

Air Fairing Repair VNL, VNM

Air Fairing Repair

(Effective from September 1998)

This bulletin describes the approved procedures for making cosmetic and structural repairs to the VN Series air fairings. At this time, Volvo Trucks North America recommends using only Fusor^{®1} bonding and repair materials for repairing VN air fairings.



CAUTION

DO NOT use fiberglass resin or other polyester fillers to repair VN air fairings. In time, the adhesion of these materials is lost and the repair will fail. Use only the approved Fusor repair materials.

VN Series air fairings are composed of either telene or metton panels, which are similar to the VN hood's SMC composition. Although these materials appear similar to fiberglass, the techniques for repair are quite different. Only Fusor bonding materials have been approved for panel bonding, structural repairs and cosmetic repairs on the Volvo metton and telene panels.

This bulletin contains the following information:

- ["Special Tools" page 2](#)
- ["Dispenser/Adhesive Preparation" page 3](#)
- ["Air Fairing, Cosmetic Repair" page 3](#)
- ["Air Fairing, Structural Repair" page 4](#)

¹Fusor is a registered trademark of Lord Repair Adhesives.

Tools

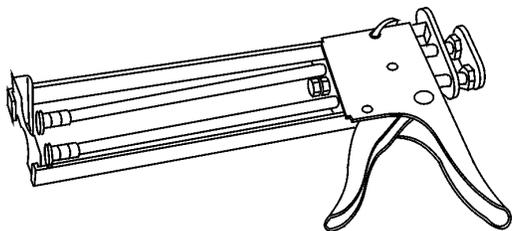
Special Tools

Note: Repair methods in this bulletin feature hand-operated dispenser guns and 10 oz. cartridges of repair materials to enable structural repairs at a minimal cost.

The repair methods, tools, and materials featured in the following information may also be used for fairing repairs: *Cab, Body Repair -VNL, VNM*(Group 81, PV776–TSP109945) or *Hood -VNL, VNM, (Group 82, PV776–TSP109858)*.

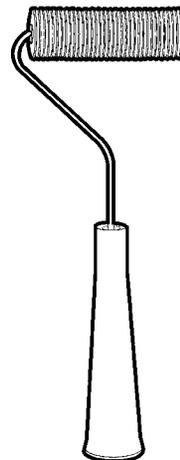
The following tools and materials are all available from Precision Products and Services, Inc.

Call 1–800–99FUSOR (993–8767).



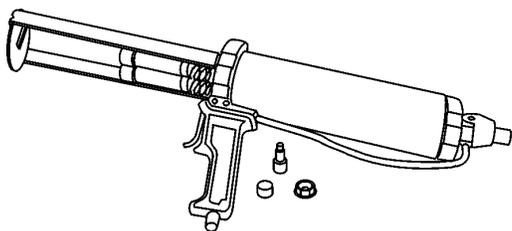
W8002291

P/N 301 Manual Dispenser Gun (for 10 oz. adhesive cartridges)



W8002351

P/N 704 Saturation Roller



W8002290

P/N 304 The 300 mL pneumatic dispenser may also be used.

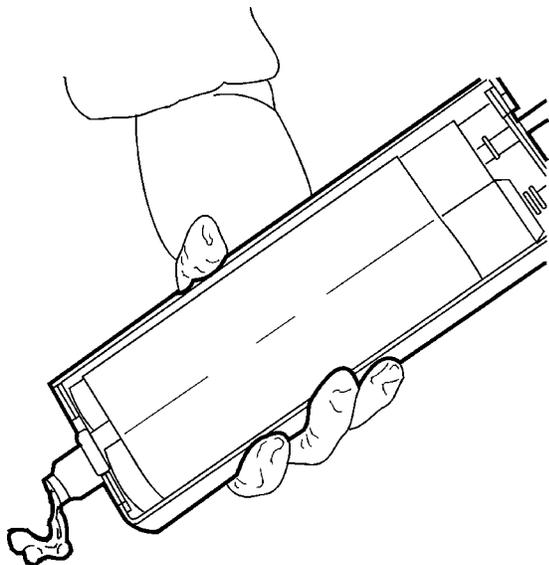
For information on various repair procedures using Fusor products, videos are also available from Precision Products and Services, Inc. Call 1–800–99FUSOR (993–8767).

