

# HEADLINING—HARDTOP ENCLOSURE— EXTERIOR DECALS AND OVERLAYS

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## HEADLINING

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### GENERAL

The headlining used in Cherokee, Wagoneer, and Truck models is made of laminated polystyrene backing board which is finished, depending on the model, with either a plastic coating or a soft vinyl covering. Lines scored into the backing board allow the headlining to be shaped to fit the contour of the roof while providing added strength for self-support.

### CHEROKEE-WAGONEER

#### Removal

- (1) Remove sun visors, escutcheons, and center support.
- (2) Remove windshield moulding and end caps.
- (3) Remove rear opening moulding and end caps.
- (4) Remove plastic trim strip and end cap retainers.
- (5) Remove lens from dome lamp and cargo lamp, if equipped. Remove screws attaching lamp to roof bows.
- (6) Remove coat hooks.
- (7) Free rear headlining from J-moulding by pulling down carefully at the center, while pushing up on either outside edge.
- (8) Push cargo lamp, if equipped, through die-cut opening in headlining.
- (9) Remove rear headlining through tailgate opening.
- (10) Free front headlining from J-moulding by pulling down carefully at the center, while pushing up on outside edges.

- (11) Remove front headlining through tailgate opening.

#### Installation

- (1) Position front headlining in vehicle and insert left side into J-moulding.
- (2) Pull dome lamp through die-cut opening in headlining and align front headlining to vehicle roof.
- (3) Pull down carefully at center of front headlining and insert right side of headlining into J-moulding.
- (4) Position rear headlining in vehicle and insert left side into J-moulding.
- (5) Pull cargo lamp, if equipped, through die-cut opening in rear headlining and align rear headlining to vehicle roof.
- (6) Pull down carefully at center of rear headlining while pushing up on right edge, and insert right side of headlining into J-moulding.
- (7) Check alignment of front headlining using sun visor and dome lamp holes and leading edge of headlining as guide. Adjust fore or aft as required.
- (8) Check alignment of rear headlining using the trailing edge as a guide. Adjust fore or aft as required.
- (9) Secure dome lamp and cargo lamp, if equipped, to roof bows and install lamp lenses.
- (10) Install plastic trim strip and end cap retainers.
- (11) Install coat hooks.
- (12) Install rear opening moulding and end caps.
- (13) Install windshield moulding and end caps.
- (14) Install escutcheons, sun visors, and center support.

**TRUCK**

**Removal**

- (1) Remove sun visors and center support.
- (2) Remove lens from dome lamp. Remove screws attaching dome lamp to rear window panel.
- (3) Remove windshield moulding and end caps.
- (4) Pull down carefully at center of headlining while pushing up on outside edges to disengage headlining from J-moulding.
- (5) Push dome lamp through die-cut opening in headlining.
- (6) Remove headlining from vehicle.

**Installation**

- (1) Position headlining in vehicle and insert left side into J-mouldings.
- (2) Pull dome lamp through die-cut opening and align headlining to vehicle roof.
- (3) Pull down carefully at center of headlining while pushing up on right edge, and insert right side of headlining into J-moulding.
- (4) Check alignment of the headlining using the sun visor and dome lamp holes and headlining leading edge as guides. Adjust fore and aft as necessary.
- (5) Secure dome lamp to rear window panel and install dome lamp lens.
- (6) Install windshield moulding and end cap.
- (7) Install sun visors and center support.

**HARDTOP ENCLOSURE AND LIFTGATE**

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**GENERAL**

A lightweight, removable hardtop enclosure is available for the CJ-7. The top is constructed of injection molded polycarbonate. The hardtop enclosure and steel liftgate are painted with a special spatter finish polyurethane enamel.

**HARDTOP ENCLOSURE**

**Removal**

- (1) Remove screws attaching hardtop enclosure to windshield frame (fig. 20-1).
- (2) Remove nuts, washers, and screws attaching hardtop enclosure to rear quarter panels.
- (3) Remove hardtop enclosure from vehicle.

**CAUTION:** *When removing hardtop enclosure, avoid damaging foam sealer installed between the hardtop enclosure and rear quarter panels.*

**Installation**

- (1) Inspect tabular windshield seal, bonded to hardtop enclosure, for damage. Replace, if necessary.
- (2) Carefully position hardtop enclosure on vehicle.

**CAUTION:** *When installing the hardtop enclosure, avoid damaging foam sealer installed between the hardtop enclosure and rear quarter panels.*

- (3) Install screws, washers, and nuts attaching hardtop enclosure to rear quarter panels.
- (4) Install screws attaching hardtop enclosure to windshield frame.

**REPAIR**

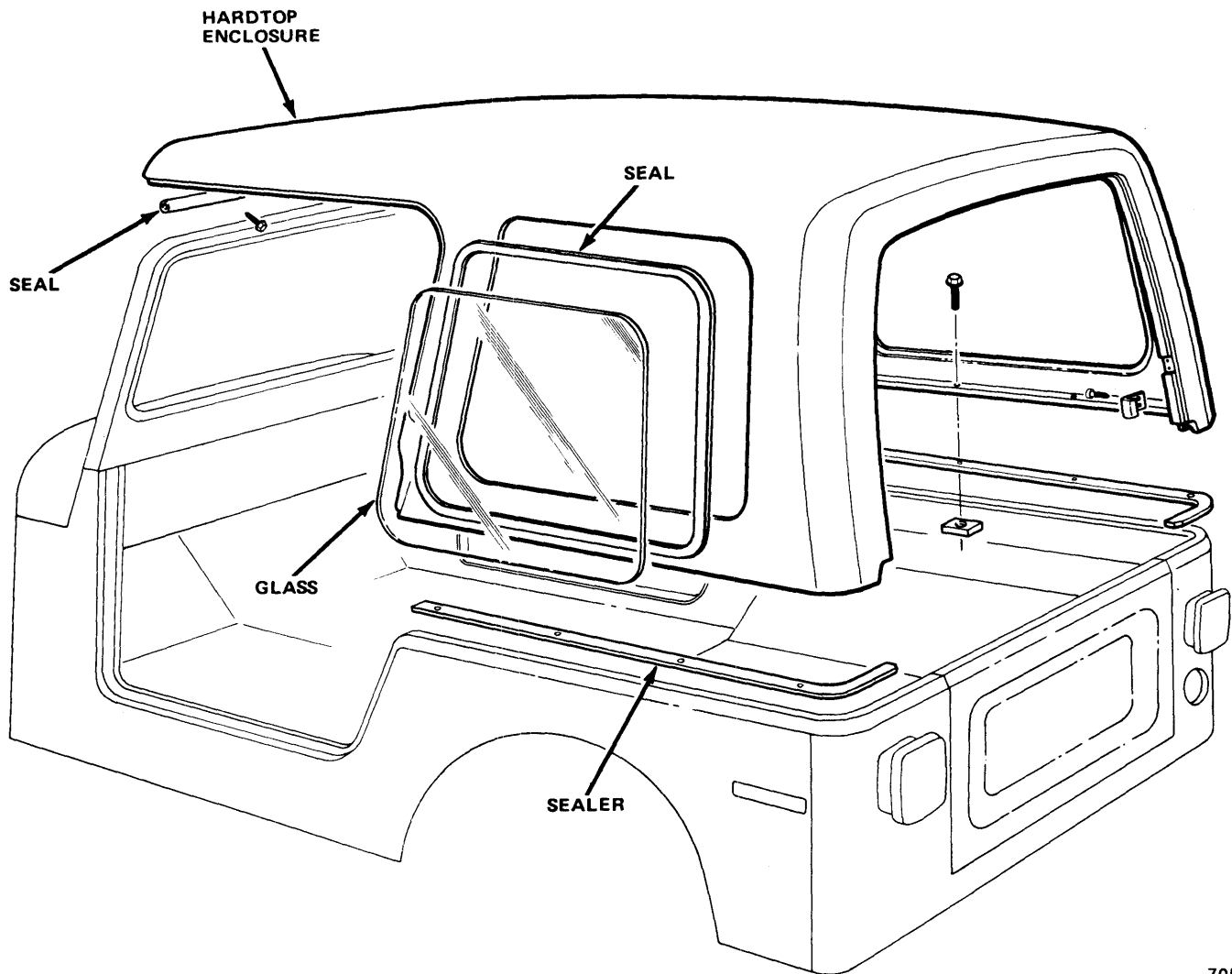
In the event of top damage, the following material will be required for use with these repair procedures:

- Paint Repair Kit (White)\*
- Paint Repair Kit (Black)\*
- Structural Adhesive (3M Brand or equivalent)

\*Paint repair kits are available from Parts Distribution Centers. The paint repair kits consist of:

- One quart spatter enamel
- One quart sealer coat
- One pint catalyst
- One quart reducer MEK (methyl-ethyl-ketone)
- One Instruction Sheet

**NOTE:** *Methyl-ethyl-ketone (MEK) is usually available from chemical houses listed under SOLVENTS in the Yellow Pages. If not available locally in small quantities, the solvent may be obtained from mail order*



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Fig. 20-1 Hardtop Enclosure Removal

chemical houses such as E. H. Sargent & Co. and Fisher Scientific\*, which have sales-service centers throughout the country.

