Body by Fisher

1967
SERVICE MANUAL

1967 FISHER BODY SERVICE MANUAL

FOR ALL
BODY STYLES

This publication contains the essential removal, installation, adjustment and maintenance procedures for servicing all 1967 Fisher Body Styles. All information, illustrations, and specifications contained in this publication are based on the latest product information available at the time of publication approval. The right is reserved to make changes at any time without notice.

Arrangement of the material is shown by the table of contents on the right-hand side of this page. Black tabs on the first page of each section can be seen on the edge of the book below the section title. A more detailed table of contents precedes each section, and an alphabetical index is included in the back of the manual.

TABLE OF CONTENTS

SECTION	TITLE
1	GENERAL INFORMATION
2	LUBRICATION
3	UNDERBODY
4	STATIONARY GLASS
5	FRONT END
6	DOORS
7	REAR QUARTERS
8	REAR COMPARTMENT LID
9	TAIL GATE
10	TRIM CLEANING
11	HEADLINING
12	ROOF COVER
13	FOLDING TOP
14	DOOR, QUARTER AND SHELF TRIM
15	SEATS
16	ELECTRICAL
17	EXTERIOR MOLDINGS
18	INDEX

FISHER BODY DIVISION
PART NO. 4228136

LITHO IN U.S.A.
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NOTE

Scheduling revisions prevented the incorporation of service procedure references pertaining to the "Z-67" body style in this service manual. Due to basic similarity in design, service procedures specified in this manual for the "Z-37" style can be utilized when servicing the "Z-67" style, with a few exceptions.

For basic service procedures concerning the "Z-67" rear quarter window mechanism, folding top adjustment, folding top stay pad dimensions or folding top electric actuator, refer to the 1966 Fisher Body Service Manual. The Folding Top Trim Assembly operations are the same as for other series convertibles in Section 13 of this 1967 manual.

SECTION 1
GENERAL INFORMATION

INDEX

Subject	Page
Manual Description	1-1
Introduction	1-1
Index	1-1
Page and Figure Numbers	1-1
Reference Tabs	1-1
Text	1-1
Illustrations	1-1
Body Number Plate	1-1
Model Identification	1-1
Introduction	1-1
Body Style Number	1-2
Body Style Number Series	1-2
Body Style Number Suffix	1-2
Body Type Name	1-2
Body Type Letter	1-2
Wood Grain Treatment	1-3
Description	1-3
Removal	1-3
Installation	1-3

MANUAL DESCRIPTION

INTRODUCTION

This publication contains the essential removal, installation, adjustment and maintenance procedures for servicing all 1967 Fisher Body Styles. This information is current as of time of publication approval.

INDEX

The preceding page contains a "Table of Contents" which lists the section number and subject title of each main body area section. The first page in each main body area section has an index to the subjects included in that section. An alphabetic index covering the entire manual is located in section 18.

PAGE AND FIGURE NUMBERS

All page numbers and figure numbers consist of two sets of digits separated by a dash. The digits preceding the dash identify the main body area section. The digits following the dash represent the consecutive page number or figure number within the particular body area section.

REFERENCE TABS

The first page of each section is marked with a ready-reference black tab corresponding with the table of contents page.

TEXT

Unless otherwise specified, each service procedure covers all body styles. Procedures covering specific styles are identified by the style number, body series number, body type letter or similar designation. A description of these designations is covered in this section under "Model Identification".

ILLUSTRATIONS

Where possible, illustrations are placed in close proximity to the accompanying text and should be used as part of the text.

BODY NUMBER PLATE

The body number plate identifies the body style, body assembly plant, body number, trim combination number, paint code and time built code (Fig. 1-1). On Corvair styles, the body number plate is attached to the left side of the motor compartment cross rail. On Cadillac "C" & "D" styles, the plate is located on the left upper portion of the horizontal surface of the cowl. On all other cars, the plate is located on the left upper portion of the vertical surface of the dash firewall.

MODEL IDENTIFICATION

INTRODUCTION

Due to the wide variety of body styles available, certain body styles have been grouped in this publication as an aid to identification. These group designations may be used individually or in various combinations. An explanation of the principal categories follows:

BODY STYLE NUMBER

The body style number consists of five digits as they appear on the body number plate. (Refer to previous section for body number plate location.) The body style number is used to include or exclude a specific style (ex. on 16637, use . . . . . .; on all styles, except the 68069 style, use . . . . . .).

BODY STYLE NUMBER SERIES

The body style number series may be used to indicate three possibilities:

Division - first digit and four zeros (ex. 10000 Chevrolet; 20000 Pontiac).
Division and Car Line - first two digits and three zeros (ex. 33000 Oldsmobile F 85; 45000 Buick LeSabre).
Division, Car Line and Style Group - First three digits and two zeros (ex. 25200 Catalina; 25600 Star Chief).

BODY STYLE NUMBER SUFFIX

The last two digits of the body style number indicate body type as follows:

07 - 2 door sport coupe with pillar post (strut back)
11 - 2 door sedan with pillar post
17 - 2 door sport coupe hardtop (strut back)
23 - 4 door sedan with auxiliary center seat
33 - 4 door sedan with auxiliary center seat and center partition window
35 - 4 door station wagon two seat
37 - 2 door coupe hardtop
39 - 4 door sedan hardtop
45 - 4 door station wagon three seat
47 - 2 door sport coupe hardtop