Additional Tools and Materials

- | | | |
|------------------|---|--------------------|
| P/N 705 | Heat Monitoring Strip | |
| P/N 102 | FUSOR Plastic Body Cosmetic Repair Adhesive, Fast Set Formula | 10.1 oz. cartridge |
| P/N 100EZ | FUSOR EZ Plastic Body Repair Adhesive, Heat Set Formula | 10.1 oz. cartridge |
| P/N 703 | FUSOR Adhesion Prep/Cleaner | 32 oz. bottle |
| P/N 702 | FUSOR Plastic Fiberglass Cloth | |

Dispenser/Adhesive Preparation

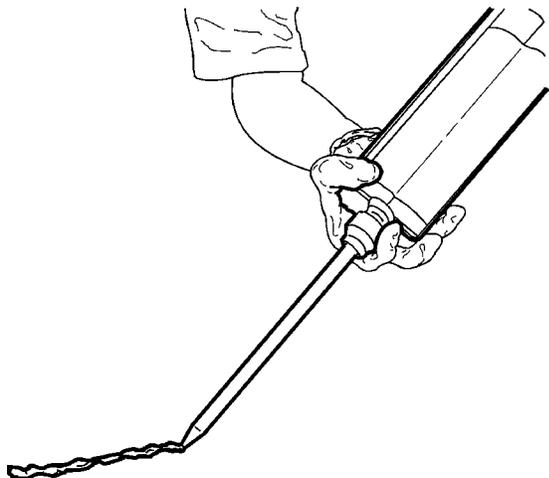
1



Using the dispenser gun, P/N 301, squeeze a small amount of adhesive from the cartridge to level the plungers.

W8002352
Manual
Dispenser
Gun P/N 301

2



Attach a mixing tip and dispense a small amount of adhesive until the color is evenly mixed.

W8002353

Air Fairing, Cosmetic Repair

See also "Air Fairing Repair" page 1.



PERSONAL INJURY HAZARD! Before working on a vehicle, set the parking brake, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

Cosmetic repairs, such as minor scratches, nicks or gouges, can be repaired using the following procedures. Generally, a repair is considered to be cosmetic if the panel material has not been broken.

Note: Cosmetic repairs use Fusor Plastic Body Cosmetic Repair Adhesive, Fast Set Formula, P/N 102. Work quickly, as the adhesive will begin to set within 3 minutes. Allow approximately 15 minutes for curing before sanding.

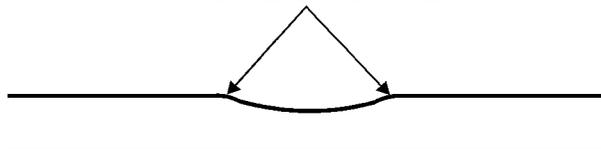
1

Clean the repair area with Fusor Adhesion Prep/Cleaner.

Fusor
Adhesion/Prep
Cleaner
P/N 703

2

COVE GROOVE



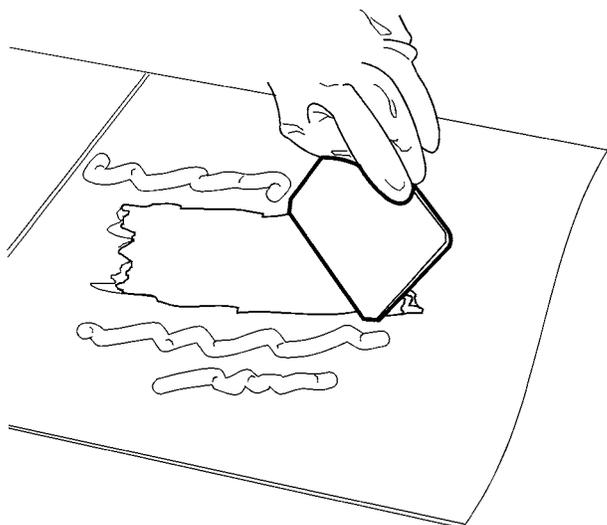
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Personal injury hazard. Always wear safety goggles and a respirator when sanding. Failure to use safety goggles could result in damage to the eyes. Failure to use a respirator could result in foreign material in the lungs.

Taper sand the repair area with 80 grit sand paper. Gradually taper the repair area to leave a "cove groove." Avoid leaving sharp edges. Remove sanding dust with compressed air to assure a clean bonding surface.

