

2007 Toyota FJ Cruiser

By Gilbert R. Gutierrez

Vehicle information



Vehicle type: Four-door utility vehicle

NAGS® numbers*: Windshield part number FW02652GTy; front door glass FD23053-54GTy R-L; rear door glass FD23055-56GTN or YPN, R-L; quarter glass FQ23057-58GTN or YPN R-L; and back glass FB23059GTy or YPY

Helpful tools or supplies: Retention tape to protect the fenders, hood and doorframe trim; a PryBaby for molding and panel removal; two temporary universal windshield gravity stops; a leak detector; two 2-inch-by-3/8-inch strips of 3M automotive attachment tape 06383

Watch for: The six beads of urethane that hold the molding down on the windshield. When removing the doorframe trim, be careful not to bend the frame or scratch the paint on the door opening.

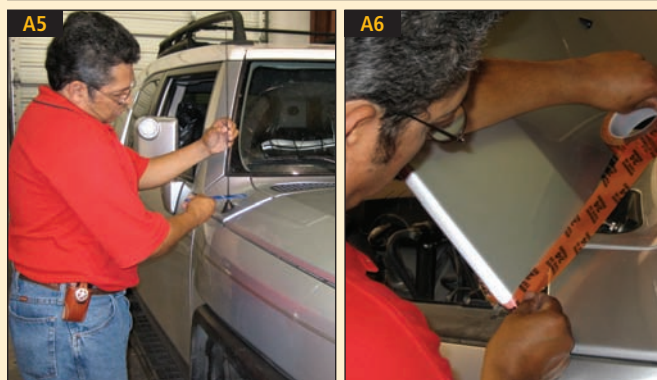
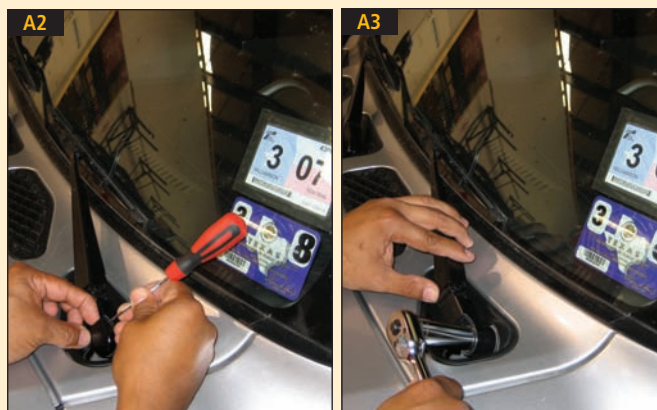
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A. Windshield

Preparation

1. Cover the front seats, floorboards, dash and steering wheel with a clean drop cloth or disposable plastic covers.

Note: Always wear eye and hand protection when working with glass. Make sure you have the right glass and that the urethane systems are current. Windshield part number is FW02652GTy.



2. Remove the windshield-wiper nut covers using a hook tool, small flat-tip screwdriver, pick or No. 2 PryBaby.

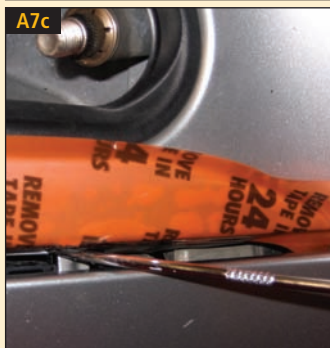
3. Remove the nuts using a wrench or socket. If the nuts are tight, loosen them with a 15-millimeter wrench and then come back with your socket. Move the wiper arm in an up-and-down motion to break it loose from the post.

4. Tag wipers with painter's tape and a marker to ensure proper installation.

5. Remove the antenna with an antenna-removal tool.

6. Tape the hood, cowl, A-pillar and fender with molding-retention tape to avoid gnarling or scratching the cowl and moldings during removal.

