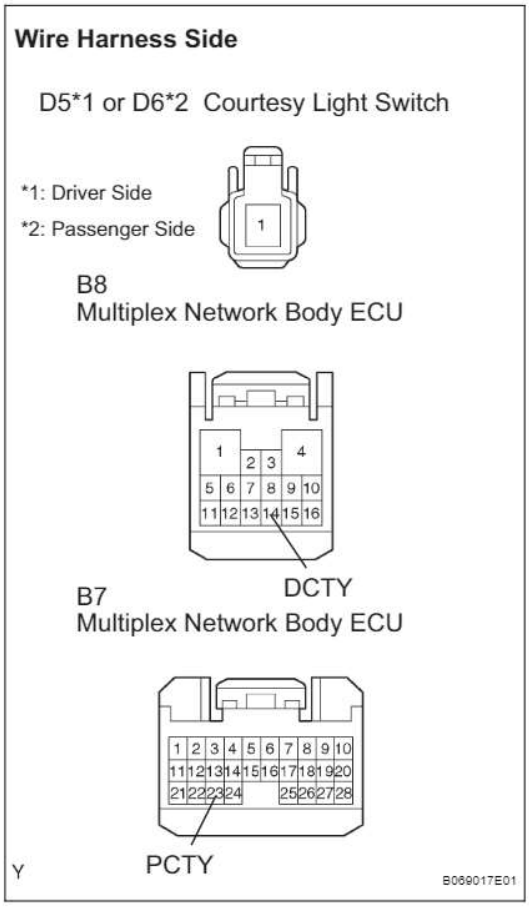
Tester Connection	Switch Condition	Specified Condition
1 - Switch body	Pushed	10 kΩ or higher
1 - Switch body	Not Pushed	Below 1 Ω

NG → **REPLACE FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY**

OK

WS

3	CHECK WIRE HARNESS (COURTESY LIGHT SWITCH - MULTIPLEX NETWORK BODY ECU)



(a) Disconnect the D5 or D6 switch connector.
(b) Disconnect the B7 or B8 ECU connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D5-1 - B8-14 (DCTY)	Below 1 Ω
D6-1 - B7-23 (PCTY)	Below 1 Ω
D5-1 or B8-14 (DCTY) - Body ground	10 kΩ or higher
D6-1 or B7-23 (PCTY) - Body ground	10 kΩ or higher

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

OK

REPLACE MULTIPLEX NETWORK BODY ECU

Auto Up Operation does not Fully Close Power Window (Jam Protection Function is Activated)

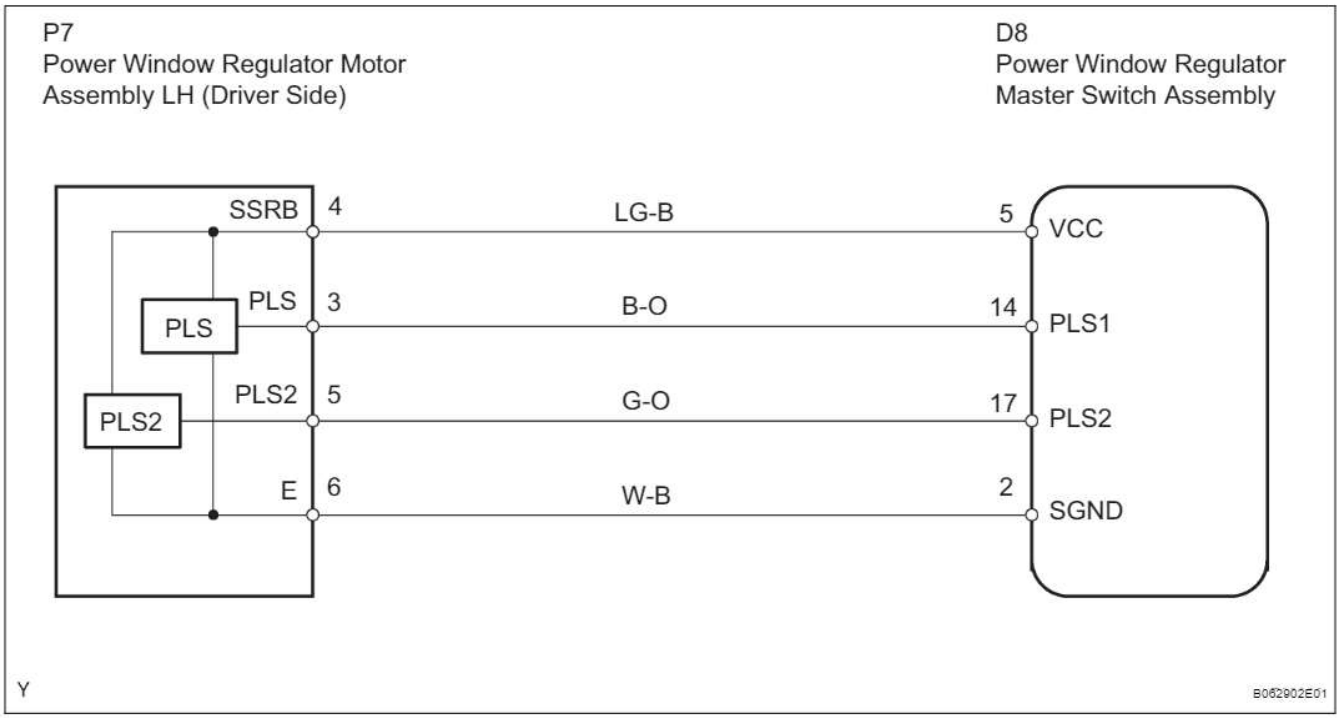
DESCRIPTION

If the door glass or the power window regulator motor does not operate smoothly, the jam protection function may trigger automatically, resulting in the AUTO UP function being unable to fully close the window.

HINT:

The jam protection function is only available on the driver side power window.

WIRING DIAGRAM



1	RESET POWER WINDOW REGULATOR MOTOR

(a) Reset the power window regulator motor (See page WS-6).

(b) Check if the power window AUTO UP/DOWN function operates normally.

OK:

AUTO UP/DOWN function operates normally.

NG → **Go to step 2**

OK

END

2	CHECK FRONT DOOR WINDOW REGULATOR ASSEMBLY LH

(a) Remove the door glass (See page ED-8).
(b) Operate the front door window regulator using the switch.
(c) Check if the power window regulator assembly operates smoothly.

OK:

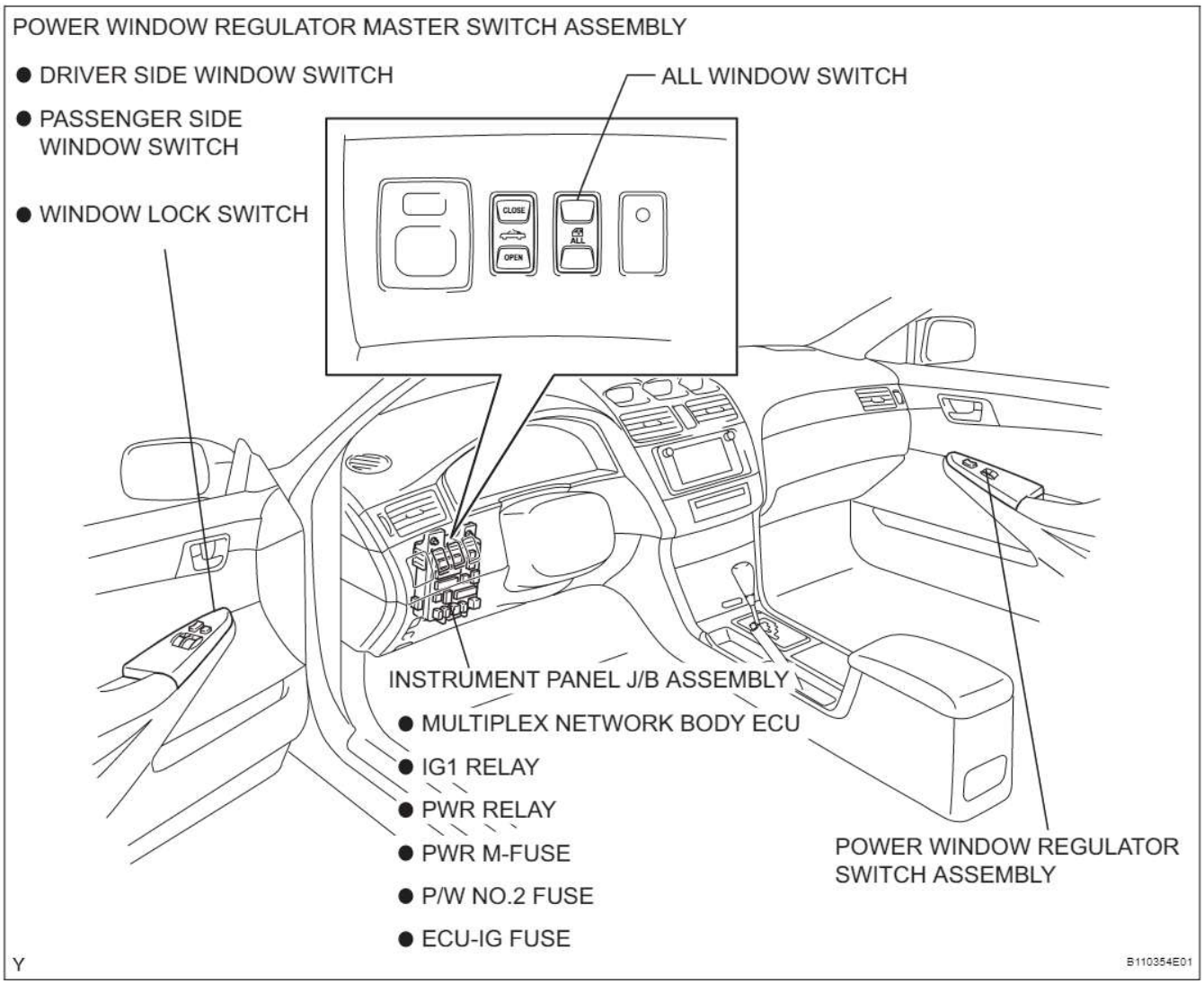
Power window regulator assembly operates smoothly.

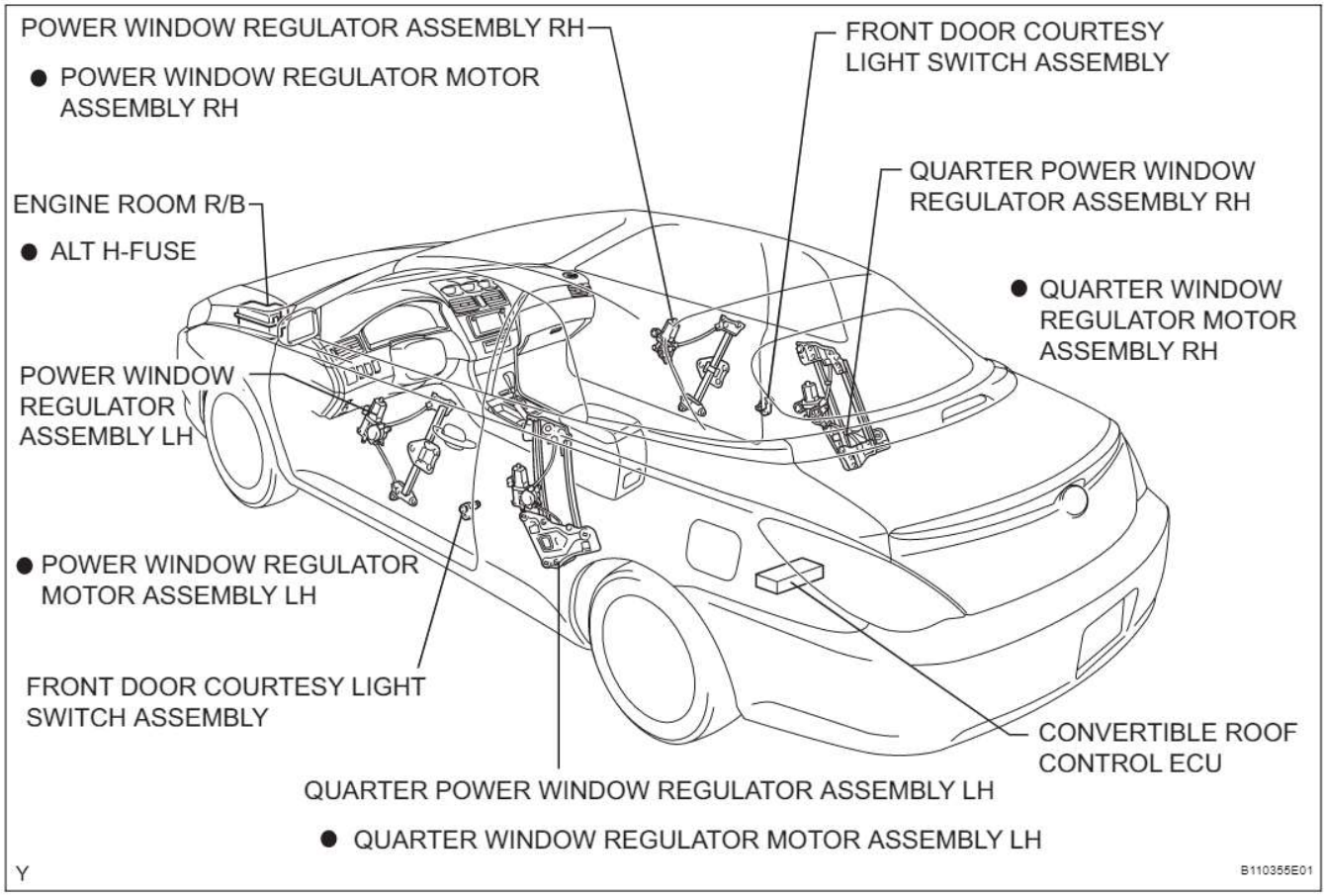
NG → **REPLACE FRONT DOOR WINDOW REGULATOR ASSEMBLY LH**

OK

REPLACE DOOR GLASS RUN

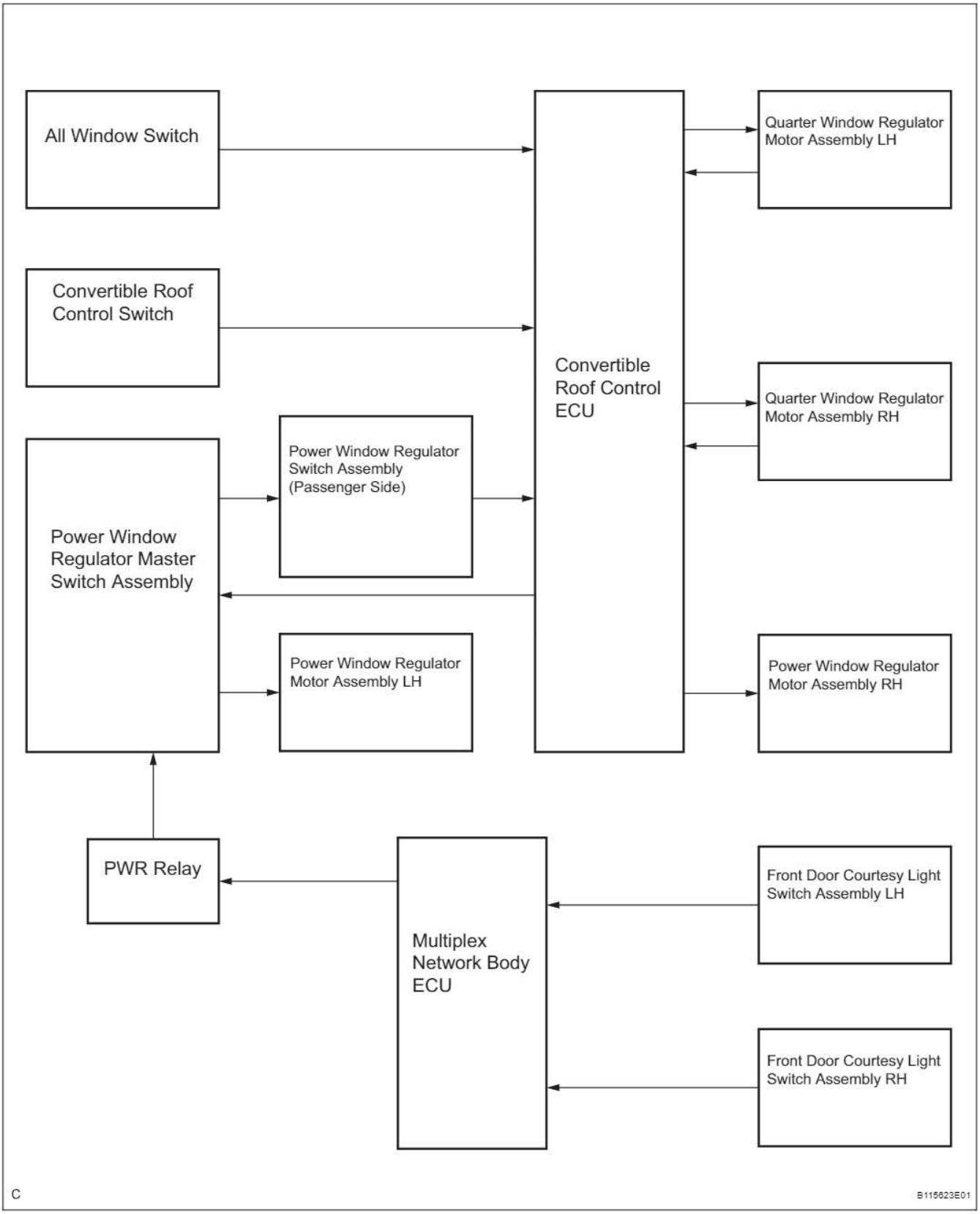
PARTS LOCATION




POWER WINDOW REGULATOR ASSEMBLY RH
● POWER WINDOW REGULATOR MOTOR ASSEMBLY RH
FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY
QUARTER POWER WINDOW REGULATOR ASSEMBLY RH
ENGINE ROOM R/B
● ALT H-FUSE
● QUARTER WINDOW REGULATOR MOTOR ASSEMBLY RH
POWER WINDOW REGULATOR ASSEMBLY LH
● POWER WINDOW REGULATOR MOTOR ASSEMBLY LH
FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY
CONVERTIBLE ROOF CONTROL ECU
QUARTER POWER WINDOW REGULATOR ASSEMBLY LH
● QUARTER WINDOW REGULATOR MOTOR ASSEMBLY LH
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SYSTEM DIAGRAM



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SYSTEM DESCRIPTION

1. POWER WINDOW CONTROL SYSTEM DESCRIPTION

(a) The power window control system controls the power windows' UP/DOWN function using regulator motors. The main controls of this system are: the power window regulator master switch, which is built into the driver side door, and the power window regulator switch, which is built into the passenger side door. Pressing the regulator switch or either of the 2 switches on the master switch transmits an UP/DOWN signal to the corresponding power window regulator motor.

(b) The power window control system has the following functions:

Function	Outline
Manual UP/DOWN function	Driver side power window: Function that causes window to raise while power window switch is being pulled up, and to lower while pushed halfway down. Window stops as soon as switch is released. Passenger side power window: Function that causes window to raise while power window switch is being pulled up and to lower while pushed down. Window stops as soon as switch is released.
Auto DOWN function	Function that enables window of driver side door to be fully opened by one full press of power window switch.
Remote control function	Function that allows power window master switch to control manual UP/DOWN operations of passenger door power window.
Key-off operation function	Function that makes it possible to operate power window for approx. 43 seconds after ignition switch is turned to ACC or LOCK position and either front door is not opened.
Window lock function	Function where passenger side power window operation is disabled when window lock switch of master switch is pressed. Passenger side power window can be operated when window lock switch is pressed again.

2. ALL WINDOW CONTROL SYSTEM DESCRIPTION

(a) Open operation of front door windows and quarter windows:

When the all window open switch is turned ON, the convertible roof control ECU turns ON the open output signal of the LH/RH quarter window motors, and then turns ON the open output signal of the LH/RH front door window motors. However, the input of the all window switch will be ignored if the convertible roof control switch is being pressed because convertible roof control switch inputs take precedence over inputs of the all window switch.

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(b) Close operation of front door windows and quarter windows:
When the all window close switch is turned ON, the convertible roof control ECU turns ON the close output signal of the LH/RH quarter window motors. Also, the open output signal of the LH/RH front door window motors is turned ON for 0.8 seconds. Then, after the quarter windows are fully closed, the close output signal of the LH/RH front door window motors is turned ON. However, the input of the all window switch will be ignored if the convertible roof control switch is being pressed because convertible roof control switch inputs take precedence over inputs of the all window switch.

3. CONVERTIBLE ROOF CONTROL SYSTEM DESCRIPTION

(a) Open operation of front door windows and quarter windows:
When the convertible roof control switch is turned ON, the convertible roof control ECU turns ON the open output signal of the LH/RH quarter window motors, and then turns ON the open output signal of the LH/RH front door window motors. If the convertible roof control switch is turned OFF at this time, all outputs will stop.

4. OPERATION OF ALL WINDOW OPENING CONTROL SYSTEM

(a) Turn the ignition switch ON.

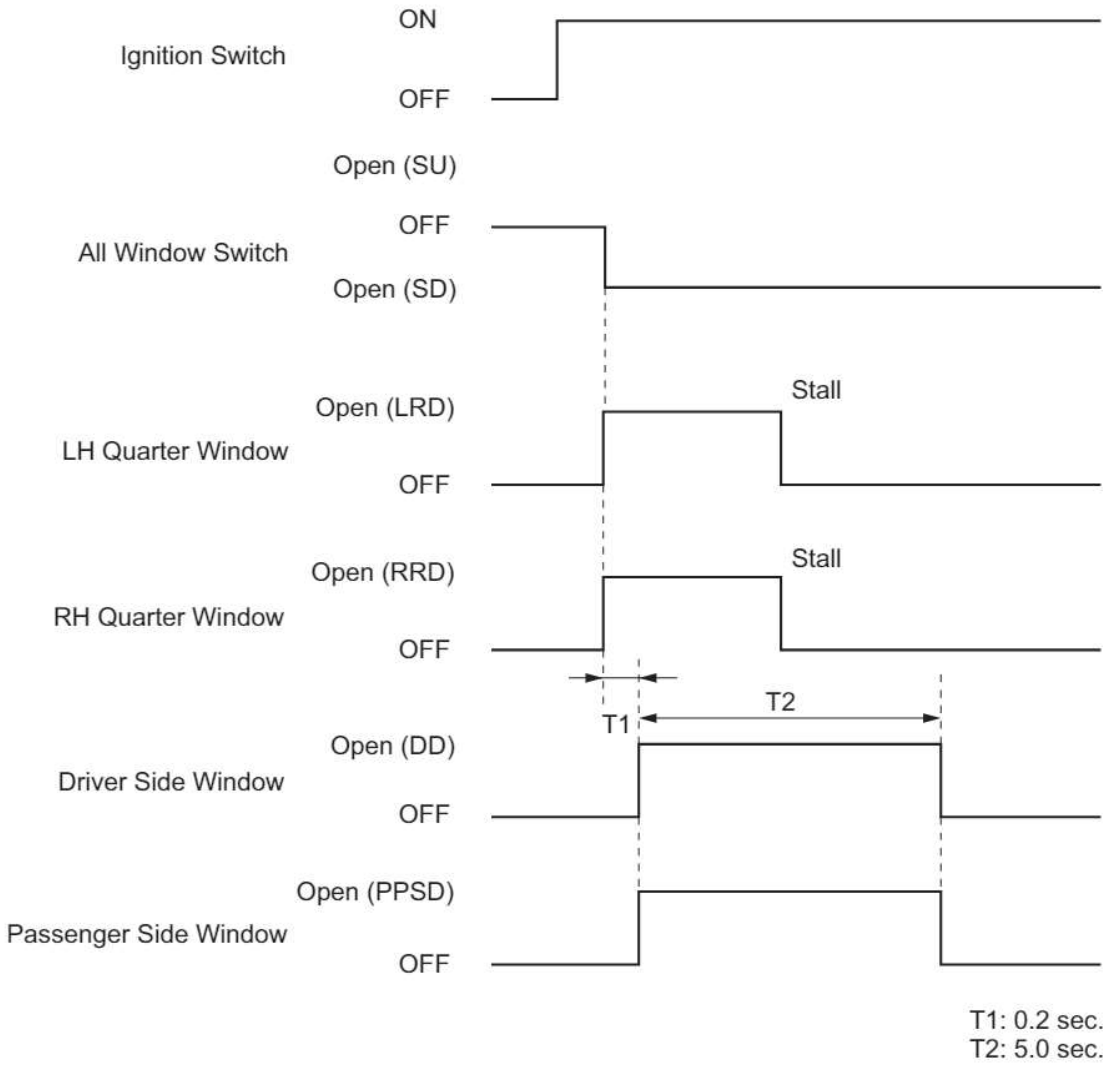
(b) When the all window open switch (SD) is ON, the quarter window motor LH/RH open signal (LRD, RRD) outputs are turned ON. 0.2 seconds after the all window open switch (SD) is ON, the front window motor LH/RH open signal (DD, PPSD) outputs are turned ON.

(c) After the LH and RH quarter window motors stall, their open signal (LRD, RRD) outputs are turned OFF (motor stall detection time: approximately 0.5 seconds).

(d) After the front window motor open signal (DD, PPSD) outputs are ON for 5 seconds, it turns OFF.

(e) When the convertible control switch (TPU, TPD) is ON, all window switch inputs are ignored (protection timer for relay reverse: approximately 0.1 seconds).

All Window Opening Control System Timing Chart



5. OPERATION OF ALL WINDOW CLOSING CONTROL SYSTEM

(a) Turn the ignition switch ON.

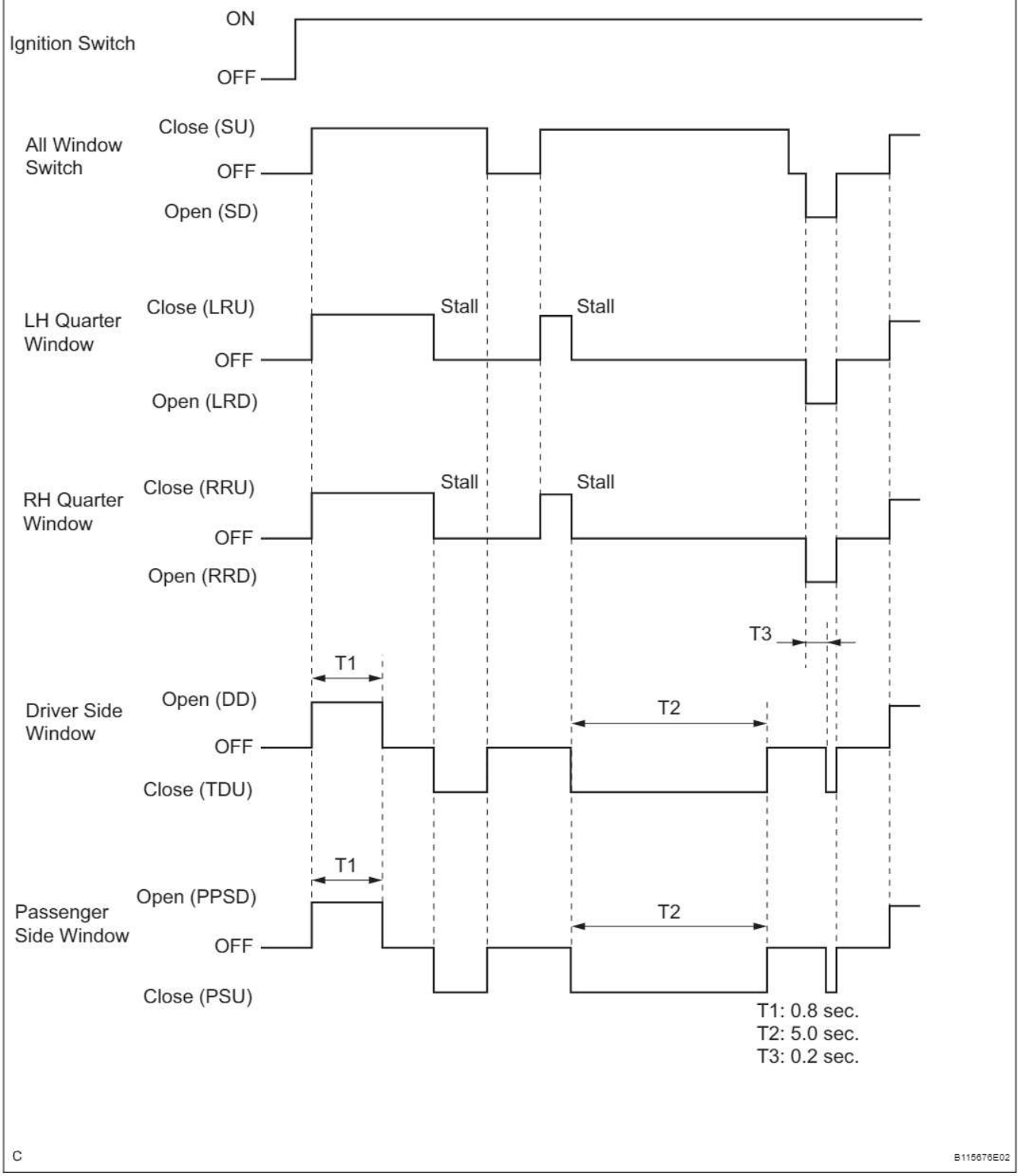
(b) When the all window close switch (SU) is ON, the quarter window motor LH/RH close signal (LRD, RRD) outputs and front window motor LH/RH open signal (DD, PPSD) outputs are turned ON. If the all window close switch is operated again, the front window motor close outputs (DD, PPSD) are not turned ON.

(c) After the front window motor open signal (DD, PPSD) outputs are ON for 0.8 seconds, it turns OFF.

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(d) After the LH and RH quarter window motors stall, their close signal (LRD, RRD) outputs are turned OFF (motor stall detection time: approximately 0.5 seconds).
(e) After the front window motor close signal (TDU, PMU) outputs are ON for 5.0 seconds, it turns OFF.
(f) When the convertible control switch (TPU, TPD) is ON, all window switch inputs are ignored (protection timer for relay reverse: approximately 0.1 seconds).