3



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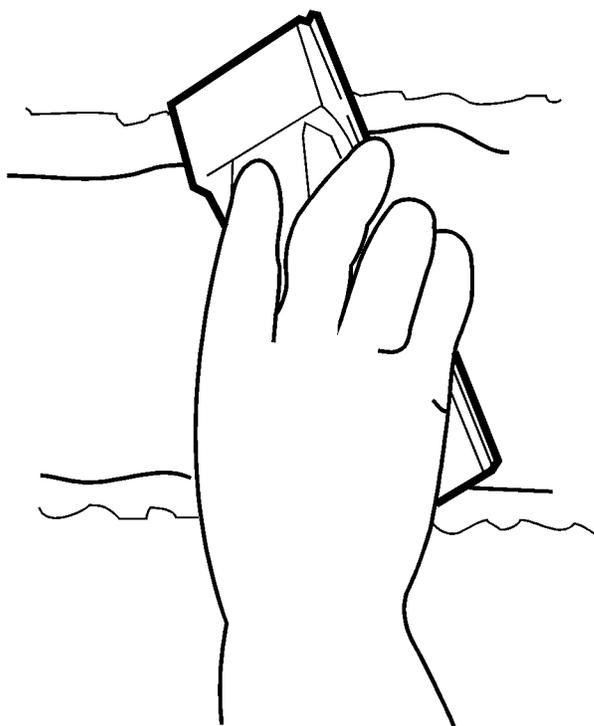
Properly prepare the dispenser (see "Dispenser/Adhesive Preparation" page 3). Apply the Fusor Cosmetic Repair Adhesive with the dispenser and work into the repair area with a plastic spreader.

Fusor
Cosmetic Repair Adhesive
P/N 102

4

Allow the adhesive to cure for approximately 15 minutes.

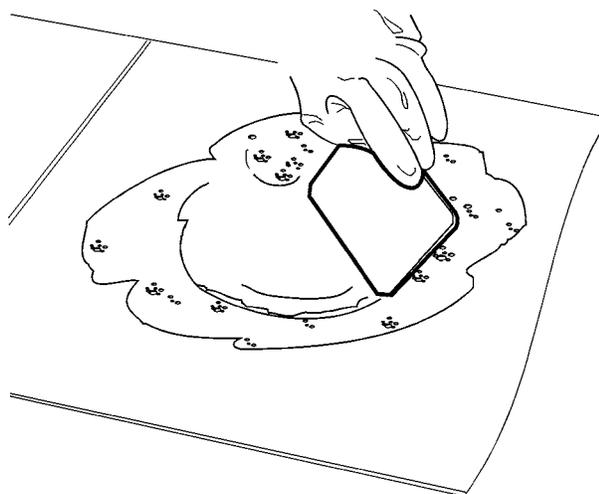
5



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Finish sand with 80 grit sandpaper, followed by 220 to 320 grit sandpaper.

6



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If pinholes exist in the repair area, blow off the surface with compressed air and apply a skim coat. Allow 15 minutes for curing and do a final sanding.

7

The surface is now ready to be cleaned, primed and painted.

Air Fairing, Structural Repair

See also "Air Fairing Repair" page 1.

! DANGER

PERSONAL INJURY HAZARD! Before working on a vehicle, set the parking brake, place the transmission in neutral, and block the wheels. Failure to do so can result in unexpected vehicle movement and can cause serious personal injury or death.

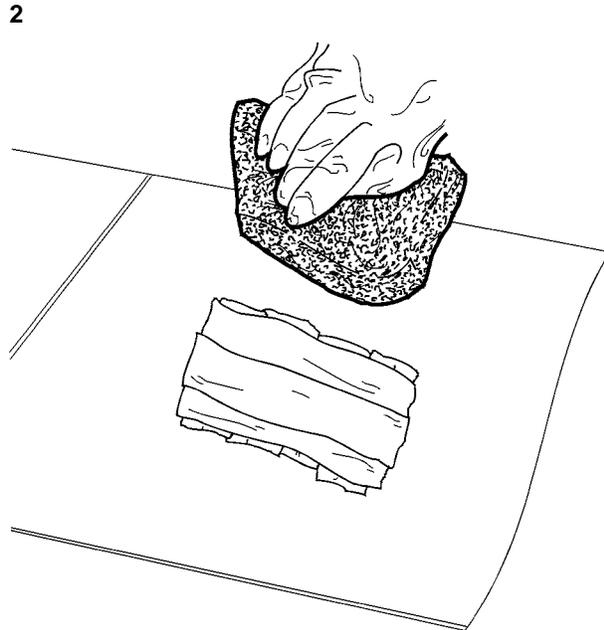
Structural damage refers to damage in which the panel has been broken, or damage that extends through the laminate. All structural damage repairs require the use of a structural reinforcement (backing) patch. These patches serve to provide necessary mechanical strength and provide a foundation for building the cosmetic repair on the front side.

Structural repairs require the use of Fusor EZ Plastic Body Repair Adhesive, Heat Set Formula, P/N 100EZ. Cure the adhesive with a heat gun for 5 to 10 minutes before sanding.

