

SECTION 501-11: Glass, Frames and Mechanisms
REMOVAL AND INSTALLATION

2014 F-150 Workshop Manual
 Procedure revision date: 10/25/2013

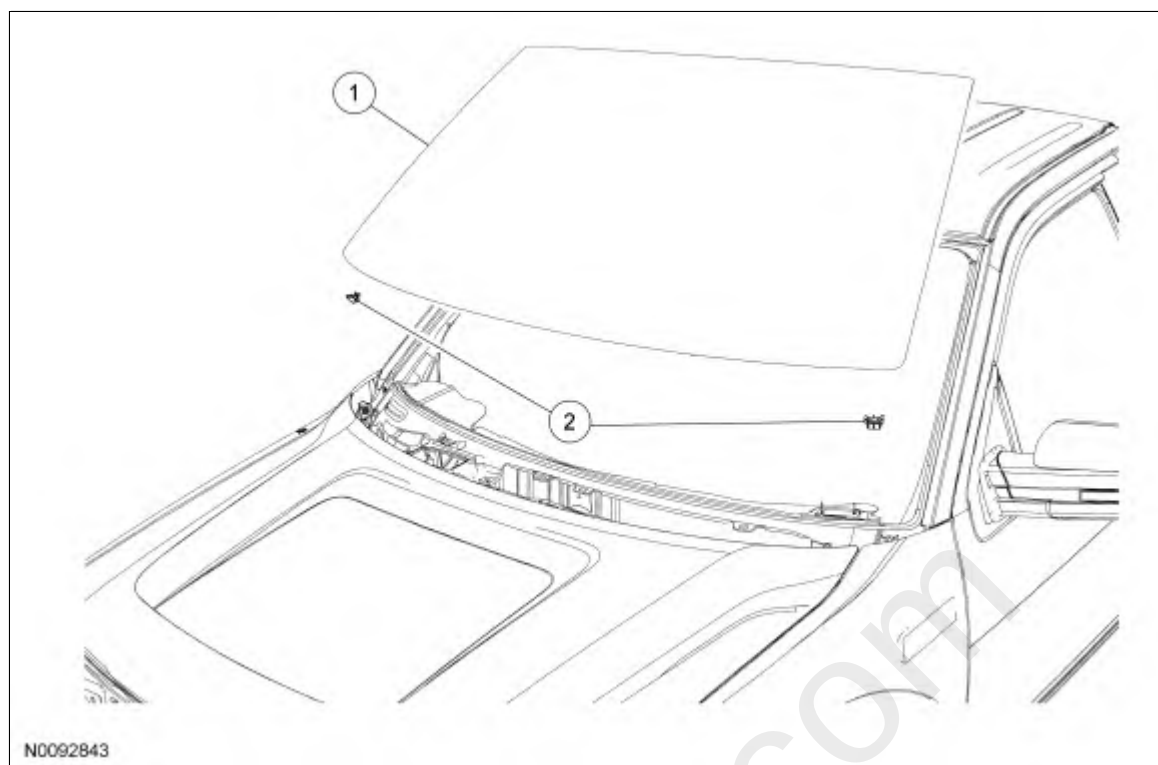
Windshield Glass

Special Tool(s)

 ST3109-A	Air Caulking Gun AST405 or equivalent
 ST3274-A	Deluxe Air Windshield Knife 300-AST 1770E or equivalent
 ST2085-A	The Pumper 164-R2459 or equivalent

Material

Item	Specification
Dow Urethane Adhesive Betaseal™ Express	—
Dow Urethane One Step Glass Primer Betaprime™ 5500 / 5500A / 5500SA	—
Sika Urethane Adhesive Sika Tack ASAP	—
Sika Urethane Metal and Glass Primer Sika 206 G+P	—
Motorcraft® Ultra-Clear Spray Glass Cleaner ZC-23	ESR-M14P5-A



Item	Part Number	Description
1	03100	Windshield glass
2	03489	Windshield glass spacer blocks (2 required)

