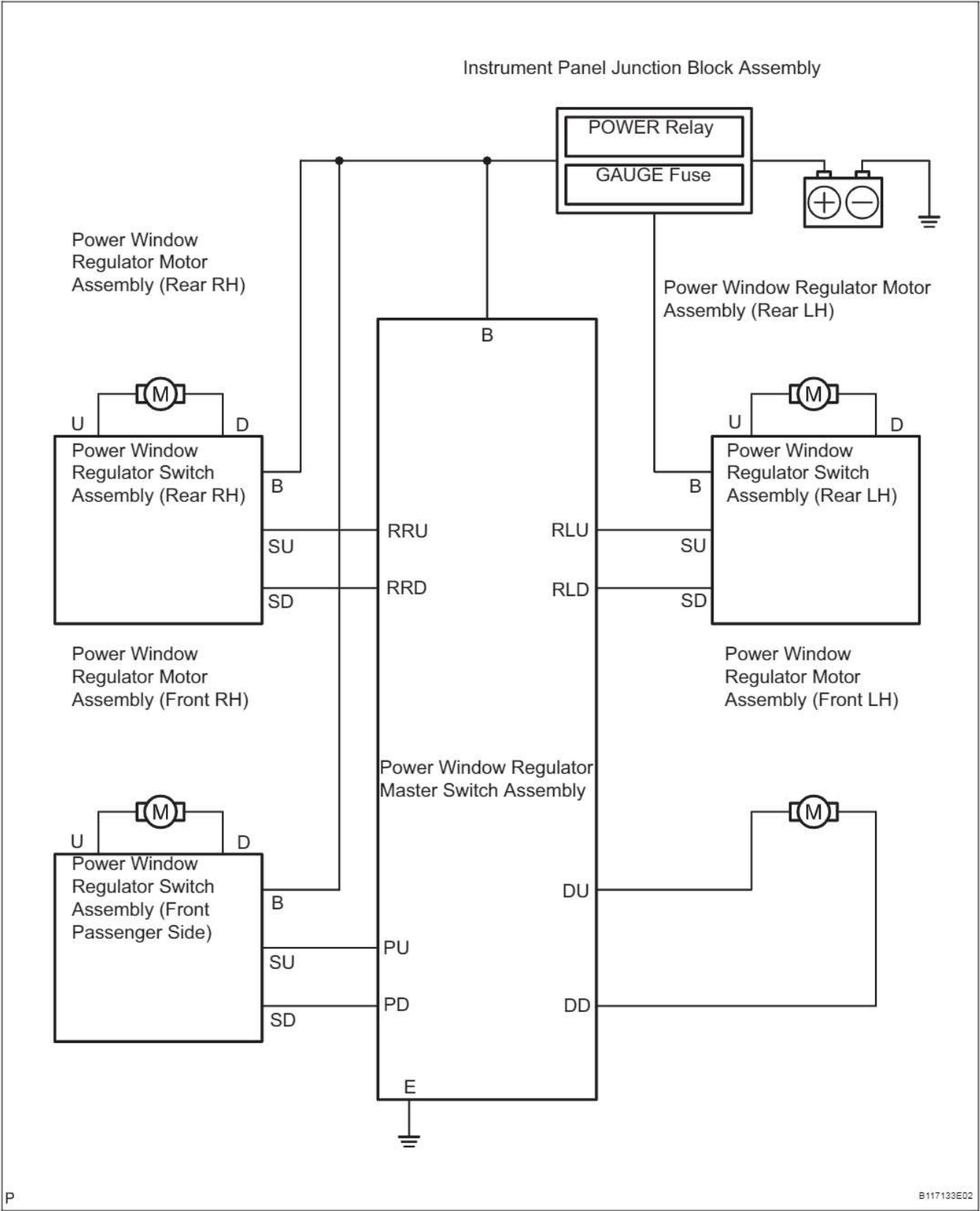


WINDSHIELD / WINDOWGLASS – POWER WINDOW CONTROL SYSTEM

SYSTEM DIAGRAM

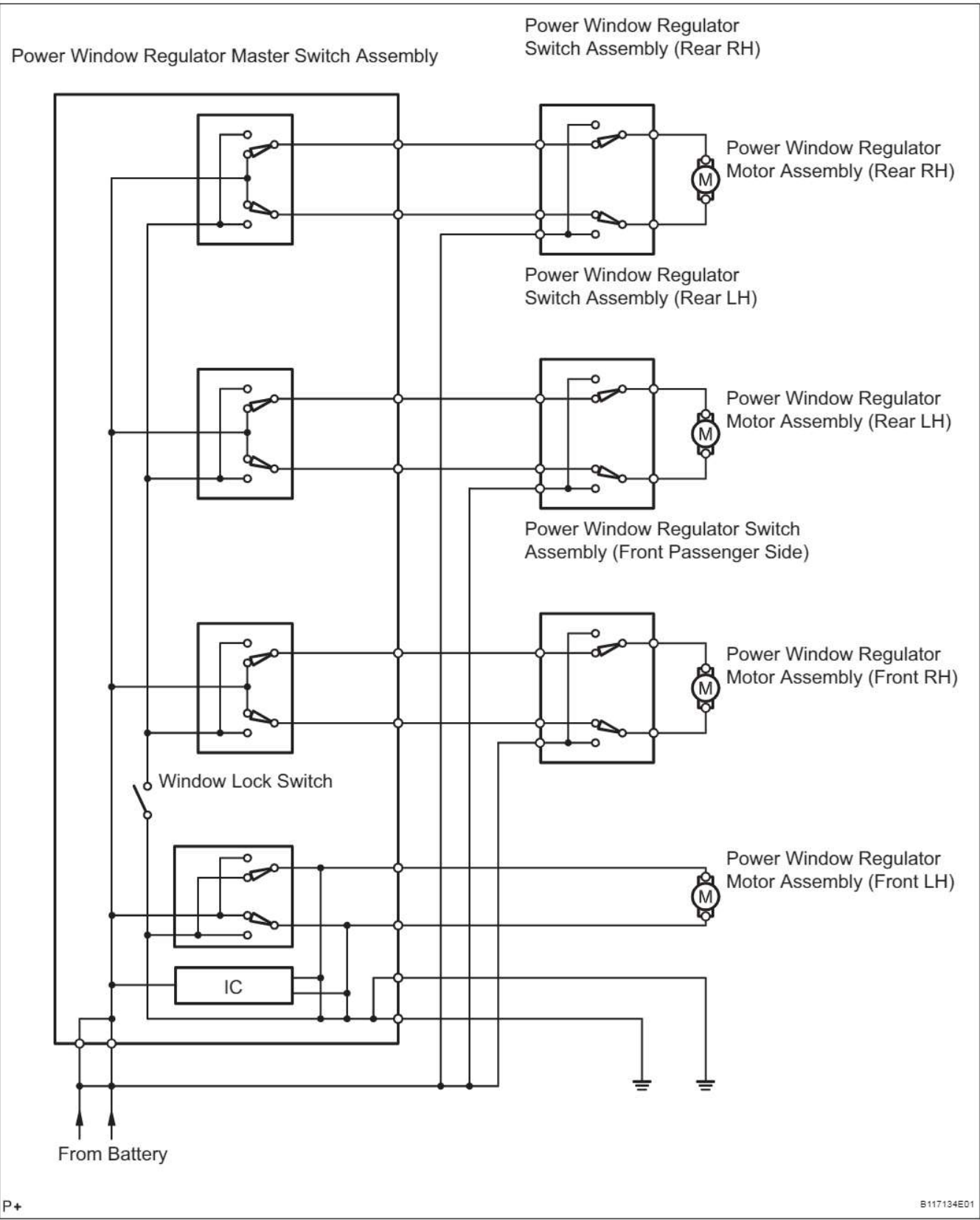
1. POWER WINDOW CONTROL SYSTEM DIAGRAM



2. POWER WINDOW SWITCH INNER CIRCUIT

WS-4

WINDSHIELD / WINDOWGLASS – POWER WINDOW CONTROL SYSTEM



SYSTEM DESCRIPTION

1. DESCRIPTION
- The power window control system has the following functions.

Function	Outline
Manual UP / DOWN function	• Driver side power window: Function that raises window while power window switch is pulled up, and lowers window while pushed halfway down (window stops as soon as switch is released) • Other power windows: Function that raises window while power window switch is pulled up, and lowers window 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 push downward on power window switch
Remote UP / DOWN function	Function that allows power window master switch to control manual UP / DOWN operation of passenger side power window and rear power windows

WS-6

WINDSHIELD / WINDOWGLASS – POWER WINDOW CONTROL SYSTEM

PROBLEM SYMPTOMS TABLE

HINT:

Use the table below to help determine the cause of the problem symptom. The potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

Power window control system

Symptom	Suspected area	See page
All power windows do not operate	1. GAUGE fuse	-
	2. POWER relay	WS-36
	3. Ignition switch	ST-18
	4. Wire harness	-
AUTO DOWN function does not operate	1. Power window regulator master switch assembly	WS-8
	2. Power window regulator motor assembly (front LH)	WS-13
Only one power window does not operate	1. Power window regulator master switch assembly	WS-8
	2. Power window regulator switch assembly	WS-11
	3. Power window regulator motor assembly	WS-13
	4. Wire harness	-
Window lock system does not operate	1. Power window regulator master switch assembly	WS-8

ON-VEHICLE INSPECTION

1. CHECK POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY (WINDOW LOCK SWITCH)

- Check that operation of the power windows except the driver side power window is disabled when the window lock switch of the power window regulator master switch is pressed.
- Check that the power windows can operate when the window lock switch is pressed again.

2. CHECK MANUAL UP / DOWN FUNCTION

- Check that the AUTO switch of the master switch can operate the driver side power window as follows:

OK:

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

- Check that each regulator switch can operate each power window as follows:

OK:

Condition	Regulator Switch	Switch Operation	Power Window
- Ignition switch ON - Window lock switch OFF	Passenger side	Pulled up	UP (closes)
- Ignition switch ON - Window lock switch OFF	Passenger side	Pushed down	DOWN (opens)
- Ignition switch ON - Window lock switch OFF	Rear LH	Pulled up	UP (closes)
- Ignition switch ON - Window lock switch OFF	Rear LH	Pushed down	DOWN (opens)

WINDSHIELD / WINDOWGLASS – POWER WINDOW CONTROL SYSTEM**WS-7**

Condition	Regulator Switch	Switch Operation	Power Window
- Ignition switch ON - Window lock switch OFF	Rear RH	Pulled up	UP (closes)
- Ignition switch ON - Window lock switch OFF	Rear RH	Pushed down	DOWN (opens)

3. CHECK AUTO DOWN FUNCTION

- (a) Check that the AUTO switch of the master switch can operate the driver side power window as follows:

OK:

Condition	Master Switch	Switch Operation	Power Window
Ignition switch ON	Driver side	Fully pushed down	AUTO DOWN (fully opens)

4. CHECK REMOTE UP / DOWN FUNCTION

- (a) Check that the power window regulator master switch can operate the power windows besides the driver side power window as follows:

OK:

Condition	Master Switch	Switch Operation	Power Window
- Ignition switch ON - Window lock switch OFF	Passenger side	Pulled up	UP (closes)
- Ignition switch ON - Window lock switch OFF	Passenger side	Pushed down	DOWN (opens)
- Ignition switch ON - Window lock switch OFF	Rear LH	Pulled up	UP (closes)
- Ignition switch ON - Window lock switch OFF	Rear LH	Pushed down	DOWN (opens)
- Ignition switch ON - Window lock switch OFF	Rear RH	Pulled up	UP (closes)
- Ignition switch ON - Window lock switch OFF	Rear RH	Pushed down	DOWN (opens)

WS**5. CHECK PTC OPERATION****HINT:**

PTC operation is a function that prevents overloading of the power window regulator by stopping the motor. PTC operation activates when the power window regulator switch is operated for a predetermined amount of time.

- Pull up and hold the power window regulator switch for more than 90 seconds. Then release the switch.
- Check that pressing the switch does not move the window.
- Wait until 60 seconds have passed since the switch was released in the first step. Check that pressing the switch results in normal window movement.

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

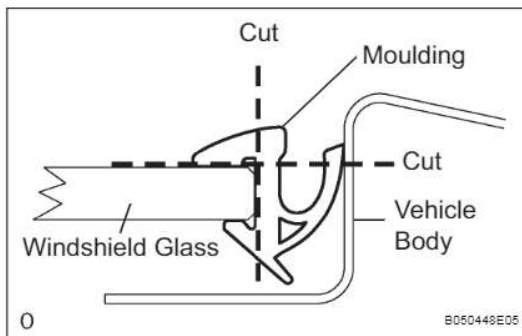
2. REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP LH
3. REMOVE FRONT DOOR OPENING TRIM WEATHERSTRIP RH
4. REMOVE FRONT PILLAR GARNISH LH (See page [IR-8](#))
5. REMOVE FRONT PILLAR GARNISH RH (See page [IR-8](#))
6. REMOVE VISOR ASSEMBLY LH (See page [IR-8](#))
7. REMOVE VISOR ASSEMBLY RH (See page [IR-8](#))
8. REMOVE ASSIST GRIP SUB-ASSEMBLY (See page [IR-9](#))
9. REMOVE VISOR HOLDER LH (See page [IR-8](#))
10. REMOVE VISOR HOLDER RH (See page [IR-8](#))
11. REMOVE ROOM NO. 1 LIGHT ASSEMBLY (See page [IR-8](#))
12. REMOVE ROOF HEADLINING ASSEMBLY
 - (a) Slightly lower the front section of the roof headlining (see page [IR-9](#)).

HINT:
It is not necessary to completely remove the roof headlining.
13. REMOVE INNER REAR VIEW MIRROR ASSEMBLY (See page [MI-5](#))
14. REMOVE FRONT WIPER ARM HEAD CAP
15. REMOVE FRONT WIPER ARM LH
16. REMOVE FRONT WIPER ARM RH
17. REMOVE COWL TOP VENTILATOR LOUVER RH (See page [WW-8](#))
18. REMOVE COWL TOP VENTILATOR LOUVER LH (See page [WW-8](#))
19. REMOVE HOOD TO COWL TOP SEAL (See page [WW-8](#))

WS

WINDSHIELD / WINDOWGLASS – WINDSHIELD GLASS

WS-19



20. REMOVE WINDSHIELD MOULDING OUTSIDE

- (a) Using a knife, cut off the windshield moulding outside.

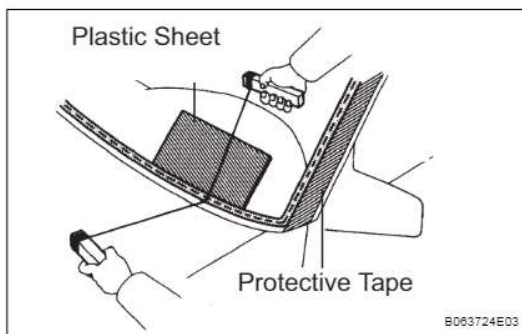
NOTICE:

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

- (b) Remove the remaining moulding.

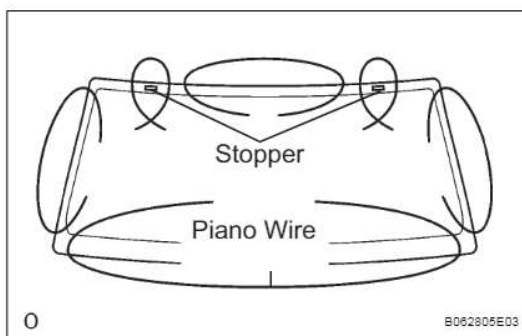
HINT:

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



21. REMOVE WINDSHIELD GLASS

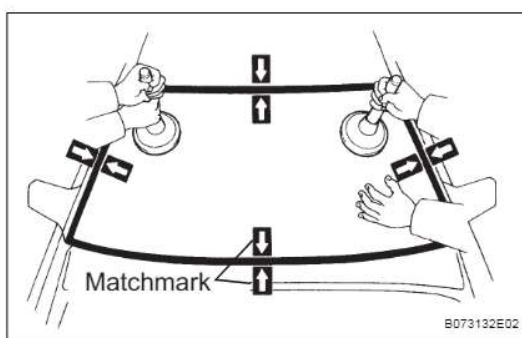
- (a) Apply protective tape to the outer surface of the vehicle body to prevent scratches.