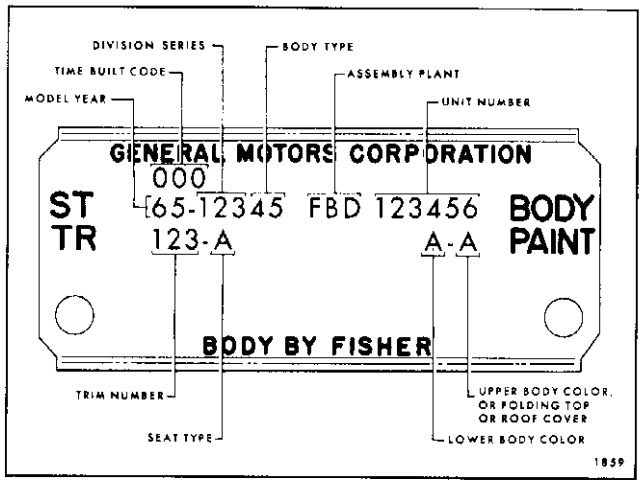


Fig. 1-1—Body Number Plate

49 - 4 door sedan hardtop
55 - 4 door station wagon two seat with skylight
57 - 2 door sport coupe hardtop
65 - 4 door station wagon three seat with skylight
67 - 2 door convertible coupe
69 - 4 door sedan with pillar post (some models equipped with door window frames)
80 - 2 door pick-up delivery
87 - 2 door sport coupe hardtop (plain back)

BODY TYPE NAME

Body type names are used for group classification as follows (style number suffix shown in brackets):

Closed Style
Two door sedan (11)
Two door sport coupe (07)
Four door sedan (69)
Limousine (23, 33)

Hard Top
Sport coupe hardtop (17, 47, 57, 87)
Coupe hardtop (37)
Sedan hardtop (39, 49)

Station Wagon
Station wagon two seat (35 less skylight; 55 with skylight)
Station wagon three seat (45 less skylight; 65 with skylight)

Convertible Coupe (67)

Sedan Delivery (80)

BODY TYPE LETTER

Basic body types can be identified by generic group classifications as follows:

"A" - Chevrolet 13000 Series
Pontiac 23-24000 Series
Oldsmobile 33000 Series
Buick 43-44000 Series

"B" - Chevrolet 15-16000 Series
Pontiac 25-26000 Series
Oldsmobile 35000 Series
Buick 45-46000 Series

"C" - Oldsmobile 384-386-39800 Series
Buick 482-48400 Series
Cadillac 68000 Series

"D" - Cadillac 69700 Series

"E" - Oldsmobile 394-39600 Series
Buick 49000 Series
Cadillac 69300 Series

"F" - Chevrolet 12000 Series
"X" - Chevrolet 11000 Series
"Z" - Chevrolet 10000 Series

WOOD GRAIN TREATMENT

STATION WAGONS AND SEDAN DELIVERY

DESCRIPTION

The wood grain transfer film is a vinyl material with a pressure sensitive adhesive backing. The transfers are serviced in pre-cut panels.

REMOVAL

Remove the moldings from the affected panel (see Molding Section 17). The transfer film may then be removed by lifting an edge and peeling the material from the painted surface. Exercise care so as not to damage the paint.

NOTE: Application of heat to the transfer and the panel by means of a heat gun or heat lamp will aid in the removal.

INSTALLATION

Preparation of the surface to which the transfer will be applied is very important. In cases where body metal repair has been made, it is necessary to prime and color coat these areas to blend with the undamaged surface. Apply the transfer film to color coated panels only, never to bare metal or primer. The surface must be free of any imperfections that may high-light through the film. Remove dirt nibs and other foreign material in the paint by light sanding with 600 grit sandpaper.

The temperature of the body must be maintained at a moderate level between approximately 65 and 90 degrees. Too warm a body will cause the wood grain film to stick prematurely while too cool a body will reduce the adhesion of the wood grain film. Cool the body panel with cool water when too warm and heat the body panel with a heat gun or a heat lamp when too cold. Just prior to application of the transfer film clean the painted surface with a non-petroleum base volatile cleaner and allow to dry.

The following are the recommended steps for easy application of the film.

1. Cut the paper backing the entire width of the transfer at the approximate centerline of the film exercising care not to damage the transfer film.
2. Peel the paper backing from one half of the film.
3. Align the upper edge of the half of the film with the paper backing to the lower edge of the pierced molding holes making sure that the transfer is centered on the panel.
4. Starting at the center of the transfer and using a water dampened rag, press that half of the transfer with the backing removed on to the panel. Work outboard from the middle to the edges. Remove all air bubbles.

   NOTE: The transfer can be pulled back from the panel and reinstalled if large air pockets develop. Exercise care not to stretch the material. Small air bubbles may be removed by piercing the film at the bubble with a pin and pressing the bubble down.
5. Remove the backing from the other half of the transfer. Apply this half in the same manner working from the center to the end and from the middle to the upper and lower edges.
6. Fold the transfer over the door or quarter edges and press to the hemming flanges. Application of heat with a heat lamp or heat gun will aid in folding the transfer over the edge.

   NOTE: If the transfer film will not adhere to the flange, brush a clear vinyl adhesive to the back edge of the film and reapply.
7. Reinstall the moldings.

SECTION 2

LUBRICATION

INDEX

Subject	Page
Instrument Panel Compartment Door	2-1
Front Door Hinge Hold-Open Assembly	2-1
Rear Door Hinge Hold-Open Assembly	2-1
Door Lock Fork Bolt and Rotary Bolt	2-1
Door Lock Striker	2-1
Door Jamb Switch	2-2
Door Lock Mechanism and Lock Parts	2-2
Front Compartment Lid Lock	2-2
Door Window Regulator and Cams - Styles with Upper Frames	2-2
Door Window Regulator Cams and Guides - Styles without Upper Frames	2-2
Rear Quarter Window Regulator Cams and Guides.	2-4
Rear Compartment Lid Lock	2-5
Rear Compartment Hinges and Torque Rods	2-5
Tail Gate Window Regulator and Cams (Station Wagon)	2-5
Tail Gate Lock Striker (Station Wagon)	2-5
Tail Gate Hinges (Station Wagon)	2-5
Gas Tank Filler Door Hinge	2-5
Folding Seat Linkage	2-5
Front Seat Adjuster Mechanism	2-6
Convertible Top Linkage	2-6

DESCRIPTION

The movable mechanical parts of the body are lubricated at the factory to insure proper and quiet operation. If additional lubrication is required, the following specified materials or their equivalents should be used at the locations listed.

