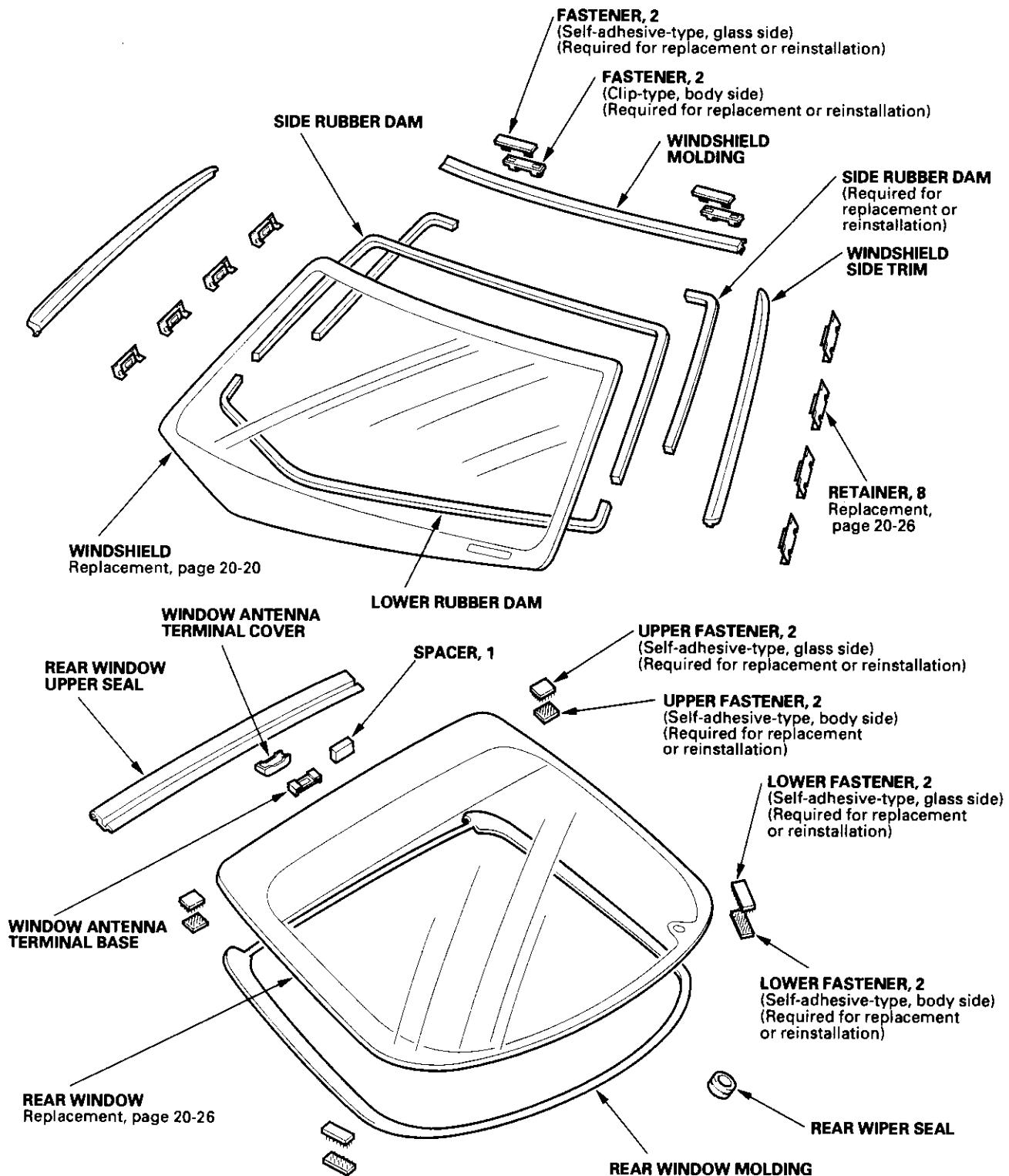
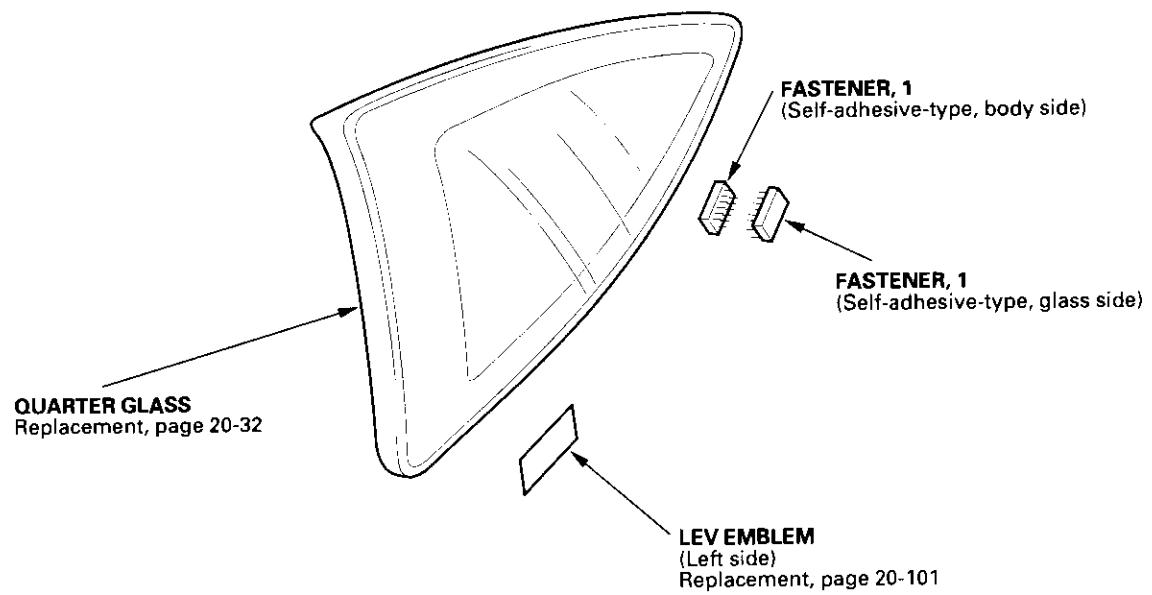


Glass

Component Location Index





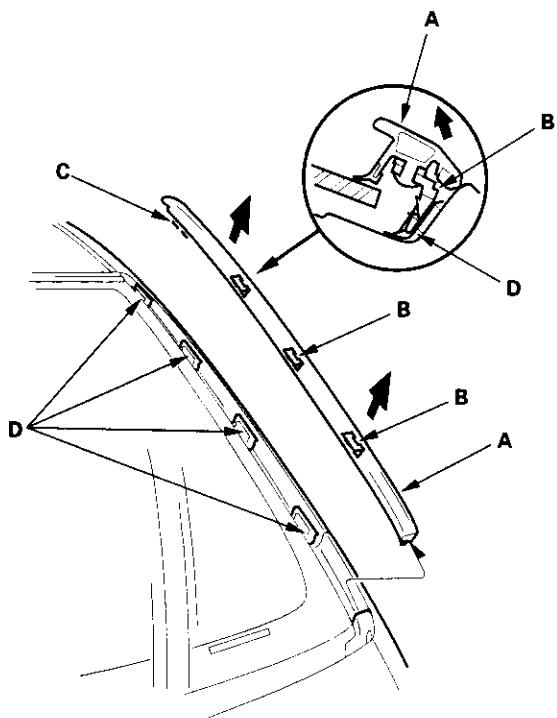
Glass

Windshield Replacement

NOTE:

- Put on gloves to protect your hands.
- Wear eye protection when removing the glass with piano wire.
- Use seat covers to avoid damaging the seats.