! CAUTION

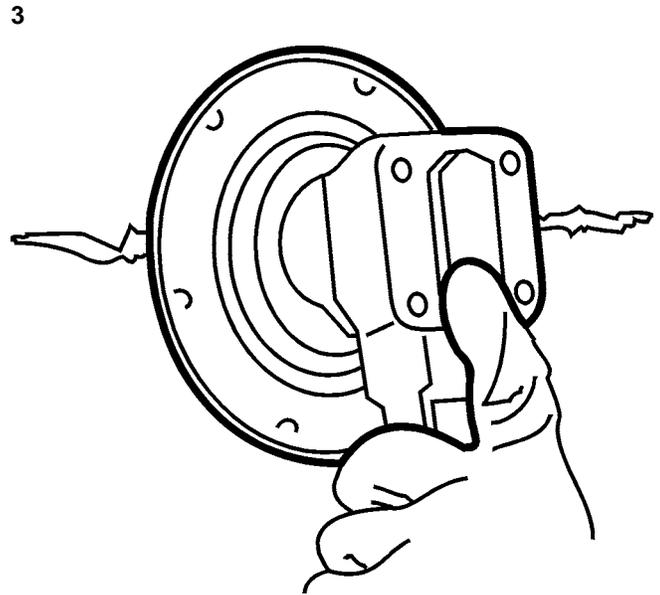
Use caution not to heat the panel above 60°C (140°F), to avoid warping the air fairing panels. A Fusor heat monitoring strip, P/N 705, is available. See "Special Tools" page 2.

1
To prevent absorption of the prep cleaner, cover the damage in the front and the back of the panel with masking tape.



Clean the front and the back of the repair area with Fusor Adhesion Prep/Cleaner. Remove the masking tape from the front and the back of the repair area.

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W8001816

! WARNING

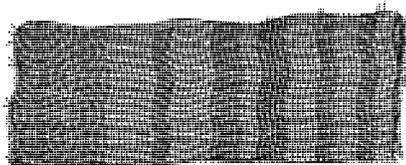
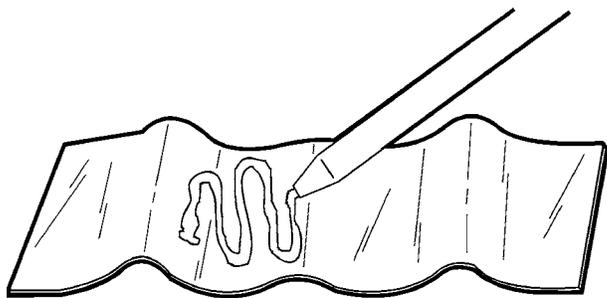
Personal injury hazard. Always wear safety goggles and a respirator when sanding. Failure to use safety goggles could result in damage to the eyes. Failure to use a respirator could result in foreign material in the lungs.

Prepare the back of the panel by sanding the entire area with 80 grit sandpaper. Remove all sanding dust with compressed air to assure a clean bonding surface.

4
Prepare a backing patch as follows. Cut a piece of Fusor Plastic Fiberglass Cloth to cover the repair area and overlap approximately 2.5 cm (1 in.) around the damage. Remove the cloth from its plastic backing.

Fusor Plastic Fiberglass Cloth P/N 702

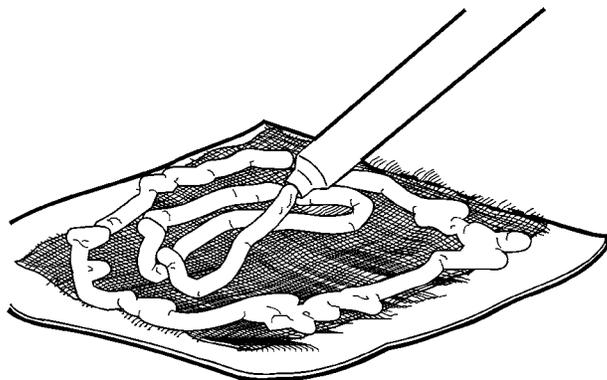
5



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Properly prepare the dispenser (see "Dispenser/Adhesive Preparation" page 3). Apply the Fusor repair adhesive with the dispenser to the plastic backing film and smooth with a plastic spreader.

6



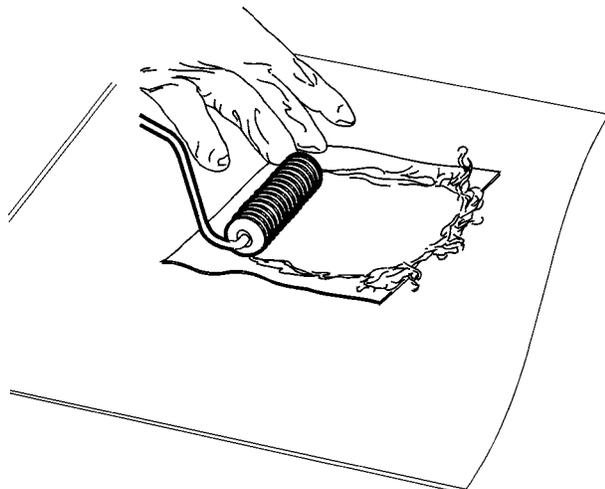
W8002360

Place the cut cloth onto the adhesive, then cover the cloth with another coat of Fusor repair adhesive and smooth with a plastic spreader. To increase the strength of the backing patch, apply subsequent layers of cloth and adhesive.

