

SECTION 13

FOLDING TOP

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FOLDING TOP TRIM ASSEMBLY (COMPLETE)

All convertible top trim cover assemblies incorporate a spring-loaded top material hold-down cable along the right and left side roof rails. The cables are installed through a retaining pocket in the top material and are fastened at the front and rear side rails by attaching screws. The cables are designed to hold the top material tight against the side roof rail stay pads, thus minimizing air leakage between the top material and the stay pads.

On certain styles the back curtain assemblies incorporate a hard, curved glass back window. This back window is dielectrically bonded to the vinyl back curtain material and is not serviced as a separate item. On other styles, the back curtain incorporates a pliable plastic window.

REMOVAL OF FOLDING TOP AND BACK CURTAIN TRIM ASSEMBLY

1. Place protective covers on all exposed panels which may be contacted during procedure.

2. Remove rear seat cushion and back.

CAUTION: Disconnect rear seat speaker wire if present.

3. Remove right and left folding top compartment side trim panels.
4. Remove right and left side roof rail rear weatherstrip attaching screws; then remove weatherstrips from rails.
5. Detach folding top quarter flaps from side roof rear rails.
6. On styles equipped with back glass support rods, disengage right and left rods from back curtain (Fig. 13-1).
7. Lower top to "stacked" position.
8. Remove remaining side roof rail weatherstrip attaching screws; then remove weatherstrips from rails.

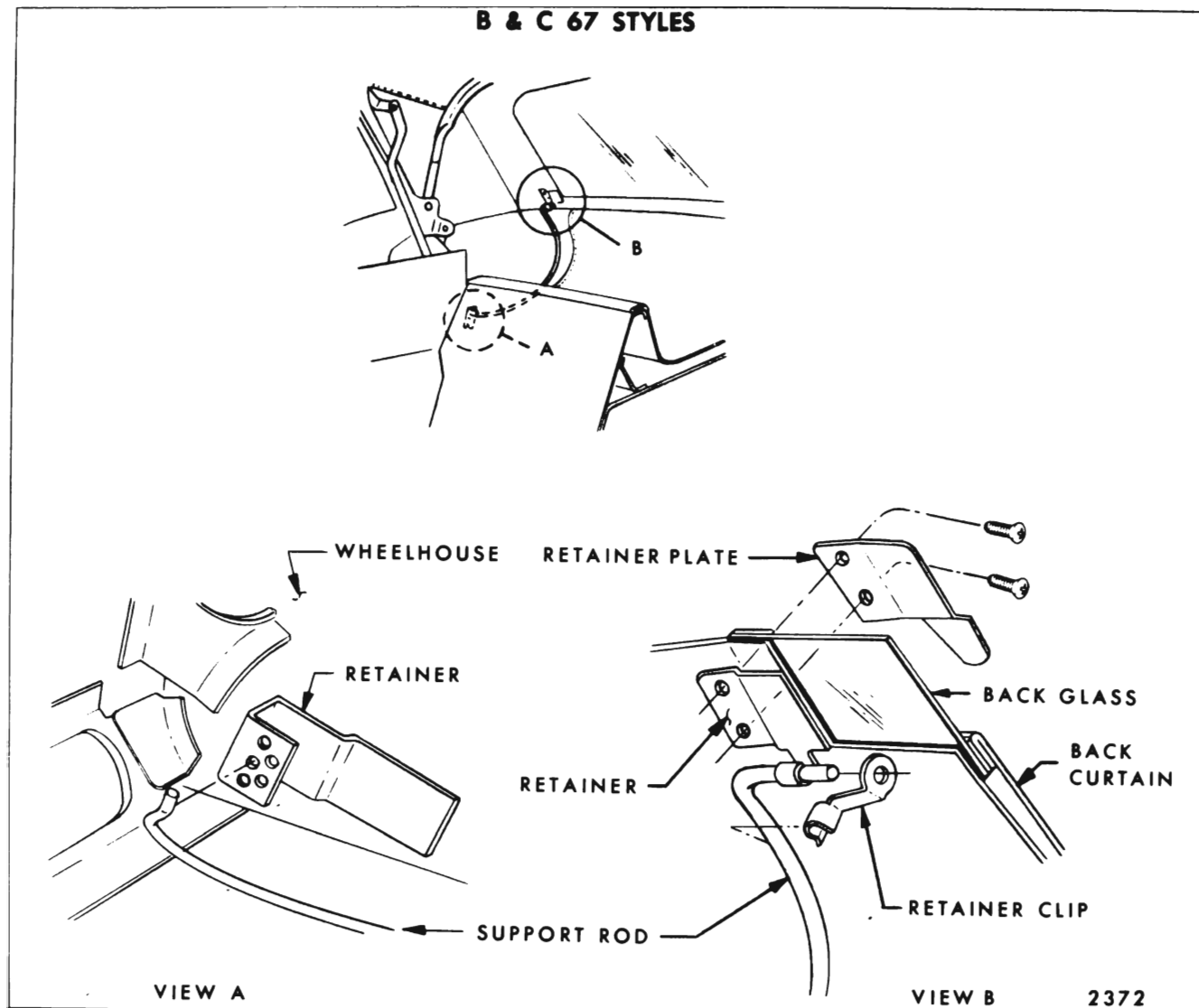


Fig. 13-1—"B & C" Body Back Glass Support Rod Attachments

9. Remove front roof rail front and rear weatherstrips.
10. Detach top material from front roof rail (Fig. 13-2).
11. Detach top material flaps from side roof front rail (Fig. 13-2).
12. Raise top and lock to windshield header.
13. At right and left side roof front and rear rails, remove hold-down cable front and rear attaching screws. (See Views "A and B" in Fig. 13-3).
14. Pull both hold-down cables forward until cables are completely removed from top material retaining pockets.
15. At underside of front bow, remove screws securing listing pocket retainer to bow (Fig. 13-4).
16. Push top material upward sufficiently until retainer is disengaged from bow; then remove retainer from listing pocket.
17. Detach folding top compartment bag from rear seat back panel, thus exposing rear quarter and rear trim stick attaching bolts. Forward end of top compartment bag may be tied or wired to center roof bow to provide ready access to attaching bolts (Fig. 13-5).
18. At each rear quarter area remove attaching bolts securing rear quarter trim stick assembly to rear quarter inner panel (Fig. 13-6).

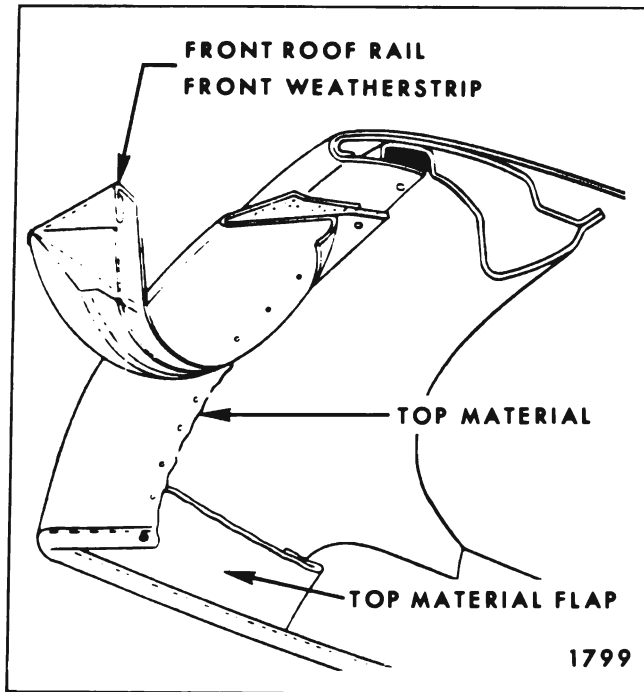


Fig. 13-2 —Top Material At Front Roof Rail

19. Remove rear trim stick attaching bolts; then lift trim assembly with attached quarter and rear trim sticks on top of rear compartment front panel.
20. To establish relationship of right and left inner vertical edge of old top material to back curtain assembly at rear trim stick location, mark back curtain material at both locations with a grease pencil (Fig. 13-7). Reference marks should be transferred to new back curtain when step 6 of installation procedure is performed.
21. To establish relationship of old top material to its position on rear trim sticks, cut selvage end of top material off flush with lower edge of trim sticks.
22. Using a pencil, mark both ends of rear and rear quarter trim sticks on vinyl surface of top material (Fig. 13-8). Reference marks for trim sticks should be transferred to new top material when step 28 of installation procedure is performed.
23. Remove screw securing escutcheon clip at each end of wire-on binding on rear bow. Remove wire-on binding from rear bow. Detach top material from rear roof bow and from trim sticks, then remove top cover assembly (Fig. 13-9).
24. Lock top to windshield header. Install radius end of each adjustable spacer stick to fit against center roof bow. Install opposite end of spacer stick so that metal plate fits under rear roof bow. Spacer sticks should be installed along inboard edge of side stay pad (Fig. 13-10).

NOTE: The approximate dimension for location of spacer sticks, measuring outboard from centerline dimple of rear roof bow is approximately 17" for all body style (See Dimension "Y" in Fig. 13-10).

While exerting rearward pressure on rear bow to draw side stay pads taut, extend spacer sticks until they fit snugly between center bow and rear roof bow, then tighten wing nuts.

25. Spacer sticks may be fabricated as shown in Figure 13-11.
26. Temporarily tie or tape rear bow to rear side roof rails. (See Fig. 13-10.) Detach nylon webbing, side stay pads and back curtain assembly from rear bow.
27. Remove rear trim stick with attached back curtain assembly and top compartment bag from body and place on clean, protected surface.
28. Remove right and left nylon webbing from rear trim stick on styles so equipped.
29. Using chalk, or other suitable material, mark ends of rear quarter trim sticks on vinyl surface of back curtain material (Fig. 13-12). Reference marks for trim sticks should be transferred to new back curtain material when step 6 of installation procedure is performed.
30. Remove back curtain assembly from rear and rear quarter trim sticks.
31. Remove side stay pads. Stay pads are attached to front roof rail and front and rear bows with tacks; to center bow with screws.

NOTE: On Cadillac styles, silencer assembly must be removed prior to side stay pads. For Removal and Installation procedure, refer to Silencer Assembly section.

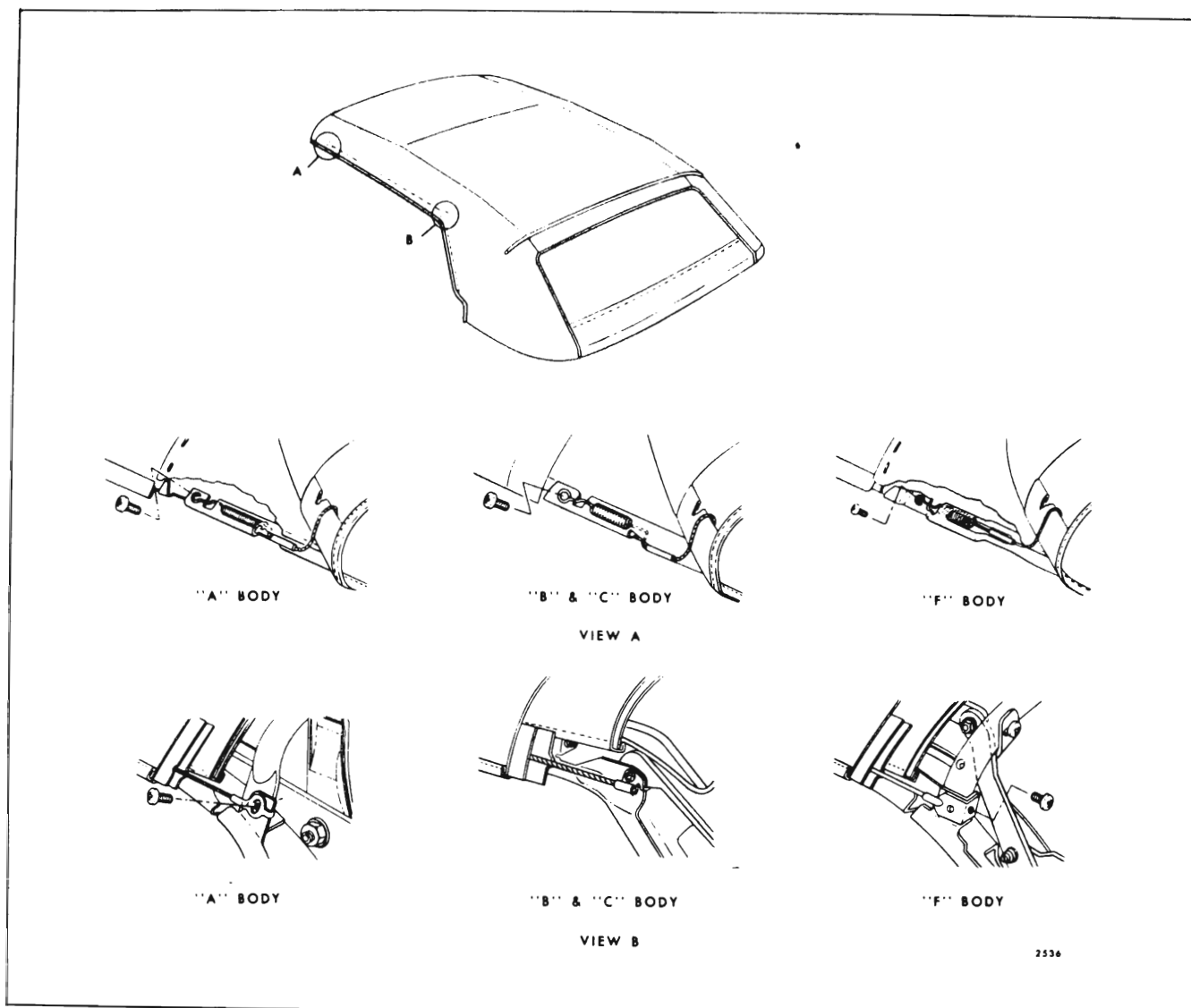


Fig. 13-3 — Convertible Top Material Hold Down Cable

INSTALLATION OF FOLDING TOP AND BACK CURTAIN TRIM ASSEMBLY

1. If new top is being installed but it was impossible to perform step 24 of removal procedure, pre-set spacer sticks to shortest length and install between center and rear roof bow (Fig. 13-10). Adjust sticks so that dimension "X" in Figure 13-10 (measured along spacer stick from front upper rolled edge of rear roof bow to center of center bow) is $16 \frac{1}{16}$ " on "B & C" Styles, $13 \frac{3}{16}$ " on "F" Styles and $15 \frac{1}{4}$ " on "A" Styles. Tie or tape rear bow to rear side roof rails.

NOTE: In all cases, above dimension may be changed slightly within tolerances to corres-

pond with new top after tryout. Dimension should be equal on both right and left sides.

2. Tack side stay pads in conventional manner to rear roof bow and stay tack pads to front roof rail. Make sure inboard edge of pad is properly aligned within depressions in bow and rail. Stay tack pad to front bow. Install pad to center bow with screws. Make sure inboard edge of pad is properly aligned within depression in bow. Install stay pad wadding in conventional manner using an approved trim cement. (Fig. 13-13 for "A" Body, Fig. 13-14 for "B" Body, Fig. 13-15 for "C" Body and Fig. 13-16 for "F" Body.)
3. Trim salvage end of side stay pads just forward of rear rolled edge of rear roof bow (Fig. 13-13 for "A" Body, Fig. 13-14 for "B"

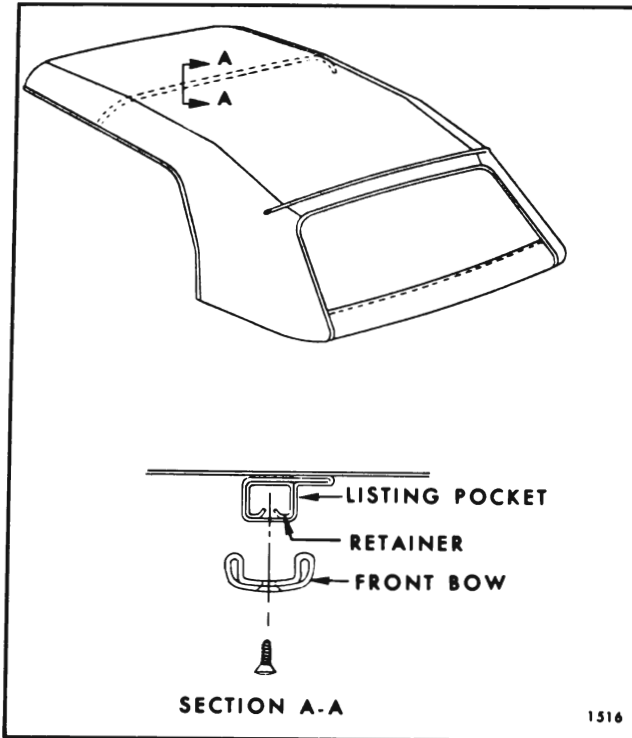


Fig. 13-4 — Listing Pocket Retainer

Body, Fig. 13-15 for "C" Body and Fig. 13-16 for "F" Body).

4. Distance from center of center bow to rolled forward upper edge of rear roof bow is $16 \frac{1}{16}$ " for "B & C" Styles, $13 \frac{3}{16}$ " for "F" Styles and $15 \frac{3}{4}$ " for "A" Styles.

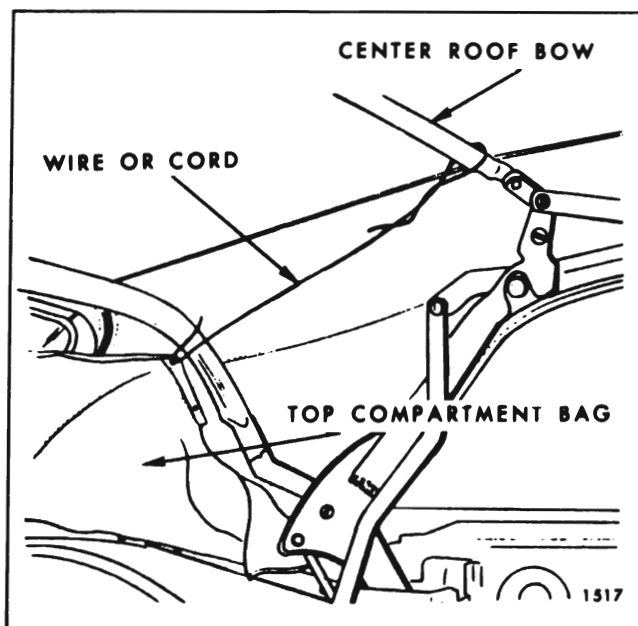


Fig. 13-5 — Top Compartment Bag Tied to Center Bow

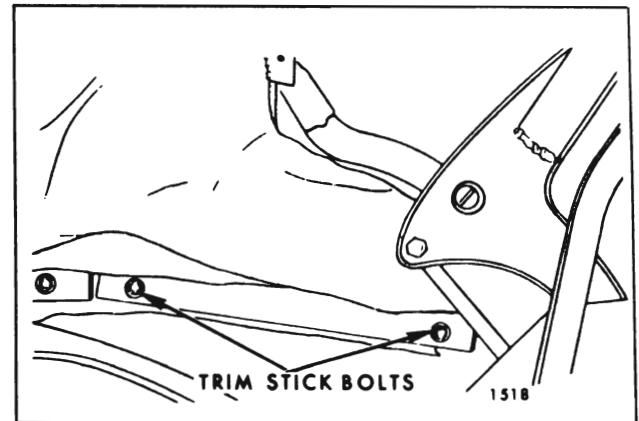


Fig. 13-6 — Rear Quarter Trim Stick

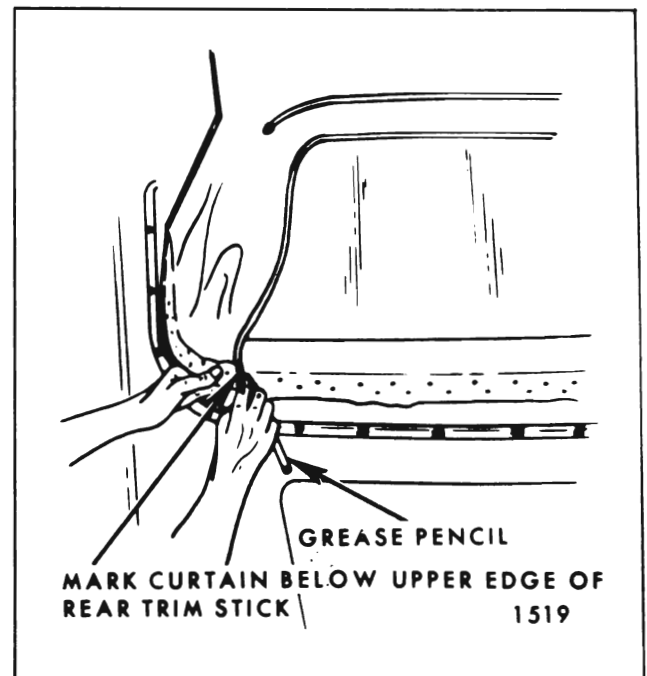


Fig. 13-7 — Locating Edge of Top Material

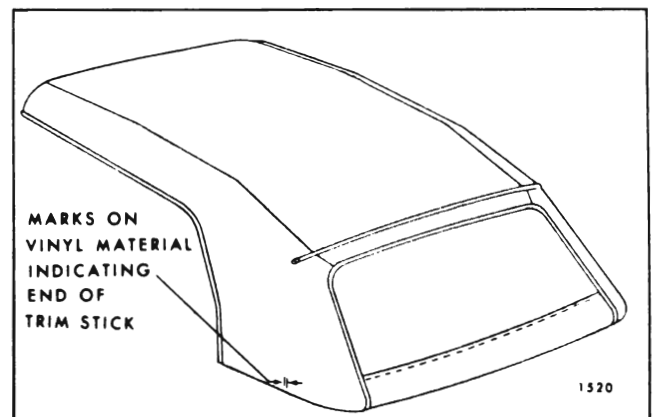


Fig. 13-8 — Marking Top Material

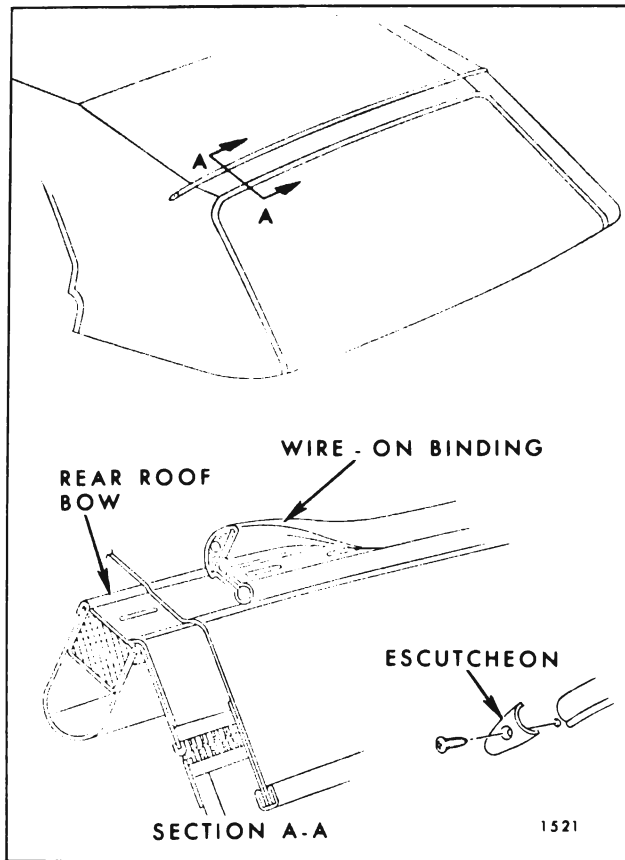


Fig. 13-9 - Rear Roof Bow Wire-On Binding

NOTE: Dimension may vary $\pm 1/4$ " after back curtain has been completely installed. Readjust spacer sticks and side roof rail pads as required if rear bow does not come within this position range.

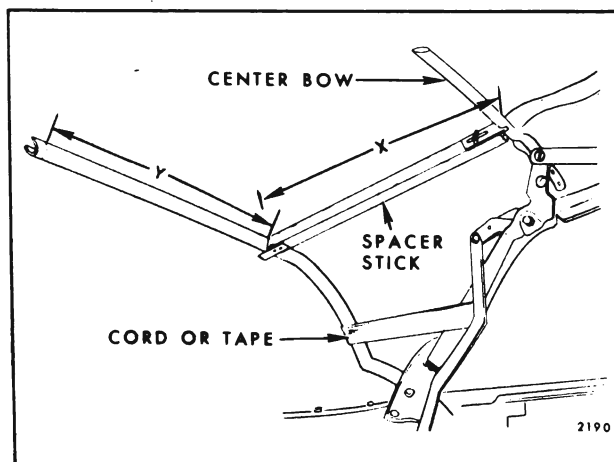


Fig. 13-10 - Spacer Stick Installation

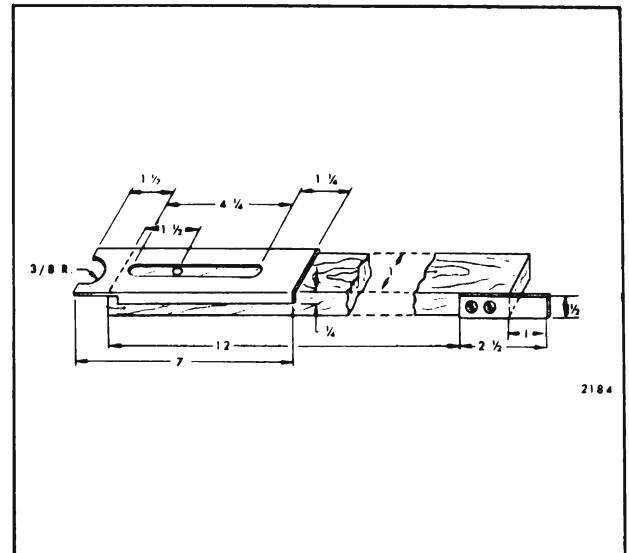


Fig. 13-11 - Spacer Stick Dimensions

MATERIAL PER STICK

Wood - $1/2 \times 1 \times 14-1/2$
 Steel - $1/32 \times 1/2 \times 2-1/2$
 Steel - $1/32 \times 1-1/2 \times 7$
 2 Screw #6 x $1/2$ "
 Bolt $1/4 - 20 \text{ UNC} - 2A \times 1"$
 Wingnut $1/4 \times 20 \text{ UNC} - 2B$
 2 Washers $1/4"$ I.D.

5. Place new back curtain assembly on clean covered work bench with interior surface of back window facing down.
6. Carefully lay removed back curtain assembly over new back curtain assembly. Using a grease pencil, mark vinyl surface of new back curtain using marked edge of old curtain as guide. (See steps 20 and 29 of removal procedure.) In addition, mark trim stick bolt hole locations on new back curtain assembly.