All Window Closing Control System Timing Chart



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PROBLEM SYMPTOMS TABLE

POWER WINDOW CONTROL SYSTEM

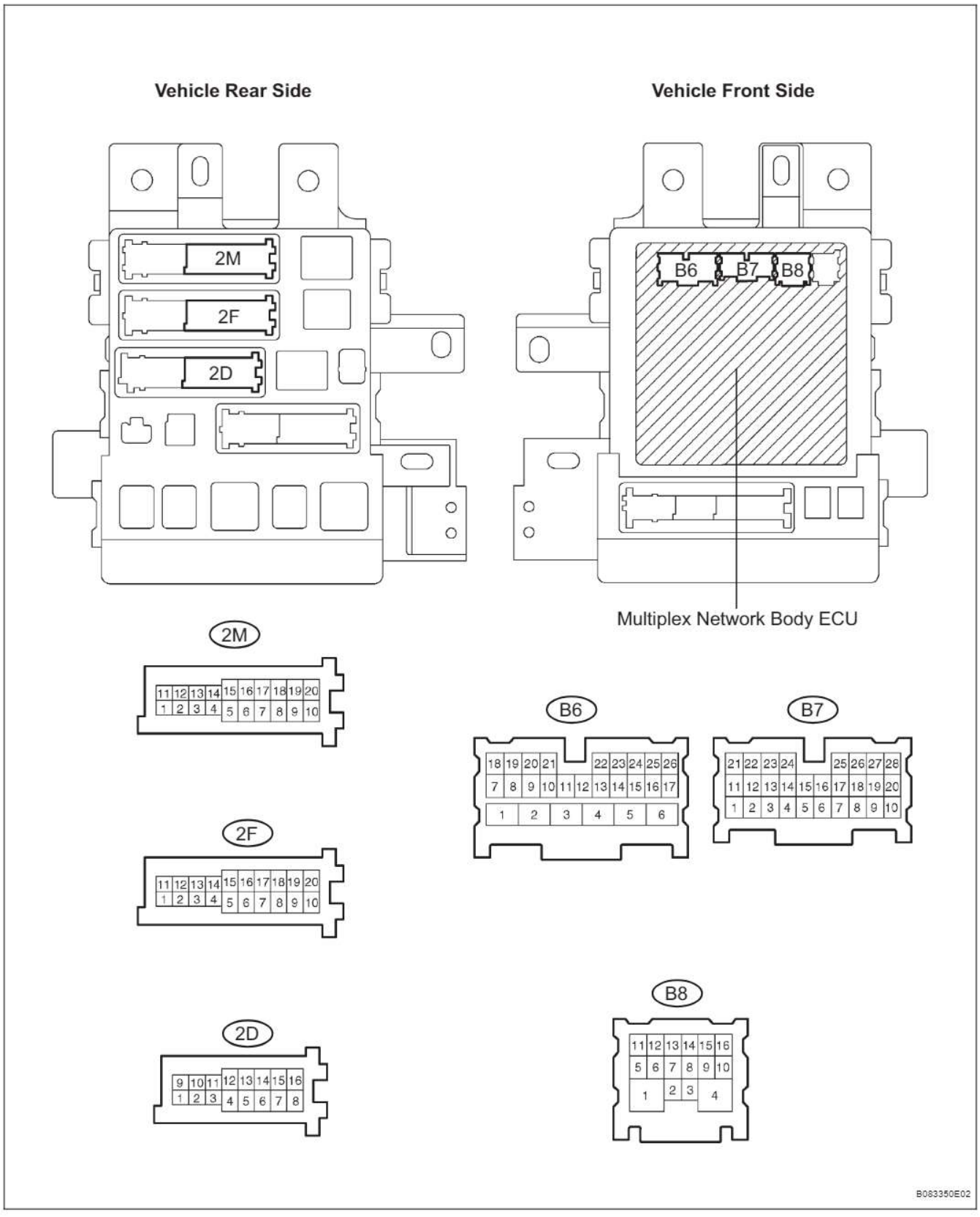
Symptom	Suspected area	See page
Remote UP/DOWN function does not operate	1. Refer to troubleshooting	WS-57
	2. Power window regulator master switch assembly	-
	3. Wire harness	-
	4. Convertible roof control ECU	-
Manual UP/DOWN and AUTO DOWN function does not operate on driver side	1. Refer to troubleshooting	WS-60
	2. P/W NO. 2 fuse	-
	3. Power window regulator master switch assembly	-
	4. Power window regulator motor assembly (driver side)	-
	5. Wire harness	-
Manual UP/DOWN function does not operate on passenger side only	1. Refer to troubleshooting	WS-63
	2. P/W NO. 2 fuse	-
	3. Power window regulator switch assembly (passenger side)	-
	4. Power window regulator motor assembly (passenger side)	-
	5. Wire harness	-
	6. Convertible roof control ECU	-
Power windows do not operate using master switch	1. Refer to troubleshooting	WS-72
	2. PWR M-fuse, ECU-IG fuse, P/W NO. 2 fuse, AM1 fuse	-
	3. IG1 relay, PWR relay	-
	4. Power window regulator master switch assembly	-
	5. Wire harness	-
	6. Instrument panel J/B assembly (multiplex network body ECU)	-
Power windows do not operate using all window switch	1. Refer to troubleshooting	WS-76
	2. All window switch	-
	3. Power window regulator master switch assembly	-
	4. Quarter power window regulator motor assembly LH	-
	5. Quarter power window regulator motor assembly RH	-
	6. Wire harness	-
	7. Convertible roof control ECU	-
Power window can be operated after ignition switch is turned OFF even when certain conditions are not met	1. Refer to troubleshooting	WS-68
	2. Power window regulator master switch assembly	-
	3. Front door courtesy light switch (driver side)	-
	4. Front door courtesy light switch (passenger side)	-
	5. Wire harness	-
	6. Multiplex network body ECU	-

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TERMINALS OF ECU

1. CHECK INSTRUMENT PANEL J/B ASSEMBLY (MULTIPLEX NETWORK BODY ECU)

(a) Disconnect the B6, B7 and B8 ECU connectors.



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(b) Disconnect the 2D, 2F and 2M J/B connectors.
(c) Measure the voltage and resistance of the wire harness side connectors.

Voltage and Resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
BECU (2F-1) - Body ground	W-R - Body ground	+B (BECU) power supply	Always	10 to 14 V
ALTB (2D-16) - Body ground	L-W - Body ground	+B (power system, generator system) power supply	Always	10 to 14 V
GND1 (2F-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND2 (2M-9) - Body ground	BR - Body ground	Ground	Always	Below 1 Ω
PWS (2F-10) - Body ground	W-B - Body ground	PWR Relay ON signal	Ignition switch 1: OFF → 2: ON	1: Below 1 V → 2: 10 to 14 V
KSW (B6-21) - Body ground	L - Body ground	Key unlock warning switch input	Ignition key cylinder 1: No key → 2: Key inserted	1: 10 kΩ or higher → 2: Below 1 Ω
DCTY (B8-14) - Body ground	R-G - Body ground	Driver side courtesy switch input	Driver side door 1: Closed → 2: Opened	1: 10 kΩ or higher → 2: Below 1 Ω
PCTY (B7-23) - Body ground	R-G - Body ground	Passenger side courtesy switch input	Passenger side door 1: Closed → 2: Opened	1: 10 kΩ or higher → 2: Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.
(d) Reconnect the B6, B7 and B8 ECU connectors.
(e) Reconnect the 2D, 2F and 2M J/B connectors.
(f) Measure the voltage of the connector.

Voltage

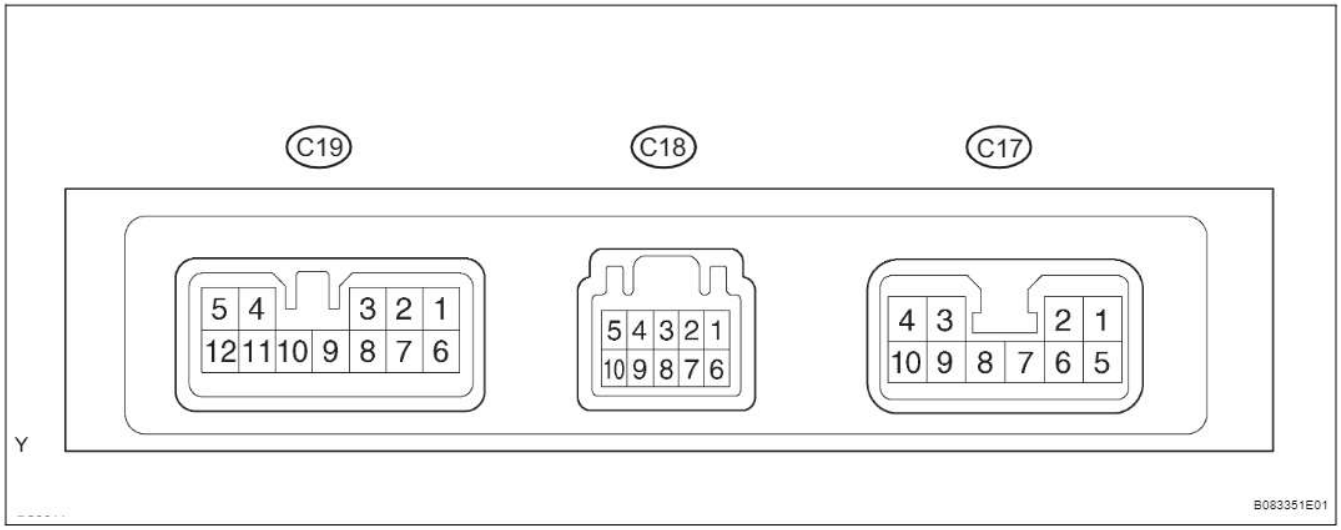
Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
KSW (B6-21) - Body ground	L - Body ground	Key unlock warning switch input	Ignition key cylinder 1: No key → 2: Key inserted	1: 10 to 14 V → 2: Below 1 V

If the result is not as specified, the J/B assembly (multiplex network body ECU) may have a malfunction.

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2. CHECK CONVERTIBLE ROOF CONTROL ECU

(a) Disconnect the C17, C18 and C19 ECU connectors.



(b) Measure the voltage and resistance of the wire harness side connectors.

Voltage and Resistance

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
BTP (C17-10) - Body ground	W - Body ground	+B (TB) power supply	Always	10 to 14 V
IGN2 (C17-8) - Body ground	W - Body ground	+B (IGN2) power supply	Always	10 to 14 V
EIG (C18-5) - Body ground	B-R - Body ground	Ignition (EIG) power supply	Ignition switch 1: OFF → 2: ON	 1: Below 1 V → 2: 10 to 14 V
IGN1 (C17-4) - Body ground	V - Body ground	Key OFF power supply	Ignition switch 1: ON → 2: OFF → 3: After 43 sec.	 1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
GND1 (C17-2) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND2 (C19-10) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
GND3 (C18-9) - Body ground	W-B - Body ground	Ground	Always	Below 1 Ω
TDU (C18-7) - Body ground	P - Body ground	Driver side window UP output	All window switch 1: OFF → 2: UP	 1: 10 kΩ or higher → 2: Below 1 Ω
DD (C18-4) - Body ground	R - Body ground	Driver side window DOWN output	All window switch 1: OFF → 2: DOWN	 1: 10 kΩ or higher → 2: Below 1 Ω
WLSW (C18-10) - Body ground	G - Body ground	Window lock switch (in master switch) input	Window lock switch 1: UNLOCK → 2: LOCK	 1: Below 1 Ω → 2: 10 kΩ or higher
PPSU (C19-7) - Body ground	G - Body ground	Passenger side window UP input	Passenger side power window regulator switch 1: OFF → 2: UP	 1: 10 kΩ or higher → 2: Below 1 Ω
PSM (C19-8) - Body ground	R - Body ground	Passenger side window DOWN input	Passenger side power window regulator switch 1: OFF → 2: DOWN	 1: 10 kΩ or higher → 2: Below 1 Ω

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POWER WINDOW CONTROL SYSTEM (for Convertible)

HOW TO PROCEED WITH TROUBLESHOOTING

HINT:
Use these procedures to troubleshoot the power window control system (convertible).

1	VEHICLE BROUGHT TO WORKSHOP

NEXT

2	CUSTOMER PROBLEM ANALYSIS CHECK AND SYMPTOM CHECK

NEXT

3	PROBLEM SYMPTOMS TABLE

HINT:
See page WS-47
(a) If the fault is not listed on the problem symptoms table, proceed to A.
(b) If the fault is listed on the problem symptoms table, proceed to B.

B	Go to step 5

A

4	OVERALL ANALYSIS AND TROUBLESHOOTING

(a) Terminals of ECU (See page WS-48).
(b) On-vehicle Inspection (See page WS-51).
(c) Inspection (See page WS-52).

NEXT

5	ADJUST, REPAIR OR REPLACE

NEXT

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6	CONFIRMATION TEST

NEXT

END

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
TPU (C18-1) - Body ground	B-R - Body ground	All window switch close input	All window switch 1: OFF → 2: Close	1: 10 kΩ or higher → 2: Below 1 Ω
TPD (C18-6) - Body ground	B - Body ground	All window switch open input	All window switch 1: OFF → 2: Open	1: 10 kΩ or higher → 2: Below 1 Ω

If the result is not as specified, there may be a malfunction on the wire harness side.

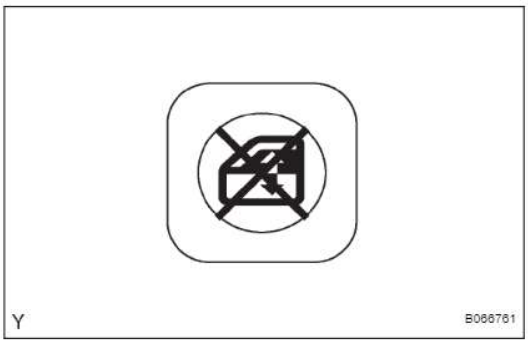
(c) Reconnect the C17, C18 and C19 ECU connectors.

(d) Measure the voltage of the connectors.

Voltage

Symbols (Terminal No.)	Wiring Color	Terminal Description	Condition	Specified Condition
PSU (C19-6) - GND1 (C17-2)	G - W-B	Passenger side power window regulator motor up drive output	Passenger side window 1: Fully closed → 2: Opening operation → 3: Fully opened	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
PPSD (C19-1) - GND1 (C17-2)	R - W-B	Passenger side power window regulator motor down drive output	Passenger side window 1: Fully opened → 2: Closing operation → 3: Fully closed	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
LRU (C17-5) - GND1 (C17-2)	G-W - W-B	Quarter LH side power window regulator motor up drive output	Quarter LH side window 1: Fully closed → 2: Opening operation → 3: Fully opened	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
LRD (C17-1) - GND1 (C17-2)	R-W - W-B	Quarter LH side power window regulator motor down drive output	Quarter LH side window 1: Fully opened → 2: Closing operation → 3: Fully closed	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
RRU (C19-12) - GND1 (C17-2)	G-W - W-B	Quarter RH side power window regulator motor up drive output	Quarter RH side window 1: Fully closed → 2: Opening operation → 3: Fully opened	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V
RRD (C19-5) - GND1 (C17-2)	R-W - W-B	Quarter RH side power window regulator motor down drive output	Quarter RH side window 1: Fully opened → 2: Closing operation → 3: Fully closed	1: Below 1 V → 2: 10 to 14 V → 3: Below 1 V

If the result is not as specified, the ECU may have a malfunction.



ON-VEHICLE INSPECTION

1. CHECK POWER WINDOW LOCK SWITCH

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

(b) Check that the passenger side power window 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 operates as follows:

Standard

WS

Condition	Master Switch	Switch Operation	Power Window
Ignition switch ON	Driver side	Pulled up	UP (closed)
Ignition switch ON	Driver side	Pushed halfway down	DOWN (open)

(b) Check that the passenger side power window operates as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
• Ignition switch ON • Window lock switch OFF	Passenger side	Pulled up	UP (closed)
• Ignition switch ON • Window lock switch OFF	Passenger side	Pushed down	DOWN (open)

3. CHECK AUTO DOWN FUNCTION

(a) Check that the driver side power window operates as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
Ignition switch ON	Driver side	Pushed fully down	AUTO DOWN (fully closed)

4. CHECK REMOTE UP/DOWN FUNCTION

(a) Check that the passenger side power window operates as follows:

Standard

Condition	Master Switch	Switch Operation	Power Window
• Ignition switch ON • Window lock switch OFF	Passenger side	Pulled up	UP (closed)
• Ignition switch ON • Window lock switch OFF	Passenger side	Pushed down	DOWN (open)

INSPECTION

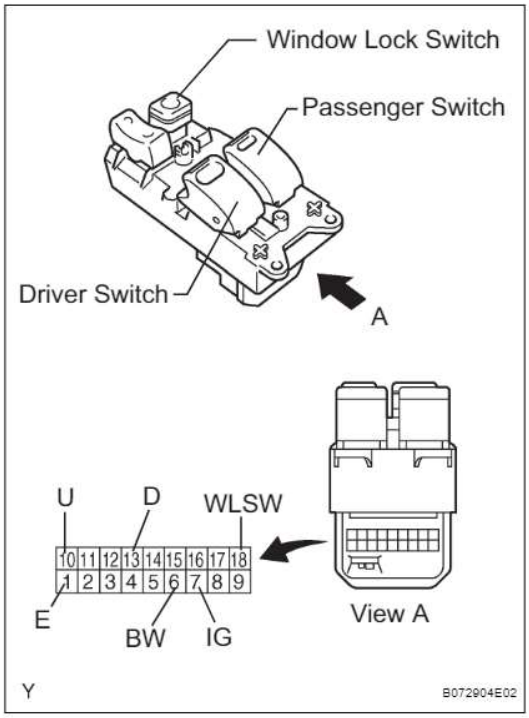
1. INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

(a) Remove the master switch (See page ED-8).

(b) Measure the resistance of the switch when the switch is operated.

Resistance:

Driver switch



Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
Always (ON/OFF)	UP	1 (E) - 13 (D) 6 (BW) - 10(U)	Below 1 Ω
Always (ON/OFF)	OFF	1 (E) - 10 (U) 1 (E) - 13 (D)	Below 1 Ω

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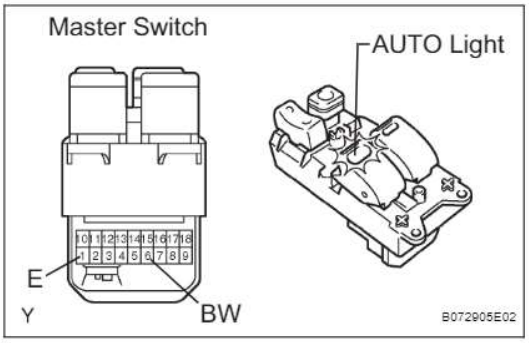
Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
Always (ON/OFF)	DOWN	1 (E) - 10 (U) 6 (BW) - 13 (D)	Below 1 Ω
Always (ON/OFF)	AUTO DOWN	1 (E) - 10 (U) 6 (BW) - 13 (D)	Below 1 Ω

Passenger switch

Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
OFF	UP	1 (E) - 17 (D) 7 (IG) - 15 (U)	Below 1 Ω
OFF	OFF	1 (E) - 17 (D) 1 (E) - 15 (U)	Below 1 Ω
OFF	DOWN	1 (E) - 15 (U) 7 (IG) - 17 (D)	Below 1 Ω
ON	UP	7 (IG) - 15 (U)	Below 1 Ω
ON	OFF	15 (U) - 17 (D)	Below 1 Ω
ON	DOWN	7 (IG) - 17 (D)	Below 1 Ω

Window lock switch

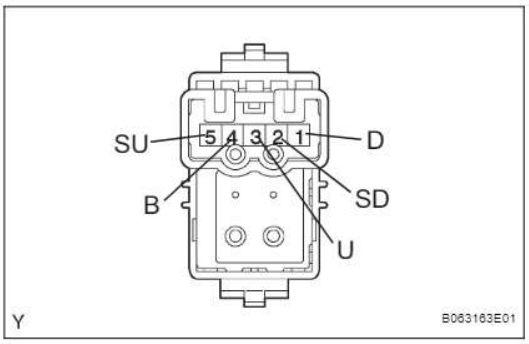
Window Lock Switch Condition	Tester Connection	Specified Condition
ON	1 (E) - 18 (WLSW)	Below 1 Ω



(c) Check the master switch AUTO light.
OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 6 (BW) Battery negative (-) → Terminal 1 (E)	AUTO light illuminates

If the result is not as specified, replace the master switch assembly.



2. INSPECT POWER WINDOW REGULATOR SWITCH ASSEMBLY

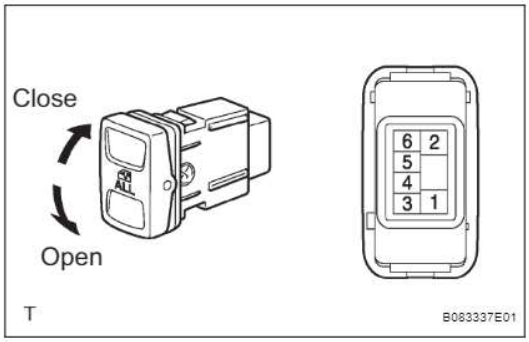
(a) Remove the power window regulator switch (See page ED-8).

(b) Measure the resistance of the switch when the switch is operated.
Resistance

Switch Condition	Tester Connection	Specified Condition
UP	1 (D) - 2 (SD) 3 (U) - 4 (B)	Below 1 Ω
OFF	1 (D) - 2 (SD) 3 (U) - 5 (SU)	Below 1 Ω
DOWN	1 (D) - 4 (B) 3 (U) - 5 (SU)	Below 1 Ω

If the result is not as specified, replace the regulator switch assembly.

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3. INSPECT ALL WINDOW SWITCH

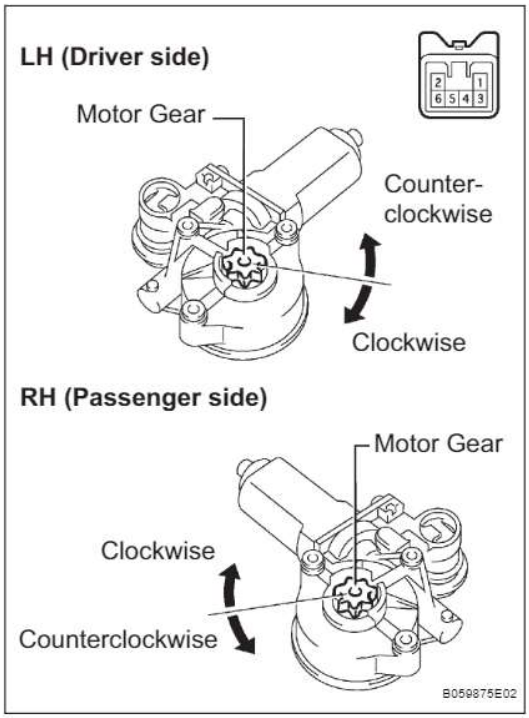
(a) Remove the all window switch.

(b) Measure the resistance of the switch when the switch is operated.

Resistance

Switch Condition	Tester Connection	Specified Condition
CLOSE	3 - 6 4 - 5	Below 1 Ω
OFF	-	-
OPEN	3 - 4 5 - 6	Below 1 Ω

If the result is not as specified, replace the switch.



4. INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY

(a) Check operation of the regulator motor LH/RH.

(1) Remove the power window regulator motor LH/RH (See page ED-8).

(2) Apply battery voltage to the motor terminals.

NOTICE:

Do not apply voltage to the terminals except 1 and 2.

(3) Check that the motor operates smoothly.

OK:

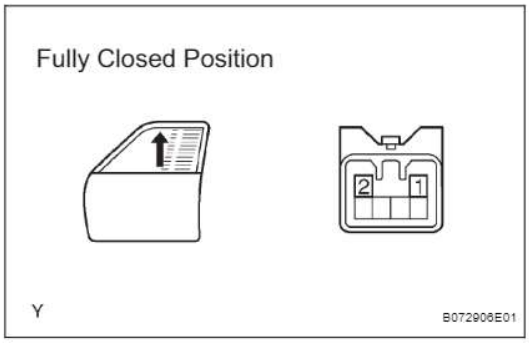
LH (Driver side)

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates clockwise
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates counterclockwise

RH (Passenger side)

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates clockwise
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates counterclockwise

If the result is not as specified, replace the motor assembly.



(b) Check the PTC operation inside the regulator motor.

NOTICE:

The work must be performed with the power window regulator and door glass installed in the vehicle.

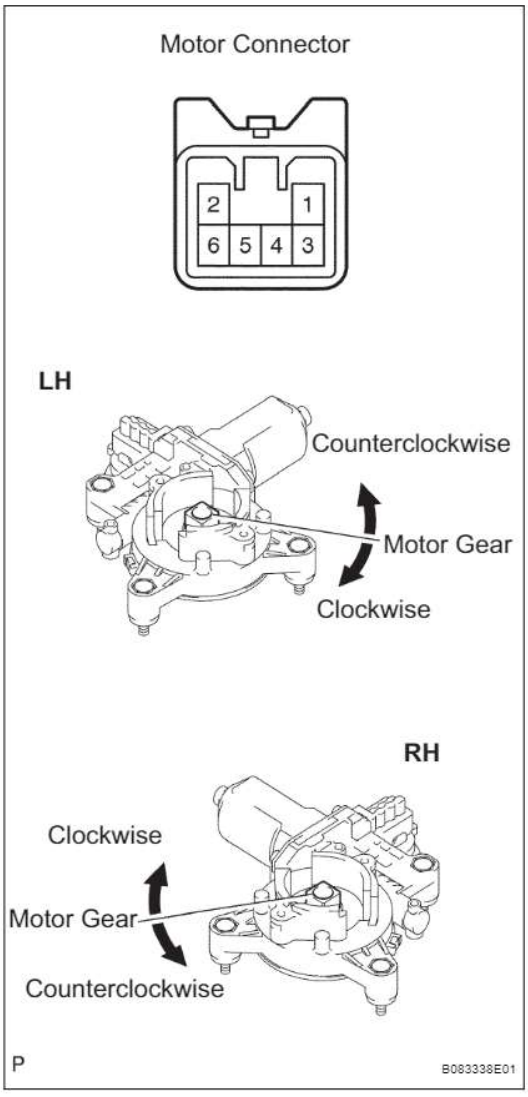
(1) Remove the driver side power window regulator motor.

(2) Connect the ammeter's positive (+) lead to terminal 2 of the wire harness side connector and the negative (-) lead to the battery's negative terminal.

(3) Connect the battery's positive (+) lead to terminal 1 of the wire harness side connector, and raise the window to the fully closed position.

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(4) Continue to apply voltage, and check that the current changes to less than 1 A within 4 to 90 seconds.
(5) Disconnect the leads from the terminals.
(6) Approximately 60 seconds later, connect the battery's positive (+) lead to terminal 2 and the negative (-) lead to terminal 1, and check that the window begins to descend.
If the result is not as specified, replace the motor assembly.



5. INSPECT QUARTER WINDOW REGULATOR MOTOR ASSEMBLY

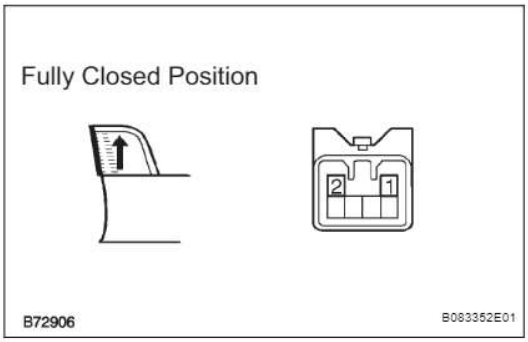
(a) Check operation of the regulator motor LH/RH.
(1) Remove the quarter power window regulator motor LH/RH (See page ED-8).
(2) Apply battery voltage to the motor terminals.
NOTICE:
Do not apply voltage to the terminals except 1 and 2.
(3) Check that the motor operates smoothly.
OK:
LH

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates clockwise
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates counterclockwise

RH

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates clockwise
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates counterclockwise

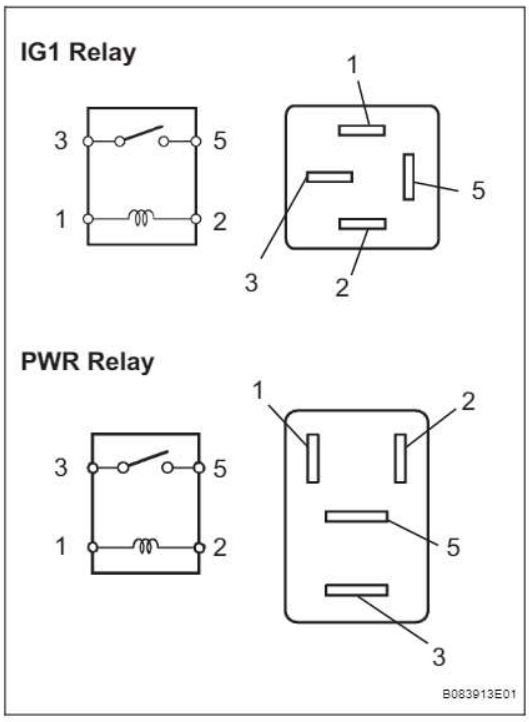
If the result is not as specified, replace the motor assembly.



(b) Check the PTC operation inside the regulator motor LH/RH.
NOTICE:
The work must be performed with the power window regulator and door glass installed in the vehicle.
(1) Remove the driver side power window regulator motor.

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(2) Connect the ammeter's positive (+) lead to terminal 2 of the wire harness side connector and the negative (-) lead to the battery's negative terminal.
(3) Connect the battery's positive (+) lead to terminal 1 of the wire harness side connector, and raise the window to the fully closed position.
(4) Continue to apply voltage, and check that the current changes to less than 1 A within 4 to 90 seconds.
(5) Disconnect the leads from the terminals.
(6) Approximately 60 seconds later, connect the battery's positive (+) lead to terminal 2 and the negative (-) lead to terminal 1, and check that the window begins to descend.
If the result is not as specified, replace the motor assembly.



6. INSPECT RELAY (MARKING: IG1, PWR)

(a) Remove the IG1 and PWR relays from the instrument panel J/B.
(b) Measure the resistance of the relays.
Resistance

Tester Connection	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

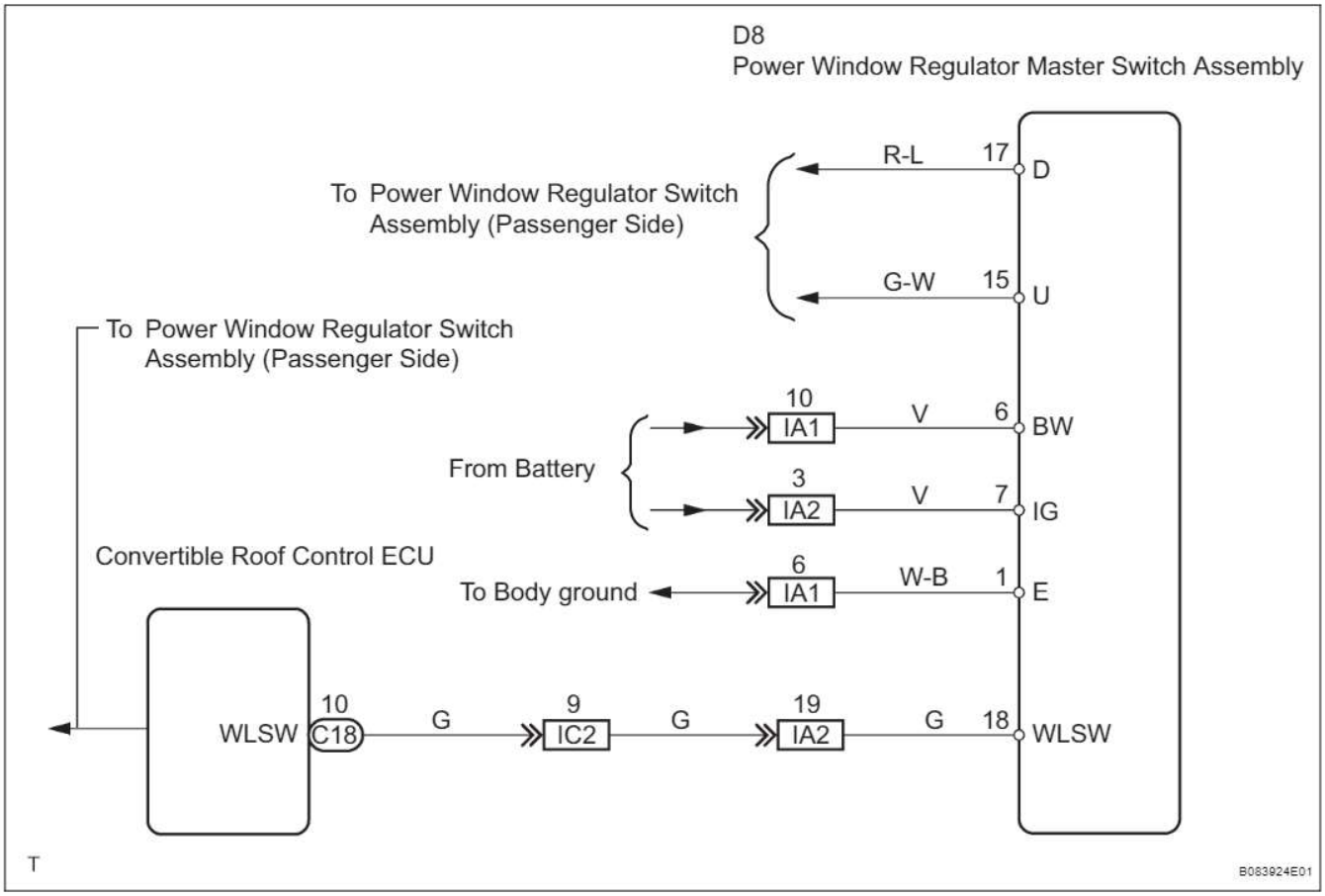
If the result is not as specified, replace the relay.

Remote Up / Down Function does not Operate

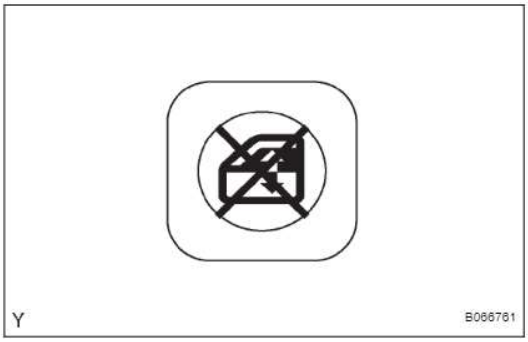
DESCRIPTION

With the ignition switch ON, the power window regulator master switch transmits remote switch signals to the passenger side power window regulator switch. Then, the regulator switch drives the power window regulator motor.

WIRING DIAGRAM



1	CHECK POWER WINDOW LOCK SWITCH



(a) Turn the window lock switch OFF and operate the master switch passenger side switch. Check that the remote UP/DOWN function operates normally.

OK:

Remote UP/DOWN function operates normally.

NG	Go to step 2

WS

OK

END

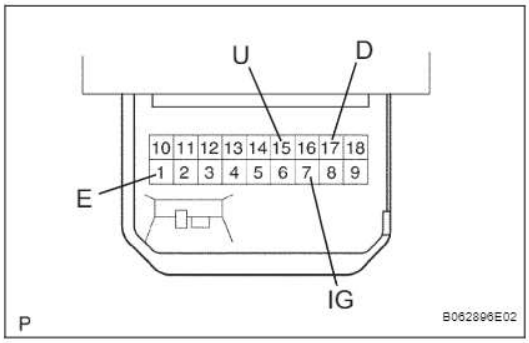
2	CHECK MANUAL UP/DOWN FUNCTION

(a) Check that the passenger side power window manual UP/DOWN function operates normally.
OK:
Manual UP/DOWN function operates normally.