Note: Applying heat to the adhesive while working with it will facilitate saturation of the fiberglass cloth and speed up the set time.

Note: If available, a scrap piece of fairing panel may be cut to size and bonded on as a backer panel in lieu of the fiberglass cloth patch.

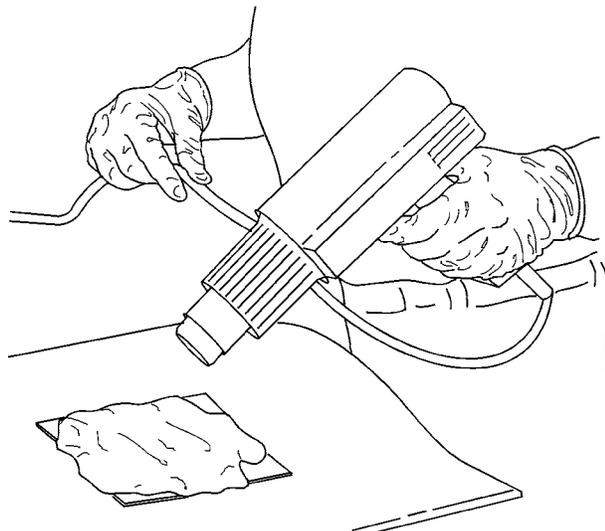
7



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Apply the prepared patch to the back side of the repair area. Compress the patch into the repair area with a saturation roller (or equivalent tool).

8

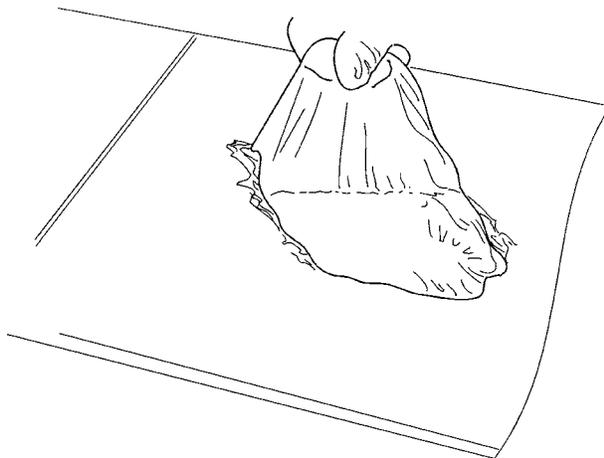


W8002362

 WARNING
Personal injury hazard. Always wear gloves and protective clothing when operating a heat gun. Failure to do so can result in mild to severe burns.

Heat set the reinforcement patch with a heat gun until the Fusor repair adhesive sets (5 to 10 minutes).

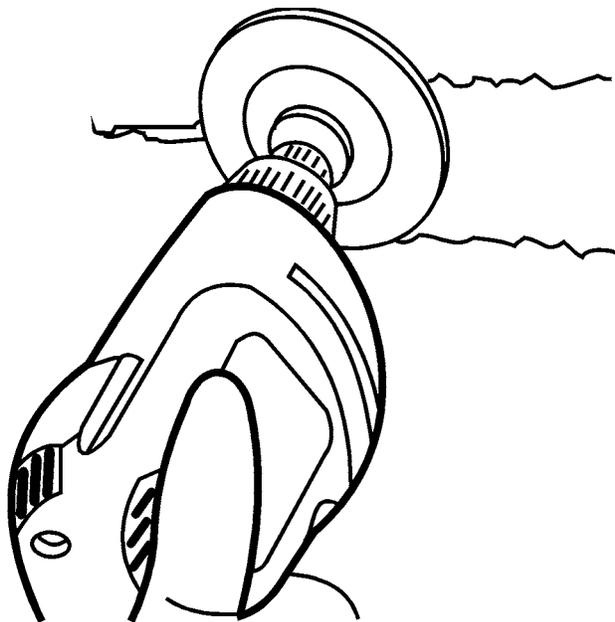
9



W8002363

After the patch cools, remove the plastic backing film. The structural reinforcing patch is now complete.