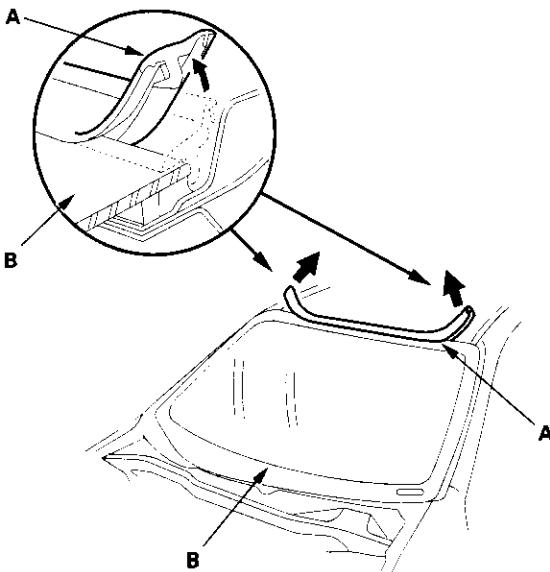
1. Pull up the side trim (A) to release the clips (B, C) from the retainers (D), then remove the trim from each side of the windshield.



2. Remove these items:

- Windshield wiper arms (see page 22-150).
- Cowl covers (see page 20-98).

3. Remove the molding (A) from the upper edge of the windshield (B). If necessary, cut the molding with a utility knife.



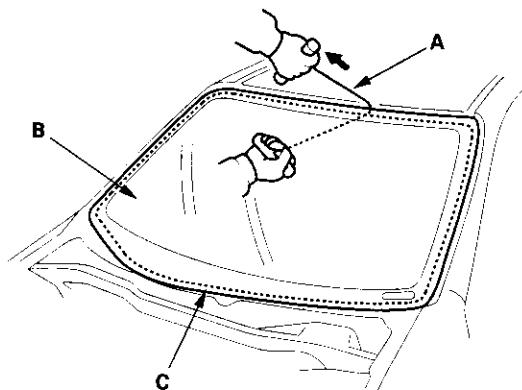
4. If the old windshield is to be reinstalled, make alignment marks across the glass and body with a grease pencil.

5. Pull down the front portion of the headliner (see page 20-54). Take care not to bend the headliner excessively, or you may crease or break it.

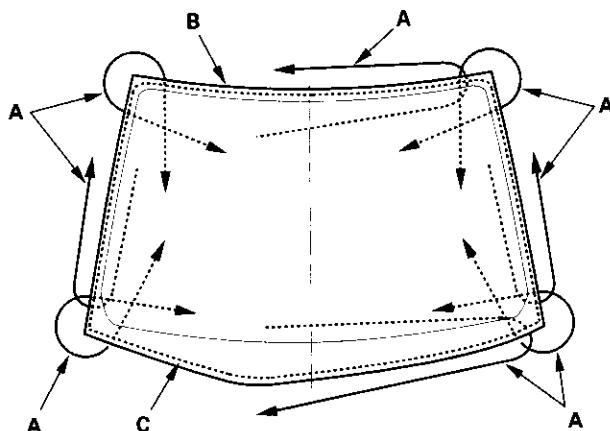
6. Apply protective tape along the edge of the dashboard and body. Using an awl, make a hole through the rubber dam and adhesive from inside the vehicle at the corner portion of the windshield. Push a piece of piano wire through the hole, and wrap each end around a piece of wood.



7. With a helper on the outside, pull the piano wire (A) back and forth in a sawing motion. Hold the piano wire as close to the windshield (B) as possible to prevent damage to the body and dashboard. Carefully cut through the rubber dam and adhesive (C) around the entire windshield.



Cutting portions:



8. Carefully remove the windshield.

9. With a knife, scrape the old adhesive smooth to a thickness of about 2 mm (0.08 in.) on the bonding surface around the entire windshield opening flange:

- Do not scrape down to the painted surface of the body; damaged paint will interfere with proper bonding.
- Remove the rubber dam, clips, and fasteners from the body.

10. Clean the body bonding surface with a sponge dampened in alcohol. After cleaning, keep oil, grease, and water from getting on the clean surface.

11. If the old windshield is to be reinstalled, use a putty knife to scrape off all of the old adhesive, the fasteners, the clips, and the rubber dam from the windshield. Clean the inside face and the edge of the windshield with alcohol where new adhesive is to be applied. Make sure the bonding surface is kept free of water, oil, and grease.

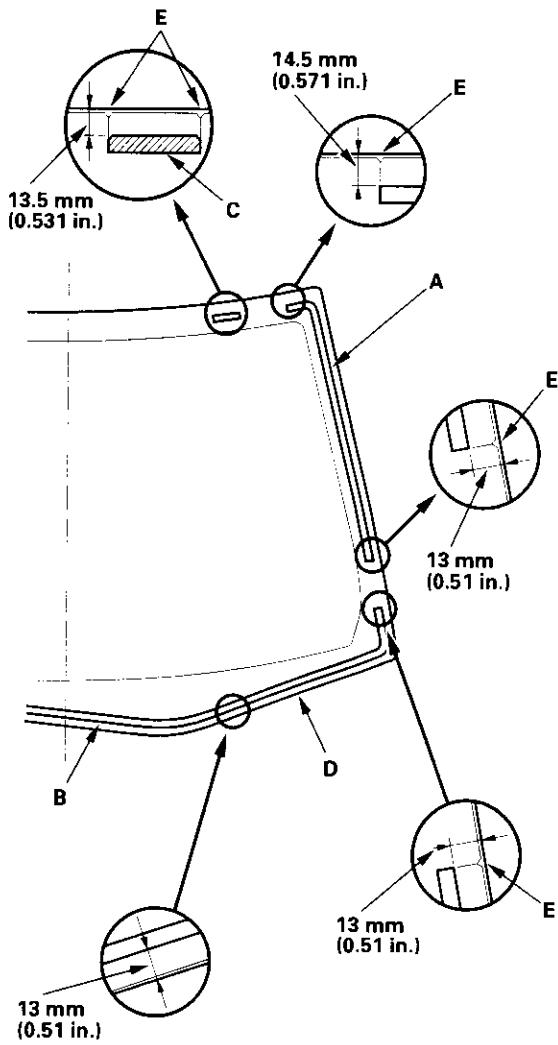
(cont'd)

Glass

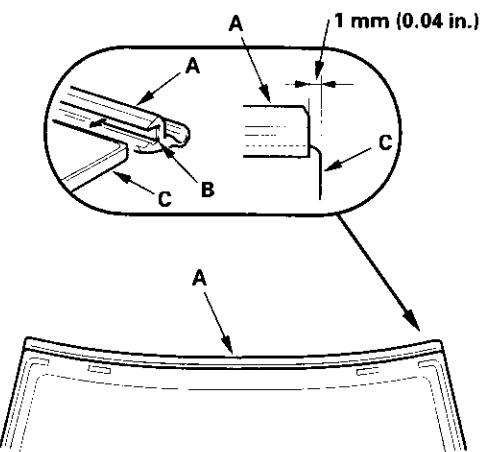
Windshield Replacement (cont'd)

12. Glue the side rubber dams (A) and lower rubber dam (B) with adhesive tape (NITTO 501, or equivalent). Glue the fasteners (C) with adhesive tape (3M 4215, or equivalent) to the inside face of the windshield (D) as shown:

- Be sure the rubber dams and fasteners line up with the alignment marks (E).
- Be careful not to touch the windshield where adhesive will be applied.



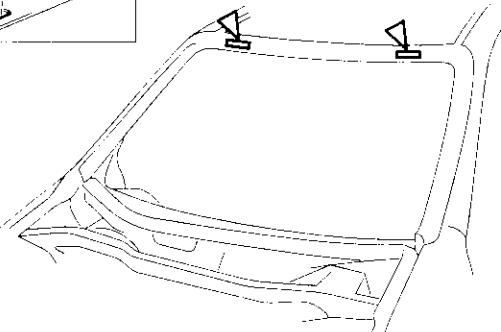
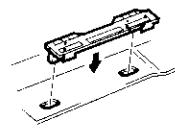
13. Glue the molding (A) with adhesive tape (B) (3M 4212, or equivalent) to the corner edge of the windshield (C). Be careful not to touch the windshield where adhesive will be applied.