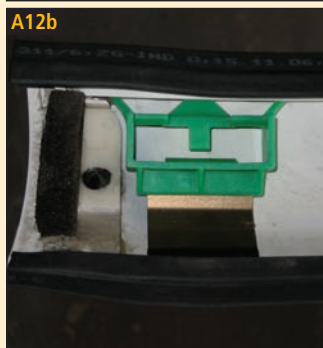
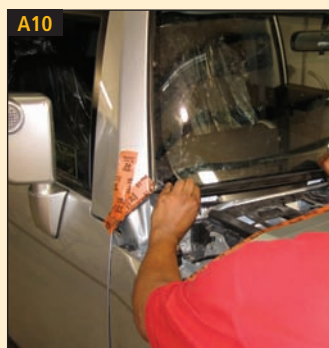
7. Using a No. 2 PryBaby, pop loose the two corner cowl-cover fasteners located at the base of the cowl cover at the fender near the A-pillar. Pop loose the two corner cowl-cover fasteners at the junction of the upper cowl and corner cowl. Be careful; they break easily.



Use a small hook and pick to unfasten the clip, if necessary. Remove the antenna cover on the passenger-side corner cowl by slightly twisting and turning, then pulling in an upward motion.

8. Open the hood and remove the six plastic push-in fasteners using a small straight pick to push the center pin in, and a clip-removal tool or door-panel remover to remove the fastener. Remove the two push-in fasteners at the center of the upper cowl. Take note of the center guide when re-installing the cowl.

9. Remove the cowl by pulling it in an upward motion toward the engine compartment, disengaging the cowl from the base of the windshield area.



10. Remove the bottom windshield molding by cutting the two adhesive strips at the corners, using a small razor knife and pulling in an upward motion toward the windshield, disengaging the molding at the base of the windshield from the six clips on the glass.

11. Using a small razor knife, cut loose the six urethane beads from the upper one-piece reveal molding at the top edge of the windshield. **Note:** When re-installing the molding, be sure to apply urethane in the same spots that the old beads occupied to secure the top molding to the windshield.

12. On either side of the vehicle, pop loose the six retainers and two push-in fasteners, starting 2 inches out from the corner and working your way inward toward the center at 9 inches, 16 inches and 22 inches. **Caution:** The retainers break easily. The Toyota part number is 75503-35010.

13. If using a cold knife or power tool, remove the A-pillar trim panels, as the windshield fits close to the pinchweld.

14. Remove the door weatherstrip.

15. Remove the two screw covers on the A-pillar pull handle using a hook and pick or small flat-tip screwdriver.

16. Remove the two screws hidden beneath the covers using a 10-millimeter socket.



17. Remove the A-pillar trim panels using a door-panel remover or No. 3 PryBaby.

Caution: If the windshield is close to the A-pillar exterior panel and panel removal is necessary, remove the 10-millimeter bolt from the inside and then pop the exterior panel using a No. 3 PryBaby. You will not be able to save the fasteners and will have to order them from Toyota. The part number is 75392-35210. **Note:** Before beginning windshield removal, it is crucial to verify that the new windshield is the correct one and the urethanes and primers are current. Never use outdated products as this could jeopardize the structural integrity of the vehicle and the safety of its passengers.

Removal

18. Make sure cutting blades are sufficiently sharp.

19. Before cutting out the windshield, remove contaminants from the glass and pinchweld to prevent contact with the urethane.

20. If using a cold knife, use a $\frac{3}{4}$ -inch blade. Cut the top and bottom; then use an Equalizer with an 8-inch blade to cut the sides of the windshield to save the side reveal moldings, Toyota part number 75503-35010. **Note:** There are no gravity stops on this windshield.

21. If trying to save the windshield, use an Equalizer with an 8-inch blade.

22. When using an Equalizer or any power tool, lubricate the cutting area with water. Spray the top and sides; then make your cuts.

