

Fixed Glass

Special Tool(s) / General Equipment

Glass Cut-Out Wire
Power Caulk Gun
Power Fixed Glass Removal Tool
Cold Knife
Knife
Vacuum Cleaner

Materials

Name	Specification
Sika® SikaTack® MACH 60 / Sika® SikaTack® MACH 30 / Dow® BETASEAL® Express	-
Sika Tack ASAP Urethane Adhesive	-
Motorcraft® Ultra-Clear Spray Glass Cleaner ZC-23	ESR-M14P5-A
Sika® Aktivator PRO / Dow® BETAPRIME® 5504G / Sika® Primer-207	-

Repair

- NOTE:** Some interior trim, exterior trim and/or components may require removal based on the tools and removal method used.

NOTE: In some instances repair methods may be combined to achieve the best results.

NOTE: If any of the following conditions exist, the fixed glass must be discarded. A new fixed glass is required.

- The fixed glass is the windshield glass and equipped with a camera bracket.
- The fixed glass is the windshield glass and equipped with adhesive mouldings.

Choose the best repair method for the type of glass being replaced.

- Cold knife method “uses the cold knife to cut the urethane from the outside of a vehicle provided the blade can reach the bead.
Use the General Equipment: Cold Knife
 - Power tool method “uses various power tools from inside the vehicle using a cutting or paddle type blade.
Use the General Equipment: Power Fixed Glass Removal Tool
 - Piano wire method “uses the piano wire to cut the urethane from inside and outside of a vehicle using an assistant.
Use the General Equipment: Glass Cut-Out Wire
- When using the cold knife method, apply tape to protect the perimeter of the window opening from paint damage. Multiple layers of tape may be required.



NOTICE: New or reused fixed glass must be installed within 2 hours of cutting the urethane adhesive. Exposed cut surfaces of urethane become oxidized and inactive beyond 2 hours, reducing the effectiveness of the repair bond.

NOTICE: To avoid rust formation, use extreme care not to scratch the paint or primer or damage the pinch weld during glass removal.

NOTICE: Take precautions to prevent damage to other components when cutting urethane.

NOTE: If any of the following conditions exist, the fixed glass must be discarded. A new fixed glass is required.

- The fixed glass is the windshield glass and equipped with a camera bracket.
- The fixed glass is the windshield glass and equipped with adhesive mouldings.

NOTE: Fixed glass may have locating pins that vary in location. It may be necessary to cut these pins with a utility knife.

Remove the fixed glass.

Use the General Equipment: Power Fixed Glass Removal Tool

Use the General Equipment: Cold Knife

Use the General Equipment: Knife

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).

NOTICE: New or reused fixed glass must be installed within 2 hours of cutting the urethane adhesive. Exposed cut surfaces of urethane become oxidized and inactive beyond 2 hours, reducing the effectiveness of the repair bond.

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

NOTE: Touching the adhesive surface impairs the rebonding.

NOTE: Make sure the mating surfaces are clean and free of foreign material.

NOTE: If replacing the windshield glass and equipped with a camera bracket, it must have locating pins and spacers to ensure correct alignment. Do not use a replacement windshield glass, without locating pins and spacers.

Prep the pinch weld area to install the new or reused fixed glass.

1. Trim or shave down the original urethane adhesive on pinch weld flange and on glass (if reused) using a utility knife, leaving a 1 mm to 2 mm (0.04 in to 0.08 in) base on the parts, only when final installation is within 2 hours.
2. Remove any foreign material or dirt from the pinch weld using a soft brush or vacuum.
Use the General Equipment: Vacuum Cleaner

5. **NOTE:** Minimize applying primer over areas with remaining urethane adhesive and observe a minimum flash time of 10 minutes.

If the paint layer was damaged on the pinch weld extending into bare metal, apply primer to those areas only.

Material: Sika® Aktivator PRO / Dow® BETAPRIME®, 5504G / Sika® Primer-207

6. **NOTE:** Minimize applying primer over areas with remaining urethane adhesive and observe a minimum flash time of 10 minutes.

Apply primer as necessary.

1. Apply primer to those areas only previously primed with primer.
Material: Sika® Aktivator PRO / Dow® BETAPRIME®, 5504G / Sika® Primer-207
2. If the clearcoat layer was damaged on the pinch weld but not extending into bare metal, apply primer to those areas only.
Material: Sika® Aktivator PRO / Dow® BETAPRIME®, 5504G / Sika® Primer-207

7. **NOTE:** This step only applies when installing a new fixed glass.

Clean the inside of the new fixed glass with glass cleaner.

Material: Motorcraft® Ultra-Clear Spray Glass Cleaner / ZC-23 (ESR-M14P5-A)

8.



NOTE: This step only applies when installing a new fixed glass.

Apply primer according to the manufacturer's instructions to the new fixed glass. Allow at least 10 minutes to dry.