\*This is not a complete list, nor is it a recommendation for the exclusive use of the chemical houses listed.

### Dent Repair

(1) Use a grinder to remove paint and to outline damaged area.

(a) Use a grade 24 disc for initial grinding.

(b) Follow up with a grade 50 disc to prevent coarse scratches from showing up in final finish.

(2) Apply plastic body filler, such as DuPont Polyester Autobody Filler, Ditzler White Body Filler, 3M Plastic Filler or equivalent. For best results, mix plastic body filler and hardener according to manufacturer's instructions.

(3) Apply plastic filler with a rubber or plastic spreader as shown in figure 20-2. Use firm pressure with spreader to aid in removing air bubbles which will show up as pinholes.

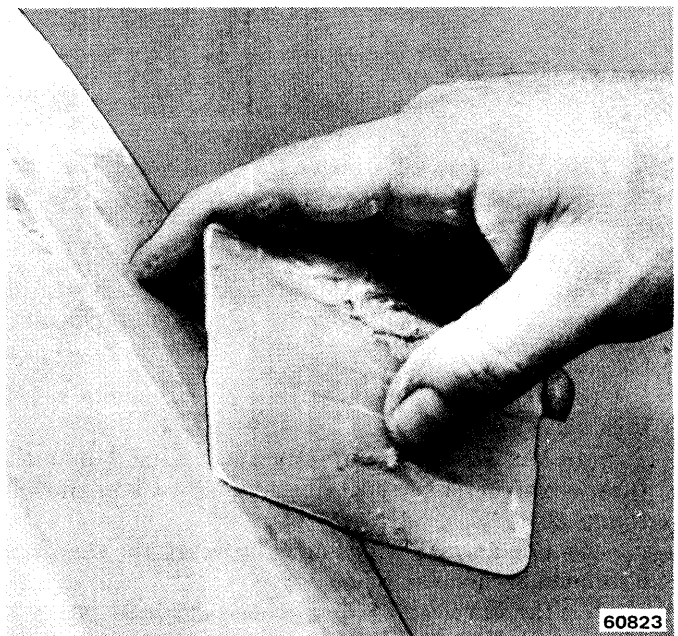


Fig. 20-2 Applying Plastic Body Filler with Spreader

(4) Use an air file or hand file board for shaping of plastic body filler.

(a) For initial shaping of plastic body filler use a grade 24 paper.

(b) For shaping and sanding contours in plastic body filler, use a grade 36 or 40 paper.

(c) For finish sanding plastic body filler, use a grade 80 paper.

(5) Apply sealer and color coat (refer to Paint Repair Procedure).

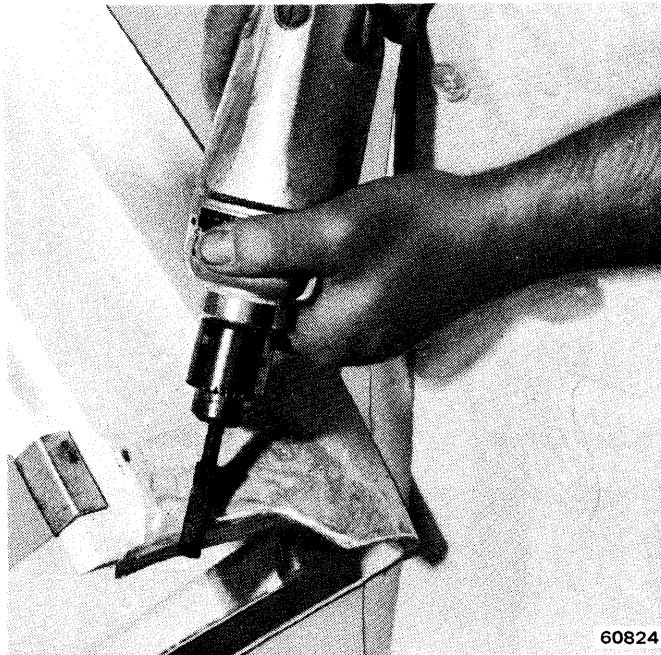
**Broken Section Repair**

(1) Use a grinder to remove paint, from both sides, and to outline damaged area.

(a) Use a grade 24 disc for initial grinding.

(b) Follow up with a grade 50 disc to prevent coarse scratches from showing up in final finish.

(2) Bevel edges of break on both sides, using a rotary file as shown in figure 20-3.



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**Fig. 20-3 Beveling Edges of Broken Piece with Rotary File**

**NOTE:** Edges should be beveled on the inside and outside on the enclosure to ensure sufficient surface area for bonding.

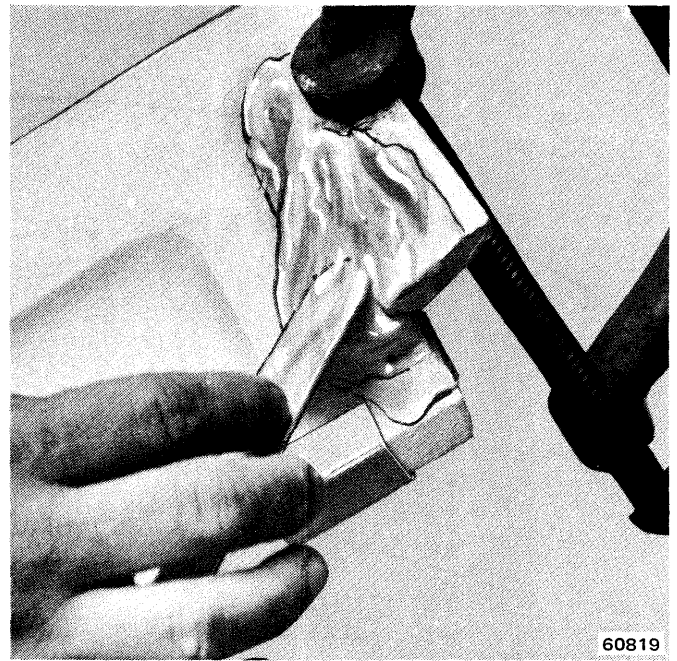
(3) Clamp broken piece into place leaving a 1/16-inch gap along break line.

(4) Mix Structural Adhesive, according to manufacturer's instructions, apply liberally to break as shown in figure 20-4.

(5) Use an air file or hand file board for shaping of hardened Structural Adhesive.

(a) For initial shaping, use a grade 24 paper.

(b) For shaping and sanding contours in Structural Adhesive, use a grade 36 or 40 paper.



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**Fig. 20-4 Applying Structural Adhesive to Broken Piece and Enclosure**

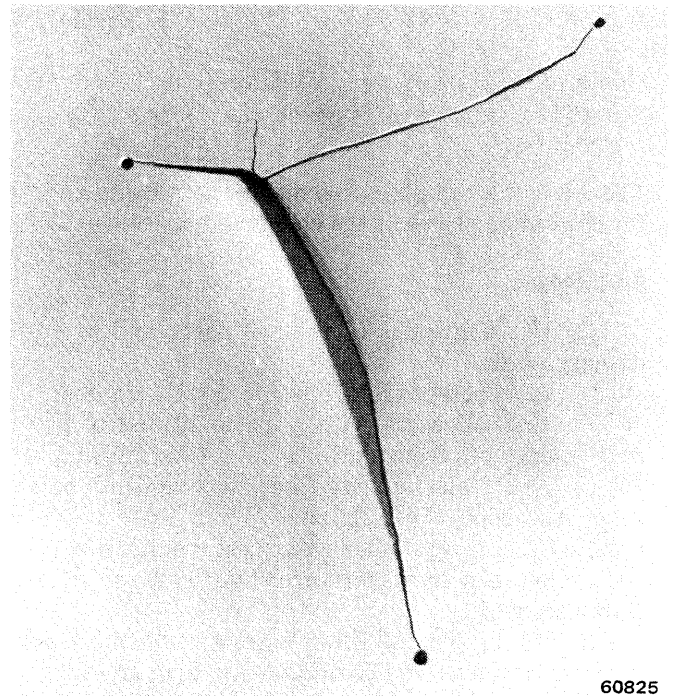
(c) For finish sanding, use a grade 80 paper.

