



Photos by Sam VanHagen, Ford Motor Co.

The 2009 Ford Flex crossover vehicle arrived in dealership showrooms last summer. Technicians can expect to see more crossovers in their shops, as they represent the "fastest-growing part of the auto market today," says Mark Fields, Ford president of The Americas.

Ford flexes its muscle

Removal and replacement procedures for the 2009 Ford Flex windshield

Vehicle information

Vehicle type:

Four-door crossover vehicle

OE part number:

Windshield 8A8Z 7403100 A

Helpful tools or supplies:

Power cutout tool; Pumper or equivalent

Watch for:

Take care to avoid damaging the A-pillar exterior moldings.



ONLINE

For a free PDF download of the windshield removal and replacement instructions for the 2009 Ford Flex, visit GlassMagazine.com.

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 the urethane systems are current. Windshield OE part number is 8A8Z 7403100 A.

2. Tape up any vulnerable areas on the vehicle to protect against possible damage.

3. Remove the upper cowl panel grille.

4. Remove the exterior A-pillar window moldings.

5. Pull the top of the window molding outward to release the top two clips.

6. Slide the window molding upward to release the remaining clips.

7. Twist the window molding clips to remove them from the vehicle body. Attach the clips to the window molding.

8. Remove the A-pillar trim panels. **Caution:** The A-pillar speaker grille is not serviceable. Do not attempt to remove it or you will damage the A-pillar trim panel.

9. Pull the door weatherstrip aside.

10. Pull outward on the A-pillar trim panel to release the clips.

11. Using a flat-blade tool, remove the A-pillar trim-panel tether from the vehicle body.

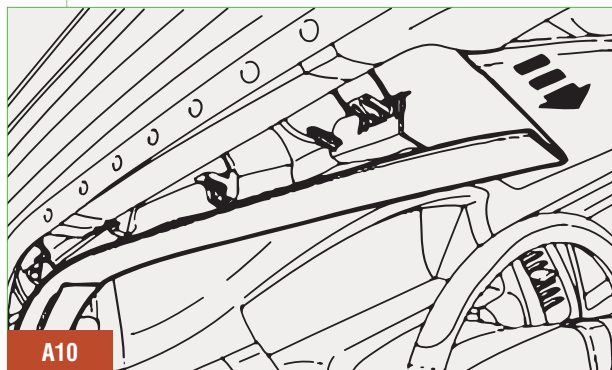
12. Disconnect the speaker electrical connector.

13. Pull the A-pillar trim panel toward the rear of the vehicle to remove.

14. Remove the rearview mirror.

15. Remove the windshield-wiper nut covers.

16. Remove the windshield-wiper nuts using a wrench or socket. Move the



wiper arm in an up-and-down motion to break it loose from the post, or use a wiper puller. **Note:** Wipers can sometimes be hard to remove. Use a wiper puller to avoid stressing the post.

17. Remove the overhead console.

18. Remove the passenger front-assist handle.

19. Remove the left-hand and right-hand sun visors and clips.

20. Lower the front portion of the headliner and block with a suitable material. **Note:** Before beginning windshield removal, verify 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

21. Make sure cutting blades are sufficiently sharp.

22. Before cutting out the windshield, remove contaminants from the glass and

pinchweld to prevent contact with the urethane.

23. Lubricate the urethane adhesive with water. Spray the top, sides and bottom before beginning windshield cutout. **Caution:** Always wear eye protection and protective gloves when servicing a vehicle. Failure to do so could result in serious personal injury.

24. Use the power cutout tool of your choice to cut out the windshield, starting at the top center and working toward the bottom corners. **Caution:** To avoid rust formation, take extreme care not to scratch the paint or primer or otherwise damage the pinchweld during glass removal.

25. After cutting the sides and top, place a pumper in the top center of the windshield to open the cutting area on the bottom. **Caution:** Never use your head to push; this could result in back and neck injuries.

26. Spray the bottom of the windshield at least 4-to-5 inches above the urethane on the glass, so water flows

down into the urethane while you make your final cut across the bottom of the windshield.

27. 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

28. After cutting the windshield out, use a soft brush or vacuum to remove contaminants such as dirt, moisture and other debris from the pinchweld. Clean the dashboard.

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

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

31. Lift the windshield and set it onto the old urethane.

32. With the windshield resting in the opening, make sure it's in the right spot.

33. Adjust both sides of the windshield to the correct setting,

Tech tips

marking the passenger's side, then the driver's side. Lift the windshield from the opening and place it on a windshield stand or suitable workstation.

34. Before installing the new windshield, repair any corrosion on the pinchweld. **Warning:** If left unrepaired, the corrosion could jeopardize the structural integrity of the vehicle and the safety of its passengers.

35. If re-installing the original windshield, remove the excess urethane adhesive from the glass and leave a thin layer to bond with the new urethane adhesive bead.

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

Note: Use the same brand and cure-rate products for the urethane adhesive and glass primer. Do not mix different brands of urethane adhesive and glass primer.

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

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

39. Apply the glass prep, then primer, to the new windshield, following the urethane manufacturer's recommendations. Allow the primer to dry for at least six minutes.

40. Using a pinchweld-preparation tool, trim the original urethane adhesive bead, leaving 1-2 millimeters of existing urethane on the pinchweld. **Caution:** Avoid scratching the pinchweld. **Note:** Make sure there are no contaminants, and do not touch the pinchweld after prepping the area.

41. Apply the pinchweld primer only to the areas where needed, following the urethane manufacturer's recommendations. **Note:** Allow preps and primers to dry as recommended by the urethane manufacturer. Use the same brand of pinchweld primer, glass primer and urethane adhesive.

42. Using a high-ratio, electric or battery-operated caulk gun, apply a triangular bead of urethane to the same path as the freshly cut urethane on the

pinchweld, starting and ending at the bottom of the windshield near the center. Make sure there are no gaps in the bead. **Note:** Before cutting your V-notch, cut the tip off of your nozzle using a nozzle cutter. With the cut nozzle, measure to the top of the roofline and, at 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.

43. Using vacuum cups, lift the windshield from the windshield stand or workstation. 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.

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

45. Allow the urethane adhesive to cure before testing for leaks. 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.

46. Position the front portion of the headliner.

47. Install the left-hand and right-hand sun visors and clips.

48. Install the passenger front-assist handle.

49. Install the overhead console.

50. Install the rearview mirror.

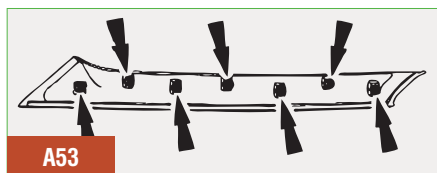
51. Install the A-pillar trim panels, following steps 8-13 in reverse order.

Warning: You must install a new A-pillar trim-panel tether if it is damaged or does not fasten correctly. During a side air-curtain deployment, the A-pillar trim-panel tether helps prevent the trim from striking the occupant. Failure to follow this instruction could result in serious injury to the vehicle occupants.

Note: Alignment tabs must be positioned properly for installation to avoid damage.

52. Install the exterior A-pillar window moldings.

53. Apply seam sealer to the rubber gaskets around each of the window molding clips.




54. Starting at the bottom, align the A-pillar window molding clips and carefully snap them into place.

55. Install the upper cowl panel grille.

56. 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 vehicle and the safety of its passengers.

57. Use glass cleaner to clean the interior and exterior of the windshield.

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

With permission from Ford Motor Co. Special thanks to Rod Watson, Carlite technical services manager, Zeledyne LLC, Tulsa, for contributing to this article.