23. After cutting the sides and top, spray the bottom of the windshield at least 4 to 5 inches above the urethane on the glass, so the water flows down into the urethane while you make your final cut across the bottom of the windshield.

24. Take the windshield out of the opening using a set of vacuum cups. Lift the glass and place it on a windshield stand or suitable workstation.

Installation

25. After cutting the windshield out, remove contaminants such as dirt, moisture and other debris from the pinchweld. Clean the dashboard.

26. Attach two temporary universal windshield gravity stops at the bottom corners.

27. Dry fit the new glass to the opening. Mark your glass using a grease pencil or molding hold-down tape.

28. Place your vacuum cups on the windshield in the appropriate location for a one-person set.

29. For driver-side setting of the windshield using a Glass Handler Kit, place the kit's elbow setting pad on the driver's side of the uncovered cowl area; then lift the windshield from the stand using the vacuum cups.

30. Reach over, place your elbow on the setting pad and set the windshield onto the old urethane.

31. With the windshield resting in the opening, make sure it is in the right spot.

32. Adjust both sides to the correct setting, marking the passenger's side, then the driver's side. Lift the glass and place it on a windshield stand or suitable workstation.

33. Follow the urethane manufacturer's recommendations for installation.

34. Install the bottom molding on the glass. Press upward against the two legs on the clips, then push downward to apply pressure on the clips, snapping the molding in place.

35. Apply two 2-inch-by- $\frac{3}{4}$ -inch strips of 3M automotive attachment tape to the end of the molding so it will attach itself to the windshield. **Note:** Clean the windshield before applying the molding.

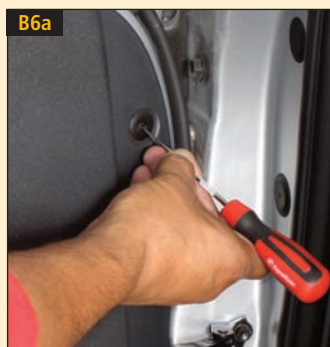
36. Clean the inside of the windshield using a urethane manufacturer-recommended product; follow recommended steps. **Note:** Do not touch the windshield after cleaning, prepping or priming it.

37. Wear powder-free Nitrile gloves to keep off chemicals.

38. Apply the glass prep and primer, following the urethane manufacturer's recommendations.

39. Using a pinchweld-preparation tool, remove as much of the original urethane as the urethane manufacturer recommends. **Note:** Before removing the old urethane, make sure there are no contaminants and do not touch the pinchweld after prepping the area.

40. Apply the pinchweld primer only to the areas where needed and follow the urethane manufacturer's recommenda-



tions. **Caution:** Allow preps and primers to dry as recommended by the urethane manufacturer.

41. Apply a triangular bead of urethane to the same path as the freshly cut urethane on the pinchweld. **Note:** Before cutting your V-notch with a Top Notch tool, cut the tip off of your nozzle using a nozzle cutter. With the cut nozzle, measure to the top of the A-pillar, and at $\frac{1}{8}$ inch higher than the A-pillar, make a mark on the nozzle with a pen or marker. Notch the nozzle up to the marked line; this will give you the appropriate triangular bead.

42. Using vacuum cups, lift the windshield from the wind-



shield stand or workstation. Reach over, place your elbow on the setting pad and set the windshield on the urethane at the mark you made during dry fit. Lower the driver's side of the windshield onto the urethane and line it up with the dry-fit mark; it is now in place.

43. The windshield is now ready to be decked. Press firmly to ensure a good seal.

44. Check for leaks before re-installing the parts. Use a leak detector to go over the perimeter of the windshield. If you find a leak, apply pressure to the spot to ensure the glass makes contact with the wet urethane.