INSTRUMENT PANEL COMPARTMENT DOOR HINGE

Wipe off dirt and apply a sparing amount of dripless oil to the hinge frictional points. Operate door and wipe off excess lubricant.

FRONT DOOR HINGE HOLD-OPEN ASSEMBLY

Wipe off dirt and apply engine oil to points indicated (Fig. 2-1).

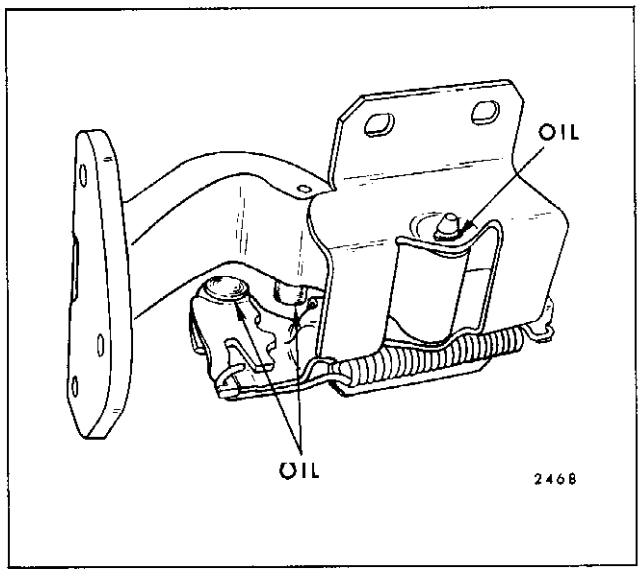


Fig. 2-1 — Front Door Hinge Hold-Open Assembly

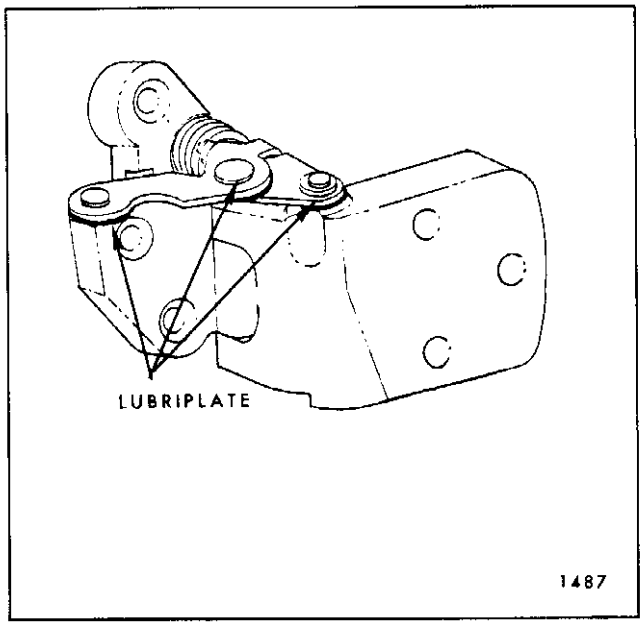


Fig. 2-2 — Rear Door Hinge Hold-Open Assembly

REAR DOOR HINGE HOLD-OPEN ASSEMBLY

Wipe off dirt and apply a light coat of Lubriplate to frictional points (Fig. 2-2). Wipe off excess lubricant.

DOOR LOCK FORK BOLT AND ROTARY BOLT

Wipe off dirt and apply a thin coat of stick-type lubricant and oil (Fig. 2-3 and 2-4).

DOOR LOCK STRIKER

Wipe off dirt and apply a thin coat of stick-type lubricant to top surface of striker teeth at areas indicated (Fig. 2-5).

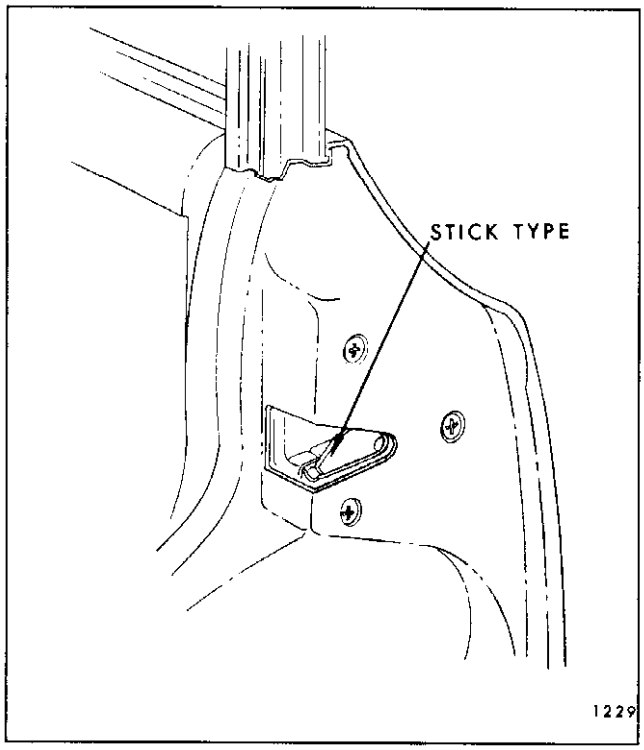


Fig. 2-3 — Door Lock Fork Bolt and Rotary Bolt

DOOR JAMB SWITCH

Wipe off dirt and apply a thin coat of Lubriplate to end surface of switch plunger and remove excess lubricant.

