

REMOVAL AND INSTALLATION

GLASS REMOVAL TOOLS

Common Glass Tools Needed to Remove Stationary Glass



[1 - Extractor® Express™ or equivalent, equipped with flat blade](#)

[2 - Rotating Wire Removal System](#)

[3 - Two handled wire type cut-out tool](#)

[4 - Cold knife equipped with a 25 mm \(1.0 in.\) blade or a 38 mm \(1.5 in.\) blade](#)

[5 - Long knife](#)

BACKLITE

REMOVAL

CAUTION:

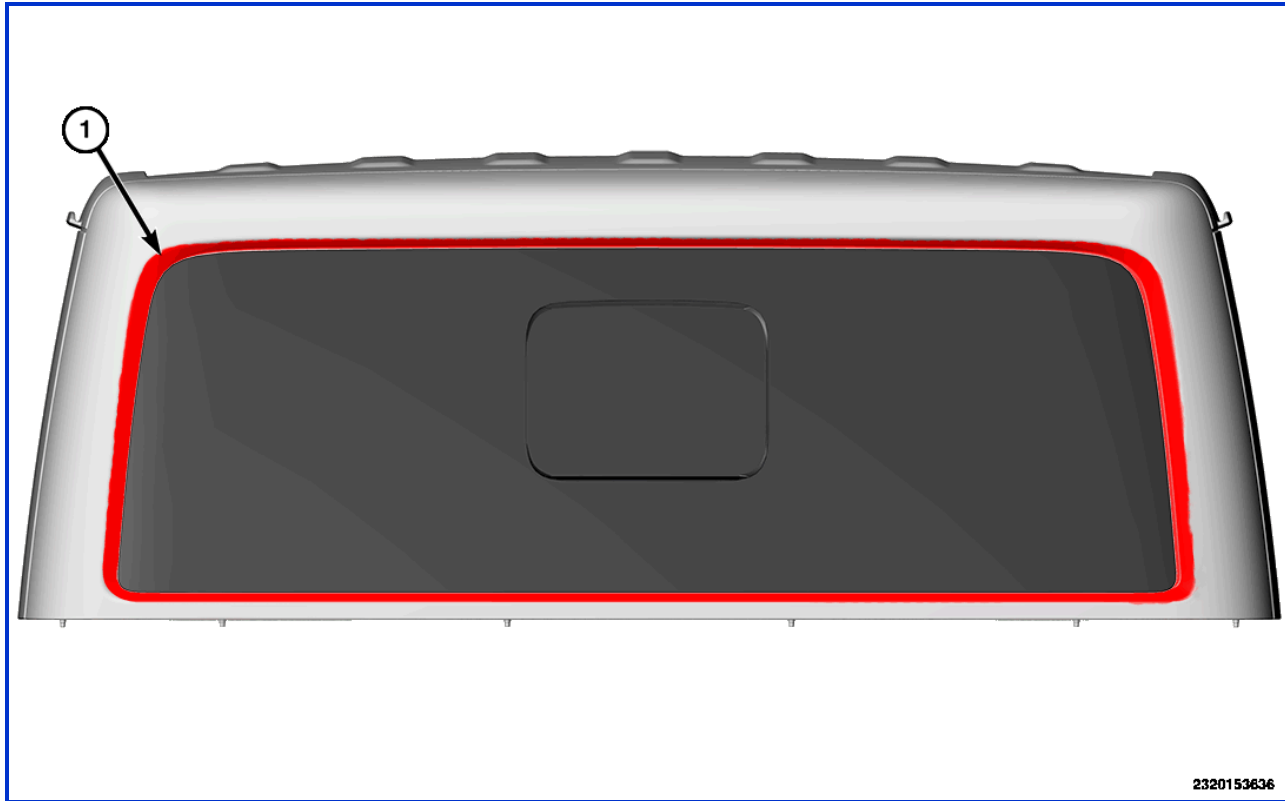
It is difficult to salvage the backlite during the removal operation. The urethane bonding used to secure the glass to the fence is difficult to cut or clean from any surface. Since the molding is set in urethane, it is unlikely it would be salvaged. Before removing the backlite, check the availability from the parts supplier.