Removal

1. Remove the cowl panel grille. For additional information, refer to [Section 501-02](#).
2. If equipped, remove the overhead console or dome lamp assembly. For additional information, refer to [Section 501-12](#).
3. Remove the interior rear view mirror. For additional information, refer to [Section 501-09](#).
4. If equipped, remove the rain sensor. For additional information, refer to [Section 501-16](#).
5. Remove the A-pillar trim panels, sunvisors and sunvisor clips. For additional information, refer to [Section 501-05](#).
6. Partially lower the front portion of the headliner near the windshield upper opening and block with a suitable material.
7.  **WARNING: Wear eye and ear protection when servicing a vehicle. Failure to follow this instruction may result in serious personal injury.**

 **WARNING: Wear protective gloves when handling components or parts that have pointed or sharp edges. Failure to follow this instruction may result in serious personal injury.**

NOTICE: To avoid rust formation, use extreme care not to scratch the paint or primer or

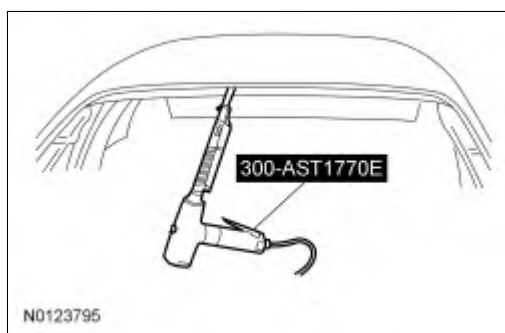
otherwise damage the pinchweld during glass removal.

NOTE: Insert the blade into the Deluxe Air Windshield Knife so that the flat side is against the glass. This will leave the entire urethane adhesive bead on the pinchweld and allow a dry fit of the replacement windshield glass.

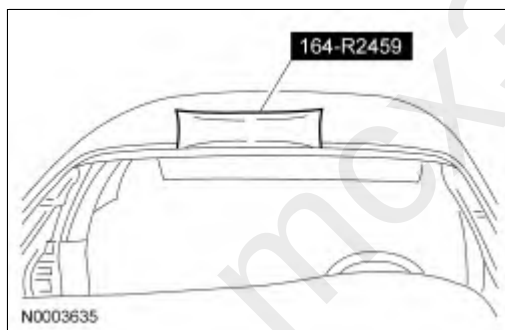
NOTE: Lubricate the urethane adhesive with water to aid the Deluxe Air Windshield Knife when cutting the urethane adhesive.

NOTE: Support the windshield glass to prevent the glass from dropping while cutting the urethane adhesive.

Working from inside the vehicle, cut the urethane adhesive using the Deluxe Air Windshield Knife starting at the top center and working toward the bottom corners then across the bottom.



8. Using The Pumper, distance the windshield glass from the body.



9. **NOTE:** Removing the windshield glass requires more than one technician.

Using the Deluxe Air Windshield Knife, cut the remaining urethane adhesive and remove the windshield glass and place on a stable work surface.

Installation

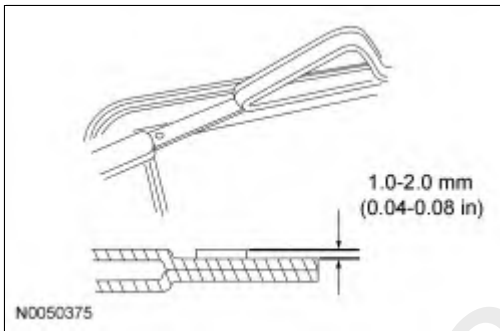
NOTE: For additional material guidelines, refer to the manufacturer's installation information.

1. Inspect the glass spacer blocks for damage. If necessary, install new spacer blocks.
2. Dry-fit the windshield glass on the existing urethane adhesive bead on the pinch weld.
 - Position the windshield glass on the pinch weld.
 - Center the glass in the opening.
 - Adjust the windshield spacer blocks as needed for best fit.

- Make alignment marks with tape or non-staining grease pencil (preferably at the spacer blocks) on the windshield glass and the body.
3. After the dry-fit alignment, remove the glass from the body opening and place on a stable work surface with the interior side of the glass facing upward.
 4.  **WARNING: Repair any corrosion found on the pinch weld. The pinch weld is a structural component of the vehicle. Corrosion left unrepaired may reduce the structural integrity of the vehicle. Failure to follow this instruction may result in serious injury to vehicle occupant(s).**

NOTE: Avoid scratching the pinch weld. Repair all minor scratches or exposed metal on the pinch weld following manufacturer's instructions. Use the same brand pinch weld primer, glass primer and urethane adhesive.