- (b) From the interior, insert a piano wire between the vehicle body and glass as shown in the illustration.
(c) Tie objects that can serve as handles (for example, wooden blocks) to both wire ends.

NOTICE:

- When separating the 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 glass, place a plastic sheet between the piano wire and instrument panel.



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

HINT:

Matchmarks do not need to be placed if not reusing the glass.

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

NOTICE:

Leave as much adhesive on the vehicle body as possible when cutting through the adhesive.

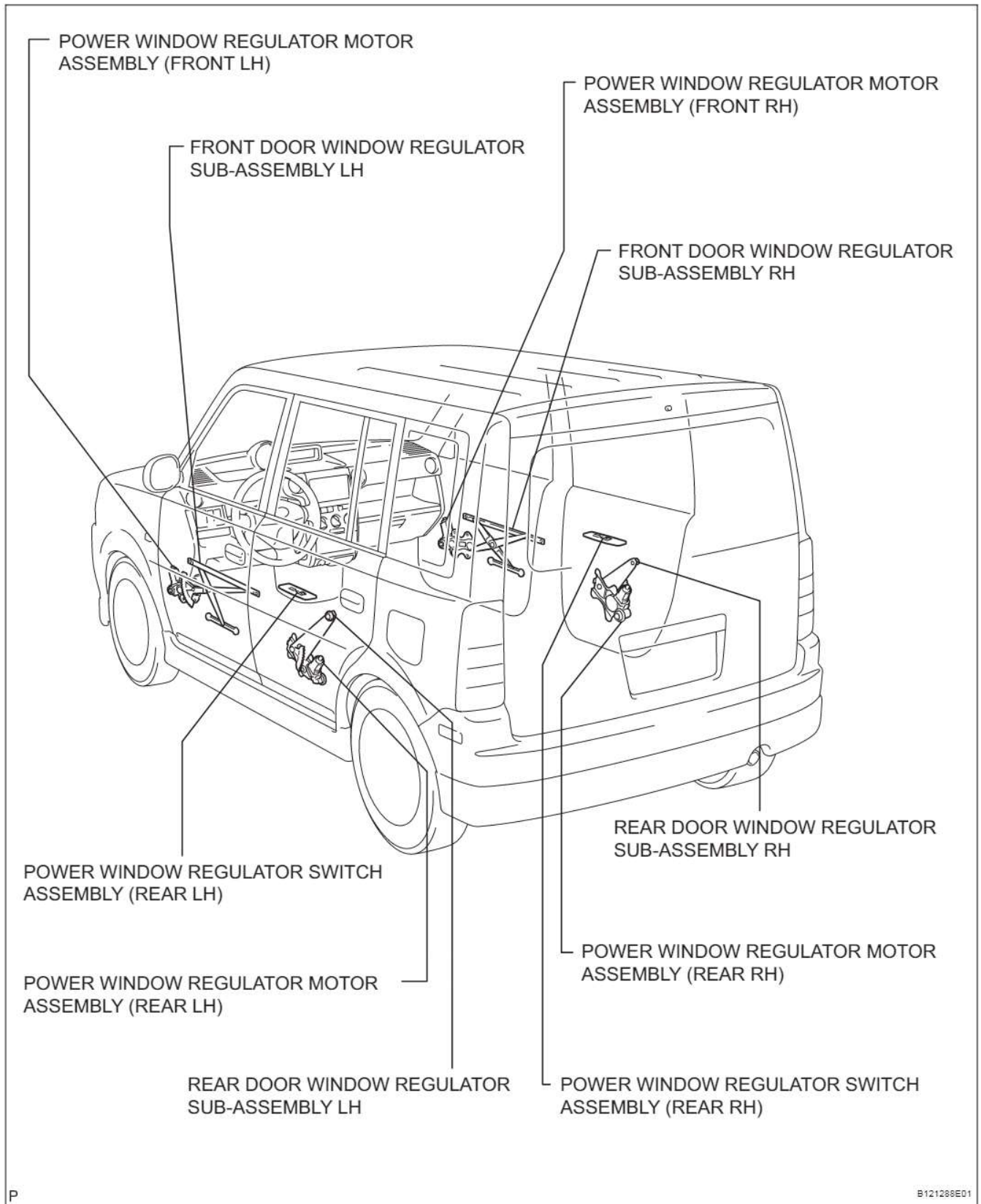
- (f) Disengage the stoppers.

- (g) Using suction cups, remove the glass.

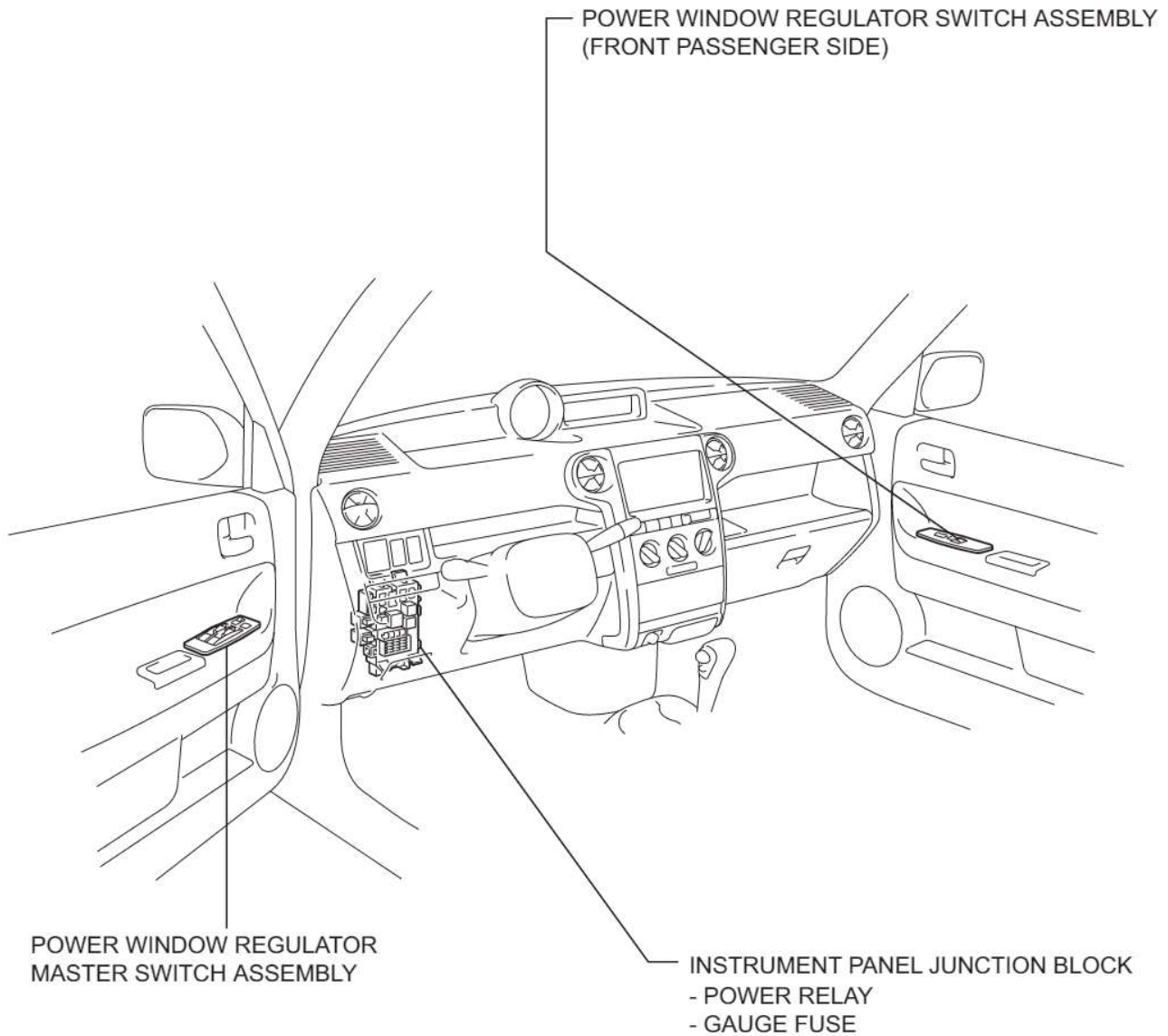
WS

WINDSHIELD / WINDOWGLASS – POWER WINDOW CONTROL SYSTEM

WS-1

POWER WINDOW CONTROL SYSTEM**PARTS LOCATION**

WS

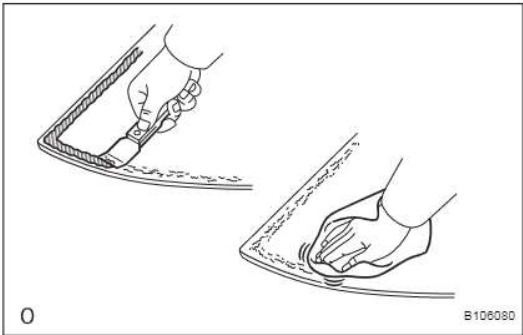
WS-2**WINDSHIELD / WINDOWGLASS – POWER WINDOW CONTROL SYSTEM****WS**

P

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INSTALLATION

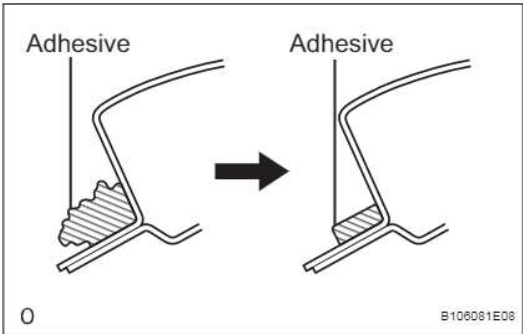
HINT:
A bolt without a torque specification is shown in the standard bolt chart (see page SS-2).



1. CLEAN WINDSHIELD GLASS

- (a) Using a scraper, remove the damaged stoppers, dams and adhesive sticking to the glass.
- (b) Clean the outer edges of the glass with white gasoline.

NOTICE:
Do not touch the glass surface after cleaning it. Even if using new glass, clean it with white gasoline.



2. CLEAN VEHICLE BODY

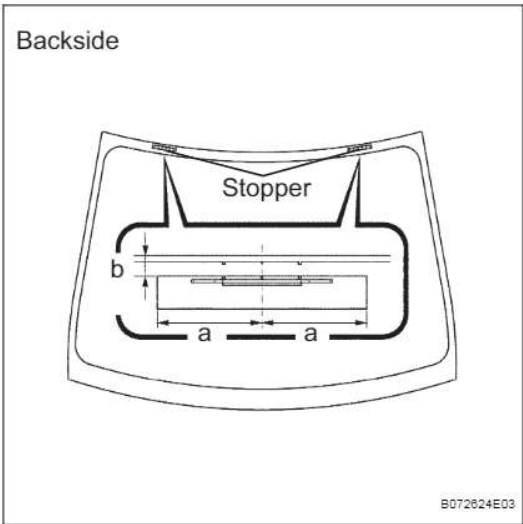
- (a) Clean and shape the contact surface of the vehicle body.
 - (1) On the contact surface of the vehicle body, use a knife to cut away excess adhesive as shown in the illustration.

HINT:
Leave as much adhesive on the vehicle body as possible.

NOTICE:
Be careful not to damage the vehicle body.

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

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



3. INSTALL NO. 2 WINDSHIELD GLASS STOPPER

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

HINT:
If primer is applied to an area that is not is specified, wipe off the primer with white gasoline before it dries.

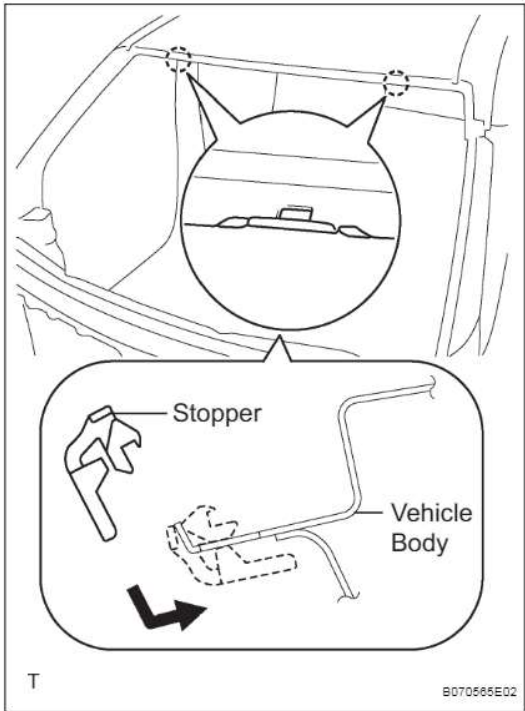
NOTICE:

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

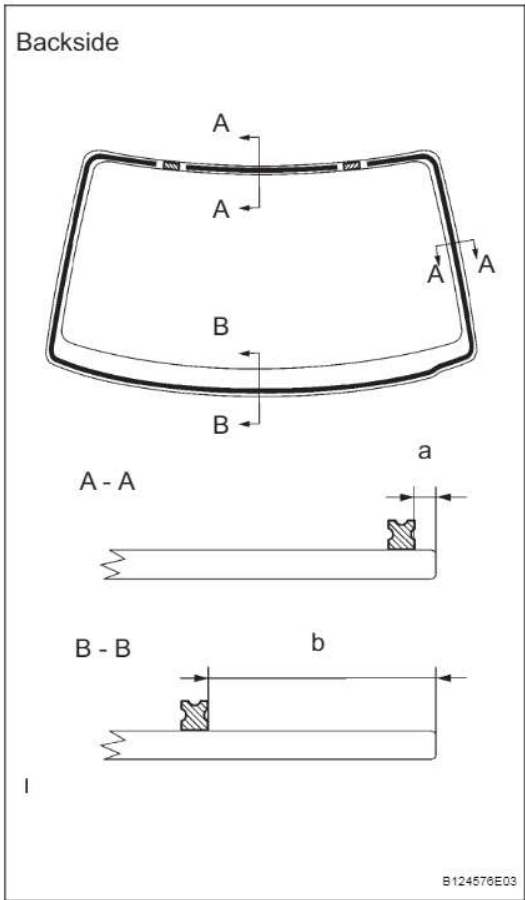
- (b) Install 2 new stoppers onto the windshield glass as shown in the illustration.

Standard measurement

Area	Specified Condition
a	40.0 mm (1.575 in.)
b	9.0 mm (0.354 in.)



4. **INSTALL NO. 1 WINDSHIELD GLASS STOPPER**
(a) Install 2 new stoppers to the vehicle body as shown in the illustration.



5. **INSTALL WINDSHIELD GLASS ADHESIVE DAM**
(a) Apply Primer G to the glass where the glass adhesive dams will be installed.
HINT:
If primer is applied to an area that is not specified, wipe off the primer with white gasoline before it dries.
NOTICE:
• Allow the primer to dry for 3 minutes or more.
• Throw away any leftover primer.
• Do not apply too much primer.
(b) Remove the peeling paper from the adhesive part of the dam. Install the dam (adhesive side) to the window glass (Primer G area), but exclude the stopper areas.

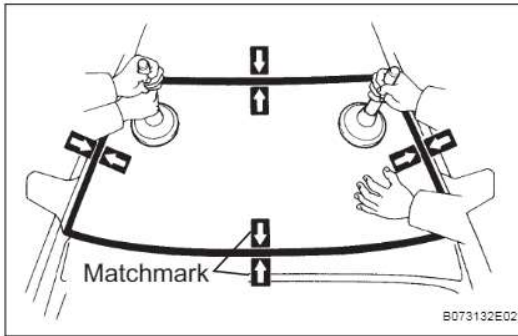
Standard measurement

Area	Specified Condition
a	7.0 mm (0.276 in.)
b	23.5 mm (0.925 in.)

6. **INSTALL WINDSHIELD MOULDING OUTSIDE**
(a) Using a brush or sponge, apply Primer G to the contact surface of the windshield glass.
HINT:
If primer is applied to an area that is not specified, wipe off the primer with white gasoline before it dries.
NOTICE:
• Allow the primer to dry for 3 minutes or more.
• Throw away any leftover primer.
• Do not apply too much primer.
(b) Install a new windshield moulding.