CAUTION:

Take care using any tools to avoid top damage in the location indicated by the illustration.

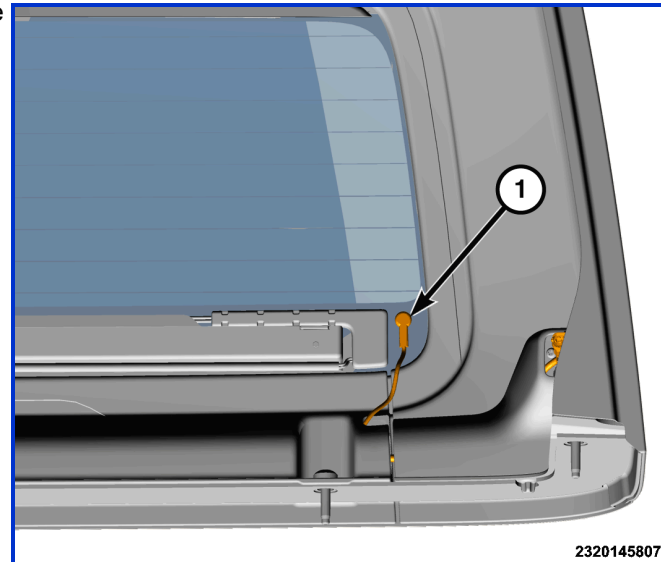
NOTE: The backlite is attached to the window frame with urethane adhesive. The urethane adhesive is applied cold and seals the surface area between the window opening and the glass. The primer adheres the urethane adhesive to the backlite.

1. Disconnect and isolate the negative battery cable(s) ([Refer to 08 - Electrical/Battery System/Standard Procedure](#)).



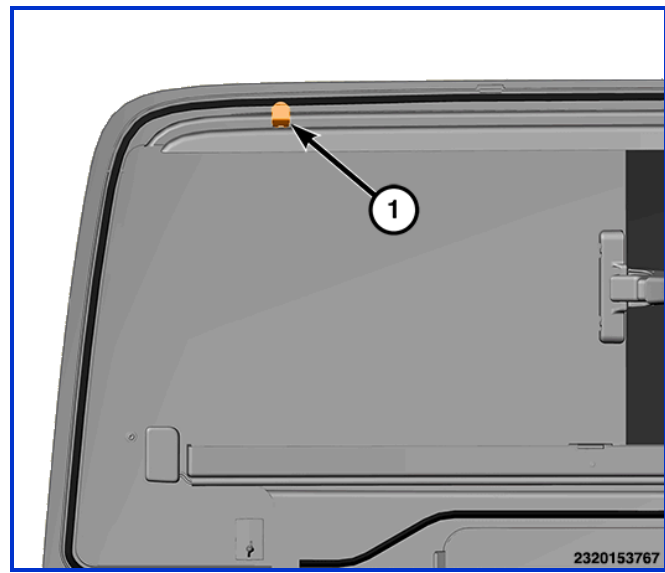
1 - Backlite

2. Remove the rear header panel ([Refer to 23 - Body/Interior/PANEL, Back Trim/Removal and Installation](#)).
3. Disconnect the electronic backlite grid connectors from both sides of the glass, if equipped.