14. Install the fasteners to the body.

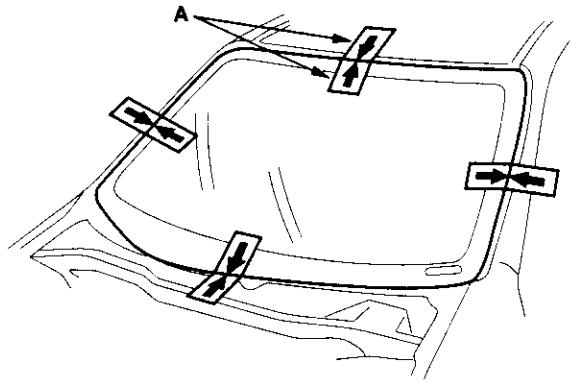
Fastener Locations

▷ : Fastener, 2





15. Set the windshield in the opening, and center it. Make alignment marks (A) across the windshield and body with a grease pencil at the four points shown. Be careful not to touch the windshield where adhesive will be applied.

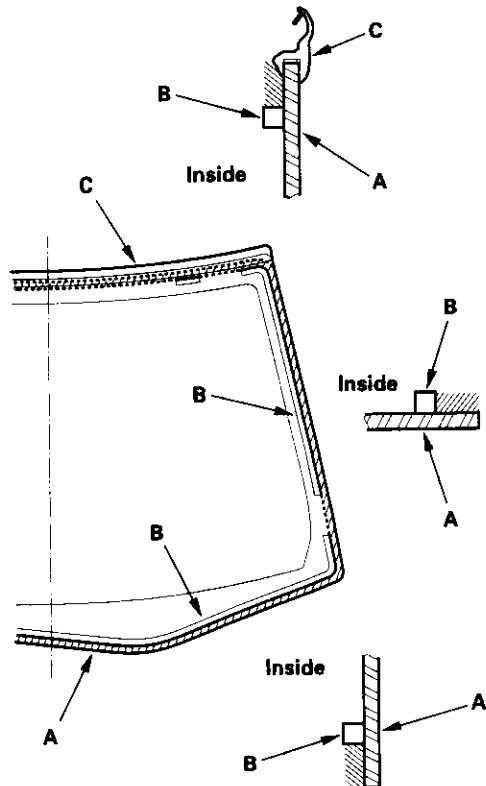


16. Remove the windshield.

17. With a sponge, apply a light coat of glass primer around the edge of the windshield (A) between the dams (B) and molding (C) as shown, then lightly wipe it off with gauze or cheesecloth:

- Apply glass primer to the molding.
- Do not apply body primer to the windshield, and do not get body and glass primer sponges mixed up.
- Never touch the primed surfaces with your hands. If you do, the adhesive may not bond to the windshield properly, causing a leak after the windshield is installed.
- Keep water, dust, and abrasive materials away from the primed surface.

: Apply glass primer here.



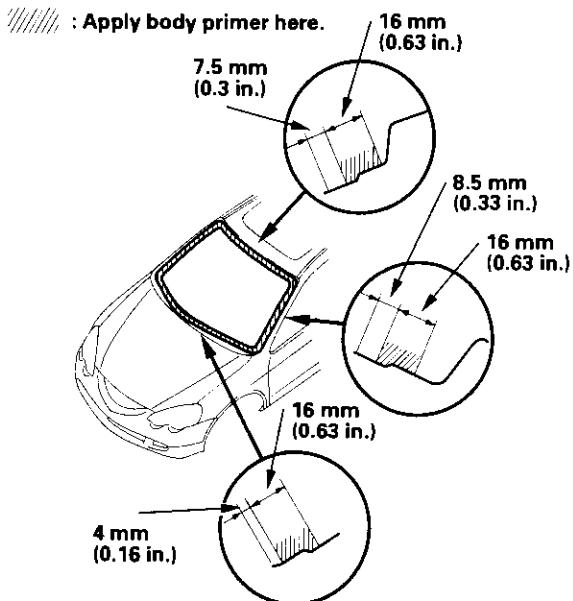
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Glass

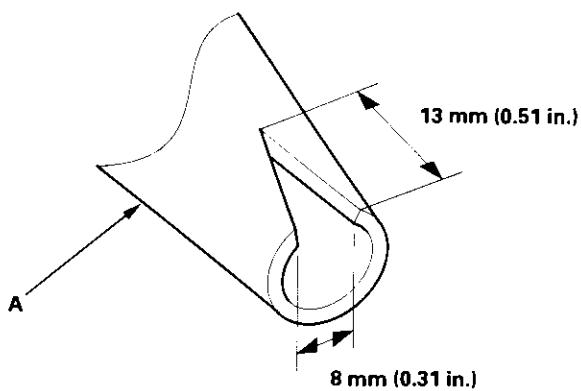
Windshield Replacement (cont'd)

18. With a sponge, apply a light coat of body primer to the original adhesive remaining around the windshield opening flange. Let the body primer dry for at least 10 minutes:

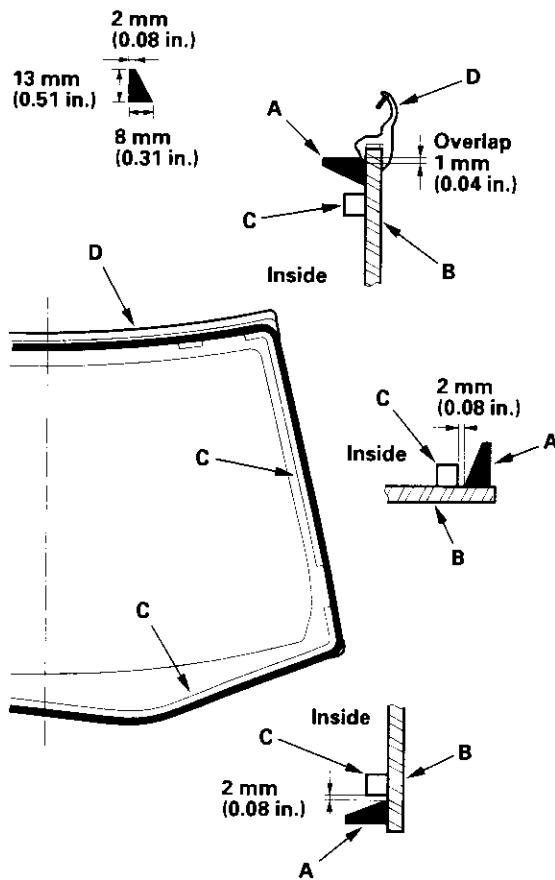
- Do not apply glass primer to the body, and be careful not to mix up glass and body primer sponges.
- Never touch the primed surfaces with your hands.
- Mask off the dashboard before painting the flange.



19. Before filling a cartridge, cut a "V" in the end of the nozzle (A) as shown.



20. Pack adhesive into the cartridge without air pockets to ensure continuous delivery. Put the cartridge in a caulking gun, and run a bead of adhesive (A) around the edge of the windshield (B) between the dams (C) and molding (D) as shown. Apply the adhesive within 30 minutes after applying the glass primer. Make a slightly thicker bead at each corner.



21. Use suction cups to hold the windshield over the opening, align it with the alignment marks made in step 15, and set it down on the adhesive. Lightly push on the windshield until its edges are fully seated on the adhesive all the way around. Do not open or close the doors until the adhesive is dry.



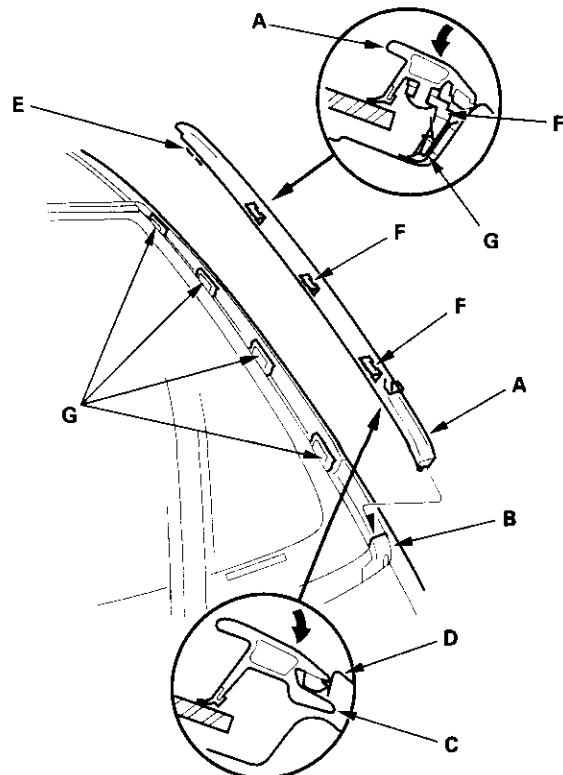
22. Scrape or wipe the excess adhesive off with a putty knife or towel. To remove adhesive from a painted surface or the windshield, wipe with a soft shop towel dampened with alcohol.