WS-22

WINDSHIELD / WINDOWGLASS – WINDSHIELD GLASS



7. INSTALL WINDSHIELD GLASS

(a) Position the glass.

- (1) Using suction cups, place the glass in the correct position.
- (2) Check that the entire contact surface of the glass rim is perfectly even.
- (3) Place matchmarks on the glass and vehicle body on the locations indicated in the illustration.

HINT:

- Placing matchmarks is only necessary when installing new glass. If it is the reused glass, matchmarks should already be present.
- When reusing the glass, check and correct the matchmark positions.

NOTICE:

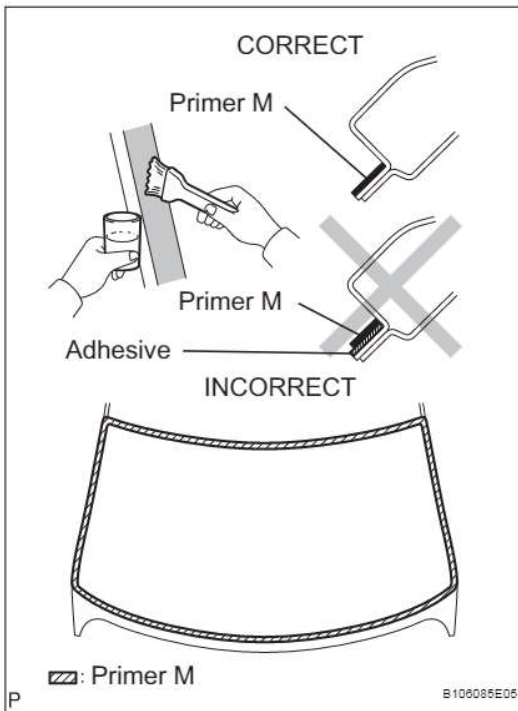
Check that the stoppers are attached to the vehicle body correctly.

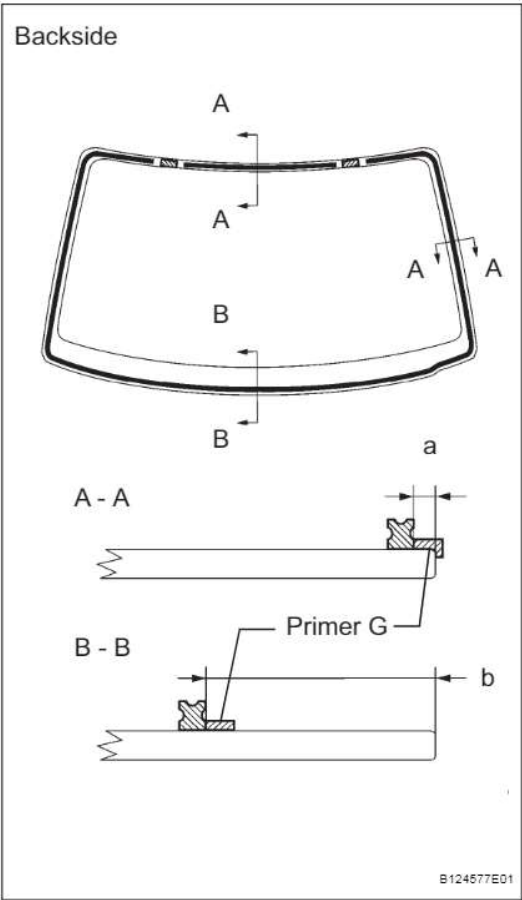
(4) Using suction cups, remove the glass.

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

NOTICE:

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





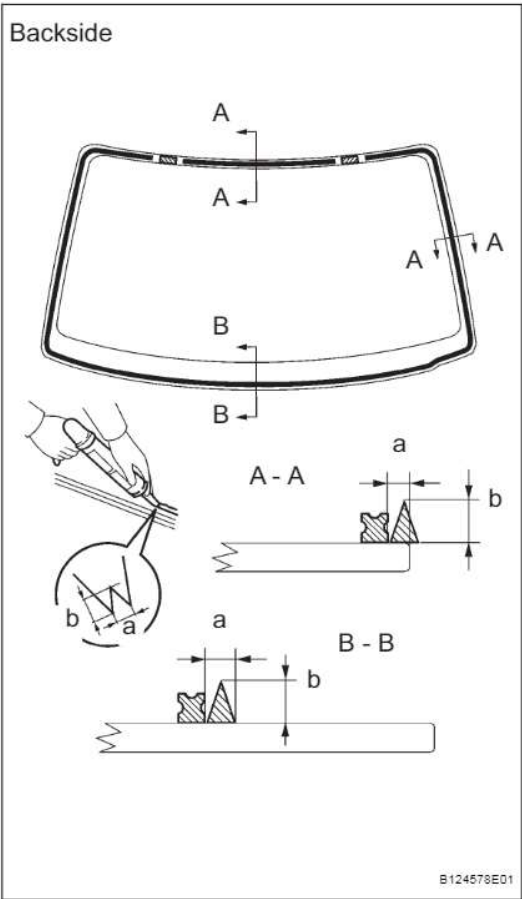
- (c) Using a brush or sponge, apply Primer G to the contact surface of the glass.
Standard measurement

Area	Specified Condition
a	7.0 mm (0.276 in.)
b	23.5 mm (0.925 in.)

HINT:
If the primer is applied to an area that is not specified, apply white gasoline to a clean cloth and wipe off the excess primer.

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

WS



- (d) Apply adhesive to the 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 time frame

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

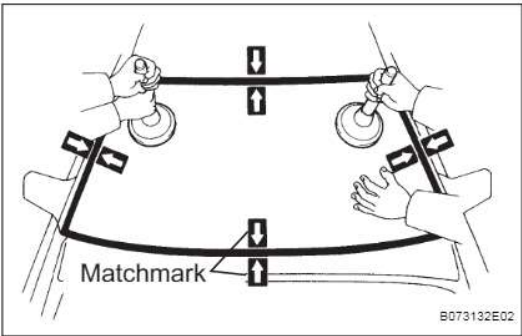
- (2) Load the sealer gun with the cartridge.
(3) Apply adhesive to the glass as shown in the illustration.

Standard measurement

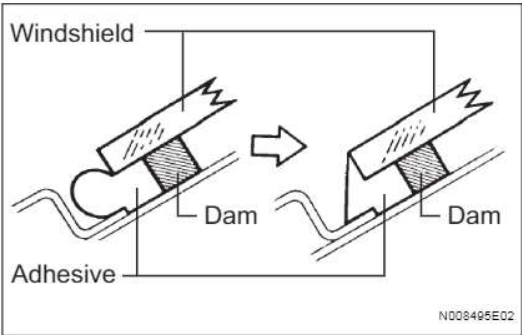
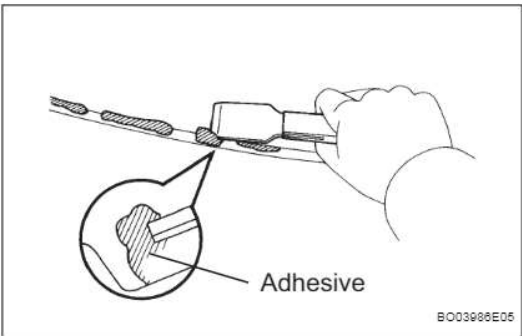
Area	Specified Condition
a	8.0 mm (0.315 in.)
b	12.0 mm (0.472 in.)

WS-24

WINDSHIELD / WINDOWGLASS – WINDSHIELD GLASS



- (e) Install the glass to the vehicle body.
- (1) Using suction cups, position the glass so that the matchmarks are aligned. Press it in gently along the rim.
- NOTICE:**
- Allow the primer to dry for 3 minutes or more.
 - Check that the stoppers are attached to the vehicle body correctly.
 - Check the clearance between the vehicle body and glass.
- (2) Lightly press the outer surface of the glass to ensure that it is securely fit to the vehicle body.
- (3) Using a scraper, remove any excess or protruding adhesive.



HINT:
Apply adhesive onto the glass rim.

NOTICE:
Do not drive the vehicle within the 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

8. INSTALL COWL TOP VENTILATOR LOUVER LH (See page [WW-11](#))
9. INSTALL COWL TOP VENTILATOR LOUVER RH (See page [WW-11](#))
10. INSTALL HOOD TO COWL TOP SEAL (See page [WW-11](#))
11. INSTALL FRONT WIPER ARM LH (See page [WW-11](#))
12. INSTALL FRONT WIPER ARM RH (See page [WW-12](#))
13. INSTALL FRONT WIPER ARM HEAD CAP
14. INSTALL ROOF HEADLINING ASSEMBLY (See page [IR-9](#))
15. INSTALL VISOR HOLDER LH (See page [IR-9](#))
16. INSTALL VISOR HOLDER RH (See page [IR-9](#))
17. INSTALL VISOR ASSEMBLY LH (See page [IR-10](#))

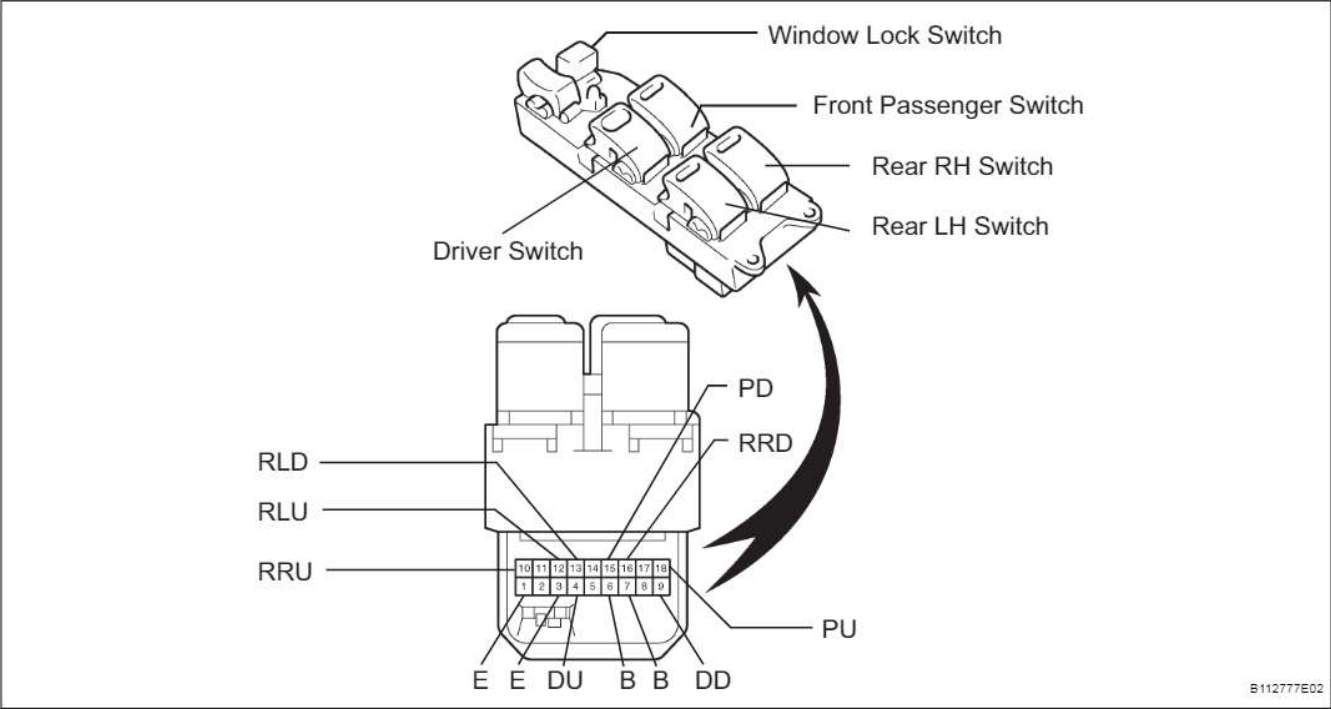
18. INSTALL VISOR ASSEMBLY RH (See page [IR-10](#))
19. INSTALL FRONT PILLAR GARNISH LH (See page [IR-10](#))
20. INSTALL FRONT PILLAR GARNISH RH (See page [IR-10](#))
21. INSTALL ROOM NO. 1 LIGHT ASSEMBLY (See page [IR-9](#))
22. INSTALL ASSIST GRIP SUB-ASSEMBLY (See page [IR-9](#))
23. INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP LH
24. INSTALL FRONT DOOR OPENING TRIM WEATHERSTRIP RH
25. INSTALL INNER REAR VIEW MIRROR ASSEMBLY (See page [MI-5](#))
26. CHECK FOR LEAKS AND REPAIR
 - (a) Conduct a leak test after the adhesive has completely hardened.
 - (b) Seal any leaks with auto glass sealer.
27. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

WS

POWER WINDOW MASTER SWITCH

INSPECTION

1. INSPECT POWER WINDOW REGULATOR MASTER SWITCH ASSEMBLY
- (a) Measure the resistance between each terminal of the connector when the switch is operated.



Standard resistance:
Driver switch

Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
Always (ON / OFF)	UP	1 (E) - 9 (DD) 3 (E) - 9 (DD) 4 (DU) - 6 (B) 4 (DU) - 7 (B)	Below 1 Ω
Always (ON / OFF)	OFF	1 (E) - 4 (DU) 3 (E) - 4 (DU) 1 (E) - 9 (DD) 3 (E) - 9 (DD)	Below 1 Ω
Always (ON / OFF)	DOWN	1 (E) - 4 (DU) 3 (E) - 4 (DU) 6 (B) - 9 (DD) 7 (B) - 9 (DD)	Below 1 Ω
Always (ON / OFF)	AUTO DOWN	1 (E) - 4 (DU) 3 (E) - 4 (DU) 6 (B) - 9 (DD) 7 (B) - 9 (DD)	Below 1 Ω

Front passenger switch

WINDSHIELD / WINDOWGLASS – POWER WINDOW MASTER SWITCH**WS-9**

Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
OFF	UP	1 (E) - 15 (PD) 3 (E) - 15 (PD) 6 (B) - 18 (PU) 7 (B) - 18 (PU)	Below 1 Ω
OFF	OFF	1 (E) - 15 (PD) 3 (E) - 15 (PD) 1 (E) - 18 (PU) 3 (E) - 18 (PU)	Below 1 Ω
OFF	DOWN	1 (E) - 18 (PU) 3 (E) - 18 (PU) 6 (B) - 15 (PD) 7 (B) - 15 (PD)	Below 1 Ω
ON	UP	6 (B) - 18 (PU) 7 (B) - 18 (PU)	Below 1 Ω
ON	OFF	15 (PD) - 18 (PU)	Below 1 Ω
ON	DOWN	6 (B) - 15 (PD) 7 (B) - 15 (PD)	Below 1 Ω

Rear LH switch

Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
OFF	UP	1 (E) - 13 (RLD) 3 (E) - 13 (RLD) 6 (B) - 12 (RLU) 7 (B) - 12 (RLU)	Below 1 Ω
OFF	OFF	1 (E) - 12 (RLU) 3 (E) - 12 (RLU) 1 (E) - 13 (RLD) 3 (E) - 13 (RLD)	Below 1 Ω
OFF	DOWN	1 (E) - 12 (RLU) 3 (E) - 12 (RLU) 6 (B) - 13 (RLD) 7 (B) - 13 (RLD)	Below 1 Ω
ON	UP	6 (B) - 12 (RLU) 7 (B) - 12 (RLU)	Below 1 Ω
ON	OFF	12 (RLU) - 13 (RLD)	Below 1 Ω
ON	DOWN	6 (B) - 13 (RLD) 7 (B) - 13 (RLD)	Below 1 Ω

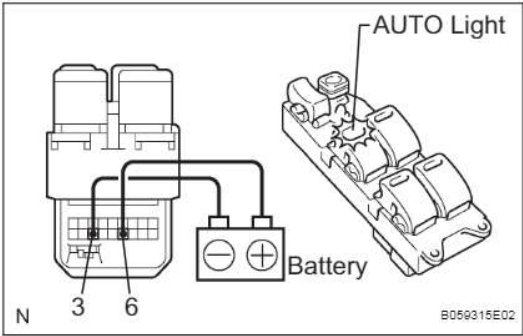
Rear RH switch

Window Lock Switch Condition	Power Window Switch Condition	Tester Connection	Specified Condition
OFF	UP	1 (E) - 16 (RRD) 3 (E) - 16 (RRD) 6 (B) - 10 (RRU) 7 (B) - 10 (RRU)	Below 1 Ω
OFF	OFF	1 (E) - 10 (RRU) 3 (E) - 10 (RRU) 1 (E) - 16 (RRD) 3 (E) - 16 (RRD)	Below 1 Ω
OFF	DOWN	1 (E) - 10 (RRU) 3 (E) - 10 (RRU) 6 (B) - 16 (RRD) 7 (B) - 16 (RRD)	Below 1 Ω
ON	UP	6 (B) - 10 (RRU) 7 (B) - 10 (RRU)	Below 1 Ω
ON	OFF	10 (RRU) - 16 (RRD)	Below 1 Ω
ON	DOWN	6 (B) - 16 (RRD) 7 (B) - 16 (RRD)	Below 1 Ω

WS

WS-10

WINDSHIELD / WINDOWGLASS – POWER WINDOW MASTER SWITCH



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

- (b) Apply battery voltage to the master switch terminals and check the AUTO light.