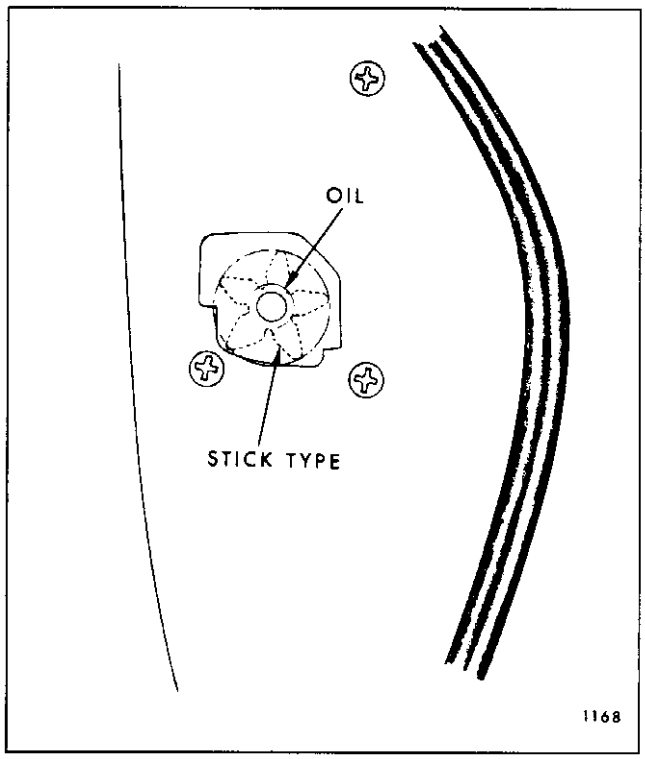


Fig. 2-4 — Door Lock Fork Bolt and Rotary Bolt

DOOR LOCKING MECHANISM AND LOCK PARTS

Apply Lubriplate to pivot points at ends of connecting rods and moving parts of lock.

FRONT COMPARTMENT LID LOCK

On front compartment lid lock apply a thin coat of Lubriplate to contact point as indicated (Fig. 2-6).

DOOR WINDOW REGULATOR AND CAMS—STYLES WITH UPPER FRAMES

Apply a coat of Lubriplate to areas indicated, (Fig. 2-7). Lubrication of front and rear doors with upper frames is typical.

DOOR WINDOW REGULATOR CAMS AND GUIDES—STYLES WITHOUT UPPER FRAMES

Apply a coat of Lubriplate to areas indicated. (Fig. 2-8). Lubrication of front and rear doors without upper frames is typical.