23. Let the adhesive dry for at least 1 hour, then spray water over the windshield and check for leaks. Mark leaking areas, and let the windshield dry, then seal with sealant:

- Let the vehicle stand for at least 4 hours after windshield installation. If the vehicle has to be used within the first 4 hours, it must be driven slowly.
- Keep the windshield dry for the first hour after installation.

24. Reinstall the cowl covers.

25. On both sides of the windshield, set the bottom edge of the side molding (A) under the cowl cover (B), and set the hook (C) under the front fender (D), then align the clips (E, F) with the retainers (G). Push on the clip portions of the molding until the molding is fully seated on the windshield.



26. Reinstall all remaining removed parts.

NOTE: Advise the customer not to do the following things for 2 to 3 days:

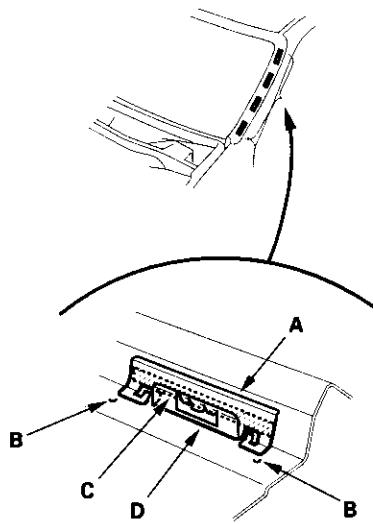
- Slam the doors with all the windows rolled up.
- Twist the body excessively (such as when going in and out of driveways at an angle or driving over rough, uneven roads).

Windshield Side Trim Retainer Replacement

NOTE:

- Take care not to scratch the body.
- When heating the body with a dryer, be careful not to get it too hot. Heat it gradually to prevent damage to the paint.
- Remove the plastic parts, and/or protect them from the hot with aluminum foil.

1. While heating the retainer to 212–248°F (100–120°C) with a dryer, gently pull it away from the body with pliers.
2. With a putty knife, scrape the remaining adhesive tape from the bonding surface while heating it with a dryer.
3. Clean the bonding surface with a sponge damaged in alcohol. Make sure the bonding surface is kept free of water, oil and grease.
4. Peel the adhesive backing away from the double-faced adhesive tape on new retainer.
5. Line up the retainers (A) with the alignment marks (B) on the body, and glue the retainers with adhesive tape (C).



6. Apply two-part epoxy adhesive (D) around the edge of the retainers as shown.

Rear Window Replacement

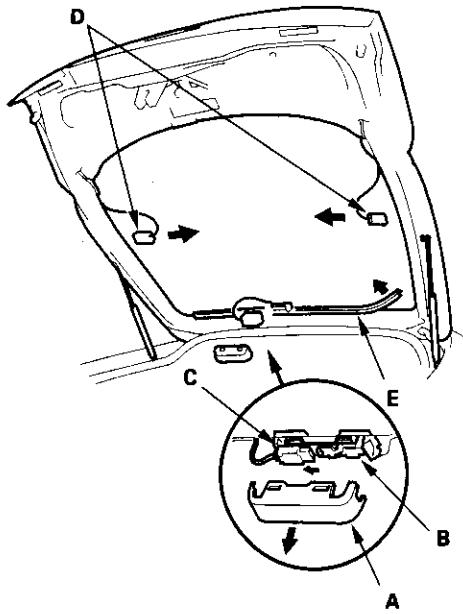
NOTE:

- Put on gloves to protect your hands.
- Wear eye protection when removing the glass with piano wire.
- Use seat covers to avoid damaging any surfaces.
- Do not damage the rear window defogger grid lines, window antenna grid lines, and terminals.

1. Remove these items:

- Hatch trim panel (see page 20-53)
- Rear window wiper motor (see page 22-151)

2. Remove the window antenna terminal cover (A) from the window antenna terminal base (B), and disconnect the window antenna connector (C). Disconnect the rear window defogger connectors (D).



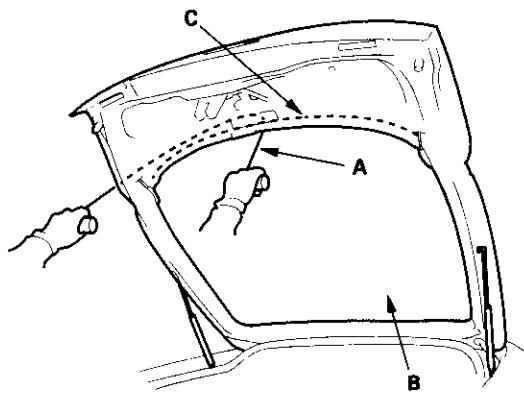
3. Remove the rear window trim (E).

4. If the old rear window is to be reinstalled, make alignment marks across the glass and body with a grease pencil.

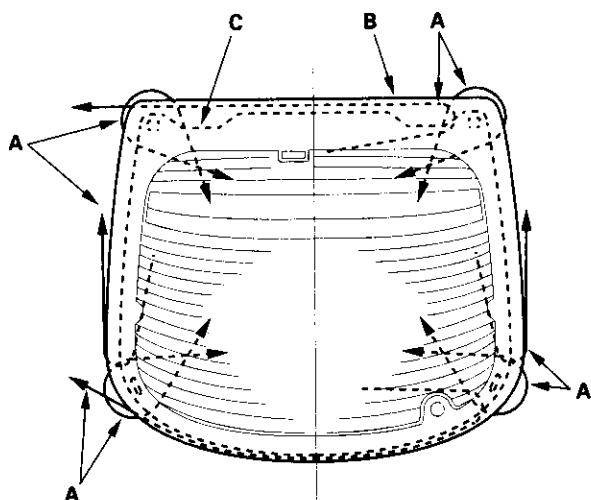
5. Apply protective tape along the inside and outside edges of the hatch. Using an awl, make a hole through the adhesive from inside the vehicle at the corner portion of the rear window. Push the piano wire through the hole, and wrap each end around a piece of wood.



6. With a helper on the outside, pull the piano wire (A) back and forth in a sawing motion. Hold the piano wire as close to the rear window (B) as possible to prevent damage to the hatch, and carefully cut through the adhesive (C) around the entire rear window.



Cutting positions:



7. Carefully remove the rear window.

8. With a putty knife, scrape the old adhesive smooth to a thickness of about 2 mm (0.08 in.) on the bonding surface around the entire rear window opening flange:

- Do not scrape down to the painted surface of the body; damaged paint will interfere with proper bonding
- Remove the fasteners from the hatch.

9. Clean the hatch bonding surface with a sponge dampened in alcohol. After cleaning, keep oil, grease, and water from getting on the surface.

10. If the old rear window is to be reinstalled, use a putty knife to scrape off all of the old adhesive, the fasteners and the rubber dams from the rear window. Clean the inside face and the edge of the rear window with alcohol where new adhesive is to be applied. Make sure the bonding surface is kept free of water, oil, and grease.