Material: Sika® Aktivator PRO / Dow® BETAPRIME®, 5504G / Sika® Primer-207

9. **NOTE:** This step only applies to reusable fixed glass.

Visually inspect and remove remaining urethane adhesive from the glass leaving a thin layer to bond with the new urethane adhesive bead.



10.



NOTE: This step only applies to reusable fixed glass.

Apply primer according to the manufacturer's instructions to the fixed glass anywhere the urethane adhesive was completely removed. Allow at least 10 minutes to dry.

Material: Sika® Aktivator PRO / Dow® BETAPRIME®, 5504G / Sika® Primer-207



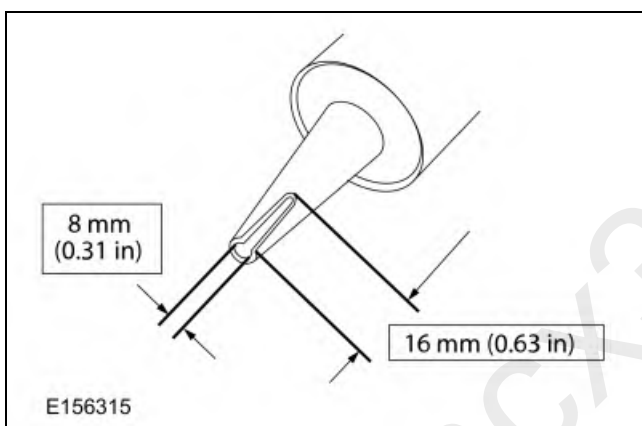
11.



Cut the urethane adhesive applicator tip to specification.

Material: Sika® SikaTack® MACH 60 / Sika® SikaTack® MACH 30 / Dow® BETASEAL®, Express

Material: Sika Tack ASAP Urethane Adhesive



12.



NOTICE: Make sure the urethane bead is uniform to prevent air and water leaks.

NOTE: The fixed glass must be installed within 10 minutes of applying the urethane adhesive.

NOTE: Use a power caulk gun that applies the urethane adhesive with less effort and a continuous bead.

Apply a urethane adhesive bead.

1. Start and end at the original overlap points to prevent air and water leaks.
2. **NOTE:** Take care in applying urethane on vehicles without peripheral moldings as urethane expulsion could become an appearance issue.

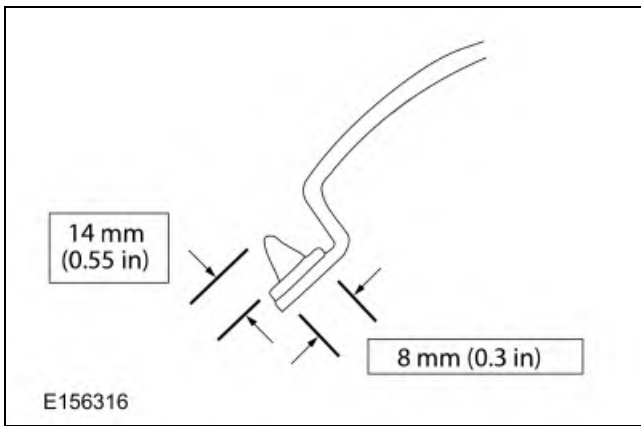
Apply a urethane adhesive bead 14 mm (0.551 in) high and 8 mm (0.314 in) wide on top of the existing trimmed urethane adhesive bead on the pinch weld.

Use the General Equipment: Power Caulk Gun

Material: Sika® SikaTack® MACH 60 / Sika® SikaTack® MACH 30 / Dow® BETASEAL®, Express

Material: Sika Tack ASAP Urethane Adhesive

3. Make sure there are no gaps in the bead.



13. **NOTICE: The door windows must be left open during the adhesive curing time.**

Open the vehicle windows to prevent the air pressure of closing doors from compromising the urethane adhesive bond.



WARNING: Do not drive vehicle until the urethane adhesive seal has cured. Follow urethane adhesive manufacturer's curing directions. Inadequate or incorrect curing of the urethane adhesive seal will adversely affect glass retention. Failure to follow these instructions may result in serious injury to vehicle occupant(s).

NOTE: If equipped, the adhesive strip backings must be removed from the A-pillar mouldings before installing the fixed glass.

NOTE: If replacing the windshield glass and equipped with a camera bracket, it must have locating pins and spacers to ensure correct alignment. Do not use a replacement windshield glass, without locating pins and spacers.

Install the fixed glass to the vehicle.

1. Install the fixed glass, pressing firmly by hand to ensure a good bond.
2. Secure the fixed glass in the correct position with tape until the urethane adhesive has cured.

15. If necessary, remove excess uncured urethane adhesive from the interior and exterior surface of the fixed glass.

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16. Install any removed components as needed.

17. If equipped, carry out the IPMA camera alignment.

Refer to: Lane Keeping System - System Operation and Component Description (419-07 Lane Keeping System, Description and Operation).