NG → OTHER PROBLEM

OK

3	INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (PASSENGER SIDE SWITCH)



(a) Disconnect the D8 master switch connector.
(b) Measure the resistance of the switch when the switch is operated.

Resistance

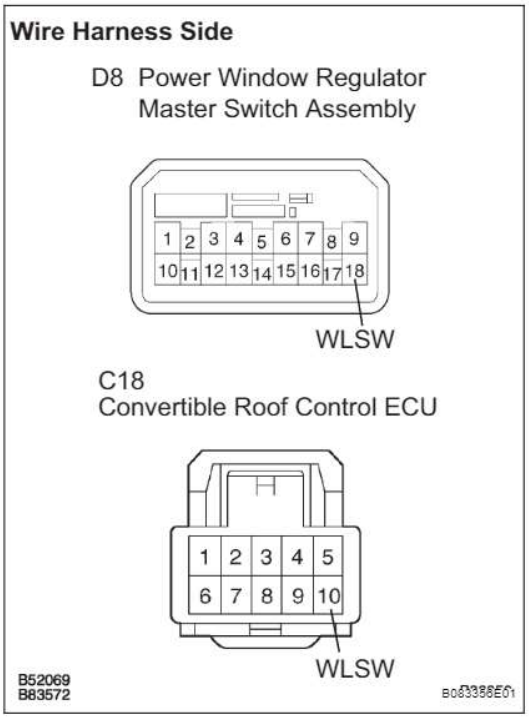
Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
OFF	UP	1 (E) - 17 (D) 7 (IG) - 15 (U)	Below 1 Ω
OFF	OFF	1 (E) - 17 (D) 1 (E) - 15 (U)	Below 1 Ω
OFF	DOWN	1 (E) - 15 (U) 7 (IG) - 17 (D)	Below 1 Ω
ON	UP	7 (IG) - 15 (U)	Below 1 Ω
ON	OFF	15 (U) - 17 (D)	Below 1 Ω
ON	DOWN	7 (IG) - 17 (D)	Below 1 Ω

NG → REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

OK

WS

4	CHECK WIRE HARNESS (REGULATOR MASTER SWITCH - CONVERTIBLE ROOF CONTROL ECU)



(a) Disconnect the D8 master switch connector.
(b) Disconnect the C18 ECU connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D8-18 (WLSW) - C18-10 (WLSW)	Below 1 Ω
D8-18 (WLSW) or C18-10 (WLSW) - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS AND CONNECTOR**

OK →

REPLACE CONVERTIBLE ROOF CONTROL ECU

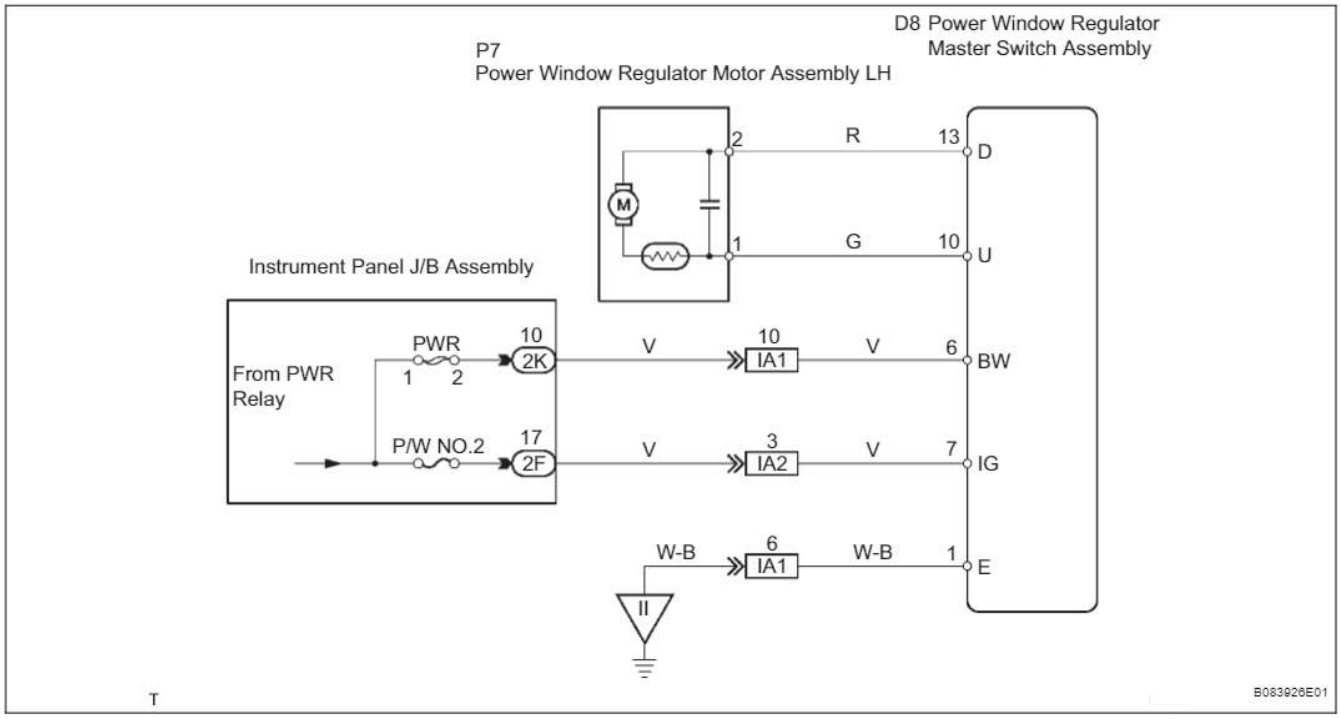
WS

Manual Up / Down and Auto Down Function does not Operate on Driver Side

DESCRIPTION

If the manual UP/DOWN and AUTO down function does not operate, a malfunction may be present in the power window regulator master switch, the power window regulator motor or the wire harness.

WIRING DIAGRAM



1	INSPECT FUSE (P/W NO.2)

(a) Remove the P/W NO. 2 fuse from the instrument panel J/B.

(b) Measure the resistance of the fuse.

Resistance:

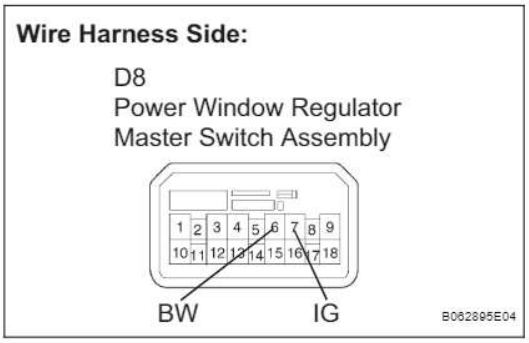
Below 1 Ω

NG → **REPLACE FUSE**

OK

WS

2 CHECK HARNESS AND CONNECTOR (MASTER SWITCH - BATTERY AND BODY GROUND)



(a) Disconnect the D8 master switch connector.
(b) Measure the voltage and resistance of the wire harness side connector.

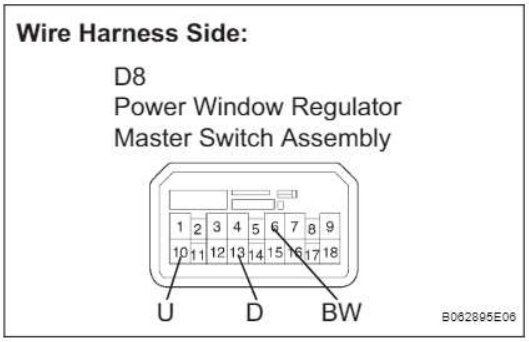
Voltage and resistance

Tester Connection	Condition	Specified Condition
D8-6 (BW) - Body ground	Ignition switch ON	10 to 14 V
D8-7 (IG) - Body ground	Ignition switch ON	10 to 14 V
D8-1 (E) - Body ground	Always	Below 1 Ω

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

3 CHECK POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY



(a) Disconnect the D8 master switch connector.
(b) Check operation of the power window regulator motor assembly LH.

Standard

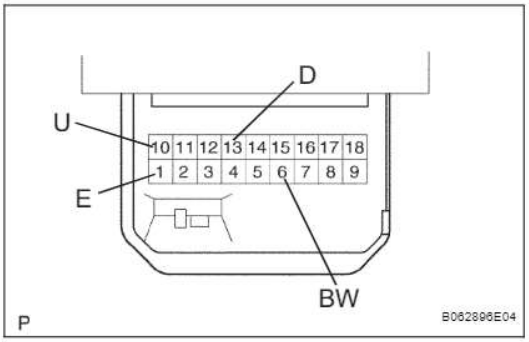
Wire Connection	Specified Condition
D8-10 (U) - D8-6 (BW) D8-13 (D) - Body ground	Power window moves UP
D8-10 (U) - Body ground D8-6 (BW) - D8-13 (D)	Power window moves DOWN

NG → Go to step 4

OK

REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

4 INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (SWITCH OPERATION)



(a) Disconnect the D8 master switch connector.
(b) Measure the resistance of the switch when the switch is operated.

Resistance

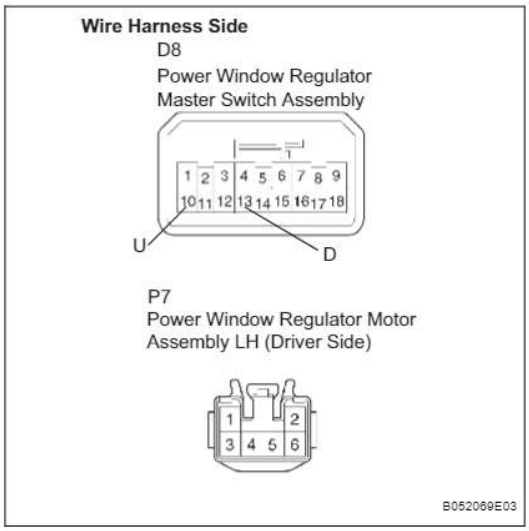
Tester Connection	Switch Condition	Specified Condition
D8-1 (E) - D8-13 (D) D8-10 (U) - D8-6 (BW)	UP	Below 1 Ω
D8-1 (E) - D8-10 (U) D8-1 (E) - D8-13 (D)	OFF	Below 1 Ω
D8-1 (E) - D8-10 (U) D8-6 (BW) - D8-13 (D)	DOWN	Below 1 Ω

WS

NG → REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

OK

5 CHECK HARNESS AND CONNECTOR (MASTER SWITCH - POWER WINDOW MOTOR LH)



(a) Disconnect the D8 master switch connector.
(b) Disconnect the P7 motor connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D8-13 (D) - P7-2	Below 1 Ω
D8-10 (U) - P7-1	Below 1 Ω
D8-13 (D) or P7-2 - Body ground	10 kΩ or higher
D8-10 (U) or P7-1 - Body ground	10 kΩ or higher

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY LH

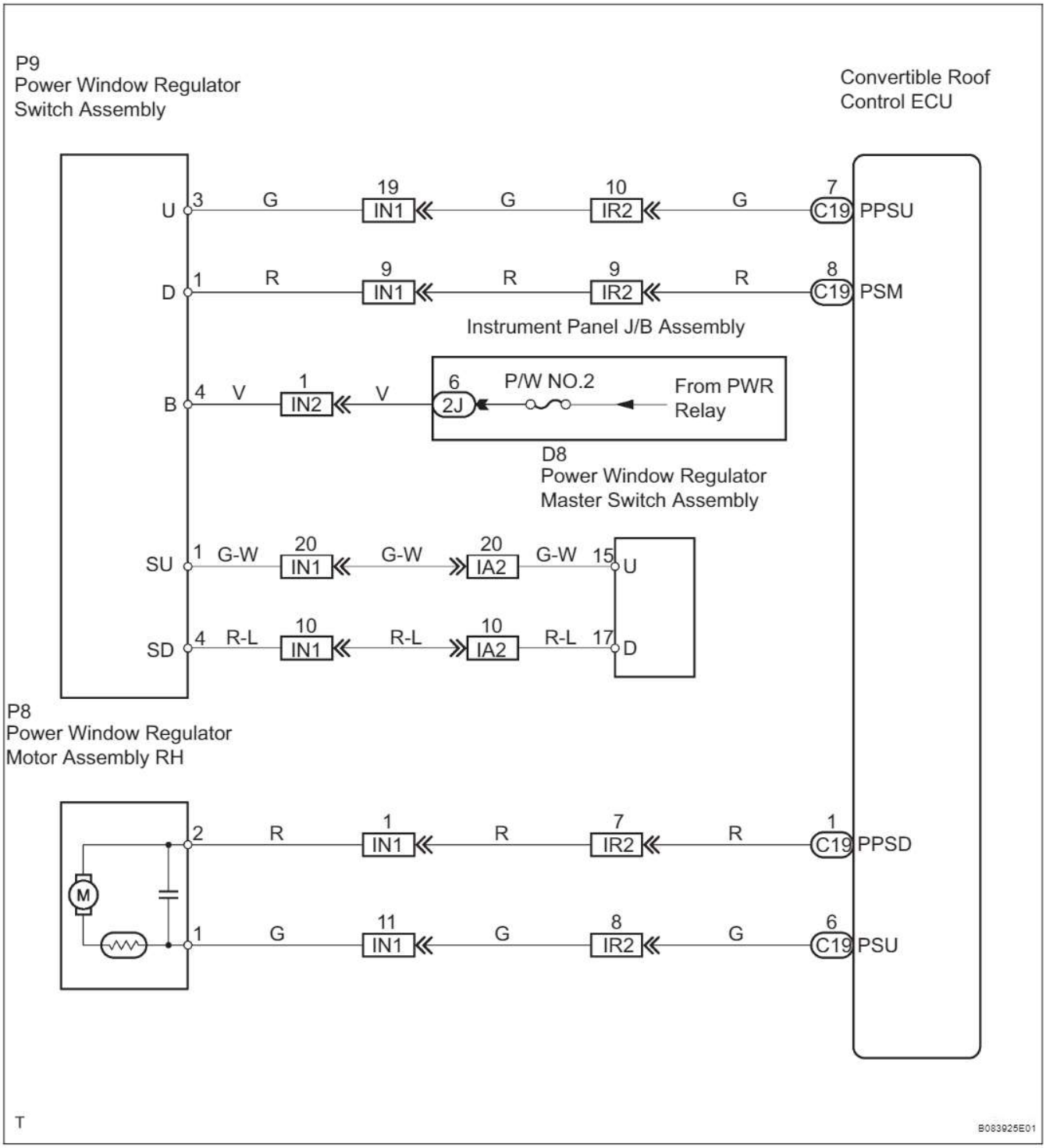
WS

Manual Up / Down and Auto Down Function does not Operate on Passenger Side Only

DESCRIPTION

If the passenger side manual UP/DOWN function does not operate, a malfunction may be present in the power window regulator motor, the power window regulator switch or the wire harness.

WIRING DIAGRAM



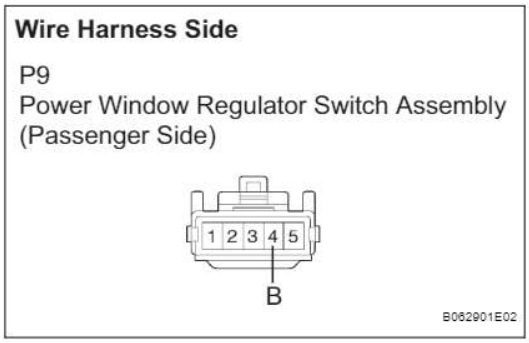
1	INSPECT FUSE (P/W NO.2)

(a) Remove the P/W NO. 2 fuse from the instrument panel J/B.
(b) Measure the resistance of the fuse.
Resistance:
Below 1 Ω

NG → **REPLACE FUSE**

OK

2	CHECK POWER WINDOW REGULATOR SWITCH ASSEMBLY (B VOLTAGE)



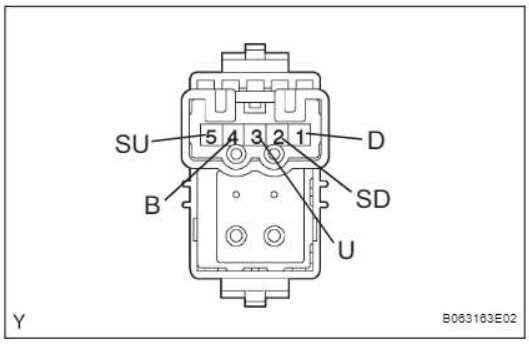
(a) Disconnect the P9 regulator switch connector.
(b) Measure the voltage of the wire harness side connector.
Voltage

Tester Connection	Condition	Specified Condition
P9-4 (B) - Body ground	Ignition switch ON	10 to 14 V

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR (INSTRUMENT PANEL J/B - POWER WINDOW SWITCH)**

OK

3	INSPECT POWER WINDOW REGULATOR SWITCH ASSEMBLY (SWITCH OPERATION)



(a) Disconnect the P9 switch connector.
(b) Measure the resistance of the switch when the switch is operated.
Resistance

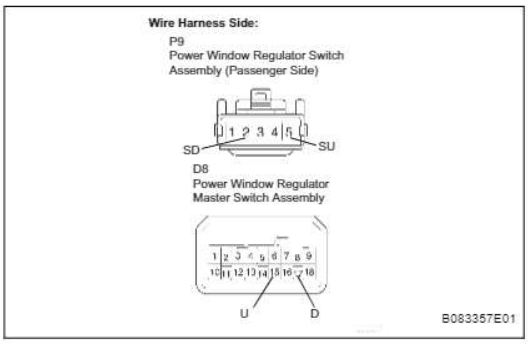
Tester Connection	Switch Condition	Specified Condition
1 (D) - 2 (SD) 3 (U) - 4 (B)	UP	Below 1 Ω
1 (D) - 2 (SD) 3 (U) - 5 (SU)	OFF	Below 1 Ω
1 (D) - 4 (B) 3 (U) - 5 (SU)	DOWN	Below 1 Ω

NG → **REPLACE POWER WINDOW REGULATOR SWITCH ASSEMBLY**

OK

WS

4 CHECK HARNESS AND CONNECTOR (SWITCH - POWER WINDOW MASTER SWITCH)



(a) Disconnect the P9 switch connector.
(b) Disconnect the D8 master switch connector.
(c) Measure the resistance of the wire harness side connectors.

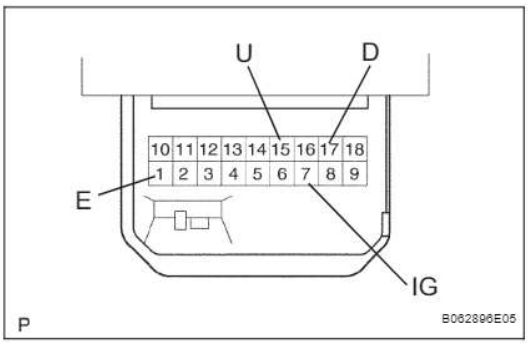
Resistance

Tester Connection	Specified Condition
P9-2 (SD) - D8-17 (D)	Below 1 Ω
P9-5 (SU) - D8-15 (U)	Below 1 Ω
P9-2 (SD) or D8-17 (D) - Body ground	10 kΩ or higher
P9-5 (SU) or D8-15 (U) - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

5 INSPECT POWER WINDOW REGULATOR SWITCH MASTER ASSEMBLY (PASSENGER SIDE)



(a) Disconnect the D8 master switch connector.
(b) Measure the resistance of the switch when the switch is operated.

Resistance

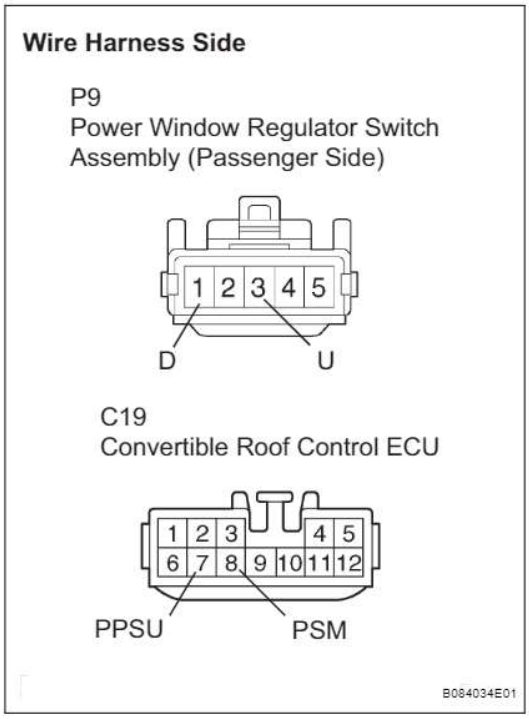
Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
OFF	UP	1 (E) - 17 (D) 7 (IG) - 15 (U)	Below 1 Ω
OFF	OFF	1 (E) - 17 (D) 1 (E) - 15 (U)	Below 1 Ω
OFF	DOWN	1 (E) - 15 (U) 7 (IG) - 17 (D)	Below 1 Ω
ON	UP	7 (IG) - 15 (U)	Below 1 Ω
ON	OFF	15 (U) - 17 (D)	Below 1 Ω
ON	DOWN	7 (IG) - 17 (D)	Below 1 Ω

NG → **REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY**

OK

WS

6 CHECK HARNESS AND CONNECTOR (POWER WINDOW SWITCH - ROOF CONTROL ECU)



(a) Disconnect the P9 switch connector.
(b) Disconnect the C19 ECU connector.
(c) Measure the resistance of the wire harness side connectors.

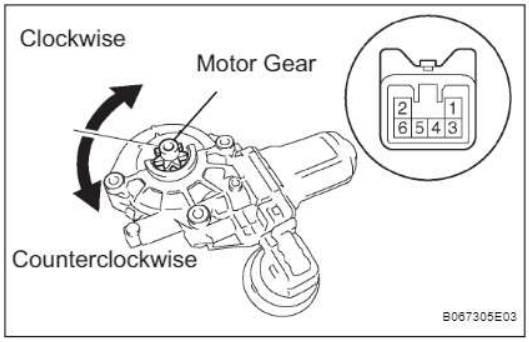
Resistance

Tester Connection	Specified Condition
P9-1 (D) - C19-8 (PSM)	Below 1 Ω
P9-3 (U) - C19-7 (PPSU)	Below 1 Ω
P9-1 (D) or C19-8 (PSM) - Body ground	10 kΩ or higher
P9-3 (U) or C19-7 (PPSU) - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

7 INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY RH



(a) Apply battery voltage to connector terminals 1 and 2.
NOTICE:
Do not apply battery voltage to any terminals except terminals 1 and 2.
(b) Check that the motor smoothly rotates.

Standard

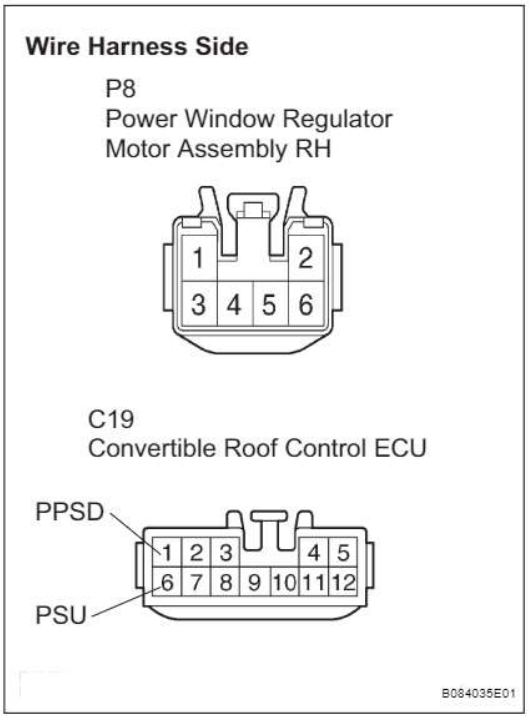
Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates clockwise
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates counterclockwise

NG → **REPLACE POWER WINDOW REGULATOR MOTOR ASSEMBLY RH**

OK

WS

8	CHECK HARNESS AND CONNECTOR (POWER WINDOW MOTOR RH - ROOF CONTROL ECU)



(a) Disconnect the P8 motor connector.
(b) Disconnect the C19 ECU connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
P8-1 - C19-6 (PSU)	Below 1 Ω
P9-2 - C19-1 (PPSD)	Below 1 Ω
P8-1 or C19-6 (PSU) - Body ground	10 kΩ or higher
P9-2 or C19-1 (PPSD) - Body ground	10 kΩ or higher

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

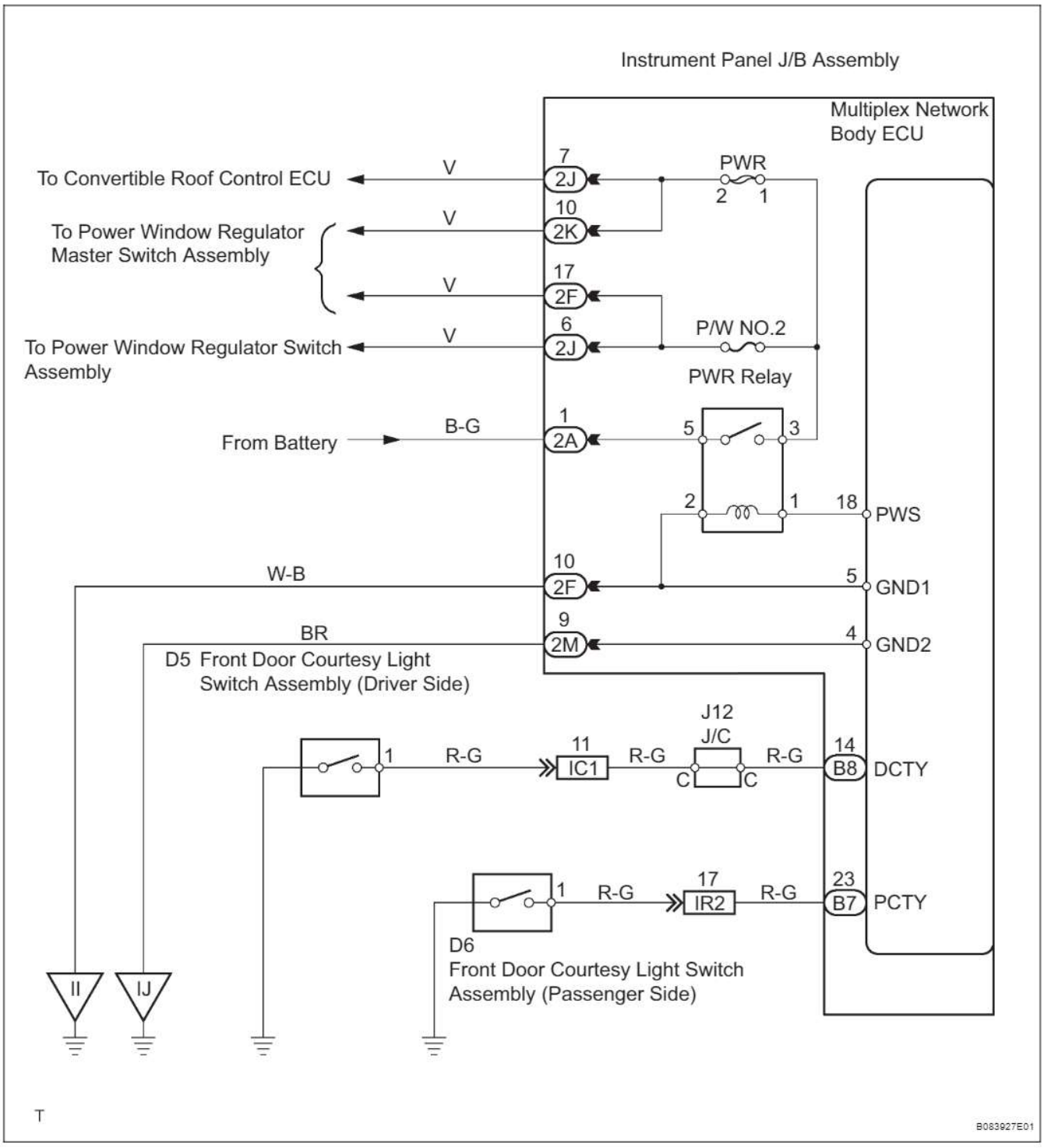
REPLACE CONVERTIBLE ROOF CONTROL ECU

Power Window can be Operated After Ignition Switch is Turned OFF Even if Operative Conditions are not Met

DESCRIPTION

The multiplex network body ECU keeps power supplied to the power window regulator master switch and the regulator switch for 43 seconds after the ignition switch is turned OFF. However, the body ECU will cut power to the master switch if: 1) either front door is opened within 43 seconds, 2) a signal from any door courtesy light switches is input to the ECU within 43 seconds, or 3) no power window activity occurs within 43 seconds.

WIRING DIAGRAM



1	CHECK OPERATION FUNCTION AFTER IGNITION SWITCH IS TURNED OFF

(a) Check the power window operation function after the ignition switch is turned OFF.

WS

Result

	Proceed to
Either front door is opened within 43 seconds but the power window can still operate	A
43 seconds pass and the power window can still operate	B

B → REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

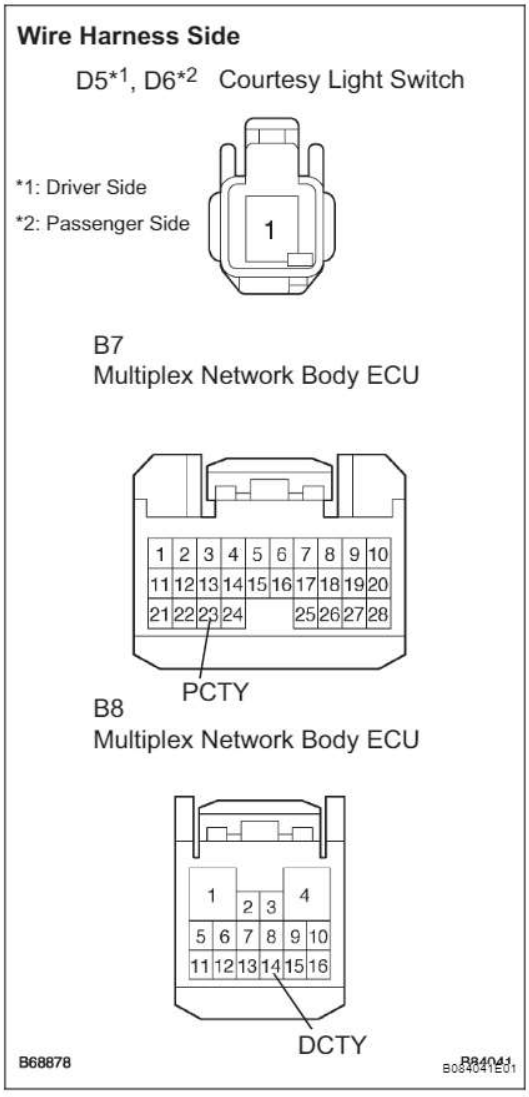
A

2 INSPECT FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY

NG → REPLACE FRONT DOOR COURTESY LIGHT SWITCH ASSEMBLY

OK

3 CHECK AND REPLACE WIRE HARNESS (COURTESY LIGHT SWITCH - MULTIPLEX NETWORK BODY ECU)



(a) Disconnect the D5 and D6 switch connectors.
(b) Disconnect the B7 and B8 ECU connectors.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D5-1 - B8-14 (DCTY)	Below 1 Ω
D6-1 - B7-23 (PCTY)	Below 1 Ω
D5-1 or B8-14 (DCTY) - Body ground	10 kΩ or higher
D6-1 or B7-23 (PCTY) - Body ground	10 kΩ or higher

NG → REPAIR OR REPLACE HARNESS AND CONNECTOR

WS

OK

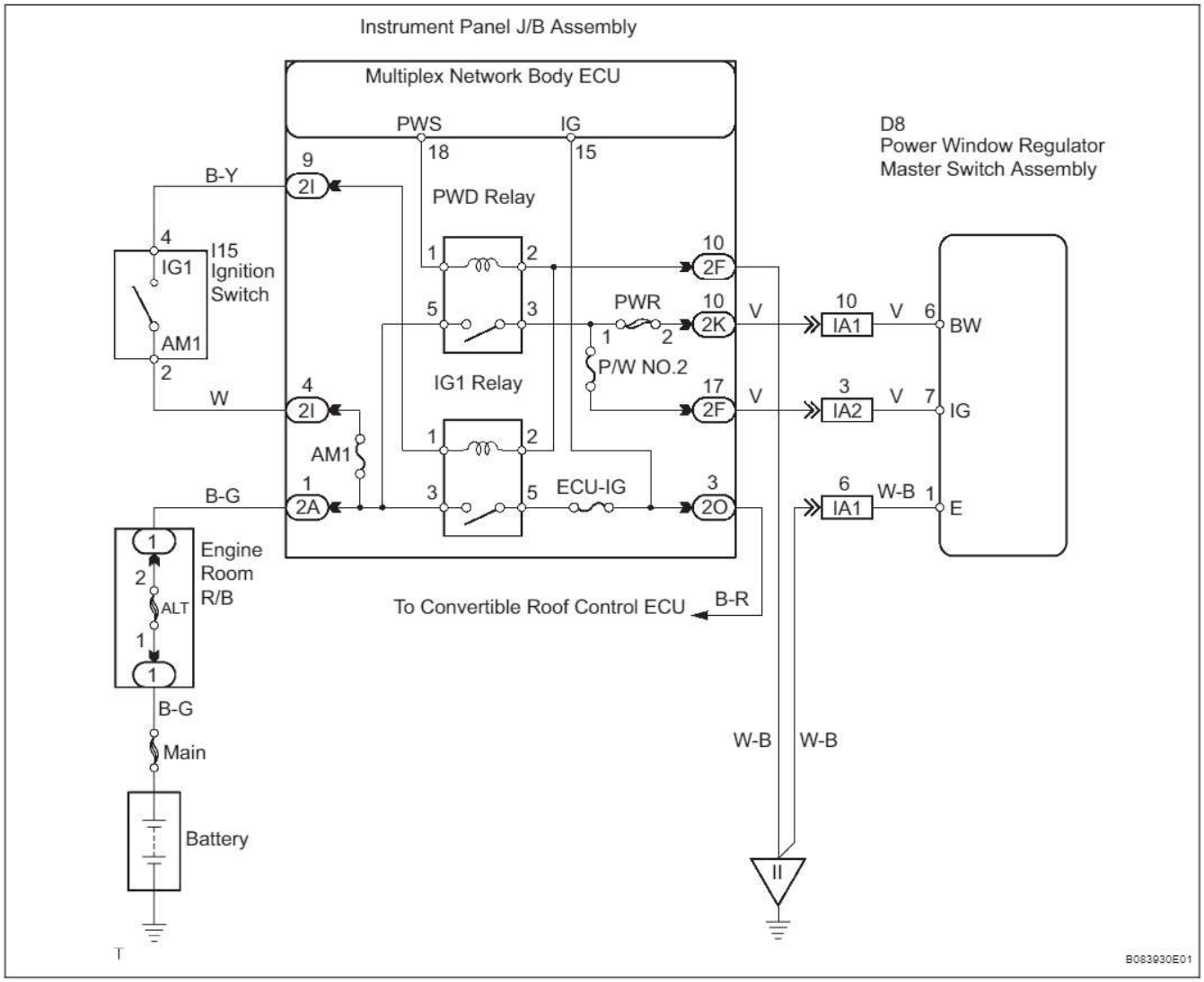
REPLACE MULTIPLEX NETWORK BODY ECU

Power Window does not Operate Using Master Switch

DESCRIPTION

If all of the door windows do not operate, the power window regulator master switch may not have power or may be malfunctioning.