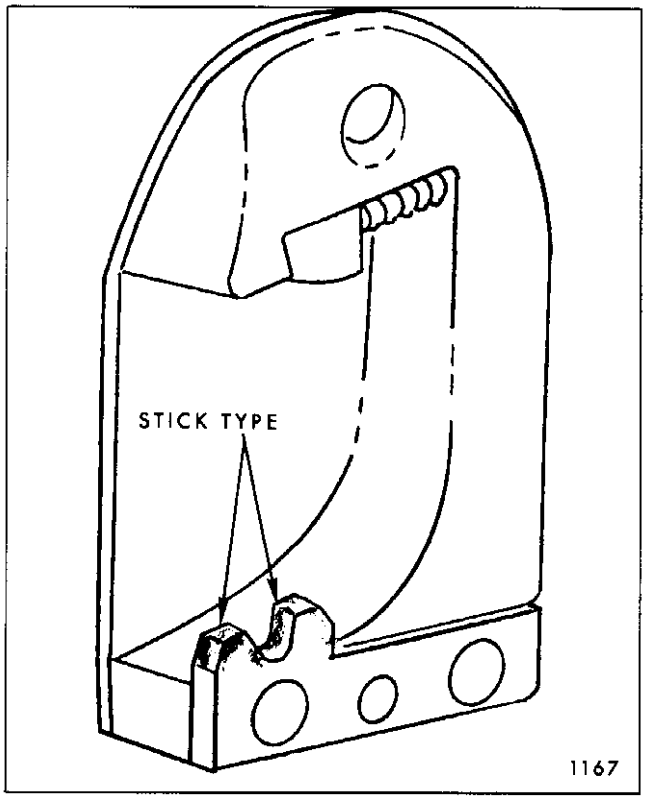


Fig. 2-5 — Door Lock Striker

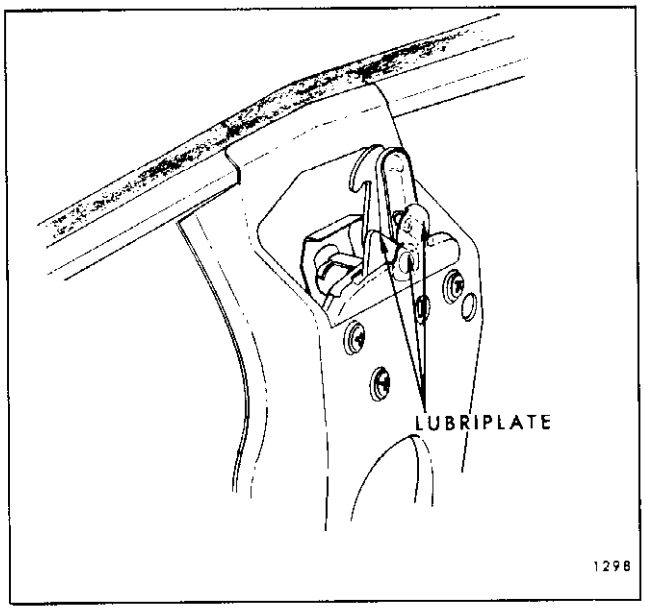


Fig. 2-6 — Front Compartment Lid Lock

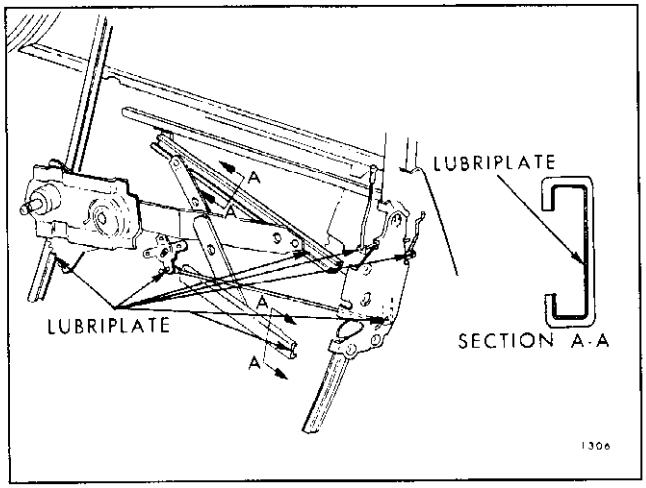


Fig. 2-7 — Door Window Regulator and Cams On Styles With Upper Frames

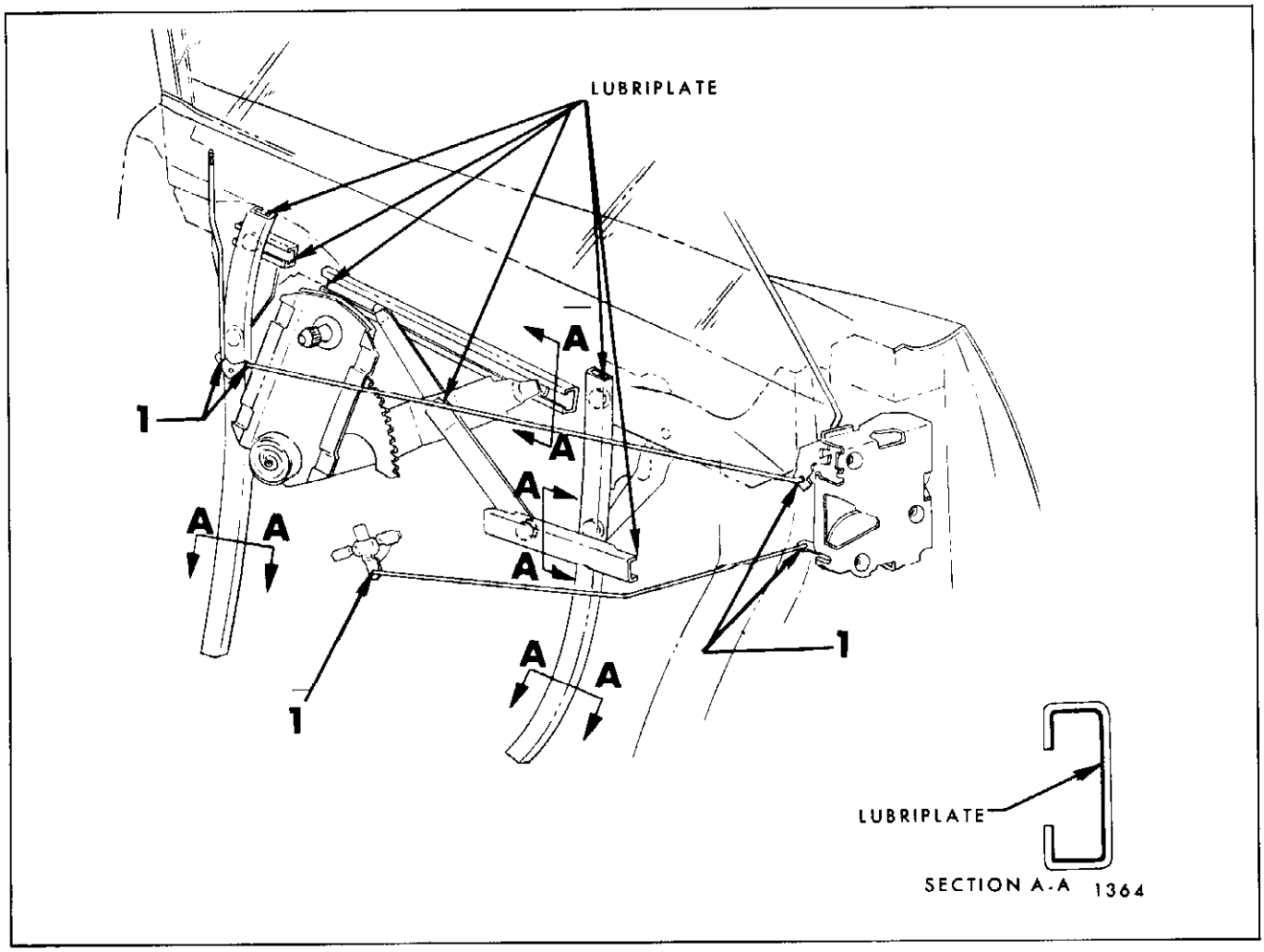


Fig. 2-8 — Door Window Regulator and Cams On Styles Without Upper Frames

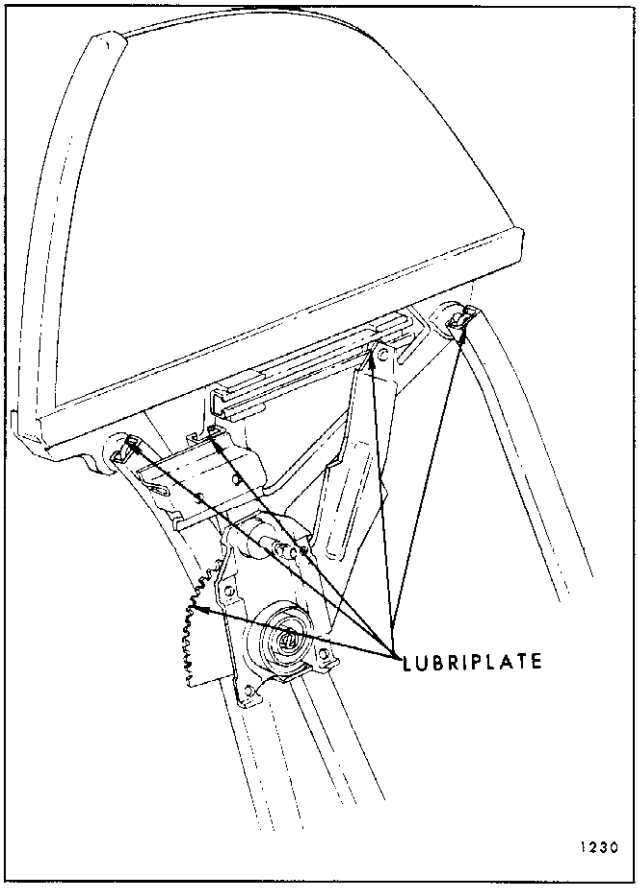