10



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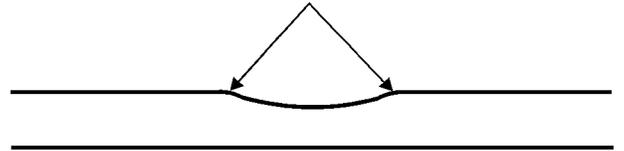
! WARNING

Personal injury hazard. Always wear safety goggles and a respirator when using a grinding wheel. Failure to use safety goggles could result in damage to the eyes. Failure to use a respirator could result in foreign material in the lungs.

Working from the front of the repair area, grind the damaged area down to the structural reinforcing patch, using a 36 to 40 grit grinding wheel.

11

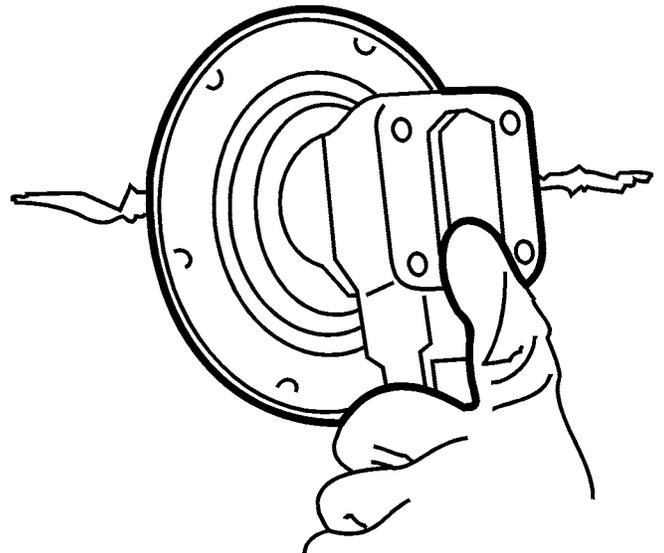
COVE GROOVE



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Gradually taper the repair area to leave a "cove groove." Avoid leaving sharp edges.

12



W8001816

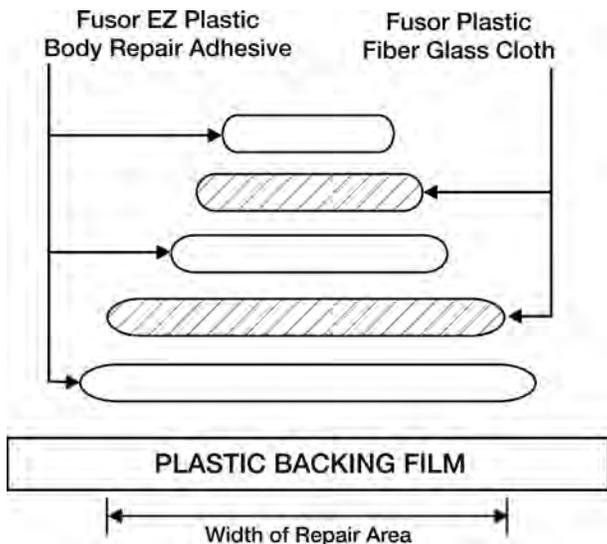
Sand the prepared area with 80 grit sandpaper. Remove any sanding dust with compressed air to assure a clean bonding surface.

13

Prepare a "pyramid patch" to bring the repaired area back up to its original contour.

Building a Pyramid Patch

14



W8002364

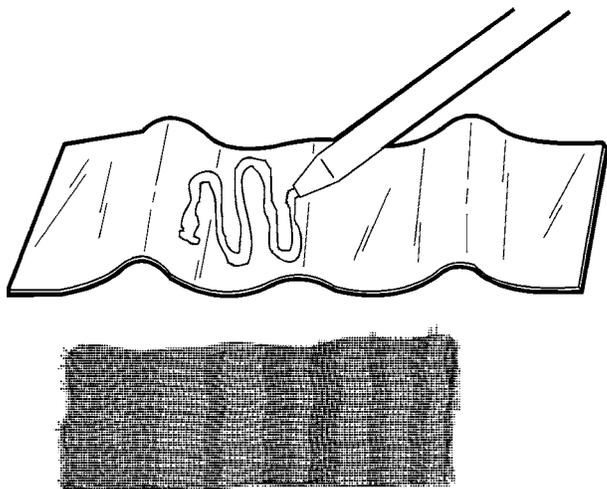
To build a pyramid patch, use alternating sections of Fusor Repair Adhesive and Fusor Plastic Fiberglass Cloth. (See "Special Tools" page 2.)