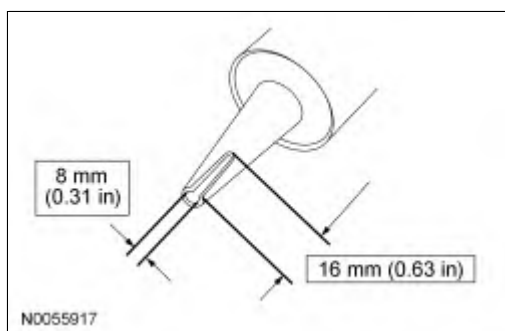
Using an appropriate tool, trim the urethane adhesive leaving a 1 mm to 2 mm (0.04 in to 0.08 in) base of original equipment urethane adhesive on the pinch weld.



5. Using a clean shop towel, brush or oil-free compressed air, clean the pinch weld area around the existing urethane adhesive. Remove any foreign material or water that may have entered during glass removal.
6. If reinstalling the same windshield glass, remove the remaining urethane adhesive from the windshield glass leaving a thin layer to bond with the new urethane adhesive bead.
7. Clean the inside of the windshield glass surface with glass cleaner.
 - Make sure to thoroughly clean the surface of the blackened border area where the urethane adhesive will be applied.
8. **NOTICE: Be sure to 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. Refer to the Material Chart in this procedure.**

If installing a new windshield glass, apply glass primer according to manufacturer's instructions. Allow at least 6 minutes to dry.

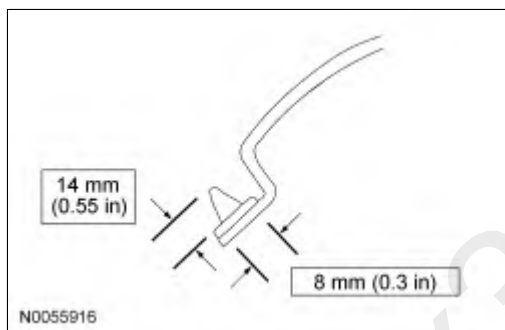
9. Cut the urethane adhesive applicator tip to specification.



10. **NOTE:** Use either an Air Caulking Gun or a high-ratio, electric or battery-operated caulk gun that will apply the urethane adhesive with less effort and continuous bead.

NOTE: The windshield glass must be positioned within 10 minutes of applying the urethane adhesive.

Apply urethane adhesive on top of the existing trimmed urethane adhesive bead on the pinch weld, starting and ending at the bottom of the windshield near the center, making sure there are no gaps in the bead.



11. **WARNING:** Improper curing of the urethane adhesive may adversely affect glass retention, which is important for restraint system performance during a crash. Carefully follow the urethane adhesive manufacturer's curing instructions. Do not drive the vehicle until the urethane adhesive seal has cured. Failure to follow these instructions may result in serious injury to vehicle occupant(s) during a crash.

NOTICE: Before positioning the windshield glass, open vehicle windows to prevent the air pressure of closing doors from affecting the urethane adhesive bond.

Position the windshield glass on the pinch weld using the alignment marks made previously.

12. **NOTE:** The urethane adhesive must cure for a minimum of one hour before testing for air or water leaks.

After the urethane adhesive has cured, check the windshield glass seal for air or water leaks through the urethane adhesive bead and add urethane adhesive as necessary.

13. Position the front portion of the headliner.
14. Install the A-pillar trim panels, sunvisors and sunvisor clips. For additional information, refer to [Section 501-05](#).
15. If equipped, install the rain sensor. For additional information, refer to [Section 501-16](#).

16. Install the interior rear view mirror. For additional information, refer to [Section 501-09](#).
 17. If equipped, install the overhead console or dome lamp assembly. For additional information, refer to [Section 501-12](#).
 18. Install the cowl panel grille. For additional information, refer to [Section 501-02](#).
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