45. Tape the windshield in place so that it doesn't slide down when you remove the temporary gravity stops.

46. Remove the two temporary universal windshield gravity stops.

47. Re-install the removed parts in reverse order.

48. Allow the urethane to cure according to the urethane manufacturer's recommended cure time before returning the vehicle to the customer. **Warning:** Disregarding the safe drive-away time that your urethane manufacturer recommends could jeopardize the structural integrity of the car and the safety of its passengers.

49. You have completed the removal and replacement of the windshield.

B. Front door glass

Removal

1. Make sure that you have the right glass. Front door glass part numbers are FD23053-54GTY R-L.

2. To remove the door panels, pry open the trim cover on the door-handle assembly using a small flat-tip screwdriver or No. 2 hook and pick.

3. Remove the No. 1 Phillips screw behind the trim cover.

4. Remove the trim cover from the armrest-pull handle using a small flat-tip screwdriver or No. 2 hook and pick.

5. Remove the No. 1 Phillips screw beneath the trim cover.

6. Push in the upper door trim-panel plug lock pin using a small flat-tip screwdriver or No. 2 hook and pick. Using an installation stick or No. 1 PryBaby, remove the trim-panel plug.

7. Remove the armrest window-switch assembly trim panel using a door-panel remover or No. 3 PryBaby. Disconnect the electrical window-switch assembly harness by pinching the tab and pulling the harness free.

8. Remove the trim panel using a door-panel or plastic trim-panel remover. Use a No. 2 PryBaby to disengage the nine plas-



tic fasteners located about 7 to 10 inches from the top of the door panel.

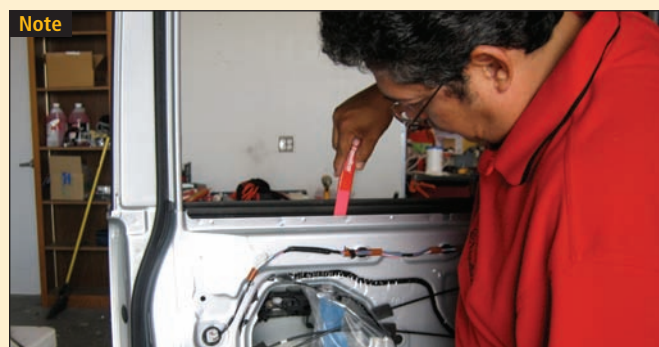
9. In an upward-outward motion, gently pull the door panel and disengage it from the door.

10. Disengage the door-handle assembly by pulling the cable out and away from the panel and slipping it off the notch on the door-handle assembly.

11. Set the door panel in a safe place.

12. Remove the plastic sound-weather barrier.

13. Remove the two rubber hole covers hiding the 10-millimeter bolts for the front glass retainer and front door rail.



14. Remove the 10-millimeter bolt on the rear side of the door closest to the retainer-clip hole and the one on the front of the door where you removed the rubber hole cover.

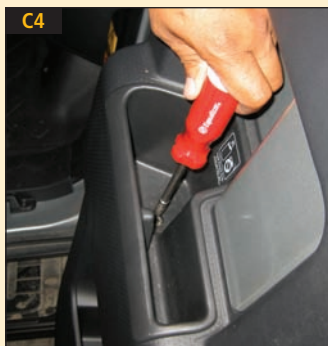
15. Lower the glass to align the mounting hardware with the opening.

16. Remove the two 10-millimeter bolts on the glass retainers. There is one on the front of the door and one on the rear, on the regulator arms.

17. Remove the glass by lifting the backside first to disengage it from the front railing weatherstrip channel and slipping it through the top of the door opening. **Note:** If the glass is broken, it can become lodged behind the impact bar on the door interior. If it is not removed, the glass can dent the skin of the door from the inside out as the door is repeatedly opened and closed. Use the SaberTooth tempered glass removal tool to remove the broken glass. Use the SaberTooth to remove broken glass lodged in the bottom of the door or jammed in the water drains.