OK

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 6 (B)	AUTO light illuminates
Battery negative (-) → Terminal 3 (E)	

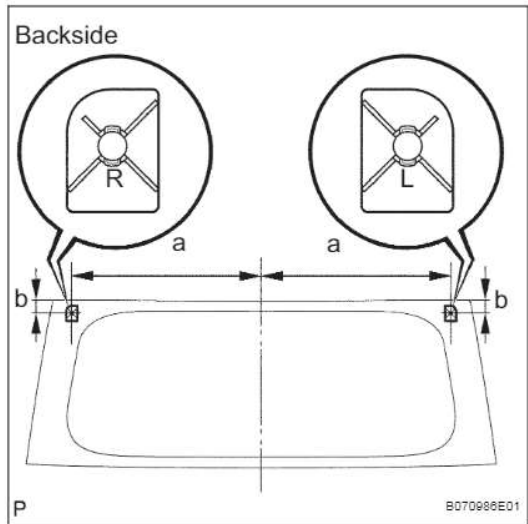
If the result is not as specified, replace the master switch assembly.

WS

WS-28

WINDSHIELD / WINDOWGLASS – BACK DOOR GLASS

- (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 CLIP

- (a) Apply Primer G to the installation part of the clips.
- HINT:
If primer is applied to an area that is not specified, wipe off the primer with white gasoline before it dries.
- (b) Install new clips.

NOTICE:

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

Standard measurement

Area	Specified Condition
a	528.8 mm (20.819 in.)
b	35.8 mm (1.409 in.)

2. INSTALL BACK WINDOW GLASS SPACER

- (a) Apply Primer G to the glass where the spacers will be installed.
- HINT:
If primer is applied to an area that is not specified, wipe off the primer with white gasoline before it dries.
- (b) Install 4 new spacers.

NOTICE:

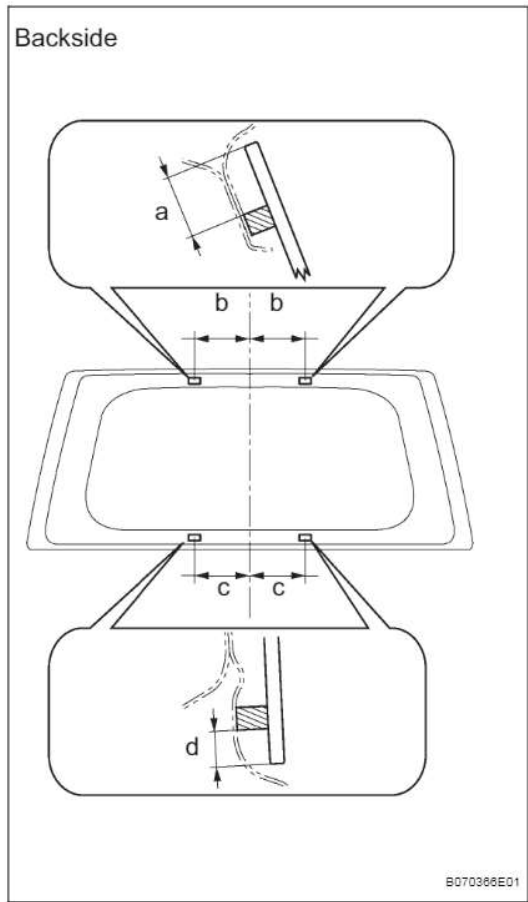
- Allow the primer to dry for 3 minutes or more.
- Throw away any leftover primer.
- Do not apply too much primer.

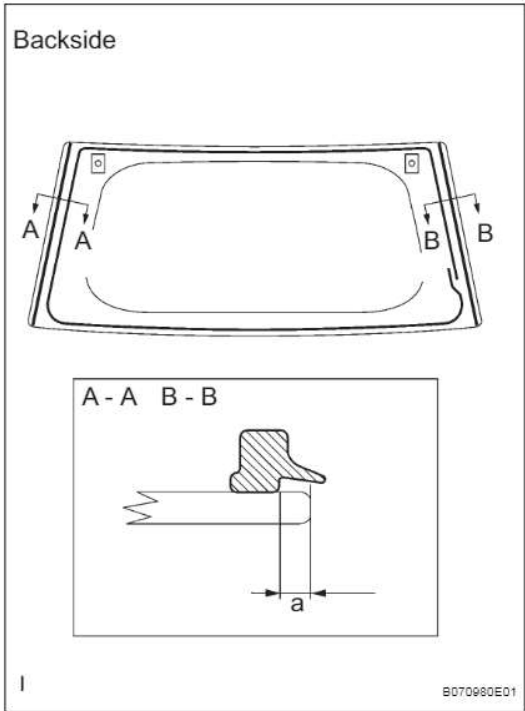
Standard measurement

Area	Specified Condition
a	15.0 mm (0.591 in.)
b	220 mm (8.661 in.)
c	220 mm (8.661 in.)
d	18.0 mm (0.708 in.)

3. INSTALL BACK DOOR WINDOW MOULDING

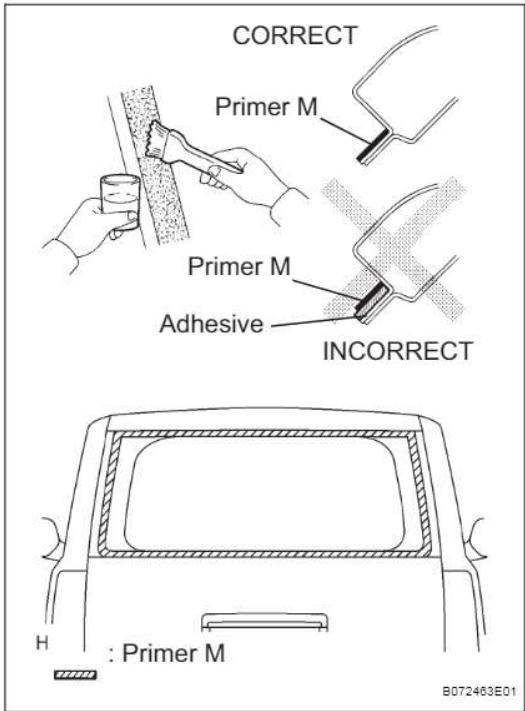
- (a) Apply Primer G to the installation part of the window moulding.
- NOTICE:**
- Allow the primer to dry for 3 minutes or more.
 - Throw away any leftover primer.
 - Do not apply too much primer.





- (b) Install a new moulding LH and RH as shown in the illustration.
- Standard measurement**

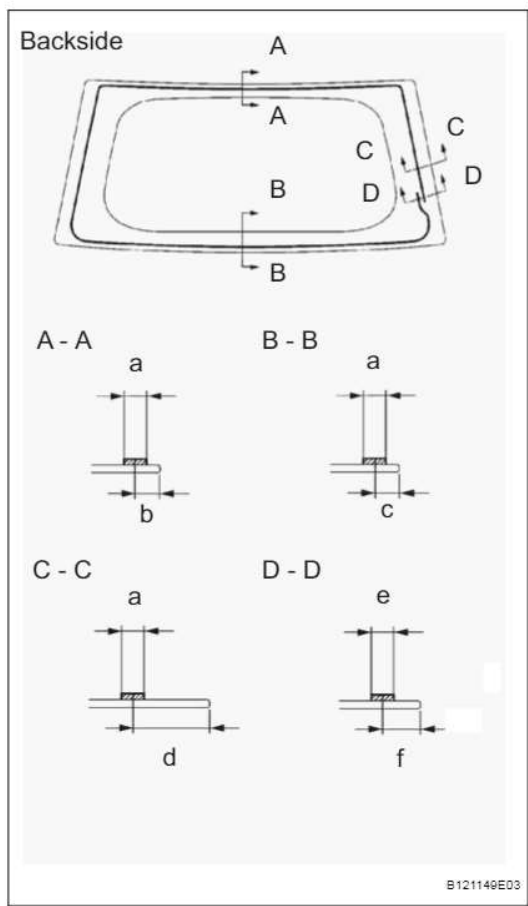
Area	Specified Condition
a	3.0 mm (0.118 in.)



4. INSTALL BACK DOOR GLASS

- (a) Using a brush or sponge, apply Primer M to the exposed part of the vehicle body.
- NOTICE:**
- Allow the primer to dry for 3 minutes or more.
 - Do not apply primer to the adhesive.
 - Throw away any leftover primer.
 - Do not apply too much primer.

WS-30 WINDSHIELD / WINDOWGLASS – BACK DOOR GLASS

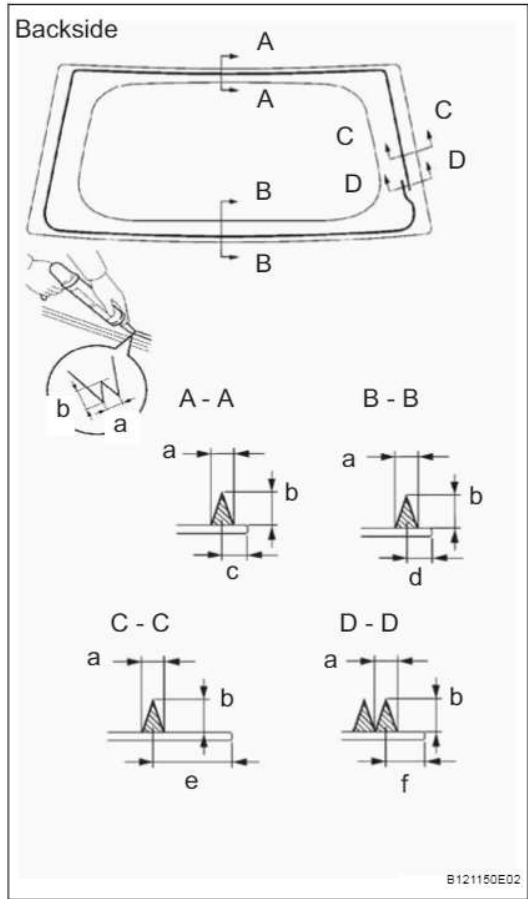


- (b) Using a brush or sponge, apply Primer G to the contact surface of the back door glass.
- Standard measurement**

Area	Specified Condition
a	14.0 mm (0.551 in.)
b	10.0 mm (0.394 in.)
c	12.8 mm (0.504 in.)
d	30.0 mm (1.181 in.)
e	22.0 mm (0.866 in.)
f	38.0 mm (1.496 in.)

HINT:
If primer is applied to an area that is not specified, wipe off the primer with white gasoline before it dries.

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



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

Temperature	Usage Time Frame
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 door glass as shown in the illustration.
- Standard measurement**

Area	Specified Condition
a	8.0 mm (0.315 in.)
b	12.5 mm (0.492 in.)
c	10.0 mm (0.394 in.)
d	12.8 mm (0.504 in.)
e	30.0 mm (1.181 in.)
f	30.0 mm (1.181 in.)

WINDSHIELD / WINDOWGLASS – BACK DOOR GLASS**WS-31**

- (d) Install the back door glass to the vehicle body.
- (1) Hold the back window glass in place securely with tape or equivalent until the adhesive has hardened.

NOTICE:

- Allow the primer coating to dry for 3 minutes or more.
- Check that the clips are attached to the vehicle body correctly.
- Check the clearance between the vehicle body and glass.

- (2) Lightly press the front surface of the back door glass to ensure that the back door glass is securely fit to the vehicle body.

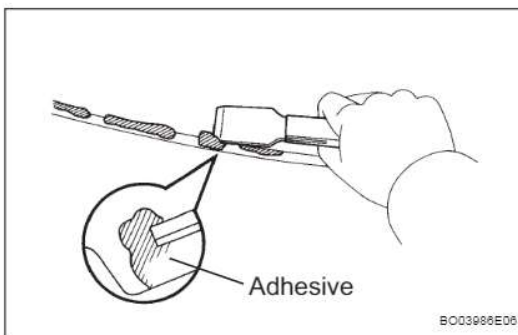
- (3) Using a scraper, remove any excess or protruding adhesive.

HINT:

Apply adhesive onto the glass rim.

NOTICE:

Do not drive the vehicle within the time written in the table below.

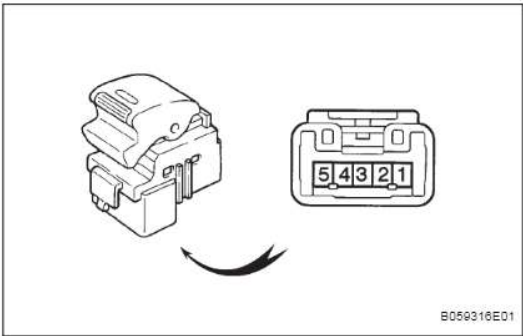
Minimum time

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.

6. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL**WS**



FRONT PASSENGER SIDE POWER WINDOW SWITCH

INSPECTION

1. INSPECT POWER WINDOW REGULATOR SWITCH ASSEMBLY

- (a) Measure the resistance between each terminal of the connector when the switch is operated.

Standard 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

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

WS

WS-34**WINDSHIELD / WINDOWGLASS – WINDOW DEFOGGER SYSTEM**

SYSTEM DESCRIPTION**1. GENERAL**

The defogger system's thin heater wires are attached to the inside of the rear window and defog the window surface quickly. The indicator light illuminates while the system is operating. The system automatically turns off after approximately 15 minutes.

WS

WINDSHIELD / WINDOWGLASS – WINDOW DEFOGGER SYSTEM

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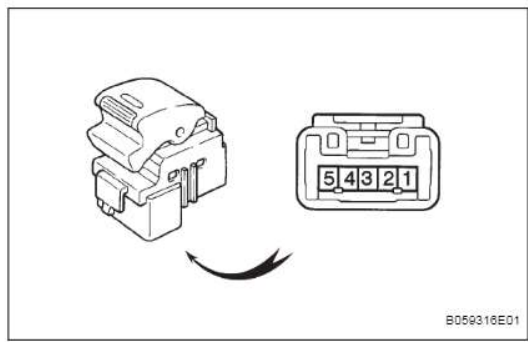
PROBLEM SYMPTOMS TABLE**HINT:**

Use the table below to help determine the cause of the problem symptom. The potential causes of the symptoms are listed in order of probability in the "Suspected Area" column of the table. Check each symptom by checking the suspected areas in the order they are listed. Replace parts as necessary.