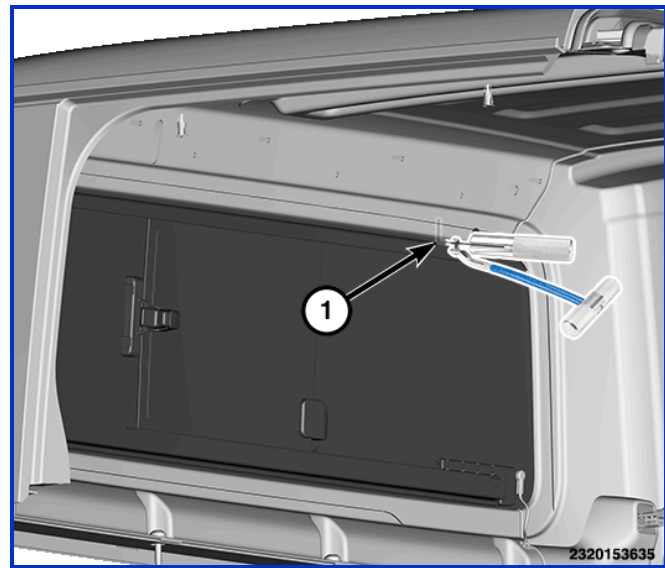
1 - Grid Connector

4. Bend the top tabs down out of the way.



1 - Tab

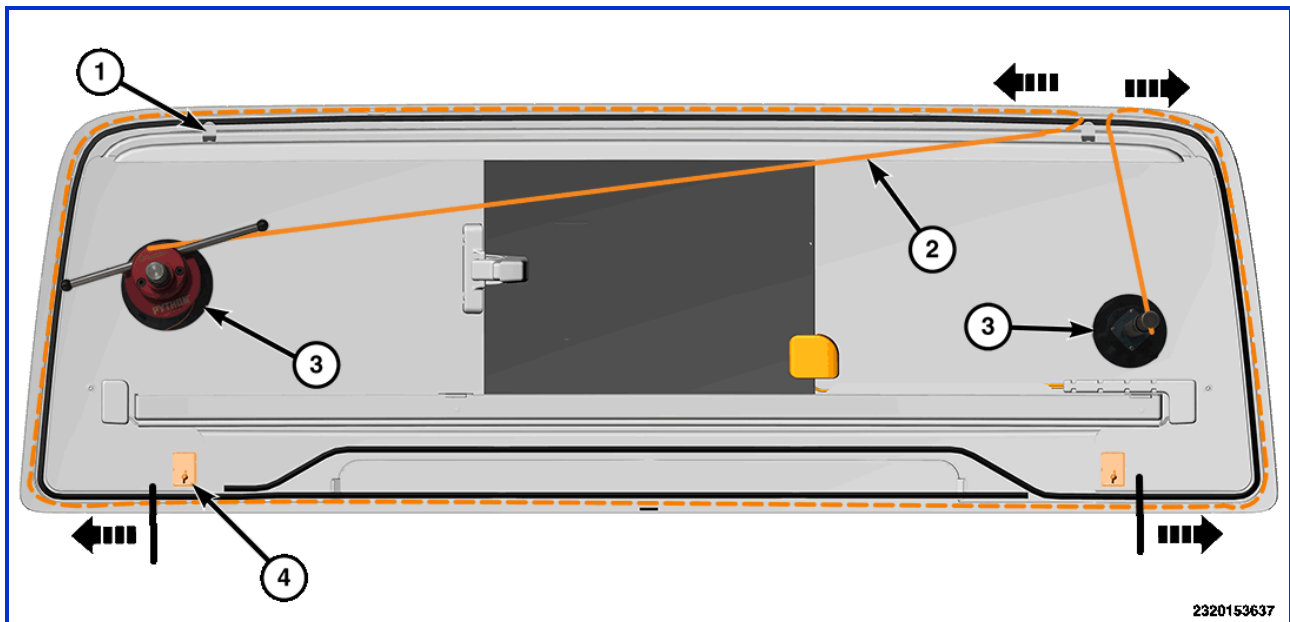
5. From inside the vehicle, separate the top adhesive using a pull knife or equivalent, to aid installation of the wire removal tool.



1 - Pull Knife

6. Install the nylon cable out through the opening in the adhesive made previously and position around the perimeter of the glass as indicated.

7. Using an assistant and a windshield Rotating Wire Removal System tool, cut and separate the urethane adhesive securing the glass to the fence and stopping at the support pins. Use a trim stick or equivalent to aid in guiding the nylon cable around the glass channels as needed.