(6) Apply sealer and color coat (refer to Paint Repair Procedure).

**Fracture Repair**

(1) Use a grinder to remove paint, from both sides, and to outline damaged area.

(2) Stop-drill crack(s) using 1/8-inch drill bit as shown in figure 20-5.



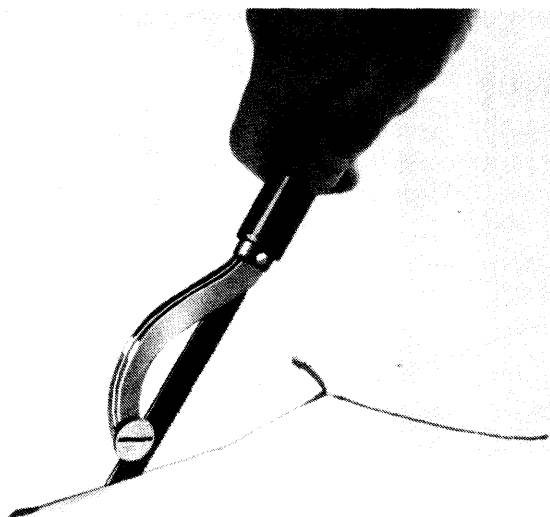
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**Fig. 20-5 Stop-Drilling Cracks**

(3) Bevel edges of crack(s) on both sides, using a rotary file.

**NOTE:** Edges should be beveled on the inside and outside of the enclosure to ensure sufficient surface area for good bonding.

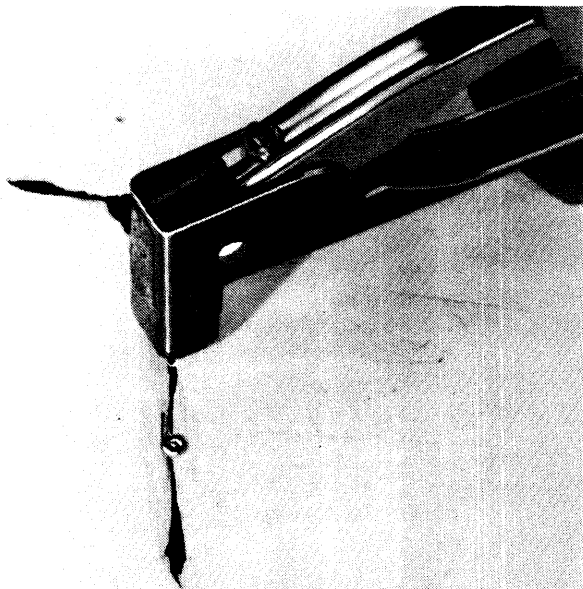
(4) Cut along length of crack(s) using hacksaw blade as shown in figure 20-6.



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Fig. 20-6 Cutting to Relieve Crack

**NOTE:** On crack(s) 6 inches or longer it is advisable to countersink pop rivets along length of crack(s) as shown in figure 20-7.



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Fig. 20-7 Installing Pop Rivets in Crack

(5) Mix Structural Adhesive, according to manufacturer's instructions, and apply liberally to crack(s) from inside and outside of enclosure as shown in figure 20-8.

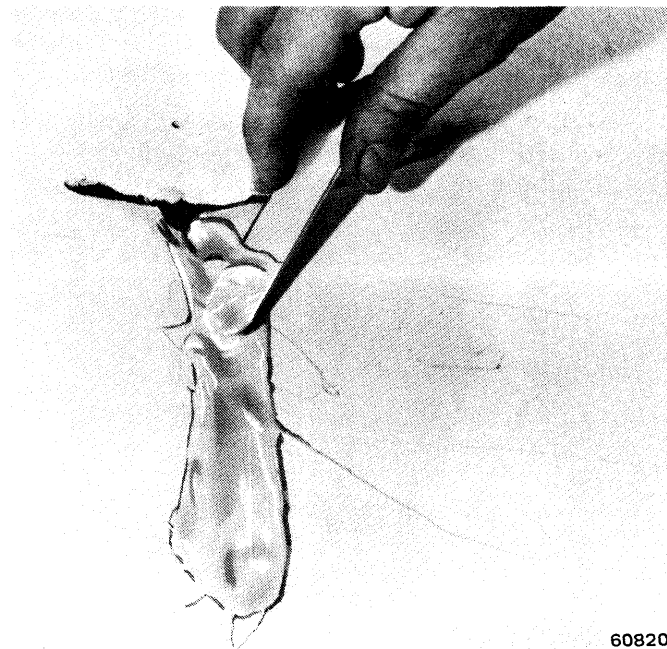
(6) Use an air file or hand file board for shaping of Structural Adhesive.

(a) For initial shaping, use a grade 24 paper.

(b) For shaping and sanding contours in Structural Adhesive, use a grade 36 or 40 paper.

(c) For finish sanding, use a grade 80 paper.

(7) Apply sealer and color coat (refer to Paint Repair Procedure).



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Fig. 20-8 Applying Structural Adhesive to Fractured Area

### Paint Repair

(1) Clean repair area using wax and silicone remover, such as DuPont Prep-Sol, Ditzler Acryli-Clean, 3M General Purpose Adhesive Cleaner and Wax Remover or equivalent.

(2) Featheredge affected area as described in the following steps:

(a) For rough featheredging, use a grade 80 disc on a random disc sander.

(b) For final featheredging, use a grade 180 or 220 disc on a random disc sander or 220 grade paper on a hand sanding block.

(3) Mix sealer according to instruction sheet in kit.

**NOTE:** One paint repair kit is sufficient to paint a complete top. Do not mix more paint than is necessary to cover the area being repaired. The spray equipment being used must be clean.

**CAUTION:** The solvents in polyurethane enamel will dissolve residual lacquers left in the cup or spray gun and may clog the gun or affect the finish surface.

(4) Spray a test panel and adjust spray gun as necessary.

(5) Apply sealer coat to affected area and allow to dry to touch.

(6) Empty spray gun and mix texture color coat according to instruction sheet in kit. Stir thoroughly.

(7) Spray a test panel and adjust spray gun to obtain desired texture finish.

**NOTE:** Paint must be applied in the desired texture finish. This paint does not wrinkle or change texture during drying. Normally, a standard siphon-feed spray gun will provide a satisfactory texture pattern. In some isolated cases it may be necessary to use a pressure-feed type spray gun to produce a coarse enough texture.

(8) Spray affected area with texture color coat, starting in the center, working to the outside edges.

(9) Empty spray gun and fill cup with reducer.

(10) Spray reducer on edges of painted area to eliminate overspray and blend in repair.

(11) Bake for 30 minutes at a temperature not to exceed 140°F or let air dry for 24 hours.

(12) Clean spray equipment thoroughly.

**NOTE:** Equipment must be cleaned immediately after using polyurethane enamel. Once paint dries, there is no known solvent that will remove it.

### LIFTGATE

(1) Open liftgate, support to prevent closing, and remove lockpins from liftgate support attaching screws (fig. 20-9).

(2) Remove screws attaching supports to liftgate and fold supports downward.