Installation

18. To replace the door glass, slip it back into the door in the same manner you removed it. Make sure it is fully in the weather-



strip channel and not on the backside of the metal carrier. Align the carrier before bolting it to the plastic hardware on the glass.

19. Check the operation of the glass before replacing the panel to ensure proper installation.

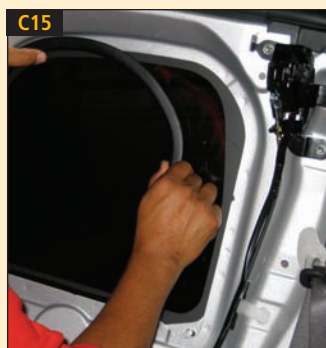
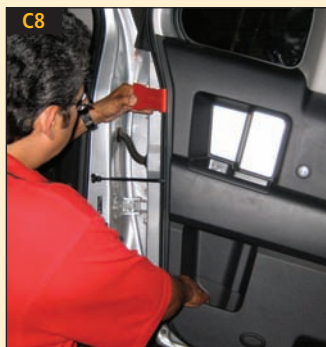
20. Re-install the removed parts in reverse order.

21. You have completed the removal and replacement of the front door glass.

C. Rear door glass

Removal

1. Make sure you have the right glass. Rear door glass part



numbers are FD23055-56GTN or YPN, R-L.

2. Remove the weatherstrip from the side edge of the rear door.

3. To remove the rear door panel, remove the door handle using a door-clip remover and wiggle the handle free from the post.

4. Remove the No. 1 Phillips screw in the cup holder, arm-rest-pull handle.

5. Remove the trim cover for the seatbelt bolt at the bottom of the door using a flat-tip screwdriver or installation stick.

6. Remove the 16-millimeter bolt beneath the trim cover.

7. Remove the push-in plug fasteners from the top side of the trim panel using a hook and pick and your fingers.

8. Remove the lower trim panel using a door-panel or plastic trim-panel remover. Use a No. 2 PryBaby to disengage the seven plastic fasteners located about 8 to 12 inches from the top of the door panel.

9. In an upward-outward motion, gently pull the door panel to disengage it from the door.

10. Set the lower door panel in a safe place.

11. To remove the upper trim panel, remove the two 10-milimeter self-tapping screws at the base of the upper trim panel nearest to the seatbelt slot.

12. Disengage the two plastic fasteners around the glass area using a door-panel remover.

13. In an upward-outward motion, gently pull the upper door panel to disengage it from the door.

14. Guide the seatbelt through the adjustable passenger-height assembly.

15. Remove the trim lock from the inside of the glass opening.

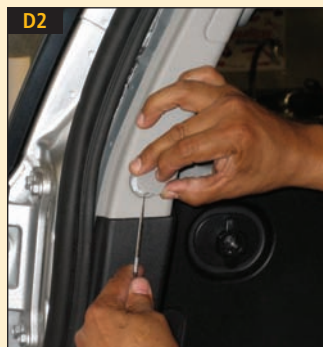
16. Apply molding-retention tape to the doorframe to help protect against paint scratches during removal of the door exterior metal trim.

17. Pop loose the three plastic fasteners from the body trim using a No. 2 PryBaby.

18. Make sure cutting blades are sufficiently sharp.
19. Before cutting out the rear door glass, remove contaminants from the glass and pinchweld.
20. Tape the outside of the rear door glass with molding-retention tape to protect against paint scratches.
21. If trying to save the rear door glass, use an Equalizer with an 8-inch round-tip serrated blade, making sure the unsharpened side faces the glass.
22. When using any power tool, lubricate the cutting area with water or a urethane manufacturer-recommended product. Spray the top and sides before making your cuts.
23. Tape the top exterior of the rear door glass to ensure it does not fall out during the final cutting stage.
24. Spray the bottom of the rear door glass with water at least 4 to 5 inches above the urethane on the glass, so the water flows down into the urethane while you make your final cut across the bottom of the glass.