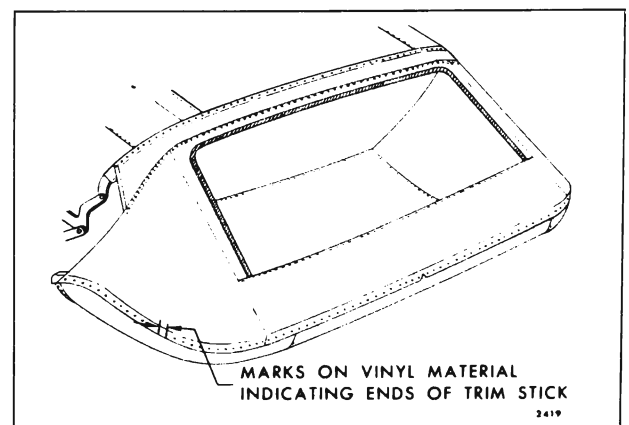


Fig. 13-12 - Marking Back Curtain

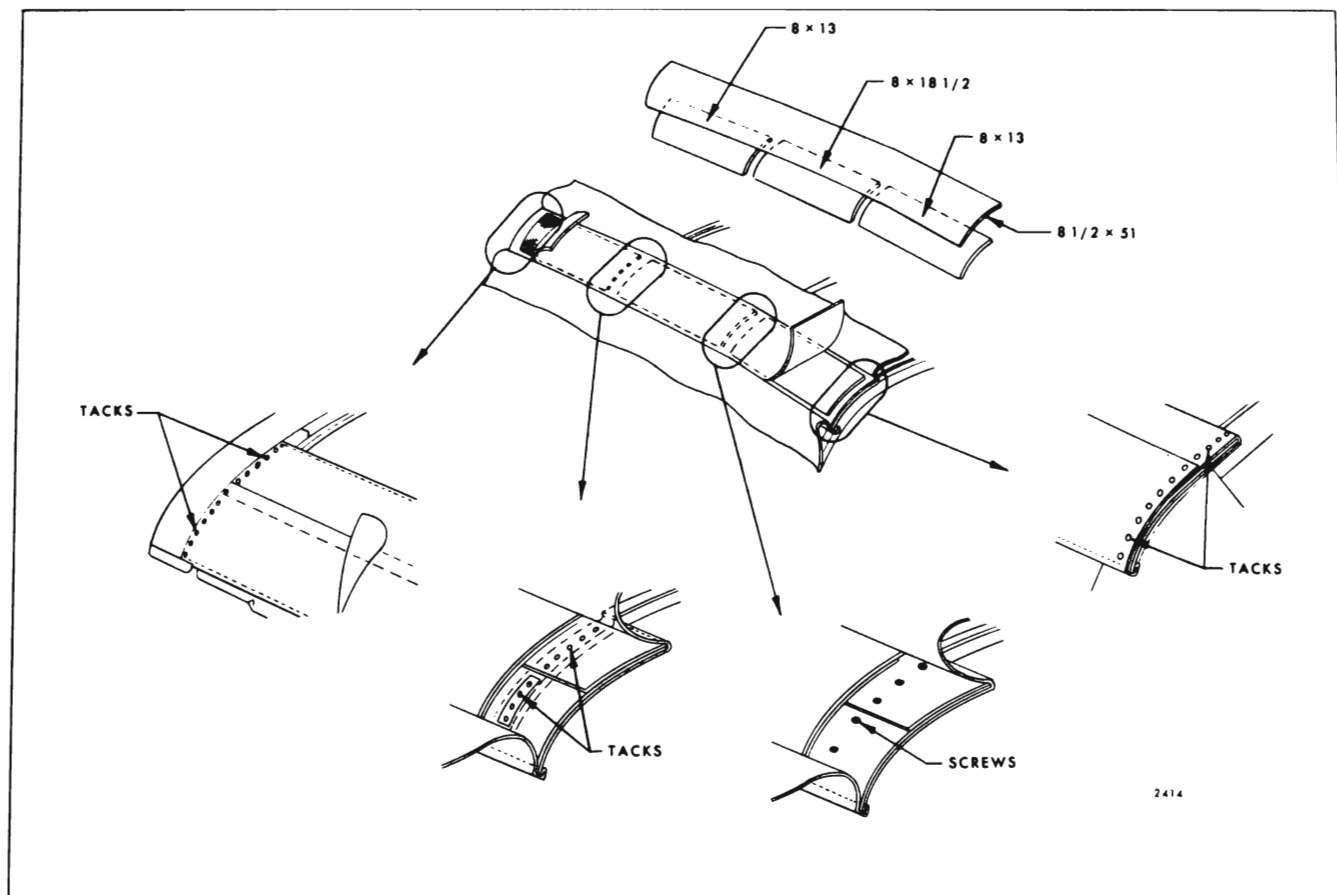


Fig. 13-13—"A" Body Side Stay Pad Installation

IMPORTANT: Where a grease pencil or similar material is used for marking back curtain, marks must be below trim stick so that they will not show after curtain is installed in body.

7. Center and position back curtain assembly to rear trim stick over attached top compartment bag.

NOTE: Notch in back curtain material at lower edge indicates centerline of back curtain assembly (Fig. 13-17). In addition, back curtain lower edge should extend approximately 1/2" below lower edge of trim sticks.

8. Tack curtain to rear trim sticks (Fig. 13-17).
9. Tack remainder of back curtain material to rear quarter trim stick (Fig. 13-18).
10. Tacks securing back curtain assembly to trim sticks should be placed close to each side of every bolt hole in trim sticks; then pierce or punch back curtain assembly for each trim stick bolt.

11. On all "B, C & A" Styles, tack nylon webbing to rear trim stick. Forward edge of webbing should be even with edge of rear trim stick. New webbing may be cut from a piece of non-staining type webbing 2" x 24" for "A" Bodies and 2" x 27" for "B & C" Bodies. Excess webbing should be trimmed off at rear trim stick, 1/2" above back curtain lower edge.

12. Inspect mastic type trim stick fillers to body below pinch weld for sufficient seal at bolt holes (Fig. 13-19).

13. Secure back curtain with tacks to rear roof bow to prevent damage.

14. Install rear trim stick with attached back curtain assembly into body.

NOTE: Make sure that all trim stick bolts are driven completely in to represent finished condition.

15. Working from body center progressively out-board to right and left sides, tack back curtain to rear bow. Make sure all fullness has been

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drawn from curtain material (Fig. 13-20). Any excess material at rear bow may be carefully trimmed.

16. Check contour of back curtain assembly at rear roof bow and at pinchweld molding.
17. Where required, place reference chalk mark on outer surface of back curtain along pinchweld finishing molding. Re-adjust back curtain assembly as required (Fig. 13-21).
18. Where required, adjust side stay pads; then tack side stay pads to front roof rail and front bow. Attach side stay pads to center bow with screws. Trim selvage end of side stay pads at front roof rail. Install stay pad top covering material in conventional manner using nitrile or neoprene type trim cement.
19. On "B, C & A" Styles only, tack nylon webbing to rear roof bow. Outboard edge of webbing should be installed even with outboard

edge of side roof rail pad. Fold excess webbing rearward and tack to rear bow. Remove excess by trimming webbing just forward of rear rolled edge of rear roof bow.

CAUTION: Do not cut back curtain or side stay pad material.

20. Detach rear trim stick with attached back curtain assembly from body.
21. Lay out new top material on clean protected surface with outer layer of material exposed.
22. Using a pencil, mark top material (mark should be approximately 1/2" in length) at deck seam 5-1/4" on "B, C & F" and 4-1/4" on "A" Styles from edge of top material upper valance binding. (See dimension "X" in Fig. 13-22).
23. Fold new top material in half so that inner lining of top material is exposed (Fig. 13-23). Install a 6" piece of tape on inner surface at

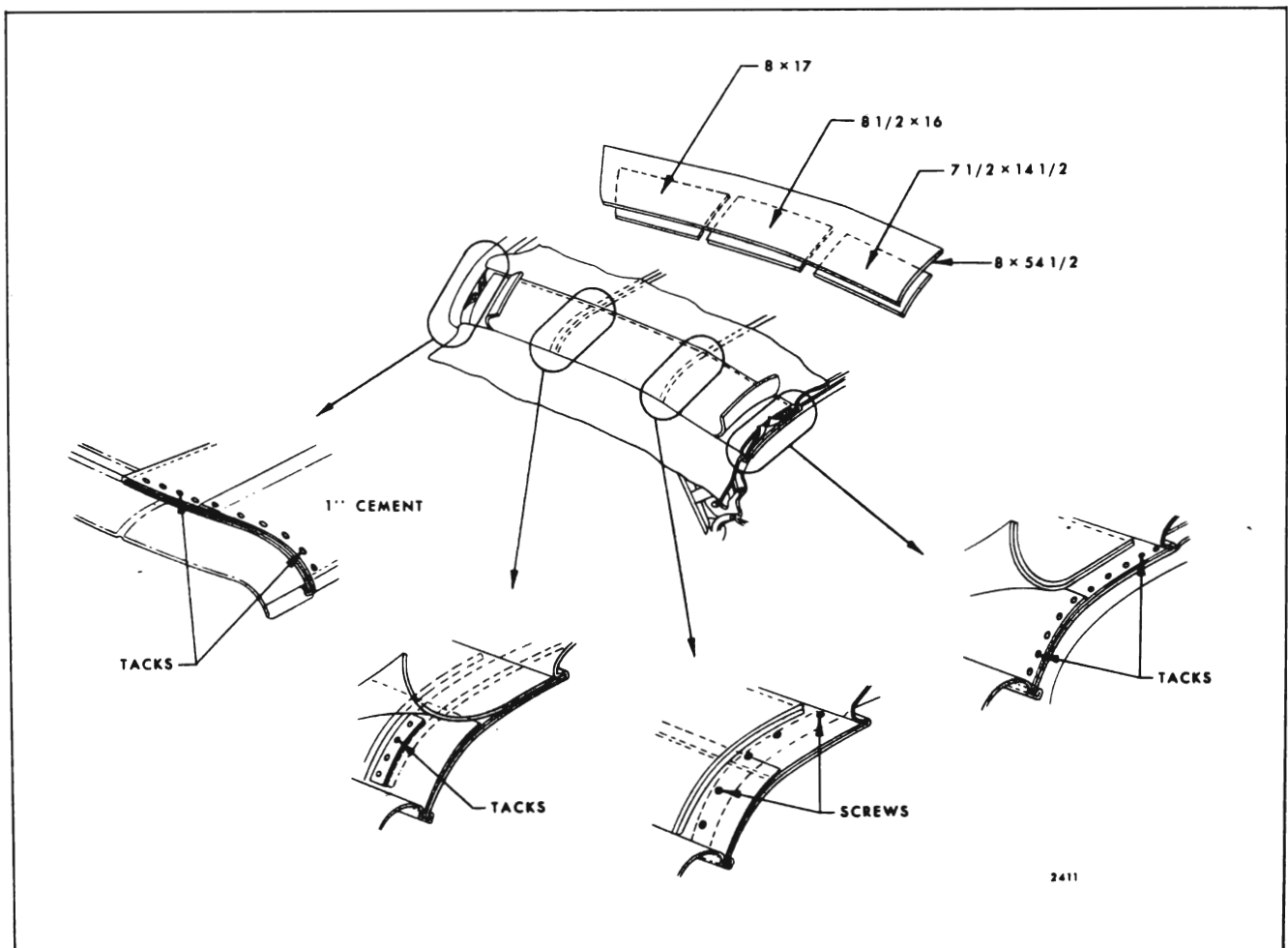


Fig. 13-14—"B" Body Side Stay Pad Installation

centerline fold of new top material (Fig. 13-23). Using a pencil, mark the approximate centerline of new top material along entire length of tape.

IMPORTANT: Be sure mark will be visible inside of body after new top is installed on convertible top framework.

24. Along forward surface of rear roof bow install a 1" piece of tape at centerline dimple of rear roof bow. Using a pencil, mark centerline of rear bow on tape (Fig. 13-24.)
25. Remove rear bow spacer sticks and positioning tape or cord.
26. Check position of rear roof bow in relation to new folding top trim assembly by placing new top trim over folding top framework. With quarter flaps properly folded over rear side roof rails (edge of rails should match stitch lines of quarter flap seams), marks on deck seam should be in center of rear roof bow.

NOTE: The deck seam mark will vary slightly ($\pm 1/4"$) depending upon position of rear roof bow. Also check centerline mark on inner lining of top material. Mark should correspond to centerline mark on rear roof bow.

27. Remove top trim material.
28. Carefully lay removed top, which was marked at lower edge of trim stick prior to removal, over new top. Align old top with new top. Using a pencil, mark vinyl surface of new top using marked edge of old top as guide. Also mark edges of trim sticks on vinyl surface of new top material. (See steps 21 and 22 of removal procedure).
29. Position top trim on framework and center assembly both fore and aft and side to side.
30. Install listing pocket retainer into listing pocket.
31. Center retainer in listing pocket; then, install

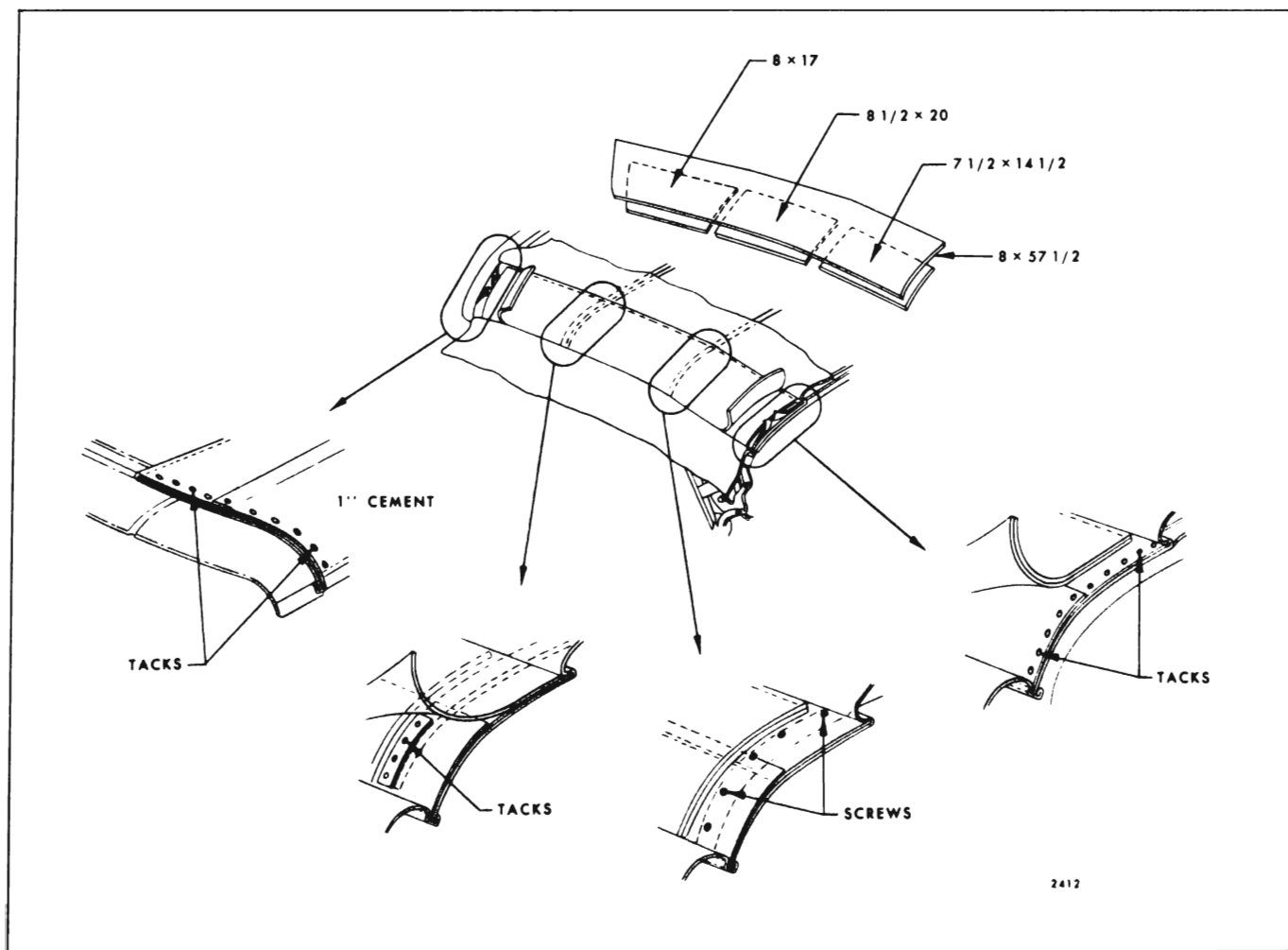


Fig. 13-15—"C" Body Side Stay Pad Installation

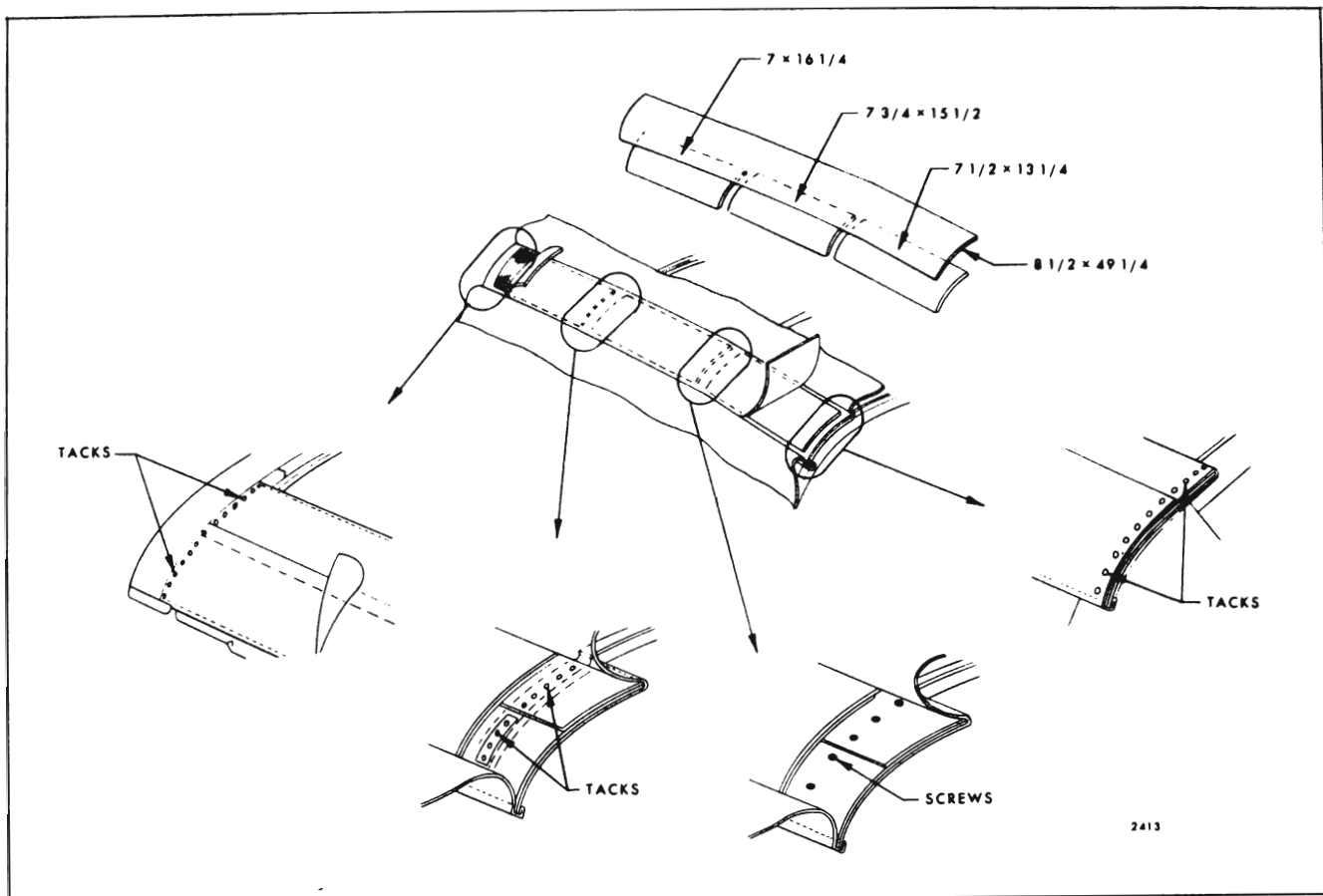


Fig. 13-16—"F" Body Side Stay Pad Installation

retainer into front bow.

NOTE: Retainer should be evenly centered between side roof rail stay pads.

32. Install front bow to listing pocket retainer attaching screws (Fig. 13-25).
33. On right side of top material, at front of hold-down cable pocket, install cable through pocket in top assembly.

NOTE: Welding rod or similar material may be bent at one end to form a hook. Then at rear of hold-down pocket, slip hooked end of rod into pocket. Push rod through pocket until hooked end of rod is exposed at front of pocket. Install rear end of cable attaching bracket over hooked portion of rod; then pull cable through pocket. When cable attaching bracket is exposed at rear end of hold-down pocket, disengage hooked portion of rod from cable attaching bracket. Repeat above operation on opposite side of top assembly.

34. After cables have been inserted in hold-down

pockets in top material, securely install front and rear cable attaching brackets to side roof front and rear rails (Fig. 13-3).

35. Check position of top trim at rear roof bow and at side roof rear rails. With quarter flaps properly folded over rear side roof rails (edge of rails should match stitch lines of quarter flap seams), marks on deck seam should be in center of rear roof bow.

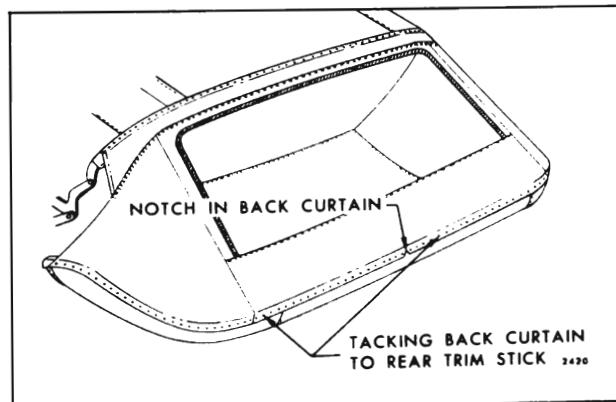


Fig. 13-17—Back Curtain Installation

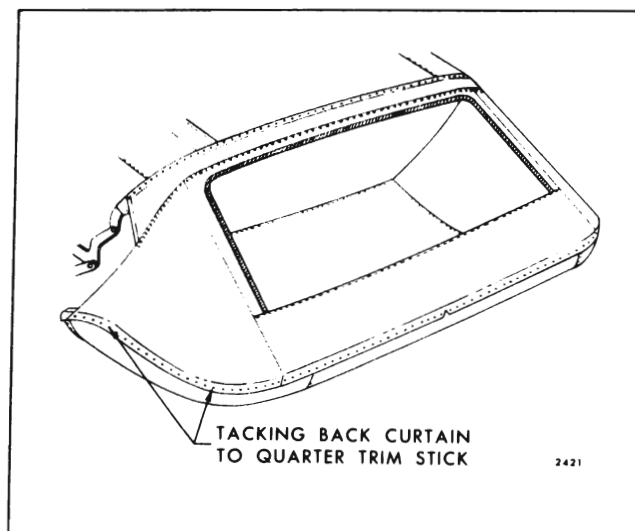


Fig. 13-18—Back Curtain Installation

NOTE: The deck seam mark will vary slightly ($\pm 1/4''$) depending upon position of rear roof bow. Also check centerline mark on inner lining of top material. Mark should correspond

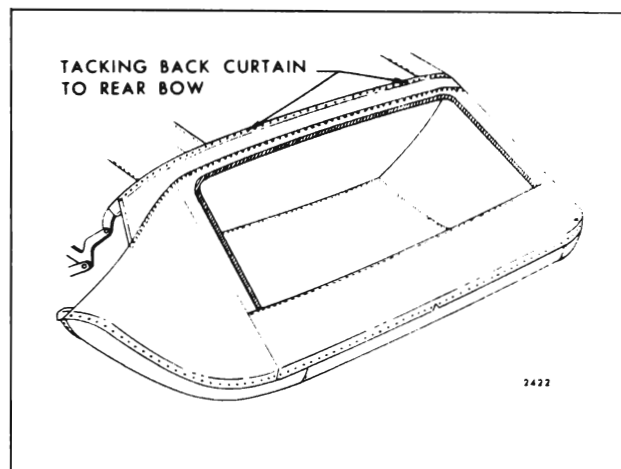


Fig. 13-20—Back Curtain Installed

to centerline mark on rear roof bow. (See Fig. 13-26).

36. Using nitrile cement or neoprene-type weatherstrip adhesive, fasten rear quarter flaps to side roof rear rails. Make sure that quarter flap seam breaks at forward edge of side roof rear rail.

NOTE: Material may have to be stretched from side to side to insure proper fit of top material flaps to side roof rear rails and to remove wrinkles from top material along rear roof bow.

37. Using an awl or other suitable tool, pierce flaps for side roof rail rear weatherstrip attaching screws. Install side roof rail rear weatherstrips to help maintain position of quarter flaps while adhesive is drying.