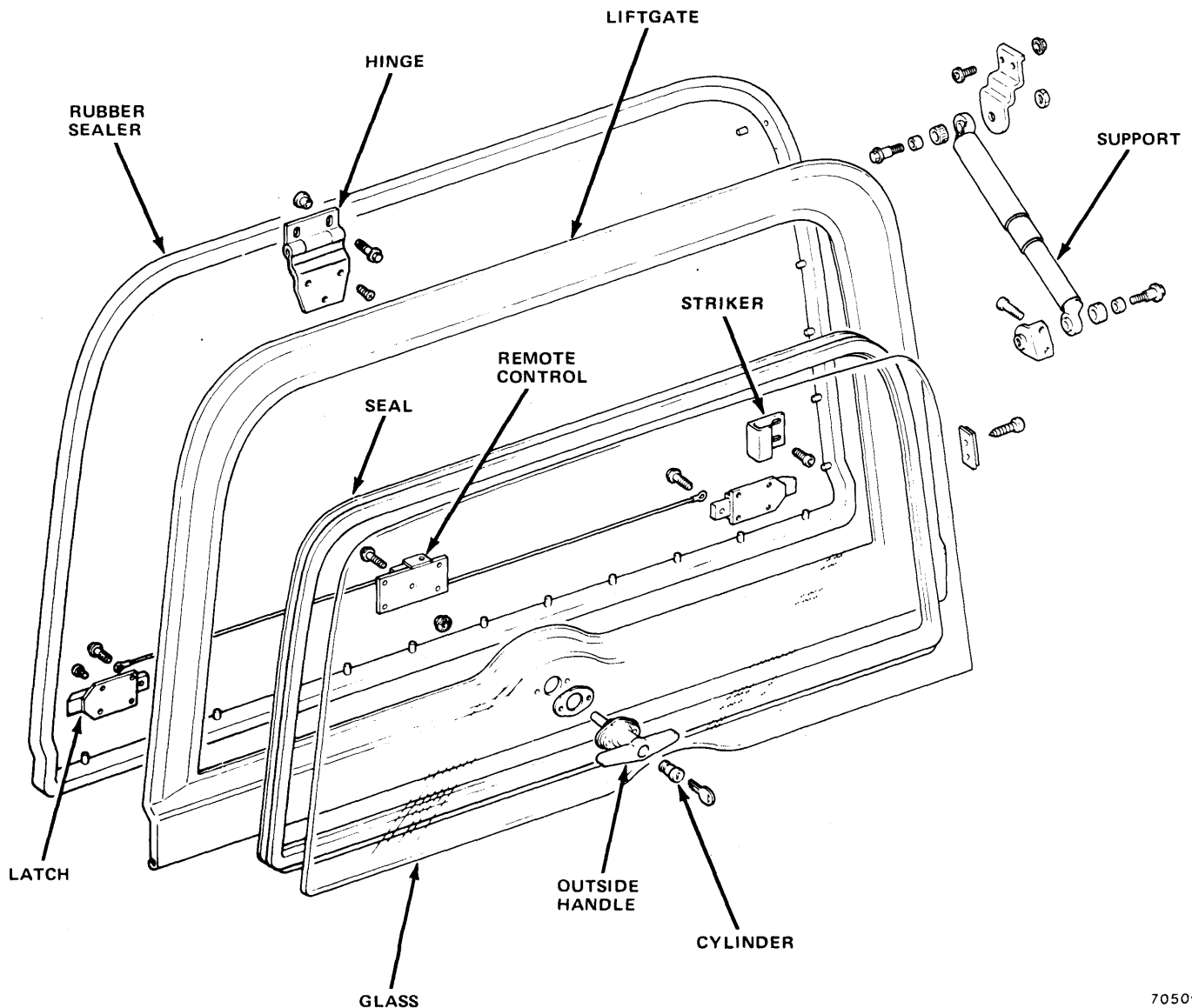


Fig. 20-9 Liftgate Components

**WARNING:** *Never remove supports with liftgate closed. The supports are under spring tension and may cause damage or personal injury if removed with liftgate closed. After removal, do not attempt to dismantle or repair the supports.*

(3) Using Torx Bit Tool J-25359-02, remove screws attaching latches to liftgate.

**NOTE:** *Do not disconnect remote control cables from latches.*

(4) Loosen screws, using Torx Bit Tool J-25359-02, attaching hinges.

(5) Close liftgate and shift liftgate to obtain desired gap (side-to-side).

(6) Open liftgate and tighten hinge-to-liftgate screws using Torx Bit Tool J-25359-02.

(7) Position latches on liftgate and install attaching screws using Torx Bit Tool J-25359-02.

(8) Position supports on liftgate and install attaching screws.

(9) Install lockpins on support attaching screws.

## Strikers

The strikers provide durable retention points for the latches and prevent movement of the liftgate. Latches may be moved in or out to compensate for body and enclosure variations. Use Torx Bit Tool J-25359-02 for removal.

## Liftgate

### Removal

(1) Open liftgate, support to prevent closing, and remove lockpins from liftgate support attaching screws.

(2) Remove screws attaching supports to liftgate and fold supports downward.

**WARNING:** *Never remove supports with liftgate closed. The supports are under spring tension and may cause damage or personal injury if removed with liftgate closed. After removal, do not attempt to dismantle or repair the supports.*

(3) Using Torx Bit Tool J-25359-02, remove screws attaching hinges to liftgate and remove liftgate.

### Installation

(1) Position liftgate on hinges and install hinge-to-liftgate attaching screws using Torx Bit Tool J-25359-02.

(2) Position supports on liftgate and install attaching screws.

(3) Install lockpins on support attaching screws.

## Rubber Sealer

The liftgate rubber sealer is made of molded latex foam with a smooth rubber skin on the outside.

Plastic retainers are used to retain the rubber sealer to the liftgate. Barbs on the retainers depress when inserted in the holes and spread when fully inserted.

## Maintenance of Rubber Sealers

Cold weather may cause the rubber sealer to harden and lose resiliency. This may cause the liftgate to loosen in its opening, resulting in noise. When servicing, use a dampened cloth to clean rubber sealer. Clean dirt from all points where rubber sealer contacts the molded top and tailgate. Apply AMC Silicone Lubricant or equivalent to rubber sealer.

**CAUTION:** *Do not use graphite, brake fluid, or wax on rubber sealer.*

## Replacement

Replacement rubber sealers are coated with powder to prevent stickiness in storage. Remove all powder with a dampened cloth before installation.

(1) Carefully remove rubber sealer from liftgate, using needlenose pliers to remove plastic retainers from liftgate panel holes.

(2) Remove dust, dirt, and old sealer from rubber sealer, liftgate, and enclosure.

(3) Install lower corner of sealer to liftgate first.

(4) Press retainers, starting at lower edge of liftgate, into liftgate panel holes.

(5) Apply a bead of 3M Auto Joint and Seam Sealer or equivalent around perimeter of liftgate between rubber sealer and liftgate flange to prevent water from passing seal and entering vehicle.

## Hinge Replacement

(1) Open liftgate, support to prevent closing, and remove lockpins from liftgate support attaching screws.

(2) Remove screws attaching supports to liftgate and fold supports downward.

**WARNING:** *Never remove supports with liftgate closed. The supports are under spring tension and may cause damage or personal injury if removed with liftgate closed. After removal, do not attempt to dismantle or repair the supports.*



(3) Using Torx Bit Tool J-25359-02, remove screws attaching hinge to liftgate.

(4) Using Torx Bit Tool J-25359-02, remove screws attaching hinge to enclosure. Remove hinge from enclosure.

(5) Clean replacement hinge in a suitable solvent and blow dry with compressed air.

(6) Color-coat hinge to match enclosure.

(7) Lubricate hinge with AMC Lubriplate or equivalent.

(8) Position hinge on enclosure and install attaching screws, using Torx Bit Tool J-25359-02.

(9) Position liftgate on hinge and install hinge-to-liftgate attaching screws using Torx Bit Tool J-25359-02.

(10) Position supports on liftgate and install attaching screws.

(11) Install lockpins on support attaching screws.

### Support Replacement

(1) Open liftgate, support to prevent closing, and remove lockpins from support attaching screws.

(2) Remove screws attaching supports and remove supports.

(3) Install supports and attaching screws.

(4) Install lockpins on support attaching screws.

### Latch Replacement

(1) Loosen screw attaching remote control cable to latch. Disconnect cable from screw.

(2) Remove screws attaching latch (fig. 20-9) to liftgate using Torx Bit Tool J-25359-02. Remove latch.

(3) Position latch on liftgate and install attaching screws using Torx Bit Tool J-25359-02.

(4) Connect remote control cable to latch screw and tighten screw.

### Remote Control Replacement

(1) Loosen screws attaching remote control cables to latch. Disconnect cables from screws.

(2) Remove screws attaching remote control (fig. 20-9) to liftgate using Torx Bit Tool J-25359.

(3) Position remote control on liftgate and install attaching screws using Torx Bit Tool J-25359.

(4) Connect remote control cables to latch screws and tighten screws.

### Outside Handle Replacement

(1) Remove screws attaching remote control to liftgate using Torx Bit Tool J-25359.

(2) Remove nuts attaching outside handle to liftgate and remove handle.

**NOTE:** *The replacement outside handle is furnished without the lock cylinder. The lock cylinder is furnished uncoded without keys.*

(3) Code existing door lock key to replacement cylinder.

(a) Insert key in replacement cylinder.

(b) File tumblers until flush with cylinder body.

(c) Remove and install key, and check that tumblers are flush with body.

(d) Install cylinder in replacement outside handle.

(4) Position outside handle in liftgate and install attaching nuts.

(5) Position remote control on liftgate and install attaching screws using Torx Bit Tool J-25359-02.

### Rear Window Replacement

(1) Unlock rubber weatherstrip (fig. 20-9) using wood wand or fiber stick.

(2) Use fiber stick to break seal between glass and rubber weatherstrip.

(3) Push glass and weatherstrip toward outside of vehicle. Remove glass.

(4) Remove weatherstrip from liftgate opening.