WIRING DIAGRAM



1	INSPECT FUSE (PWR, ECU-IG, P/W NO.2, AM1)

(a) Remove the PWR M-fuse, ECU-IG, P/W NO. 2 and AM1 fuses from the instrument panel J/B.

(b) Measure the resistance of the fuses.

Resistance:

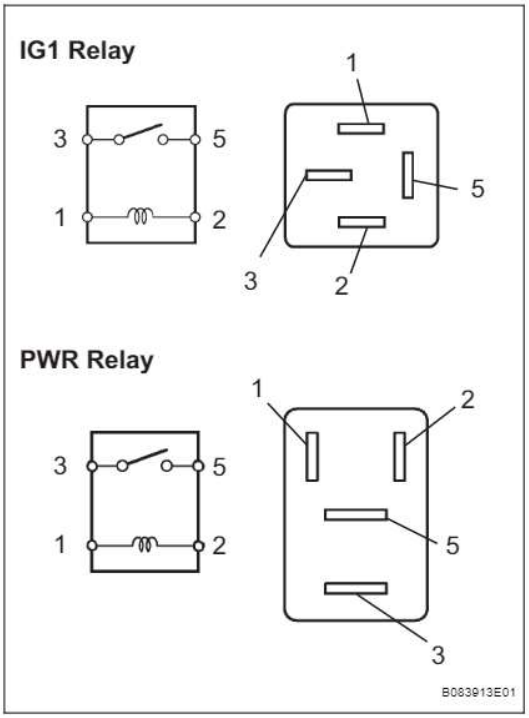
Below 1 Ω

NG	REPLACE FUSE

WS

OK

2	INSPECT RELAY (MARKING: IG1, PWR)



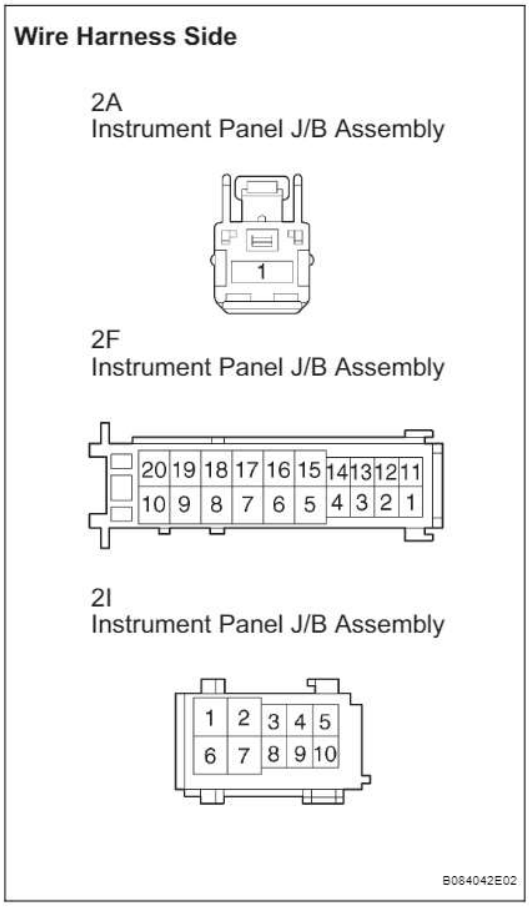
(a) Remove the IG1 and PWR relays from the instrument panel J/B.
(b) Measure the resistance of the relays.
Resistance

Terminal No.	Specified Condition
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

NG → REPLACE RELAY

OK

3 CHECK HARNESS AND CONNECTOR (FOR POWER SOURCE OF INSTRUMENT PANEL J/B)



(a) Disconnect the 2A, 2F and 2I J/B connectors.
(b) Measure the voltage and resistance of the wire harness side connectors.

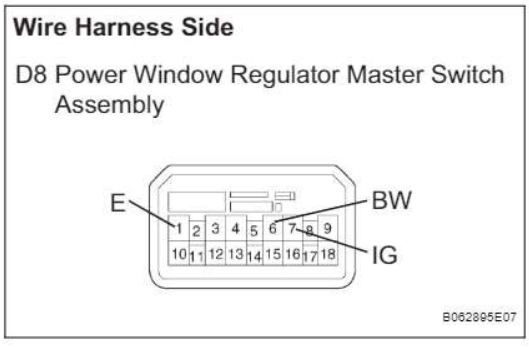
Voltage and Resistance

Tester Connection	Condition	Specified Condition
2A-1 - Body ground	Always	10 to 14 V
2F-10 - Body ground	Always	10 to 14 V
2I-4 - 2I-9	Ignition switch ON	Below 1 Ω

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

4 CHECK HARNESS AND CONNECTOR (POWER WINDOW MASTER SWITCH - BATTERY AND BODY GROUND)



(a) Disconnect the D8 master switch connector.
(b) Measure the voltage and resistance of the wire harness side connector.

Voltage and resistance

Tester Connection	Condition	Specified Condition
D8-6 (BW) - Body ground	Ignition switch ON	10 to 14 V
D8-7 (IG) - Body ground	Ignition switch ON	10 to 14 V
D8-1 (E) - Body ground	Always	Below 1 Ω

NG → Go to step 5

OK

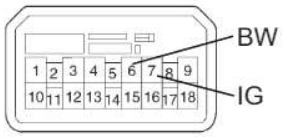
REPLACE POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

WS

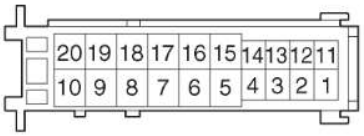
5	CHECK HARNESS AND CONNECTOR (POWER WINDOW MASTER SWITCH - INSTRUMENT PANEL J/B)

Wire Harness Side

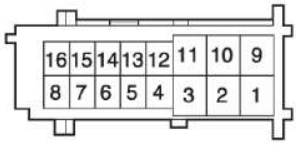
D8 Power Window Regulator Master Switch Assembly



2F Instrument Panel J/B Assembly



2K Instrument Panel J/B Assembly



B084036E01

(a) Disconnect the D8 master switch connector.
(b) Disconnect the 2F and 2K J/B connectors.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D8-6 (BW) - 2K-10	Below 1 Ω
D8-7 (IG) - 2F-17	Below 1 Ω
D8-6 (BW) or 2K-10 - Body ground	10 kΩ or higher
D8-7 (IG) or 2F-17 - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE INSTRUMENT PANEL J/B

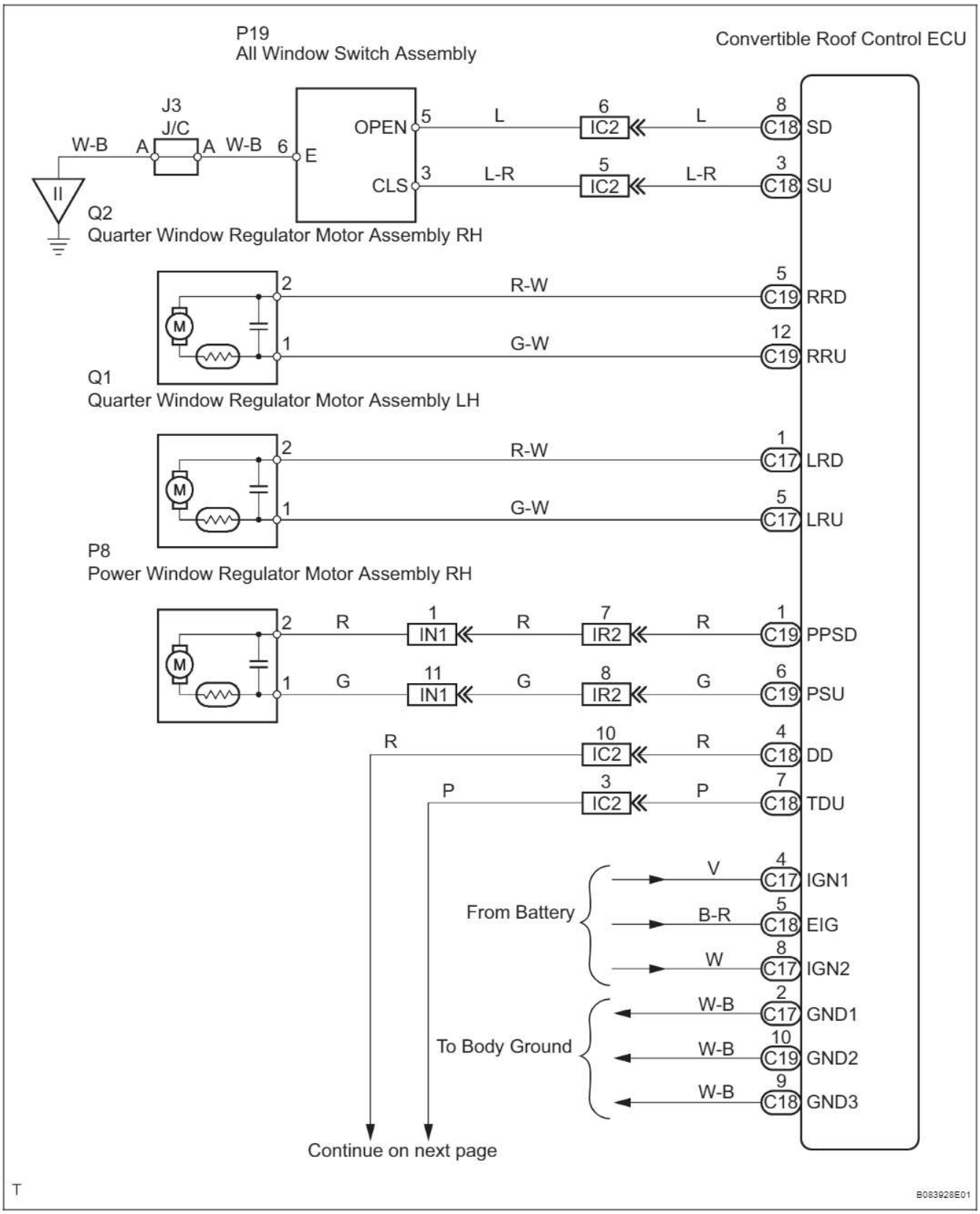
WS

Power Windows do not Operate Using All Window Switch

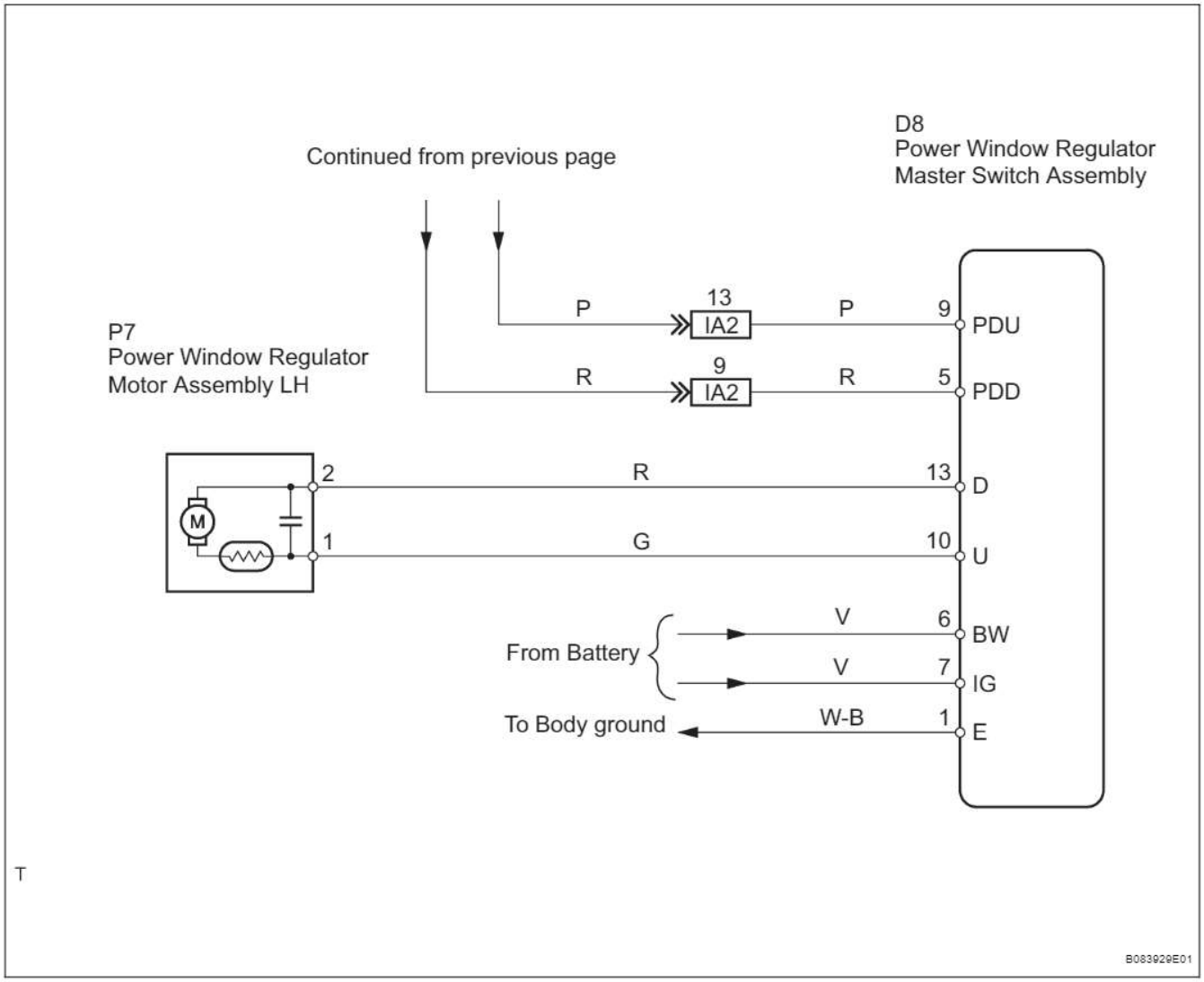
DESCRIPTION

The all window switch can operate all the power windows. The all window switch outputs signals to the convertible roof control ECU which activates the passenger, quarter LH/RH window regulator motors directly. For the driver window regulator motor, the convertible control ECU outputs signals to the master switch, and the master switch activates the driver window regulator motor.

WIRING DIAGRAM



WS



1	CHECK ALL WINDOW SWITCH OPERATION

(a) Check that the power windows operate when the all window switch is operated.

Result

Result	Proceed to
All windows do not operate	A
Only driver side power window does not operate	B

B → Go to step 8

A

2	CHECK POWER WINDOW BASIC OPERATION

(a) Check that the power windows operate when the power window regulator master switch or power window regulator switch is operated.

WS

OK:
Power windows operate normally.

NG → **OTHER PROBLEM**

OK

3	CHECK CONVERTIBLE ROOF CONTROL SWITCH OPERATION

(a) Check that all windows operate when convertible roof switch is operated.
OK:
All windows operate normally.

NG → **OTHER PROBLEM**

OK

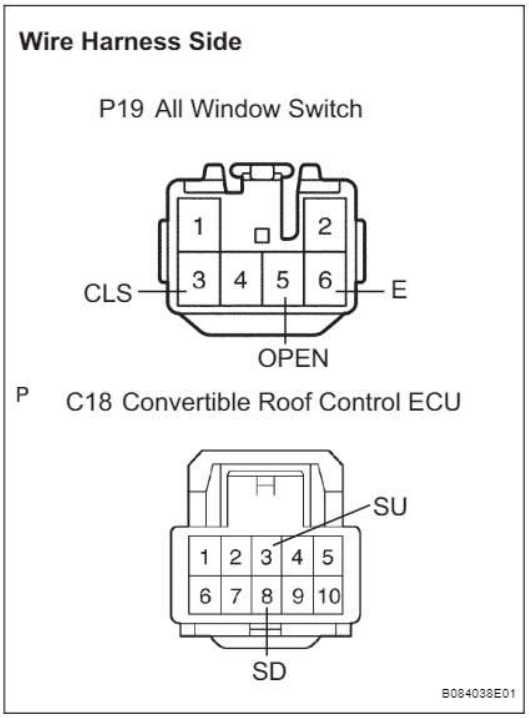
4	INSPECT ALL WINDOW SWITCH

HINT:
See page WS-54

NG → **REPLACE ALL WINDOW SWITCH**

OK

5	CHECK HARNESS AND CONNECTOR (ALL WINDOW SWITCH - ROOF CONTROL ECU)



(a) Disconnect the P19 switch connector.
(b) Disconnect the C18 ECU connector.
(c) Measure the resistance of the wire harness side connectors.
Resistance

Tester Connection	Specified Condition
P19-3 (CLS) - C18-3 (SU)	Below 1 Ω
P19-5 (OPEN) - C18-8 (SD)	Below 1 Ω
P19-6 (E) - Body ground	Below 1 Ω
P19-3 (CLS) or C18-3 (SU) - Body ground	10 kΩ or higher
P19-5 (OPEN) or C18-8 (SD) - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

WS

OK

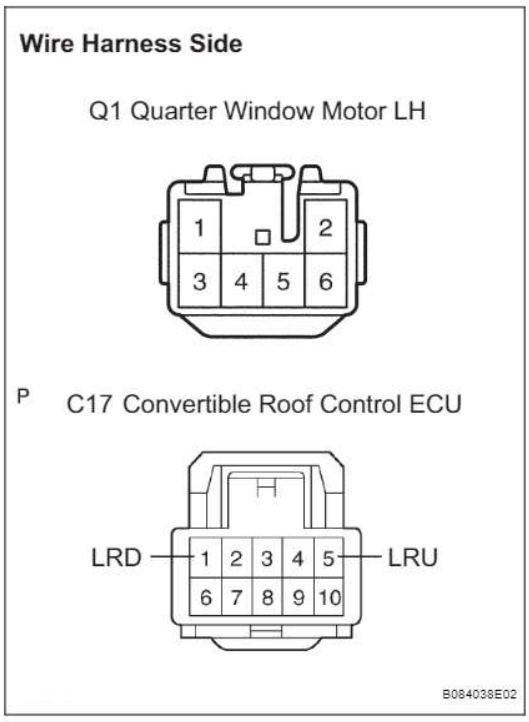
6	INSPECT QUARTER WINDOW MOTOR LH/RH

HINT:
See page WS-55

NG → REPLACE QUARTER WINDOW MOTOR LH/RH

OK

7	CHECK HARNESS AND CONNECTOR (QUARTER WINDOW MOTOR - ROOF CONTROL ECU)

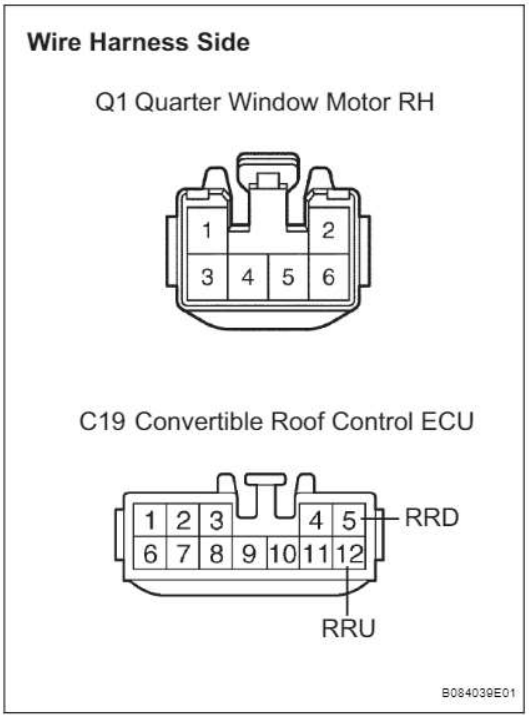


(a) Check the wire harness between the quarter window motor LH and convertible roof control ECU.
(1) Disconnect the Q1 motor connector.
(2) Disconnect the C17 ECU connector.
(3) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
Q1-1 - C17-5 (LRU)	Below 1 Ω
Q1-2 - C17-1 (LRD)	Below 1 Ω
Q1-1 or C17-5 (LRU) - Body ground	10 kΩ or higher
Q1-2 or C17-1 (LRD) - Body ground	10 kΩ or higher

WS



(b) Check the wire harness between the quarter window motor RH and convertible roof control ECU.
(1) Disconnect the Q2 motor connector.
(2) Disconnect the C19 ECU connector.
(3) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
Q2-1 - C19-12 (RRU)	Below 1 Ω
Q2-2 - C19-5 (RRD)	Below 1 Ω
Q2-1 or C19-12 (RRU) - Body ground	10 kΩ or higher
Q2-2 or C19-5 (RRD) - Body ground	10 kΩ or higher

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE CONVERTIBLE ROOF CONTROL ECU

8	INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY

HINT:
See page WS-52

NG → **REPLACE POWER WINDOW REGULATOR MASTER SWITCH**

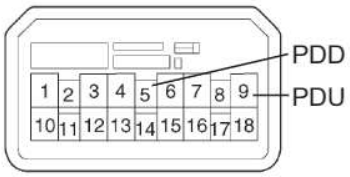
OK

WS

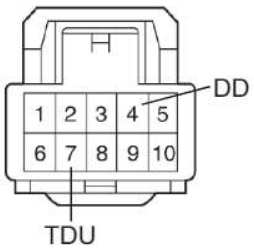
9	CHECK HARNESS AND CONNECTOR (POWER WINDOW MASTER SWITCH - ROOF CONTROL ECU)

Wire Harness Side

D8 Power Window Regulator Master Switch Assembly



C18 Convertible Roof Control ECU



B084040E01

(a) Disconnect the D8 switch connector.
(b) Disconnect the C18 ECU connector.
(c) Measure the resistance of the wire harness side connectors.

Resistance

Tester Connection	Specified Condition
D8-5 (PDD) - C18-4 (DD)	Below 1 Ω
D8-9 (PDU) - C18-7 (TDU)	Below 1 Ω
D8-5 (PDD) or C18-4 (DD) - Body ground	10 kΩ or higher
D8-9 (PDU) or C18-7 (TDU) - Body ground	10 kΩ or higher

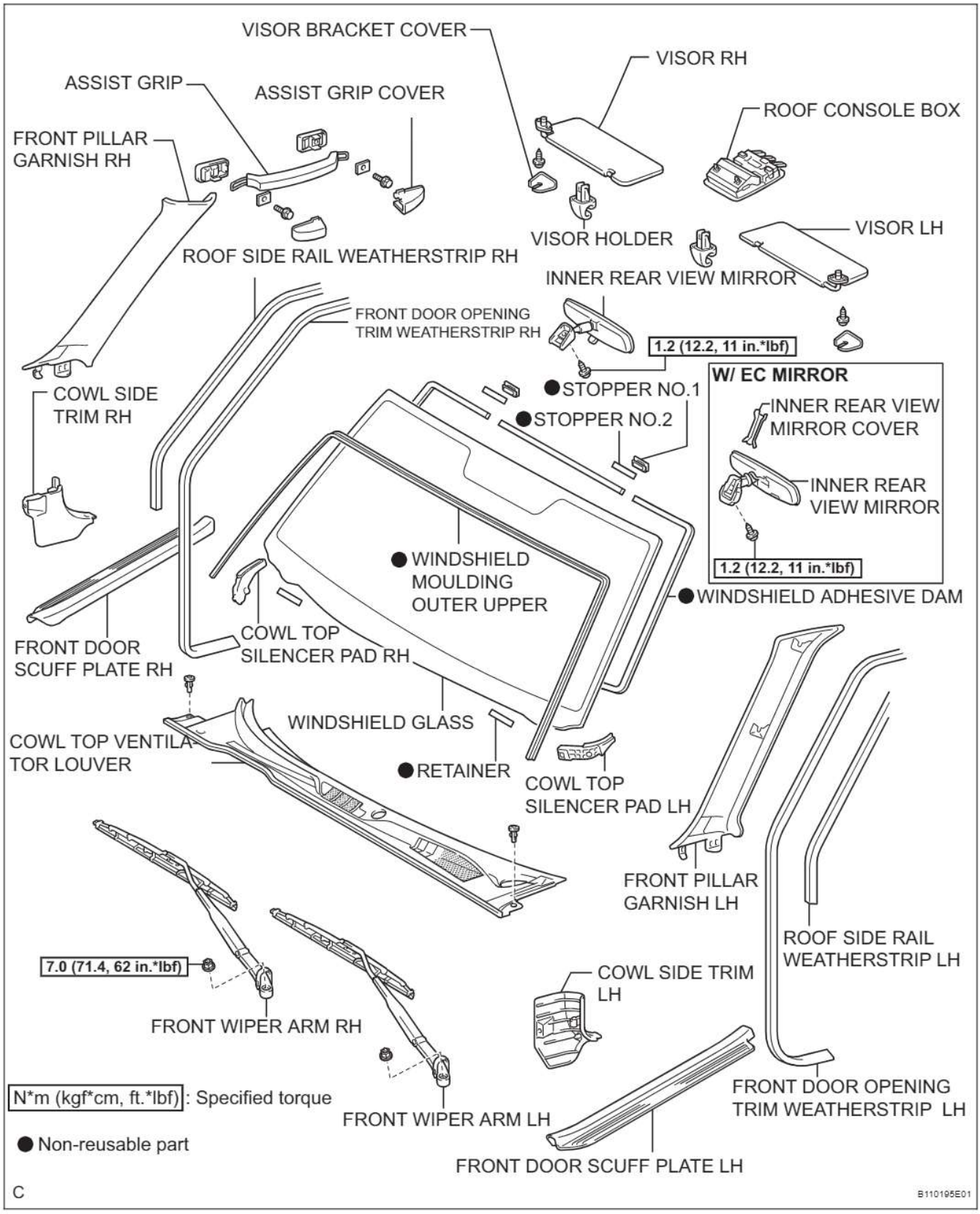
NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

REPLACE CONVERTIBLE ROOF CONTROL ECU

WINDSHIELD GLASS (for Coupe)

COMPONENTS



REMOVAL

HINT:

- The installation procedures are the removal procedure in reverse order. However, only installation procedures requiring additional information are included.
- A bolt without a torque specification is shown in the standard bolt chart (See page SS-1).

1. REMOVE INNER REAR VIEW MIRROR ASSEMBLY

HINT:

See page MI-9

2. REMOVE ROOF HEADLINING ASSEMBLY

HINT:

See page IR-1

(a) Remove the front door scuff plate LH and RH.
(b) Remove the cowl side trim LH and RH.
(c) Remove the roof side rail weatherstrip LH and RH.
(d) Remove the front door opening trim weatherstrip LH and RH.
(e) Remove the front pillar garnish LH and RH.
(f) Remove the visor LH and RH.
(g) Remove the 2 visor holders.
(h) Remove the assist grip.
(i) Remove the roof console box.
(j) Partially remove the roof headlining.

HINT:

It is not necessary to completely remove the roof headlining. Slightly lower the front section of the roof headlining so that the windshield glass can be removed later in step 5.

3. REMOVE COWL TOP VENTILATOR LOUVER SUB-ASSEMBLY (See page WW-7)

4. REMOVE WINDSHIELD MOULDING OUTER UPPER

(a) Using a knife, cut off the moulding as shown in the illustration.

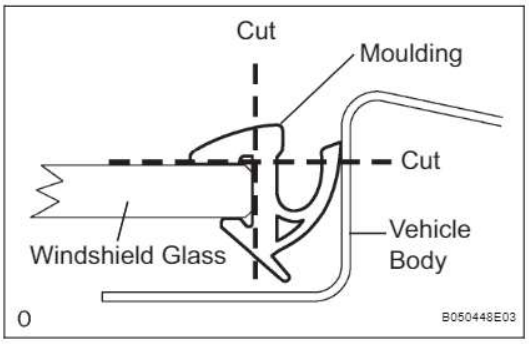
NOTICE:

Be careful not to damage the vehicle body with the knife.

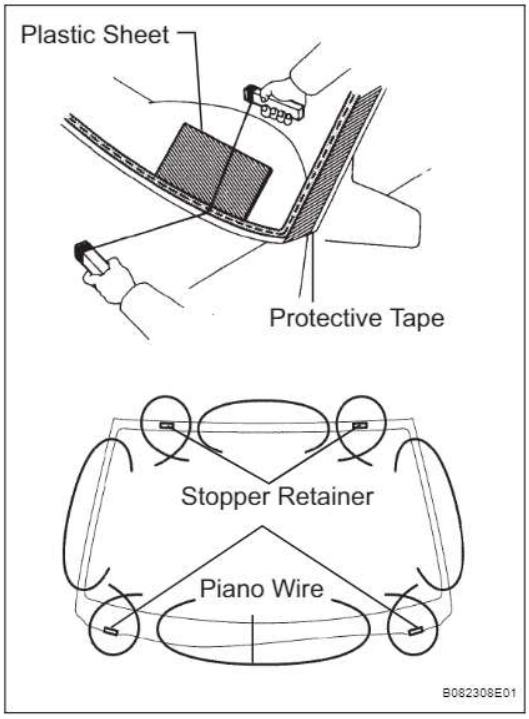
(b) Remove the remaining moulding.

HINT:

Make a partial cut in the moulding. Then pull and remove it by hand.



WS



5. REMOVE WINDSHIELD GLASS

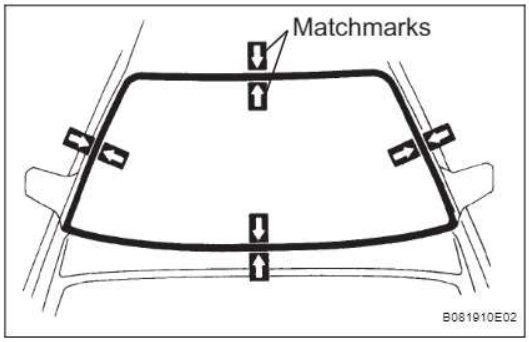
(a) Apply protective tape to the outer surface of the vehicle body to minimize scratches.

(b) From the interior, insert piano wires between the vehicle body and windshield glass as shown in the illustration.

(c) Tie objects that can serve as handles (for example, wooden blocks) to all wire ends.

NOTICE:

- **When separating the windshield glass from the vehicle, be careful not to damage the vehicle's paint or interior/exterior ornaments.**
- **To prevent the instrument panel from being scratched when removing the windshield glass, place a plastic sheet between the piano wire and instrument panel.**



(d) Place matchmarks over the windshield glass and vehicle body on the locations indicated in the illustration.