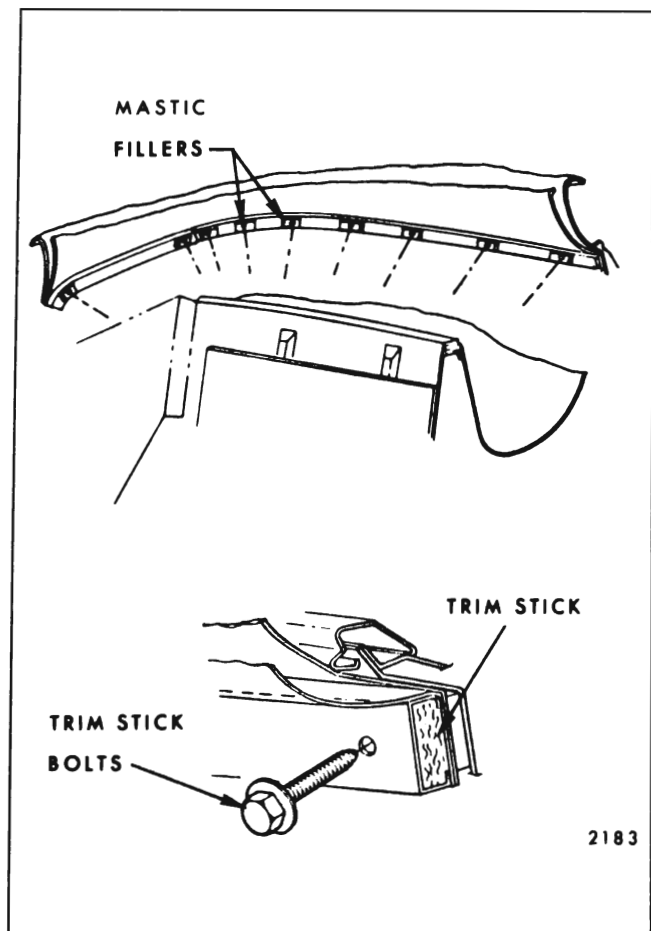


Fig. 13-19—Checking Trim Stick Fillers

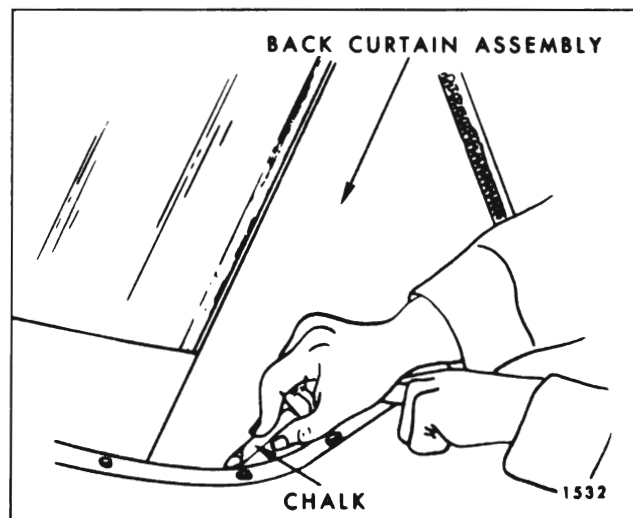


Fig. 13-21—Marking Back Curtain

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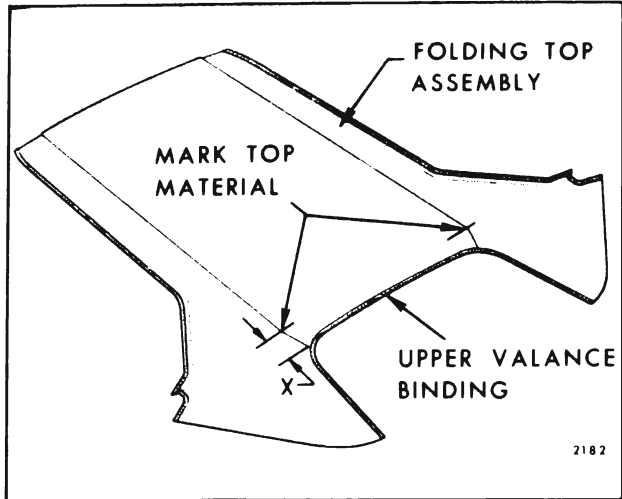


Fig. 13-22 — Marking Top Material

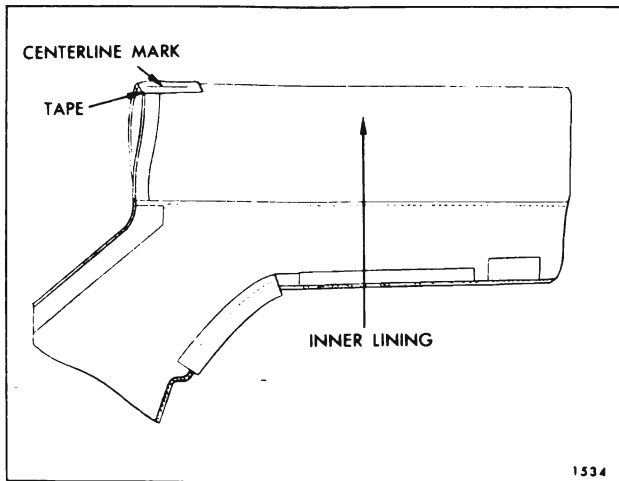


Fig. 13-23 — Marking Folding Top Material

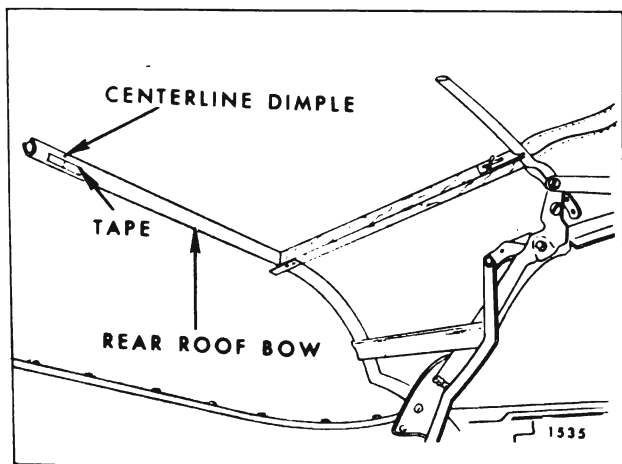


Fig. 13-24 — Marking Rear Roof Bow

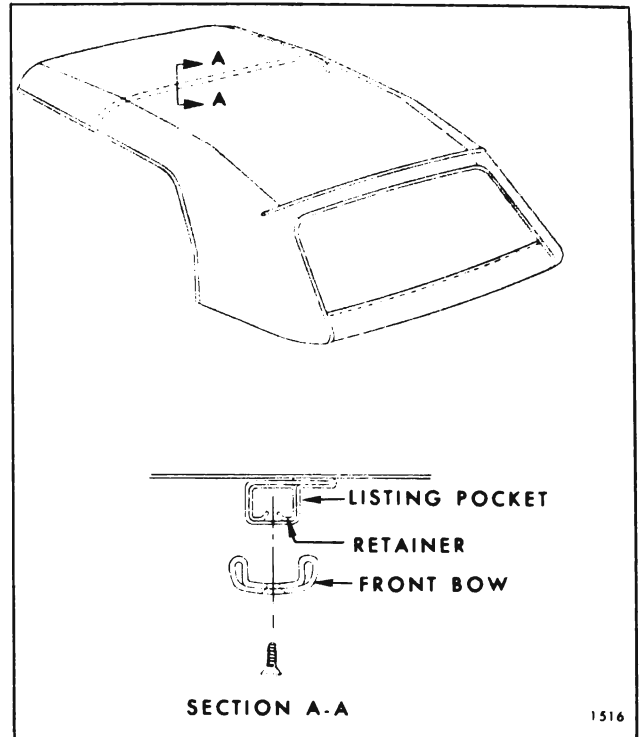


Fig. 13-25 — Listing Pocket Retainer

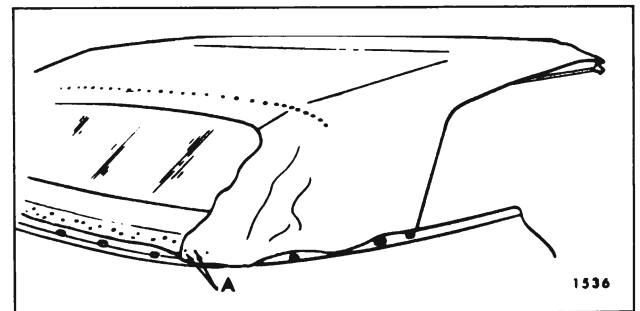


Fig. 13-26 — Tacking Top Material

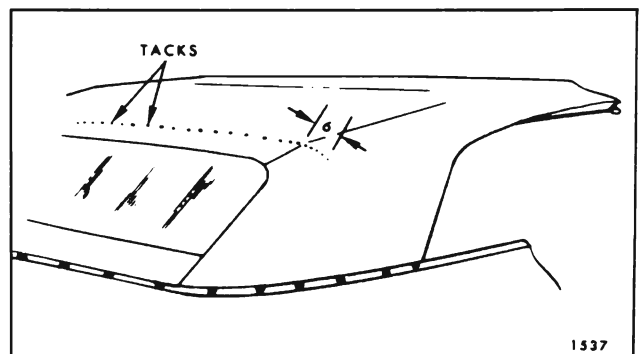


Fig. 13-27 — Tacking Outboard Of Seams

38. Using previously marked lines (ends of trim stick) as locating reference, tack top material to rear and rear quarter trim sticks. "A" in Figure 13-26 shows top material installed to rear trim stick at inboard edge.
39. Cut or punch hole in top material for each trim stick attaching bolt.
40. Install top material into body. Make sure rear and rear quarter trim stick attaching bolts are completely driven in to represent finished condition.
41. Check fit of top material. Rear quarter trim sticks may be adjusted downward to remove minor wrinkles in top material in rear quarter area.
42. Where required, re-mark top material; then make necessary adjustments to top material by repositioning rear quarter trim sticks and/or by retacking top material to rear and/or rear quarter trim sticks.

NOTE: In extreme cases, adjustment of top material at rear or rear quarter trim sticks may have to be performed several times before desired fit of top material is obtained.

43. Remove trim sticks with attached top material from top compartment well. Back curtain should extend $1/2$ " below trim sticks. (See step 7 of installation procedure). In addition, top material must extend $1/2$ " to $5/8$ " below trim sticks to minimize water wicking on inner lining of back curtain material. Trim top material as required.
44. Install trim sticks with attached top material into top compartment well and tighten side and rear trim stick attaching bolts.
45. Re-check side roof rail flaps. Make sure mark at deck seams is in center of rear bow. Also re-check centerline mark on inner surface of top material at rear bow.
46. Where required, remove side roof rail rear weatherstrips. Re-adjust top material at side roof rails and reinstall weatherstrips.
47. While pulling top material slightly rearward, stay tack top material along rear roof bow.

IMPORTANT: Tacks must be installed along a straight line in center of rear bow. (See Fig. 13-27). Tacks outboard of deck seams should be restricted to distance not to exceed 6", which is length wire-on binding extends past seam (Fig. 13-27).

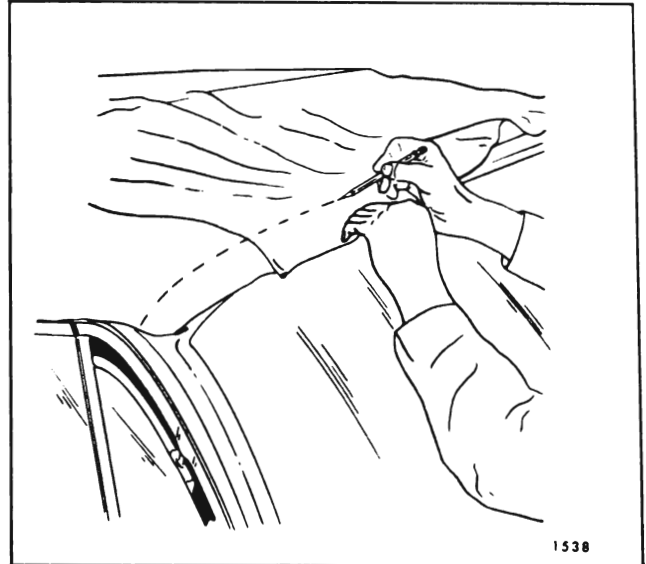


Fig. 13-28 — Marking Top Material At Front Roof Rail

48. At front roof rail, pull top trim material forward to desired tension. While maintaining tension on top trim, place a pencil mark on outer surface of trim material along forward edge of front roof rail (Fig. 13-28).
49. Unlock top from windshield header and apply nitrile cement or neoprene-type weatherstrip adhesive to tacking area of front roof rail and corresponding surface of top material. Pull top trim material slightly forward so that pencil marks are on underside of front edge of front roof rail. Fasten top trim to cemented area and stay tack trim to rail (Fig. 13-29).
50. Apply nitrile cement or neoprene-type weatherstrip adhesive to front flaps and to corresponding areas on side roof front rails.

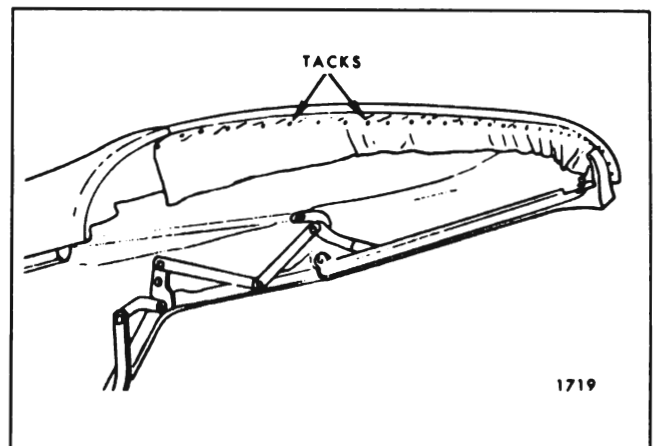


Fig. 13-29 — Installation Of Top Material To Front Roof Rail

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Fasten flaps to side roof front rails. (See Fig. 13-30).

51. Lock top to windshield header. Check appearance of top trim as well as operation and locking action of top. (If additional tension is desired in top trim unlock top from header and reposition top trim by pulling trim further forward. Stay tack and re-check top appearance).
52. Complete tacking of top trim to front roof rail and trim off excess material.
53. Permanently tack top material to rear roof bow. Apply bead of neoprene-type weatherstrip adhesive around each tack head, and into two holes pierced into top material for wire-on binding clip escutcheons.

NOTE: Any tack holes made in top material as a result of stay tacking material to rear roof bow should also be sealed using neoprene-type weatherstrip adhesive.

54. When completed, folding top should be free from wrinkles and draws. Install all previously removed trim and hardware and clean any soilage from top material, back window and material or pads.

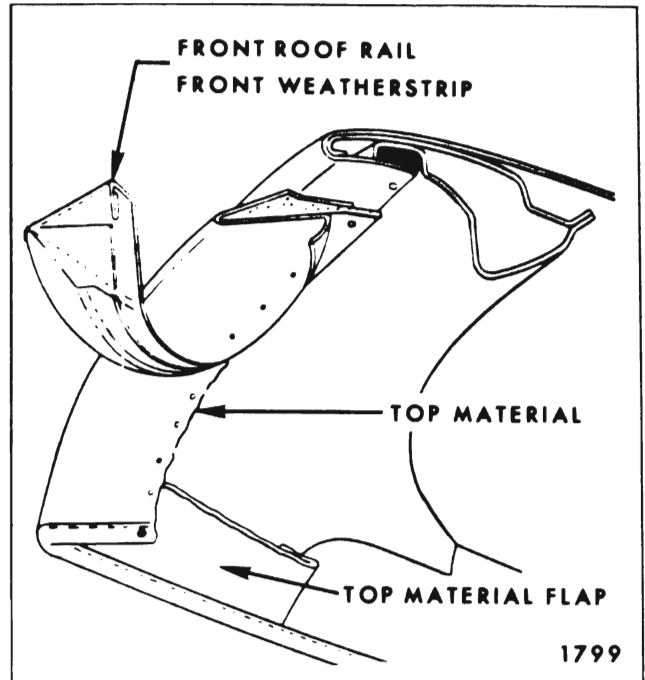


Fig. 13-30—Top Material At Front Roof Rail

55. On styles so equipped, connect back curtain support rod to back curtain.

FOLDING TOP TRIM—LESS BACK CURTAIN

REMOVAL OF FOLDING TOP TRIM COVER

1. Place protective covers on all exposed panels which may be contacted during procedures.
2. Remove rear cushion and back.
CAUTION: Disconnect rear seat speaker wire if present.
3. Remove right and left folding top compartment side trim panels.
4. Remove right and left side roof rail rear weatherstrip attaching screws; then remove weatherstrips from rails.
5. Detach folding top quarter flaps from side roof rear rails.
6. Lower to "stacked" position.
7. Remove right and left side roof rail front weatherstrip attaching screws; then remove weatherstrip from rails.
8. Remove front roof rail front and rear weatherstrips.

9. Detach top material from front roof rail.
10. Detach top material flaps from side roof front rail (Fig. 13-30).
11. Raise top and lock to windshield header.
12. At right and left side roof front and rear rails, remove hold-down cable front and rear attaching screws. (See Views "A and B" in Fig. 13-31).
13. Pull both hold-down cables forward until cables are completely removed from top material retaining pockets.
14. At underside of front bow, remove screws securing listing pocket retainer to bow (Fig. 13-32).
15. Push top material upward sufficiently until retainer is disengaged from bow; then, remove retainer from listing pocket.
16. Detach folding top compartment bag from rear seat back panel, thus exposing rear quarter

and rear trim stick attaching bolts. Forward end of top compartment bag may be tied or wired to center roof bow to provide ready access to attaching bolts (Fig. 13-33).

17. At each rear quarter area remove attaching bolts securing rear quarter trim stick assembly to rear quarter inner panel (Fig. 13-34).
18. Remove rear trim stick attaching bolts; then lift trim assembly with attached quarter and rear trim sticks on top of rear compartment front panel.
19. To establish relationship of right and left inner vertical edge of old top material to back curtain assembly at rear trim stick location,

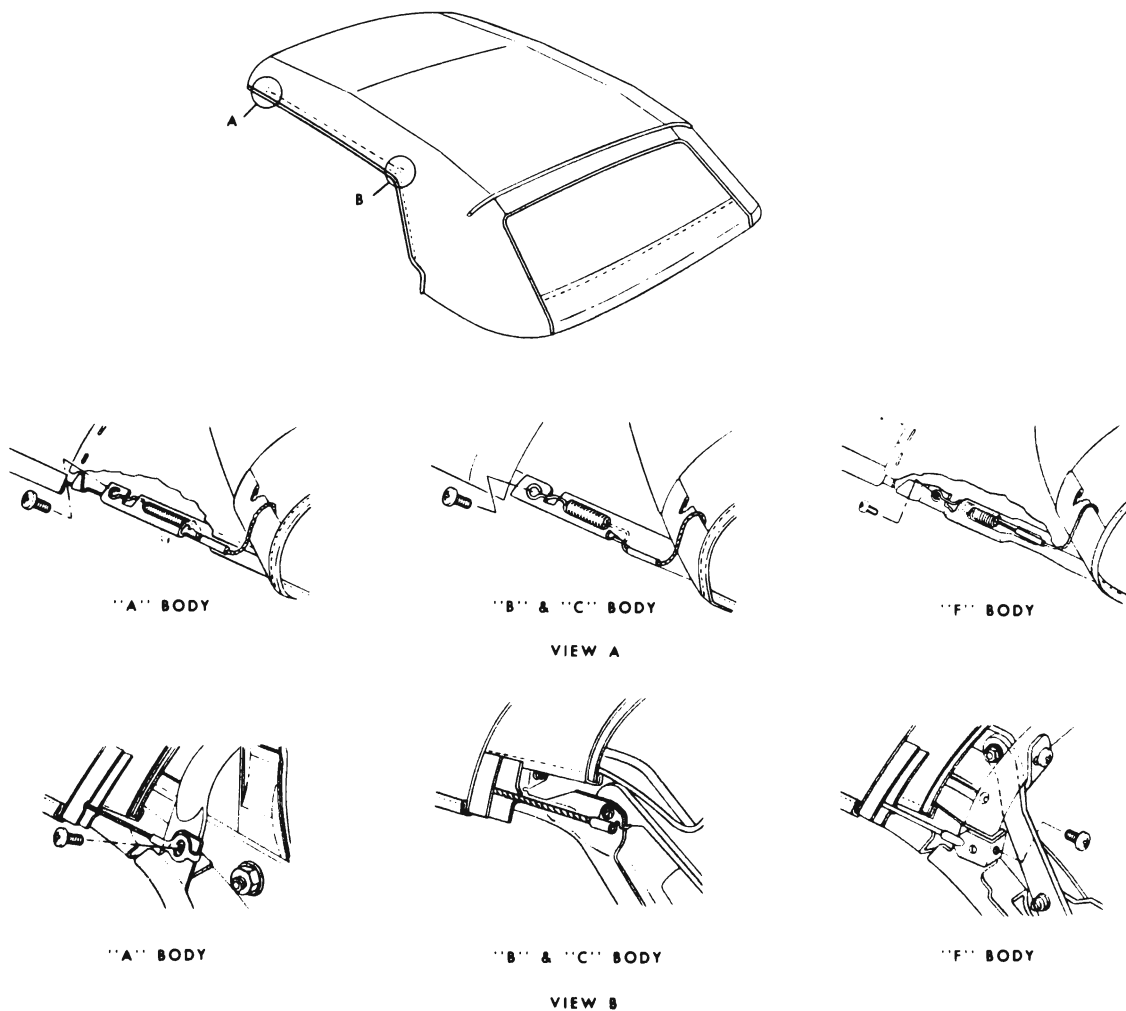
mark back curtain material at both locations with a grease pencil (Fig. 13-35).

NOTE: Reference marks must be made below upper edge of rear trim sticks.

20. To establish relationship of old top material to its position on rear trim sticks, cut selvage end of top material off flush with lower edge of trim sticks.

CAUTION: When cutting top material, be careful not to cut lower selvage edge of back curtain assembly.

21. Using a pencil, mark both ends of rear and rear quarter trim sticks on vinyl surface of top material as shown in Figure 13-36.



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Fig. 13-31 — Convertible Top Material Hold Down Cable

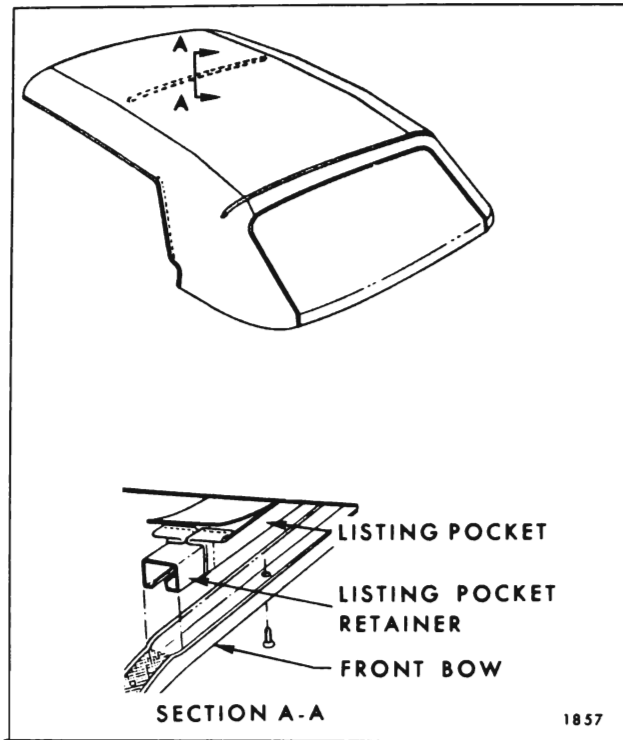


Fig. 13-32 — Listing Pocket Retainer

Reference marks for trim sticks should be transferred to new top material when step 8 of installation procedure is performed.

22. Remove screw securing escutcheon clip at each end of wire-on binding on rear bow. Remove wire-on binding from rear bow. Detach top material from rear roof bow and from trim sticks, then remove top cover assembly (Fig. 13-37).

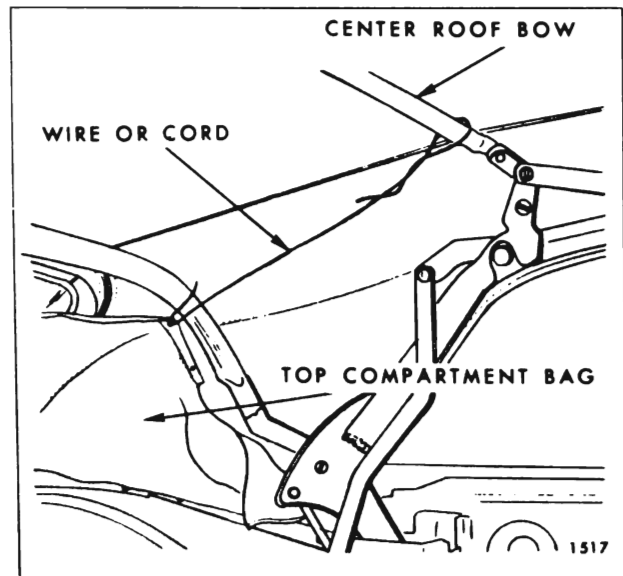


Fig. 13-33 — Top Compartment Bag Tied To Center Rail

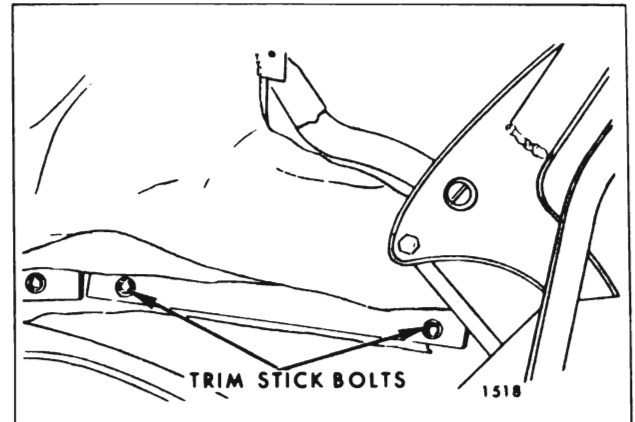


Fig. 13-34 — Rear Quarter Trim Stick

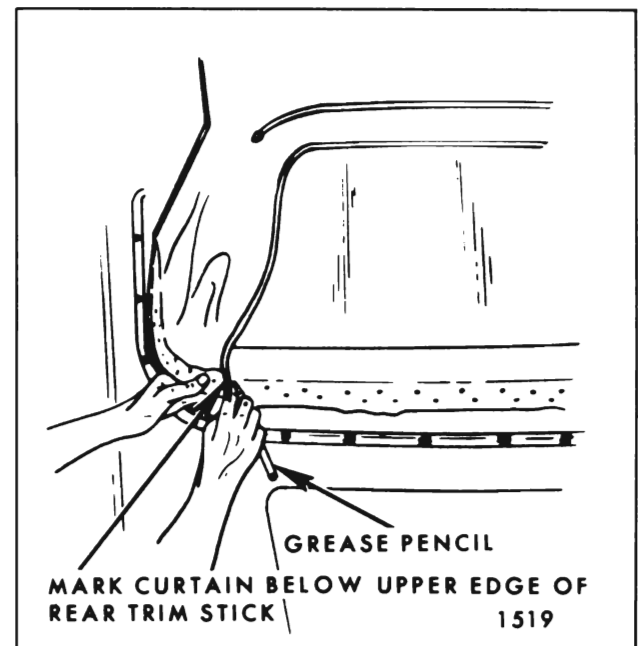


Fig. 13-35 — Locating Edge Of Top Material

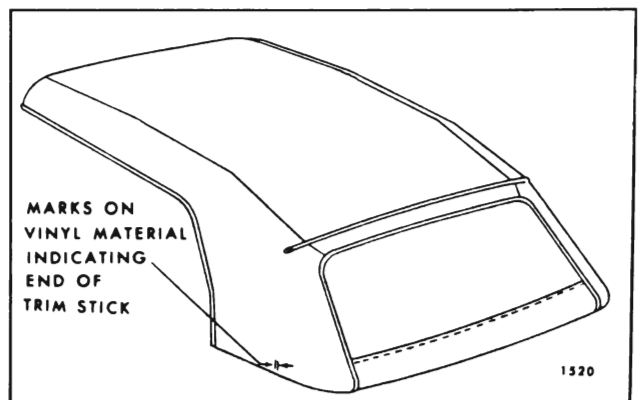


Fig. 13-36 — Marking Top Material

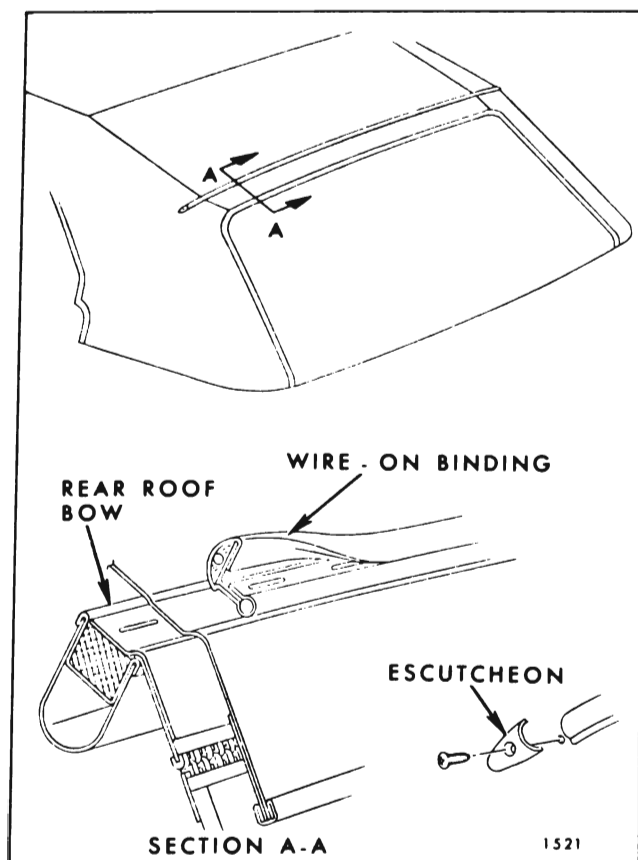


Fig. 13-37 — Rear Roof Bow Wire-On Binding

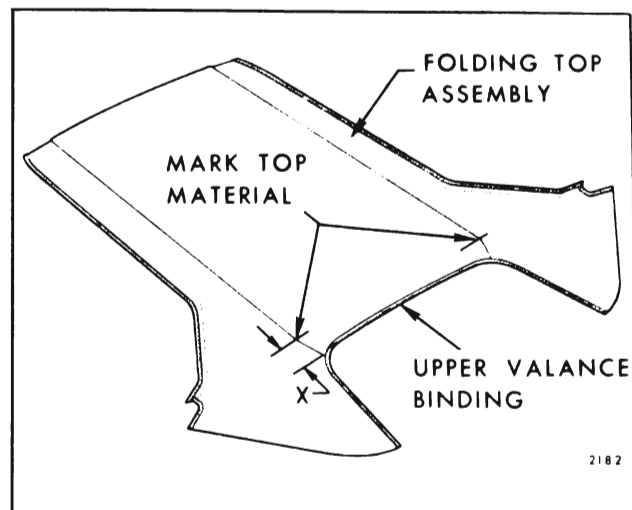


Fig. 13-38 — Marking Top Material

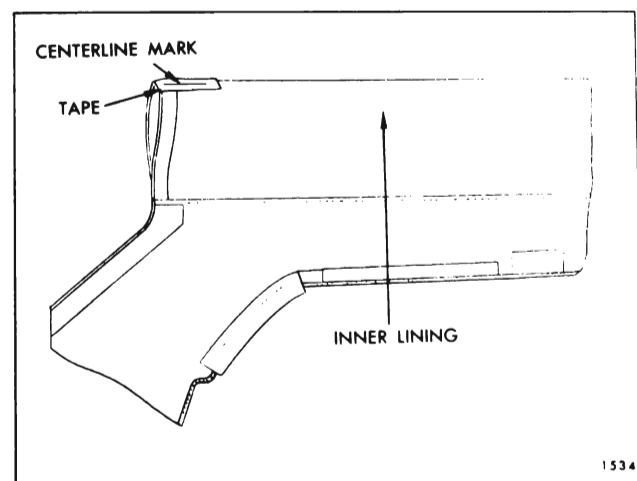


Fig. 13-39 — Marking Folding Top Material

INSTALLATION OF FOLDING TOP TRIM COVER

1. Prior to installation of new top trim material, check contour of back curtain and side stay pad assemblies. Where required, adjust back curtain and/or stay pads.
2. Lay out new top material on clean protected surface with outer layer of material exposed.
3. Using a pencil, mark top material (mark should be approximately 1/2" in length) at deck seam 5-1/4" on "B, C & F" and 4-1/4" on "A" Styles from edge of top material upper valance binding. (See dimension "X" in Fig. 13-38).
4. Fold new top material in half so that inner lining of top material is exposed (Fig. 13-39). Install a 6" piece of tape on inner surface at centerline fold of new top material (Fig. 13-39). Using a pencil, mark the approximate centerline of new top material along entire length of tape.
5. Along forward surface of rear roof bow install a 1" piece of tape at centerline dimple of rear roof bow. Using a pencil, mark centerline of rear bow on tape (Fig. 13-40).
6. Check position of rear roof bow in relation to new folding top trim assembly by placing new top trim over folding top framework. With quarter flaps properly folded over rear side roof rails (edge of rails should match stitch lines of quarter flap seams), marks on deck seam should be in center of rear roof bow.