Window defogger system

Symptom	Suspected area	See page
Rear window defogger does not operate (Indicator ON)	1. DEF fuse	WS-32
	2. Defogger relay	WS-37
	3. Rear window defogger wire	WS-38
	4. Wire harness	
Rear window defogger does not operate (Indicator OFF)	1. DEF fuse	WS-32
	2. Defogger relay	WS-37
	3. Center cluster module switch	WS-35
	4. Rear window defogger wire	WS-38
	5. Wire harness	

WS



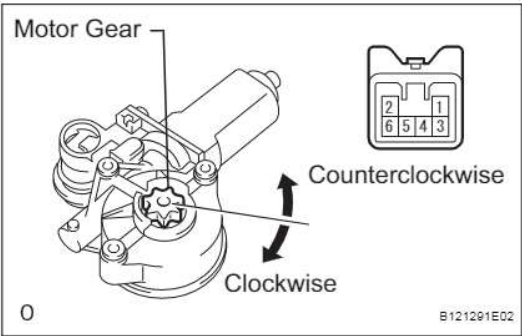
REAR POWER WINDOW SWITCH

INSPECTION

1. INSPECT POWER WINDOW REGULATOR SWITCH ASSEMBLY (REAR LH AND REAR RH)
- (a) Measure the resistance between each terminal of the connector when the switch is operated.
- Standard 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

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



POWER WINDOW REGULATOR MOTOR

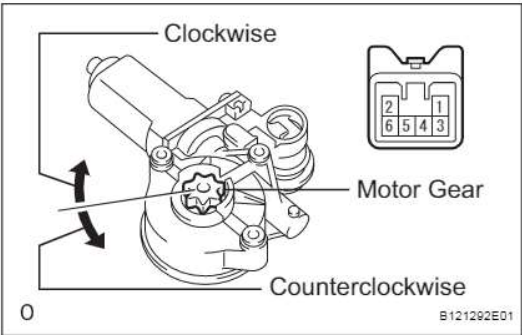
INSPECTION

1. INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY (FRONT LH)

- (a) Check operation of the regulator motor.
- (1) Apply battery voltage to the motor terminals.
 - (2) Check that the motor rotates smoothly.
- OK**

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 5 Battery negative (-) → Terminal 4	Motor gear rotates clockwise
Battery positive (+) → Terminal 4 Battery negative (-) → Terminal 5	Motor gear rotates counterclockwise

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

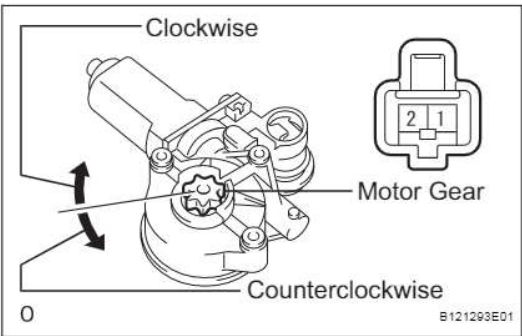


2. INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY (FRONT RH)

- (a) Check operation of the regulator motor.
- (1) Apply battery voltage to the motor terminals.
 - (2) Check that the motor rotates smoothly.
- OK**

Measurement Condition	Specified Condition
Battery positive (+) → Terminal 4 Battery negative (-) → Terminal 5	Motor gear rotates clockwise
Battery positive (+) → Terminal 5 Battery negative (-) → Terminal 4	Motor gear rotates counterclockwise

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



3. INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY (REAR LH)

- (a) Check operation of the regulator motor.
- (1) Apply battery voltage to the motor terminals.
 - (2) Check that the motor rotates smoothly.
- OK**

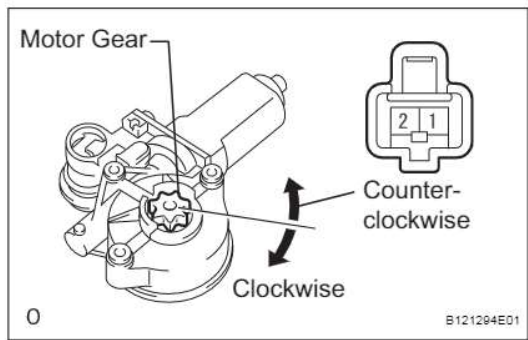
Measurement Condition	Specified Condition
Battery positive (+) → Terminal 2 Battery negative (-) → Terminal 1	Motor gear rotates clockwise
Battery positive (+) → Terminal 1 Battery negative (-) → Terminal 2	Motor gear rotates counterclockwise

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

WS

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WINDSHIELD / WINDOWGLASS – POWER WINDOW REGULATOR MOTOR



4. INSPECT POWER WINDOW REGULATOR MOTOR ASSEMBLY (REAR RH)

- (a) Check operation of the regulator motor.
- (1) Apply battery voltage to the motor terminals.
 - (2) Check that the motor rotates smoothly.