Fig. 2-9 — Rear Quarter Window Regulator Cams and Guides

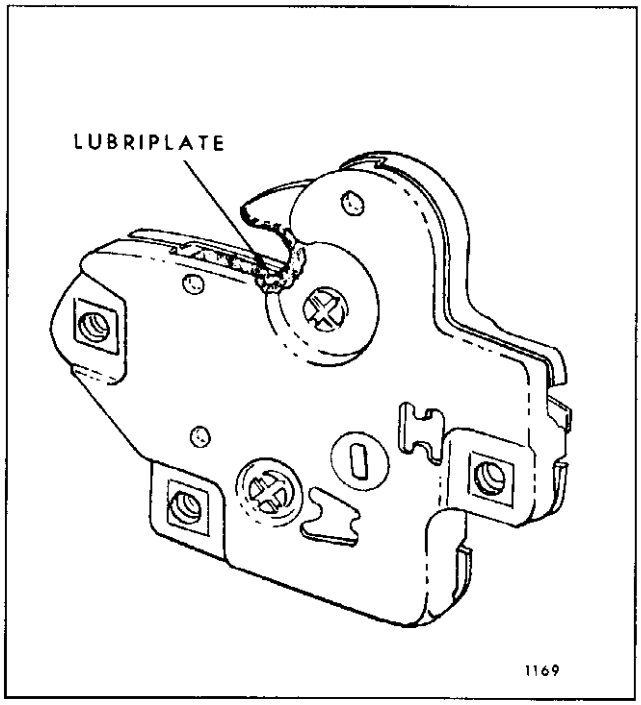


Fig. 2-10 — Rear Compartment Lid Lock

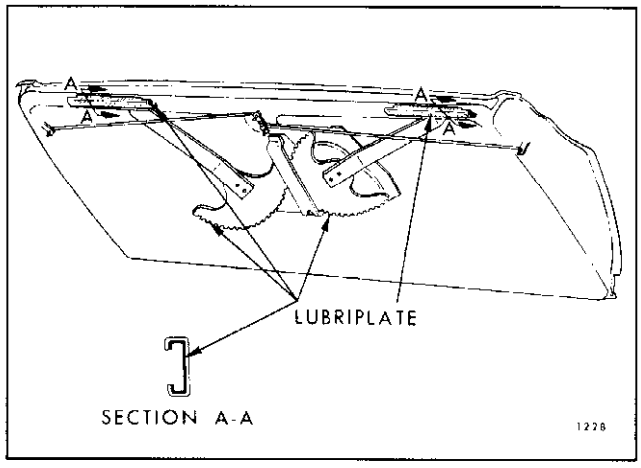


Fig. 2-11 — Tail Gate Window Regulator and Cams (Station Wagons)

REAR QUARTER WINDOW REGULATOR CAMS AND GUIDES

Apply a coat of Lubriplate to regulator, cams and guides. Lubrication shown is typical of points to be lubricated on other quarter window regulators, etc. (Fig. 2-9).