IMPORTANT: Be sure mark will be visible inside of body after new top is installed on convertible top framework.

NOTE: The deck seam mark will vary slightly ($\pm 1/4"$) depending upon position of rear roof bow. Also check centerline mark on inner lining of top material. Mark should correspond to centerline mark on rear roof bow.

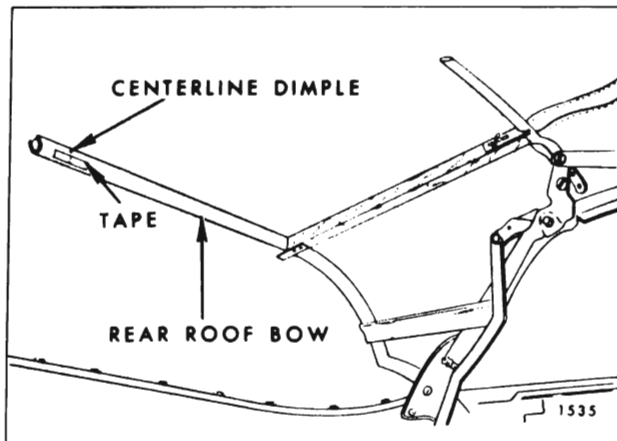


Fig. 13-40 — Marking Rear Roof Bow

7. Remove top trim material.
8. Carefully lay removed top, which was marked at lower edge of trim stick prior to removal, over new top. Align old top with new top. Using a pencil, mark vinyl surface of new top using marked edge of old top as guide. Also mark edges of trim sticks on vinyl surface of new top material. (See steps 20 and 21 of removal procedure).
9. Position top trim on framework and center assembly both fore and aft and side to side.
10. Install listing pocket retainer into listing pocket.
11. Center retainer in listing pocket; then install retainer into front bow.
NOTE: Retainer should be evenly centered between side roof rail stay pads.
12. Install front bow to listing pocket retainer with attaching screws (Fig. 13-32).
13. On right side of top material, at front of hold-down cable pocket, install cable through pocket in top assembly.

NOTE: Welding rod or similar material may be bent at one end to form a hook. Then at rear of hold-down pocket slip hooked end of rod into pocket. Push rod through pocket until hooked end of rod is exposed at front of pocket. Install rear end of cable attaching bracket over hooked portion of rod; then pull cable through pocket. When cable attaching bracket is exposed at rear end of hold-down pocket, disengage hooked portion of rod from cable attaching bracket. Repeat above operation on opposite side of top assembly.

14. After cables have been inserted in hold-down pockets in top material, securely install front and rear cable attaching brackets to side roof front and rear rails (Fig. 13-31).

15. Check position of top trim at rear roof bow and at side roof rear rails. With quarter flaps properly folded over rear side roof rails (edge of rails should match stitch lines of quarter flap seams), marks on deck seam should be in center of rear roof bow.

NOTE: The deck seam mark will vary slightly ($\pm 1/4''$) depending upon position of rear roof bow. Also check centerline mark on inner lining of top material. Mark should correspond to centerline mark on rear roof bow. (Fig. 13-40).

16. Using nitrile cement or neoprene-type weatherstrip adhesive, fasten rear quarter flaps to side roof rails. Make sure that quarter flap seam breaks at forward edge of side roof rear rail.

NOTE: Material may have to be stretched from side to side to insure proper fit of top material flaps to side roof rear rails and to remove wrinkles from top material along rear roof bow.

17. Using an awl or other suitable tool, pierce flaps for side roof rail rear weatherstrip attaching screws. Install side roof rail rear weatherstrip to help maintain position of quarter flaps while adhesive is drying.

18. Using previously marked lines (ends of trim stick) as locating reference, tack top material to rear and rear quarter trim sticks. "A" in Figure 13-41 shows top material installed to rear trim stick at inboard edge.

19. Cut or punch hole in top material for each trim stick attaching bolt.

20. Install top material into body. Make sure rear and rear quarter trim stick attaching bolts

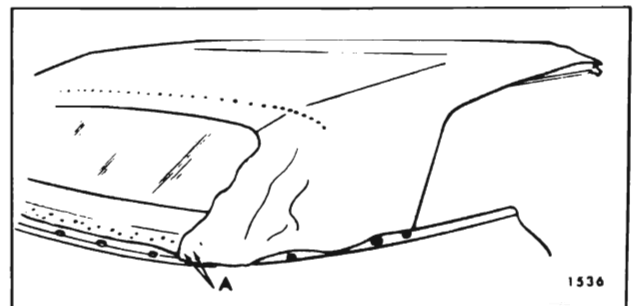


Fig. 13-41 — Tacking Top Material

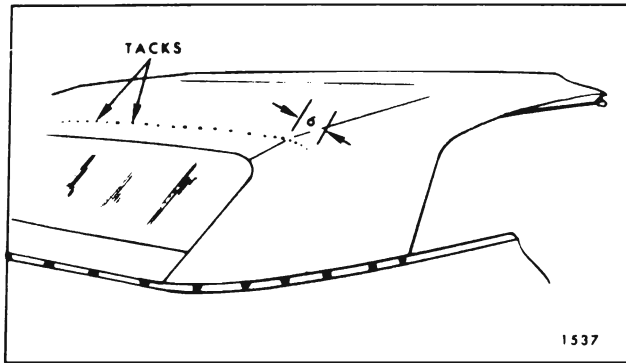


Fig. 13-42 — Tacking Outboard of Seams

are completely driven in to represent finished condition.

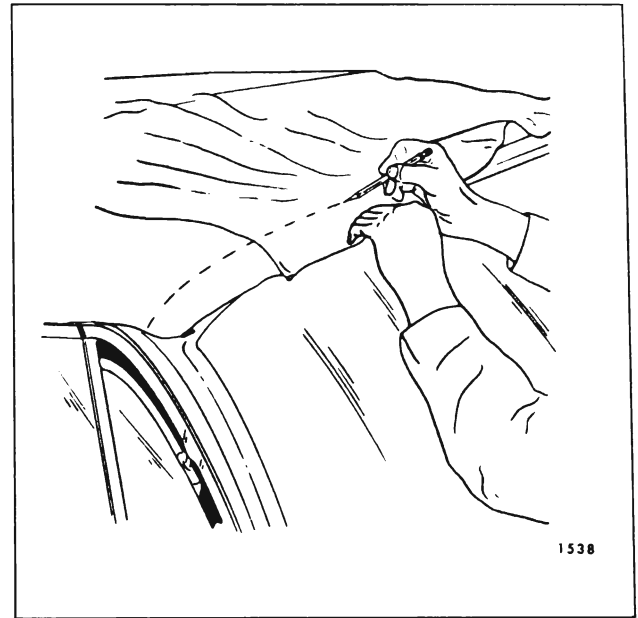


Fig. 13-43 — Marking Top Material At Front Roof Rail

inches, which is length wire-on binding extends past seam (Fig. 13-42).

21. Check fit of top material. Rear quarter trim sticks may be adjusted downward to remove minor wrinkles in top material in rear quarter area.
 22. Where required, re-mark top material; then make necessary adjustments to top material by repositioning rear quarter trim sticks and/or by retacking top material to rear and/or rear quarter trim sticks.
- NOTE:** In extreme cases, adjustment of top material at rear or rear quarter trim sticks may have to be performed several times before desired fit of top material is obtained.
23. Remove trim sticks with attached top material from top compartment well. Top material must extend 1/2" to 5/8" below trim sticks to minimize water wicking on inner lining of back curtain material. Trim top material as required.
 24. Install trim sticks with attached top material into top compartment well and tighten side and rear trim stick attaching bolts.
 25. Re-check side roof rail flaps. Make sure mark at deck seams is in center of rear bow. Also re-check centerline mark on inner surface of top material at rear bow.
 26. Where required, remove side roof rail rear weatherstrips. Re-adjust top material at side roof rails and reinstall weatherstrips.
 27. While pulling top material slightly rearward, stay tack top material along rear roof bow.
 28. At front roof rail, pull top trim material forward to desired tension. While maintaining tension on top trim, place a pencil mark on outer surface of trim material along forward edge of front roof rail (Fig. 13-43).
 29. Unlock top from windshield header and apply nitrile cement or neoprene-type weatherstrip adhesive to tacking area of front roof rail and corresponding surface of top material. Pull top trim material slightly forward so that pencil marks are on underside of front edge of front roof rail. Fasten top trim to cemented area and stay tack trim to rail (Fig. 13-44).

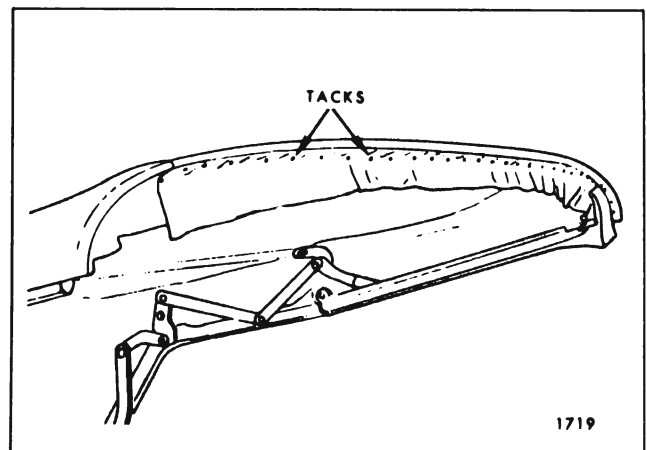


Fig. 13-44 — Installation Of Top Material To Front Roof Rail

IMPORTANT: Tacks must be installed along a straight line in center of rear bow. (See Fig. 13-42). Tacks outboard of deck seams should be restricted to distance not to exceed six

30. Apply nitrile cement or neoprene-type weatherstrip adhesive to front flaps and to corresponding areas on side roof front rails. Fasten flaps to side roof front rails. (See Fig. 13-30).
31. Lock top to windshield header. Check appearance of top trim as well as operation and locking action of top. (If additional tension is desired in top trim unlock top from header and reposition top trim by pulling trim further forward. Stay tack and recheck top appearance).
32. Complete tacking of top trim to front roof rail and trim off excess material.
33. Permanently tack top material to rear roof bow. Apply bead of neoprene-type weatherstrip adhesive around each tack head, and into two holes pierced into top material for wire-on binding clip escutcheons.

NOTE: Any tack holes made in top material as a result of stay tacking material to rear roof bow should also be sealed using neoprene-type weatherstrip adhesive.

34. When completed, folding top should be free from wrinkles and draws. Install all previously removed trim and hardware and clean any soilage from top material, back window and material or pads.

BACK CURTAIN ASSEMBLY (COMPLETE)

REMOVAL

1. Place protective covers on all exposed panels which may be contacted during procedure.
2. Remove following trim and hardware items:
 - a. Rear seat cushion and back.

CAUTION: Disconnect rear seat speaker wire if present.

 - b. Folding top compartment side trim panel assemblies.
 - c. Side roof rail rear weatherstrip; then loosen folding top quarter flaps from rails.
3. Detach folding top compartment bag from rear

seat back panel, thus exposing rear quarter and rear trim stick attaching bolts. Forward end of top compartment bag may be tied or wired to center roof bow to provide ready access to attaching bolts (Fig. 13-45).

4. On styles equipped with back curtain support rods disengage rods from back curtain (Fig. 13-46).
5. At each rear quarter area remove attaching bolts securing rear quarter trim stick assembly to rear quarter inner panel (Fig. 13-47).
6. Remove rear trim stick attaching bolts; then lift trim assembly with attached quarter and rear trim sticks on top of rear compartment front panel.
7. To establish relationship of right and left inner vertical edge of old top material to back curtain assembly at rear trim stick location, mark back curtain material at both locations with a grease pencil (Fig. 13-48). Reference marks should be transferred to new back curtain when step 3 of installation procedure is performed.

NOTE: Reference marks must be made below upper edge of rear trim stick.

8. Using a pencil, mark both ends of rear and rear quarter trim sticks on vinyl surface of top material (Fig. 13-49).
9. Remove screw securing escutcheon clip at each end of wire-on binding on rear bow. Remove wire-on binding from rear bow (Fig. 13-50).
10. Detach folding top trim from rear roof bow and from rear and rear quarter trim sticks.
11. Carefully slide top trim forward exposing tacked edge of back curtain at rear roof bow.

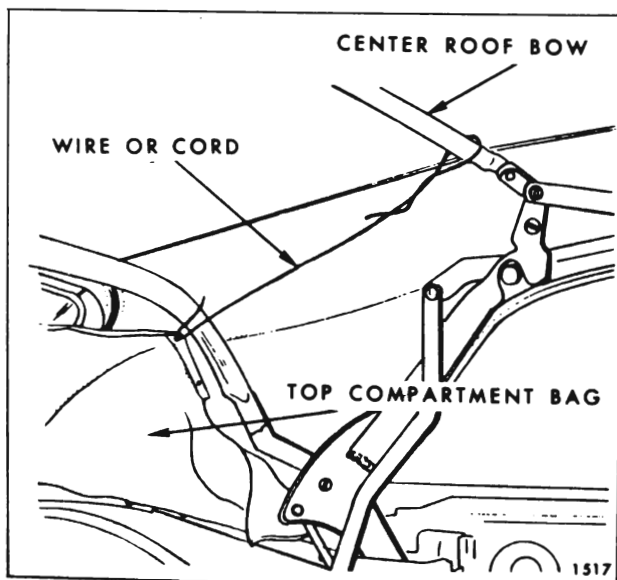


Fig. 13-45—Top Compartment Bag Tied To Center Rail

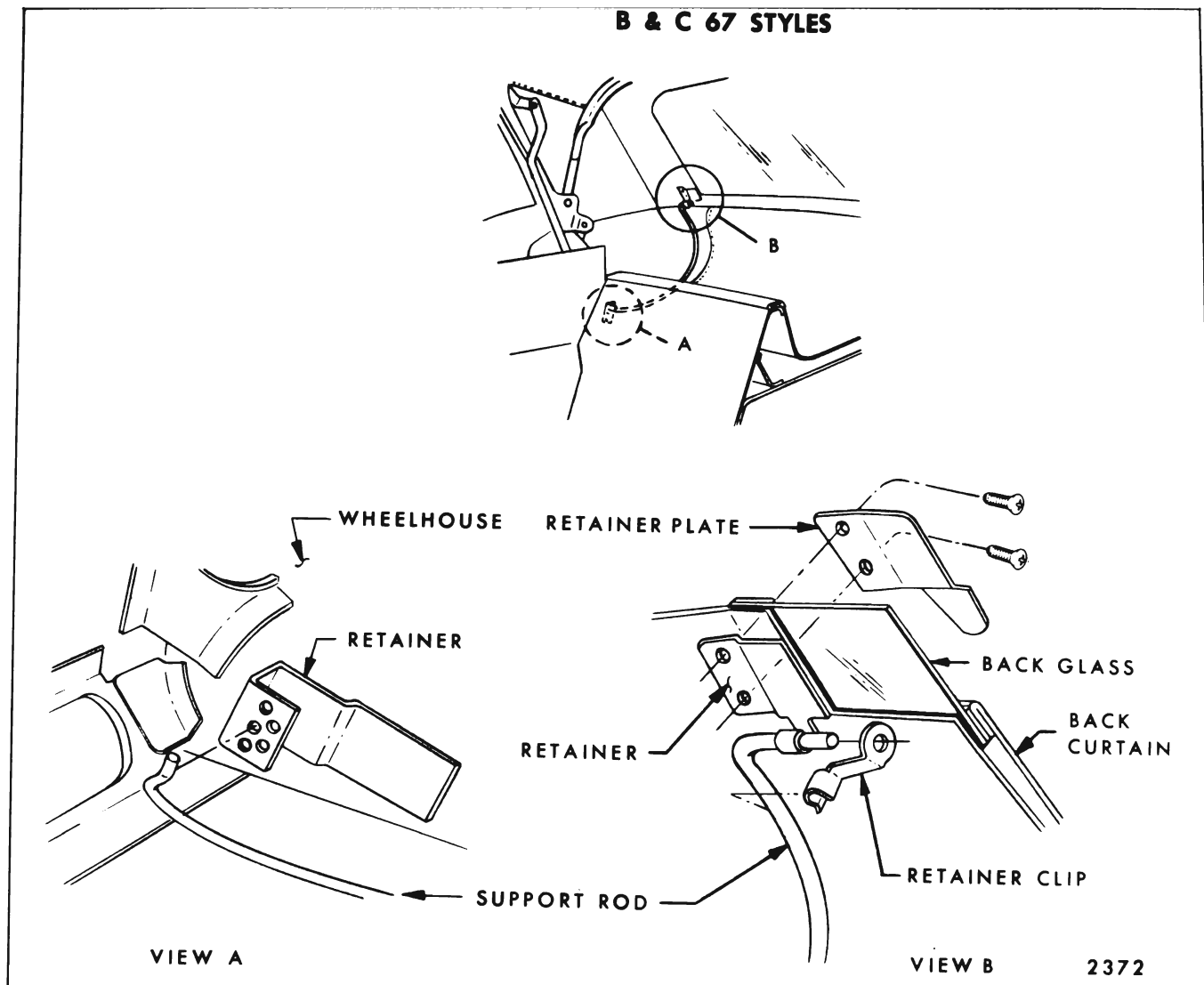


Fig. 13-46—"B & C" Body Back Glass Support Rod Attachments

12. On "A, B & C" Styles detach nylon webbing and back curtain from rear roof bow; then remove back curtain assembly with attached trim sticks and top compartment bag from body and place on a clean, protected surface. On all other styles remove back curtain from rear roof bow.
13. Remove right and left nylon webbing from rear trim stick. (All styles except "F" Body).
14. Using chalk, or other suitable material, mark ends of rear and rear quarter trim sticks on vinyl surface of back curtain material (Fig. 13-51). Reference marks for trim sticks should be transferred to new back curtain material when step 3 of installation procedure is performed.
15. Remove back curtain assembly from rear and rear quarter trim sticks.

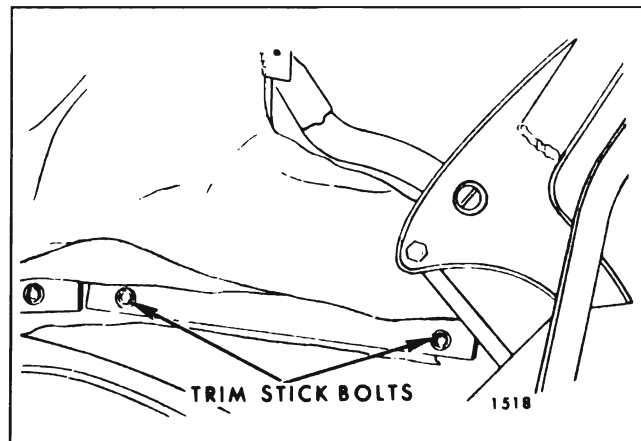


Fig. 13-47—Rear Quarter Trim Stick

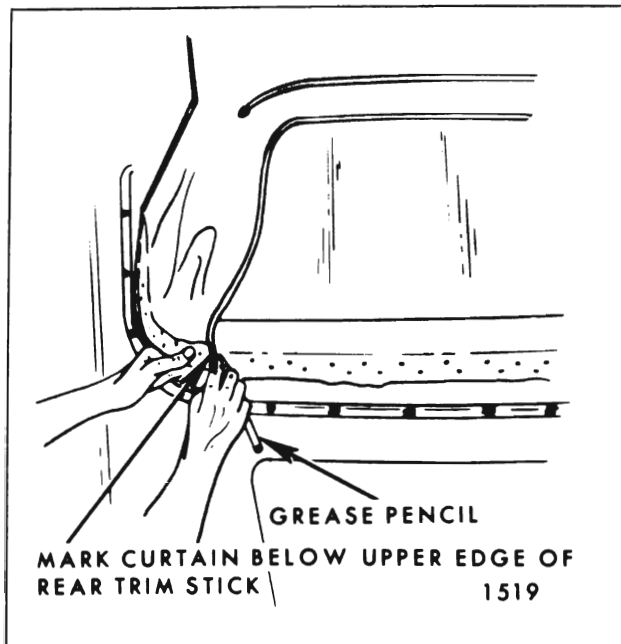


Fig. 13-48—Locating Edge Of Top Material

INSTALLATION

1. Preset spacer sticks to shortest length and install between center and rear roof bow (Fig. 13-52). Adjust sticks so that dimension "X" in Figure 13-52 (measured along spacer stick from front upper rolled edge of rear roof bow to center of center bow) is 16-1/16" on "B & C" Styles, 15-3/4" on "A" Styles and 13-3/16" on "F" Styles.

NOTE: Dimension may vary $\pm 1/4$ " after back curtain has been completely installed.

Tie or tape rear bow to rear side roof rails.

2. Place new back curtain assembly on clean covered work bench with interior surface of back window facing down.

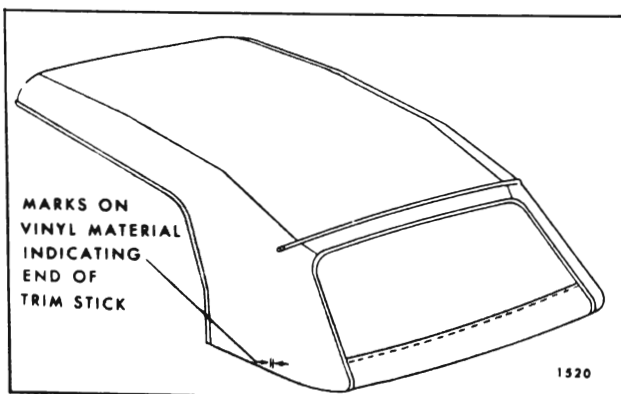


Fig. 13-49—Marking Top Material

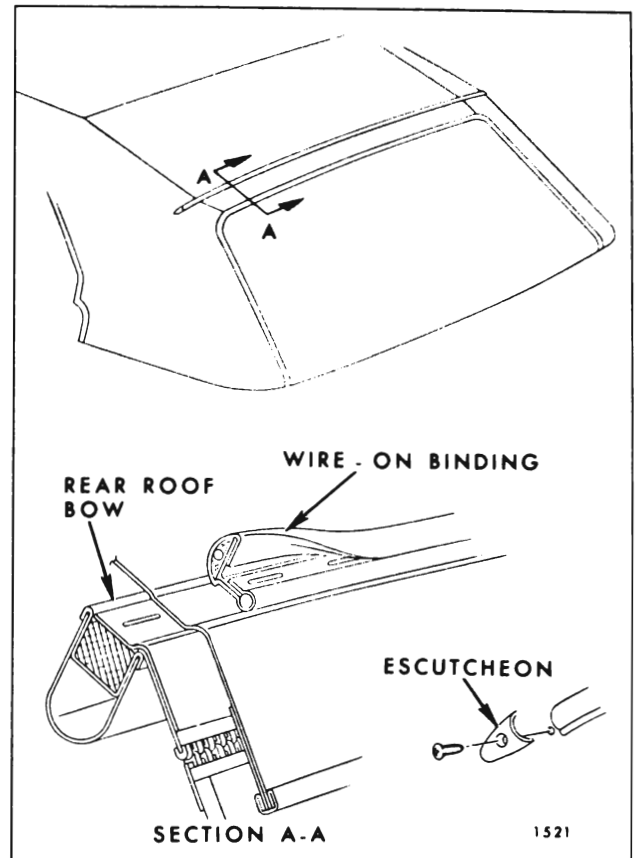


Fig. 13-50—Rear Roof Bow Wire-On Binding

3. Carefully lay removed back curtain assembly over new back curtain assembly. Using a grease pencil, mark vinyl surface of new back curtain using marked edge of old curtain as guide. (See steps 7 and 14 of removal procedure). In addition, mark trim stick bolt hole locations on new back curtain assembly.

IMPORTANT: Where a grease pencil or similar material is used for marking back curtain,

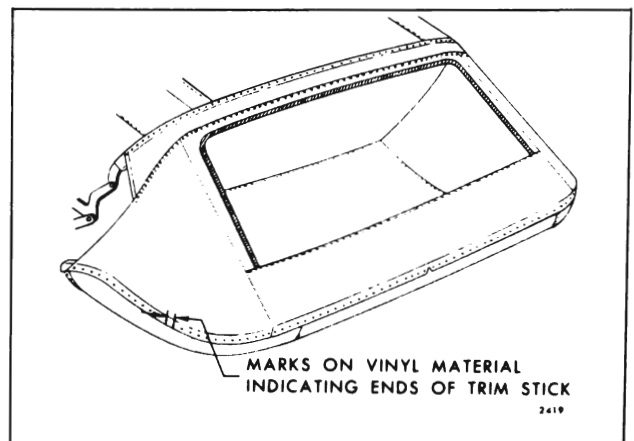


Fig. 13-51—Marking Back Curtain

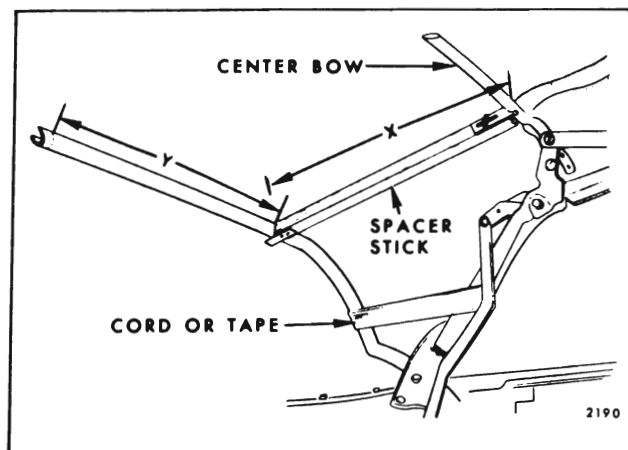


Fig. 13-52 — Spacer Stick Installation

marks must be below trim stick so that they will not show after curtain is installed in body.

4. Center and position back curtain assembly to rear trim stick over attached compartment bag.

NOTE: Notch in back curtain material at lower edge indicates centerline of back curtain assembly. (See Fig. 13-53). In addition, back curtain lower edge should extend approximately 1/2" below lower edge of trim sticks.

5. Tack curtain to rear trim sticks (Fig. 13-53).
6. Tack remainder of back curtain material to rear quarter trim stick (Fig. 13-54).
7. Tacks securing back curtain assembly to trim sticks should be placed close to each side of every bolt hole in trim sticks; then pierce or punch back curtain assembly for each trim stick bolt.