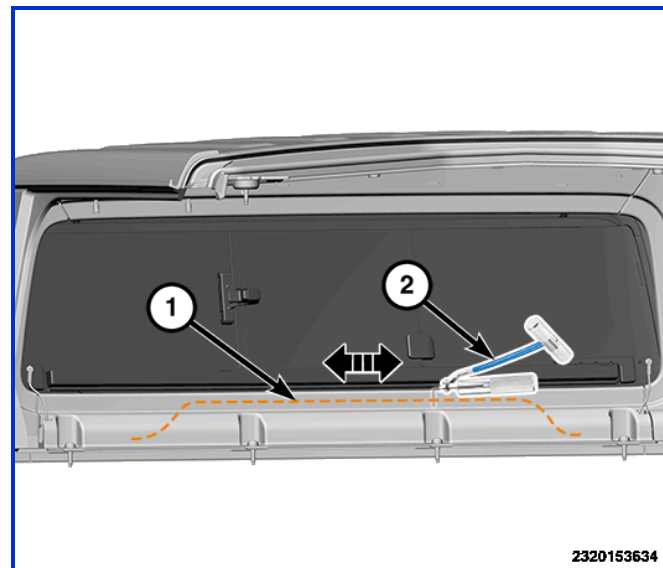
1 - Tab

2 - Nylon Cable

3 - Rotating Wire Removal System Tool

4 - Support Pin

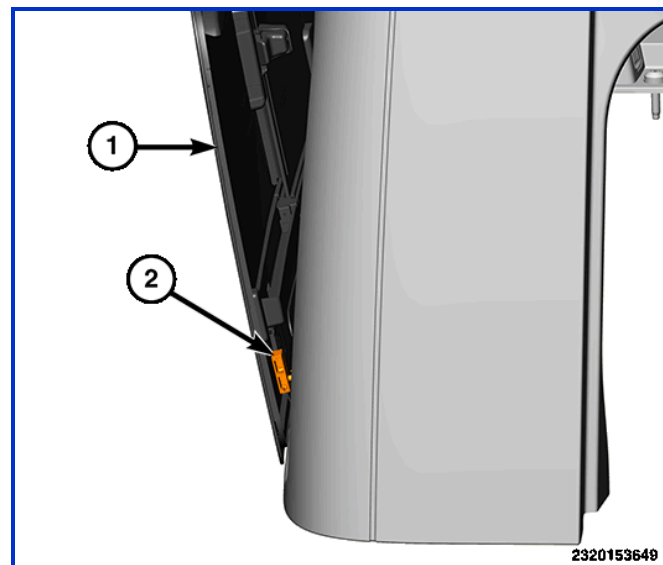
8. From inside the vehicle, separate the lower adhesive using a pull knife or equivalent. This will aid in gaining access to the lower support pins.