Fusor Repair Adhesive P/N 100EZ
Fusor Plastic Fiberglass Cloth P/N 702

15

Cut a piece of Fusor Plastic Fiberglass Cloth slightly larger than the repair area. Remove the cloth from its plastic backing area. Use the plastic backing film as the base for the patch.

16



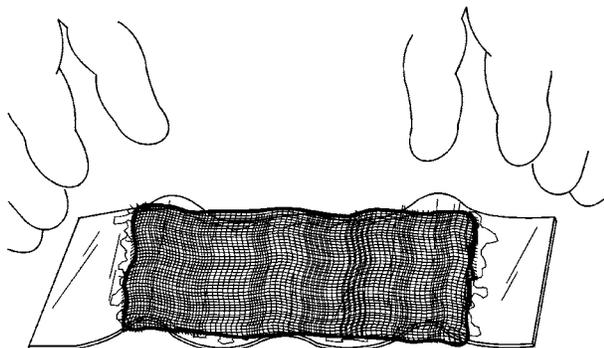
W8002358

Apply the Fusor repair adhesive with the dispenser to the plastic backing film and smooth with a plastic spreader.

17

Using the cut cloth from step 15, trim the first piece of Fusor Plastic Fiberglass cloth slightly **smaller** than the repair area.

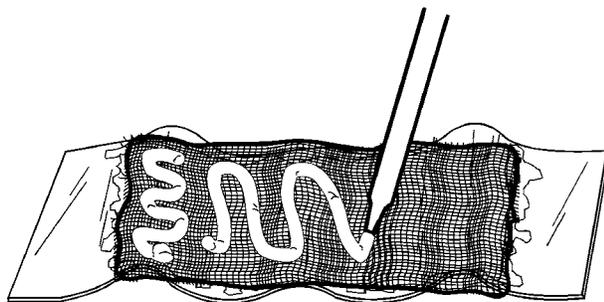
18



W8002365

Place the cut cloth onto the adhesive.

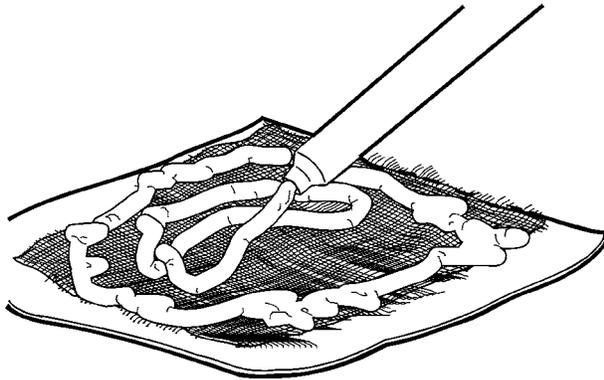
19



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Cover the cloth with another coat of Fusor repair adhesive and smooth with a plastic spreader.

20

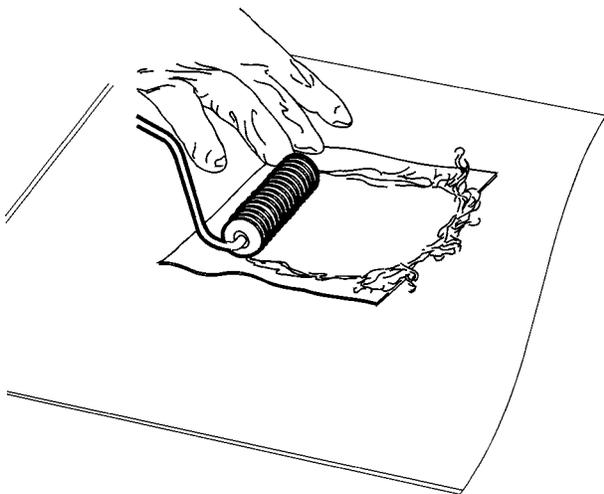


W8002360

Apply subsequent layers of cloth and adhesive, each layer being slightly smaller than the previous one. Build as many layers as necessary to fill the void left by step 11, finishing with a top coat of adhesive.

Note: Applying heat to the adhesive while working with it will facilitate saturation of the fiberglass cloth and speed up the set time. The pyramid patch is now ready for application.

21

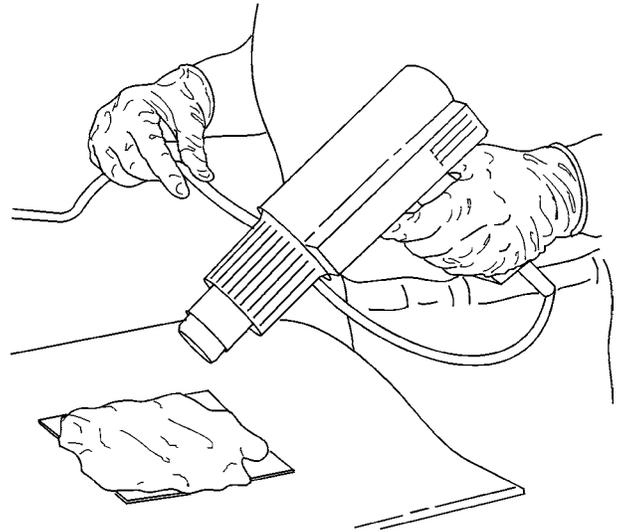


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Place the pyramid patch into the prepared area. Work the patch into the repair area with a saturation roller (or equivalent tool).