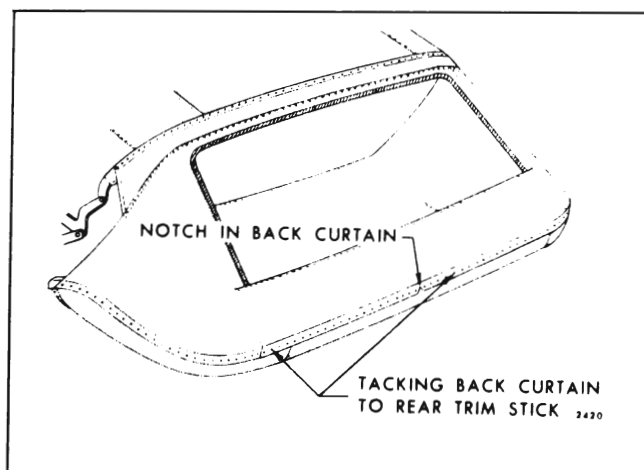


Fig. 13-53 — Back Curtain Installation

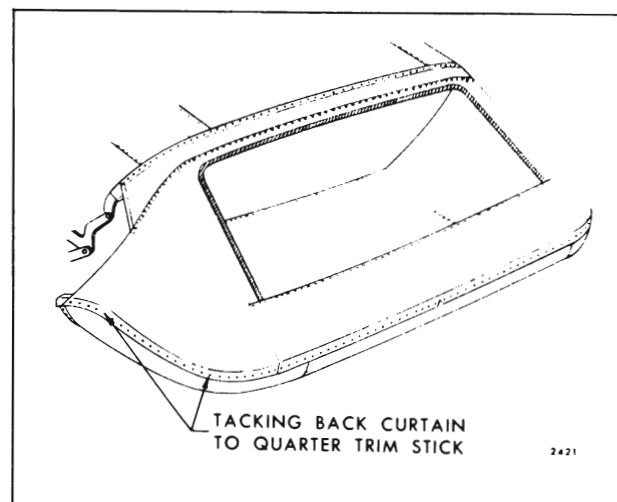


Fig. 13-54 — Back Curtain Installation

8. On "B, C & A" Styles tack nylon webbing to rear trim stick. Forward edge of webbing should be even with edge of rear trim stick.
9. Inspect mastic type trim stick fillers at body below pinchweld for sufficient seal at bolt holes (Fig. 13-55).
10. Secure back curtain assembly with a sufficient number of tacks to rear bow to prevent accidental damage to back window.

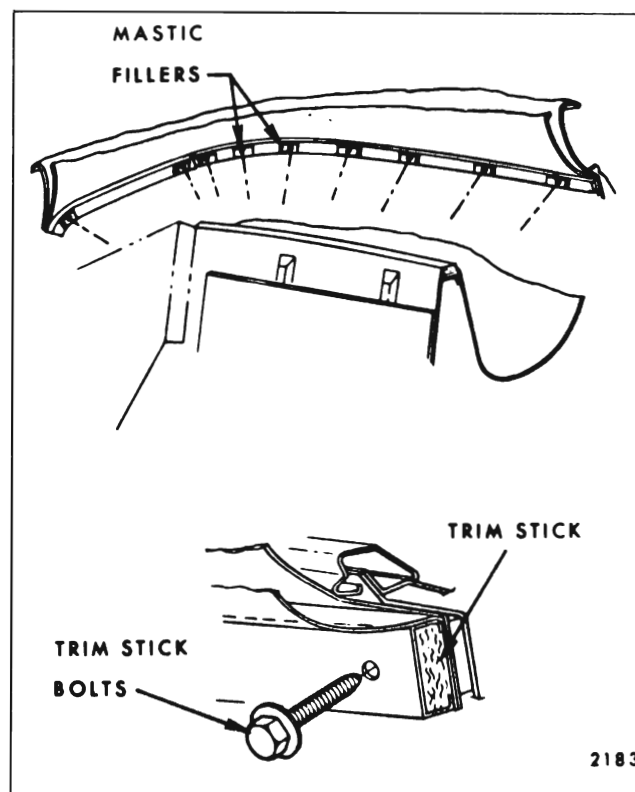


Fig. 13-55 — Checking Trim Stick Fillers

13-24 FOLDING TOP

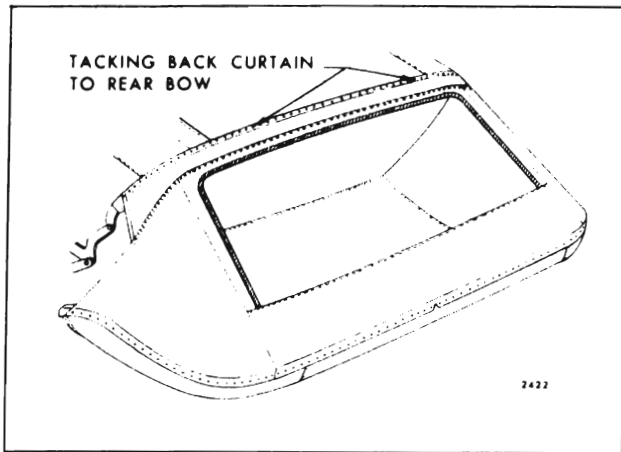


Fig. 13-56—Back Curtain Installed

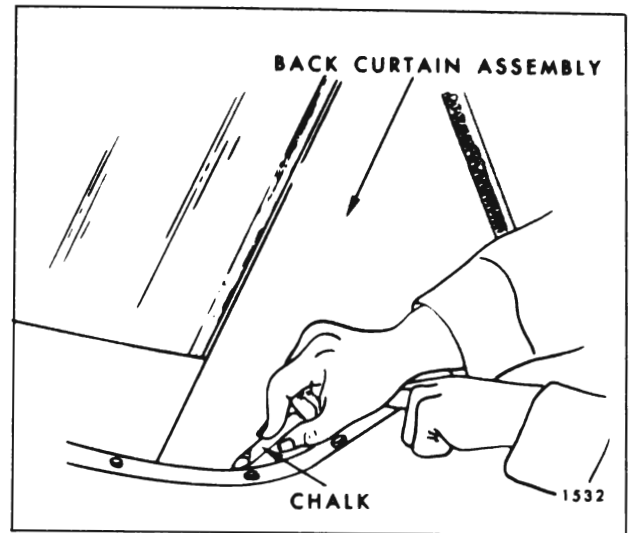


Fig. 13-57—Marking Back Curtain

11. Install rear trim stick with attached back curtain assembly into body.

NOTE: Make sure that all trim stick bolts are driven completely in to represent finished condition.

12. Working from body center progressively outboard to right and left sides, tack back curtain to rear bow. Make sure all fullness has been drawn from curtain material (Fig. 13-56). Any excess material at rear bow, may be carefully trimmed.

13. Check contour of back curtain assembly to rear roof bow and at pinchweld molding.

14. Where required, place reference chalk mark on outer surface of back curtain along pinchweld finishing molding. Re-adjust back curtain assembly as required (Fig. 13-57).

15. On "B, C & A" Styles, tack nylon webbing to rear roof bow. Outboard edge of webbing should be installed even with outboard edge of side roof rail pad. Fold excess webbing rearward and tack to rear bow. Remove excess by trimming webbing just forward of rear rolled edge of rear roof bow.

CAUTION: Do not cut side stay pad material.

16. Detach rear trim stick with attached back curtain assembly from body and install top trim cover assembly.

NOTE: Extra care in positioning new curtain at same location on trim stick as old curtain and aligning of trim stick attaching bolt holes in top material with holes in trim stick will allow re-installation of top material to its original position with a minimum of refitting.

17. Install all previously removed trim and hardware.

FOLDING TOP SILENCER ASSEMBLY Cadillac Styles

DESCRIPTION

The Silencer Assembly consists of a piece of deadener material sewn to a lining type material which is serviced as a complete kit. The Silencer Assembly is installed in such a manner as to cover the area between the front roof rail and front roof bow, and from the right side stay pad to the left side stay pad.

Removal of Silencer Assembly

1. Lower top to stacked position.
2. Remove front roof rail front and rear weatherstrips.
3. Remove side rail front weatherstrips.

4. Detach folding top material from front roof rail (Fig. 13-30).
5. Detach top material flaps from side roof front rails.
6. Raise top and lock to header.
7. Remove hold down cable attachment at front roof rails (View "A", Fig. 13-31).
8. At underside of front roof bow, remove screws securing listing pocket retainer to bow (Fig. 13-32).
9. "Peel" folding top material rearward until front roof bow is exposed.
10. Remove tacks at front roof rail securing side stay pad flaps and open flaps at front roof rail.
11. Remove tacks from front roof rail securing Silencer Assembly.
12. Remove silencer assembly from entire front roof rail (Silencer is cemented)
13. Remove screw securing front roof bow to right

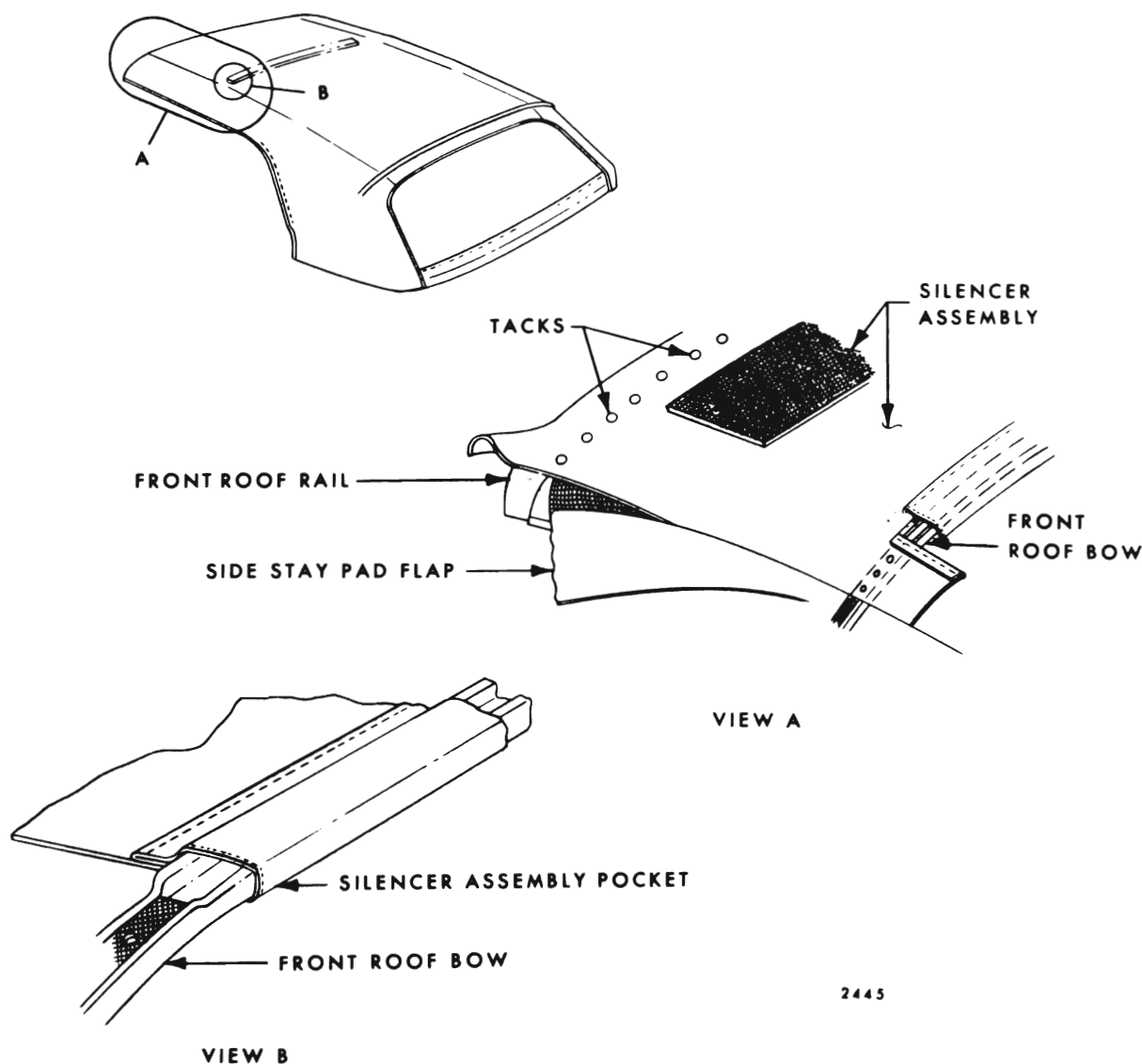


Fig. 13-58 - Folding Top Silencer Assembly

13-26 FOLDING TOP

folding top side roof front rail to front bow link.

14. Slide pocket on Silencer Assembly off front roof bow and remove silencer from car.

Installation of Silencer Assembly

1. With deadener pad on top side of assembly, slip pocket on assembly over front roof bow. (View "B", Fig. 13-58)
2. Secure right side of front bow to folding top side roof front rail to front bow link.
3. Apply nitrile type cement to front roof rail.
4. Stretching assembly taut, cement assembly to

front roof rail.

NOTE: Prior to cementing make certain assembly is centered.

5. Tack outboard ends of assembly to front roof rail (View "A" Fig. 13-58).
6. Cement assembly to side stay pads.
7. Cement side stay pad flaps to assembly.
8. Tack stay pad flaps to front roof rail.
9. Refer to steps 28 thru 32 of Installation procedure of Folding Top Less Back Curtain.
10. When completed, folding top should be free from wrinkles and draws. Install all previously removed hardware and weatherstrips.

HYDRO-LECTRIC SYSTEM

DESCRIPTION

The high pressure hydro-lectric unit used in the convertible bodies, consists of a 12 volt reversible type motor, a rotor-type pump, two hydraulic lift cylinders, and an upper and lower hydraulic hose assembly. On the "A" Series the unit is installed in the body directly behind rear seat back. (Fig. 13-59). On the "B, C & F" Series the unit is installed in the body beneath the rear seat back panel (Fig. 13-60).

Figure 13-61 illustrates and identifies the individual parts of the motor and pump assembly.

NOTE: When servicing the motor assembly or pump end plate assembly, it is extremely im-

portant that the small motor shaft "O" ring seal is properly installed over the motor armature shaft and into the pump end plate assembly prior to installing the pump rotors or the motor shaft drive ball.

MOTOR AND PUMP ASSEMBLY

Removal

1. Operate folding top to full "up" position.
2. Disconnect positive battery cable.
3. a. On "A" Styles, place protective covering over rear seat cushion and back.

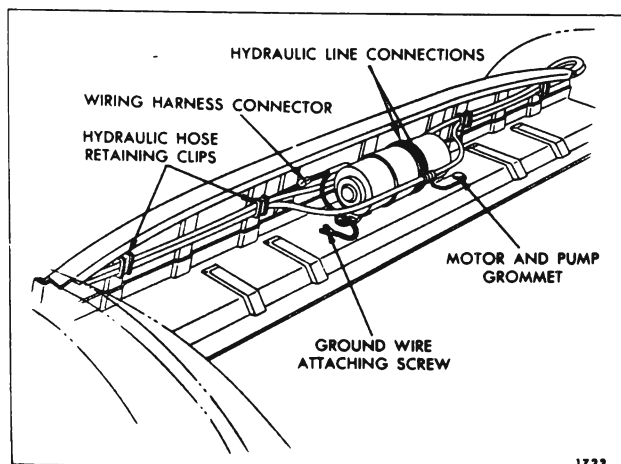


Fig. 13-59 — Motor And Pump Assembly

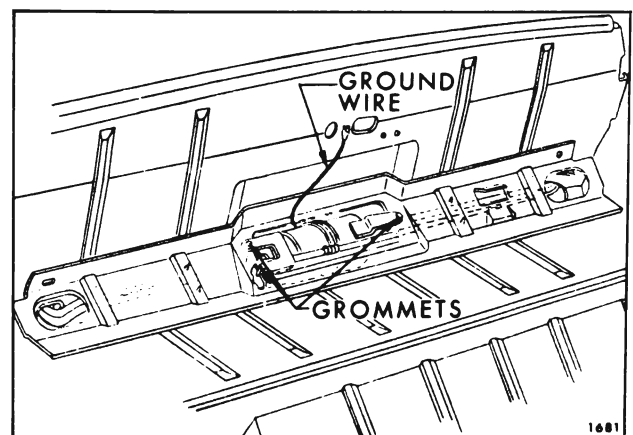


Fig. 13-60 — Hydro-Lectric Motor And Pump Assembly

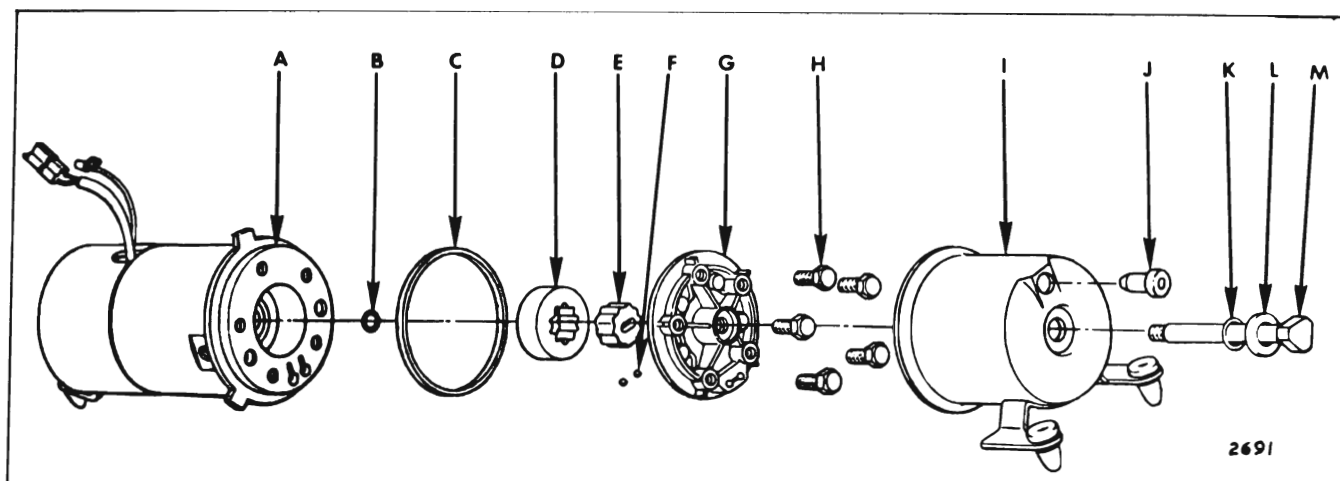


Fig. 13-61 — Hydro-Lectric Motor And Pump Disassembled

A. Motor Assembly
 B. Motor Shaft "O" Ring Seal
 C. Reservoir Seal
 D. Outer Pump Rotor
 E. Inner Pump Rotor

F. Fluid Control Valve Balls
 G. Pump Cover Plate Assembly
 H. Pump Cover Attaching Screws
 I. Reservoir Tube And Bracket Assembly

J. Reservoir Filler Plug
 K. Reservoir End Plate Attaching Bolt
 "O" Ring Seal
 L. Reservoir End Plate Attaching Bolt Washer
 M. Reservoir End Plate Attaching Bolt

- b. On "B, C & F" Styles, remove rear seat cushion and back.
4. Working inside body, detach front edge of folding top compartment bag from rear seat back panel.
5. On "A" Body Styles, working on inside of body over rear seat back, remove pump and motor shield attaching screws and remove shield.
6. Remove clips securing wire harness and hydraulic hose to rear seat back panel. (Figs. 13-59 and 13-60).
7. a. On "A" Body Styles disconnect motor leads from wire harness and ground attaching screws (Fig. 13-59).
- b. On "B, C & F" Body Styles at rear seat back panel, disconnect wiring harness and remove ground wire attaching screw (Fig. 13-60).
8. To facilitate removal, apply a rubber lubricant to pump attaching grommets; then carefully disengage grommets from floor pan. (Figs. 13-60 and 13-59).
9. Place absorbent rags below hose connections and end of reservoir.
10. With a straight-bladed screwdriver, vent reservoir by removing filler plug; then install plug.

NOTE: Venting reservoir is necessary in this "sealed-in" unit to equalize air pressure in reservoir to that of the atmosphere. This operation prevents the possibility of hydraulic fluid being forced under pressure from disconnected lines and causing damage to trim or body finish.

11. Disconnect hydraulic lines and cap open fittings to prevent leakage of fluid. (Figs. 13-59 and 13-60). Use a cloth to absorb any leaking fluid, then remove unit from rear compartment.

Installation

1. If a replacement unit is being installed, fill reservoir unit with specified Delco No. 11 Hydraulic Fluid (GM Hydraulic Brake Fluid Super No. 11 or its equivalent). See "Filling of Hydro-Lectric Reservoir".
2. Connect hydraulic hoses, engage attaching grommets in panel and connect wiring.
3. Connect battery and operate top through its up and down cycles until all air has been "bled" from hydraulic circuit. See "Filling of Hydro-Lectric Reservoir".
4. Check connections for leaks and recheck fluid level in reservoir.
5. Install all previously removed parts.

RESERVOIR TUBE

Disassembly From Motor and Pump Assembly

1. Remove motor and pump assembly from body.
2. Scribe a line across pump end plate and reservoir tube to insure a correct assembly of parts. See Fig. 13-62.
3. With a straight-bladed screwdriver, remove reservoir filler plug.
4. Drain fluid from reservoir into a clean container.
5. With suitable tool, remove bolt from end of assembly and remove reservoir tube. Note sealing rings around bolt and between end of reservoir tube and pump cover plate assembly.

Assembly To Motor and Pump Assembly

1. Position sealing ring on pump and assembly reservoir tube to pump according to scribe marks.

NOTE: Bracket assembly on tube should be located at outer end when tube is assembled to pump.

2. Install and tighten attaching bolt.
3. Place unit in horizontal position and fill with fluid until fluid level is within 1/4" of lower edge of filler plug hole.

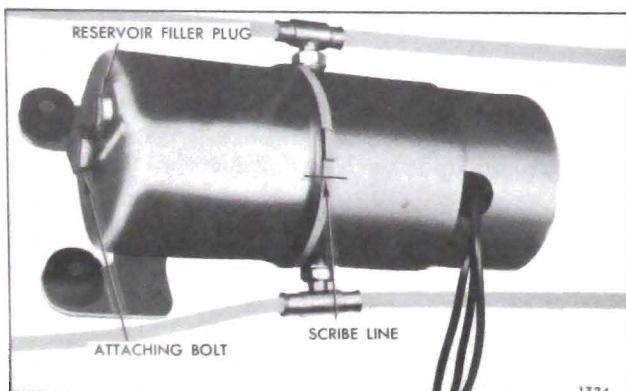


Fig. 13-62 — Hydro-Lectric Motor And Pump Assembly

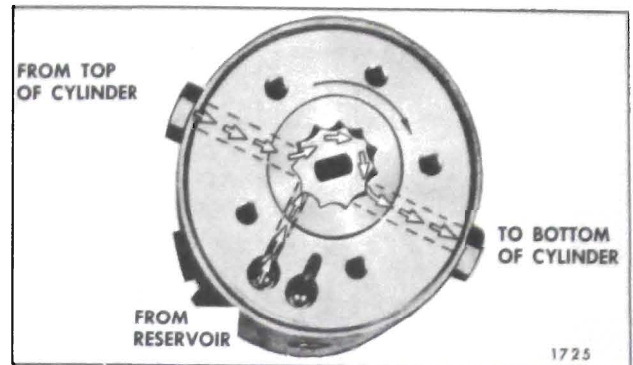


Fig. 13-63 — Operation Of Pump To Raise Top

OPERATION OF FOLDING TOP

When the control switch is actuated to the "up" position, the battery feed wire is connected to the red motor lead and the motor and pump assembly operate to force the hydraulic fluid through the hoses to the lower ends of the double-acting cylinders. The fluid forces the piston rods in the cylinders upward, thus raising the top. The fluid in the top of the cylinders returns to the pump for recirculation to the bottom of the cylinders. When the control switch knob is actuated to the "down" position, the feed wire is connected to the dark green motor lead and the motor and pump assembly operate in a reversed direction to force the hydraulic fluid through the hoses to the top of the cylinders. The fluid forces the piston rods in the cylinders downward, thus lowering the top. The fluid in the bottom of the cylinders returns to the pump for recirculation to the top of the cylinders.

OPERATION OF PUMP ASSEMBLY

The rotor type pump assembly is designed to deliver a maximum pressure in the range of 340 psi to 380 psi. The operation of the pump assembly when raising the top is as follows:

1. **Raising the Top.** When the red motor lead is energized the motor drive shaft turns the rotors clockwise as indicated by the large arrow in Figure 13-63. The action of the pump rotors forces the fluid under pressure to the bottom of each cylinder forcing the piston upward. This action causes the fluid above the piston in each cylinder to be forced into the pump, which recirculates the fluid to the bottom of the cylinders. The additional fluid required to fill the cylinder due to piston rod displacement is drawn from the reservoir.
2. **Lowering the Top.** When the green motor lead is energized the motor drive shaft turns the

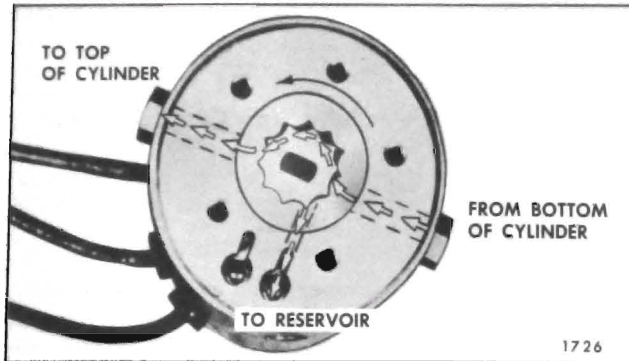


Fig. 13-64—Operation Of Pump To Lower Top

rotors counterclockwise as indicated by the large arrow in Figure 13-64. The action of the pump rotors forces the fluid under pressure to the top of each cylinder. This action causes the fluid below the piston in each cylinder to be forced into the pump which recirculates the fluid to the top of each cylinder. The surplus hydraulic fluid due to piston rod displacement flows into the reservoir.

FLUID CONTROL VALVE

The fluid control valve consists of a rocker arm installed in the pump cover plate, and two steel balls. Figure 13-65 shows the top surface of the pump cover plate. The dotted lines indicate the cavities on the bottom side of the cover plate. The cavities are designed to permit fluid flow between pump rotors and the reservoir. Figure 13-66 and Figure 13-67 illustrates the operation of the fluid control valve.