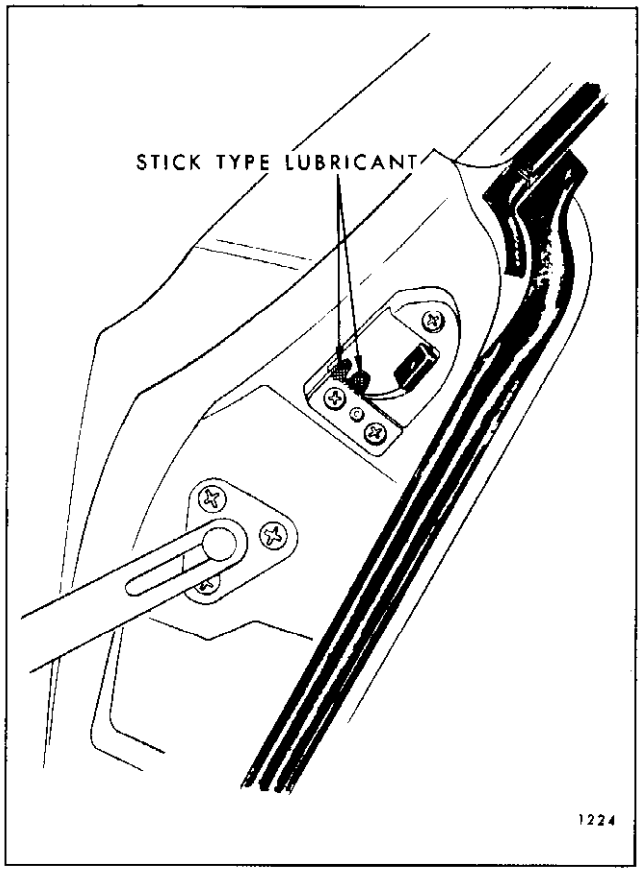


Fig. 2-12 — Tail Gate Lock Striker Station Wagon

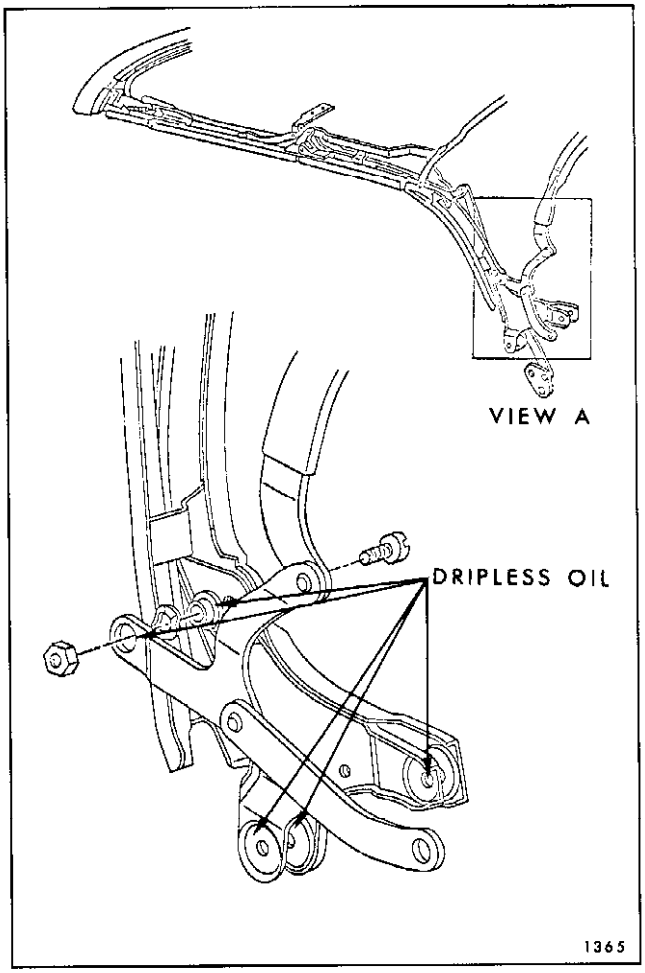


Fig. 2-13 — Convertible Top Linkage - "B and C" Styles

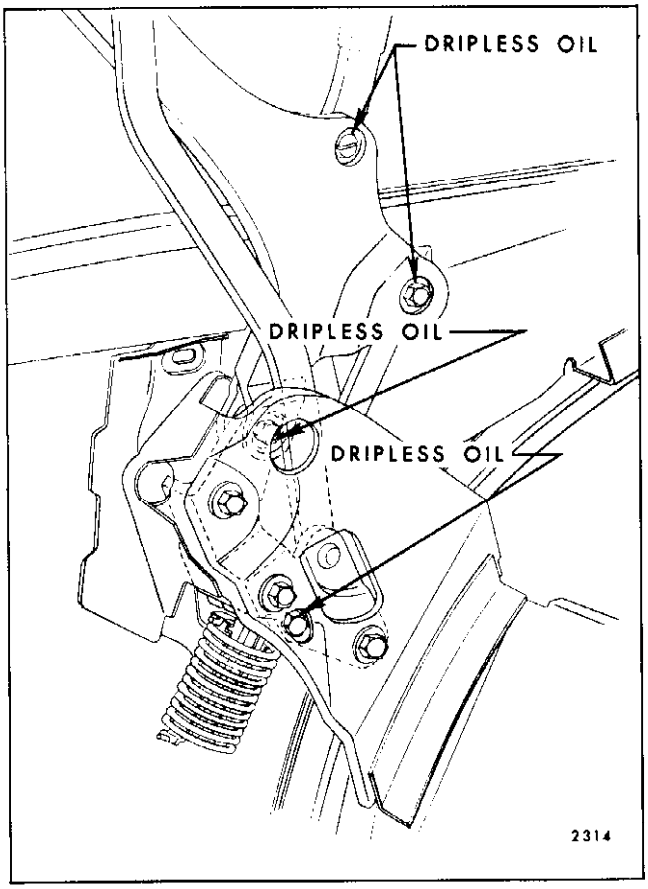


Fig. 2-14 — Convertible Top Linkage - "A" Styles
(Manual Type Shown)

REAR COMPARTMENT LID LOCK

Apply a thin coat of Lubriplate to lock bolt (Fig. 2-10).

REAR COMPARTMENT HINGES AND TORQUE RODS

Apply Lubriplate and or dripless oil to frictional points as required. Wipe off excess lubricant.

TAIL GATE WINDOW REGULATOR AND CAMS (station wagon)

Apply Lubriplate to areas indicated (Fig. 2-11).

TAIL GATE LOCK STRIKER (station wagon)

Apply a thin coat of stick-type lubricant to surface of striker teeth. After lubrication, close tailgate several times and remove excess lubricant (Fig. 2-12).

TAIL GATE HINGES (station wagon)

Apply a sparing amount of dripless oil to frictional parts, work tail gate several times and remove excess lubricant.

GAS TANK FILLER DOOR HINGE

Apply a few drops of dripless oil to frictional points of door hinge, work door several times and remove excess lubricant.

FOLDING SEAT LINKAGE

Wipe off dirt and apply a sparing amount of dripless oil to all frictional areas. Work linkage several times and wipe off excess lubricant.

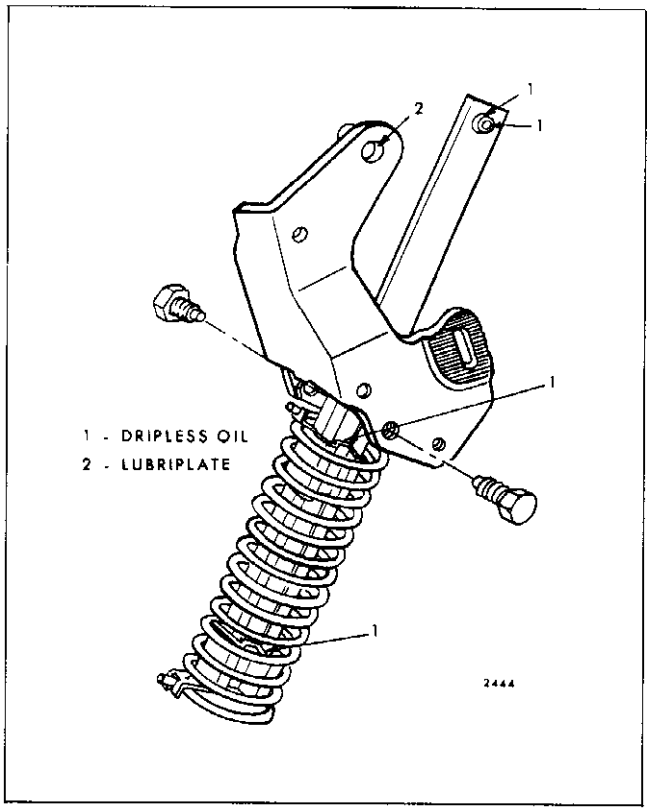


Fig. 2-15 — Convertible Top Linkage - "F" Styles

FRONT SEAT ADJUSTER MECHANISM (Manually and Electrically Operated)

Thoroughly wipe off old lubricant. Apply a thin coat of lubriplate to jack screws and tracks. Operate seat to limits of all positions. Apply a small amount of dripless oil to linkage and wipe off excess lubricant.