1 - Lower Adhesive

2 - Pull Knife

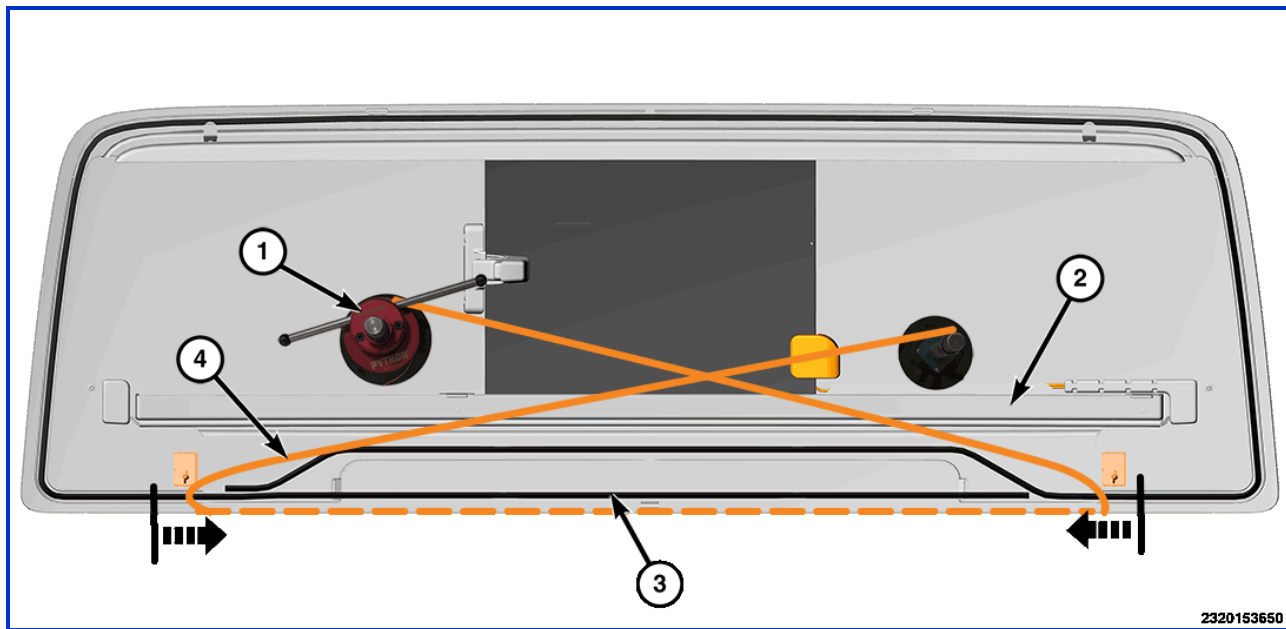
9. Position the glass back to expose the support pins at the bottom.
10. Using a small flat bladed tool or equivalent, separate the two sided tape securing the support pins to the glass.



1 - Glass

2 - Support Pin

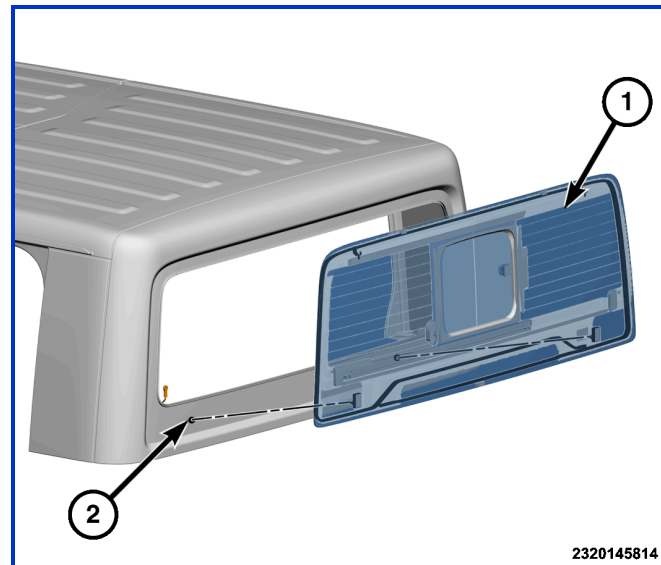
11. Reposition the nylon cable through the glass opening to cut the remaining adhesive at the bottom of the glass as indicated.
12. Using an assistant and a windshield Rotating Wire Removal System tool, cut and separate the remaining urethane adhesive securing the bottom of the glass to the fence and remove the glass. Use a trim stick or equivalent to aid in guiding the nylon cable around the glass channels as needed.



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- 1 - Rotating Wire Removal System Tool
- 2 - Glass Channels
- 3 - Glass
- 4 - Nylon Cable

13. Separate glass from vehicle.



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- 1 - Glass
- 2 - Hole

WARNING:

Do not operate the vehicle within 24 hours of windshield installation. It takes at least 24 hours for urethane adhesive to cure. If it is not cured, the windshield may not perform properly if the vehicle is in an accident.

CAUTION:

To help prevent water leaks, partially roll down the left and right door glass before installing the windshield. This avoids pressurizing the passenger compartment if a door is slammed before the urethane is cured.

CAUTION:

Protect all painted and trimmed surfaces from coming in contact with urethane or primers.