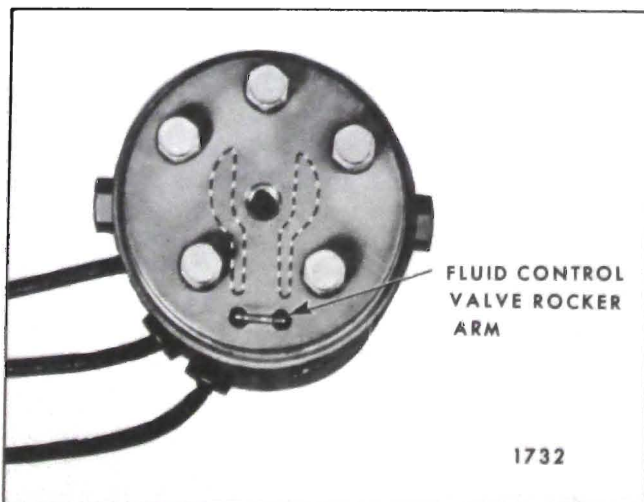


Fig. 13-65—Pump Cover Plate

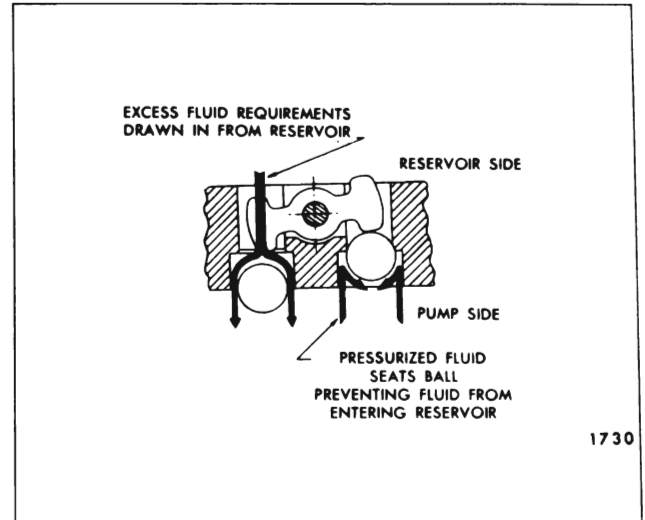


Fig. 13-66—Fluid Control Valve

MECHANICAL CHECKING PROCEDURE

If there is a failure in the hydro-lectric system and the cause is not evident the mechanical operation of the top should first be checked. If the folding top assembly appears to have a binding action, disconnect the top lift cylinder piston rods from the top linkage and then manually raise and lower the top. The top should travel through its up and down cycle without any evidence of binding action. If a binding action is noted when the top is being locked at the header, check the alignment of the door

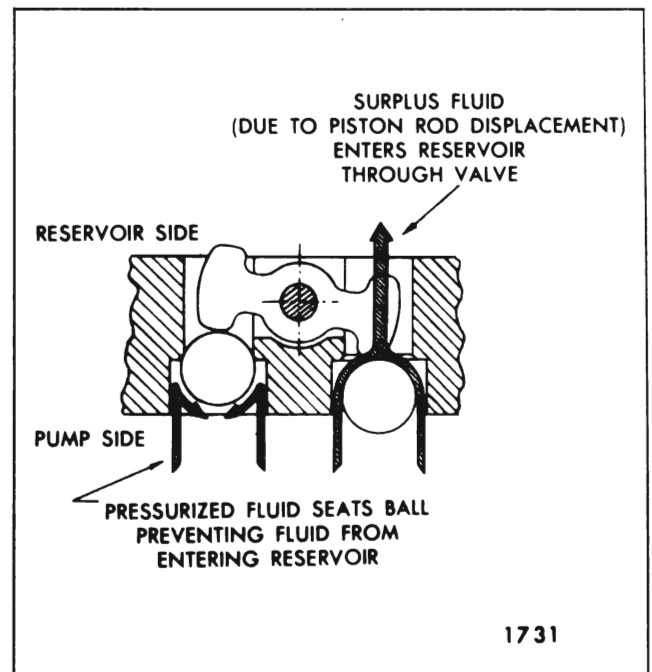


Fig. 13-67—Fluid Control Valve

windows, ventilators and rear quarter windows with relation to the side roof rail weatherstrips. Make all necessary adjustments for correct top alignment. See "Folding Top Adjustments". If a failure continues to exist after a check for mechanical failure has been completed, the hydro-lectric system should then be checked for electrical or hydraulic failures.

ELECTRICAL CHECKING PROCEDURE

If a failure in the hydro-lectric system continues to exist after the mechanical operation has been checked, the electrical system should then be checked. A failure in the electrical system may be caused by a low battery, breaks in wiring, faulty connections, mechanical failure of an electrical component, or wires or components shorting to one another or to body metal. Before beginning checking procedures, check battery according to recommended procedure.

1. Check for Current at Folding Top Control Switch.

- a. Disengage terminal block from rear of switch.
- b. Connect light tester to central feed terminal of switch terminal block.
- c. Ground light tester ground lead to body metal.
- d. If light tester does not light, there is an

open or short circuit between power source and switch.

2. Checking the Folding Top Control Switch.

If there is current at the feed wire terminal of the terminal block, operation of switch can be checked as follows:

- a. Place a #12 jumper wire on switch terminal block between center terminal (feed) and one motor wire terminal. If motor operates with jumper wire, but did not operate with switch, switch is defective.
- b. Connect jumper wire between center terminal and other motor wire terminal on switch terminal block. If motor operates with jumper wire, but did not operate with switch, switch is defective.

3. Checking Switch to Motor Lead Wires.

If switch is found to be operating properly, the switch to motor lead wires can be checked as follows: See Figure 13-68.

- a. Disconnect green switch-to-motor wire from motor lead in rear compartment.
- b. Connect a light tester to green switch-to-motor wire terminal.
- c. Ground light tester ground lead to body metal.
- d. Actuate switch to "down" position. If tester does not light, there is an open or short circuit in wire.
- e. Disconnect red switch-to-motor wire from motor lead.
- f. Connect light tester to red switch-to-motor wire terminal.
- g. Actuate switch to "up" position. If tester does not light, there is an open or short circuit in wire.

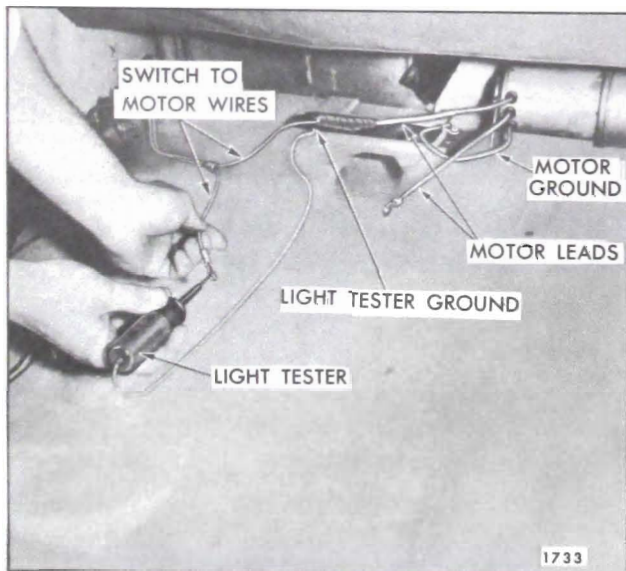


Fig. 13-68—Checking Motor Wiring

4. Checking the Motor Unit.

If a light tester indicates current at the motor lead terminals of the switch-to-motor wires, but motor unit does not operate from switch, a final check of the motor unit can be made as follows:

- a. Check connection of motor ground wire to body metal. (See Figs. 13-59 and 13-60).
- b. Connect a #12 jumper wire from battery positive pole to motor lead terminal that connects to green switch-to-motor wire. The motor should operate to lower top.
- c. Connect jumper wire to motor lead terminal that connects to red switch-to-motor wire. The motor should operate to raise top.
- d. If motor fails to operate on either or both of these checks, it should be repaired or replaced.
- e. If motor operates with jumper wire but will not operate from switch-to-motor wires, the trouble may be caused by reduced current resulting from damaged wiring or poor connections.

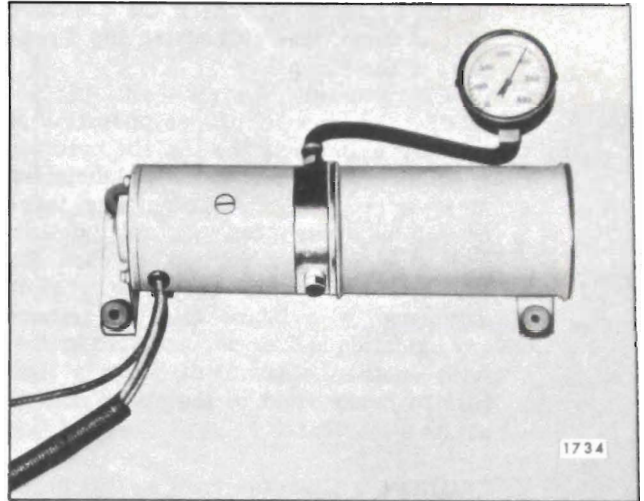


Fig. 13-69 —Checking Pump Pressure

HYDRAULIC CHECKING PROCEDURE

Failures in the hydraulic system can be caused by lack of hydraulic fluid, leaks in hydraulic system, obstructions or kinks in hydraulic hoses or faulty operation of a cylinder or pump.

1. Checking Hydraulic Fluid Level in Reservoir.

- a. Operate top to raised position.
- b. On "A" body styles, at rear compartment, remove pump and motor shield.
- c. On "B, C & F" body styles perform the following operations:
 - (1) Detach front edge of folding top compartment bag from rear seat back panel.
 - (2) Remove clips securing hydraulic hose to rear seat back panel.
 - (3) Disengage pump attaching grommets from compartment pan brace.
- d. Place absorbent rags below reservoir at filler plug.
- e. With a straight-bladed screwdriver, remove filler plug. Fluid level should be within 1/4 inch of lower edge of filler plug hole.
- f. If fluid is low, add Delco #11 Hydraulic Fluid (GM Hydraulic Brake Fluid Super

#11 or its equivalent) to bring to specified level. See "Filling of Hydro-Lectric Reservoir".

- g. Install filler plug.
- h. On "A" body styles, install pump and motor shield.
- i. On "B, C & F" body styles install motor and pump assembly and all previously removed parts.

2. Checking Operation of Lift Cylinders.

- a. On all styles remove rear seat cushion and folding top compartment side panel assemblies. On "B, C & F" body styles remove rear seat back. On "F" Body Styles only, remove the body lock pillar to main hinge support extension brace.
- b. Operate folding top control switch and observe lift cylinders during "up" and "down" cycles for these conditions:
 - (1) If movement of cylinder is uncoordinated or sluggish when the motor is actuated, check hydraulic hoses from motor and pump to cylinder for kinks.
 - (2) If one cylinder rod moves slower than the other, cylinder having slower moving rod is defective and should be replaced.
 - (3) If both cylinder rods move slowly or

do not move at all, check the pressure of the pump. See "Checking the Pressure of the Pump".

NOTE: To insure proper operation of the lift cylinders, the top lift cylinder rods should be cleaned and lubricated at least twice a year. To perform these operations, raise top to "up" position and wipe exposed portion of each top lift cylinder piston rod with a cloth dampened with brake fluid to remove any oxidation and/or accumulated grime. With another clean cloth, apply a light film of brake fluid to the piston rods to act as a lubricant.

CAUTION: Exercise care so that brake

fluid does not come in contact with any painted or trimmed parts of the body.

3. Checking Pressure at the Pump

- a. Remove motor and pump assembly from rear compartment.
- b. Install plug in one port, and pressure gauge in port to be checked. See Figure 13-69.
- c. Actuate motor with applied terminal voltage within range of 9.5 volts to 11.0 volts. Pressure gauge should show a pressure between 340 psi and 380 psi.
- d. Check pressure in other port.

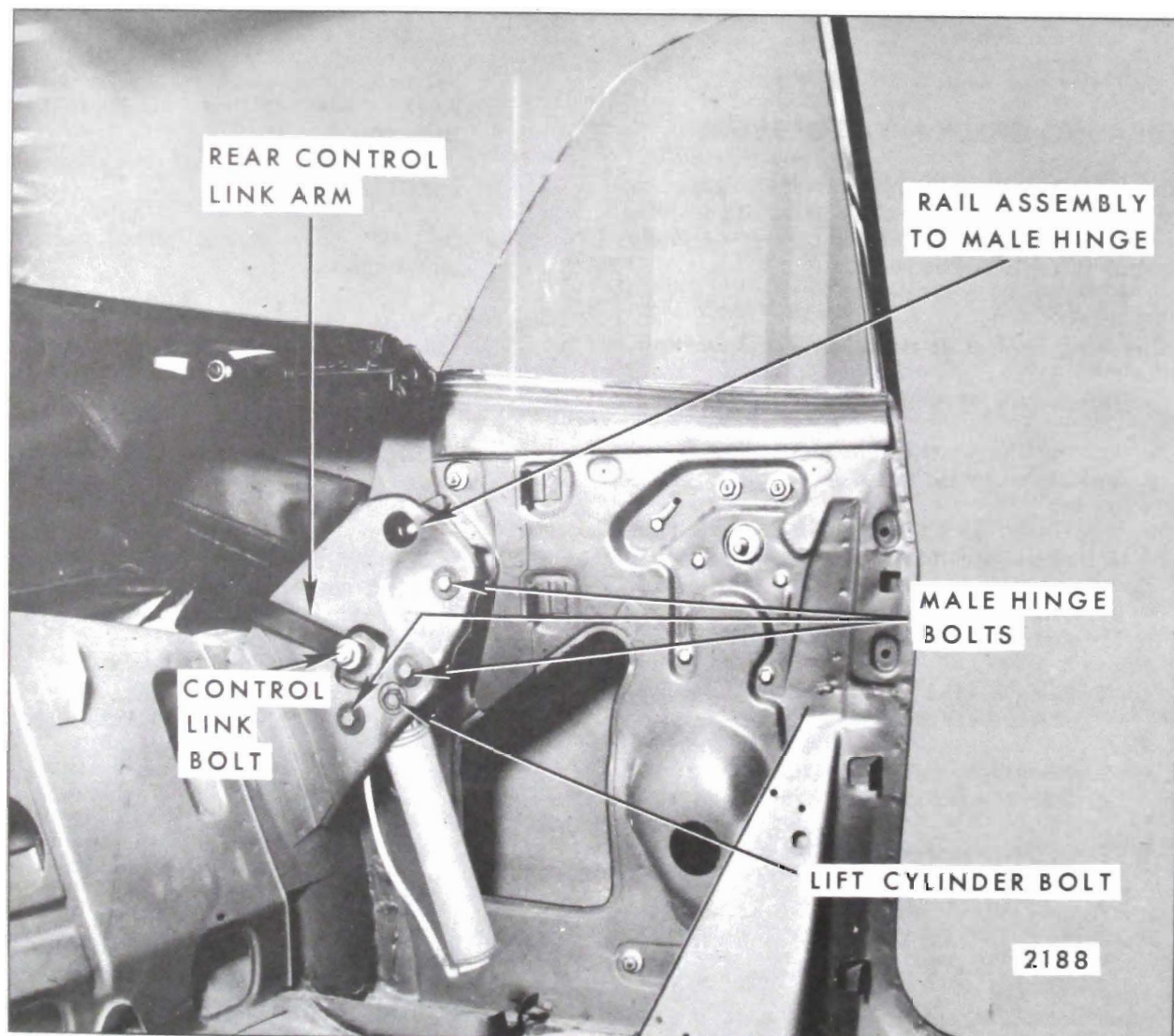


Fig. 13-70 — "A" Body Hydraulic Lift Cylinder Attachment

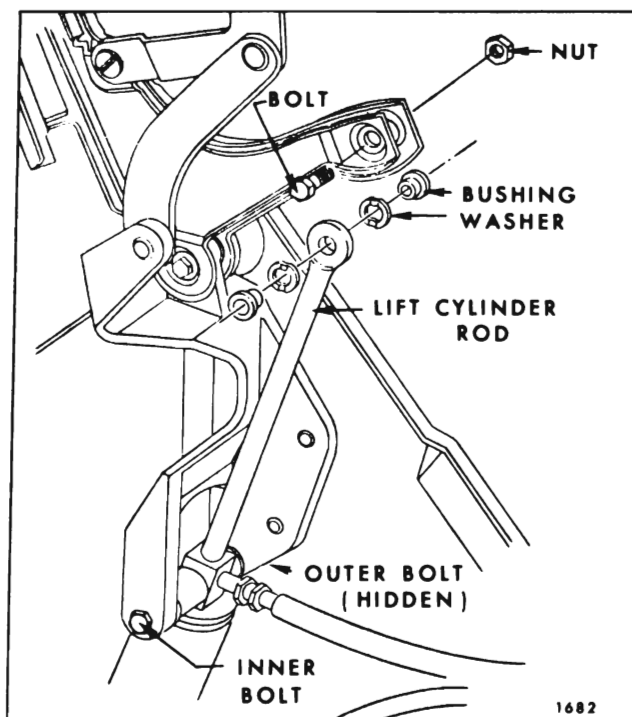


Fig. 13-71 — "B and C" Body Hydraulic Lift Cylinder Attachment

NOTE: A difference in pressure readings may exist between the pressure port for top of cylinders and pressure port for bottom of cylinders. This condition is acceptable if both readings are within the limit of 340 psi and 380 psi.

- e. If the pressure is not within specified limits, unit is defective and should be repaired or replaced, as required.

FOLDING TOP LIFT CYLINDER

Removal and Installation

1. Lock top to windshield header.
2. Disconnect positive battery cable to prevent accidental operation of motor and pump, particularly when hydraulic hoses are disconnected from cylinder.
3. Remove rear seat cushion and seat back.
4. Remove folding top compartment side trim panel assembly on side affected.
5. Remove clips securing hydraulic hose to rear seat back panel.
6. Remove attaching nut, bolt, bushing and washer from upper end of cylinder rod, Figures 13-70 and 13-71.

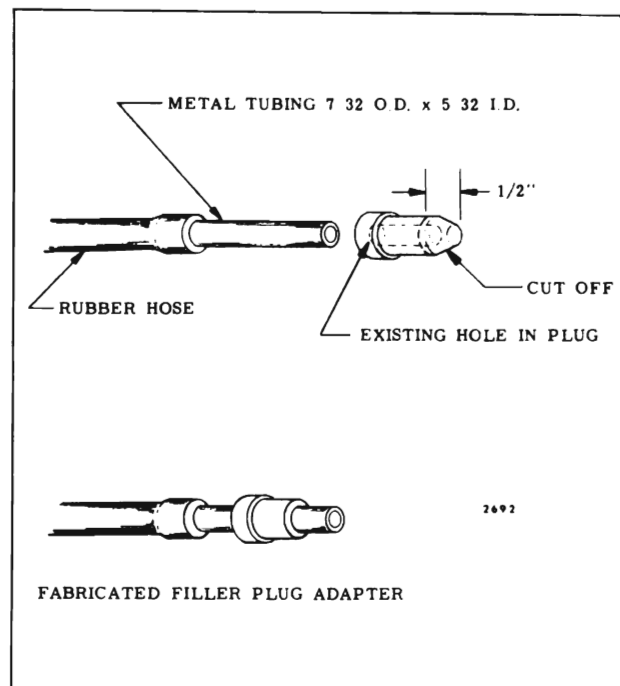


Fig. 13-72 — Reservoir Filler Plug Adapter

7. Remove inner and outer bolt securing cylinder to male hinge (Fig. 13-71).
8. Carefully move cylinder to inboard side of top compartment brace, exposing upper and lower hydraulic hose to cylinder connections.
9. Prior to disconnecting hydraulic connections, place suitable wiping rags under connections to absorb any drippage of hydraulic fluid.
10. Disconnect hydraulic connections from old cylinder and transfer to new cylinder assembly.
11. Install new cylinder to male hinge.
12. Connect positive battery cable to battery terminal.
13. Using power, raise cylinder piston rod to extended position.
14. Attach upper end of cylinder rod to folding top linkage using previously removed nut, bolt, bushing and washer.
15. Operate folding top assembly down and up several times; then check and correct level of hydraulic fluid in reservoir. See "Filling of Hydro-Lectric Reservoir".
16. Install hydraulic hose to rear seat back panel with clips and install all previously removed trim and hardware.

FILLING OF HYDRO-ELECTRIC RESERVOIR

This procedure virtually eliminates discharge or spillage of hydraulic fluid and possible trim damage while filling and bleeding system.

Fabrication of Rubber Filler Plug Adapter

1. Obtain a spare rubber filler plug (Part #7596442).
2. Cut approximately 1/2" off male end of plug (end inserted into reservoir) to permit insertion of tubing as shown in sketch.
3. Obtain a 2" length of metal tubing 7/32 O.D. x 5/32 I.D.
4. Insert reworked plug into filler hole in reservoir.
5. Insert metal tubing through hole in reworked filler plug.

NOTE: Attached sketch illustrates fabricated filler plug adapter.

Filling and Bleeding Reservoir

1. On all body styles, with top in raised position, remove folding top compartment bag material

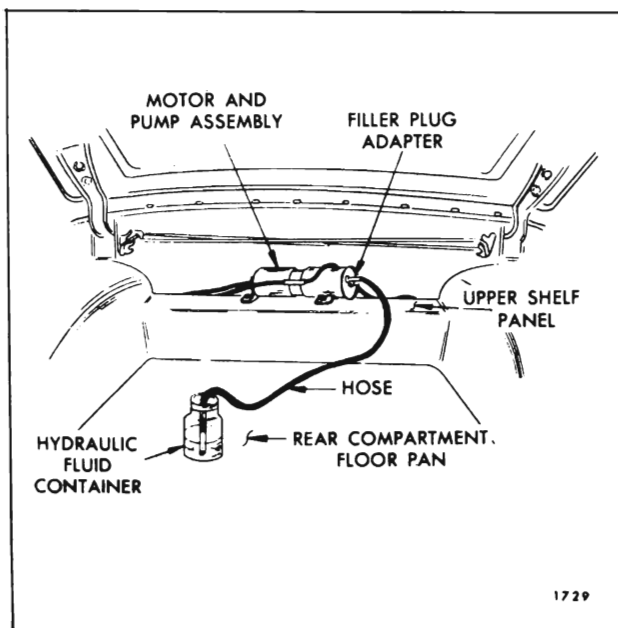


Fig. 13-73—Filling Reservoir

from rear seat back panel and remove shield from pump and motor, if present.

2. On "B-C & F" body styles, remove rear seat cushion and back.
3. Place absorbent rags below reservoir at filler plug. Using pliers, slowly pull filler plug from reservoir.

IMPORTANT: When installing new or overhauled motor and pump assembly as a bench operation, fill reservoir with hydraulic fluid. This priming operation is necessary prior to performing the following steps in order to avoid drawing excessive amount of air into hydraulic system.

4. Install filler plug adapter to reservoir and attach four or five foot length 5/32 inch I.D. rubber tubing or hose to filler plug tubing.
5. Install opposite end of hose into a container of GM Hydraulic Brake Fluid Super #11 or equivalent.

NOTE: Container should be placed in rear compartment area on "A" bodies and rear floor pan on "B-C & F" bodies, below level of fluid in the reservoir. In addition, sufficient fluid must be available in container to avoid drawing air into hydraulic system.

6. Operate top to down or stacked position. After top is fully lowered continue to operate motor and pump assembly (approximately 15 to 20 seconds), or until noise level of pump is noticeably reduced. Reduction in pump noise level indicates that hydraulic system is filled with fluid.
7. Operate top up and down several times or until operation of top is consistently smooth in both up and down cycles and no further air bubbles are exhausted in container or fluid.
8. With top in down position, remove filler plug tubing and remove filler plug adapter from reservoir.
9. Check level of fluid in reservoir and re-install original filler hole plug.

NOTE: Fluid level should be within 1/4 inch of lower edge of filler plug with top in down position.

CAUTION: DO NOT OVER-FILL.

FOLDING TOP MANUAL LIFT ASSEMBLY ALL CONVERTIBLE BODIES WITH MANUALLY OPERATED FOLDING TOPS

DESCRIPTION

The manual lift assembly incorporates a dual-action heavy duty spring which helps compensate for the weight of the folding top mechanism when the top is at or near the full up or full folded positions. When the top is in the up position, the spring is under compression; when it is in the folded or stacked position, the spring is under tension.

CAUTION: Do not attempt to detach lift assembly when spring is under tension or compression.

REMOVAL AND INSTALLATION

1. On all styles remove rear seat cushion and back and folding top compartment side trim panel assembly on side affected. On "F" Body Styles only, remove the body lock pillar to

main hinge support extension brace.

2. Move top to midway position to relieve the manual lift springs. If both lift assemblies are to be serviced, have helper support folding top or place supporting props under front roof rail.
3. Remove attaching nut, bolt, bushing and washer from upper end of lift assembly.
4. Remove inner and outer bolt securing lift assembly to male hinge; then remove assembly from body (Fig. 13-74 for "A" Body and Fig. 13-75 for "F" Body).
5. To install manual lift assembly, reverse removal procedure. Operate folding top assembly down and up several times to insure proper operation.

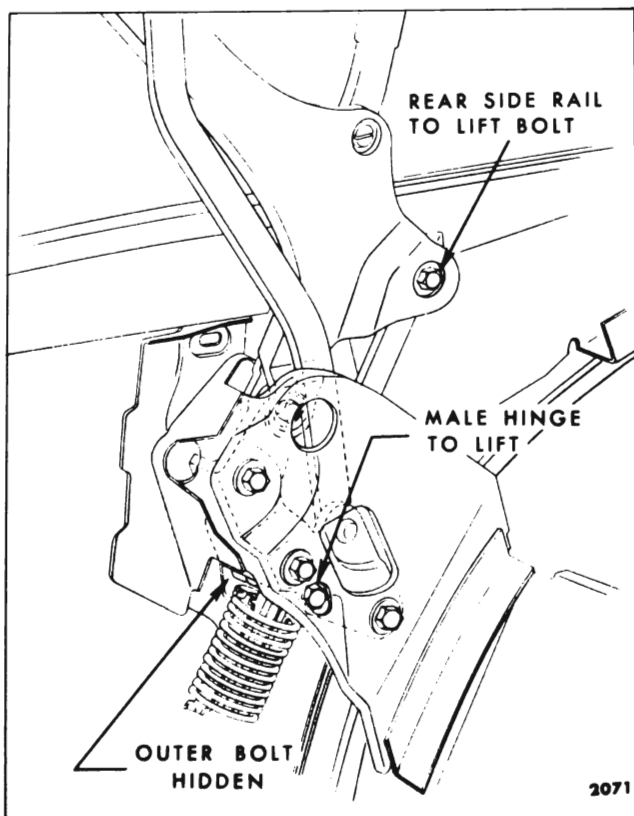


Fig. 13-74 — "A" Body Manual Lift Assembly

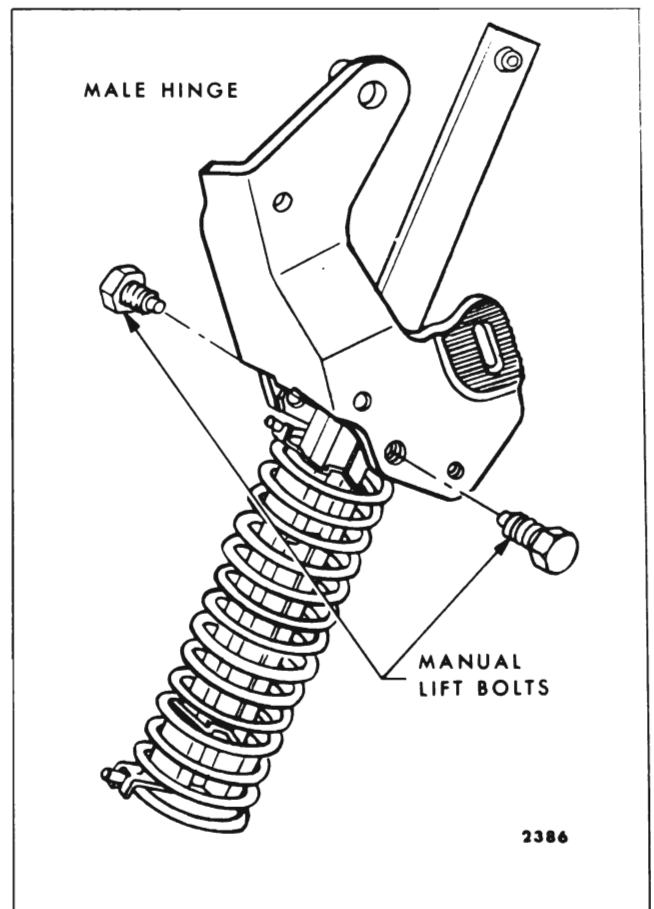


Fig. 13-75 — Manual Lift Attachment

FOLDING TOP CATCH CLIPS

The folding top catch clips snap over the folding top side roof center rails when the top is being lowered to the folded or stacked position. The catch clips prevent the spring-loaded manual lift arms from raising the top from this position. In order to

raise the top, both catch clips must be disengaged from the side roof center rails. Each catch clip is attached to the folding top compartment side panels by two screws. Any adjustments made to change stack height of the folding top (See "Folding Top Adjustments") require corresponding adjustments to the catch clips.

FOLDING TOP ADJUSTMENTS—"A" Body

DESCRIPTION

The following information outlines and illustrates procedures which may be used to correct misaligned folding top linkage. To correct some top variations, only a single adjustment is required; other top variations require a combination of adjustments. In conjunction with adjustment of the folding top, it may be necessary to adjust the door, door glass, rear quarter glass, trim sticks or side roof rail weatherstrips.

CAUTION: When operating a manually-operated folding top, hands must be kept clear of side roof rail hinges and connecting linkages.