(5) Inspect weatherstrip and clean sealer from glass cavity and flange cavity.

**NOTE:** *Inspect for uneven surfaces or irregularities in the opening flange that could cause stress damage to the glass.*

(6) Before installing weatherstrip on flange, apply a 3/16-inch bead of 3M Auto Bedding and Glazing Compound or equivalent in weatherstrip flange cavity using a pressure-type applicator.

(7) Install weatherstrip on liftgate opening flange.

(8) Apply a liberal amount of liquid soap solution to glass cavity of weatherstrip.

(9) Position glass into upper glass cavity and into each side. Position wooden wand under glass and lift up and into lower cavity. Check for equal side clearance.

(10) Use wooden wand to lock weatherstrip.

**NOTE:** *Soap solution should be removed from the weatherstrip and glass before installing sealer.*

(11) Using a pressure-type applicator, apply 3M Windshield Sealer or equivalent between weatherstrip and glass on outside of glass around entire perimeter.



## EXTERIOR DECALS

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### GENERAL

Exterior decals and stripes are made of tough, durable, weather-resistant solid vinyl and have a pressure-sensitive back. The pressure-sensitive back is protected by a paper backing which is removed at installation. The front (or face) of stripes and decals may be covered with an easy-release paper for protection during shipment or storage. The paper should be removed after installation.

### REPAIRS

Small nicks or scratches can be touched up with paint in much the same manner as painted surfaces. Proper color match can be obtained by mixing small amounts of appropriate paint colors, then applying it to the affected area of the decal.

To repair blisters or air bubbles, pierce them with a sharp needle or pin. Work the trapped air out through the pin hole and press the decal firmly against the panel. It may be necessary to preheat the panel slightly, with Heat Gun J-25070, to soften the adhesive. Heat also may be used to remove small wrinkles or irregularities.

### REPLACEMENT

#### Preparation

The temperature of the workroom should be between 65°F and 90°F. Decals should not be replaced in temperatures below 65°F.

The following equipment and materials are necessary for a quality installation:

- Woodgrain and Stripe Remover—3M or equivalent
- Adhesive Remover—3M or equivalent
- Liquid detergent (Joy, Vel, or equivalent)
- Wax and silicone remover (3M General Purpose Adhesive Cleaner, xylol, or equivalent)
- Isopropyl alcohol (rubbing alcohol)
- Squeegee (4 to 5 inches wide, plastic or hard rubber)
- Heat Gun J-25070 or infrared heat bulb with extension cord
- Clean wiping rags or paper towels
- Sharp knife, single-edge razor blade, or X-acto knife
- Scissors
- Sharp needle or pin
- Grease pencil

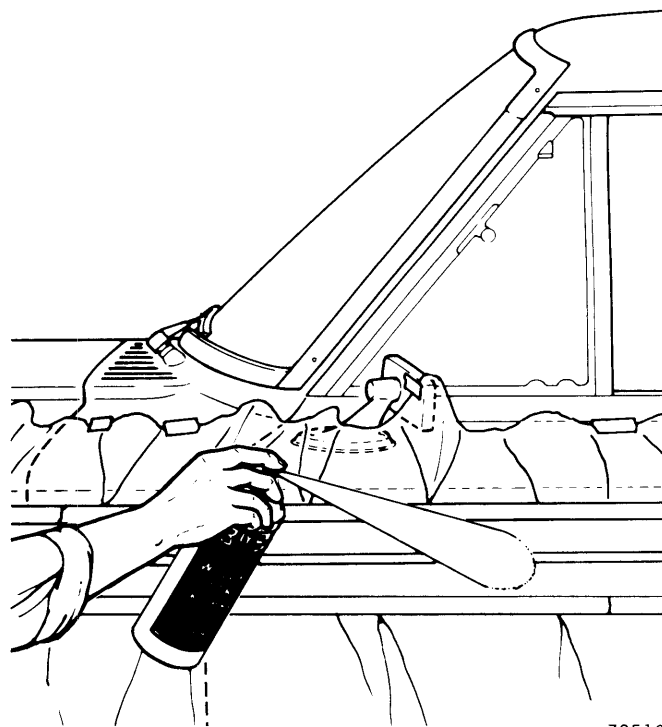
### Removal

(1) Clean repair surfaces, adjacent panels, and openings as required.

(2) Remove decal overlapping parts from affected panel.

(3) Mask off area surrounding the panel.

(4) Spray 3M Woodgrain and Stripe Remover or equivalent on flange area first. Then spray entire decal to be removed (fig. 20-10). Move spray back and forth across entire decal in a smooth steady motion. Make sure entire decal is coated with remover.



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Fig. 20-10 Spraying Remover on Decal

**CAUTION:** Woodgrain and Stripe Remover from 3M is designed for use on acrylic enamel surfaces only.

**WARNING:** Use 3M Woodgrain and Stripe Remover or equivalent only in a well-ventilated area. Observe manufacturer's warnings printed on label.

(5) Spray entire panel again, this time moving the spray up and down the decal.



(6) Allow remover to stay on decal for 20 minutes

(7) After 20 minutes, peel decal away from flange areas. Then, start in one corner and peel decal away from panel (fig. 20-11). If there is any difficulty in peeling decal/overlay away from panel, use squeegee to assist in removal (fig. 20-12).

(8) Scrape all 3M Woodgrain and Stripe Remover from surface before proceeding.

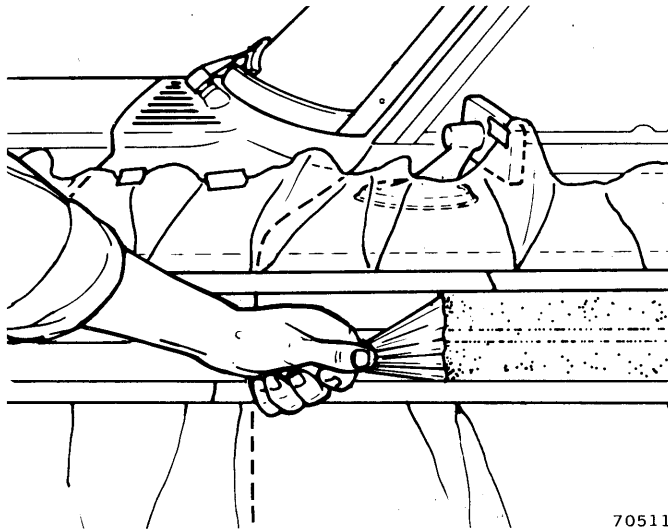


Fig. 20-11 Peeling Decal from Panel

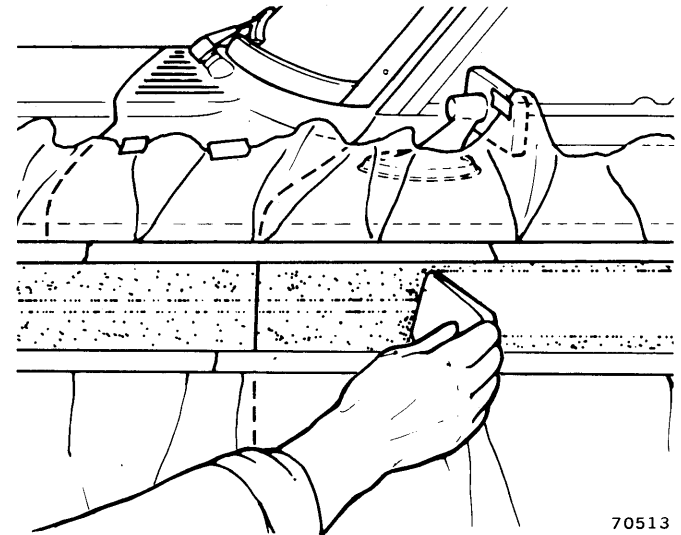


Fig. 20-13 Using Squeegee to Remove Adhesive Residue

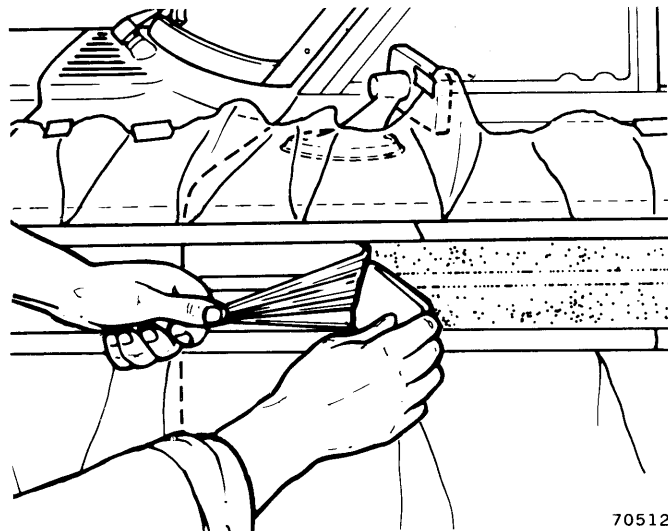


Fig. 20-12 Using Squeegee to Assist in Removal of Decal

(9) After decal is removed, spray panel again with 3M Adhesive Remover or equivalent to remove any remaining adhesive. Use a slow spray application and apply in a uniform criss-cross pattern to obtain a heavy coat.