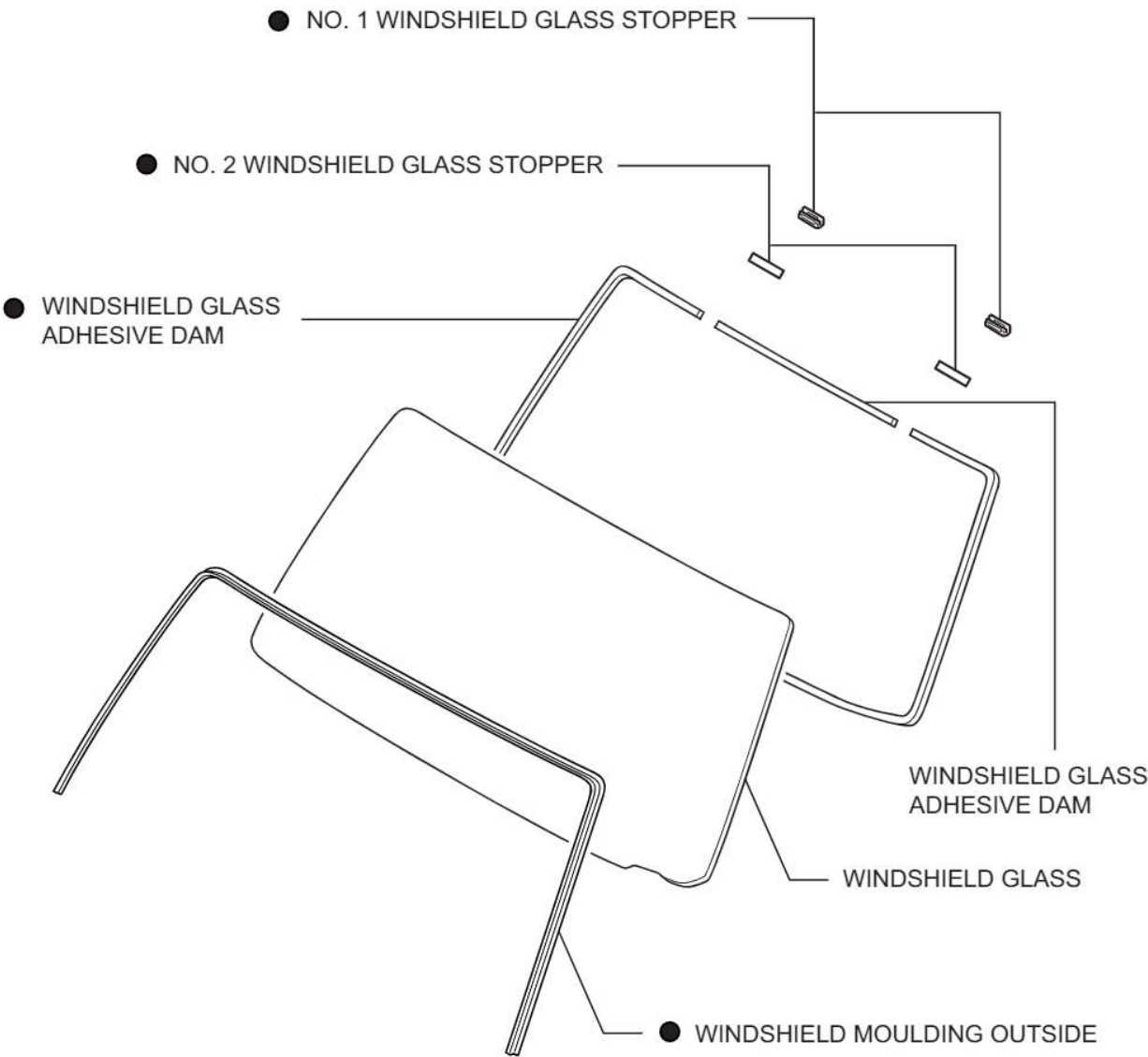
OK

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

WINDSHIELD GLASS
COMPONENTS



WS

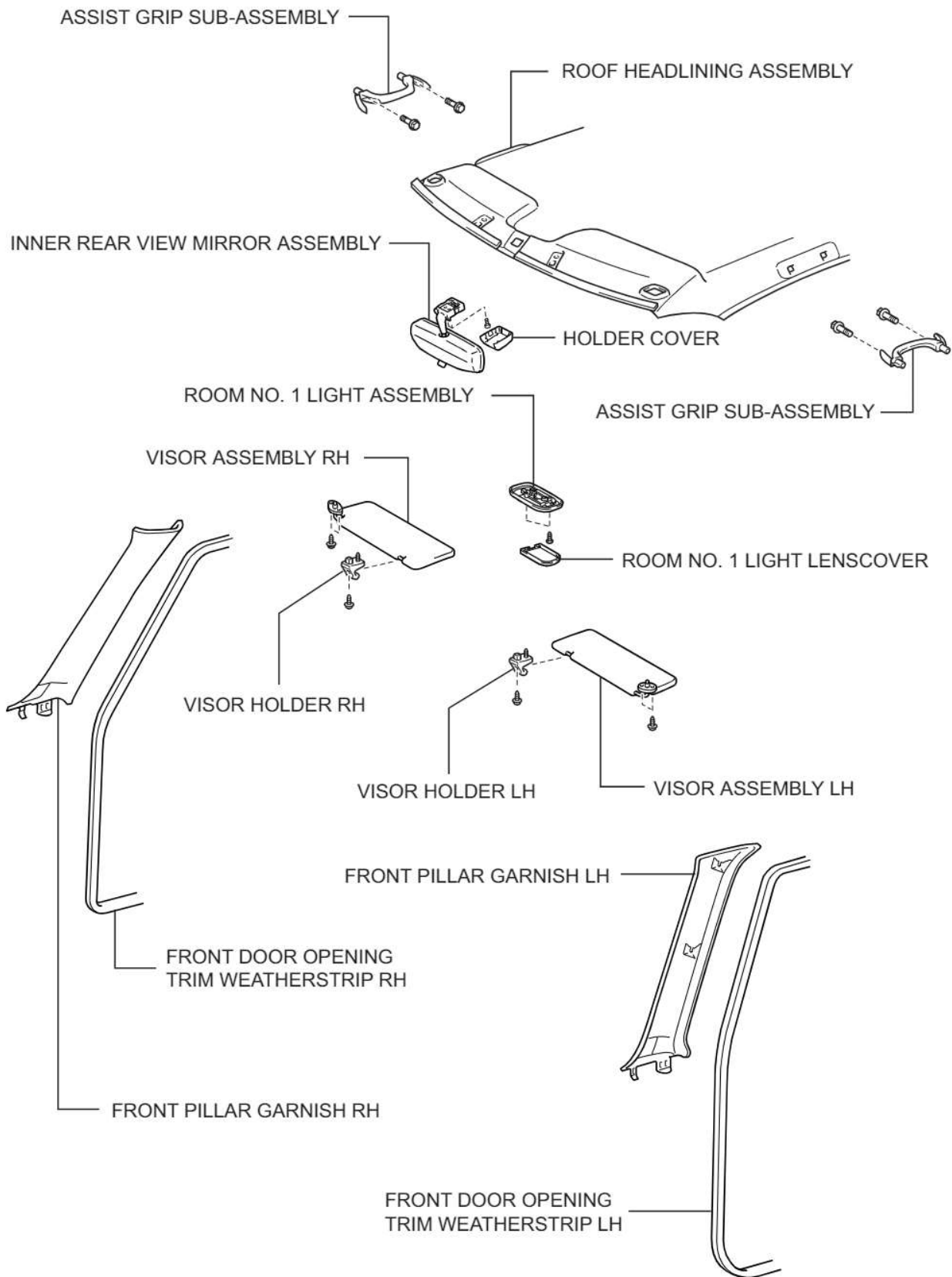
● Non-reusable part

H

B121139E01

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WINDSHIELD / WINDOWGLASS – WINDSHIELD GLASS

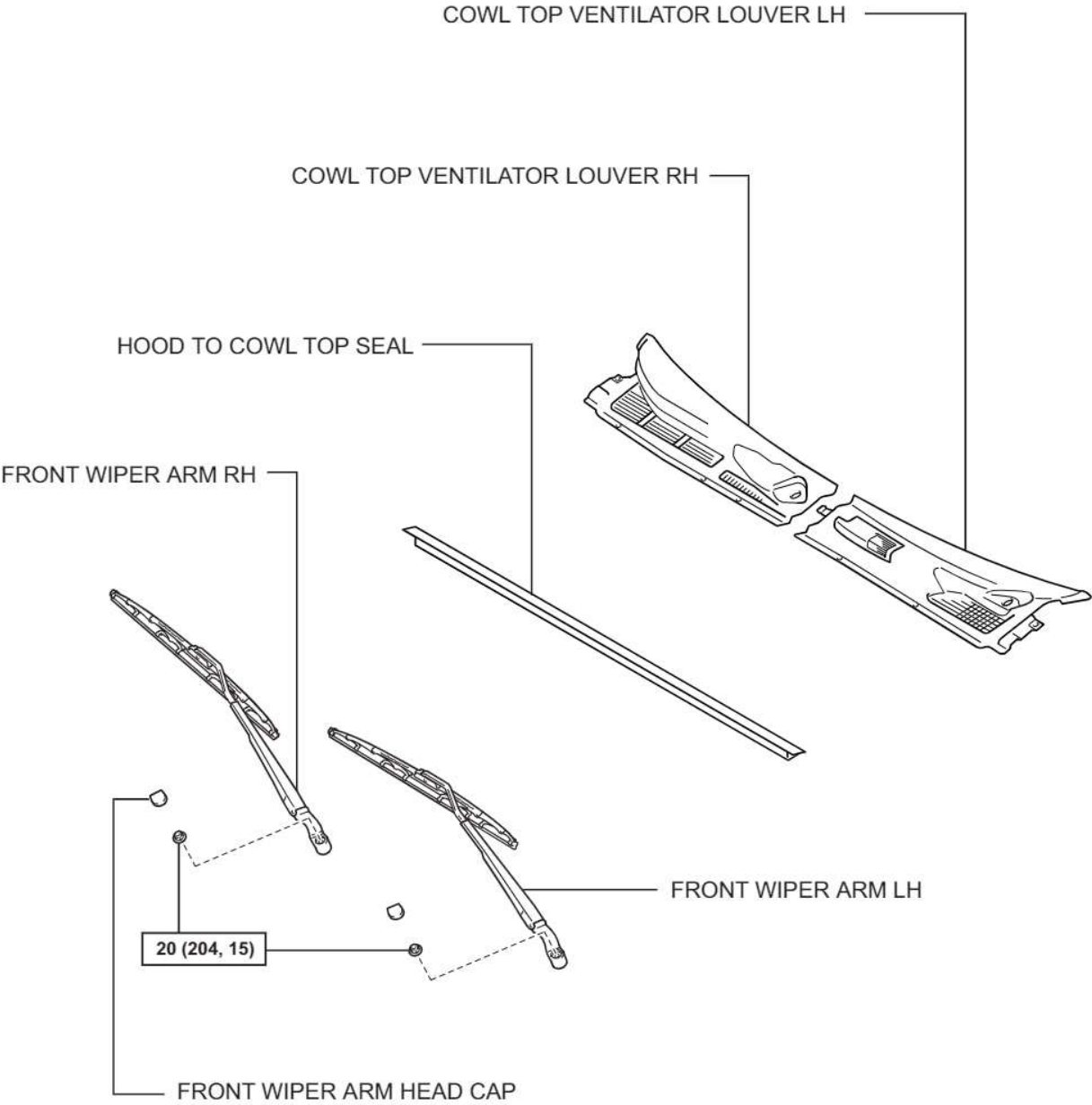


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WINDSHIELD / WINDOWGLASS – WINDSHIELD GLASS

WS-17



WS

N*m (kgf*cm, ft.*lbf) : Specified torque

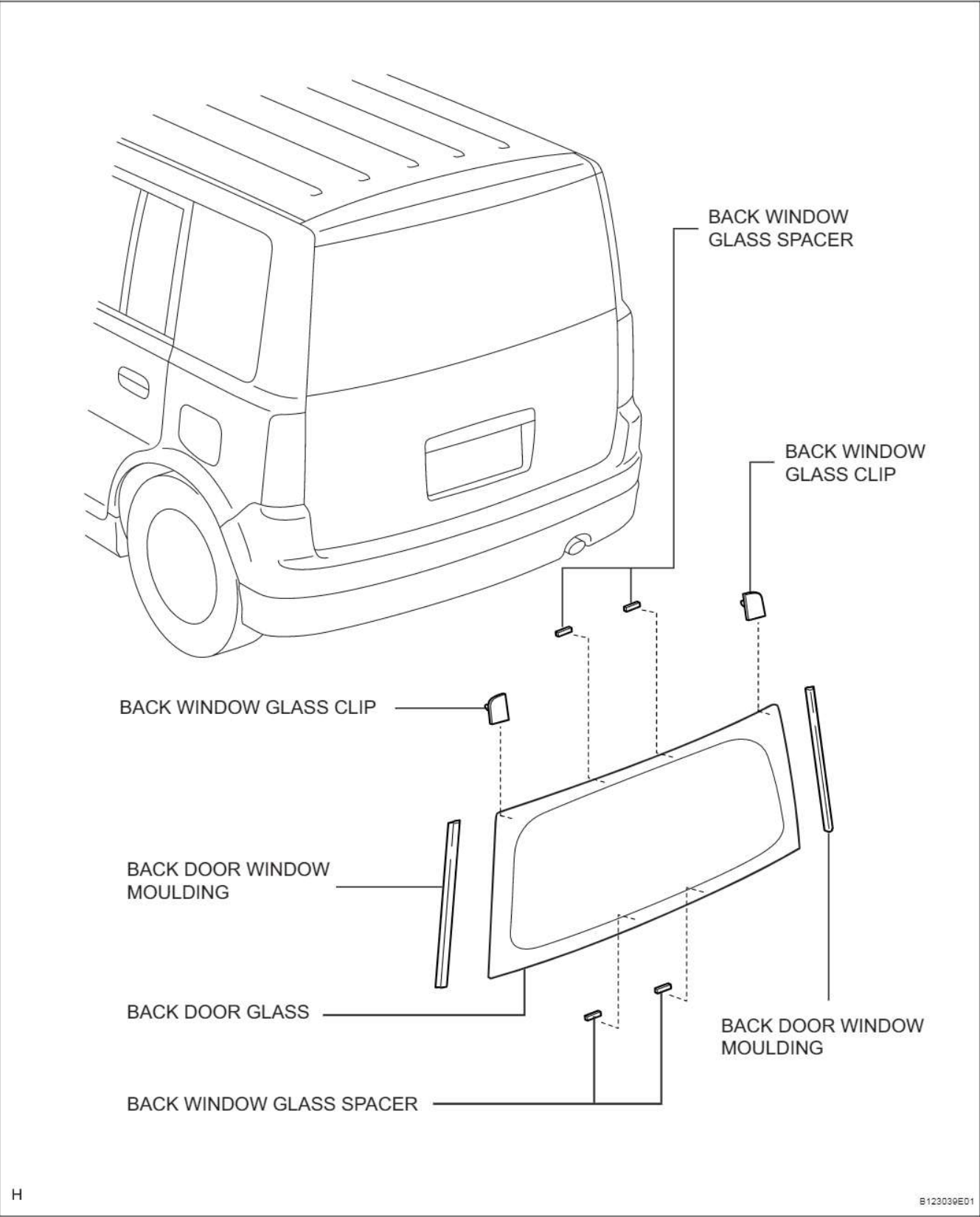
H

B121140E01

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WINDSHIELD / WINDOWGLASS – BACK DOOR GLASS

BACK DOOR GLASS
COMPONENTS



WINDSHIELD / WINDOWGLASS – BACK DOOR GLASS

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REMOVAL**1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL****CAUTION:**

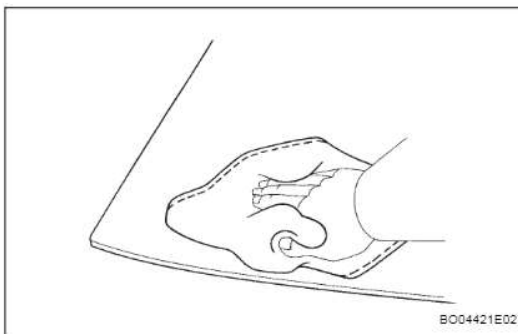
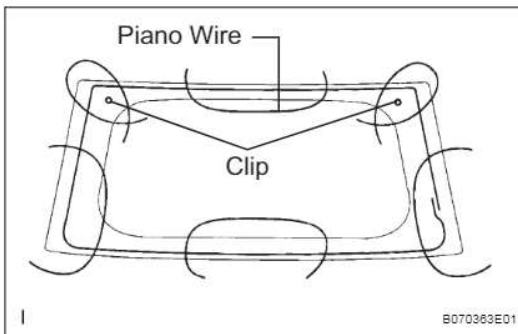
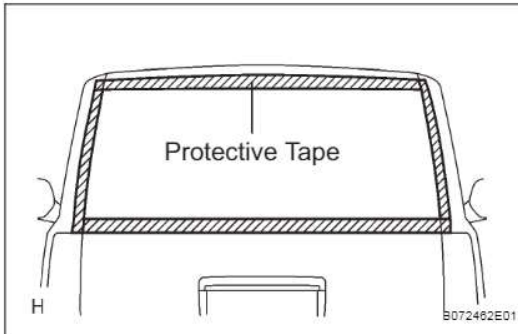
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

2. REMOVE BACK DOOR GLASS

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

NOTICE:

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

**3. CLEAN BACK DOOR GLASS**

- (a) Clean the outer edge of the back door glass with white gasoline.

NOTICE:

- Do not touch the back door glass surface after cleaning it.
- Be careful not to damage the glass.
- Even if using new back door glass, clean the back door glass with white gasoline.

4. CLEAN VEHICLE BODY

- (a) Using a scraper, remove the moulding and adhesive from the back door glass.

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

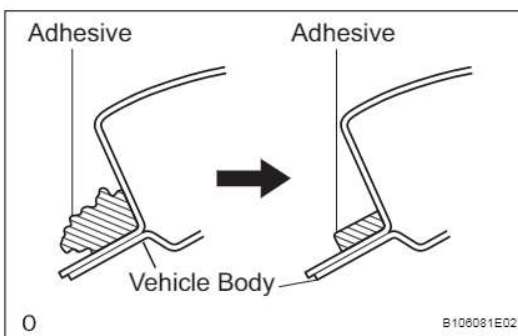
- (1) On the contact surface of the vehicle body, use a knife to cut away excess adhesive as shown in the illustration.

HINT:

Leave as much adhesive on the vehicle body as possible.

NOTICE:

Be careful not to damage the vehicle body.



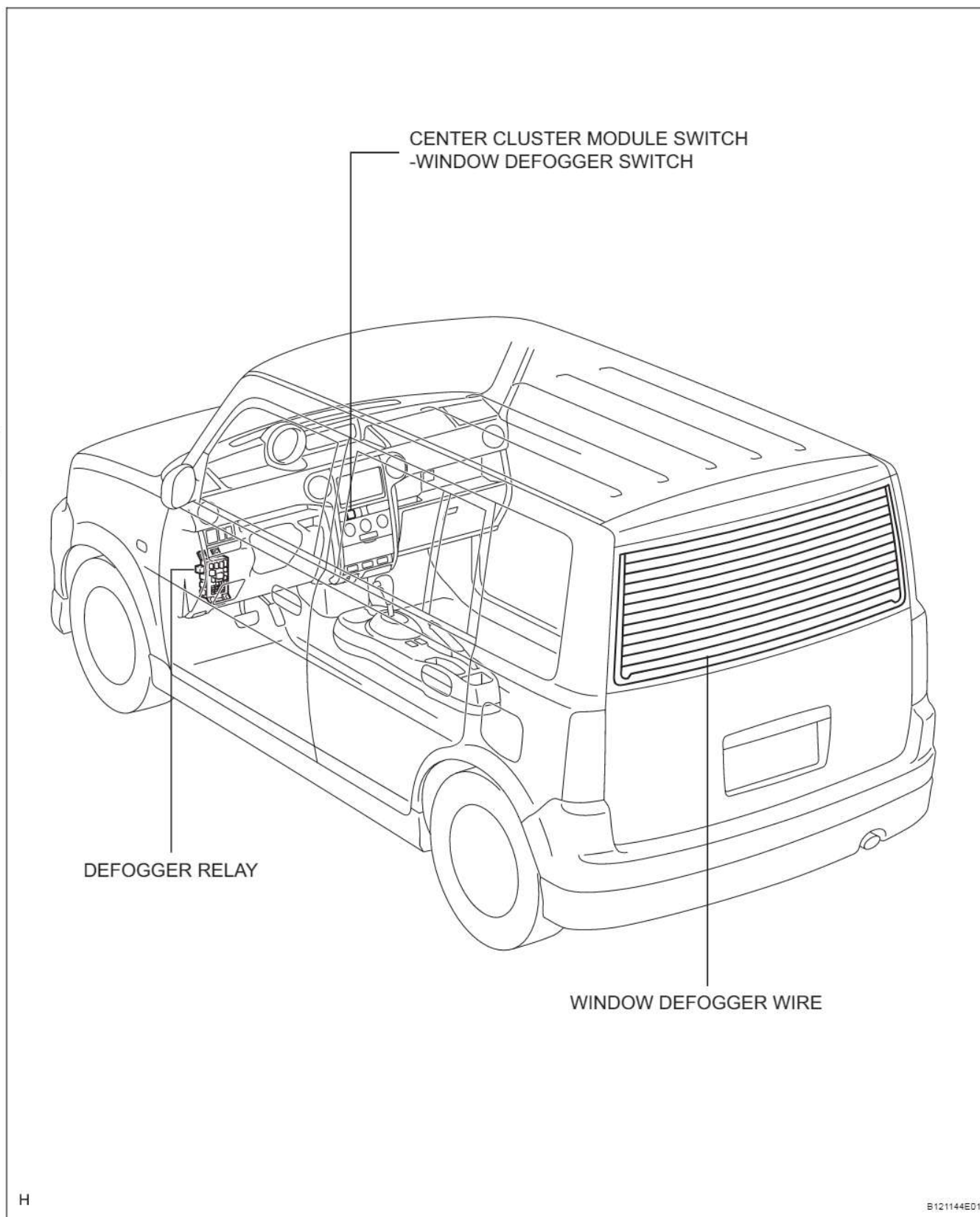
WS

WS-32

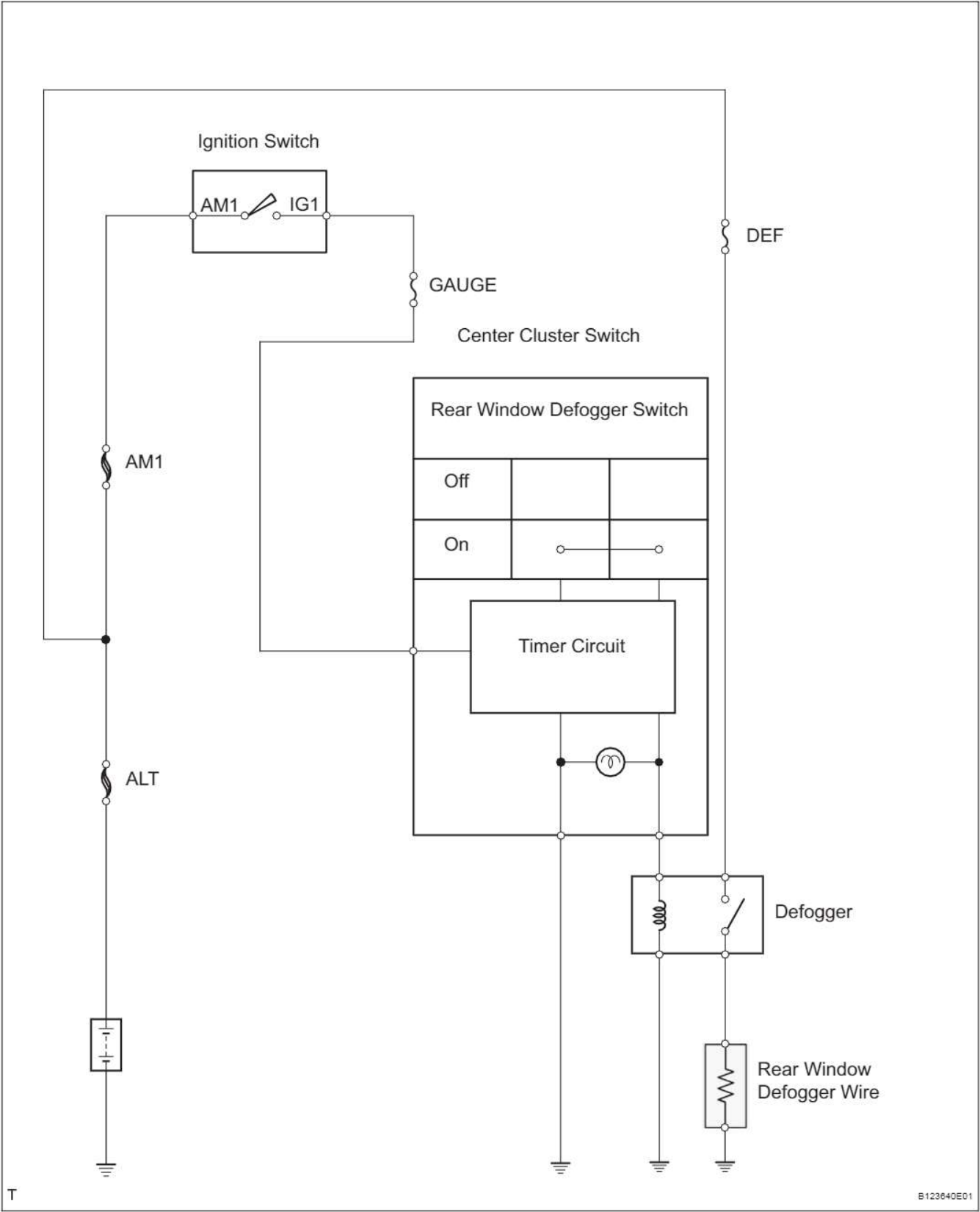
WINDSHIELD / WINDOWGLASS – WINDOW DEFOGGER SYSTEM

WINDOW DEFOGGER SYSTEM

PARTS LOCATION



SYSTEM DIAGRAM



WS

WINDOW DEFOGGER SWITCH

REMOVAL

1. DISCONNECT CABLE FROM NEGATIVE BATTERY TERMINAL

CAUTION:

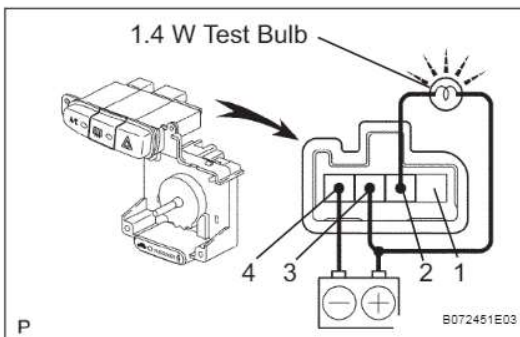
Wait at least 90 seconds after disconnecting the cable from the negative (-) battery terminal to prevent airbag and seat belt pretensioner activation.

2. REMOVE HEATER CONTROL KNOB (See page AC-104)
3. REMOVE INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY CENTER (See page IP-6)
4. REMOVE CENTER CLUSTER MODULE SWITCH

INSPECTION

1. INSPECT CENTER CLUSTER MODULE SWITCH (DEFOGGER SWITCH)

- (a) Check operation of the defogger timer.
 - (1) Connect the battery's positive (+) lead to terminal 3 and the negative (-) lead to terminal 4.
 - (2) Connect a 1.4 W test bulb as shown in the illustration.
 - (3) Push the rear window defogger switch. Check that the switch and test bulb illuminate for 12 to 18 minutes, and then check that they go off. If the result is not as specified, replace the switch.