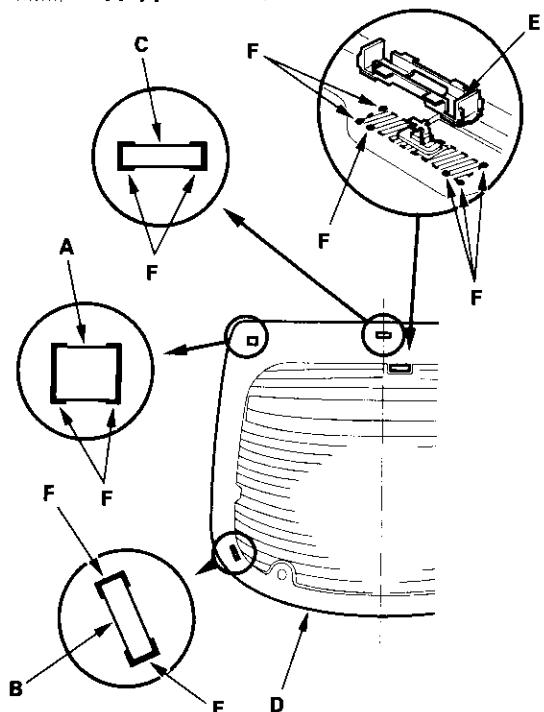
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Rear Window Replacement (cont'd)

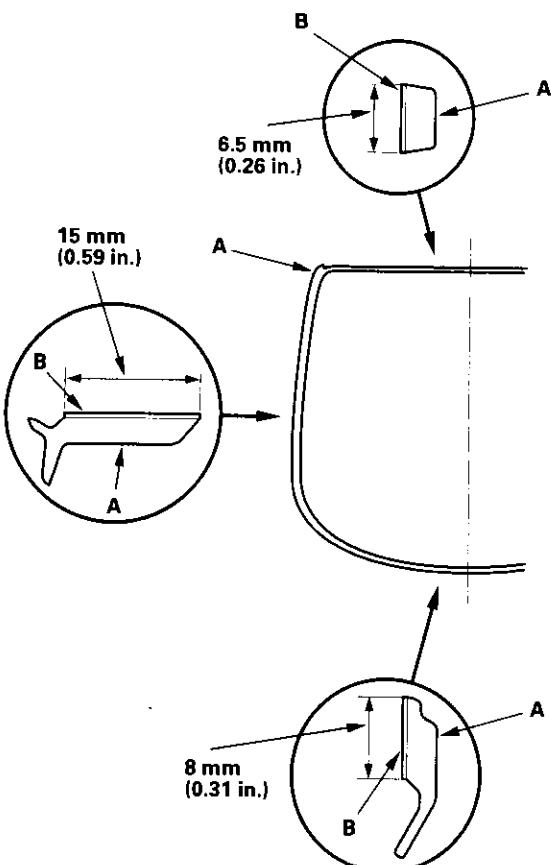
11. Glue the upper fasteners (A) and lower fasteners (B) with adhesive tape (3M 5312; or equivalent). Glue the spacer (C) with adhesive tape (NITTO 501M, or equivalent) to the inside face of the rear window (D) as shown. If necessary, apply primer (3M N-200, or equivalent) to the areas where the window antenna terminal base (E) will be glued, then glue the base on with adhesive tape (3M 4211, or equivalent):

- Be sure the fasteners and spacer (and window antenna terminal base) line up with the alignment marks (F).
- Be careful not to touch the rear window where adhesive will be applied.

////// : Apply primer here.



12. Apply primer (3M C-100, or equivalent) to the inside face around the entire molding (A), and apply the double-faced adhesive tape (B) (3M 4216, or equivalent). Do not peel off the adhesive backing.

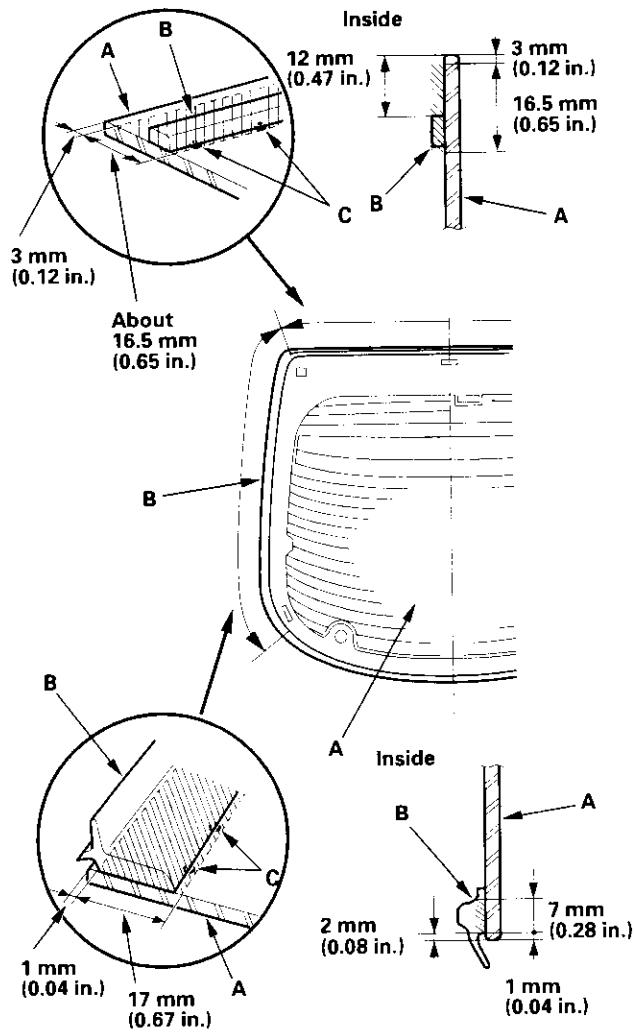




13. Apply primer (3M N-200, or equivalent) to the inside face of the rear window (A), and glue the molding (B):

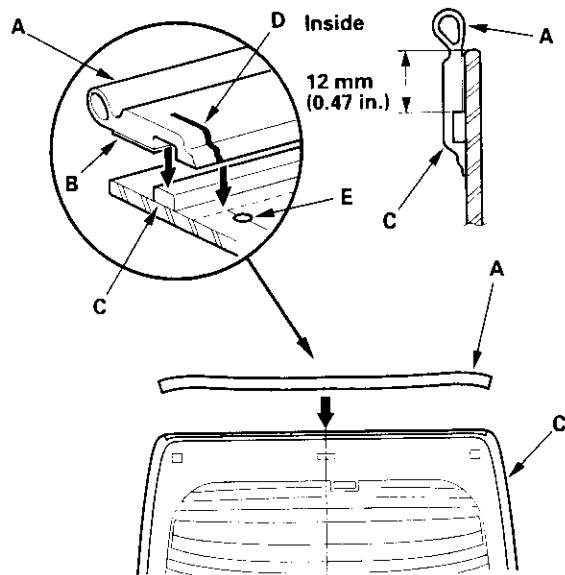
- With the printed dots (C) on the upper and side portions of the rear window as a guide, glue the molding around the edge of the rear window.
- Before installing the molding, fold the edge of the adhesive backing on the double-faced adhesive tape. After installing the molding, pull the adhesive backing away, then glue the molding into place.
- Be careful not to touch the rear window where adhesive will be applied.

: Apply primer here.



14. Glue the upper seal (A) with adhesive tape (3M 4215, or equivalent) onto the upper portion of the molding (C):

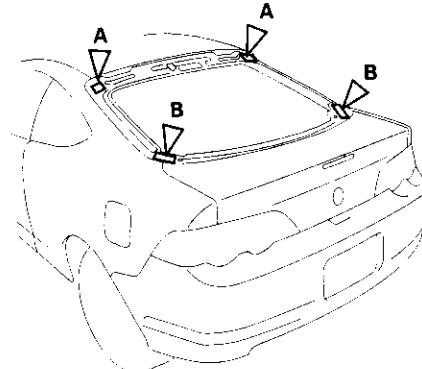
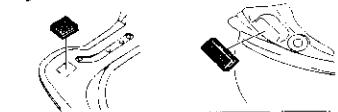
- Be sure the alignment mark (D) of the seal lines up with the alignment mark (E) of the windshield.
- Be careful not to touch the window where adhesive will be applied.



15. Glue the upper fasteners (A) and lower fasteners (B) with adhesive tape (3M 5312, or equivalent) to the hatch as shown.