HINT:

Matchmarks do not need to be placed if the windshield glass is not going to be reused.

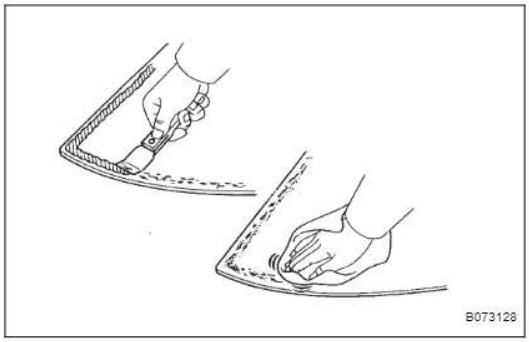
(e) Cut through the adhesive by pulling the piano wire around the windshield glass.

(f) Disengage the stoppers.

(g) Using a suction cup, remove the windshield glass.

NOTICE:

Leave as much adhesive on the vehicle body as possible when removing the windshield glass.



6. CLEAN WINDSHIELD GLASS

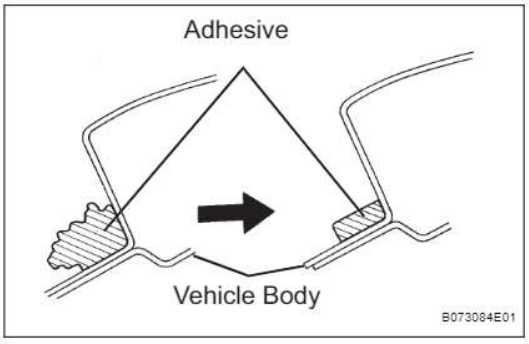
(a) Using a scraper, remove the damaged stoppers, retainers, dams and adhesive sticking to the windshield glass.

(b) Clean the outer edges of the windshield glass with white gasoline.

NOTICE:

- **Do not touch the windshield glass surface after cleaning it.**
- **Even if using new windshield glass, clean the windshield glass with white gasoline.**

WS



7. CLEAN VEHICLE BODY

(a) Clean and shape the contact surface of the vehicle body.

(1) On the contact surface of the vehicle body, use a knife to cut away excess adhesive as shown in the illustration.

HINT:

Leave as much adhesive on the vehicle body as possible.

NOTICE:

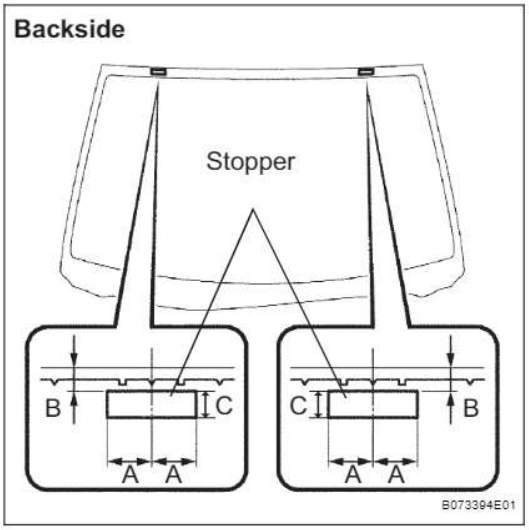
Be careful not to damage the vehicle body.

(2) Clean the contact surface of the vehicle body with cleaner.

HINT:

Even if all the adhesive has been removed, clean the vehicle body.

INSTALLATION



1. INSTALL WINDSHIELD GLASS STOPPER NO.2

(a) Apply Primer G to the installation part of the stoppers.

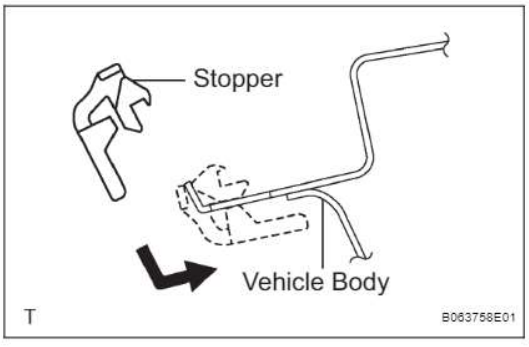
NOTICE:

- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

(b) Install 2 new stoppers onto the windshield glass as shown in the illustration.

Specification

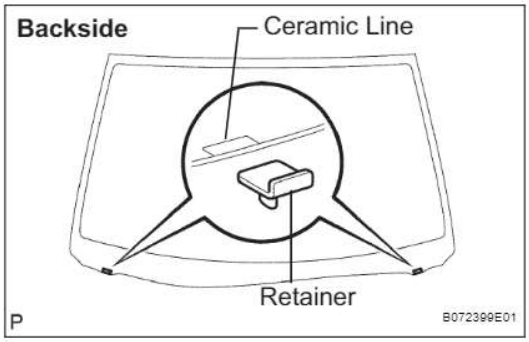
Area	Measurement
A	40.0 mm (1.575 in.)
B	7.0 mm (0.276 in.)
C	12.5 mm (0.492 in.)



2. INSTALL WINDSHIELD GLASS STOPPER NO.1

(a) Install 2 new stoppers to the vehicle body as shown in the illustration.

WS



3. INSTALL WINDSHIELD GLASS RETAINER

(a) Install 2 new retainers onto the windshield glass as shown in the illustration.

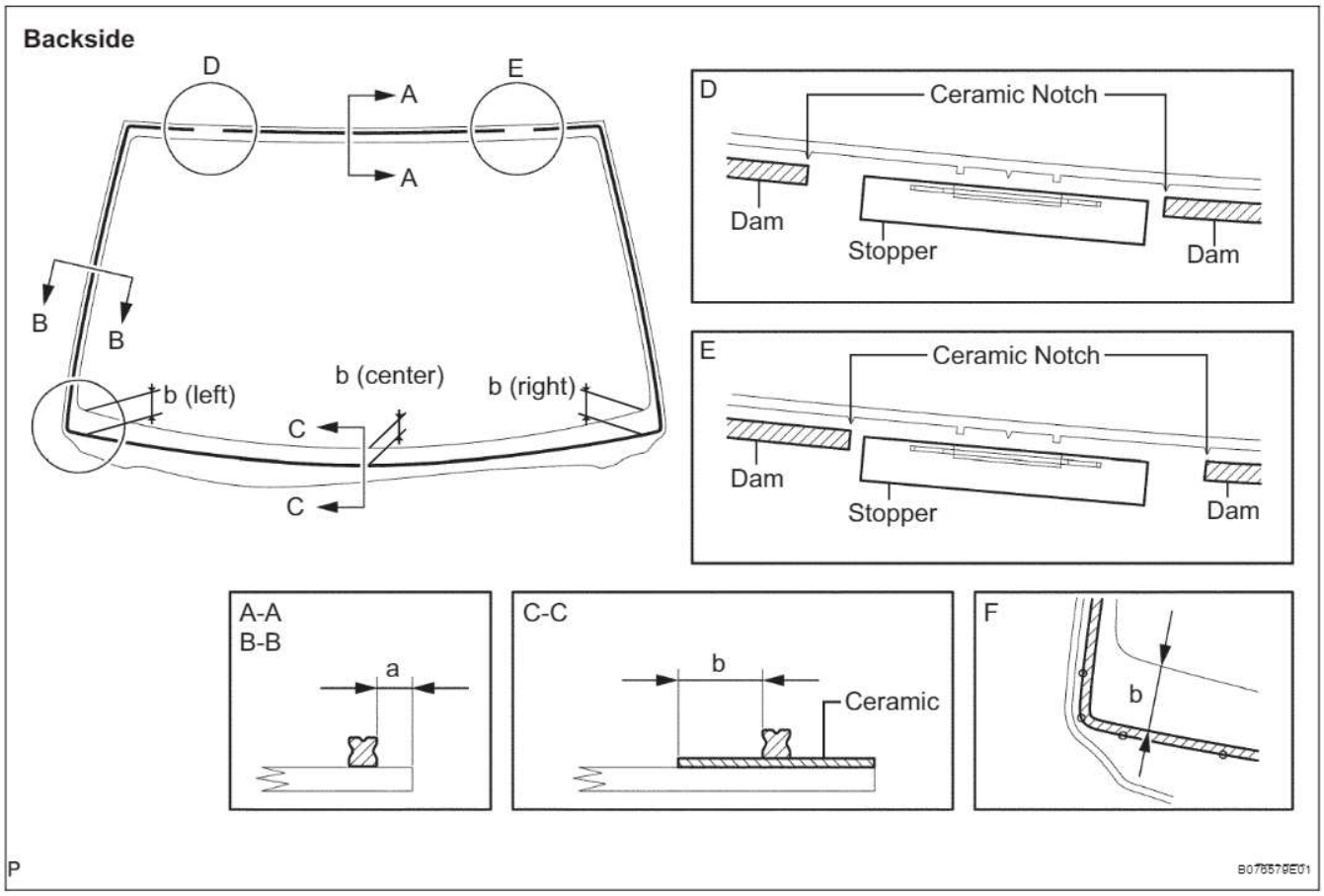
4. INSTALL WINDSHIELD ADHESIVE DAM

(a) Apply Primer G to the installation part of the windshield adhesive dams.

NOTICE:

- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

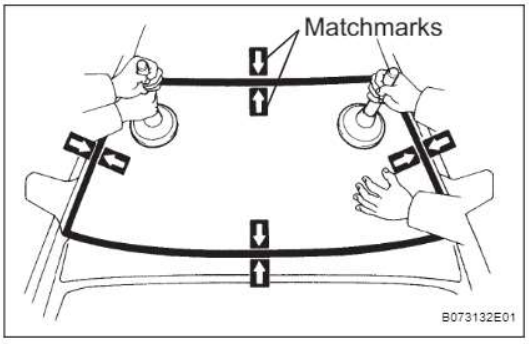
(b) Apply double-sided tape along the outer edge of the entire windshield glass except for the area marked D and E in the illustration.



Specification

Area	Measurement
a	7.0 mm (0.276 in.)
b (left)	60.0 mm (2.362 in.)
b (center)	40.0 mm (1.575 in.)
b (right)	60.0 mm (2.362 in.)

WS



5. INSTALL WINDSHIELD GLASS

(a) Position the windshield glass.

(1) Using a suction cup, place the windshield glass in the correct position.

(2) Check that the entire contact surface of the windshield glass rim is perfectly even.

(3) Place matchmarks over the windshield glass and vehicle body on the locations indicated in the illustration.

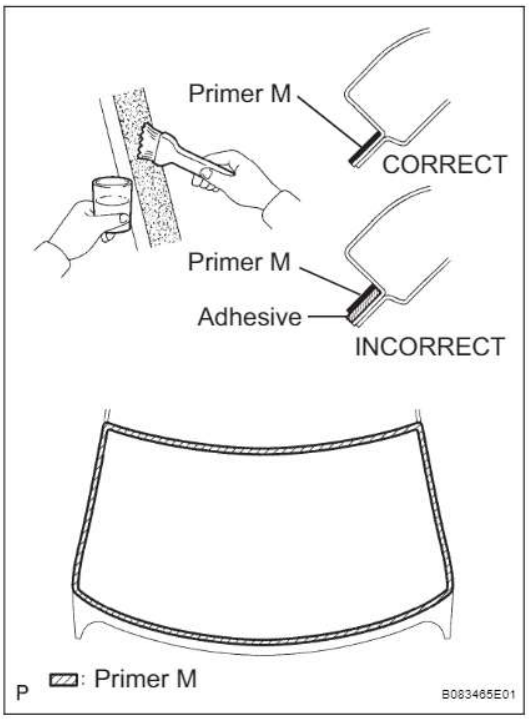
HINT:

- Placing matchmarks is only necessary if the windshield glass being installed is new. If it is reused windshield glass, matchmarks should already be present.
- When reusing the windshield glass, check and correct the matchmarks position.

NOTICE:

Check that the stoppers and retainers are attached to the vehicle body correctly.

(4) Using a suction cup, remove the windshield glass.

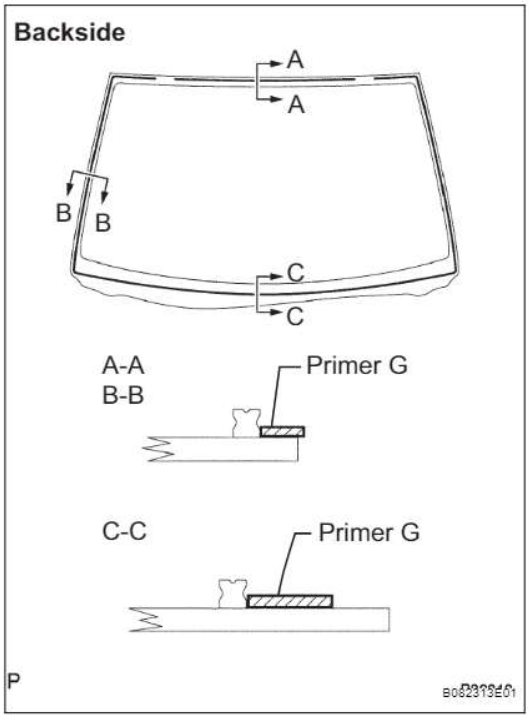


(b) Using a brush, apply Primer M to the exposed part of the vehicle body.

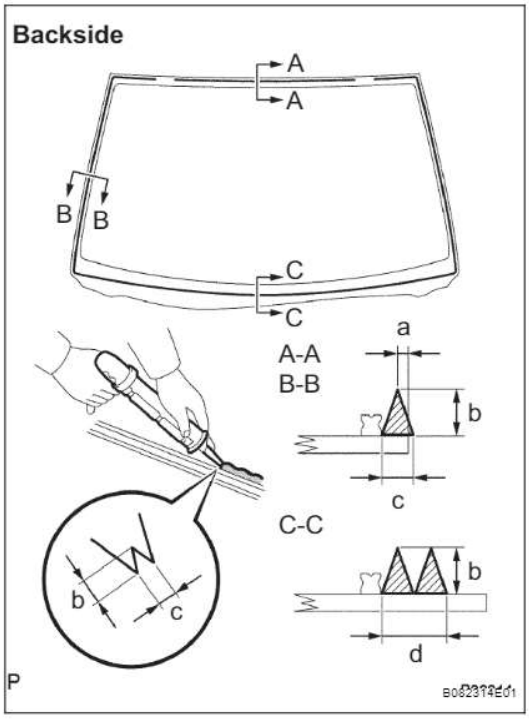
NOTICE:

- **Allow the Primer M to dry for 3 minutes or more.**
- **Do not apply Primer M to the adhesive.**
- **Throw away any leftover Primer M.**
- **Do not apply too much Primer M.**

WS



(c) Using a brush or sponge, apply Primer G to the contact surface of the windshield glass.
HINT:
If Primer G is applied to an area other than that which is specified, wipe off the primer with white gasoline before it dries.
NOTICE:
- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**



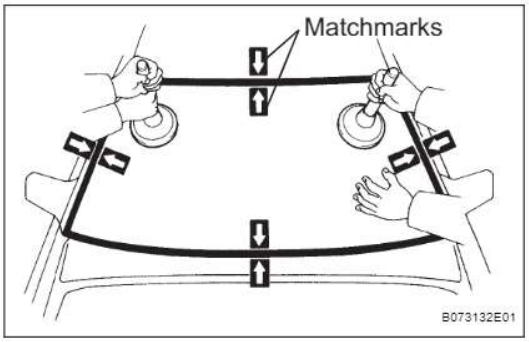
(d) Apply adhesive to the windshield glass.
Adhesive:
Part No. 08850-00801 or equivalent
(1) Cut off the tip of the cartridge nozzle as shown in the illustration.
HINT:
After cutting off the tip, use all adhesive within the time written in the table below.
Usage timeframe

Temperature	Usage Timeframe
35°C (95°F)	15 minutes
20°C (68°F)	1 hour 40 minutes
5°C (41°F)	8 hours

(2) Load the sealer gun with the cartridge.
(3) Apply adhesive to the windshield glass as shown in the illustration.
Specification

Area	Measurement
a	3.0 mm (0.118 in.)
b	12.0 mm (0.472 in.)
c	8.0 mm (0.315 in.)
d	16.0 mm (0.630 in.)

WS



(e) Install the windshield glass to the vehicle body.
(1) Using a suction cup, position the windshield glass so that the matchmarks are aligned. Press it in gently along the rim.
(2) Lightly press the front surface of the windshield glass to ensure that the windshield glass is securely fit to the vehicle body.
NOTICE:
- **Check that the stoppers and retainers are attached to the vehicle body correctly.**
- **Check that the vehicle body and windshield glass have a small gap between them.**

(3) Hold the windshield glass in place securely with protective tape or equivalent until the adhesive hardens.

6. INSTALL WINDSHIELD MOULDING OUTER UPPER

(a) Using a brush or sponge, apply Primer G to the contact surface of the windshield glass.
NOTICE:
- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

(b) Install new windshield moulding outer upper before the adhesive dries.
NOTICE:
Do not drive the vehicle for the amount of time written in the table below.
Minimum time

Temperature	Minimum time prior to driving vehicle
35°C (95°F)	1 hour 30 minutes
20°C (68°F)	5 hours
5°C (41°F)	24 hours

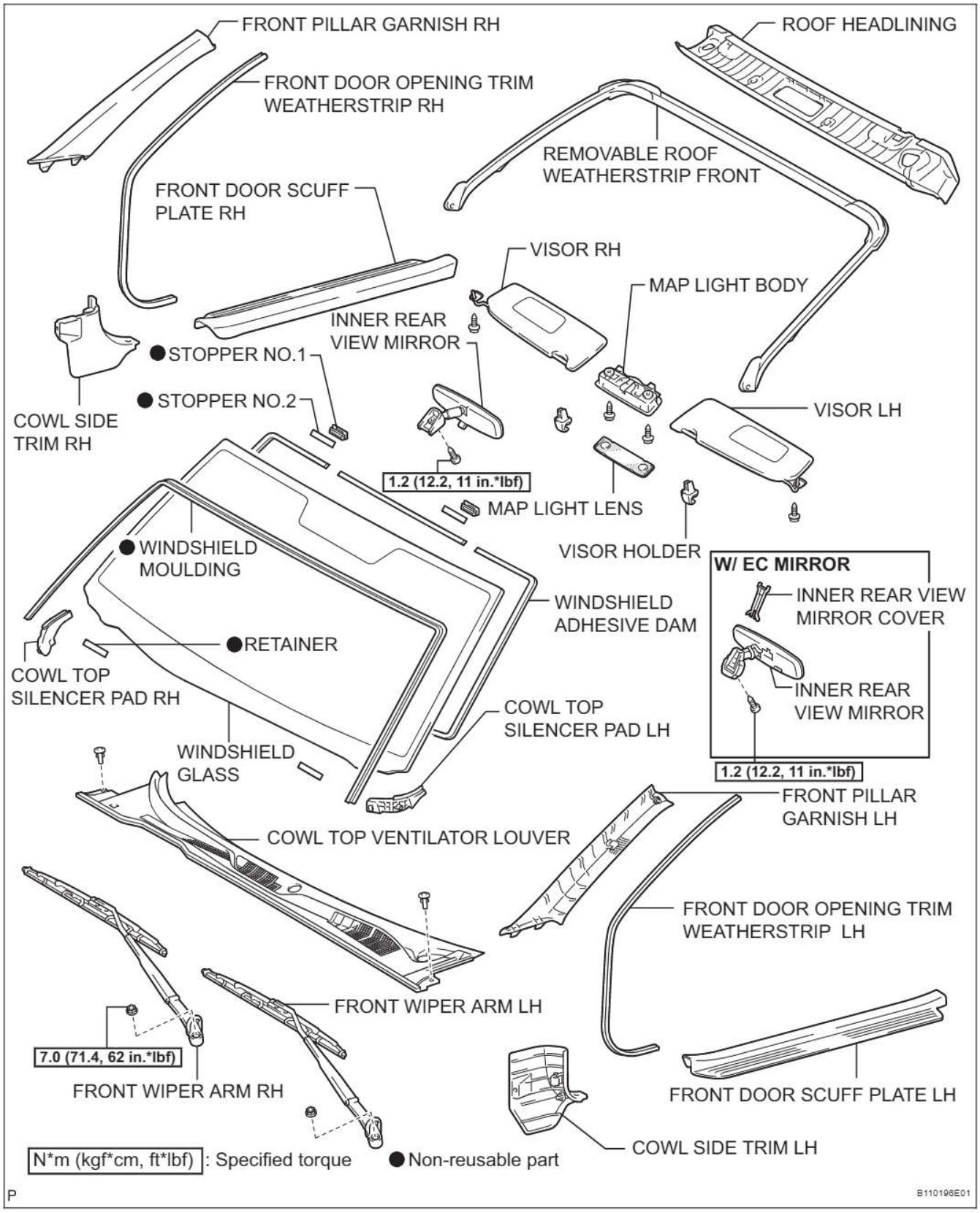
7. CHECK FOR LEAKS AND REPAIR

(a) Conduct a leak test after the adhesive has completely hardened.
(b) Seal any leaks with auto glass sealer.

WS

WINDSHIELD GLASS (for Convertible)

COMPONENTS



REMOVAL

HINT:

- The installation procedures are the removal procedures in reverse order. However, only installation procedures requiring additional information are included.
- A bolt without a torque specification is shown in the standard bolt chart (See page SS-1).

1. REMOVE INNER REAR VIEW MIRROR ASSEMBLY

HINT:

See page MI-9

2. REMOVE ROOF HEADLINING ASSEMBLY

HINT:

See page IR-9

(a) Remove the front door scuff plate LH and RH.
(b) Remove the cowl side trim LH and RH.
(c) Remove the front door opening trim weatherstrip LH and RH.
(d) Remove the front pillar garnish LH and RH.
(e) Remove the visor LH and RH.
(f) Remove the 2 visor holders.
(g) Remove the map light lens.
(h) Remove the map light body.
(i) Remove the roof headlining.

3. REMOVE REMOVABLE ROOF WEATHERSTRIP FRONT

4. REMOVE WINDSHIELD MOULDING OUTER UPPER

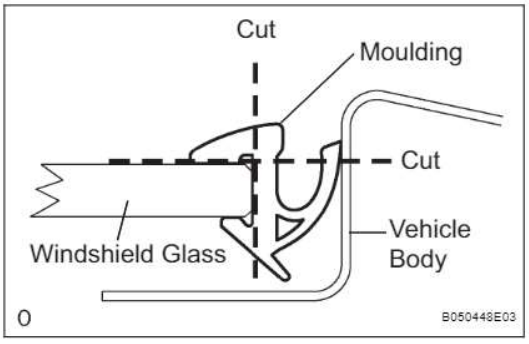
(a) Using a knife, cut off the moulding as shown in the illustration.

NOTICE:
Be careful not to damage the vehicle body with the knife.

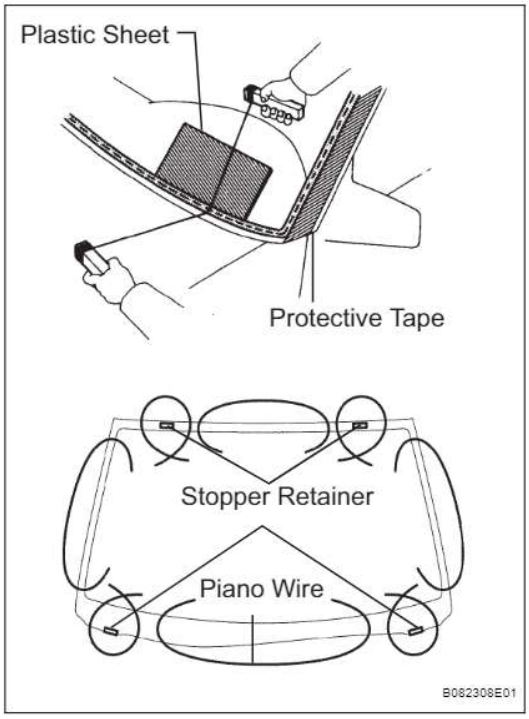
(b) Remove the remaining moulding.

HINT:

Make a partial cut in the moulding. Then pull and remove it by hand.



WS



5. REMOVE WINDSHIELD GLASS

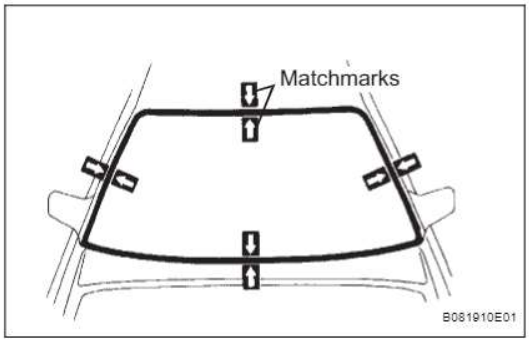
(a) Apply protective tape to the outer surface of the vehicle body to minimize scratches.

(b) From the interior, insert piano wires between the vehicle body and windshield glass as shown in the illustration.

(c) Tie objects that can serve as handles (for example, wooden blocks) to all wire ends.

NOTICE:

- **When separating the windshield glass from the vehicle, be careful not to damage the vehicle's paint or interior/exterior ornaments.**
- **To prevent the instrument panel from being scratched when removing the windshield glass, place a plastic sheet between the piano wire and instrument panel.**



(d) Place matchmarks over the windshield glass and vehicle body on the locations indicated in the illustration.

HINT:

Matchmarks do not need to be placed if the windshield glass is not going to be reused.

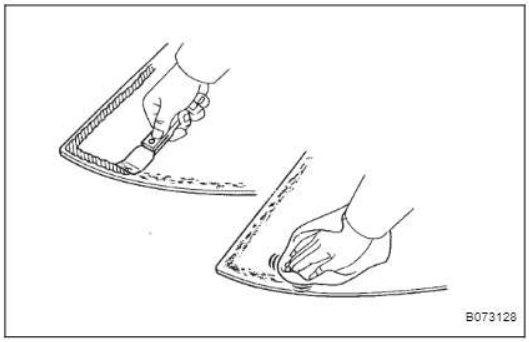
(e) Cut through the adhesive by pulling the piano wire around the windshield glass.

(f) Disengage the stoppers.

(g) Using a suction cup, remove the windshield glass.

NOTICE:

Leave as much adhesive on the vehicle body as possible when removing the windshield glass.



6. CLEAN WINDSHIELD GLASS

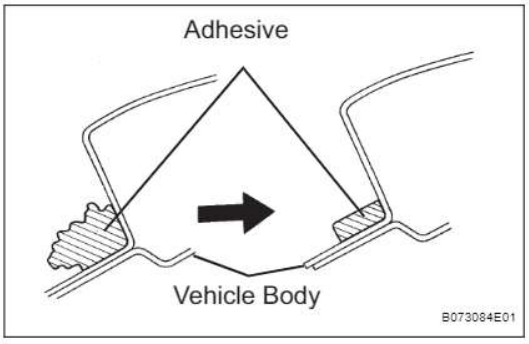
(a) Using a scraper, remove the damaged stopper, retainers, dams and adhesive sticking to the windshield glass.

(b) Clean the outer edges of the windshield glass with white gasoline.

NOTICE:

- **Do not touch the windshield glass surface after cleaning it.**
- **Even if using new windshield glass, clean the windshield glass with white gasoline.**

WS



7. CLEAN VEHICLE BODY

(a) Clean and shape the contact surface of the vehicle body.

(1) On the contact surface of the vehicle body, use a knife to cut away excess adhesive as shown in the illustration.

HINT:

Leave as much adhesive on the vehicle body as possible.

NOTICE:

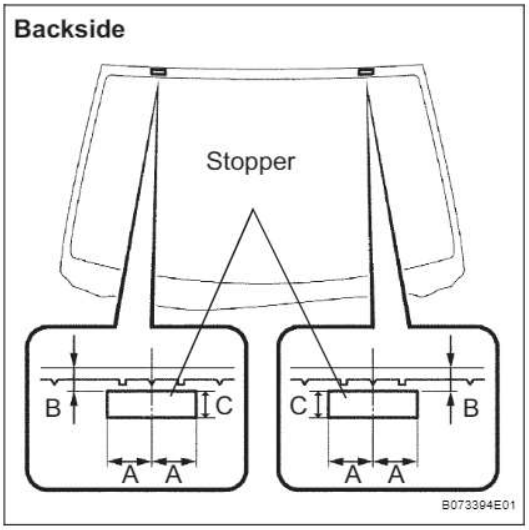
Be careful not to damage the vehicle body.

(2) Clean the contact surface of the vehicle body with cleaner.

HINT:

Even if all the adhesive has been removed, clean the vehicle body.

INSPECTION



1. INSTALL WINDSHIELD GLASS STOPPER NO.2

(a) Apply Primer G to the installation part of the stoppers.

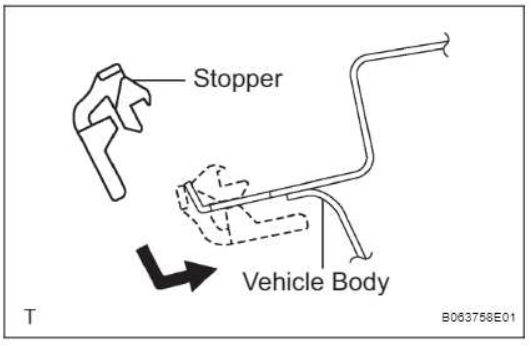
NOTICE:

- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

(b) Install 2 new stoppers onto the windshield glass as shown in the illustration.

Specification

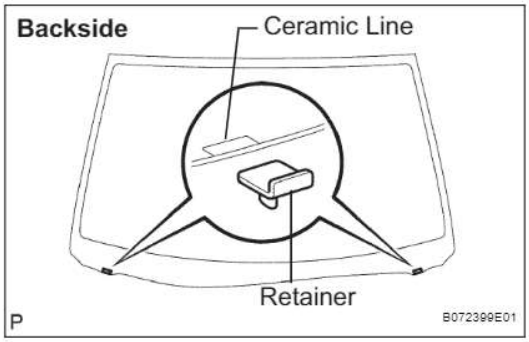
Area	Measurement
A	40.0 mm (1.575 in.)
B	7.0 mm (0.276 in.)
C	7.0 mm (0.276 in.)



2. INSTALL WINDSHIELD GLASS STOPPER NO.1

(a) Install 2 new stoppers to the vehicle body as shown in the illustration.

WS



3. INSTALL WINDSHIELD GLASS RETAINER

(a) Install 2 new retainers onto the windshield glass as shown in the illustration.

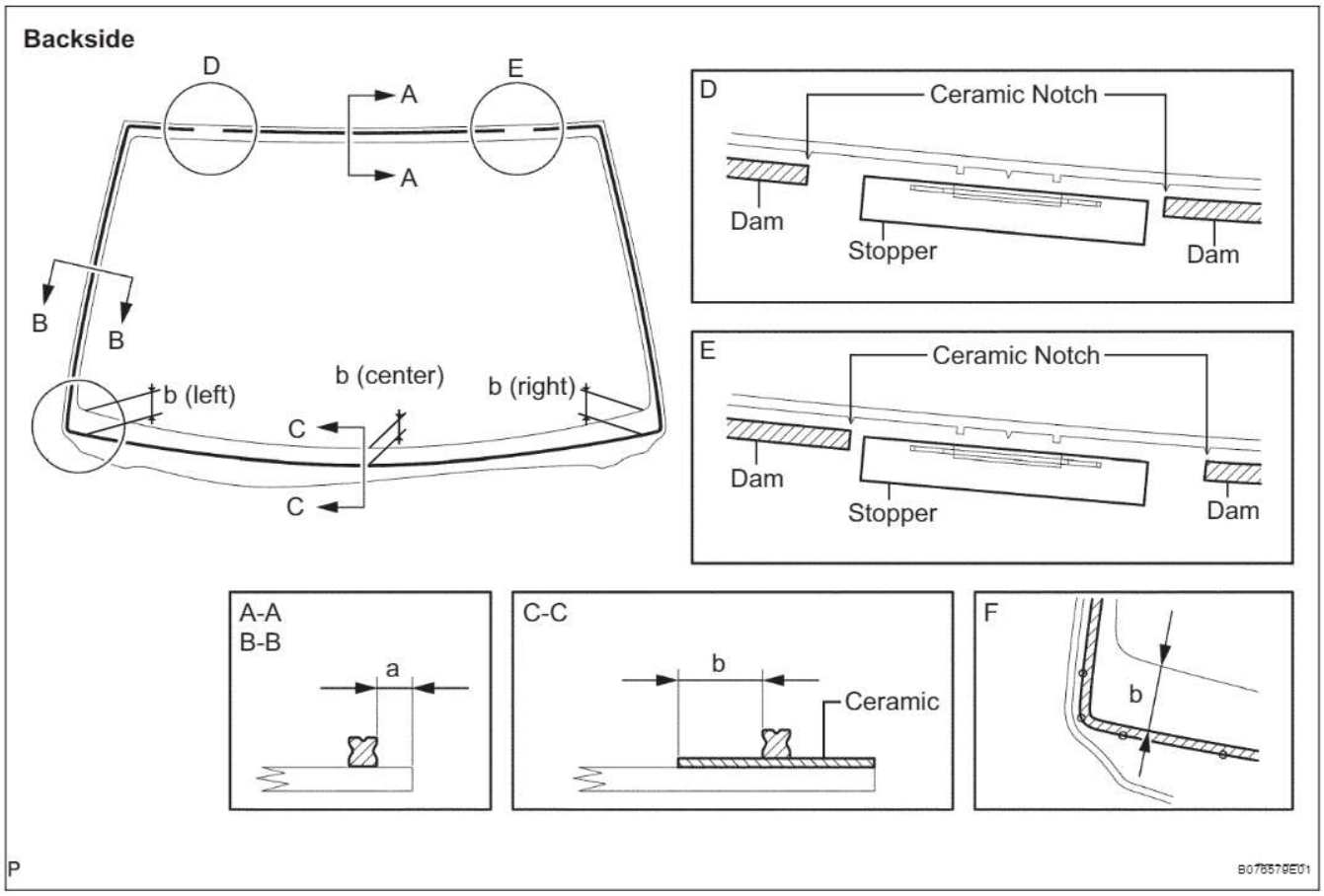
4. INSTALL WINDSHIELD ADHESIVE DAM

(a) Apply Primer G to the installation part of the windshield adhesive dams.