ADJUSTMENT OF FOLDING TOP FRONT ROOF RAIL WEDGE PLATE

The folding top front roof rail wedge plates are designed to contact the sunshade support and striker assembly thus aligning the front roof rail to the striker so that both side roof rail locks will easily engage with the strikers. In addition, the

wedge plates act as a spacer between the front roof rail and windshield header when top is in the locked position.

If the front roof rail wedge plates do not contact the sunshade support and striker assemblies when top is locked to the windshield header, the right wedge plate may be adjusted as follows:

NOTE: The left wedge plate functions as a locator and is not adjustable.

1. Raise top assembly to half-open position.
2. Loosen wedge plate attaching screws (Fig. 13-76).
3. Adjust wedge plate in or out sufficiently so that wedge plate will strike assembly when top is locked to windshield header.
4. Tighten attaching screws.
5. Lock top to windshield header.
6. Readjust wedge plate until desired adjustment is obtained.

NOTE: The sunshade support and striker assembly is not adjustable.

ADJUSTMENT OF TOP AT FRONT ROOF RAIL

If the top, when in a raised position, is too far forward or too far rearward, the front roof rail may be adjusted as follows:

1. Unlatch top and raise it above windshield header. Remove side roof rail weatherstrip front attaching screws.
2. Loosen lock assembly attaching screws on side roof front rail and adjust front roof rail fore or aft as required. Repeat on opposite side if necessary. (See View "A", Fig. 13-77).

NOTE: If additional adjustment is required,

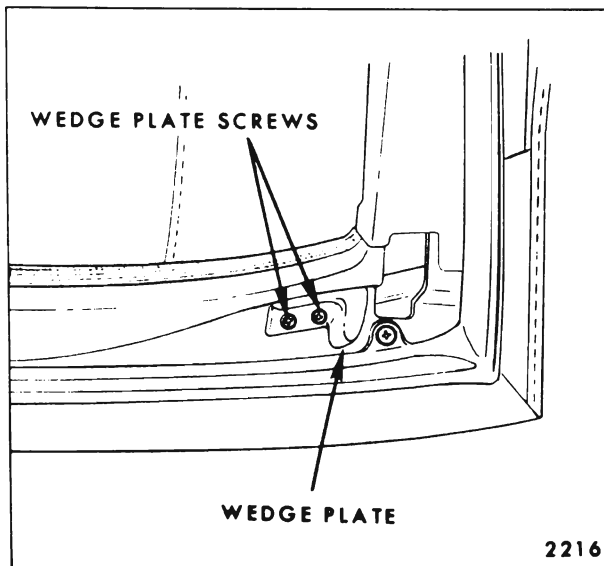


Fig. 13-76—Front Roof Rail Wedge Plate

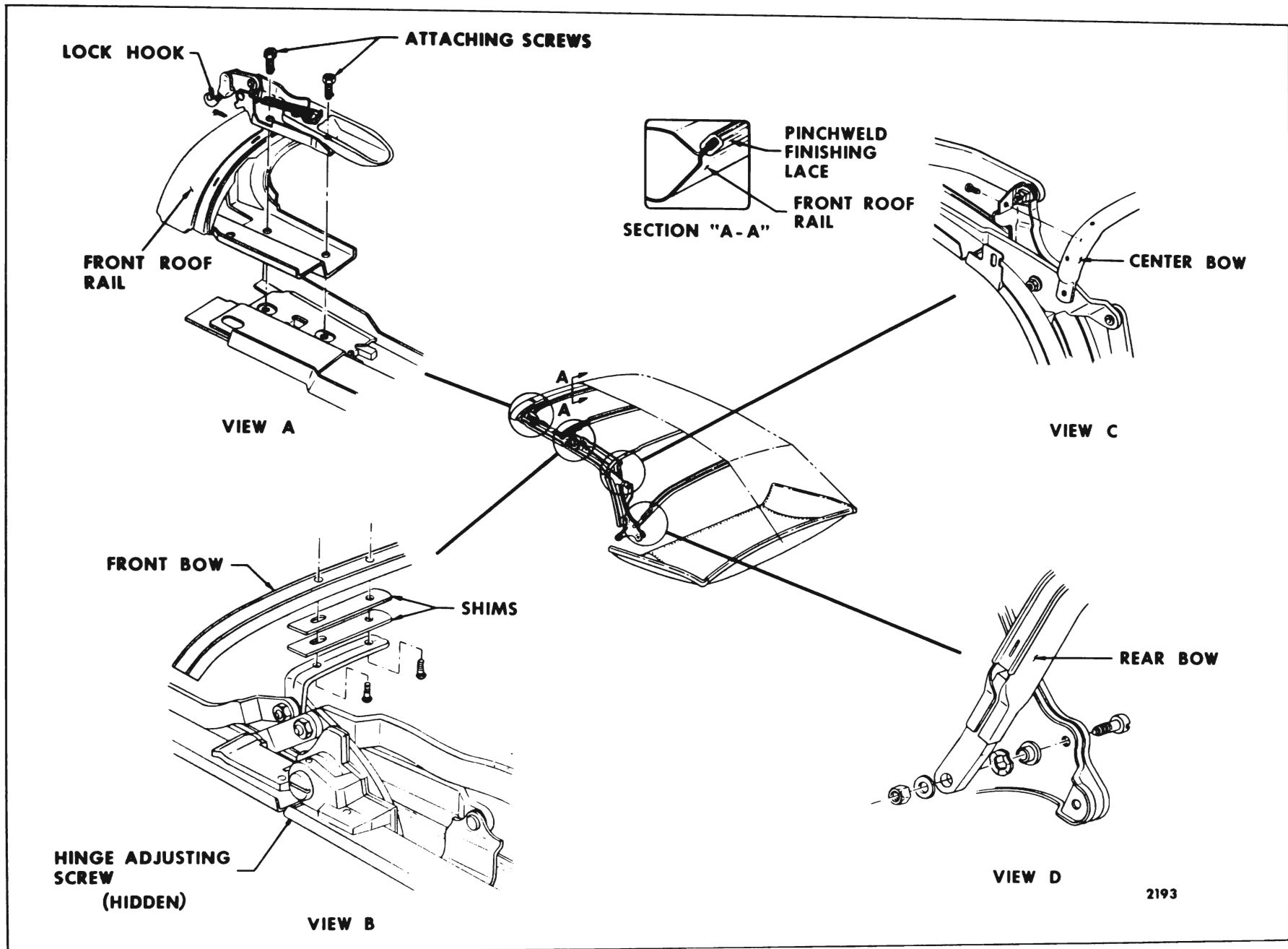


Fig. 13-77 — "A" Body Folding Top Adjustments

it can be made at folding top male hinge.

3. When front roof rail is properly adjusted, tighten lock assembly and install weatherstrip attaching screws.

FRONT ROOF RAIL LOCK ASSEMBLY

Removal and Installation

1. Unlock top from windshield header.
2. With top in a half-open position, remove lock attaching screws; then remove lock assembly from front roof rail. (See View "A", Fig. 13-77).

3. To install, reverse removal procedure.

FRONT ROOF RAIL LOCK ADJUSTMENT

If the locking action of top is unsatisfactory, the hook on the lock assembly may be adjusted as follows:

1. To tighten or increase locking action, turn lock hook clockwise.
2. To reduce or decrease locking action, turn lock hook counterclockwise.

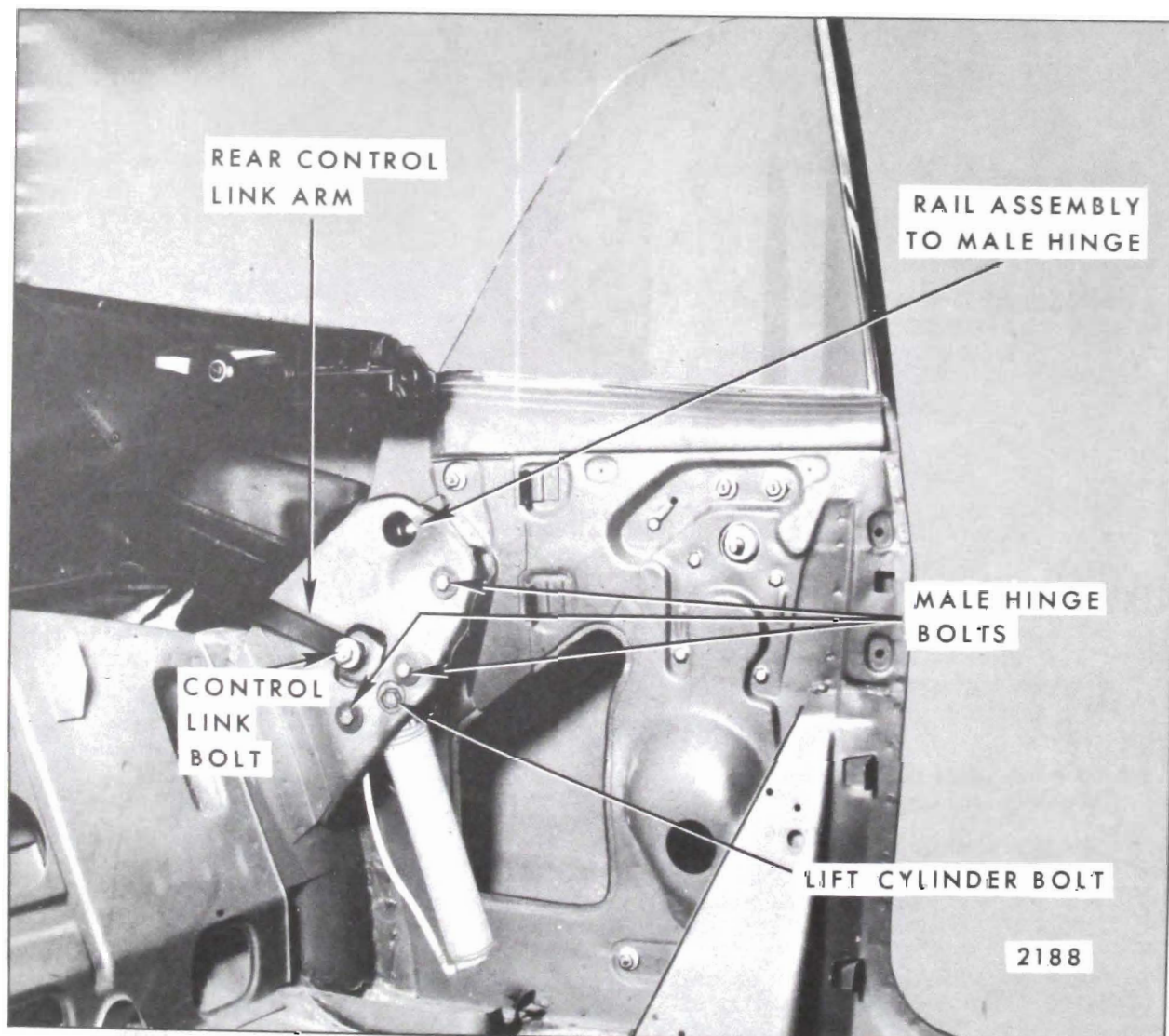


Fig. 13-78—"A" Body Convertible Top Linkage Attachments

ADJUSTMENT OF TOP CONTROL LINK

1. With top in "up" position, if joint between front and center side roof rail is too high or too low, proceed as follows:
 - a. Remove folding top compartment side trim panel.
 - b. Loosen one bolt securing control link sufficiently to permit adjustment of link (See Fig. 13-78).
 - c. Adjust side roof rail up or down allowing link to move up or down over serrations on support as required; then tighten bolt.
 - d. Reinstall folding top compartment side trim panel.

quarter window area, proceed as follows:

- a. Scribe location of male hinge attaching bolt washers and control link on folding top compartment brace.
- b. Loosen male hinge assembly (See Fig. 13-78).
- c. Without changing fore and aft location of male hinge, adjust male hinge up or down as required to obtain proper alignment between side roof rail and rear quarter window.
- d. Tighten attaching bolts, while maintaining proper alignment of scribe marks.
- e. Check fit of top material at rear quarter trim stick area and, if necessary, adjust trim stick. If adjustment is not necessary, tighten trim stick attaching bolts.
- f. On styles equipped with manually-operated folding tops, adjust folding top catch clips as required. (See "Manually Operated Folding Top Hardware").

ADJUSTMENT OF TOP AT MALE HINGE

Prior to making any adjustment of top linkage at male hinge, loosen two bolts securing folding top rear quarter trim stick to rear quarter panel. This will prevent any possible damage to top when it is raised after adjustment. After making an adjustment at male hinge, check folding top at rear quarter area for proper fit and, if necessary, adjust trim stick assembly.

1. If there is an excessive opening between side roof rail rear weatherstrip and rear of rear quarter window, or if front roof rail is too far forward or rearward, proceed as follows:
 - a. Scribe location of male hinge attaching bolt washers on folding top compartment brace.
 - b. Loosen male hinge assembly (Fig. 13-78).
 - c. Move hinge fore or aft as required to obtain proper alignment between side roof rail rear weatherstrip and rear quarter window, then tighten bolts.
 - d. Lock front roof rail to windshield, (where required, adjust front roof rail as previously described), and check fit at top material at rear quarter trim stick; then tighten trim stick attaching bolts.
 - e. On styles equipped with manually operated folding tops adjust both folding top catch clips as required. (See "Manually Operated Folding Top Hardware").

2. If side roof rail is too high or too low at rear

3. If top does not stack properly when top is in down position proceed as follows:
 - a. Scribe location of male hinge attaching bolt washers on folding top compartment brace.
 - b. Loosen male hinge assembly.
 - c. Rotate male hinge forward to lower stack height or rearward to raise stack height (Fig. 13-78).

NOTE: When rotating male hinge be certain position of rear rail to male hinge is maintained (Fig. 13-78).

 - d. Tighten attaching bolts, while maintaining proper alignment of scribe marks.
 - e. On styles equipped with manually operated folding tops, adjust both folding top catch clips as required (See "Manually Operated Folding Top Hardware").

TROUBLE SHOOTING CHART

The following procedure describes and illustrates various types of folding top misalignment conditions, their apparent causes and the recommended procedure for their correction.

TROUBLE SHOOTING CHART

| CONDITION | APPARENT CAUSE | CORRECTION |
|--|--|--|
| A. Difficult locking action at front roof rail. | <ol style="list-style-type: none"> 1. Lock hook improperly adjusted. 2. Misaligned front roof rail front weatherstrip. 3. Front roof rail misaligned. | <p>Adjust lock hook counterclockwise. (See View "A" in Fig. 13-77).</p> <p>Loosen, realign and retack front roof rail front weatherstrip.</p> <p>Adjust front roof rail. (View "A" in Fig. 13-77).</p> |
| B. Top does not lock tight enough to windshield header. | <ol style="list-style-type: none"> 1. Lock hook improperly adjusted. 2. Misaligned front roof rail front weatherstrip. 3. Front roof rail misaligned. | <p>Adjust lock hook clockwise. (See View "A" in Fig. 13-77).</p> <p>Loosen, realign and retack front roof rail front weatherstrip.</p> <p>Adjust front roof rail.</p> |
| C. Top travels too far forward. | <ol style="list-style-type: none"> 1. Front roof rail misaligned. 2. Male hinge assembly misaligned. | <p>Adjust front roof rail rearward (See View "A" in Fig. 13-77).</p> <p>Adjust male hinge assembly rearward. (Fig. 13-78).</p> |
| D. Top does not travel forward far enough. | <ol style="list-style-type: none"> 1. Front roof rail misaligned. 2. Male hinge assembly misaligned. | <p>Adjust front roof rail forward. (See View "A" in Fig. 13-77).</p> <p>Adjust male hinge assembly forward. (Fig. 13-78).</p> |
| E. Side roof rail rear weatherstrip too tight against rear of rear quarter window. | <ol style="list-style-type: none"> 1. Male hinge assembly misaligned. | <p>Adjust male hinge assembly rearward. (Fig. 13-78).</p> |
| F. Gap between side roof rail rear weatherstrip and rear of rear quarter window. | <ol style="list-style-type: none"> 1. Male hinge assembly misaligned. | <p>Adjust male hinge assembly forward and/or shim side roof rail rear weatherstrip forward as required (Fig. 13-78).</p> |
| G. Side roof rail rear weatherstrip too tight against top of rear quarter window. | <ol style="list-style-type: none"> 1. Male hinge misaligned. | <p>Adjust male hinge upward. (Fig. 13-78).</p> |
| H. Gap between side roof rail rear weatherstrip and top of rear quarter window. | <ol style="list-style-type: none"> 1. Male hinge misaligned. | <p>Adjust male hinge downward and/or shim side roof rail rear weatherstrip downward as required. (Fig. 13-78).</p> |
| I. Sag at front to center side roof rail joint. | <ol style="list-style-type: none"> 1. Control link misaligned. 2. Center side roof rail hinge adjusting screw improperly adjusted. | <p>Adjust control link downward. (Fig. 13-78).</p> <p>Adjust screw counterclockwise. (See View "B" in Fig. 13-77).</p> |

TROUBLE SHOOTING CHART (CONT'D.)

| CONDITION | APPARENT CAUSE | CORRECTION |
|--|---|---|
| J. Front and center side roof rails bow upward at hinge joint. | 1. Control link misaligned. | Adjust control link upward. (Fig. 13-78). |
| | 2. Center side roof rail hinge adjusting screw improperly adjusted. | Adjust screw clockwise. (See View "B" in Fig. 13-77). |
| K. Folding top dust boot is difficult to install. | 1. Improper stack height due to misaligned male hinge assembly. | Rotate male hinge forward or rearward as required. (Fig. 13-78). |
| | 2. Rear seat back assembly is too far forward. | Relocate rear seat back rearward until dimension between upper rear edge of rear seat back to forward edge of pinchweld finishing molding is $17\text{-}1/2" \pm 1/6"$. The dimension is measured at approximate centerline of body. |
| | 3. Excessive build-up of padding in side roof rail stay pads. | Repair side stay pads as required. |
| | 4. On manual tops, due to improperly adjusted catch slips. | Adjust catch clips downward as required. |
| L. Folding top dust boot fits too loosely. | 1. Improper stack height due to misaligned male hinge assembly. | Rotate male hinge assembly rearward as required. (Fig. 13-78). |
| | 2. Rear seat back assembly is too far rearward. | Relocate rear seat back panel forward until dimension between upper rear edge of rear seat back to forward edge of pinchweld finishing molding is $17\text{-}1/2" \pm 1/16"$. The dimension is measured at approximate centerline of body. |
| | 3. On manual tops, due to improperly adjusted catch clips. | Adjust catch clips upward as required. |
| M. Top material is too low over windows or side roof rails. | 1. Front roof bow improperly shimmed. | *Install one or two $1/8"$ shims between front roof bow and slat iron. (See View "B" in Fig. 13-77). |
| | 2. Excessive width in top material. | If top is too large, detach binding along affected area, trim off excessive material along side binding as required; then hand sew binding to top material. |

TROUBLE SHOOTING CHART (CONT'D.)

| CONDITION | APPARENT CAUSE | CORRECTION |
|--|---|--|
| N. Top material is too high over windows or side roof rails. | 1. Front roof bow improperly shimmed. | *Remove one or two 1/8" shims from between front roof bow and slat iron. (See View "B" in Fig. 13-77). |
| O. Top material has wrinkles or draws. | 1. Rear quarter trim stick improperly adjusted. 2. Top material improperly installed to center or rear quarter trim stick. | Adjust rear quarter trim stick on side affected. Retack top material as required. |
| P. Wind whistle or waterleak along front roof rail. | 1. Misaligned front roof rail front weatherstrip. | Retack front weatherstrip to front roof rail. |
| <p>*When no shims are required or when installing only one shim, use attaching screw part #4412844 (1/4 - 20 x 5/8" oval head with external tooth lock washer, type "T-T" tapping screw, chrome finish).</p> <p>When two shims are required, use attaching screw part #4412619 (1/4 - 20 x 3/4" oval head with external tooth lock washer, type "T-T" tapping screw, chrome finish).</p> | | |

FOLDING TOP ADJUSTMENTS—"B & C" Body**DESCRIPTION**

The folding top linkage consists of three sections of right and left side roof rails and a front roof rail connected by bolts, hinges, and a series of connecting links and bows. The top linkage is attached to the body at the rear quarter area by a male hinge. The hinge is attached directly to the quarter panel brace. The front roof rail is locked at the windshield header by two hook type locks which are an integral part of the two locking handles.

The following information outlines and illustrates procedures which may be used to correct misaligned folding top linkage. To correct some top variations, only a single adjustment is required; other top variations require a combination of adjustments. In conjunction with adjustment of the folding top, it may be necessary to adjust the door, door glass, rear quarter glass, trim sticks or side roof rail weatherstrips.

ADJUSTMENT OF FOLDING TOP FRONT ROOF RAIL GUIDE

If the front roof rail guides do not properly engage

with the striker assemblies when the top is in an "up" or raised position, the guides may be adjusted laterally as follows:

1. Raise top assembly to half-open position.
2. Loosen guide sufficiently to permit adjustment (Fig. 13-79).
3. Shift guide to desired position; then tighten guide.

NOTE: The sunshade support and striker assembly is not adjustable. In addition, adjustment of guide is limited. If additional adjustment is required, particularly fore and aft movement of the front roof rail, it can be obtained by adjusting the front roof rail and/or folding top male hinge.

ADJUSTMENT OF TOP AT FRONT ROOF RAIL

If the top, when in a raised position, is too far forward or does not move forward enough to allow the

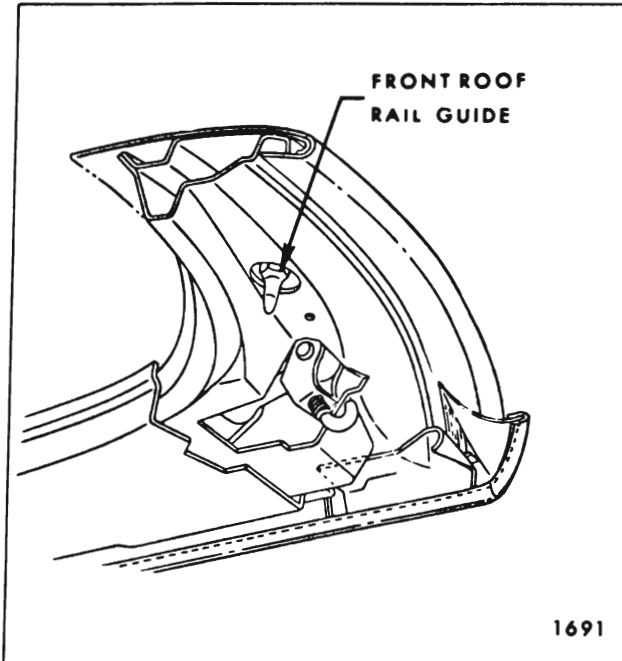


Fig. 13-79 — Guide Adjustment

guide studs on the front roof rail to enter holes in the striker assemblies, proceed as follows:

1. Unlatch top and raise it above windshield header. Remove side roof rail weatherstrip front attaching screws.
2. Loosen side roof rail lock attaching screws and adjust front roof rail fore or aft as required. Repeat on opposite side if necessary (Fig. 13-80).

NOTE: If additional adjustment is required, it can be made at the folding top male hinge.

3. When front roof rail is properly adjusted, tighten lock attaching screws and install weatherstrip attaching screws.

FRONT ROOF RAIL LOCK ASSEMBLY

Removal and Installation

1. Unlock top from windshield header.
2. With top in a half-open position, remove lock attaching screws; then, remove lock assembly from front roof rail (Fig. 13-80).
3. To install, reverse removal procedure.

FRONT ROOF RAIL LOCK ADJUSTMENT

If the locking action of top is unsatisfactory, the

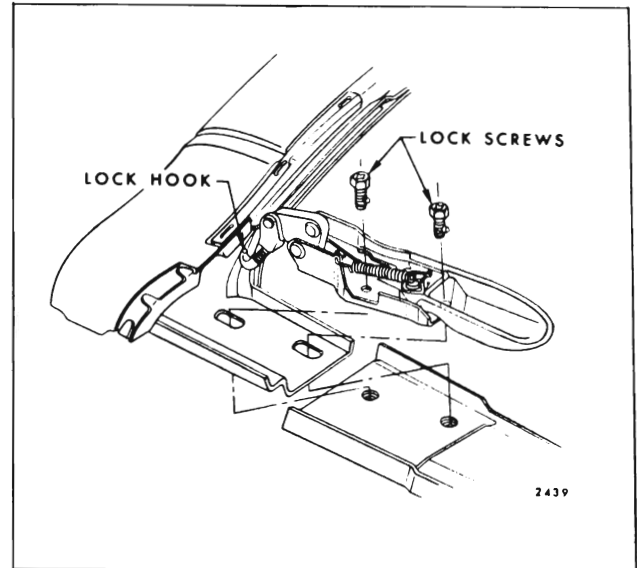


Fig. 13-80 — Lock Attachment

hook on the lock assembly may be adjusted as follows:

1. To tighten or increase locking action, turn lock hook clockwise.
2. To reduce or decrease locking action, turn lock hook counterclockwise.

ADJUSTMENT OF TOP CONTROL LINK ADJUSTING PLATE

1. With top in up position, if joint between front and center side roof rail is too high or too low, proceed as follows:
 - a. Remove folding top compartment side trim panel.
 - b. Scribe location of control link adjusting plate on folding top compartment brace.
 - c. Loosen two bolts securing control link adjusting plate sufficiently to permit adjustment of plate (Fig. 13-81).
 - d. Without changing fore and aft location of adjusting plate, adjust side roof rail up or down allowing adjusting plate to move up or down over serrations on support as required; then tighten bolts.

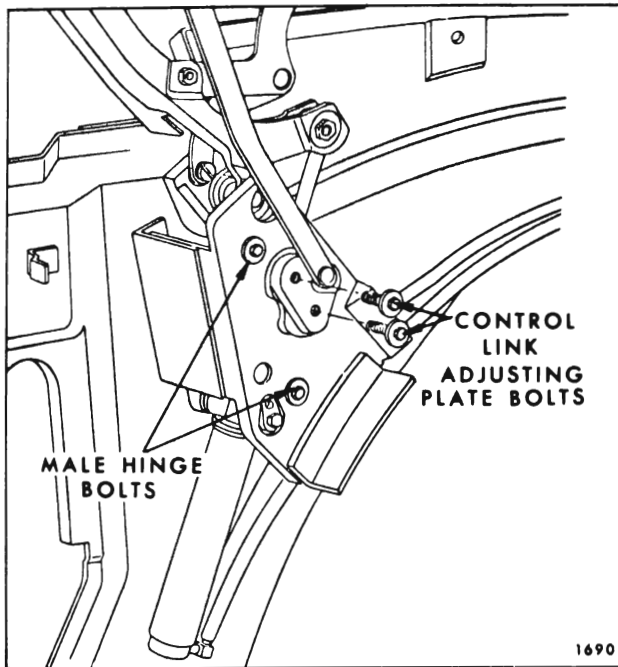


Fig. 13-81 — Male Hinge Attachment

will prevent any possible damage to top when it is raised after adjustment. After making an adjustment at male hinge, check folding top at rear quarter area for proper fit and, if necessary, adjust trim stick assembly.

1. If there is an excessive opening between side roof rail rear weatherstrip and rear of rear quarter window, or if front roof rail is too far forward or rearward, proceed as follows:
 - a. Scribe location of male hinge attaching bolt washers and control link assembly on folding top compartment brace.
 - b. Loosen male hinge assembly and control link attached bolts (Fig. 13-81).
 - c. Move hinge fore or aft as required to obtain proper alignment between side roof rail rear weatherstrip and rear quarter window; then tighten bolts.
 - d. Lock front roof rail to windshield, (where required, adjust front roof rail as previously described), and check fit of top material at rear quarter trim stick area. If necessary, adjust trim stick; then tighten trim stick attaching bolts.
 - e. Check top assembly for proper stack height and proper alignment of side roof rails over door and quarter windows. Where required, adjust control link adjusting plate as previously described. (See steps #1 and 2 under "Adjustment of Top Control Link Adjusting Plate").