NOTE:

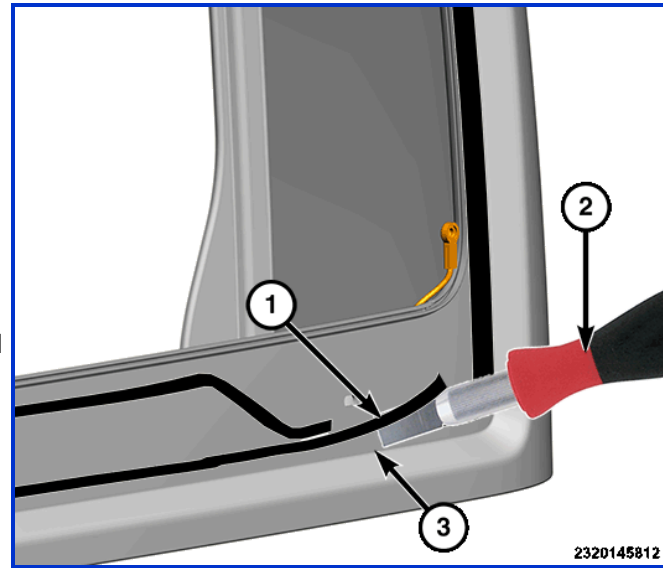
The glass fence should be cleaned of most of its old urethane adhesive. A small amount of old urethane, approximately 1 mm in height should remain on the fence. Do not completely remove all old urethane from the fence, the paint finish and bonding strength will be adversely affected.

CAUTION:

Do not use solvent based glass cleaners to clean the backlite before applying glass prep and primer or poor glass adhesion may result.

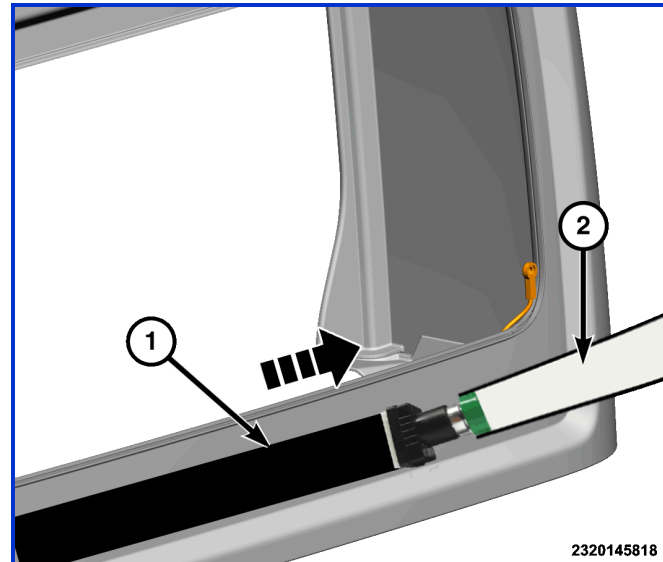
INSTALLATION

1. With a sharp flat bladed tool equipped with an appropriate width blade, trim the remaining bead of adhesive down to approximately 1 mm (0.04 in). Use care not to damage the edge of the top. Do not completely remove all old urethane from the frame, the paint finish and bonding strength will be adversely affected.
2. Clean the inside of the glass with an ammonia based glass cleaner and a lint-free cloth.
3. Apply glass prep adhesion promoter 25 mm (1 in.) wide around the perimeter of the glass and 5 mm (0.2 in.) from the edge of the glass and let air dry without wiping.
4. Apply glass primer 25 mm (1 in.) wide around the perimeter of the glass and 5 mm (0.2 in.) from the edge of the glass. Allow at least three minutes drying time.
5. Using a flashlight, verify that the primer is completely and evenly installed along the perimeter of the glass.
6. Re-prime any area that is not fully and evenly primed.



- 1 - Bead of Adhesive
- 2 - Tool
- 3 - Edge of the Top

7. Clean the glass fence with an ammonia based glass cleaner and a lint-free cloth.
8. With the use of the applicator, apply pinch weld primer 25 mm (1 in.) wide around the glass fence. Allow at least three minutes drying time.
9. Using a flashlight, verify that the primer is completely and evenly installed along the glass fence.
10. Re-prime any area that is not fully and evenly primed.