Installation

25. After cutting the rear door glass out, remove contaminants such as dirt, moisture and other debris from the pinchweld.
26. Dry fit the new glass to the opening. Mark your glass using a grease pencil or molding-retention tape.
27. Place your vacuum cups on the rear door glass in the appropriate location for a one-person set.
28. Lift the rear door glass from the windshield stand using vacuum cups.
29. With the rear door glass resting in the opening, make sure it is in the right spot.
30. Adjust both sides to the correct setting and make your mark. Lift the glass and place it on a windshield stand or suitable workstation.
31. Follow the urethane manufacturer's recommendations for installation. **Note:** It is crucial to verify the urethanes and primers are current. Never use outdated products.
32. Clean the inside of the rear door glass using a urethane manufacturer-recommended product; follow recommended steps. **Note:** Do not touch the bonding area of the rear door glass after cleaning, prepping or priming it.
33. Wear powder-free Nitrile gloves to keep off chemicals.
34. Apply glass prep and primer, following the urethane manufacturer's recommendations.
35. Using a pinchweld-preparation tool, remove as much of the original urethane as the urethane manufacturer recommends. **Note:** Before removing the old urethane, make sure there are no contaminants and do not touch the pinchweld after prepping the area.
36. Apply pinchweld primer only to the areas where needed and follow the urethane manufacturer's recommendations. **Note:** Allow preps and primers to dry as recommended by the urethane manufacturer.
37. Apply a triangular bead of urethane to the same path as the freshly cut urethane on the pinchweld. **Note:** Before cutting your V-notch with a Top Notch tool, cut the tip off of your nozzle with a nozzle cutter. With the cut nozzle, measure to the top of the door opening, and at $\frac{1}{8}$ inch higher than the



door opening, make a mark on the nozzle with a pen or marker. Notch the nozzle up to the marked line; this will give you the appropriate triangular bead.

38. Using vacuum cups, lift the rear door glass from the windshield stand or workstation. Set it on the urethane at the mark you made during

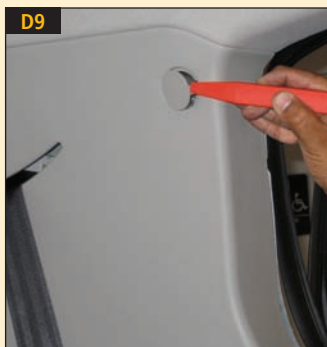
your dry fit.

39. The rear door glass is now ready to be decked. Press firmly to ensure a good seal.
40. Before re-installing the parts, check for leaks. Use a leak detector to go over the perimeter of the rear door glass. If you find a leak, apply pressure to the spot to ensure the glass makes contact with the wet urethane.
41. Re-install the removed parts in reverse order.
42. Allow the urethane to cure according to the urethane manufacturer's recommended cure time before returning the vehicle to the customer.
43. You have completed the removal and replacement of the rear door glass.

D. Quarter glass

Preparation

1. Make sure you have the right glass. Quarter glass part number is FQ23057-58GTN or YPN, R-L
2. Remove the small cover on the rear quarter panel using a hook and pick and your fingers.
3. Remove the rear speaker cover on the upper quarter trim panel using a No. 2 PryBaby and your fingers.
4. Remove the push-in plug fastener from the top side of the trim panel using a hook and pick, gently pushing the pin in and using your fingers to pull the plug.