WS

WS-36**WINDSHIELD / WINDOWGLASS – WINDOW DEFOGGER SWITCH**

INSTALLATION

1. INSTALL CENTER CLUSTER MODULE SWITCH
2. INSTALL INSTRUMENT CLUSTER FINISH PANEL SUB-ASSEMBLY CENTER (See page [IP-12](#))
3. INSTALL HEATER CONTROL KNOB (See page [IP-13](#))
4. CONNECT CABLE TO NEGATIVE BATTERY TERMINAL

WS

REMOVAL

HINT:

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

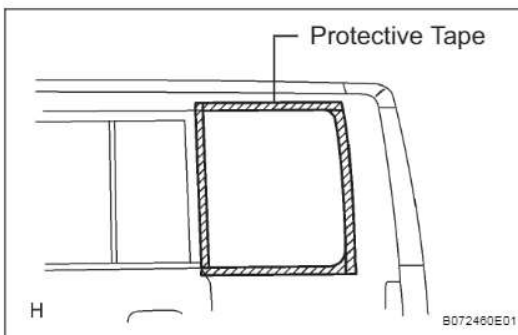
1. REMOVE REAR SEATBACK ASSEMBLY RH (See page [SE-22](#))
2. REMOVE REAR SEATBACK ASSEMBLY LH (See page [SE-22](#))
3. REMOVE REAR SEAT CUSHION WITH COVER PAD SUB-ASSEMBLY (See page [SE-22](#))
4. REMOVE CHILD RESTRAINT SEAT ANCHOR BRACKET SUB-ASSEMBLY (See page [SE-22](#))
5. REMOVE REAR SEATBACK HINGE SUB-ASSEMBLY RH (See page [SE-23](#))
6. REMOVE BACK DOOR WEATHERSTRIP
7. REMOVE REAR DOOR SCUFF PLATE RH (See page [IR-6](#))
8. REMOVE REAR DOOR OPENING TRIM WEATHERSTRIP RH
9. REMOVE NO. 2 DECK BOARD
10. REMOVE NO. 1 DECK BOARD
11. REMOVE DECK FLOOR BOX RH
12. REMOVE DECK FLOOR BOX LH
13. REMOVE REAR DECK TRIM COVER (See page [IR-11](#))
14. REMOVE REAR SEAT 3 POINT TYPE BELT ASSEMBLY OUTER RH (See page [SB-28](#))
15. REMOVE DECK TRIM SIDE PANEL ASSEMBLY RH (See page [IR-7](#))
16. REMOVE ROOF SIDE GARNISH INNER RH (See page [IR-7](#))
17. REMOVE QUARTER WINDOW ASSEMBLY

HINT:

Apply protective tape to the outer surface of the vehicle body to prevent scratches.

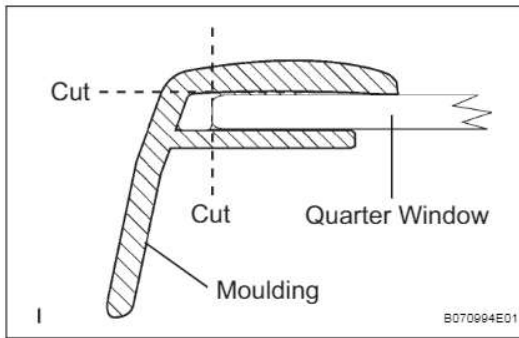
NOTICE:

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


WS

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WINDSHIELD / WINDOWGLASS – QUARTER WINDOW GLASS



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

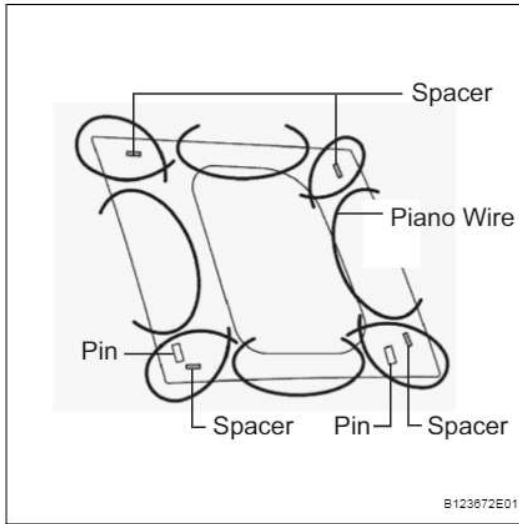
NOTICE:

Do not damage the body with the knife.

- (b) Remove the remaining moulding.

HINT:

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

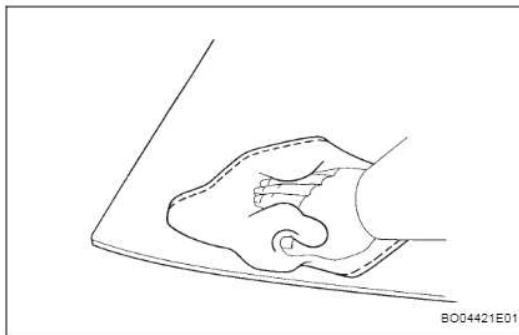


- (c) From the interior, insert a piano wire between the vehicle body and the quarter window glass as shown in the illustration.
- (d) Tie objects that can serve as handles (for example, wooden blocks) to all wire ends.
- (e) Cut through the adhesive by pulling the piano wire around the quarter window glass.

NOTICE:

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

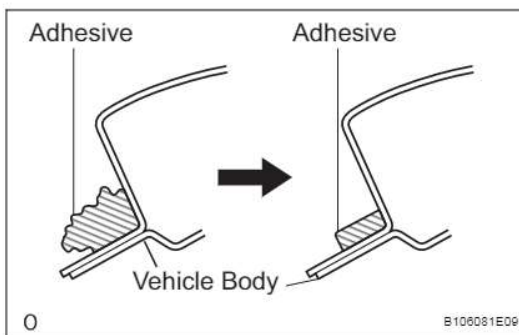
- (f) Using suction cups, remove the quarter window glass.

**18. CLEAN QUARTER WINDOW ASSEMBLY**

- (a) Clean the outer edges of the glass with white gasoline.

NOTICE:

- Do not touch the glass surface after cleaning it.
- Be careful not to damage the glass.
- Even if using new glass, clean the glass with white gasoline.

**19. 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

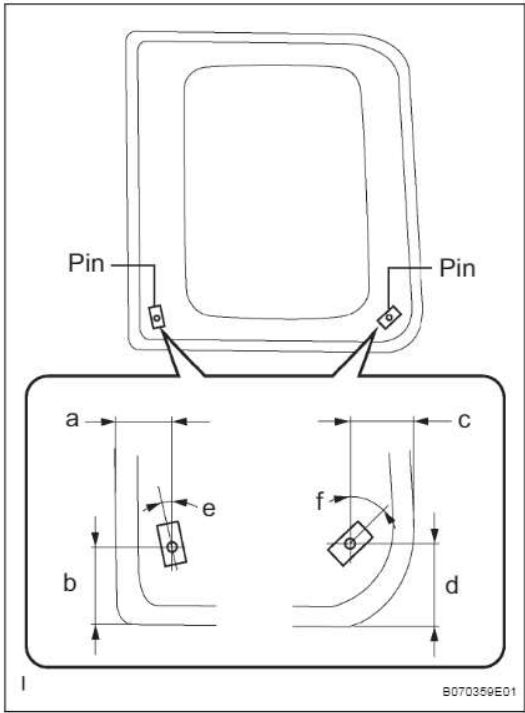
- HINT:
- Use the same procedures for the LH side and RH side.
 - The procedures listed below are for the RH side.
 - A bolt without a torque specification is shown in the standard bolt chart (see page SS-2).

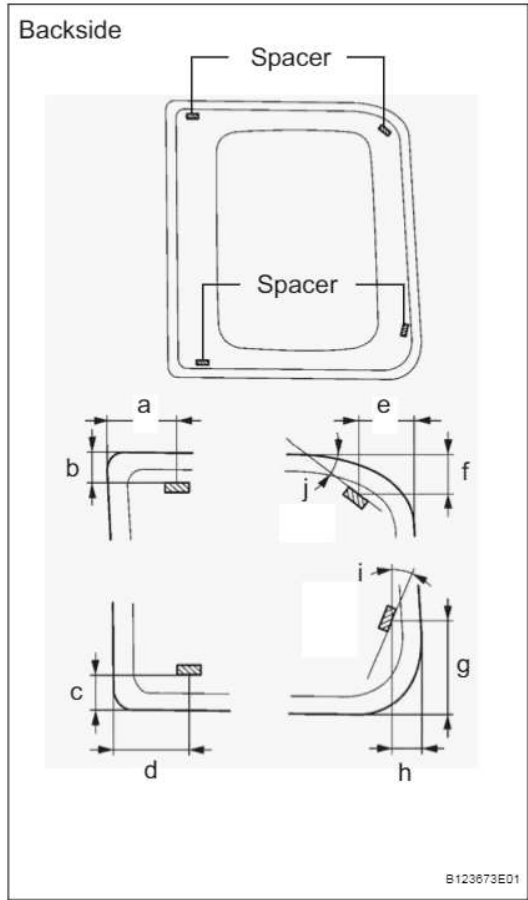
1. INSTALL NO. 1 QUARTER WINDOW GUIDE PIECE PIN

- (a) Using a brush or sponge, apply Primer G to the installation part of the pins.
- (b) Install new pins.

- NOTICE:**
- Allow the primer coating to dry for 3 minutes or more.
 - Throw away any leftover primer.
 - Do not apply too much primer.
- Standard measurement

Area	Specified Condition
a	40.0 mm (1.575 in.)
b	40.0 mm (1.575 in.)
c	37.0 mm (1.457 in.)
d	42.0 mm (1.654 in.)
e	11°
f	46.4°





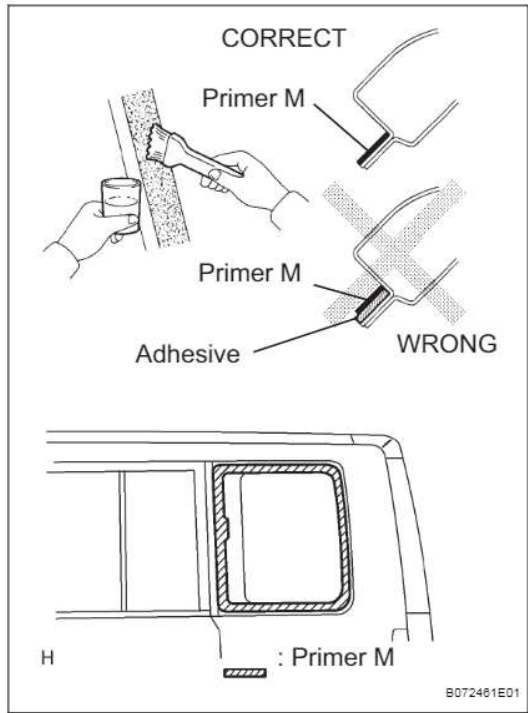
2. INSTALL QUARTER WINDOW GLASS SPACER

- (a) Using a brush or sponge, apply Primer G to the installation part of the spacers.
- (b) Install new spacers.

NOTICE:

- Allow the primer coating to dry for 3 minutes or more.
 - Throw away any leftover primer.
 - Do not apply too much primer.
- Standard measurement

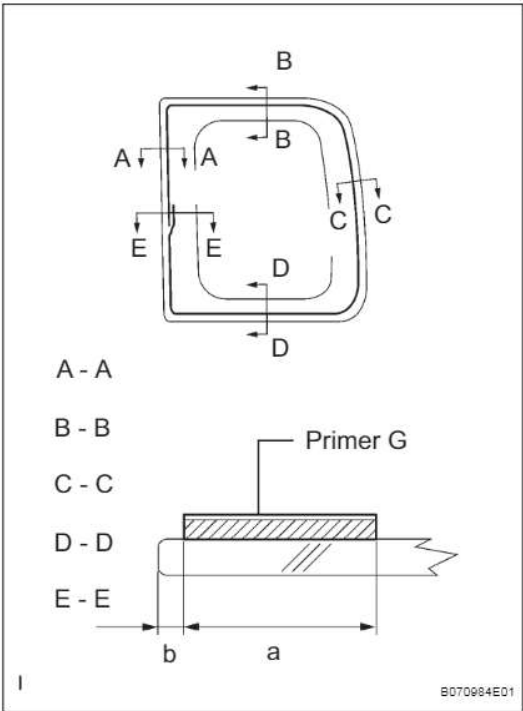
Area	Specified Condition
a	41.0 mm (1.614 in.)
b	19.0 mm (0.748 in.)
c	20.0 mm (0.787 in.)
d	45.0 mm (1.772 in.)
e	28.0 mm (1.102 in.)
f	23.0 mm (0.906 in.)
g	63.0 mm (2.480 in.)
h	21.0 mm (0.827 in.)
i	4°
j	31°



3. INSTALL QUARTER WINDOW ASSEMBLY RH

WINDSHIELD / WINDOWGLASS – QUARTER WINDOW GLASS

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

NOTICE:

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

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

Standard measurement

Item		Specified Condition
A - A	a	14.0 mm (0.551 in.)
	b	8.6 mm (0.338 in.)
B - B	a	14.0 mm (0.551 in.)
	b	5.0 mm (0.197 in.)
C - C	a	14.0 mm (0.551 in.)
	b	6.0 mm (0.236 in.)
D - D	a	22.0 mm (0.866 in.)
	b	8.6 mm (0.339 in.)

HINT:

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

NOTICE:

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

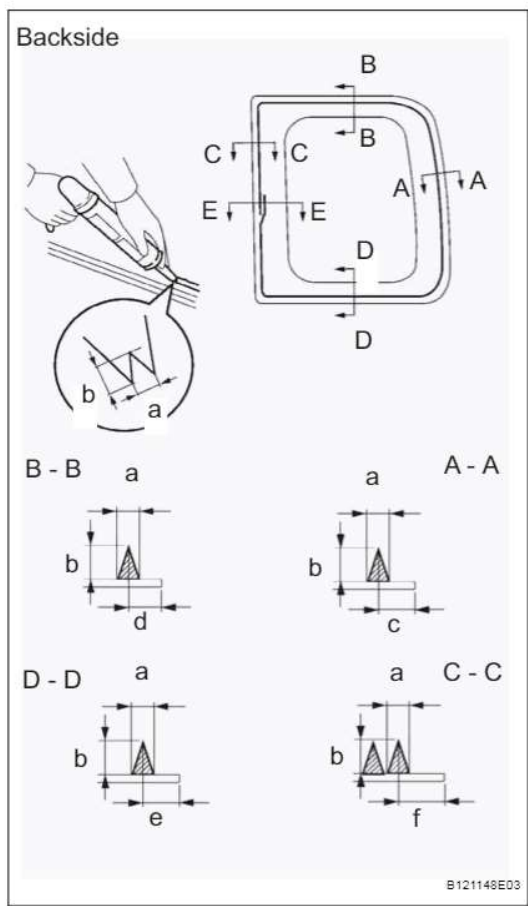
- (c) Apply adhesive to the quarter window glass.

Adhesive:

Part No. 08850-00801 or equivalent

WS

WS-48 WINDSHIELD / WINDOWGLASS – QUARTER WINDOW GLASS



- (1) Cut off the tip of the cartridge nozzle as shown in the illustration.

Standard measurement

Area	Specified Condition
a	8.0 mm (0.315 in.)
b	12.0 mm (0.472 in.)
c	13.0 mm (0.512 in.)
d	12.0 mm (0.472 in.)
e	13.0 mm (0.512 in.)
f	15.5 mm (0.610 in.)

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

Usage time frame

Temperature	Usage Time Frame
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.
(d) Install the quarter window glass to the vehicle body.
(1) Hold the quarter window glass in place securely with protective tape or equivalent until the adhesive hardens.

NOTICE:

- Allow the primer coating to dry for 3 minutes or more.
- Check that the guide piece pins are attached to the body correctly.
- Check the clearance between the body and glass.

- (2) Lightly press the front surface of the glass to ensure a close fit.

- (3) Using a scraper, remove any excess or protruding adhesive.

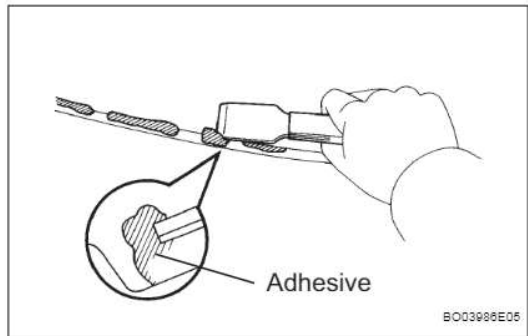
HINT:
Apply adhesive onto the glass rim.