- 1 - Pinch Weld Primer
- 2 - Applicator

CAUTION:

**Always apply bead of adhesive to the backlite.
Always install the backlite within 5 minutes
after applying adhesive.**

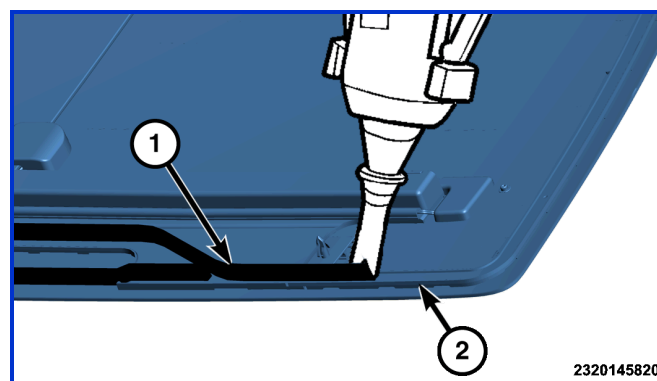
NOTE:

If the original urethane adhesive has been exposed for more than 12 hours, the entire adhesive area will need to be re-primed prior to installing new adhesive.

- Apply bead of adhesive with a triangular nozzle directly on the glass.
11. Apply approximately a 7 mm (0.3 in.) wide and 13 mm (0.5 in.) tall bead of adhesive with a triangular nozzle approximately 6 mm (0.230 in.) from the edge of the glass starting at the bottom center of the glass.

NOTE:

Be certain the bead of adhesive is placed on the primer fully.



1 - Adhesive

2 - Glass

ADHESIVE WIDTH 7 mm (0.275 in)

ADHESIVE HEIGHT 13 mm (0.50 in)

12. Run the end of the adhesive bead on the glass parallel to the start of the bead and smooth the ends flush.

NOTE:

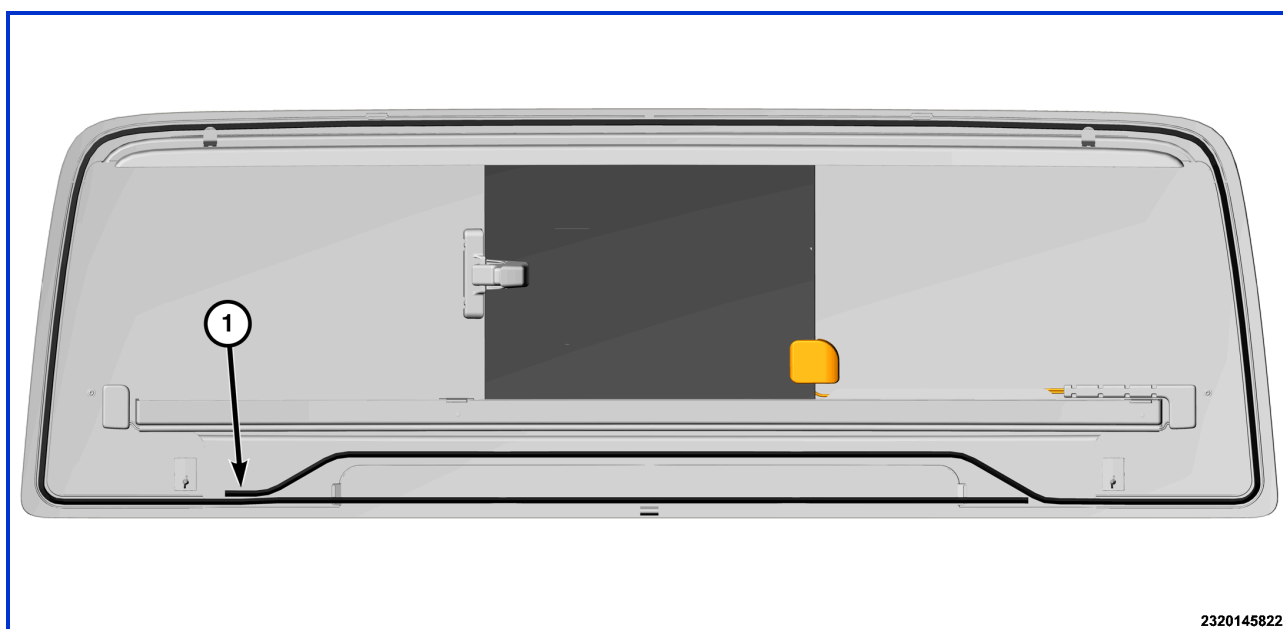
Be certain there are no gaps present in the adhesive bead and ends.