NOTICE:

- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

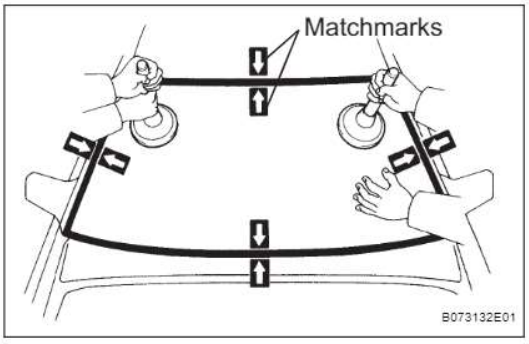
(b) Apply double-sided tape along the outer edge of the entire windshield glass except for the area marked D and E in the illustration.



Specification

Area	Measurement
a	7.0 mm (0.276 in.)
b (left)	60.0 mm (2.362 in.)
b (center)	40.0 mm (1.575 in.)
b (right)	60.0 mm (2.362 in.)

WS



5. INSTALL WINDSHIELD GLASS

(a) Position the windshield glass.

(1) Using a suction cup, place the windshield glass in the correct position.

(2) Check that the entire contact surface of the windshield glass rim is perfectly even.

(3) Place matchmarks over the windshield glass and vehicle body on the locations indicated in the illustration.

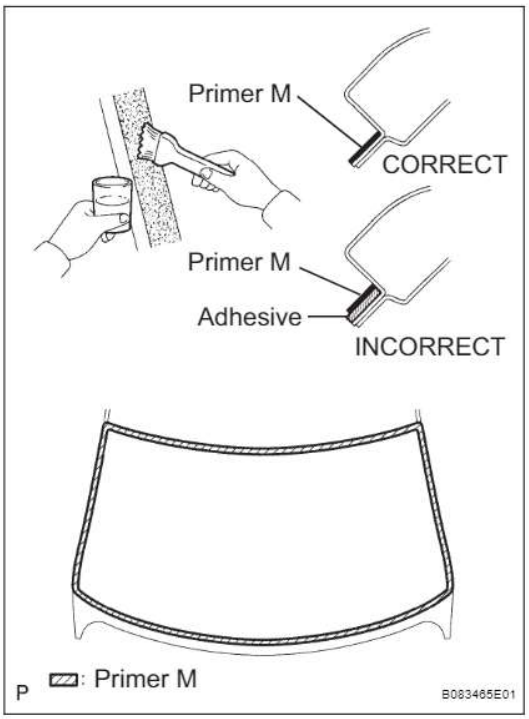
HINT:

- Placing matchmarks is only necessary if the windshield glass being installed is new. If it is reused windshield glass, matchmarks should already be present.
- When reusing the windshield glass, check and correct the matchmarks position.

NOTICE:

Check that the stoppers and retainers are attached to the vehicle body correctly.

(4) Using a suction cup, remove the windshield glass.

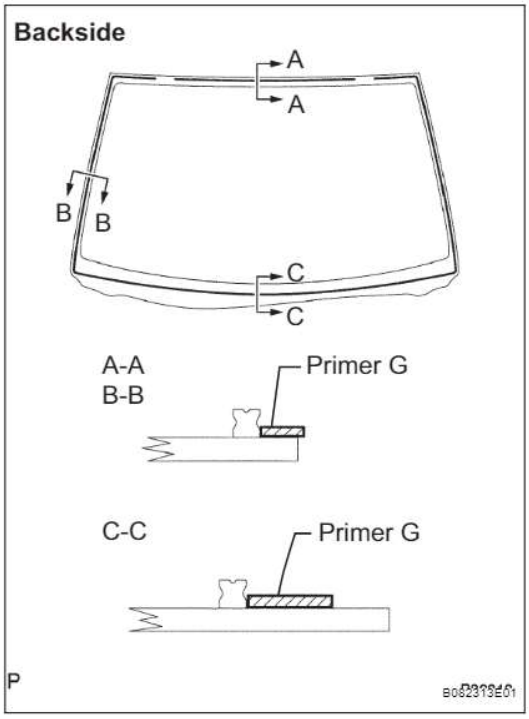


(b) Using a brush, apply Primer M to the exposed part of the vehicle body.

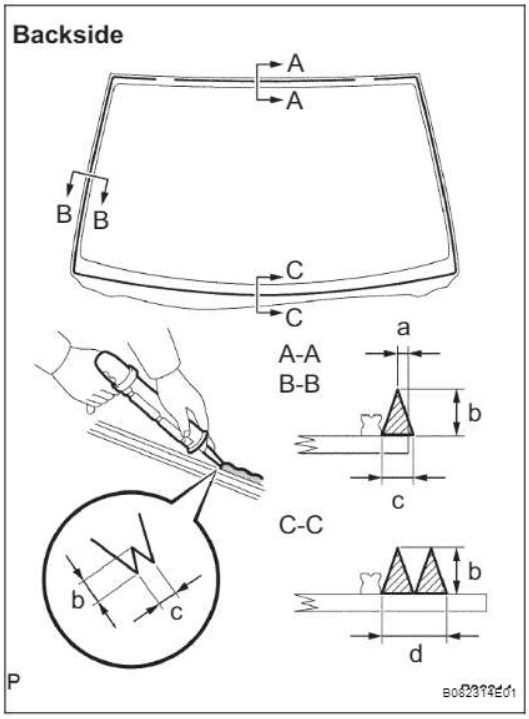
NOTICE:

- **Allow the Primer M to dry for 3 minutes or more.**
- **Do not apply Primer M to the adhesive.**
- **Throw away any leftover Primer M.**
- **Do not apply too much Primer M.**

WS



(c) Using a brush or sponge, apply Primer G to the contact surface of the windshield glass.
HINT:
If Primer G is applied to an area other than that which is specified, wipe off the primer with white gasoline before it dries.
NOTICE:
- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**



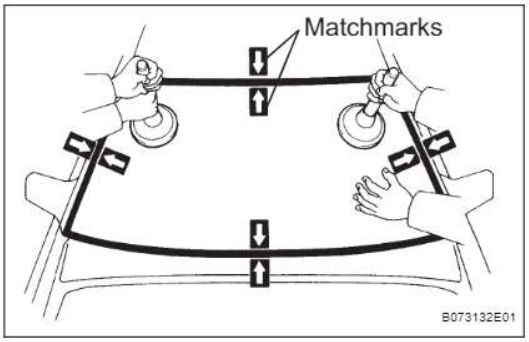
(d) Apply adhesive to the windshield glass.
Adhesive:
Part No. 08850-00801 or equivalent
(1) Cut off the tip of the cartridge nozzle as shown in the illustration.
HINT:
After cutting off the tip, use all adhesive within the time written in the table below.
Usage timeframe

Temperature	Usage Timeframe
35°C (95°F)	15 minutes
20°C (68°F)	1 hour 40 minutes
5°C (41°F)	8 hours

(2) Load the sealer gun with the cartridge.
(3) Apply adhesive to the windshield glass as shown in the illustration.
Specification

Area	Measurement
a	3.0 mm (0.118 in.)
b	12.0 mm (0.472 in.)
c	8.0 mm (0.315 in.)
d	16.0 mm (0.630 in.)

WS



(e) Install the windshield glass to the vehicle body.
(1) Using a suction cup, position the windshield glass so that the matchmarks are aligned. Press it in gently along the rim.
(2) Lightly press the front surface of the windshield glass to ensure that the windshield glass is securely fit to the vehicle body.
NOTICE:
- **Check that the stoppers and retainers are attached to the vehicle body correctly.**
- **Check that the vehicle body and windshield glass have a small gap between them.**

(3) Hold the windshield glass in place securely with protective tape or equivalent until the adhesive hardens.

6. INSTALL WINDSHIELD MOULDING OUTER UPPER

(a) Using a brush or sponge, apply Primer G to the contact surface of the windshield glass.
NOTICE:
- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

(b) Install new windshield moulding outer upper before the adhesive dries.
NOTICE:
Do not drive the vehicle for the amount of time written in the table below.
Minimum time

Temperature	Minimum time prior to driving vehicle
35°C (95°F)	1 hour 30 minutes
20°C (68°F)	5 hours
5°C (41°F)	24 hours

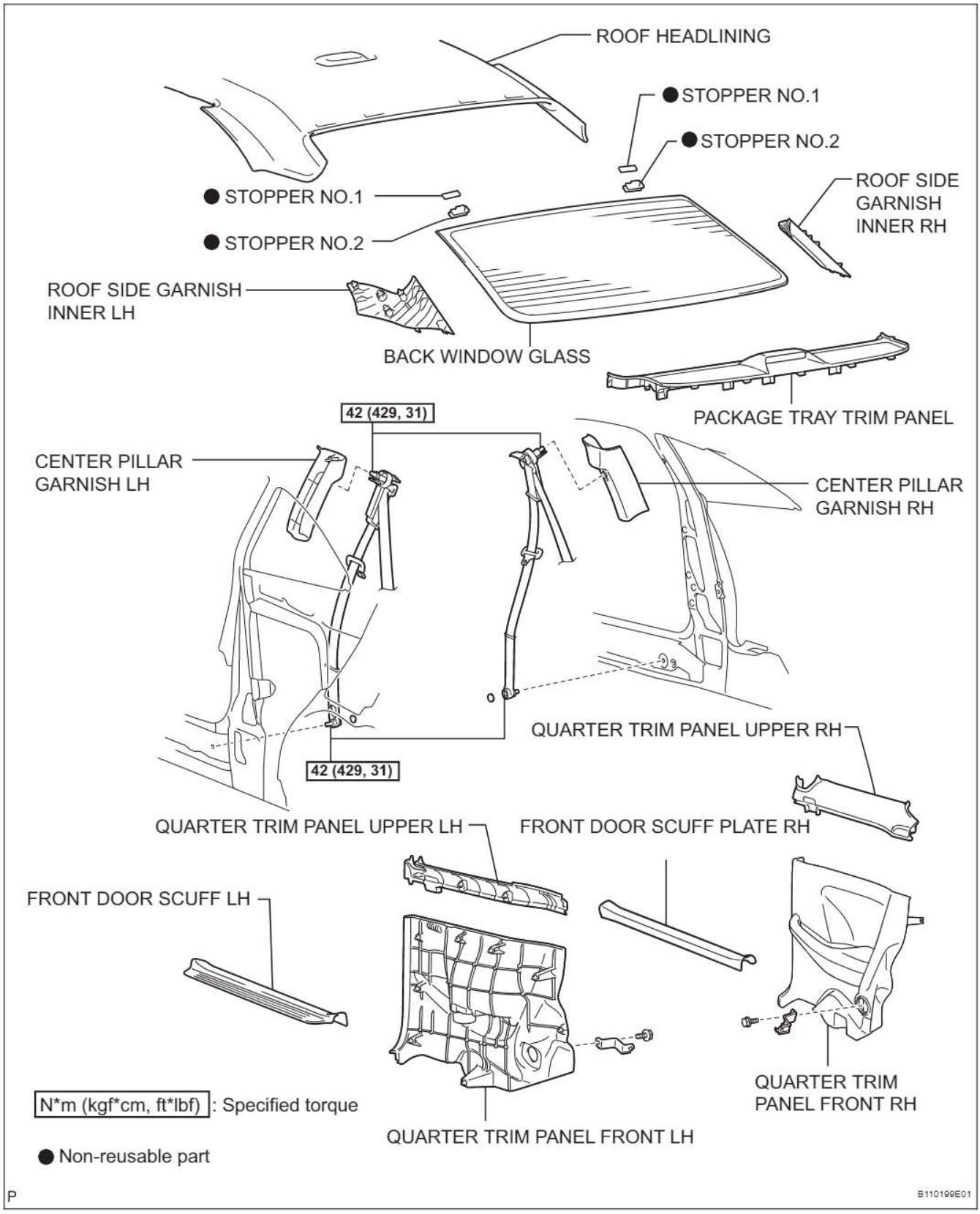
7. CHECK FOR LEAKS AND REPAIR

(a) Conduct a leak test after the adhesive has completely hardened.
(b) Seal any leaks with auto glass sealer.

WS

BACK WINDOW GLASS

COMPONENTS



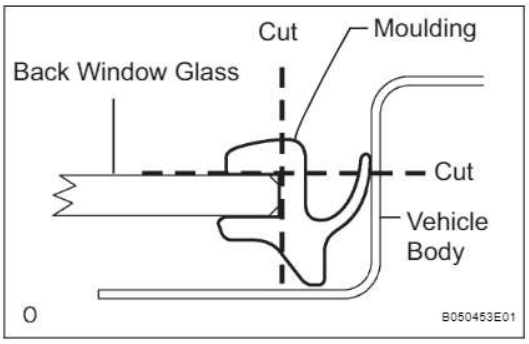
WS

REMOVAL

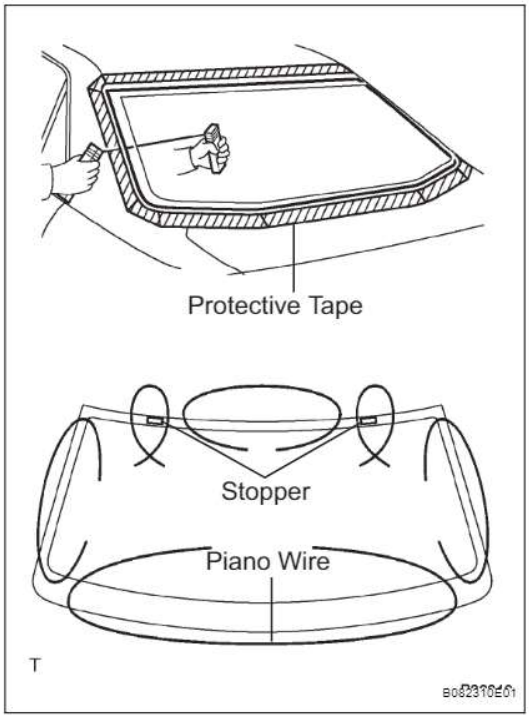
HINT:

- The installation procedures are the removal procedures in reverse order. However, only installation procedures requiring additional information are included.
- A bolt without a torque specification is shown in the standard bolt chart (See page SS-1).

1. **REMOVE REAR SEAT CUSHION ASSEMBLY**
   HINT:
   See page SE-40
2. **REMOVE REAR SEATBACK ASSEMBLY LH**
   HINT:
   See page SE-40
3. **REMOVE REAR SEATBACK ASSEMBLY RH**
   HINT:
   See page SE-40
4. **REMOVE ROOF HEADLINING ASSEMBLY**
   HINT:
   See page IR-1
   (a) Remove the seatback hinge LH and RH.
   (b) Remove the front door scuff plate LH and RH.
   (c) Remove the quarter trim panel front LH and RH.
   (d) Remove the center pillar garnish LH and RH.
   (e) Remove the roof side garnish inner LH and RH.
   (f) Remove the quarter trim panel upper LH and RH.
   (g) Partially remove the roof headlining.
   HINT:
   It is not necessary to completely remove the roof headlining. Slightly lower the rear section of the roof headlining so that the back window glass can be removed later in step 7.
5. **REMOVE PACKAGE TRAY TRIM PANEL ASSEMBLY**
6. **REMOVE BACK WINDOW MOULDING OUTSIDE**
   (a) Using a knife, cut off the moulding as shown in the illustration.
   NOTICE:
   Be careful not to damage the vehicle body with the knife.
   (b) Remove the remaining moulding.
   HINT:
   Make a partial cut in the moulding. Then, pull and remove it by hand.



WS



7. REMOVE BACK WINDOW GLASS

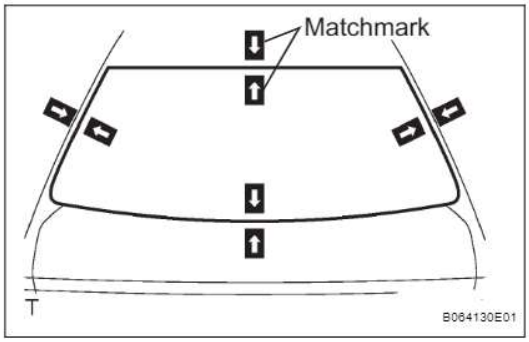
(a) Apply protective tape to the outer surface of the vehicle body to minimize scratches.

(b) From the interior, insert piano wires between the vehicle body and back window glass as shown in the illustration.

(c) Tie objects that can serve as handles (for example, wooden blocks) to all wire ends.

NOTICE:

When separating the back window glass from the vehicle, be careful not to damage the vehicle's paint or interior/exterior ornaments.



(d) Place matchmarks over the back window glass and vehicle body on the locations indicated in the illustration.

HINT:

Matchmarks do not need to be placed if the back window glass is not going to be reused.

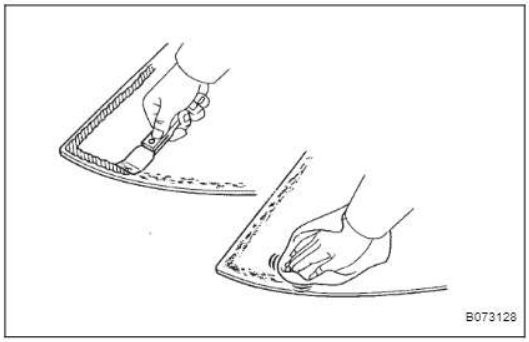
(e) Cut through the adhesive by pulling the piano wire around the back window glass.

(f) Disengage the stoppers.

(g) Using a suction cup, remove the back window glass.

NOTICE:

Leave as much adhesive on the vehicle body as possible when removing the back window glass.



8. CLEAN BACK WINDOW GLASS

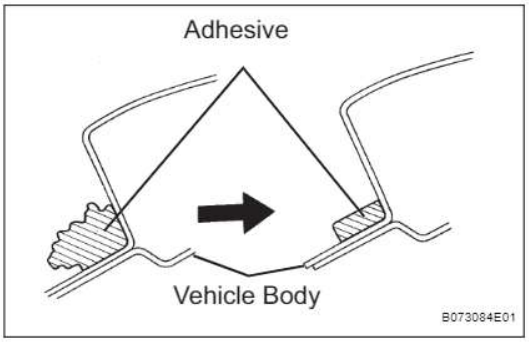
(a) Using a scraper, remove the damaged stoppers and adhesive sticking to the back window glass.

(b) Clean the outer edges of the back window glass with white gasoline.

NOTICE:

- **Do not touch the back window glass surface after cleaning it.**
- **Even if using new back window glass, clean the back window glass with white gasoline.**

WS



9. CLEAN VEHICLE BODY

(a) Clean and shape the contact surface of the vehicle body.

(1) On the contact surface of the vehicle body, use a knife to cut away excess adhesive as shown in the illustration.

HINT:

Leave as much adhesive on the vehicle body as possible.

NOTICE:

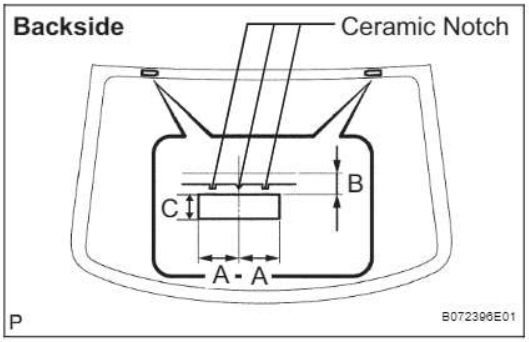
Be careful not to damage the vehicle body.

(2) Clean the contact surface of the vehicle body with cleaner.

HINT:

Even if all the adhesive has been removed, clean the vehicle body.

INSTALLATION



1. INSTALL BACK WINDOW GLASS STOPPER NO.2

(a) Apply Primer G to the installation part of the stoppers.

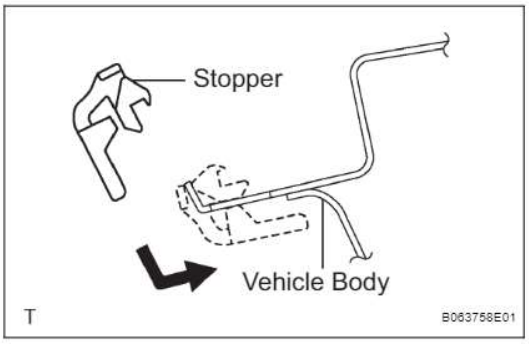
NOTICE:

- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

(b) Install 2 new stoppers onto the back window glass as shown in the illustration.

Specification

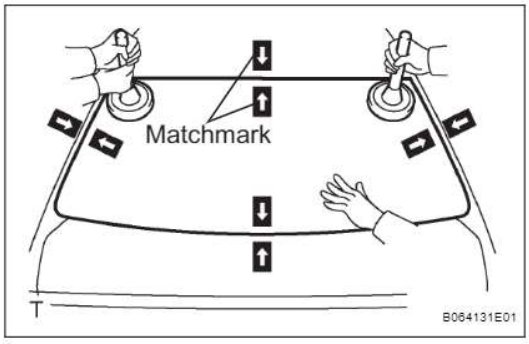
Area	Measurement
A	40.0 mm (1.575 in.)
B	11.0 mm (0.433 in.)
C	12.5 mm (0.492 in.)



2. INSTALL BACK WINDOW GLASS STOPPER NO.1

(a) Install 2 new stoppers to the vehicle body as shown in the illustration.

WS



3. INSTALL BACK WINDOW GLASS

(a) Position the back window glass.

(1) Using a suction cup, place the back window glass in the correct position.

(2) Check that the entire contact surface of the back window glass rim is perfectly even.

(3) Place matchmarks over the back window glass and vehicle body on the locations indicated in the illustration.

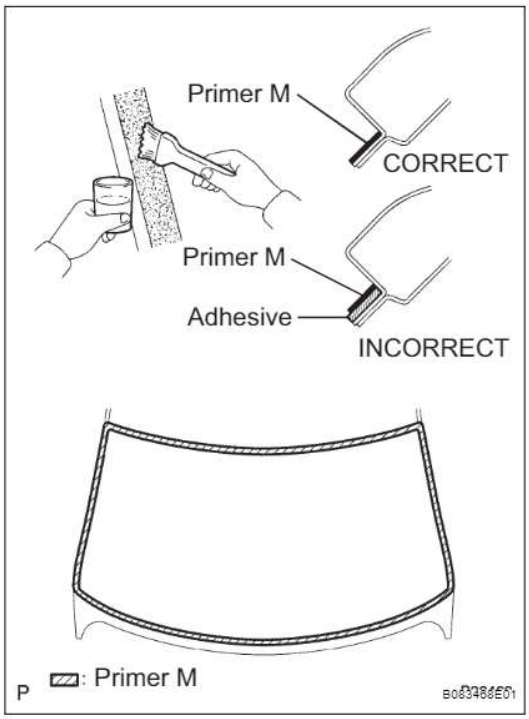
HINT:

- Placing matchmarks is only necessary if the back window glass being installed is new. If it is reused back window glass, matchmarks should already be present.
- When reusing the back window glass, check and correct the matchmark position.

NOTICE:

Check that the stoppers are attached to the vehicle body correctly.

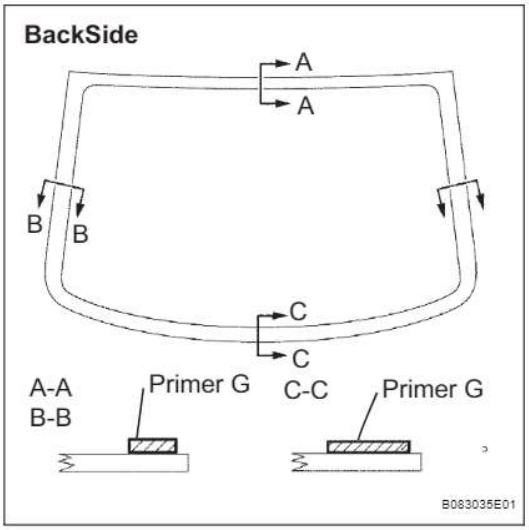
(4) Using a suction cup, remove the back window glass.



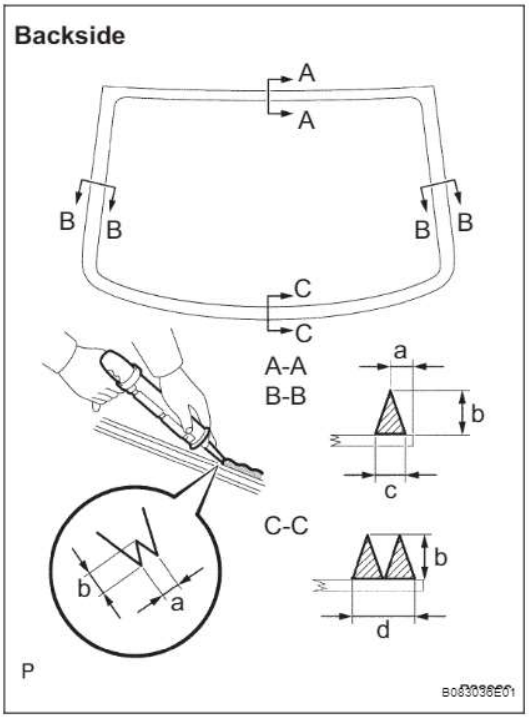
(b) Using a brush, apply Primer M to the exposed part of the vehicle body.

NOTICE:

- **Allow the Primer M to dry for 3 minutes or more.**
- **Do not apply Primer M to the adhesive.**
- **Throw away any leftover Primer M.**
- **Do not apply too much Primer M.**



(c) Using a brush or sponge, apply Primer G to the contact surface of the back window glass.
HINT:
If Primer G is applied to an area other than that which is specified, wipe off the primer with white gasoline before it dries.
NOTICE:
- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

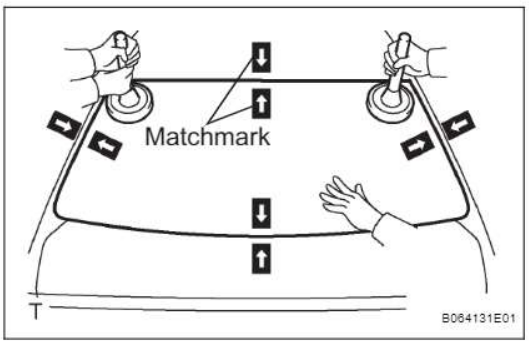


(d) Apply adhesive to the back window glass.
Adhesive:
Part No. 08850-00801 or equivalent
(1) Cut off the tip of the cartridge nozzle.
HINT:
After cutting off the tip, use all adhesive within the time written in the table below.
Usage timeframe

Temperature	Usage Timeframe
35°C (95°F)	15 minutes
20°C (68°F)	1 hour 40 minutes
5°C (41°F)	8 hours

(2) Load the sealer gun with the cartridge.
(3) Apply adhesive to the back window glass as shown in the illustration.
Specification

Area	Measurement
a	6.5 mm (0.256 in.)
b	12.0 mm (0.472 in.)
c	8.0 mm (0.315 in.)
d	16.0 mm (0.635 in.)



(e) Install the back window glass to the vehicle body.
(1) Using a suction cup, position the back window glass so that the matchmarks are aligned. Press it in gently along the rim.
(2) Lightly press the front surface of the back window glass to ensure that the back window glass is securely fit to the vehicle body.
NOTICE:
- **Check that the stoppers are attached to the vehicle body correctly.**
- **Check that the vehicle body and back window glass have a small gap between them.**

WS

(3) Hold the back window glass in place securely with protective tape or equivalent until the adhesive hardens.

4. INSTALL BACK WINDOW MOULDING OUTSIDE

(a) Using a brush or sponge, apply Primer G to the contact surface of the back window glass.

NOTICE:

- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

(b) Install new back window moulding outside before the adhesive dries.

NOTICE:

Do not drive the vehicle for the amount of time written in the table below.

Minimum time

Temperature	Minimum time prior to driving vehicle
35°C (95°F)	1 hour 30 minutes
20°C (68°F)	5 hours
5°C (41°F)	24 hours

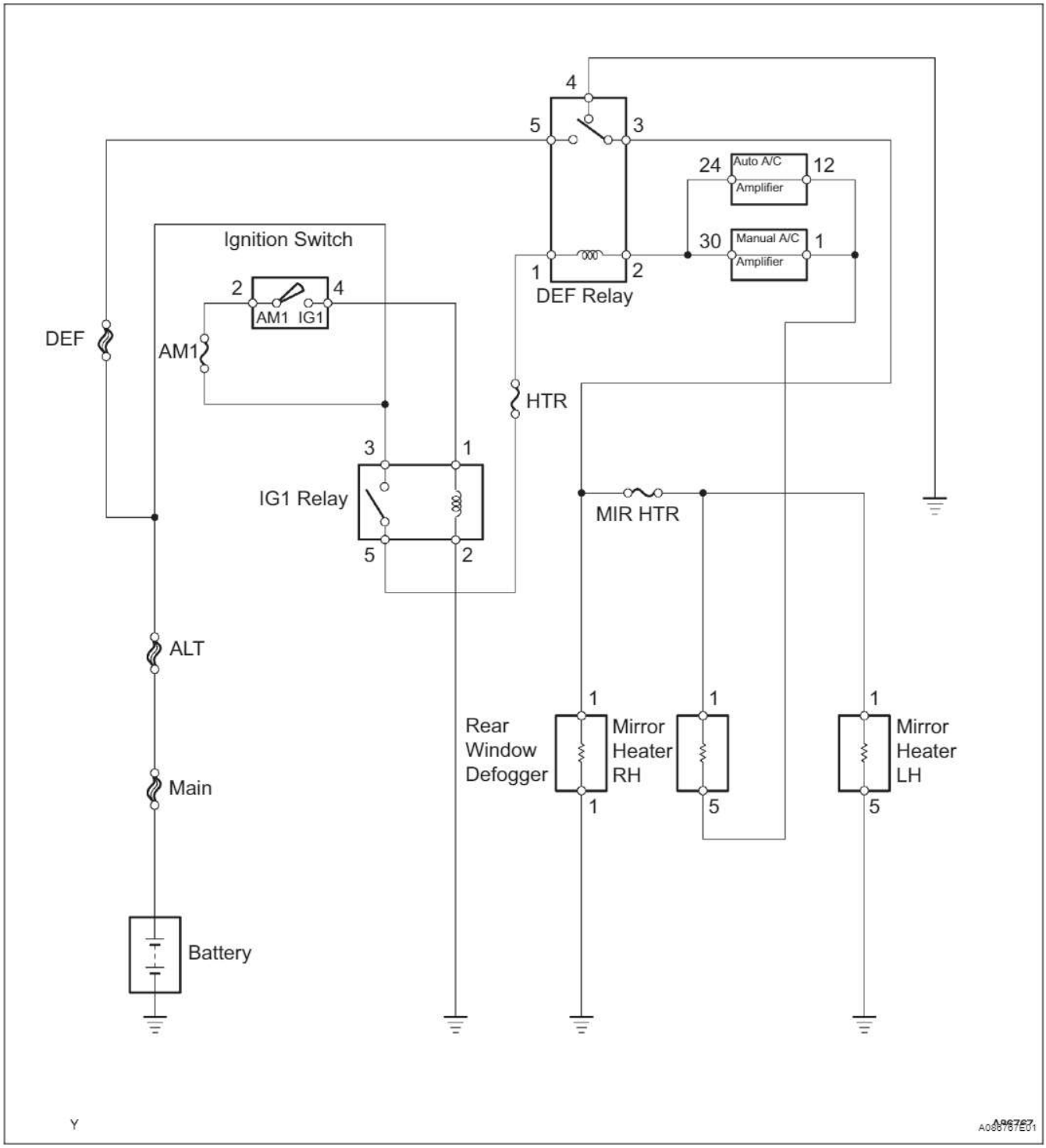
5. CHECK FOR LEAKS AND REPAIR

(a) Conduct a leak test after the adhesive has completely hardened.

(b) Seal any leaks with auto glass sealer.