NOTE: If top cannot be fully raised or lowered, even after control link plate has been adjusted, re-adjust male hinge assembly as required. Check top for proper operation.

2. If side roof rail is too high or too low at rear quarter window area, proceed as follows:

- a. Mark location of male hinge attaching bolt washers and control link on folding top compartment brace.
- b. Loosen male hinge assembly attaching bolts (Fig. 13-81).

2. If top assembly does not stack properly when top is in down position, proceed as follows:

- a. Scribe location of control link adjusting plate on folding top compartment brace.
- b. Loosen bolts securing control link adjusting plate sufficiently to permit adjustment of plate.
- c. Without changing the up or down location of adjusting plate, move adjusting plate forward or rearward (horizontally) over serrations as required to obtain desired height; then tighten bolts.

NOTE: If top cannot be fully lowered, even after control link plate has been adjusted, re-adjust male hinge assembly as required. Check top for proper operation.

ADJUSTMENT OF TOP AT MALE HINGE SUPPORT

Prior to making any adjustment of top linkage at male hinge, loosen two bolts securing folding top rear quarter trim stick to rear quarter panel. This

- c. Without changing fore and aft location of male hinge, adjust male hinge up or down as required to obtain proper alignment between side roof rails and rear quarter windows.
- d. Tighten attaching bolts, while maintaining proper alignment of vertical scribe marks.
- e. Check fit of top material at rear quarter trim stick area and, if necessary, adjust trim stick. If adjustment is not necessary, tighten trim stick attaching bolts.
- f. Check top assembly for proper stack height and proper alignment of side roof rails over door and quarter windows. Where required, adjust control link adjusting plate as previously described. (See steps #1 and 2 under "Adjustment of Top Control Link Adjusting Plate").
- NOTE:** If top cannot be fully raised or lowered, even after control link plate has been adjusted, re-adjust male hinge assembly as required. Check top for proper operation.

TROUBLE SHOOTING CHART

| CONDITION | APPARENT CAUSE | CORRECTION |
|---|---|--|
| A. Difficult locking action at front roof rail. | 1. Lock hook improperly adjusted. | Adjust lock hook counterclockwise. |
| | 2. Misaligned front roof rail front weatherstrip. | Loosen, realign and retack front roof rail front weatherstrip. |
| | 3. Front roof rail misaligned. | Adjust front roof rail. |
| B. Top does not lock tight enough to windshield header. | 1. Lock hook improperly adjusted. | Adjust lock hook clockwise. |
| | 2. Misaligned front roof rail front weatherstrip. | Loosen, realign and retack front roof rail front weatherstrip. |
| | 3. Front roof rail misaligned. | Adjust front roof rail. |
| C. Top travels too far forward. | 1. Front roof rail misaligned. | Adjust front roof rail rearward (Fig. 13-82). |
| | 2. Male hinge assembly misaligned. | Adjust male hinge assembly rearward (Fig. 13-81). |
| D. Top does not travel forward far enough. | 1. Front roof rail misaligned. | Adjust front roof rail forward (Fig. 13-82). |
| | 2. Male hinge assembly misaligned. | Adjust male hinge assembly forward (Fig. 13-81). |

TROUBLE SHOOTING CHART (CONT'D.)

| CONDITION | APPARENT CAUSE | CORRECTION |
|--|---|---|
| E. Side roof rail rear weatherstrip too tight against rear of rear quarter window. | 1. Male hinge assembly misaligned. | Adjust male hinge assembly rearward (Fig. 13-81). |
| F. Gap between side roof rail rear weatherstrip and rear of rear quarter window. | 1. Male hinge assembly misaligned. | Adjust male hinge assembly forward (Fig. 13-81) and/or shim side roof rail rear weatherstrip forward as required. |
| G. Side roof rail rear weatherstrip too tight against top of rear quarter window. | 1. Male hinge misaligned. | Adjust male hinge upward (Fig. 13-81). |
| H. Gap between side roof rail rear weatherstrip and top of rear quarter window. | 1. Male hinge misaligned. | Adjust male hinge downward and/or shim side roof rail weatherstrip downward as required. |
| I. Sag at front of center side roof rail joint. | 1. Control link adjusting plate misaligned. 2. Center side roof rail hinge adjusting screw improperly adjusted. | Adjust control link adjusting plate downward (Fig. 13-81). Adjust screw counterclockwise (Fig. 13-82). |
| J. Front and center side roof rails bow upward at hinge joint. | 1. Control link adjusting plate misaligned. 2. Center side roof rail hinge adjusting screw improperly adjusted. | Adjust control link adjusting plate upward (Fig. 13-81). Adjust screw clockwise (Fig. 13-82). |
| K. Folding top dust boot is difficult to install. | 1. Improper stack height due to misaligned control link adjusting plate. 2. Misaligned folding top dust boot female fastener. 3. Rear seat back assembly is too far forward. 4. Excessive build-up of padding in side roof rail stay pads. | Adjust control link plate rearward or forward as required (Fig. 13-81). Where possible, align female with male fastener. Relocate rear seat back panel rearward until dimension between upper rear edge of rear seat back to forward edge of pinchweld finishing molding is $21\text{-}11/16'' \pm 1/16''$. The dimension is measured at approximate centerline of body. Repair side stay pads as required. |

TROUBLE SHOOTING CHART (CONT'D.)

| CONDITION | APPARENT CAUSE | CORRECTION |
|--|---|---|
| L. Folding top dust boot fits too loosely. | <ol style="list-style-type: none"> 1. Improper stack height due to misaligned control link adjusting plate. 2. Rear seat back assembly is too far rearward. | <p>Adjust control link plate forward (Fig. 13-81).</p> <p>Relocate rear seat back panel forward until dimension between upper rear edge of rear seat back to forward edge of pinch-weld finishing molding is $21-11/16'' \pm 1/16''$. The dimension is measured at approximate centerline of body.</p> |
| M. Top material is too low over windows or side roof rails. | <ol style="list-style-type: none"> 1. Front roof bow improperly shimmed. 2. Excessive width in top material. | <p>*Install one or two $1/8''$ shims between front roof bow and slat iron (Fig. 13-82).</p> <p>If top is too large, detach binding along affected area, trim off excessive material along side binding as required; then hand sew binding to top material.</p> |
| N. Top material is too high over windows or side roof rails. | <ol style="list-style-type: none"> 1. Front roof bow improperly shimmed. | <p>*Remove one or two $1/8''$ shims from between front roof bow and slat iron (Fig. 13-82).</p> |
| O. Top material has wrinkles or draws. | <ol style="list-style-type: none"> 1. Rear quarter trim stick improperly adjusted. 2. Top material improperly installed to center of rear quarter trim stick. | <p>Adjust rear quarter trim stick on side affected.</p> <p>Retack top material as required.</p> |
| P. Wind whistles or waterleak along front roof rail. | <ol style="list-style-type: none"> 1. Misaligned front roof rail front weatherstrip. 2. Front roof rail contour does not conform to windshield header. | <p>Retack front weatherstrip to front roof rail.</p> <p>Contour of front roof rail may be changed slightly by reforming rail.</p> |

*When no shims are required or when installing only one shim, use attaching screw part #4413016 ($1/4 - 20 \times 7/16''$ oval head with external tooth lock washer, type "T-T" tapping screw, chrome finish) or equivalent.

When two shims are required, use attaching screw part #4412619 ($1/4 - 20 \times 3/4''$ oval head with external tooth lock washer, type "T-T" tapping screw, chrome finish) or equivalent.

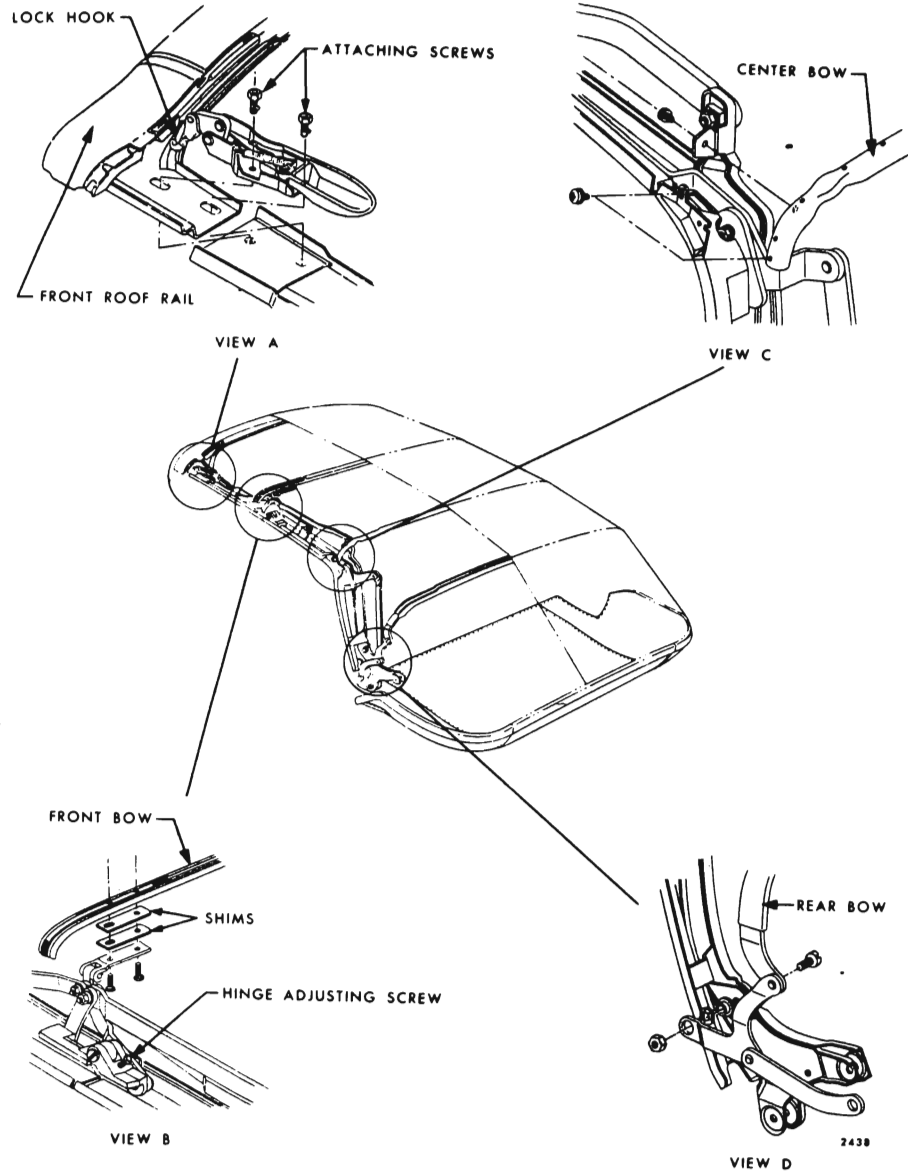


Fig. 13-82—"B and C" Body Folding Top Adjustments

FOLDING TOP ADJUSTMENTS

"F" Body

DESCRIPTION

The following information outlines and illustrates procedures which may be used to correct misaligned folding top linkage. To correct some top variations, only a single adjustment is required; other top variations require a combination of adjustments. In conjunction with adjustment of the folding top, it may be necessary to adjust the door, door glass, rear quarter glass, trim sticks or side roof rail weatherstrips.

CAUTION: When operating a manually-operated folding top, hands must be kept clear of side roof rail hinges and connecting linkages.

ADJUSTMENT OF TOP AT FRONT ROOF RAIL

If the top, when in a raised position, is too far forward or too far rearward, the front roof rail may be adjusted as follows:

1. Unlatch top and raise it above windshield header. Remove side roof rail weatherstrip front attaching screws.
2. Loosen lock assembly attaching screws on side roof front rail and adjust front roof rail fore or aft as required. Repeat on opposite side if necessary. (See View "A", Fig. 13-84).

NOTE: If additional adjustment is required, it can be made at folding top male hinge.

3. When front roof rail is properly adjusted, tighten lock assembly and install weatherstrip attaching screws.

FRONT ROOF RAIL LOCK ASSEMBLY

Removal and Installation

1. Unlock top from windshield header.
2. With top in a half-open position, remove lock attaching screws; then remove lock assembly from front roof rail. (See View "A", Fig. 13-84).
3. To install, reverse removal procedure.

FRONT ROOF RAIL LOCK ADJUSTMENT

If the locking action of top is unsatisfactory, the hook on the lock assembly may be adjusted as follows:

1. To tighten or increase locking action, turn lock hook clockwise.
2. To reduce or decrease locking action, turn lock hook counterclockwise.

ADJUSTMENT OF TOP CONTROL LINK

1. With top in "up" position, if joint between front and center side roof rail is too high or too low, proceed as follows:
 - a. Remove folding top compartment side trim panel.
 - b. Loosen one bolt securing control link sufficiently to permit adjustment of link (See Fig. 13-83).
 - c. Adjust side roof rail up or down allowing link to move up or down over serrations on support as required; then tighten bolt.
 - d. Reinstall folding top compartment side trim panel.

ADJUSTMENT OF TOP AT MALE HINGE

Prior to making any adjustment of top linkage at male hinge, loosen two bolts securing folding top rear quarter trim stick to rear quarter panel. This will prevent any possible damage to top when it is raised after adjustment. After making an adjustment at male hinge, check folding top at rear quarter area for proper fit and, if necessary adjust trim stick assembly.

1. If there is an excessive opening between side roof rail rear weatherstrip and rear of rear quarter window, or if front roof rail is too far forward or rearward, proceed as follows:
 - a. Scribe location of male hinge attaching bolt washers on folding top compartment brace.
 - b. Loosen male hinge assembly (Fig. 13-83).

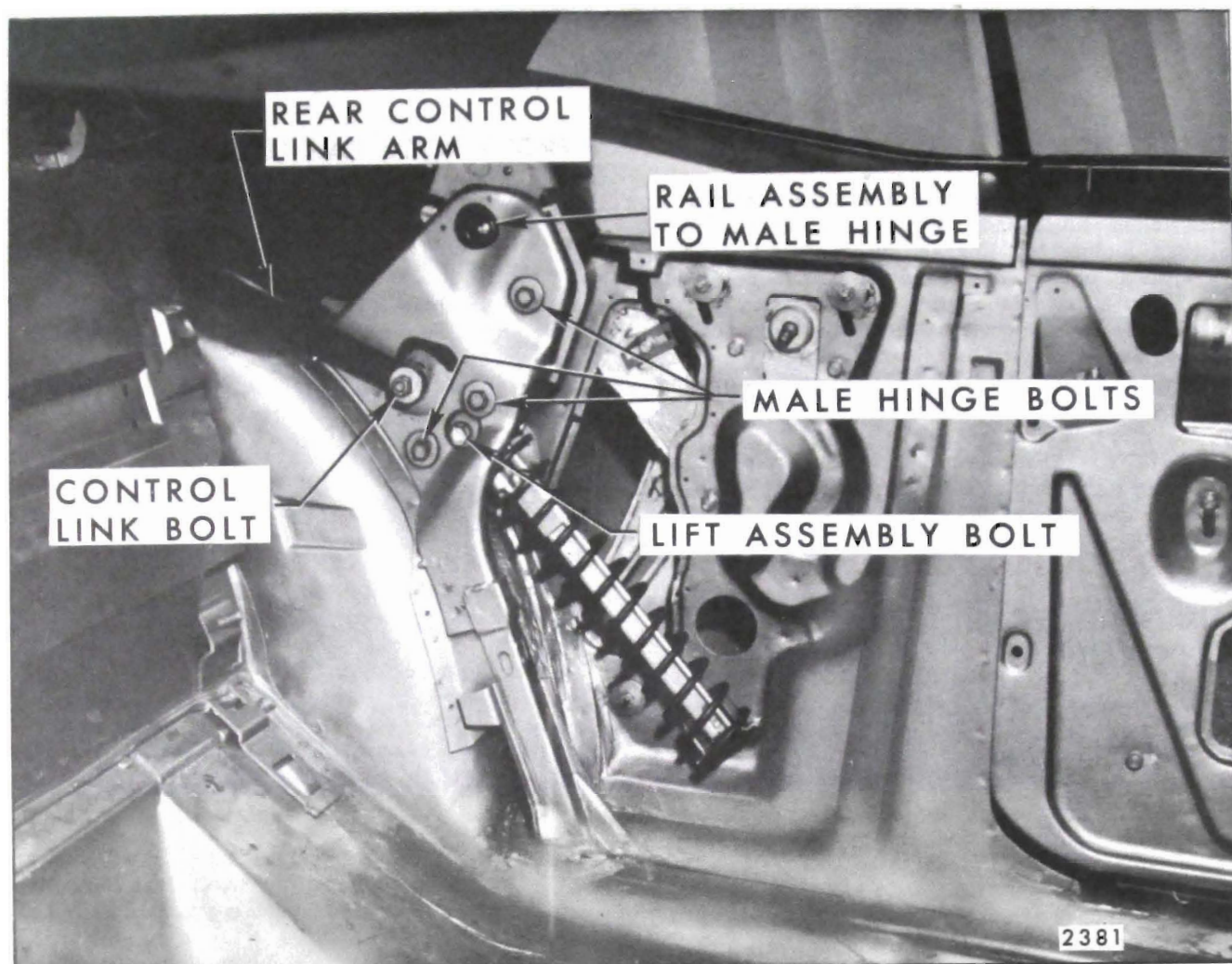


Fig. 13-83—"F" Body Convertible Top Linkage Attachments

- c. Move hinge fore or aft as required to obtain proper alignment between side roof rail rear weatherstrip and rear quarter window, then tighten bolts.
 - d. Lock front roof rail to windshield, (where required; adjust front roof rail as previously described), and check fit at top material at rear quarter trim stick; then tighten trim stick attaching bolts.
 - e. On styles equipped with manually operated folding tops adjust both folding top catch clips as required. (See "Manually Operated Folding Top Hardware").
2. If side roof rail is too high or too low at rear quarter window area, proceed as follows:
 - a. Scribe location of male hinge attaching bolt washers and control link on folding top compartment brace.
 - b. Loosen male hinge assembly (See Fig. 13-83).
 - c. Without changing fore and aft location of male hinge, adjust male hinge up or down as required to obtain proper alignment between side roof rail and rear quarter window.
 - d. Tighten attaching bolts, while maintaining proper alignment of scribe marks.
 - e. Check fit of top material at rear quarter trim stick area and, if necessary, adjust trim stick. If adjustment is not necessary, tighten trim stick attaching bolts.
 - f. On styles equipped with manually-operated folding tops, adjust folding top catch clips as required. (See "Manually Operated Folding Top Hardware").

3. If top does not stack properly when top is in down position proceed as follows:

- a. Scribe location of male hinge attaching bolt washers on folding top compartment brace.
- b. Loosen male hinge assembly.
- c. Rotate male hinge forward to lower stack height or rearward to raise stack height (Fig. 13-83).

NOTE: When rotating male hinge be certain position of rear rail to male hinge is maintained (Fig. 13-83).

d. Tighten attaching bolts, while maintaining proper alignment of scribe marks.

e. On styles equipped with manually operated folding tops, adjust both folding top catch clips as required (See "Manually Operated Folding Top Hardware").

TROUBLE SHOOTING CHART

The following procedure describes and illustrates various types of folding top misalignment conditions, their apparent causes and the recommended procedure for their correction.

TROUBLE SHOOTING CHART

| CONDITION | APPARENT CAUSE | CORRECTION |
|--|---|--|
| A. Difficult locking action at front roof rail. | 1. Lock hook improperly adjusted. | Adjust lock hook counterclockwise. (See View "A" in Fig. 13-84). |
| | 2. Misaligned front roof rail front weatherstrip. | Loosen, realign and retack front roof rail front weatherstrip. |
| | 3. Front roof rail misaligned. | Adjust front roof rail. (View "A" in Fig. 13-84). |
| B. Top does not lock tight enough to windshield header. | 1. Lock hook improperly adjusted. | Adjust lock hook clockwise. (See View "A" in Fig. 13-84). |
| | 2. Misaligned front roof rail front weatherstrip. | Loosen, realign and retack front roof rail front weatherstrip. |
| | 3. Front roof rail misaligned. | Adjust front roof rail. |
| C. Top travels too far forward. | 1. Front roof rail misaligned. | Adjust front roof rail rearward (See View "A" in Fig. 13-84). |
| | 2. Male hinge assembly misaligned. | Adjust male hinge assembly rearward. (Fig. 13-83). |
| D. Top does not travel forward far enough. | 1. Front roof rail misaligned. | Adjust front roof rail forward. (See View "A" in Fig. 13-84). |
| | 2. Male hinge assembly misaligned. | Adjust male hinge assembly forward. (Fig. 13-83). |
| E. Side roof rail rear weatherstrip too tight against rear quarter window. | 1. Male hinge assembly misaligned. | Adjust male hinge assembly rearward. (Fig. 13-83). |

TROUBLE SHOOTING CHART (CONT'D.)

| CONDITION | APPARENT CAUSE | CORRECTION |
|---|--|--|
| F. Gap between side roof rail rear weatherstrip and rear of rear quarter window. | 1. Male hinge assembly misaligned. | Adjust male hinge assembly forward and/or shim side roof rail rear weatherstrip forward as required (Fig. 13-83). |
| G. Side roof rail rear weatherstrip too tight against top of rear quarter window. | 1. Male hinge misaligned. | Adjust male hinge upward. (Fig. 13-83). |
| H. Gap between side roof rail rear weatherstrip and top of rear quarter window. | 1. Male hinge misaligned. | Adjust male hinge downward and/or shim side roof rail rear weatherstrip downward as required. (Fig. 13-83). |
| I. Sag at front to center side roof rail joint. | 1. Control link misaligned. 2. Center side roof rail hinge adjusting screw improperly adjusted. | Adjust control link downward. (Fig. 13-83). Adjust screw counterclockwise. (See View "B" in Fig. 13-84). |
| J. Front and center side roof rails bow upward at hinge joint. | 1. Control link misaligned. 2. Center side roof rail hinge adjusting screw improperly adjusted. | Adjust control link upward. (Fig. 13-83). Adjust screw clockwise. (See View "B" in Fig. 13-84). |
| K. Folding top dust boot is difficult to install. | 1. Improper stack height due to misaligned male hinge assembly. 2. Excessive build-up of padding in side roof rail stay pads. 3. On manual tops, due to improperly adjusted catch clips. | Rotate male hinge forward or rearward as required. (Fig. 13-83). Repair side stay pads as required. Adjust catch clips downward as required. |

TROUBLE SHOOTING CHART (CONT'D.)

| CONDITION | APPARENT CAUSE | CORRECTION |
|--|---|--|
| L. Folding top dust boot fits too loosely. | <ol style="list-style-type: none"> 1. Improper stack height due to misaligned male hinge assembly. 2. On manual tops, due to improperly adjusted catch clips. | <p>Rotate male hinge assembly rearward as required. (Fig. 13-83).</p> <p>Adjust catch clips upward as required.</p> |
| M. Top material is too low over windows or side roof rails. | <ol style="list-style-type: none"> 1. Front roof bow improperly shimmed. 2. Excessive width in top material. | <p>*Install one or two 1/8" shims between front roof bow and slat iron. (See View "B" in Fig. 13-84).</p> <p>If top is too large, detach binding along affected area, trim off excessive material along side binding as required; then hand sew binding to top material.</p> |
| N. Top material is too high over windows or side roof rails. | <ol style="list-style-type: none"> 1. Front roof bow improperly shimmed. | <p>*Remove one or two 1/8" shims from between front roof bow and slat iron. (See View "B" in Fig. 13-84).</p> |
| O. Top material has wrinkles or draws. | <ol style="list-style-type: none"> 1. Rear quarter trim stick improperly adjusted. 2. Top material improperly installed to center or rear quarter trim stick. | <p>Adjust rear quarter trim stick on side affected.</p> <p>Retack top material as required.</p> |
| P. Wind whistle or waterleak along front roof rail. | <ol style="list-style-type: none"> 1. Misaligned front roof rail front weatherstrip. | <p>Retack front weatherstrip to front roof rail.</p> |
| <p>*When no shims are required or when installing only one shim, use attaching screw part #4412844 (1/4 - 20 x 5/8" oval head with external tooth lock washer, type "T-T" tapping screw, chrome finish).</p> <p>When two shims are required, use attaching screw part #4412619 (1/4 - 20 x 3/4" oval head with external tooth lock washer, type "T-T" tapping screw, chrome finish).</p> | | |

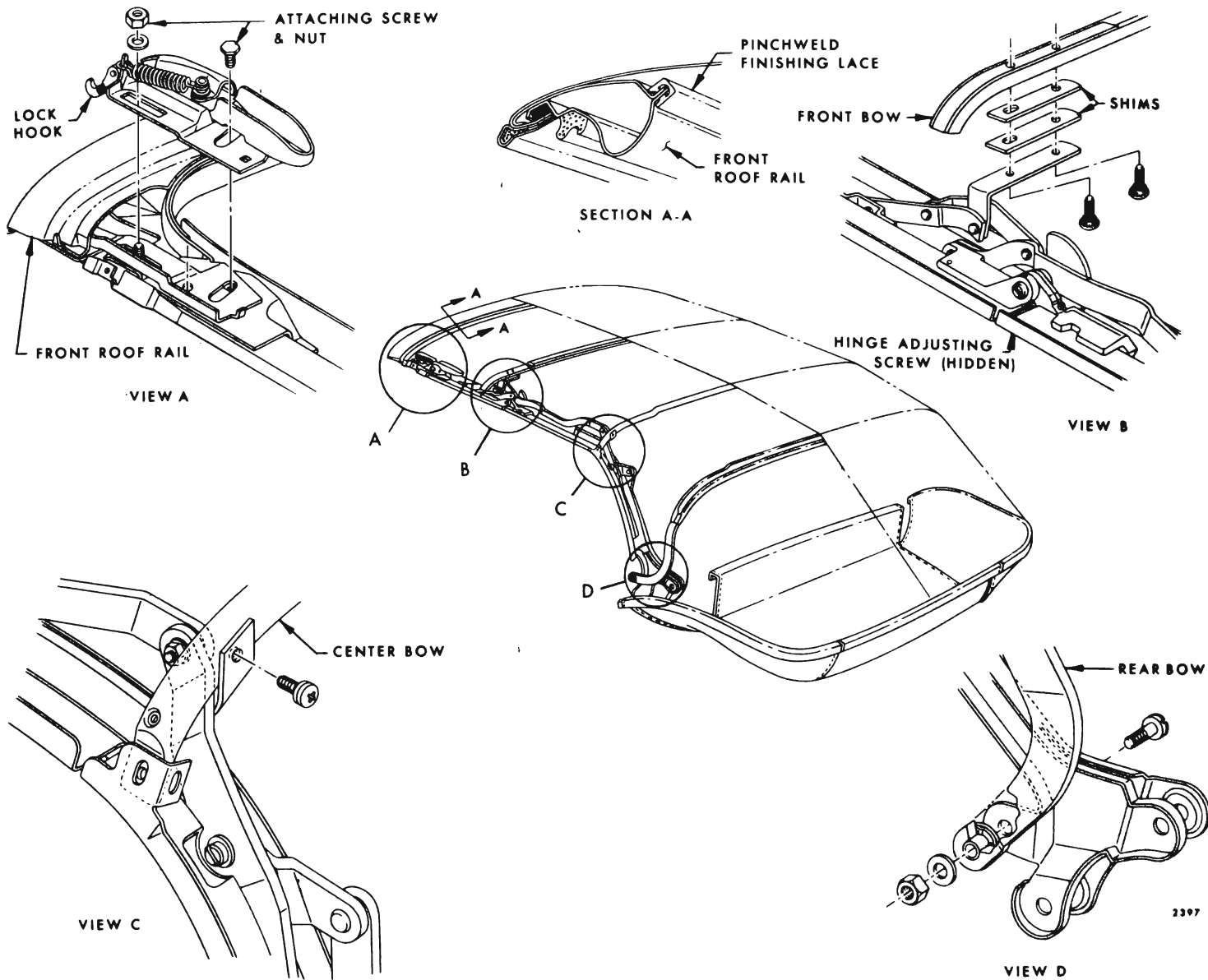


Fig. 13-84—"F" Body Folding Top Adjustments