Fastener Locations

A ▷ :Fastener, 2 B ▷ :Fastener, 2

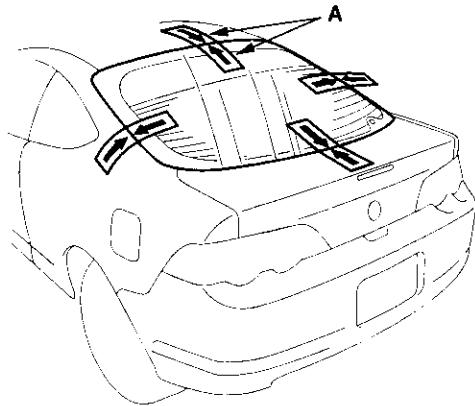


(cont'd)

Glass

Rear Window Replacement (cont'd)

16. Set the rear window in the opening, and center it. Make alignment marks (A) across the rear window, hatch, and body with a grease pencil at the four points shown. Be careful not to touch the rear window where adhesive will be applied.

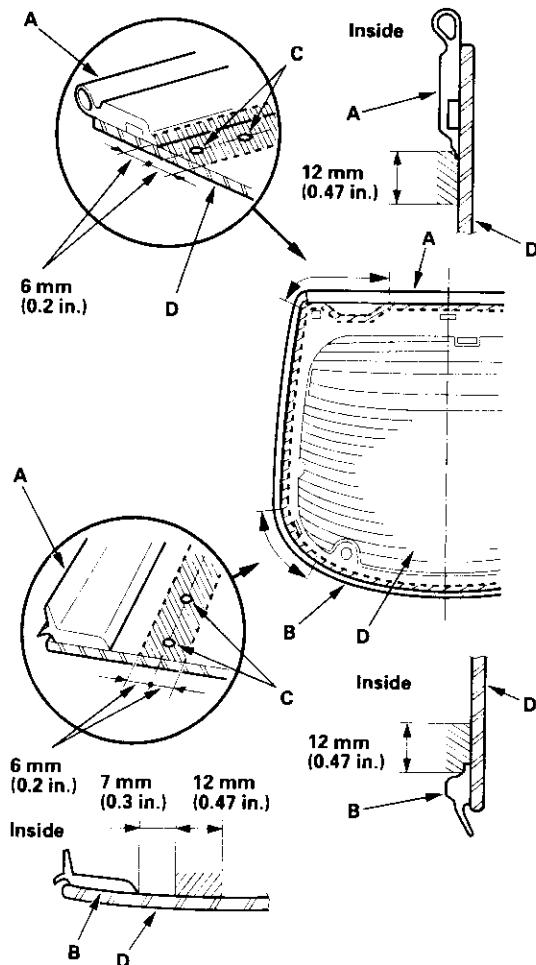


17. Remove the rear window.

18. With a sponge, apply a light coat of glass primer along the edge of the upper molding (A) and rear window molding (B) as shown, then lightly wipe it off with gauze or cheesecloth:

- With the printed dots (C) on the rear window (D) as a guide, apply the glass primer to both side portions of the rear window.
- Do not apply body primer to the rear window, and do not get the hatch and glass primer sponges mixed up.
- Never touch the primed surfaces with your hands. If you do, the adhesive may not bond to the rear window properly, causing a leak after the rear window is installed.
- Keep water, dust, and abrasive materials away from the primed surface.

//// : Apply glass primer here.

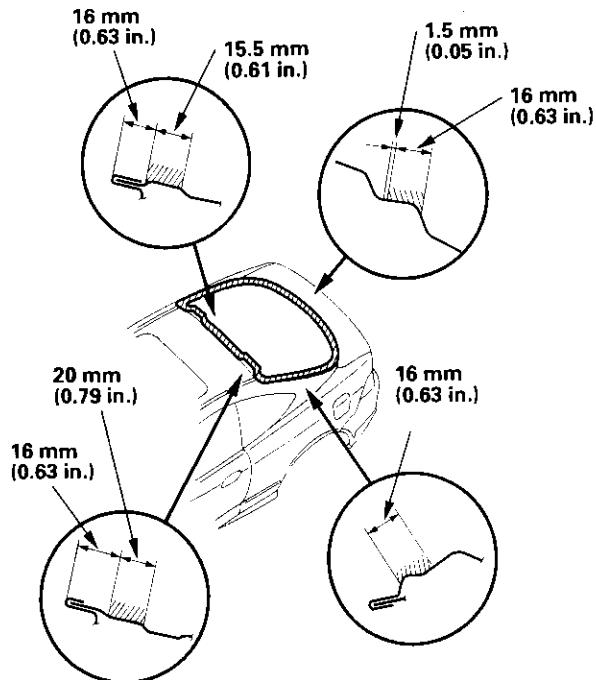




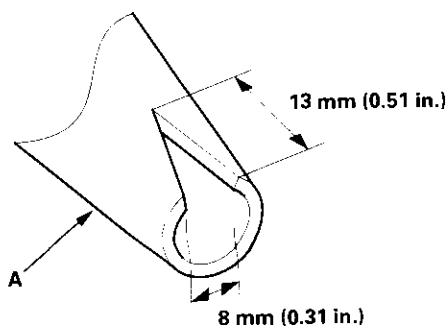
19. With a sponge, apply a light coat of body primer to the original adhesive remaining around the rear window opening flange. Let the body primer dry for at least 10 minutes:

- Do not apply glass primer to the body, and be careful not to mix up the glass and body primer sponges.
- *Never touch the primed surfaces with your hands.*

 : Apply body primer here.

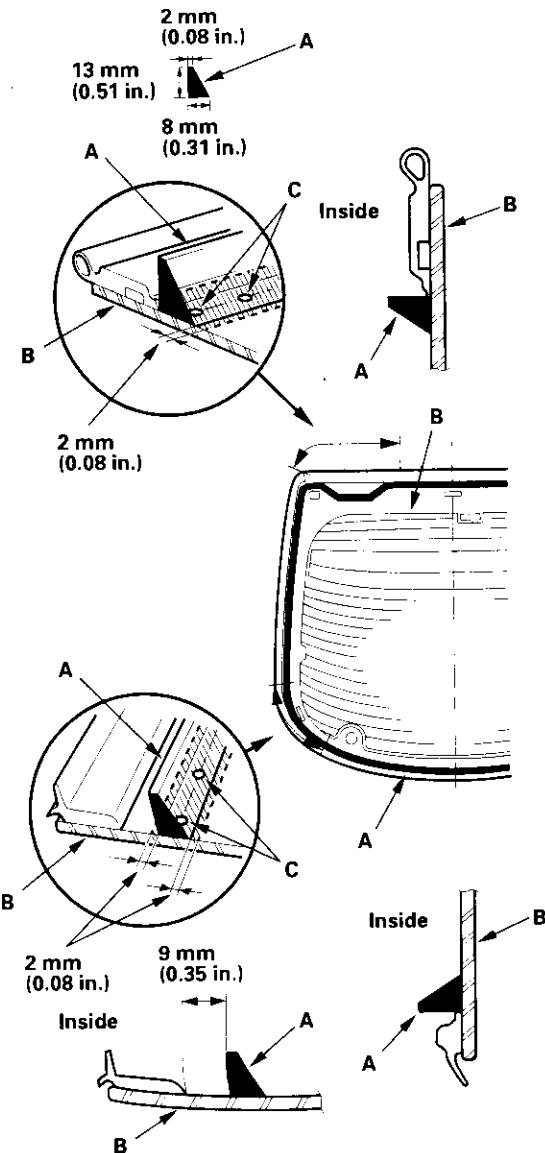


20. Before filling a cartridge, cut a "V" in the end of the nozzle (A) as shown.



21. Pack adhesive into the cartridge without air pockets to ensure continuous delivery. Put the cartridge in a caulking gun, and run a bead of adhesive (A) around the edge of the rear window (B) as shown. With the printed dots (C) on the rear window as a guide, apply the adhesive to both side portions of the rear window.

Apply the adhesive within 30 minutes after applying the glass primer. Make a slightly thicker bead at each corner.



(cont'd)

Glass

Rear Window Replacement (cont'd)

22. Use suction cups to hold the rear window over the opening, align it with the alignment marks you made in step 16, and set it down on the adhesive. Lightly push on the rear window until its edges are fully seated on the adhesive all the way around. Do not open or close the doors until the adhesive is dry.
23. Scrape or wipe the excess adhesive off with a putty knife or towel. To remove adhesive from a painted surface or the rear window, use a soft shop towel dampened with alcohol.
24. Let the adhesive dry for at least 1 hour, then spray water over the rear window and check for leaks. Mark the leaking areas, let the rear window dry, then seal with sealant. Let the vehicle stand for at least 4 hours after rear window installation. If the vehicle has to be used within the first 4 hours, it must be driven slowly.
25. Reinstall all remaining removed parts.