WS

SYSTEM DIAGRAM



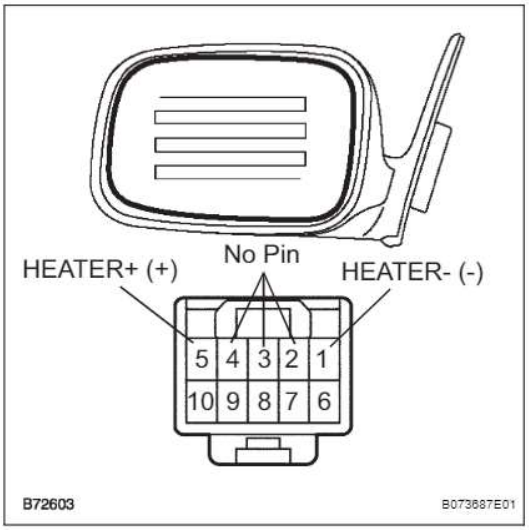
SYSTEM DESCRIPTION

The defogger system uses the heater wire in the rear windshield glass to defog the rear windshield glass.
This circuit of this system, which is shared with the outside with the outside rear view mirror heater system, operates in the same manner.

PROBLEM SYMPTOMS TABLE

Symptom	Suspected area	See page
Rear window defogger does not operate (indicator ON)	1. DEF relay	WS-113
	2. IG1 relay	-
	3. HTR fuse	-
	4. AM1 fuse	-
	5. DEF H-fuse	-
	6. Rear window defogger wire	WS-111
	7. Wire harness	-
Rear window defogger does not operate (indicator OFF)	1. DEF relay	WS-113
	2. IG1 relay	-
	3. HTR fuse	-
	4. AM1 fuse	-
	5. DEF H-fuse	-
	6. A/C control assembly	AC-172
	7. A/C panel assembly	AC-176
	8. A/C ECU	AC-16
	9. Rear window defogger wire	WS-111
	10. Wire harness	-
Mirror heater does not operate (indicator ON)	1. DEF relay	WS-113
	2. IG1 relay	-
	3. HTR fuse	-
	4. AM1 fuse	-
	5. DEF H-fuse	-
	6. MIR HTR fuse	-
	7. Outer rear view mirror assembly (LH side:)	WS-111
	8. Outer rear view mirror assembly (RH side:)	WS-111
	9. Wire harness	-
Mirror heater does not operate (indicator OFF)	1. DEF relay	WS-113
	2. IG1 relay	-
	3. HTR fuse	-
	4. AM1 fuse	-
	5. DEF H-fuse	-
	6. MIR HTR fuse	-
	7. A/C control assembly	AC-172
	8. A/C panel assembly	AC-176
	9. A/C ECU	AC-16
	10. Outer rear view mirror assembly (LH side:)	WS-111
	11. Outer rear view mirror assembly (RH side:)	WS-111
	12. Wire harness	-

WS



INSPECTION

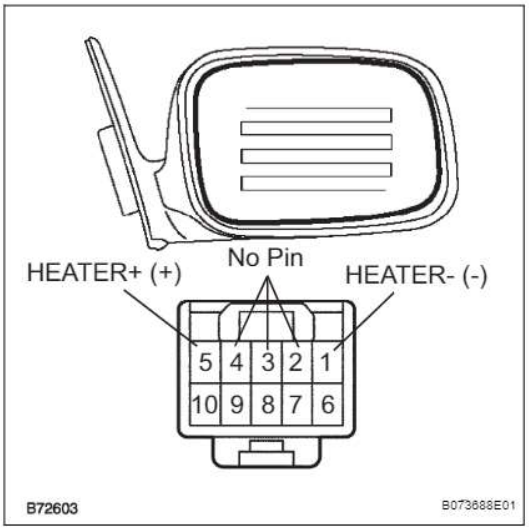
1. INSPECT OUTER REAR VIEW MIRROR ASSEMBLY LH (w/ Mirror Heater)

(a) Apply battery voltage and check operation of the mirror heater.

OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 (HEATER+) Battery negative (-) → Terminal 5 (HEATER-)	Mirror becomes warm

If the result is not as specified, replace the mirror assembly.



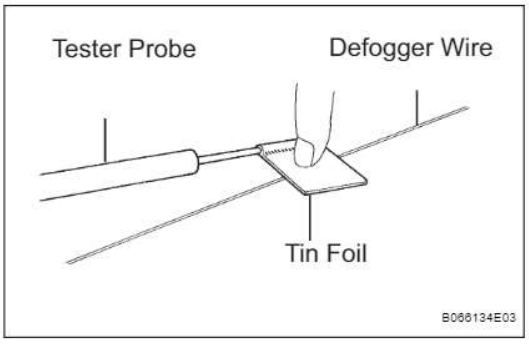
2. INSPECT OUTER REAR VIEW MIRROR ASSEMBLY RH (w/ Mirror Heater)

(a) Apply battery voltage and check operation of the mirror heater.

OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 1 (HEATER+) Battery negative (-) → Terminal 5 (HEATER-)	Mirror becomes warm

If the result is not as specified, replace the mirror assembly.



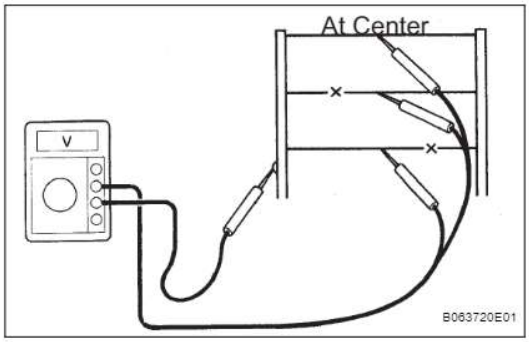
3. INSPECT BACK WINDOW (DEFOGGER WIRE)

(a) Inspect the back window (defogger wire).

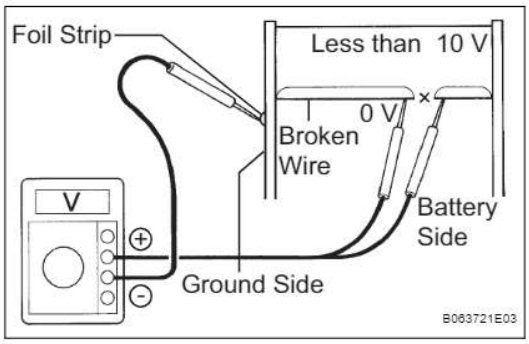
NOTICE:

- **When cleaning the glass, wipe the glass along the wire using a soft, dry cloth. Take care not to damage the wires.**
- **Do not use detergents or glass cleaners that have abrasive ingredients.**
- **When measuring voltage, wrap a piece of tin foil around the tip of the negative tester probe and press the foil against the wire with your finger, as shown in the illustration.**

WS



(b) Turn the ignition switch ON.
(c) Turn the defogger switch ON.

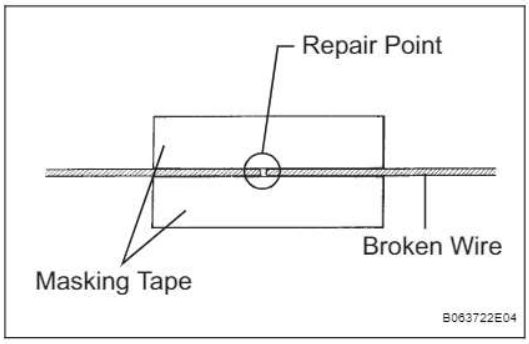


(d) Measure the voltage at the center of each defogger wire as shown in the illustration.
Voltage

Voltage	Criteria
Approx. 5 V	Wire is not broken
Approx. 10 or 0 V	Wire is broken

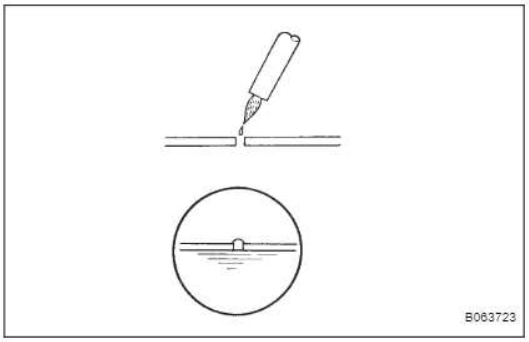
HINT:
If there is approximately 10 V, the wire may be faulty between the center of the wire and the wire end on the battery side. If there is no voltage, the wire may be faulty between the center of the wire and the wire end on the ground side.

(e) Place the voltmeter's positive (+) lead against the defogger wire on the battery side.
(f) Place the voltmeter's negative (-) lead with the foil strip against the wire on the ground side.
(g) Slide the positive (+) lead from the battery side to the ground side.
(h) The point where the voltage jumps from approximately 10 V to 0 V is where the defogger wire is broken.
HINT:
If the defogger wire is not broken, the voltmeter indicates 0 V at the positive (+) end of the defogger wire and gradually increases to approximately 12 V as the meter probe moves to the other end.

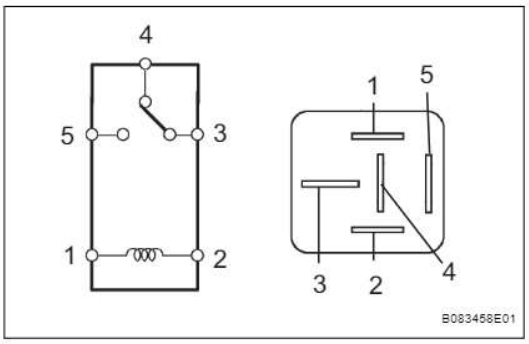


(i) If necessary, repair the defogger wire.
(1) Clean the broken wire tips with grease, wax and silicone remover.
(2) Place the masking tape along both sides of the wire.
(3) Thoroughly mix the repair agent (Dupont paste No. 4817 or equivalent).

WS



(4) Using a fine tip brush, apply a small amount of the agent to the wire.
(5) After a few minutes, remove the masking tape.
NOTICE:
Do not repair the defogger wire again for at least 24 hours.



4. INSPECT DEFOGGER RELAY

(a) Marking: DEF
(1) Remove the DEF relay from the engine room R/B.
(2) Measure the resistance of the relay.
Resistance

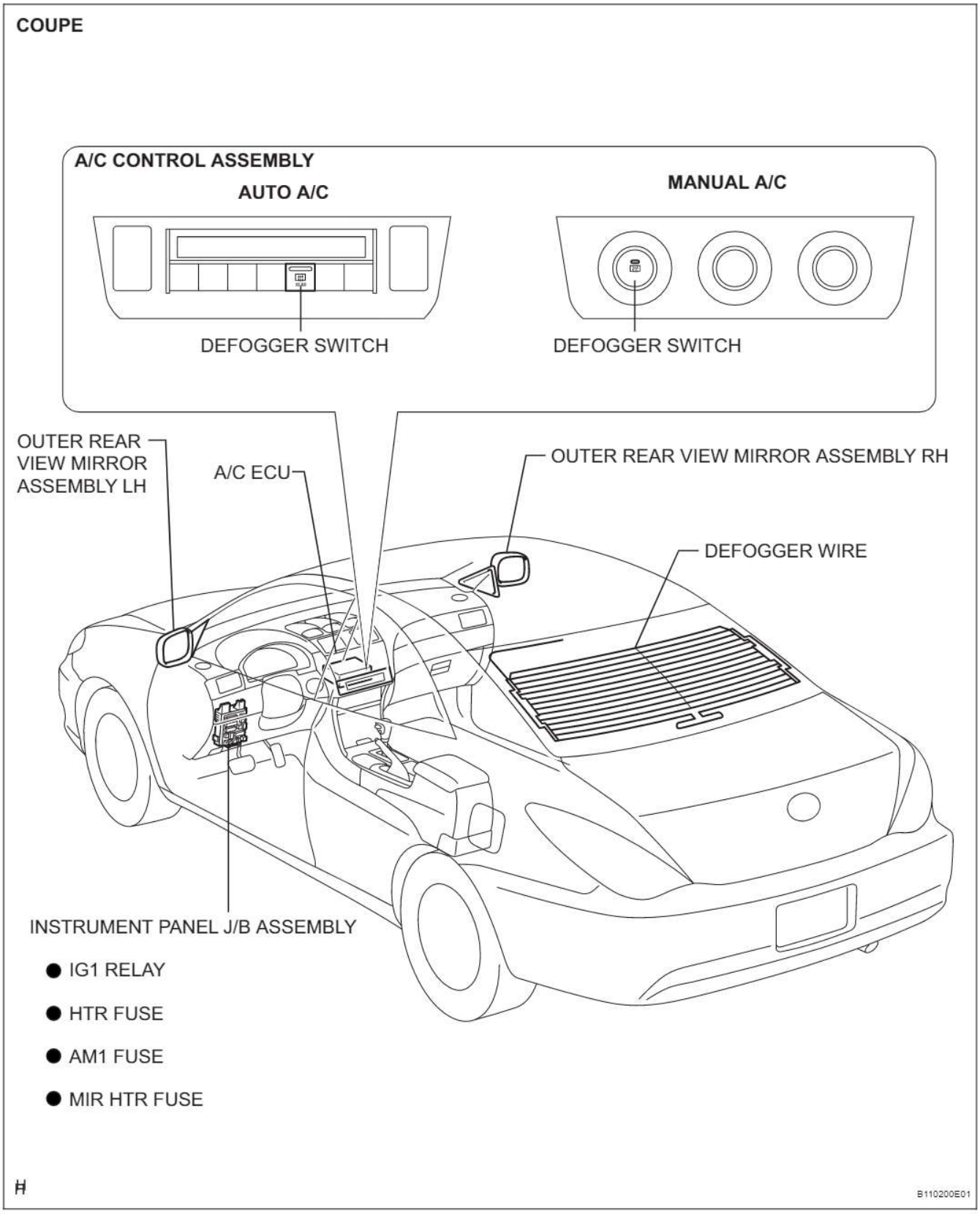
Tester Condition	Specified Condition
3 - 4	Below 1 Ω
3 - 5	10 kΩ or higher
3 - 5	Below 1 Ω (when battery voltage is applied to terminals 1 and 2)

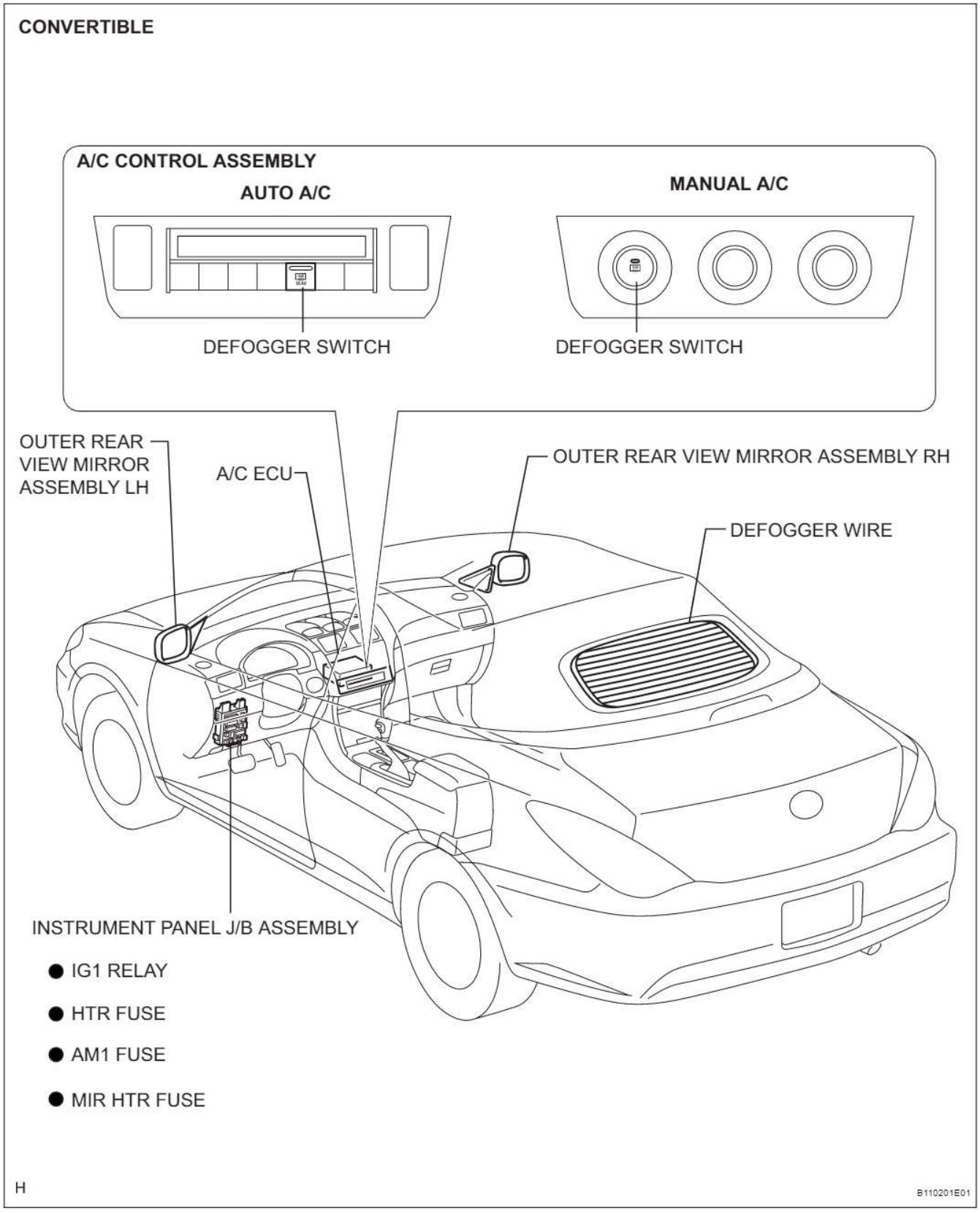
If the result is not as specified, replace the relay.

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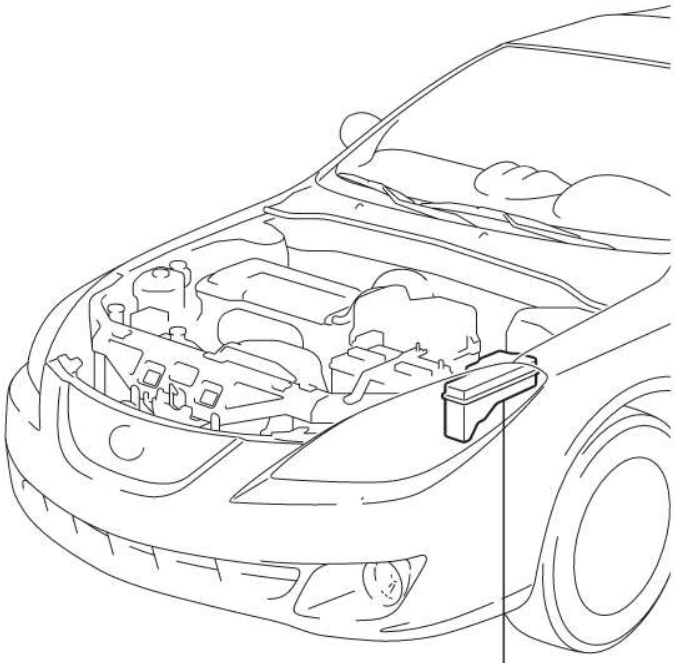
WINDOW DEFOGGER SYSTEM

PARTS LOCATION




CONVERTIBLE
A/C CONTROL ASSEMBLY
AUTO A/C
MANUAL A/C
DEFOGGER SWITCH
DEFOGGER SWITCH
OUTER REAR VIEW MIRROR ASSEMBLY LH
A/C ECU
OUTER REAR VIEW MIRROR ASSEMBLY RH
DEFOGGER WIRE
INSTRUMENT PANEL J/B ASSEMBLY
IG1 RELAY
HTR FUSE
AM1 FUSE
MIR HTR FUSE
H
B110201E01

WS



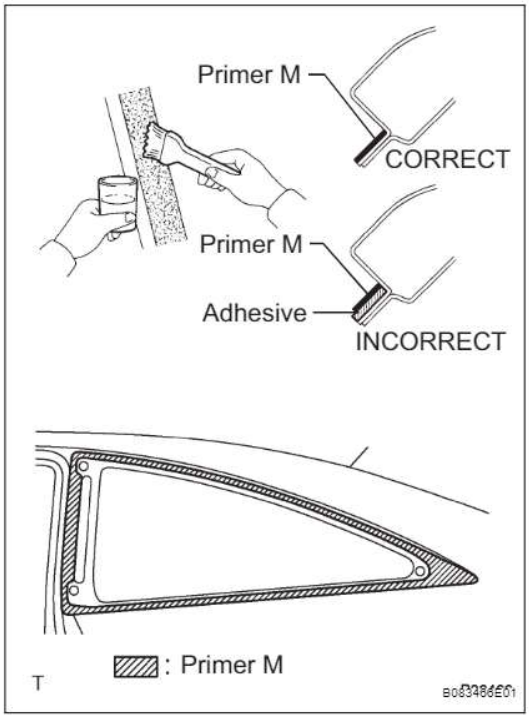
ENGINE ROOM R/B

- DEF RELAY
- DEF H-FUSE
- ALT H-FUSE

P

B110202E02

WS



INSTALLATION

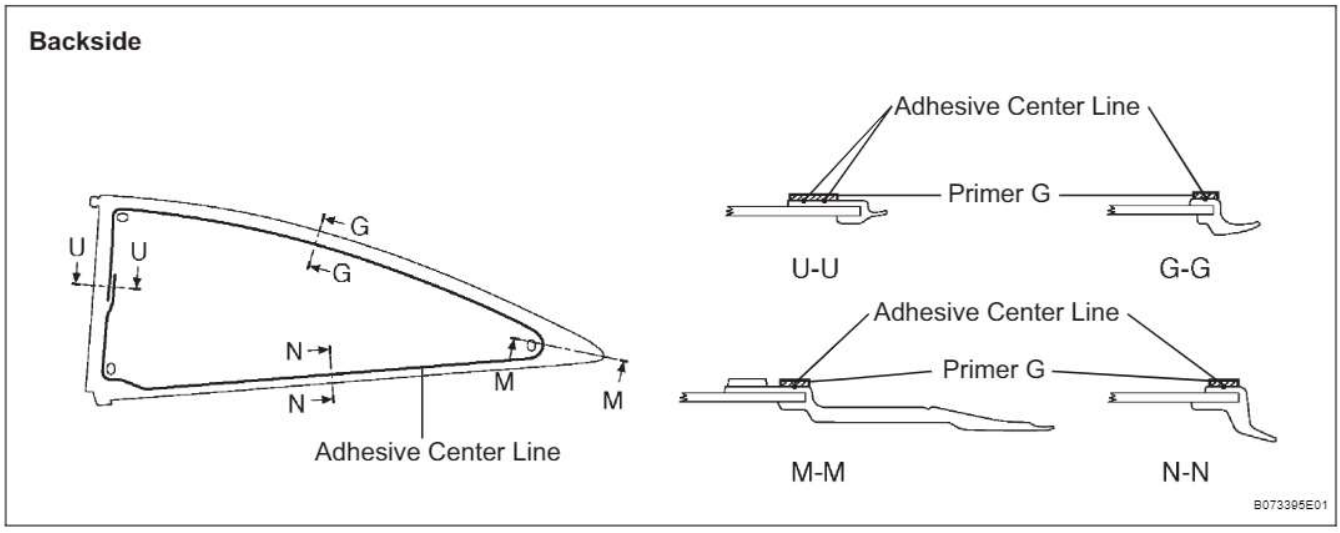
1. INSTALL QUARTER WINDOW ASSEMBLY LH

(a) Using a brush, apply Primer M to the exposed part of the vehicle body.

NOTICE:

- **Allow the Primer M to dry for 3 minutes or more.**
- **Do not apply Primer M to the adhesive.**
- **Throw away any leftover Primer M.**
- **Do not apply too much Primer M.**

(b) Using a brush or sponge, apply Primer G to the contact surface of the quarter window glass.



HINT:

If Primer G is applied to an area other than that which is specified, wipe off the primer with white gasoline before it dries.

NOTICE:

- **Allow the Primer G to dry for 3 minutes or more.**
- **Throw away any leftover Primer G.**
- **Do not apply too much Primer G.**

(c) Apply adhesive to the quarter window glass.

Adhesive:

Part No. 08850-00801 or equivalent

(1) Cut off the tip of the cartridge nozzle.

HINT:

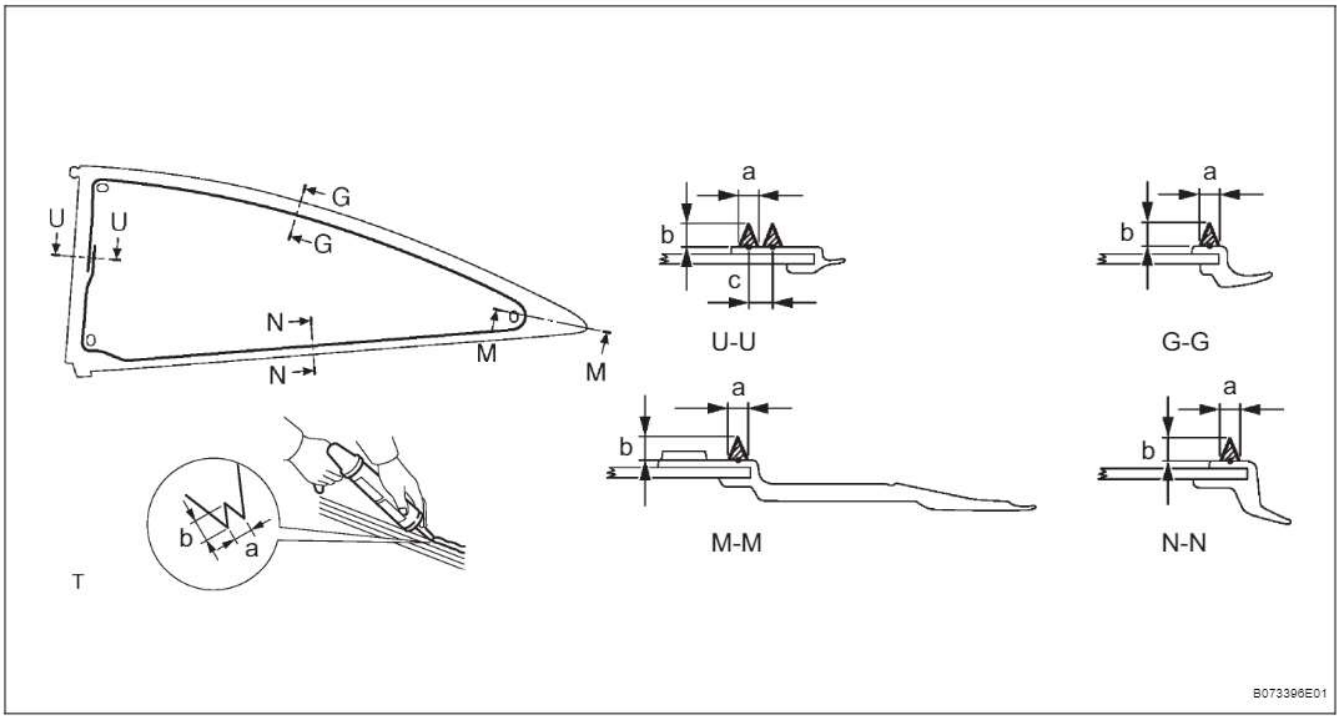
After cutting off the tip, use all adhesive within the time written in the table below.

WS

Usage timeframe

Temperature	Usage Timeframe
35°C (95°F)	15 minutes
20°C (68°F)	1 hour 40 minutes
5°C (41°F)	8 hours

(2) Load the sealer gun with the cartridge.
(3) Apply adhesive to the quarter window glass as shown in the illustration.



Specification

Area	Measurement
a	6.0 mm (0.236 in.)
b	8.0 mm (0.315 in.)
c	6.0 mm (0.236 in.)

(d) Install the quarter window glass to the vehicle body.
(1) Lightly press the front surface of the quarter window glass to ensure that the quarter window glass is securely fit to the vehicle body.
NOTICE:
- **Check that the clips are attached to the vehicle body correctly.**
- **Check that the vehicle body and quarter window glass have a small gap between them.**

(2) Hold the quarter window glass in place securely with protective tape or equivalent until the adhesive hardens.
NOTICE:
Do not drive the vehicle for the amount of time written in the table below.

WS

Minimum time

Temperature	Minimum time prior to driving vehicle
35°C (95°F)	1 hour 30 minutes
20°C (68°F)	5 hours
5°C (41°F)	24 hours

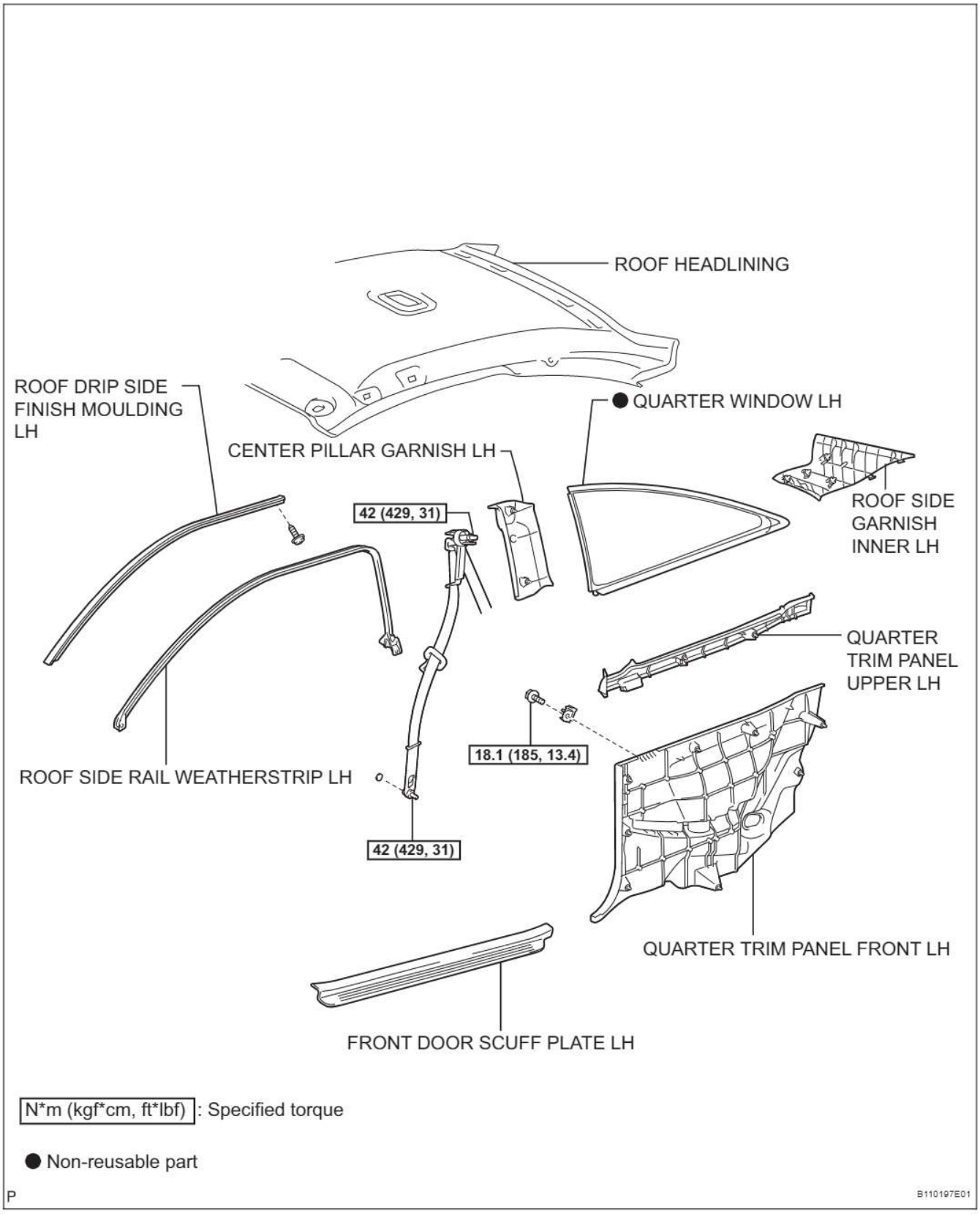
2. CHECK FOR LEAKS AND REPAIR

(a) Conduct a leak test after the adhesive has completely hardened.

(b) Seal any leaks with auto glass sealer.

QUARTER WINDOW GLASS (for Coupe)

COMPONENTS



WS

REMOVAL

HINT:

- The installation procedures are the removal procedures in reverse order. However, only installation procedures requiring additional information are included.
- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.
- A bolt without a torque specification is shown in the standard bolt chart (See page SS-1).