NOTICE:
Do not drive the vehicle within the 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

4. INSTALL ROOF SIDE GARNISH INNER RH (See page IR-10)



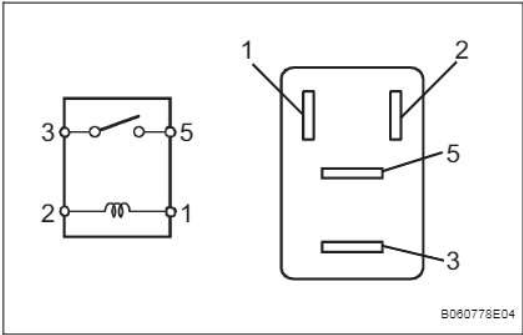
5. INSTALL DECK TRIM SIDE PANEL ASSEMBLY RH
(See page [IR-10](#))
6. INSTALL REAR SEAT 3 POINT TYPE BELT
ASSEMBLY OUTER RH (See page [SB-30](#))
7. INSTALL REAR DECK TRIM COVER (See page [IR-11](#))
8. INSTALL BACK DOOR WEATHERSTRIP
9. INSTALL DECK FLOOR BOX LH
10. INSTALL DECK FLOOR BOX RH
11. INSTALL NO. 1 DECK BOARD
12. INSTALL NO. 2 DECK BOARD
13. INSTALL REAR DOOR OPENING TRIM
WEATHERSTRIP RH
14. INSTALL REAR DOOR SCUFF PLATE RH (See page
[IR-12](#))
15. INSTALL REAR SEATBACK HINGE SUB-ASSEMBLY
RH (See page [SE-26](#))
16. INSTALL CHILD RESTRAINT SEAT ANCHOR
BRACKET SUB-ASSEMBLY (See page [SE-26](#))
17. INSTALL REAR SEAT CUSHION WITH COVER PAD
SUB-ASSEMBLY (See page [SE-27](#))
18. INSTALL REAR SEATBACK ASSEMBLY RH (See
page [SE-27](#))
19. INSTALL REAR SEATBACK ASSEMBLY LH (See
page [SE-27](#))
20. 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

POWER RELAY

ON-VEHICLE INSPECTION

1. REMOVE POWER RELAY (Marking: POWER)
- (a) Remove the power relay from the instrument panel junction block.
2. INSPECT POWER RELAY
- (a) Measure the resistance of the relay.
- Standard resistance



Tester Connection	Specified Condition
3 - 5	10 k Ω 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.

3. INSTALL POWER RELAY

DEFOGGER RELAY

ON-VEHICLE INSPECTION

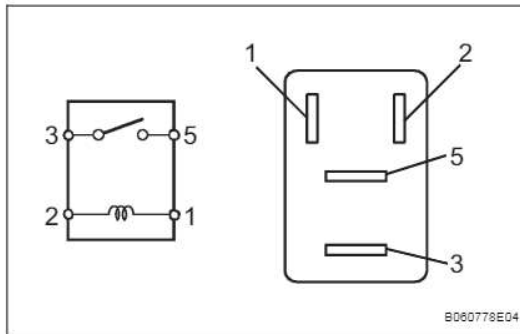
1. REMOVE DEFOGGER RELAY

- (a) Remove the defogger relay from the instrument panel junction block.

2. INSPECT DEFOGGER RELAY

- (a) Measure the resistance of the relay.

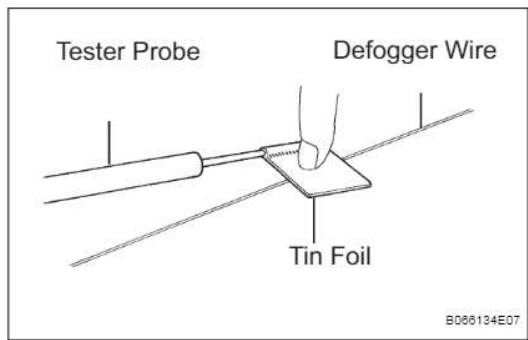
Standard resistance



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

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

3. INSTALL DEFOGGER RELAY



WINDOW DEFOGGER WIRE

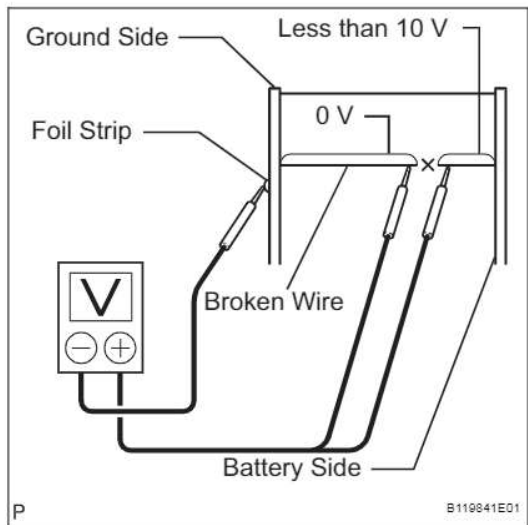
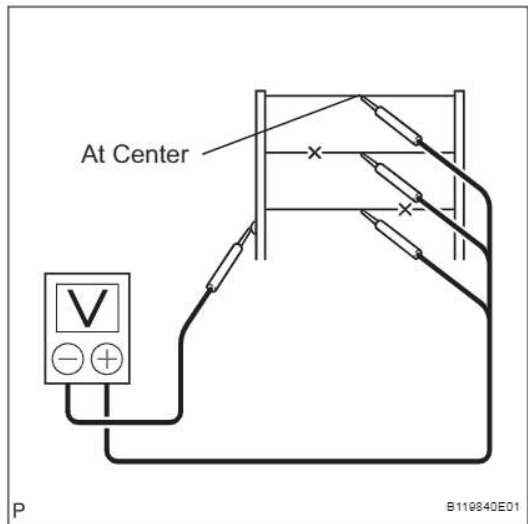
ON-VEHICLE INSPECTION

1. INSPECT BACK DOOR GLASS (DEFOGGER WIRE) NOTICE:

- When cleaning the glass, wipe the glass along the wire using a soft, dry cloth. Take care not to damage the defogger 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.
- (a) Turn the ignition switch ON.
(b) Turn the defogger switch ON.
(c) Measure the voltage at the center of each defogger wire as shown in the illustration.

Standard 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 end and the wire end on the ground side.

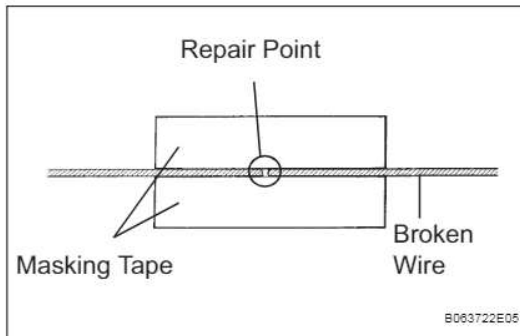
- (d) Place the voltmeter's positive (+) lead against the defogger wire on the battery side.
(e) Place the voltmeter's negative (-) lead with the foil strip against the wire on the ground side.
(f) Slide the positive (+) lead from the battery side to the ground side.
(g) The point where the voltage drops from approximately 10 V to 0 V is where the defogger wire is broken.

HINT:

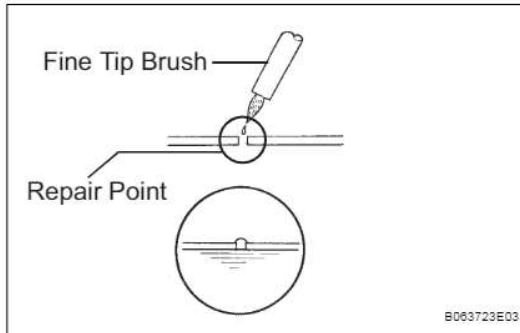
If the defogger wire is not broken, the voltmeter indicates 0 V at the positive (+) end of the defogger wire and gradually increases to approximately 12 V as the meter probe moves to the other end.

WINDSHIELD / WINDOWGLASS – WINDOW DEFOGGER WIRE

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**REPAIR****1. REPAIR DEFOGGER WIRE**

- (a) Clean the broken wire tips with grease, wax and silicone remover.
- (b) Place masking tape along both sides of the wire.
- (c) Thoroughly mix the repair agent (Dupont paste No. 4817).

Dupont paste:**No. 4817 or equivalent**

- (d) Using a fine tip brush, apply a small amount of the agent to the wire.

- (e) After a few minutes, remove the masking tape.

NOTICE:**Do not repair the defogger wire again for at least 24 hours.****WS**

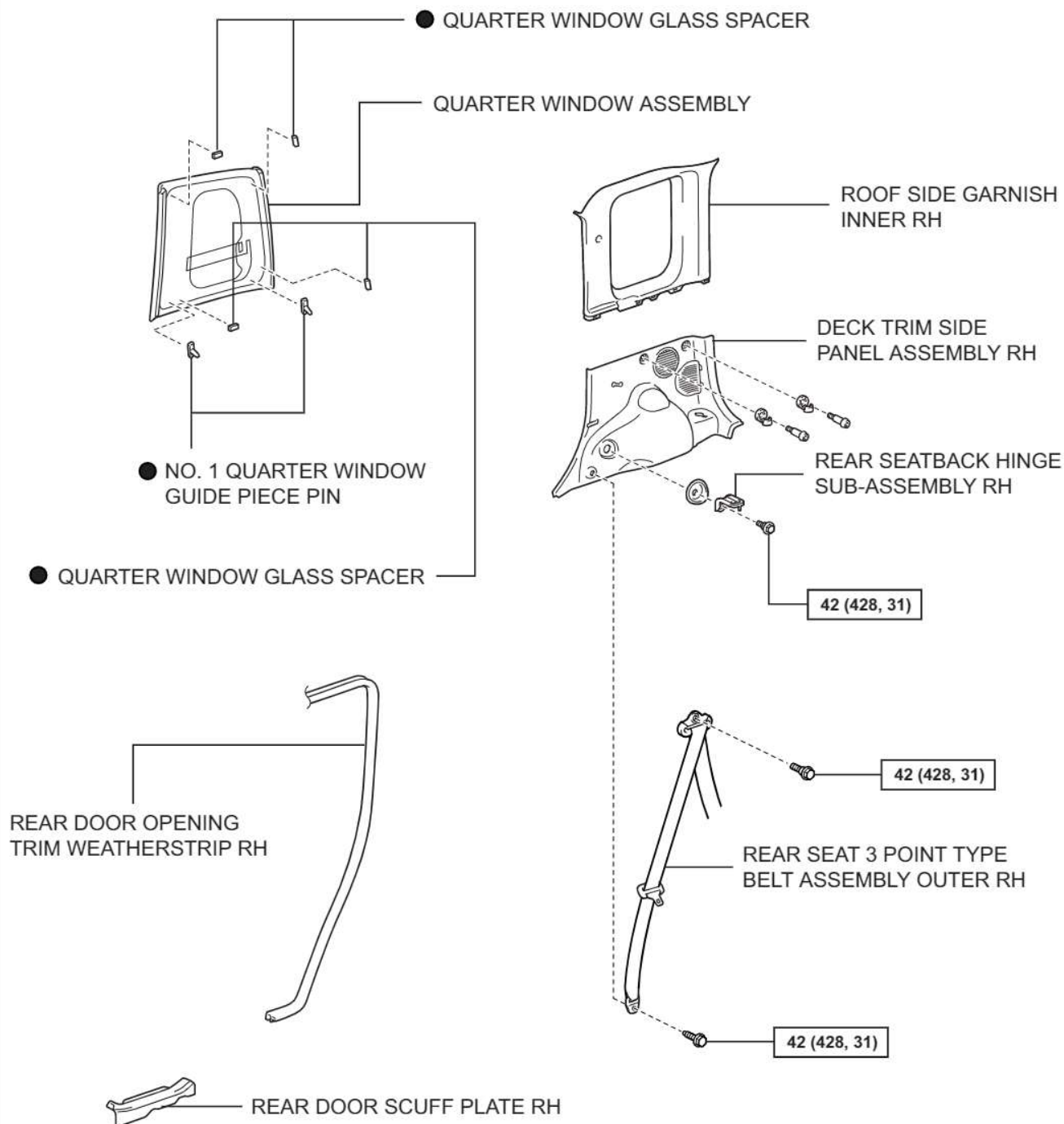
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WINDSHIELD / WINDOWGLASS - QUARTER WINDOW GLASS

QUARTER WINDOW GLASS

COMPONENTS

WS



N*m (kgf*cm, ft.*lbf) : Specified torque

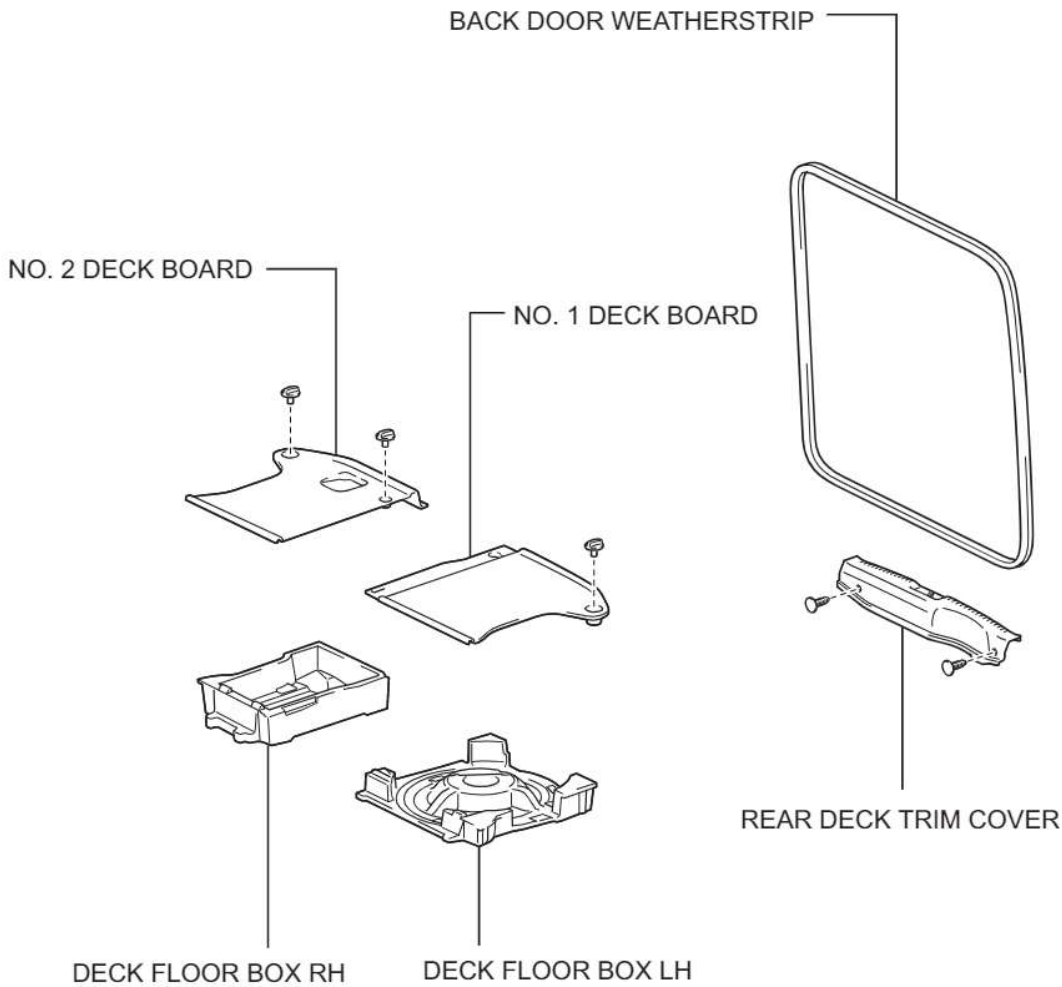
● Non-reusable part

H

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WINDSHIELD / WINDOWGLASS – QUARTER WINDOW GLASS

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WS

B122423E02

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WINDSHIELD / WINDOWGLASS – QUARTER WINDOW GLASS