NOTE: Advise the customer not to do the following things for 2 to 3 days:

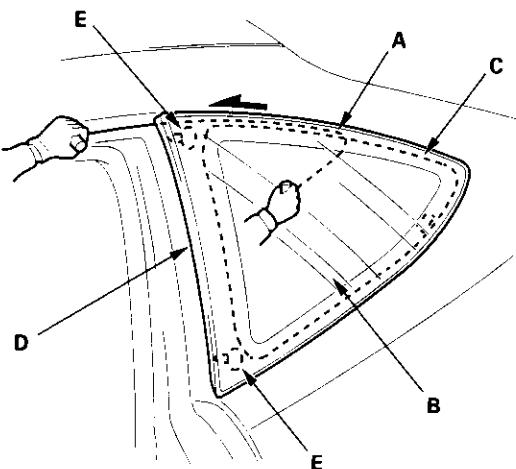
- Slam the doors with all the windows rolled up.
- Twist the body excessively (such as when going in and out of driveways at an angle or driving over rough, uneven roads).

Quarter Glass Replacement

NOTE:

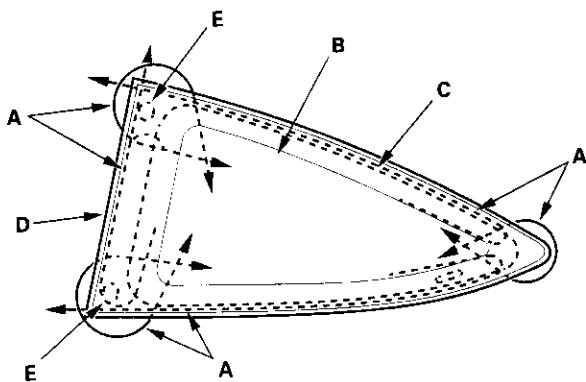
- Put on gloves to protect your hands.
- Use seat covers to avoid damaging any surface.

1. Remove the quarter pillar trim (see page 20-51).
2. Apply protective tape along the inside and outside edges of the body, and along the edge of the headliner. Using an awl, make a hole through the adhesive from inside the vehicle. Push a piece of piano wire through the hole, and wrap each end around a piece of wood.
3. With a helper on the outside, pull the piano wire (A) back and forth in a sawing motion. Hold the piano wire as close to the quarter glass (B) as possible to prevent damage to the body, and carefully cut through the adhesive (C) around the entire quarter glass:
 - If the quarter glass is to be reinstalled, take care not to damage the molding (D).
 - If the molding is damaged, replace the quarter glass, molding, and clips (E) as an assembly.
 - If any of the clips are broken, the quarter glass can be reinstalled using butyl tape (refer to step 8).





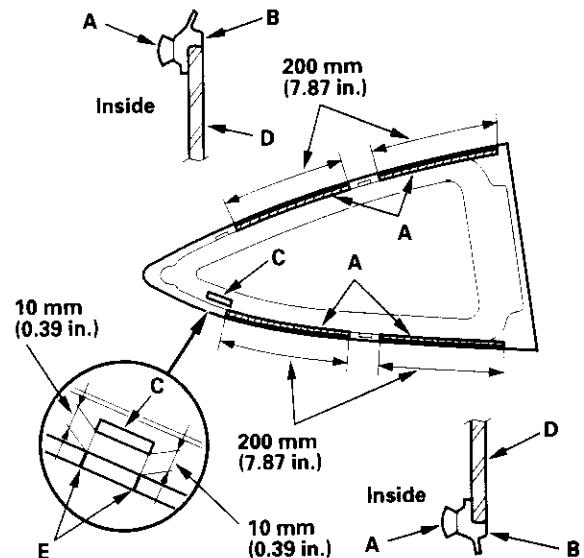
Cutting position:



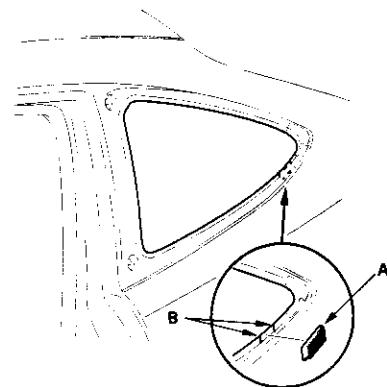
4. Carefully remove the quarter glass.
5. With a putty knife, scrape the old adhesive smooth to a thickness of about 2 mm (0.08 in.) on the bonding surface around the entire quarter glass opening flange:
 - Do not scrape down to the painted surface of the body; damaged paint will interfere with proper bonding.
 - Remove the clips and fastener from the body.
6. Clean the body bonding surface with a sponge damaged in alcohol. After cleaning, keep oil, grease, and water from getting on the surface.
7. If the old quarter glass is to be reinstalled, use a putty knife to scrape off all of the old adhesive, any broken clips, and the fastener from the glass. Clean the inside face and the edge of the glass with alcohol where new adhesive is to be applied. Make sure the bonding surface is kept free of water, oil, and grease.

8. If the old quarter glass is to be reinstalled (and either clip is broken off the molding), apply a light coat of primer (C-100, or equivalent), then apply butyl tape (A) to the molding (B) as shown. Glue the fastener (C) to the inside face of the quarter glass (D):

- Be sure the fastener lines up with the alignment marks (E).
- Be careful not to touch the quarter glass where adhesive will be applied.
- Do not peel the separator off the butyl tape.



9. If the new quarter glass is to be installed, glue the fastener (A) with adhesive tape (3M 5312, or equivalent) to the body. Be sure the fastener lines up with the alignment marks (B).

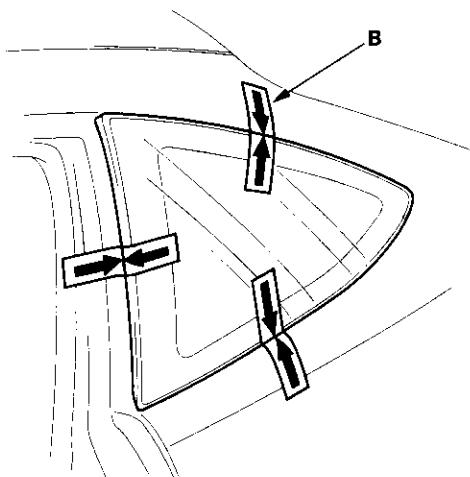
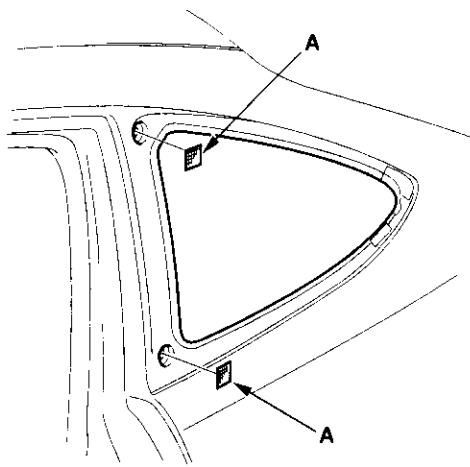


(cont'd)

Glass

Quarter Glass Replacement (cont'd)

10. If the old quarter glass is to be reinstalled (and either clip is broken off the molding), seal the body holes with pieces of urethane tape (A). Then set the quarter glass upright in the opening, and make alignment marks (B) across the quarter glass and body with a grease pencil at the three points shown. Be careful not to touch the quarter glass where adhesive will be applied.