5. Remove the two cargo-net holders using a 10-millimeter socket.
6. Remove the weatherstrip from the tailgate opening.
7. Pop loose the lower trim panel using a door-panel or plastic trim-panel remover. Use a No. 2 PryBaby to disengage the four plastic fasteners located at the top of the lower quarter panel.
8. Remove the weatherstrip from the rear door opening.
9. Remove the cover on the front portion of the quarter panel using a door-panel or plastic trim-panel remover, a No. 2 PryBaby and your fingers.
10. Using a 10-millimeter socket, remove the bolt hidden behind the trim cover.
11. Pop loose the upper trim panel using a door-panel or plastic trim-panel remover. Use a No. 2 PryBaby to disengage the eight plastic fasteners at the top of and around the upper quarter panel.
12. Using a downward-outward motion, gently pull the upper

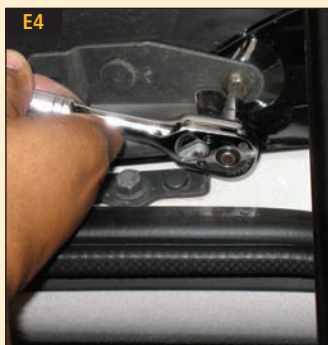
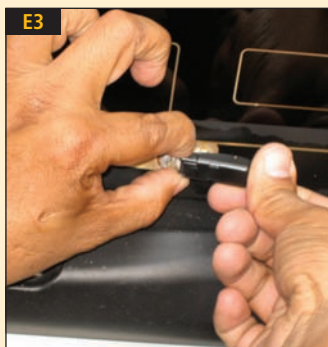
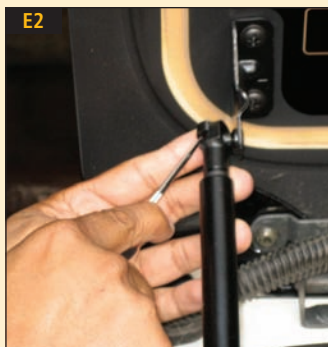
quarter panel to disengage it from the quarter panel.
13. Set the upper quarter panel in a safe place.

Removal

14. Tape off the lower trim panel with premium masking tape.
15. Make sure cutting blades are sufficiently sharp.
16. Before cutting out the quarter glass, remove contaminants from the glass and pinchweld.
17. Tape the outside of the quarter glass with molding-retention tape to avoid scratching the paint.
18. If trying to save the quarter glass, use an Equalizer with an 8-inch round-tip serrated blade, making sure the unsharpened side faces the glass.
19. When using any power tool, lubricate the cutting area with water or a urethane manufacturer-recommended product. Spray the top and sides; then make your cuts.
20. Tape the top of the quarter glass on the exterior to ensure it does not fall out during the final cutting stage.
21. Spray the bottom of the quarter glass at least 4 to 5 inches above the urethane on the glass, so the water flows down into the urethane while you make your final cut across the bottom of the quarter glass.
22. Take the quarter glass out of the opening, using a set of vacuum cups. Lift the glass and place it on a windshield stand or suitable workstation.

Installation

23. After cutting the quarter glass out, remove contaminants such as dirt, moisture and other debris from the pinchweld.
24. Dry fit the new glass to the opening. Mark your glass using a grease pencil or molding hold-down tape.
25. Place your vacuum cups on the quarter glass in the appropriate location for a one-person set.
26. Lift the quarter glass from the windshield stand using vacuum cups.
27. With the quarter glass resting in the opening, make sure it is in the right spot.
28. Adjust both sides to the correct setting and make your mark. Lift the glass and place it on a windshield stand or suitable workstation.
29. Follow the urethane manufacturer's recommendations for installation. **Note:** It is crucial to verify the urethanes and primers are current. Never use outdated products.
30. Clean the inside of the quarter glass using a urethane manufacturer-recommended product; follow recommended steps. **Note:** Do not touch the bonding area of the quarter glass after cleaning, prepping or priming it.
31. Wear powder-free Nitrile gloves to keep off chemicals.
32. Apply glass prep and primer, following the urethane manufacturer's recommendations.
33. Using a pinchweld-preparation tool, remove as much of the original urethane as the urethane manufacturer recommends. **Note:** Before removing the old urethane, make sure there are no contaminants and do not touch the pinchweld after prepping the area.
34. Apply pinchweld primer only to the areas where needed, and follow the urethane manufacturer's recommendations.