**WARNING:** Use 3M Adhesive Remover or equivalent only in a well ventilated area. Observe manufacturer's warnings printed on label.

**CAUTION:** Leaving Remover on surface for too short or long a period may render product ineffective.

**NOTE:** Allow Remover to work on adhesive surface for three to five minutes.

(10) After five minutes, use squeegee to remove adhesive residue (fig. 20-13).

**NOTE:** If some adhesive is difficult to remove, spray additional remover on troublesome spots. Wait approximately two minutes and squeegee remaining spots. Repeat as necessary

(11) Remove masking tape and paper.

(12) Wash entire panel with 3M General Purpose Adhesive Cleaner or equivalent. If any spots of adhesive remain on panel, hard rubbing during the washdown will remove them.

### Installation

(1) Clean painted surface with wax and silicone remover. Use 3M General Purpose Adhesive Cleaner, or equivalent. Wipe surface with clean cloth, and allow to dry.

**NOTE:** Freshly painted surfaces must be thoroughly dry. Residual solvents in fresh paint may cause decal to blister.

(2) Position decal on panel surface and mark the position with a grease pencil (fig. 20-14). Ensure that 1/2-inch excess is allowed to be wrapped around the door and fender areas. Cut decal to approximate length using scissors.

(3) Position the decal on panel and hold in place with small strips of masking tape (fig. 20-15). Be sure decal is aligned with decals on adjacent panels.

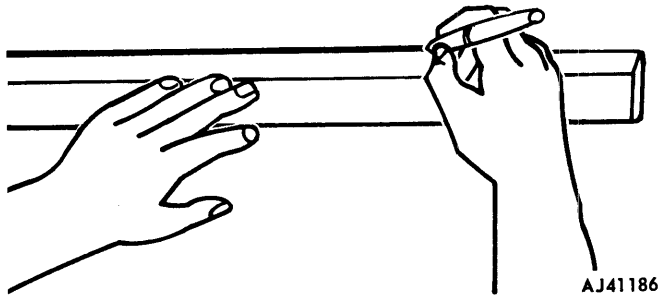


Fig. 20-14 Marking Decal Position

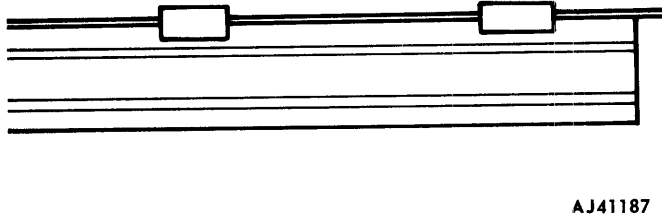


Fig. 20-15 Positioning Decal on Panel

(4) Lift decal using masking tape as hinges (fig. 20-16).

(5) Remove approximately 6 inches of paper backing from one end (fig. 20-17).

**NOTE:** To avoid pre-adhesion or stretching the decal, do not remove more than 6 inches of paper backing at one time.

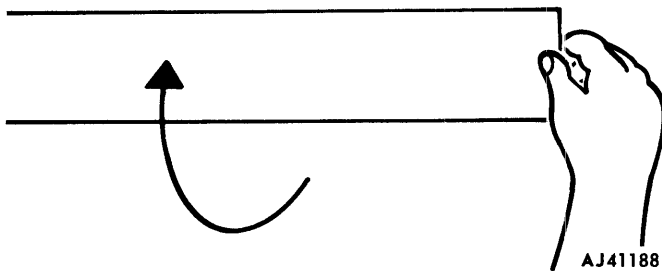


Fig. 20-16 Lifting Decal

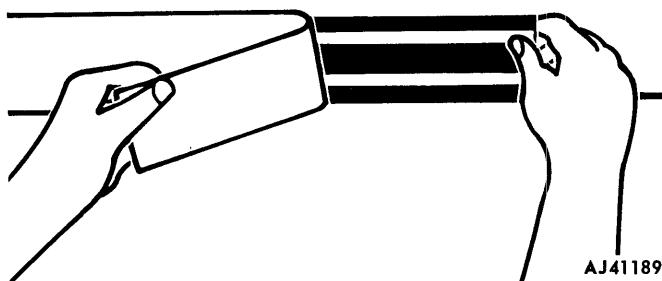


Fig. 20-17 Removing Backing Paper

(6) Fold decal back to aligned position. With firm strokes, squeegee decal to panel while removing paper backing (fig. 20-18).

(7) Where possible, extend decal 1/2 inch beyond corners or edges (fig. 20-19) and wrap firmly using finger pressure and squeegee. Avoid trapping air in these areas.

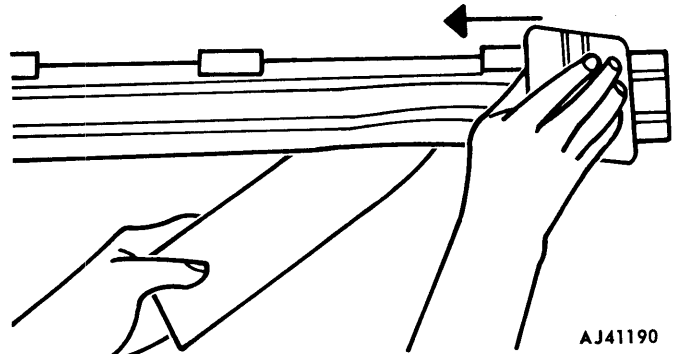


Fig. 20-18 Installing Decal with Squeegee

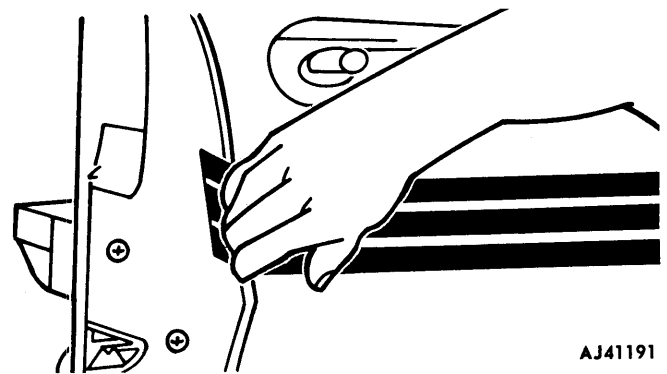


Fig. 20-19 Installing Decal at Corners or Edges

(8) Remove easy-release paper from face of decal, if applicable.

(9) Inspect decal installation using reflected light to detect any irregularities that may have developed during installation. Remove all air or moisture bubbles.

(10) Install previously removed parts and clean up vehicle as required.

### Installation of Intricate Decals

For large, intricately shaped decals, the following procedure will simplify installation.

(1) The use of a wetting solution assures a better bond between decal and painted surface. Prepare a supply of wetting solution by thoroughly mixing two or three teaspoons of detergent (Joy, Vel, or equivalent) in one gallon of water.

**NOTE:** Too much detergent will reduce the effectiveness of the bond. **DO NOT USE SOAP.**

(2) Place the decal on a clean, flat surface with paper backing side up. Bend a corner of the decal toward the decorative face side, and with a flick of the finger, separate the paper backing from the decal. Hold decal firmly to surface of table and remove paper backing. Under hot, humid conditions, a slight jerking motion will aid in removing paper backing.

**CAUTION:** Always remove the paper backing from the decal; never remove the decal from the backing as stretching may result.

**NOTE:** Hold decal in corners when removing paper backing as fingerprints will adversely affect the adhesion.

(3) Using clean sponge, apply ample wetting solution to decal adhesive and panel surface. The wetting solution permits ease of movement of decal while posi-

tioning it on panel surface.

(4) Immediately apply wetted decal to the panel surface. Apply wetting solution to decorative face of decal to allow the squeegee to slip during application.

(5) Squeegee a short section of decal at the center. Lift right or left side of decal, position it straight and close to panel, and squeegee toward lifted edge. Avoid stretching decal at lifted end. Squeegee outward from center with firm, overlapping strokes.

(a) Lift upper area of decal (up to bonded area) and, working upward from bonded section at center, squeegee decal into place.