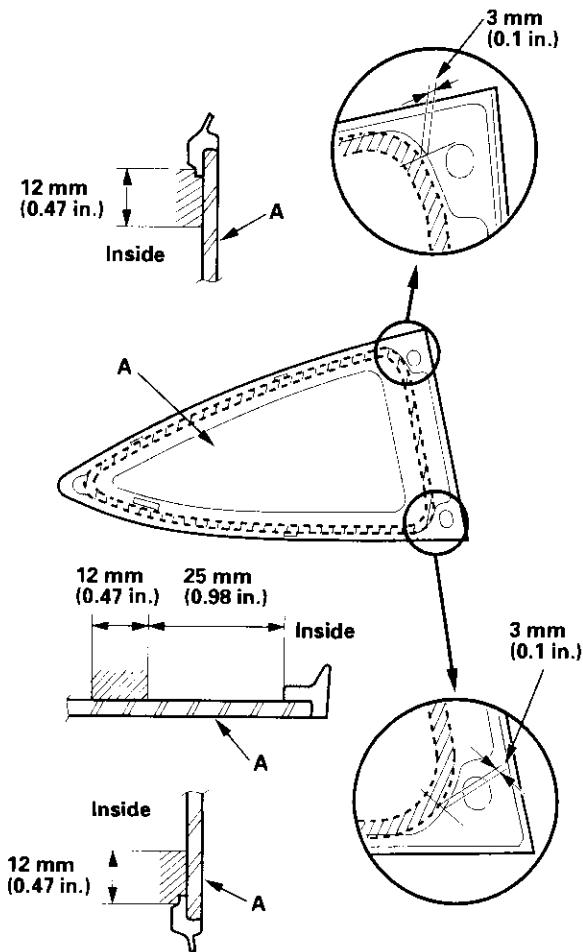


11. Remove the quarter glass.

12. With a sponge, apply a light coat of glass primer to the inside face of the quarter glass (A) as shown, then lightly wipe it off with gauze or cheesecloth:

- Do not apply body primer to the quarter glass, and do not get the body and glass primer sponges mixed up.
- Never touch the primed surfaces with your hands. If you do the adhesive may not bond to the quarter glass properly, causing a leak after the quarter glass is installed.
- Keep water, dust, and abrasive materials away from the primed surface.

//// : Apply glass primer here.

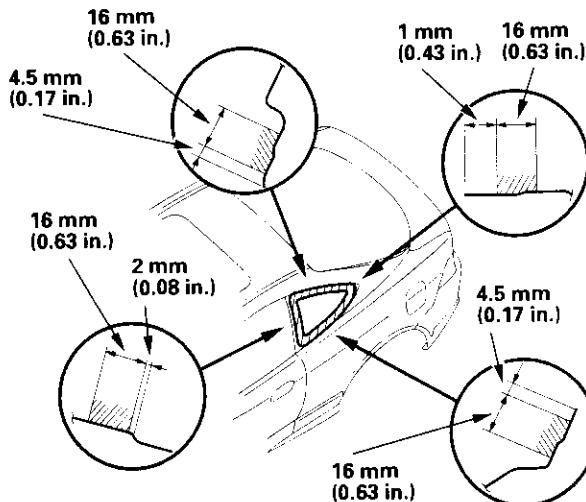




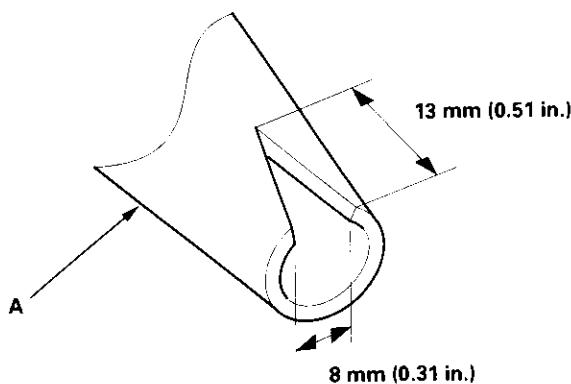
13. With a sponge, apply a light coat of body primer to the original adhesive remaining around the quarter glass opening flange. Let the body primer dry for at least 10 minutes:

- Do not apply glass primer to the body, and be careful not to mix up the glass and body primer sponges.
- Never touch the primed surfaces with your hands.
- Mask off the dashboard before painting the flange.

 : Apply body primer here.

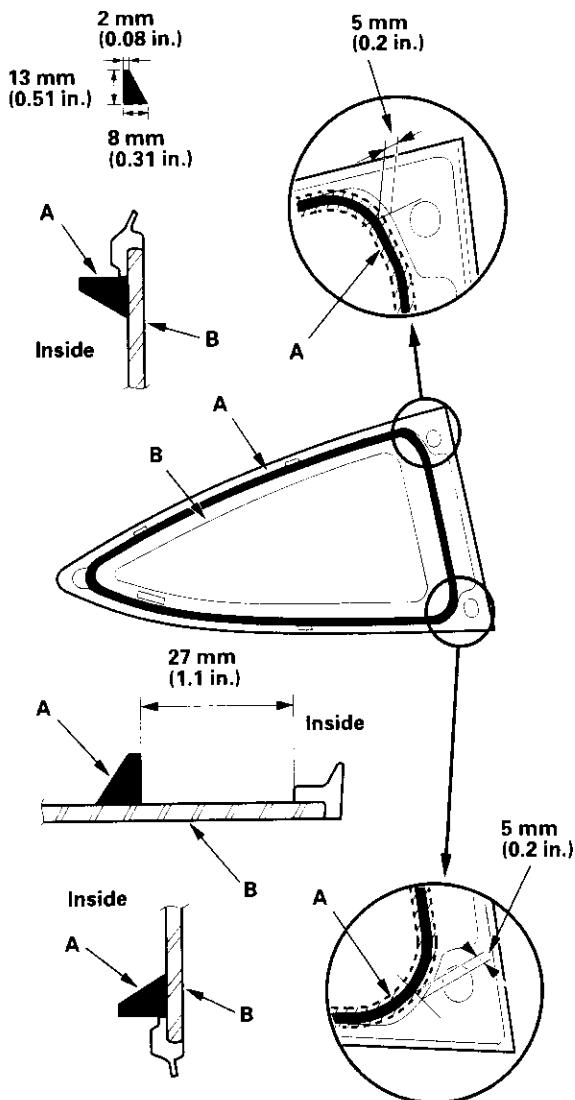


14. Before filling a cartridge, cut a "V" in the end of the nozzle (A) as shown.



15. Park adhesive into the cartridge without air pockets to ensure continuous delivery. Put the cartridge in a caulking gun, and run a bead of adhesive (A) around the edge of the quarter glass (B) as shown:

- After applying the adhesive, peel the separator off the butyl tape.
- Apply the adhesive within 30 minutes after applying the glass primer. Make slightly thicker bead at each corner.

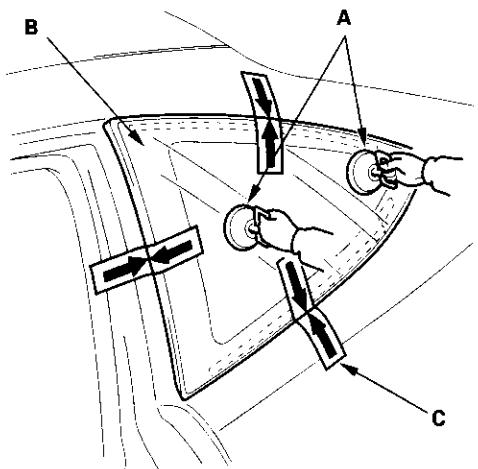


(cont'd)

Glass

Quarter Glass Replacement (cont'd)

16. Use suction cups (A) to hold the quarter glass (B) over the opening, align the clips or the alignment marks (C) made in step 10, and set it down on the adhesive. Lightly push on the quarter glass until its edges are fully seated on the adhesive all the way around. Do not open or close the doors until the adhesive is dry.



17. Scrape or wipe the excess adhesive off with a putty knife or towel. To remove adhesive from a painted surface or the quarter glass, wipe with a soft shop towel damaged with alcohol.
18. Let the adhesive dry for at least 1 hour, then spray water over the quarter glass and check for leaks. Mark the leaking areas and let the quarter glass dry, then seal with sealant. Let the vehicle stand for at least 4 hours after quarter glass installation. If the vehicle has to be used within the first 4 hours, it must be driven slowly.
19. Reinstall all remaining removed parts.

NOTE: Advise the customer not to do the following things for 2 to 3 days:

- Slam the doors with all the windows rolled up.
- Twist the body excessively (such as when going in and out of driveways at an angle or driving over rough, uneven roads).