Note: Allow preps and primers to dry as recommended by the urethane manufacturer.

35. Apply a triangular bead of urethane to the same path as the freshly cut urethane on the pinchweld. **Note:** Before cutting your V-notch with a Top Notch tool, cut the tip off of your nozzle with a nozzle cutter. With the cut nozzle, measure to the top of the roofline, and at $\frac{1}{16}$ inch higher than the roofline, make a mark on the nozzle with a pen or marker. Notch the nozzle up to the marked line; this will give you the appropriate triangular bead.

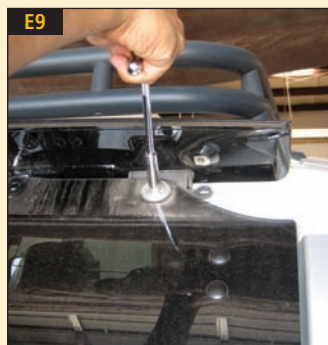
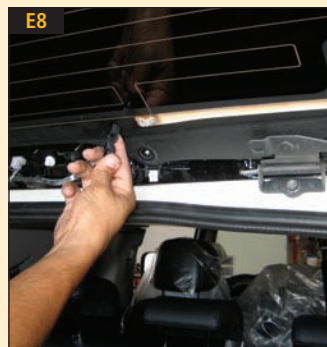
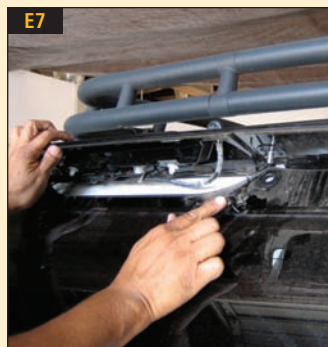
36. Lift the quarter glass from the windshield stand or workstation using vacuum cups. Set it on the urethane at the mark made during dry fit.

37. The quarter glass is now ready to be decked. Press firmly to ensure a good seal.

38. Before re-installing the parts, check for leaks. Use a leak detector to go over the perimeter of the quarter glass. If you find a leak, apply pressure to the spot to ensure the glass makes contact with the wet urethane.

39. Re-install the removed parts in reverse order.

40. Allow the urethane to cure according to the urethane manufacturer's recommended cure time before returning the vehicle to the customer.



41. You have completed the removal and replacement of the quarter glass.

E. Back glass Removal

1. Make sure you have the right glass. Back glass part numbers are FB23059GTy or YPY.

2. Remove the two retainer clips that hold the gas lifters to

the glass.

3. Disconnect the two defroster electrical connectors, one on each side, by sliding the connectors in an outward motion.

4. Remove the two 10-millimeter bolts on the glass retainers using a socket wrench. There is one on the left side of the glass and one on the right side closest to the top of the glass.

5. Remove the trim cover on the underside of the upper part of the back glass using a No. 2 PryBaby and your fingers.

6. Remove the two $\frac{3}{16}$ -inch Allen-head bolts on the glass that hold the hinge, stop light, back glass window-washer nozzles and exterior wind deflector. There is one on the left side of the glass and one on the right side closest to the top of the glass.

7. Flip the wind deflector up and remove the two defroster electrical-connector grommets that cover the holes on the glass.

8. Gently slip the two defroster electrical connectors through the holes in the glass. **Note:** The holes on the glass might be slightly smaller than the plastic housing; be careful not to pull the wire free from the housing.

9. Remove the two 10-millimeter bolts on the glass that bolt on to the hinge secured to the vehicle body.

Replacement

10. Re-install the back glass and removed parts in reverse order.

11. Check the operation of the back glass by opening and closing it several times.

12. You have completed the removal and replacement of the back glass. **AG**

The author is director of the Auto Glass Academy, Equalizer Industries, Round Rock, Texas. A special thanks to Robert Jagitsch for providing the vehicle.