1. **REMOVE REAR SEAT CUSHION ASSEMBLY (See page SE-40)**

2. **REMOVE REAR SEATBACK ASSEMBLY LH (See page SE-40)**

3. **REMOVE ROOF HEADLINING ASSEMBLY**

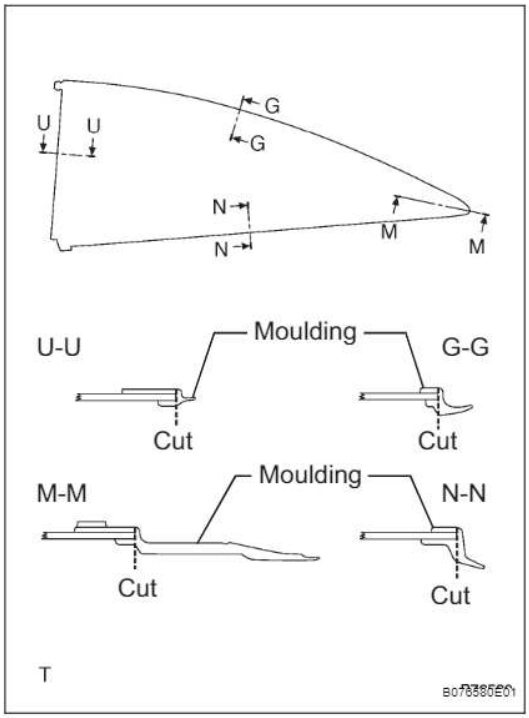
   HINT:

   See page IR-4

   (a) Remove the rear seatback hinge LH.
   (b) Remove the front door scuff plate LH.
   (c) Remove the roof side rail weatherstrip LH.
   (d) Remove the quarter trim panel front LH.
   (e) Remove the center pillar garnish LH.
   (f) Remove the roof side garnish inner LH.
   (g) Remove the quarter trim panel upper LH.
   (h) Partially remove the roof headlining.

   HINT:

   It is not necessary to completely remove the roof headlining. Slightly lower the rear section of the roof headlining so that the quarter window glass can be removed later in next step.



4. **REMOVE QUARTER WINDOW ASSEMBLY LH**

   (a) Using a knife, cut off the moulding as shown in the illustration.

   NOTICE:

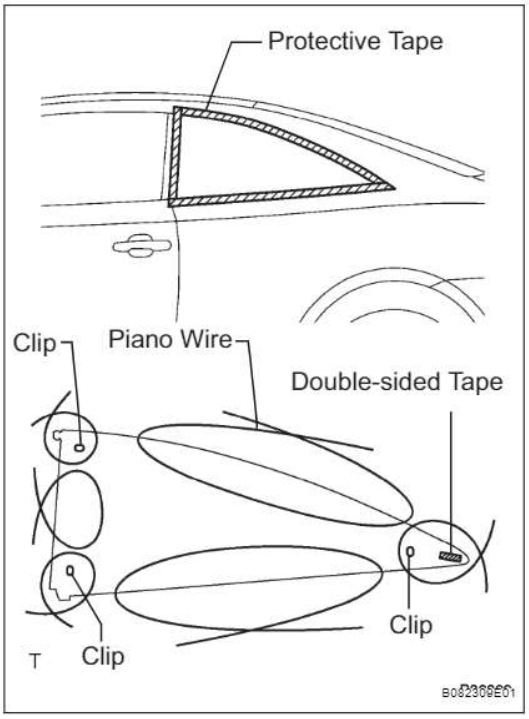
   Be careful not to damage the vehicle body with the knife.

   (b) Remove the remaining moulding.

   HINT:

   Make a partial cut in the moulding. Then, pull and remove it by hand.

WS



(c) Apply protective tape to the outer surface of the vehicle body to minimize scratches.

(d) From the interior, insert piano wires between the vehicle body and the quarter window glass as shown in the illustration.

(e) Tie objects that can serve as handles (for example, wooden blocks) to all wire ends.

NOTICE:

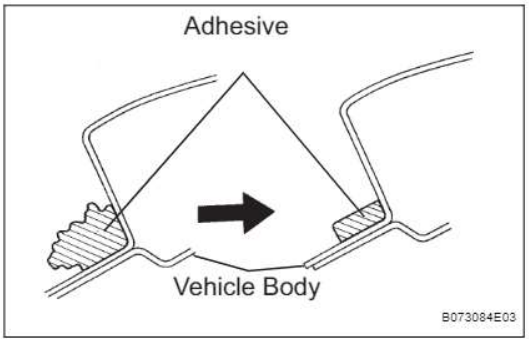
When separating the quarter window glass from the vehicle, be careful not to damage the vehicle's paint or interior/exterior ornaments.

(f) Cut through the adhesive by pulling the piano wire around the quarter window glass.

(g) Using a suction cup, remove the quarter window glass.

NOTICE:

Leave as much adhesive on the vehicle body as possible when removing the quarter window glass.



5. CLEAN VEHICLE BODY

(a) Clean and shape the contact surface of the vehicle body.

(1) On the contact surface of the vehicle body, use a knife to cut away excess adhesive as shown in the illustration.

HINT:

Leave as much adhesive on the vehicle body as possible.

NOTICE:

Be careful not to damage the vehicle body.

(2) Clean the contact surface of the vehicle body with cleaner.

HINT:

Even if all the adhesive has been removed, clean the vehicle body.

WS

INSPECTION

HINT:

- Use the same procedures for the RH side and LH side.
- The procedures listed below are for the LH side.

1. INSPECT QUARTER WINDOW ASSEMBLY LH

HINT:

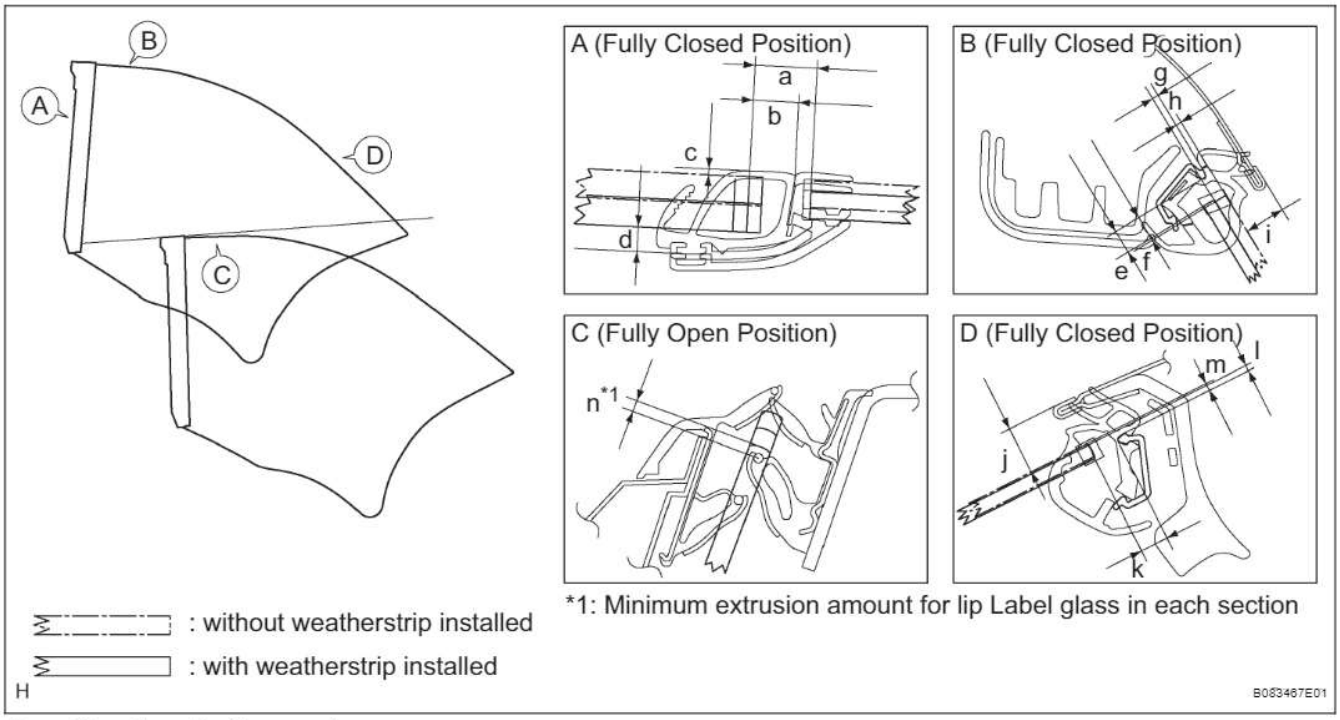
Start the inspection after making sure the front door panel and front door glass are fit properly (See page WS-124).

(a) Push the quarter window from the vehicle inside and make sure that the window is held in place by the tarpaulin rear rail weatherstrip.

(b) Close the quarter window and make sure that the window moves up and down smoothly.

(c) Around the quarter window's fully closed position, make sure that the window moves parallel to the tarpaulin rear rail weatherstrip.

(d) Fully close the quarter window. When the window reaches the fully closed position, make sure that the bracket contacts the front and rear window stops simultaneously.



*1: Minimum extrusion amount for lip Label glass in each section

Specification (reference)

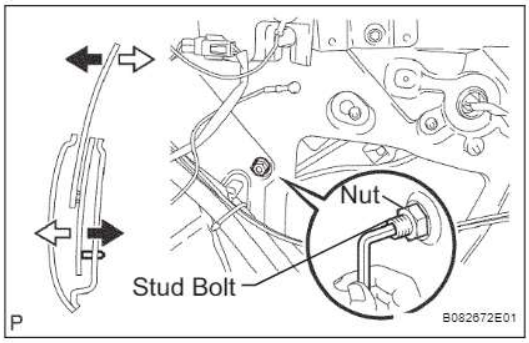
Area	Measurement	Area	Measurement
a	11.0 mm (0.433 in.)	h	0.4 to 4.4 mm (0.016 to 0.173 in.)
b	5.5 to 10.5 mm (0.217 to 0.413 in.)	i	13.5 to 18.5 mm (0.531 to 0.728 in.)
c	-0.1 to 3.9 mm (-0.004 to 0.154 in.)	j	13.5 to 18.5 mm (0.531 to 0.728 in.)
d	2.0 to 7.0 mm (0.079 to 0.276 in.)	k	7.0 to 14.0 mm (0.276 to 0.551 in.)
e	6.3 to 13.3 mm (0.248 to 0.524 in.)	l	-1.2 to 5.8 mm (-0.047 to 0.228 in.)
f	7.1 to 14.1 mm (0.280 to 0.555 in.)	m	0.6 to 4.6 mm (0.024 to 0.181 in.)
g	-1.5 to 5.5 mm (-0.059 to 0.217 in.)	n	2.8 mm (0.110 in.)

WS

ADJUSTMENT

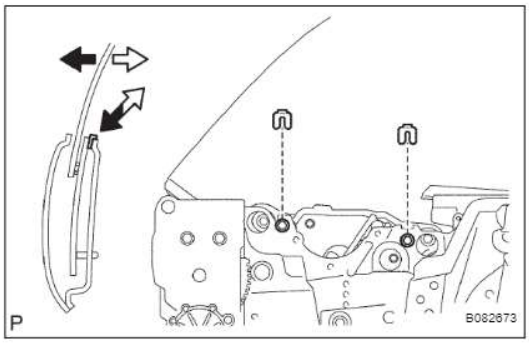
1. ADJUST QUARTER WINDOW ASSEMBLY LH

(a) Loosen the nut at the bottom of the quarter window regulator.



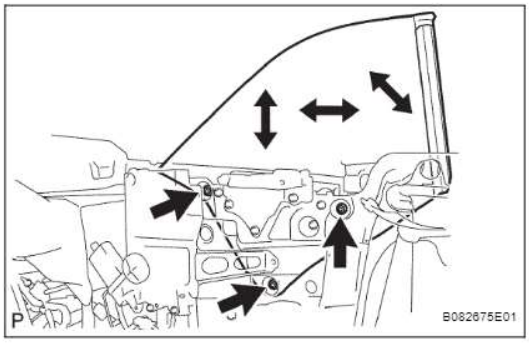
(b) To adjust the position of the quarter window glass' upper section indicated by the arrows in the illustration, turn the stud bolt with a hexagon wrench (2 sides, 4 mm width).
HINT:
When the stud bolt is loosened, the upper end of the quarter window glass leans to the inside of the vehicle. When the stud bolt is tightened, the upper end leans to the outside.

(c) Tighten the nut after adjustment.
Torque: 13 N*m (133 kgf*cm, 10 ft.*lbf)



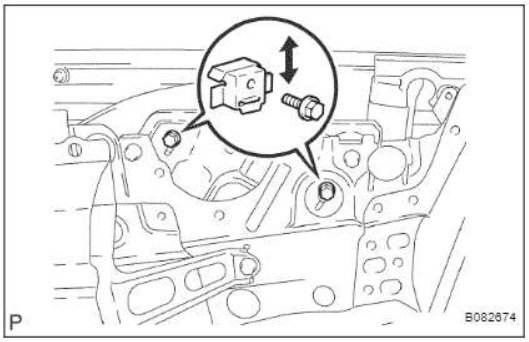
(d) To further adjust the position of the quarter window glass' upper section, use shims.
(1) Loosen the 2 bolts.
(2) Change the number of the installed shims to adjust the bottom of the quarter window glass.
(3) Tighten the 2 bolts after adjustment.
Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)
HINT:
When less shims are used, the quarter window glass' upper section leans to the inside of the vehicle. When more shims are used, the quarter window glass' upper section leans to the outside of the vehicle.
Shim size

Shim Size	Part No.	Selection Quality
1.0 mm (0.039 in.)	63277-20030	0 - 4
2.0 mm (0.079 in.)	63277-20050	0 - 2



(e) Adjust the quarter window glass horizontally and vertically.
NOTICE:
Perform adjustments using the 3 nuts indicated in the illustration. If the desired adjustment cannot be made when only using the 3 nuts, adjust the stoppers.
(1) Move the glass so that the nuts are visible through the service hole.
(2) Loosen the 3 nuts.
(3) Adjust the glass horizontally and vertically.

WS

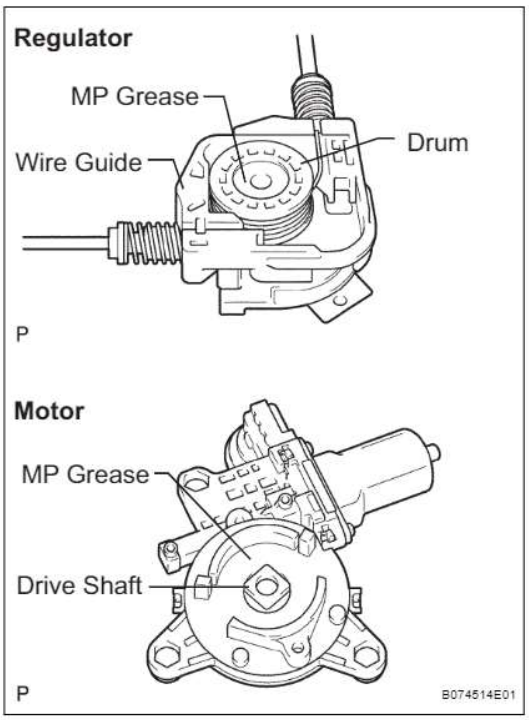


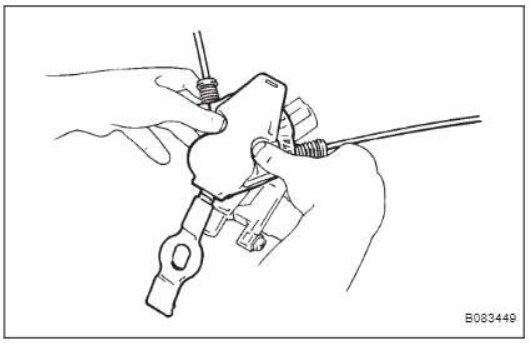
(4) Tighten the 3 nuts after the adjustment.
Torque: 8.3 N*m (85 kgf*cm, 73 in.*lbf)
NOTICE:
If the desired adjustment cannot be made when only using the glass 3 nuts, loosen the regulator's 2 bolts to adjust the stoppers to perform vertical adjustments. After adjusting the stoppers, make sure that both the front and rear stoppers contact the glass at the same time.
Torque: 8.0 N*m (82 kgf*cm, 71 in.*lbf)

INSTALLATION

1. INSTALL QUARTER WINDOW REGULATOR MOTOR

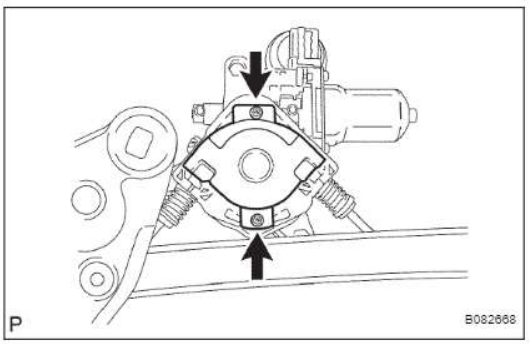
(a) Apply MP grease to the sliding and rotating areas of the quarter window regulator and motor.





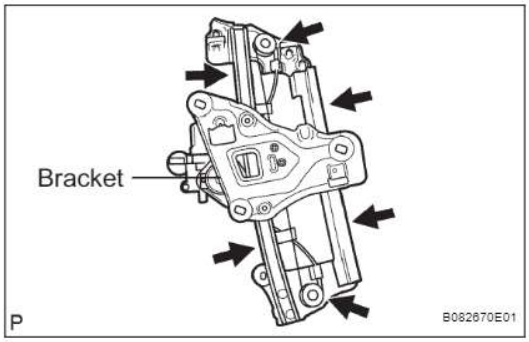
(b) With the holding tool installed, match the holding tool with the motor housing.

(c) Push down on the wire guide and drum, insert the drum into the motor housing.
NOTICE:
If you cannot insert the drum into the motor, slowly slide the bracket for installing the glass, and insert the drum while aligning the drive shaft of the motor with the drum.



(d) Install the cover with the 2 screws.

WS

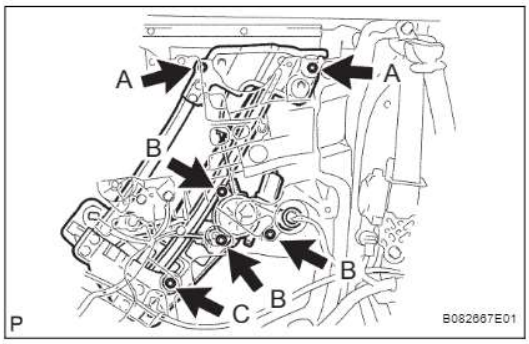


2. INSTALL QUARTER WINDOW REGULATOR SUB-ASSEMBLY LH

(a) Apply MP grease to the sliding and rotating parts of the quarter window regulator.

NOTICE:

Do not apply grease to the spring of the quarter window regulator.



(b) Install the quarter window regulator with the 6 nuts.

Torque: Nut A

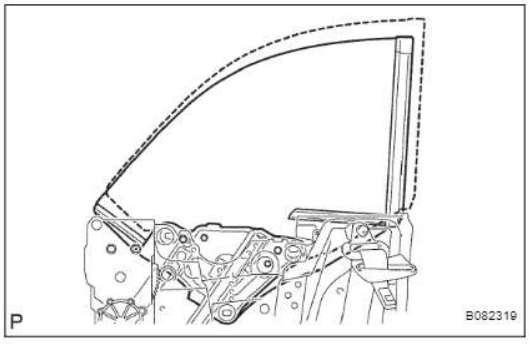
8.0 N*m (82 kgf*cm, 71 in.*lbf)

Nut B

5.5 N*m (56 kgf*cm, 49 in.*lbf)

Nut C

13 N*m (133 kgf*cm, 10 ft.*lbf)

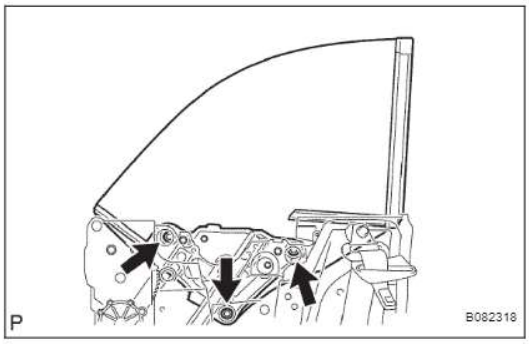


3. INSTALL QUARTER WINDOW ASSEMBLY LH

(a) Insert the quarter window glass into the door and put it on the quarter window regulator.

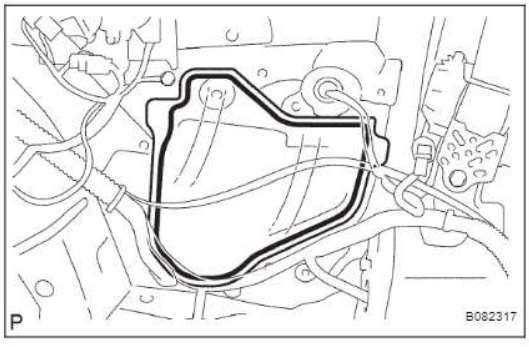
(b) Connect the connector.

(c) Move the quarter window regulator until the bolts appear in the service hole.



(d) Install the quarter window glass with the 3 nuts.

Torque: 8.3 N*m (85 kgf*cm, 73 in.*lbf)



4. INSTALL QUARTER SERVICE HOLE COVER LH

(a) Apply butyl tape to the quarter panel.

(b) Install the quarter service hole cover.

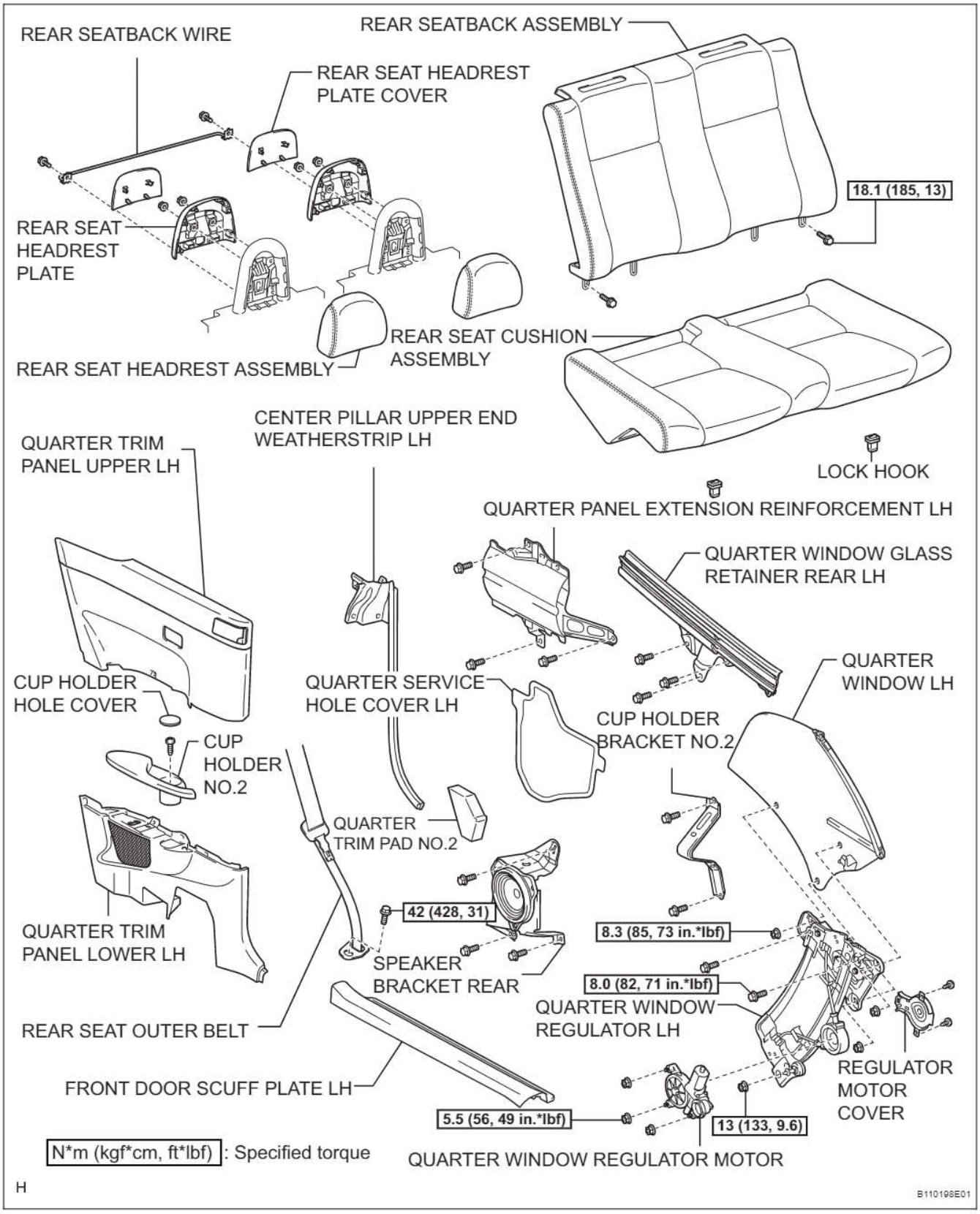
HINT:

- There should be no wrinkles or folds after attaching the quarter service hole cover.
- Check if the quarter service hole cover is securely attached.

WS

QUARTER WINDOW GLASS (for Convertible)

COMPONENTS



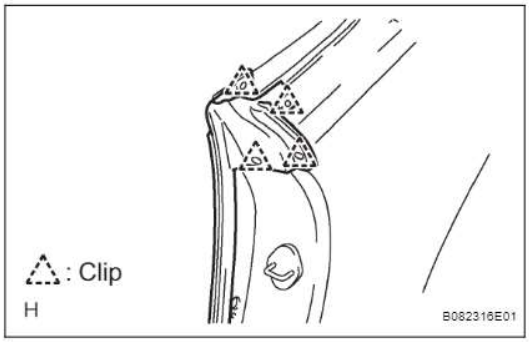
WS

REMOVAL

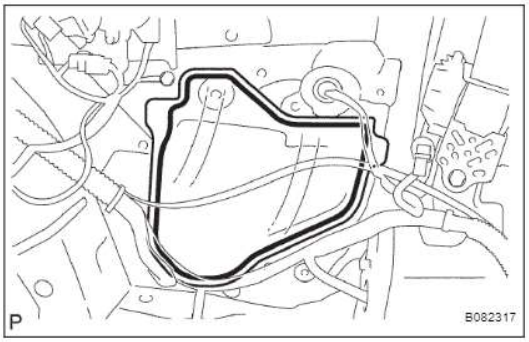
HINT:

- The installation procedures are the removal procedures in reverse order. However, only installation procedures requiring additional information are included.
- Use the same procedures for the LH side and RH side.
- The procedures listed below are for the LH side.
- A bolt without a torque specification is shown in the standard bolt chart (See page SS-1).

1. **REMOVE REAR SEAT HEADREST ASSEMBLY**
2. **REMOVE REAR SEAT CUSHION ASSEMBLY (See page SE-46)**
3. **REMOVE REAR SEATBACK ASSEMBLY (See page SE-47)**
4. **REMOVE QUARTER TRIM PANEL LOWER LH**
   HINT:
   See page IR-10
   (a) Remove the rear seat outer belt LH.
   (b) Remove the front door scuff plate LH.
   (c) Remove the cup holder hole cover.
   (d) Remove the cup holder No. 2.
   (e) Remove the quarter trim panel upper LH.
   (f) Remove the quarter trim panel lower LH.
5. **REMOVE QUARTER TRIM PAD**
6. **REMOVE SPEAKER BRACKET REAR**
   (a) Remove the 3 bolts and speaker bracket rear with rear speaker.
7. **REMOVE CUP HOLDER BRACKET NO.2**
   (a) Remove the 2 bolts and cup holder bracket.
8. **REMOVE QUARTER PANEL EXTENSION REINFORCEMENT LH**
   (a) Remove the 3 bolts and reinforcement.
9. **REMOVE QUARTER WINDOW GLASS RETAINER SUB-ASSEMBLY REAR LH**
   (a) Remove the 3 bolts and glass retainer.
10. **REMOVE QUARTER BELT MOULDING LH**
11. **REMOVE CENTER PILLAR UPPER END WEATHERSTRIP LH**
    (a) Remove the 4 clips and center pillar upper end weatherstrip.



WS

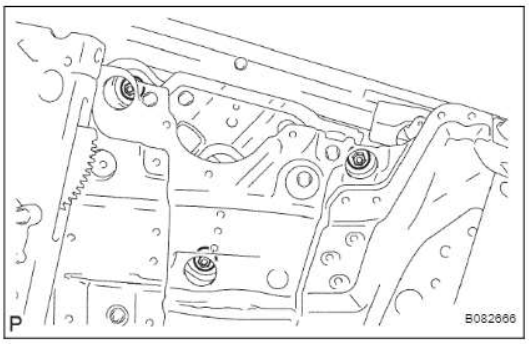


12. REMOVE QUARTER SERVICE HOLE COVER LH

(a) Remove the quarter service hole cover.

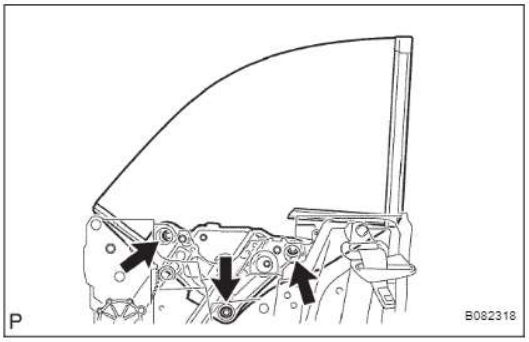
NOTICE:

Remove the remaining tape on the door side.



13. REMOVE QUARTER WINDOW ASSEMBLY LH

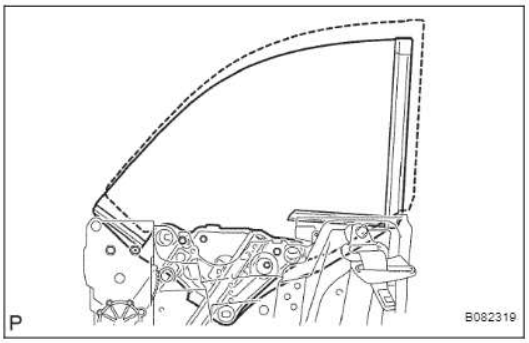
(a) Move the quarter window glass until the 3 nuts appear in the service holes.



(b) Remove the 3 nuts.

NOTICE:

Be careful when removing the nuts as the quarter window glass may fall and become damaged.



(c) Move the quarter window regulator down enough so that the quarter window glass can be removed.

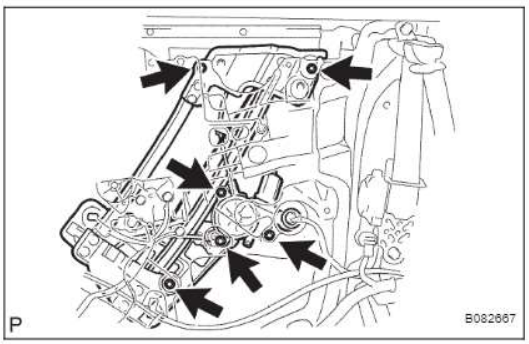
HINT:

Hold onto the quarter window glass to prevent it from falling.

(d) Remove the quarter window glass.

NOTICE:

Be careful not to damage the quarter window glass.



14. REMOVE QUARTER WINDOW REGULATOR SUB-ASSEMBLY LH

(a) Disconnect the connector.

(b) Remove the 6 nuts and quarter window regulator.

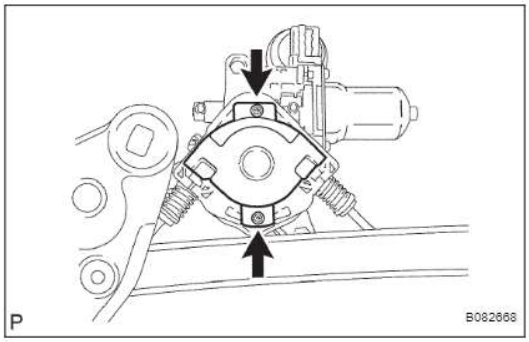
NOTICE:

Be careful when removing the nuts as the quarter window regulator may fall and become damaged.

HINT:

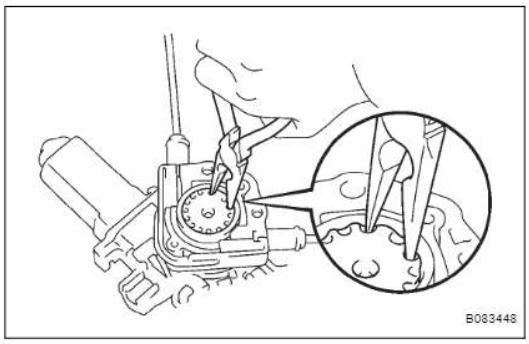
Remove the quarter window regulator through the service hole.

WS



15. REMOVE QUARTER WINDOW REGULATOR MOTOR

(a) Remove the 2 screws and cover.



(b) Using needle nose pliers, remove the drum and wire guide from the motor.

NOTICE:

Do not use a screwdriver to remove them. Using a screwdriver may damage the regulator wire.