Saturation
Roller P/N 704

22



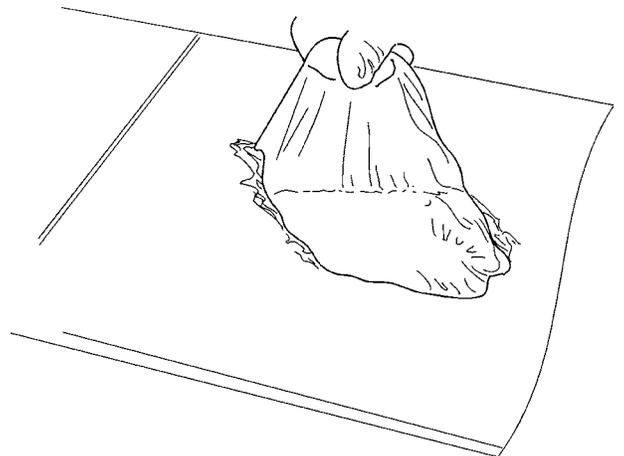
W8002362

! WARNING

Personal injury hazard. Always wear gloves and protective clothing when operating a heat gun. Failure to do so can result in mild to severe burns.

Heat set the pyramid patch with a heat gun until the Fusor Repair Adhesive sets (5 to 10 minutes).

23



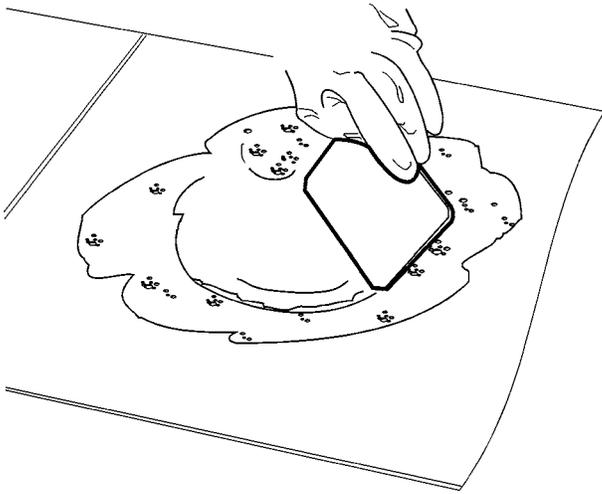
W8002363

After the patch cools, remove the plastic backing film.

24

Finish sand the area with 80 grit sandpaper.

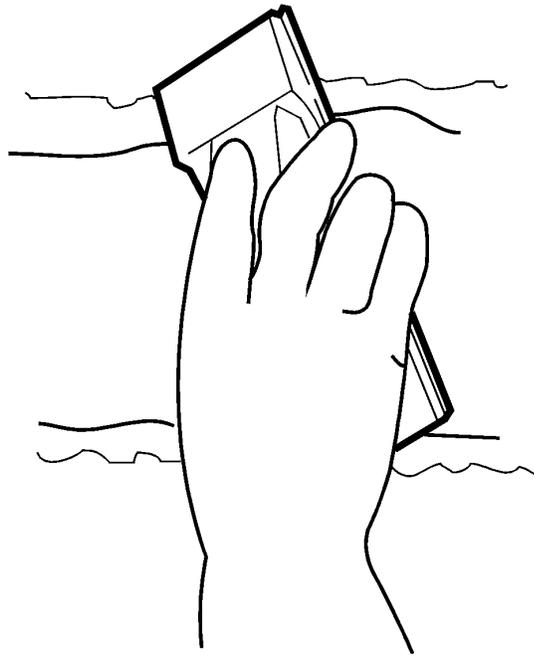
25



W8002356

If pinholes exist in the repair area, blow off the surface and apply a skim coat of Fusor repair adhesive. Smooth with a plastic spreader, heat with a heat gun until the adhesive sets (5 to 10 minutes). Allow the repair to cool completely.

26



W8001826

After the repair cools, finish sand with 80 grit sandpaper, followed by 220 to 320 grit sandpaper.

27

The surface is now ready to be cleaned, primed and painted.