(b) Lift lower area of decal (up to bonded area) and, working downward from bonded section at center, squeegee decal into place.

**NOTE:** If a wrinkle is trapped during squeegee operations, stop immediately. Carefully lift affected section. Align the section to the panel and remove wrinkle.

## EXTERIOR WOOD GRAIN OVERLAYS

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### GENERAL

Exterior wood grain overlay panels are made of a tough, durable, weather-resistant, opaque cast vinyl and have a pressure-sensitive back. The pressure-sensitive back is protected by a paper backing which is removed at installation. The wood grain is embedded in the cast vinyl for a longer lasting attractive appearance. In addition, the rear panels are retroreflective; that is, light is reflected back to its source by means of thousands of tiny glass beads impregnated in the cast vinyl.

### REPAIRS

Small nicks, bruises, or scratches can be touched up with paint in much the same manner as painted surfaces. Proper color match can be obtained by blending small amounts of appropriate paint colors, then spot-painting the affected area of the overlay.

To repair blisters or air bubbles, pierce them with a sharp needle or pin. Work the trapped air out through the pin hole and press the overlay firmly against the panel. It may be necessary to preheat the panel slightly, with a Heat Gun J-25070 to soften the adhesive. Heat also may be applied to remove small wrinkles, irregularities, or bridging which may occur in the corners of the fuel tank filler opening.

**NOTE:** Whenever the material must be stretched, do not slit or cut the overlay. Simply apply heat and press or squeegee the overlay smoothly and firmly into place.

### PREPARATION

Workroom temperature should be between 65°F and 90°F. Overlays should not be replaced in temperatures below 65°F.

The following equipment and materials are necessary for a quality overlay installation.

- Woodgrain and Stripe Remover—3M or equivalent
- Adhesive Remover—3M or equivalent
- Liquid detergent (Joy, Vel, or equivalent)
- Wax and silicone remover (3M General Purpose Adhesive Cleaner, or equivalent)
- Isopropyl alcohol (rubbing alcohol)
- Squeegee (4 to 5 inches wide, plastic or hard rubber)
- Water bucket and sponge
- Sandpaper (No. 360 or No. 400, wet-or-dry type)
- Heat Gun J-25070 or infrared heat bulb and extension cord
- Clean wiping rags or paper towels
- Sharp knife or single-edge razor blade.
- Scissors
- Sharp needle or pin

• Grease pencil

Prepare a supply of wetting solution by thoroughly mixing two or three teaspoons of detergent (Joy, Vel, or equivalent) in one gallon of water. The use of a wetting solution assures a better bond between overlay and painted surface. Too much detergent will reduce the effectiveness of the bond. **DO NOT USE SOAP.**

Overlay replacement involving collision damage, or damage to underlying paint finish, requires that metal repair and refinish operations be completed before overlay is installed.

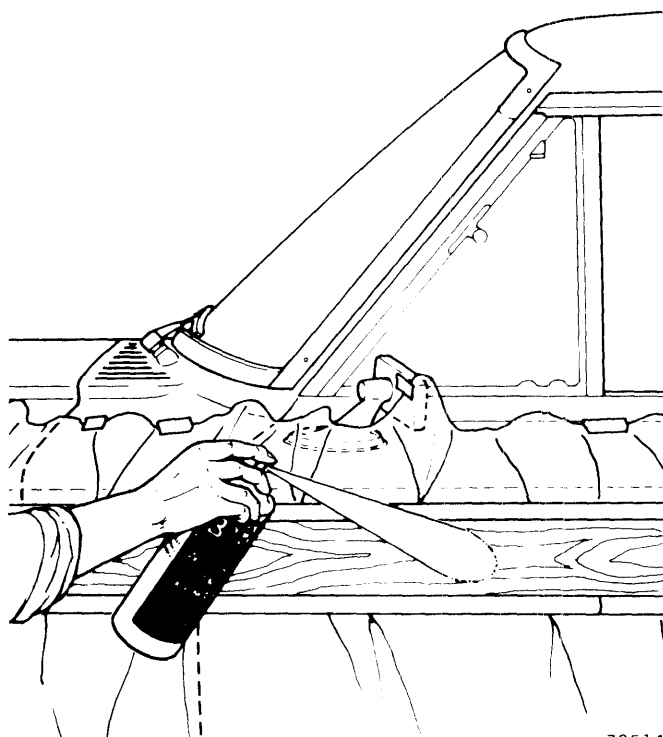
**REMOVAL**

(1) Clean repair surfaces, adjacent panels, and openings as required.

(2) Remove overlay reveal mouldings, door handles, lock assembly, side marker lamps, or other overlapping parts from the affected panel.

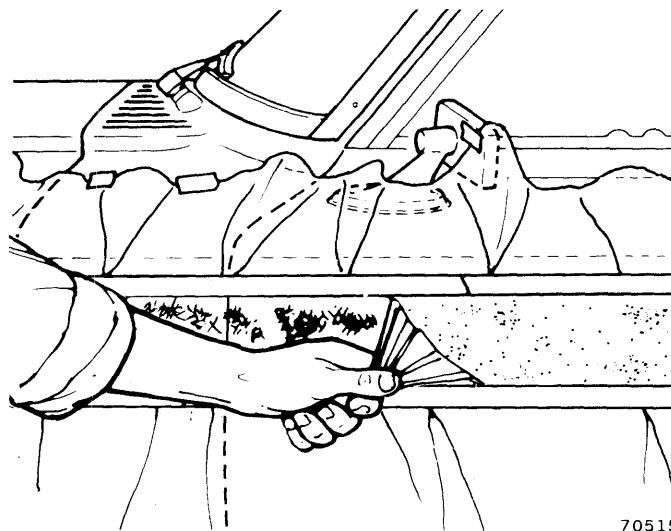
(3) Mask off area surrounding the panel.

(4) Spray 3M Woodgrain and Stripe Remover or equivalent on flange area first. Then spray entire overlay to be removed (fig. 20-20). Move spray can back and forth across entire overlay in a smooth steady motion. Make sure entire overlay is coated with remover.



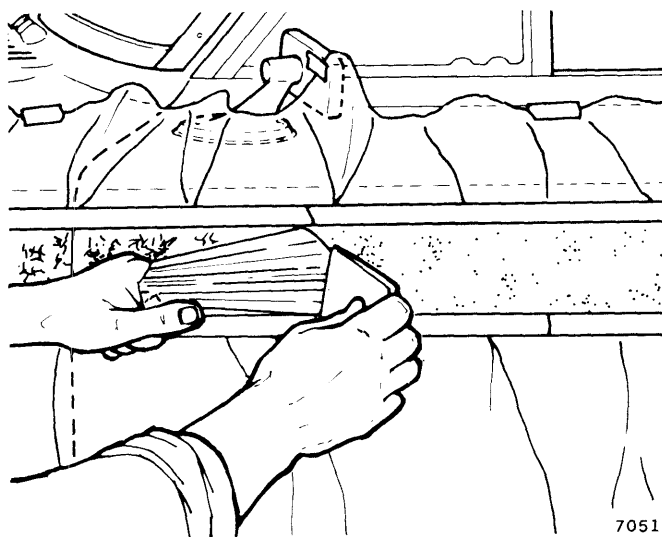
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**Fig. 20-20 Spraying Remover on Overlay**



70515

**Fig. 20-21 Peeling Overlay from Panel**



70516

**Fig. 20-22 Using Squeegee to Assist in Removal of Overlay**

(5) Spray entire panel again, this time moving the spray up and down the overlay.

(6) Allow remover to stay on overlay for 20 minutes.

(7) After 20 minutes, peel overlay away from flange areas. Then, start in one corner and peel overlay away from panel (fig. 20-21). If there is any difficulty in peeling overlay away from panel, use squeegee to assist in removing it (fig. 20-22).

(8) Scrape all Woodgrain and Stripe Remover from surface before proceeding.

**CAUTION:** Woodgrain and Stripe Remover from 3M is designed for use on acrylic enamel surfaces only.

**WARNING:** Use 3M Woodgrain and Stripe Remover or equivalent only in a well-ventilated area. Observe manufacturer's warnings printed on label.

(9) After overlay is removed, spray panel again with 3M Adhesive Remover or equivalent to remove any remaining adhesive. Use a slow spray application and apply remover in a uniform criss-cross pattern to obtain a heavy coat.

**WARNING:** Use 3M Adhesive Remover or equivalent only in a well ventilated area. Observe manufacturer's warnings printed on label.

**CAUTION:** Leaving remover on surface for too short or long a period may render product ineffective.

**NOTE:** Allow remover to work on adhesive surface for three to five minutes.

(10) After five minutes, use squeegee to remove adhesive residue (fig. 20-23).