WARNING:

Allow the urethane at least 24 hours to cure before returning the vehicle to use.

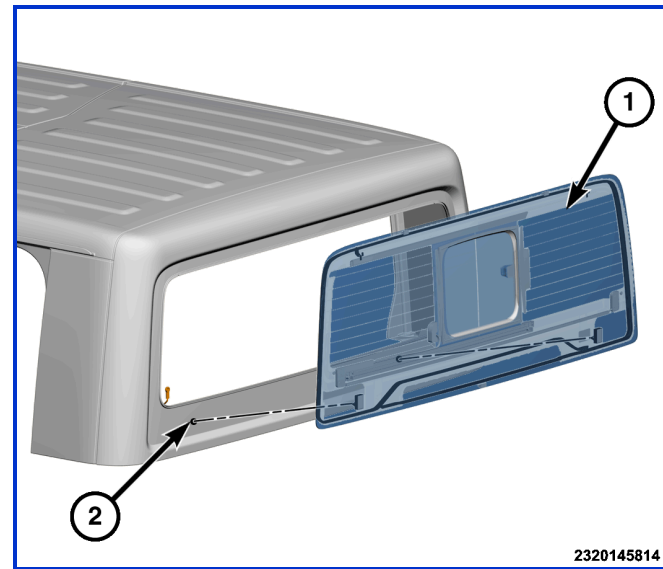
NOTE:

Roll down the left and right front door glass before installing backlite. This is to avoid pressurizing the passenger compartment if a door is slammed before the urethane is cured. The potential for water leaks can result.



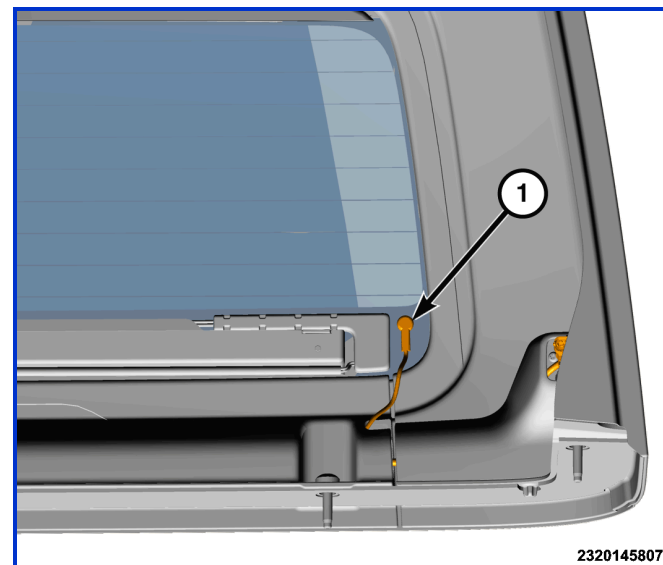
1 - Adhesive Bead

13. Locate the glass assembly to the backlight opening. Align the pins on the glass assembly with the holes in the bottom corners of the backlight opening.
14. Apply hand pressure to the outside glass surface, around the entire periphery, to assure proper seating of the glass to the backlight opening. The glass must be seated to the rest blocks.



- 1 - Glass Assembly
2 - Hole

15. Connect the electronic backlite grid connectors to both sides, if equipped.
16. Install the rear cab header panel, ([Refer to 23 - Body/Interior/PANEL, Back Trim/Removal and Installation](#)).
17. Connect the negative battery cable(s) ([Refer to 08 - Electrical/Battery System/Standard Procedure](#)).



- 1 - Grid Connector