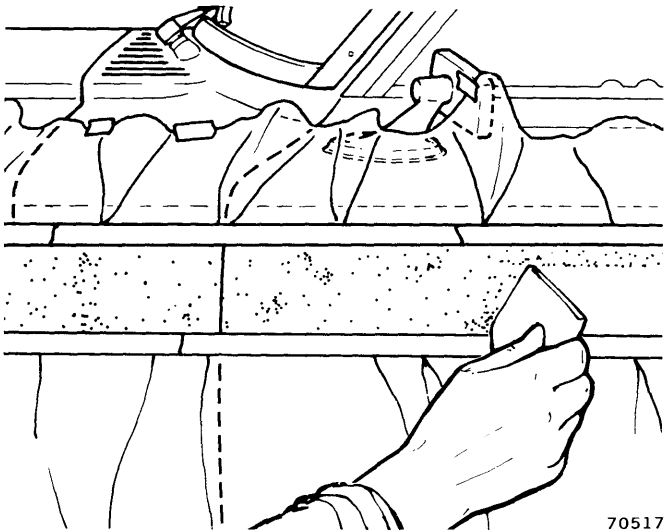


Fig. 20-23 Using Squeegee to Remove Adhesive Residue

**NOTE:** If some adhesive is difficult to remove, spray additional remover on troublesome spots. Wait approximately two minutes and squeegee remaining spots. Repeat as necessary.

(11) Remove masking tape and paper.

(12) Wash entire panel with 3M General Purpose Adhesive Cleaner or equivalent. If any spots of adhesive remain on panel, hard rubbing during the washdown will remove them.

## INSTALLATION

(1) Scuff-sand painted surface with No. 360 or No. 400 sandpaper by dry sanding. Freshly painted surfaces must be thoroughly dry. Residual solvents in fresh paint may cause overlay to blister.

(2) Clean painted surfaces with wax and silicone remover (3M General Purpose Adhesive Cleaner or equivalent). Wipe surface with clean cloth and allow to dry.

(3) Position overlay on repair panel surface, and mark approximate outline on overlay with a grease pencil. Ensure that 1/2-inch excess is allowed to be wrapped around the door and fender areas. With scissors, cut overlay to approximate size. Overlay should be cut so

that upper and lower edges extend halfway into area covered by mouldings.

(4) Place overlay on a clean, flat surface with protective paper backing side up. Bend a corner of the overlay toward the decorative face side, and with a flick of the finger, separate the paper backing from the overlay. Hold overlay firmly to the surface of a table and remove the paper backing. Under hot, humid conditions, a slight jerking motion will aid in removing paper backing.

**CAUTION:** Always remove the paper backing from the overlay; never remove the overlay from the backing as film stretching may result.

**NOTE:** Hold overlay by corners when removing paper backing as fingerprints will adversely affect the adhesion.

(5) Using clean sponge, apply ample wetting solution to overlay adhesive and to repair panel surface. The wetting solution permits ease of movement of the overlay while positioning it on a panel surface.

(6) Immediately apply wetted overlay to the repair panel surface. Position overlay in the center of the area to be covered with at least 1/2 inch extending beyond edges. Apply wetting solution to woodgrain surface of overlay to allow squeegee to slip during application.

(7) Squeegee from the center to edges of overlay with firm strokes to remove all air bubbles and wetting solution and to assure bonding of overlay to painted surface. On large overlays, the following steps will simplify installation:

(a) Squeegee a short, 4 to 6-inch horizontal section of overlay at center of panel. Lift right or left side of overlay, position it straight and close to panel, and squeegee toward lifting edge. Avoid stretching overlay at lifted end, squeegee progressively from middle with firm, overlapping strokes.

(b) Lift upper area of overlay (up to bonded area) and, working upward from bonded section at center, squeegee overlay into place.

(c) Lift lower area of overlay (up to bonded area) and, working downward from bonded section at center, squeegee overlay into place.

**NOTE:** If a wrinkle is trapped during squeegee operations, stop immediately. Carefully lift affected section. Realign section to panel and progressively remove wrinkle. Do not lift overlay if only a few bubbles are trapped.

(8) Notch corner or curved edges of overlay where necessary and trim off excess material.

(9) Allow 1/2-inch extra material beyond edges that are to be wrapped around flange areas.

**CAUTION:** Use extreme care to avoid spilling isopropyl alcohol (rubbing alcohol) on trim or painted surfaces. Wipe spills immediately as alcohol will discolor trim or painted surfaces on prolonged contact.

(10) To activate adhesive, wipe adhesive side of overlay with isopropyl alcohol.

(11) Warm overlay at edges by passing a heat source, such as Heat Gun J-25070, over the surface to soften it.

(12) Firmly press overlay into position with fingertips, a cloth, and finally a squeegee, alternately warming and pressing it until complete adhesion is obtained.

**NOTE:** Avoid undue pulling or stretching at ends of overlay as tearing could result.

(13) Apply heat to overlay at door handle holes, side

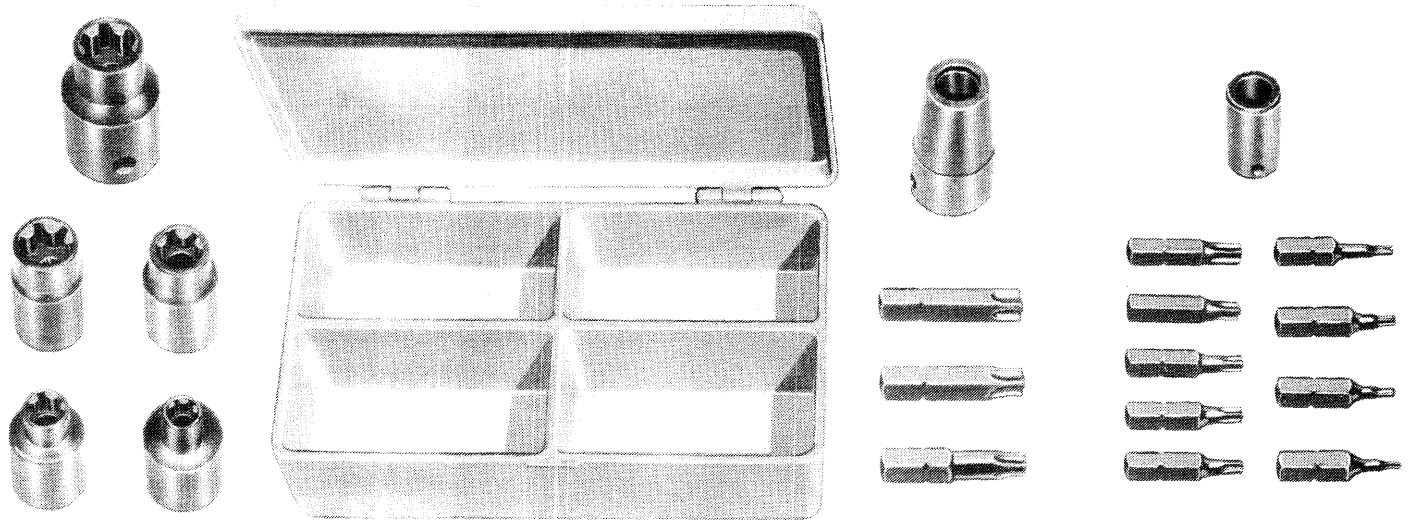
marker lamps, and other depressions using Heat Gun J-25070. Press overlay uniformly into depressions to obtain formed bond.

(14) With sharp knife, carefully cut out excess overlay at door handles, side marker lamps, and other openings in panel.

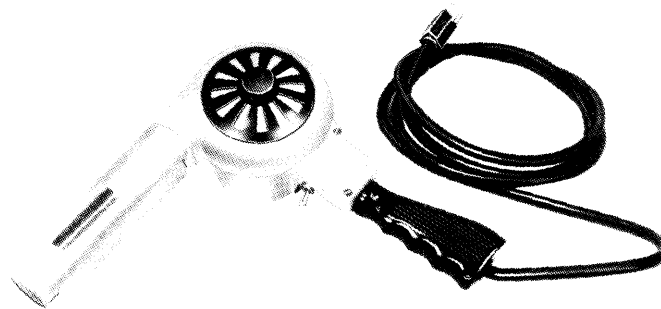
(15) Inspect overlay installation using reflected light to detect irregularities that may have developed during installation. Remove all air or moisture bubbles.

(16) Install previously removed parts and clean vehicle as required.

**Special Tools**



J-25359-02—TORX BIT SET



J-25070—HEAT GUN