CONVERTIBLE TOP LINKAGE

Apply Lubriplate or dripless oil to points indicated (Fig. 2-13, 2-14 and 2-15). Wipe off excess lubricant to prevent soiling trim.

SECTION 3

UNDERBODY

INDEX

Subject	Page
Underbody Alignment - Corvair	
General Construction	3-1
Underbody General Service	3-1
Alignment Checking	
Body Tram Gage	3-2
Reference Point Dimensions	3-2
Horizontal Dimensions	3-3
Vertical Dimensions	3-5
Underbody Alignment - Chevy II	3-5
General Construction	3-5
Underbody General Service	3-6
Alignment Checking	3-7
Body Tram Gage	3-7
Principles of Tramming	3-7
Car Preparation	3-7
Tramming Sequence	3-8
Reference Point Dimensions	3-8
Horizontal Dimensions - Front End Skirt	3-9
Horizontal Dimensions - Body	3-10
Vertical Dimensions	3-11
Cowl and Dash Dimensions	3-12
Underbody Alignment -"F" Body Styles	3-12
Description	3-12
Reference Point Dimensions	3-12
Horizontal Dimensions	3-12
Vertical Dimensions	3-14

UNDERBODY ALIGNMENT
All Corvair Styles

GENERAL BODY CONSTRUCTION

The body design used on the 10000 series is of an integral, all steel, welded construction, commonly known as "unitized" body construction. The over-all rigidity of the body is drawn from each of the individual metal components which, when welded together, comprise the body shell assembly. Panels forming the underbody area incorporate attachment provisions for the power train and the suspension systems. These panels, therefore, contribute the greatest amount of strength to the body assembly.

UNDERBODY GENERAL SERVICE INFORMATION

The underbody assembly is comprised of frame side rails, frame cross rails, floor pan cross bars, inner and outer rocker panels and other floor panel components. The underbody is of all-welded construction. The slightest misalignment in the underbody can affect door, front compartment lid, and engine compartment lid fits. Most important, however, underbody misalignment can influence the suspension system, thereby causing many of the problems that arise from a suspension misalignment. It is essential, therefore, that underbody alignment be exact to within 1/16" of the specified dimensions.

In the event of collision damage it is important that underbody alignment be thoroughly checked and, if necessary, realigned in order to accurately establish suspension, steering and engine mounting locations. There are many classifications of tools that may be employed to correct the average collision damage situation including frame straightening machines, lighter external pulling equipment and standard body jacks.

Frame tools are not considered as essential equipment for average collision repair operations; however, there will be many situations with this unitized type of construction as with other types of frame construction, where frame equipment will be required. There are also areas of repair where, even though not essential, frame equipment may prove beneficial.

IMPORTANT: Since each individual underbody component contributes directly to the over-all strength of the body, it is essential that proper welding, sealing and rust proofing techniques be observed during service operations. Underbody components should be rust-proofed whenever body repair operations, which destroy or damage the original rust-proofing, are completed. Particularly critical are the enclosed box areas. When rust-proofing critical under body components, it is essential that a good quality type of air dry primer be used (such as corrosion resistant zinc chromate). It is not advisable to use combination type of primer surfacers.

To assist in checking alignment of the underbody components, repairing minor underbody damage or locating replacement parts, the following underbody dimensions and alignment checking information is presented.

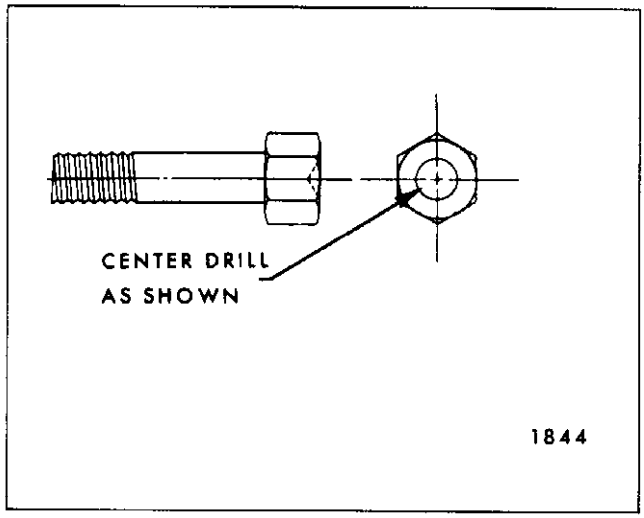


Fig. 3-1—Tram Gage Centering Bolt

ALIGNMENT CHECKING INFORMATION

Body Tram Gage

An accurate method of determining the alignment of the underbody utilizes a measuring tram gage. The tram gage required to perform all recommended measuring checks properly must be capable of extending to a length of 102". At least one of the vertical pointers must be capable of a maximum reach of 18".

Dimensions shown in the upper portion of Figure 3-2 are calculated on a horizontal plane parallel to the plane of the underbody. Precision measurements can be made only if the tram gage is also parallel to the plane of the underbody. This can be controlled by setting the vertical pointers on the tram gage according to the dimensions shown in the lower portion of Figure 3-2.

A proper tramming tool is essential for analyzing and determining the extent of collision misalignment present in underbody construction.

To facilitate centering the tram gage pointers at the suspension locations, special centering bolts (same size and thread as original attaching bolts) may be prepared as shown in Figure 3-1. Use center of bolt thread diameter for centering drill point. Depth of drilled-out cone should be the same for all centering bolts being used as a "set".

Underbody Alignment Reference Point Dimensions—(Fig. 3-2)

Dimensions to gage holes and other unthreaded holes are measured to dead center of the holes and

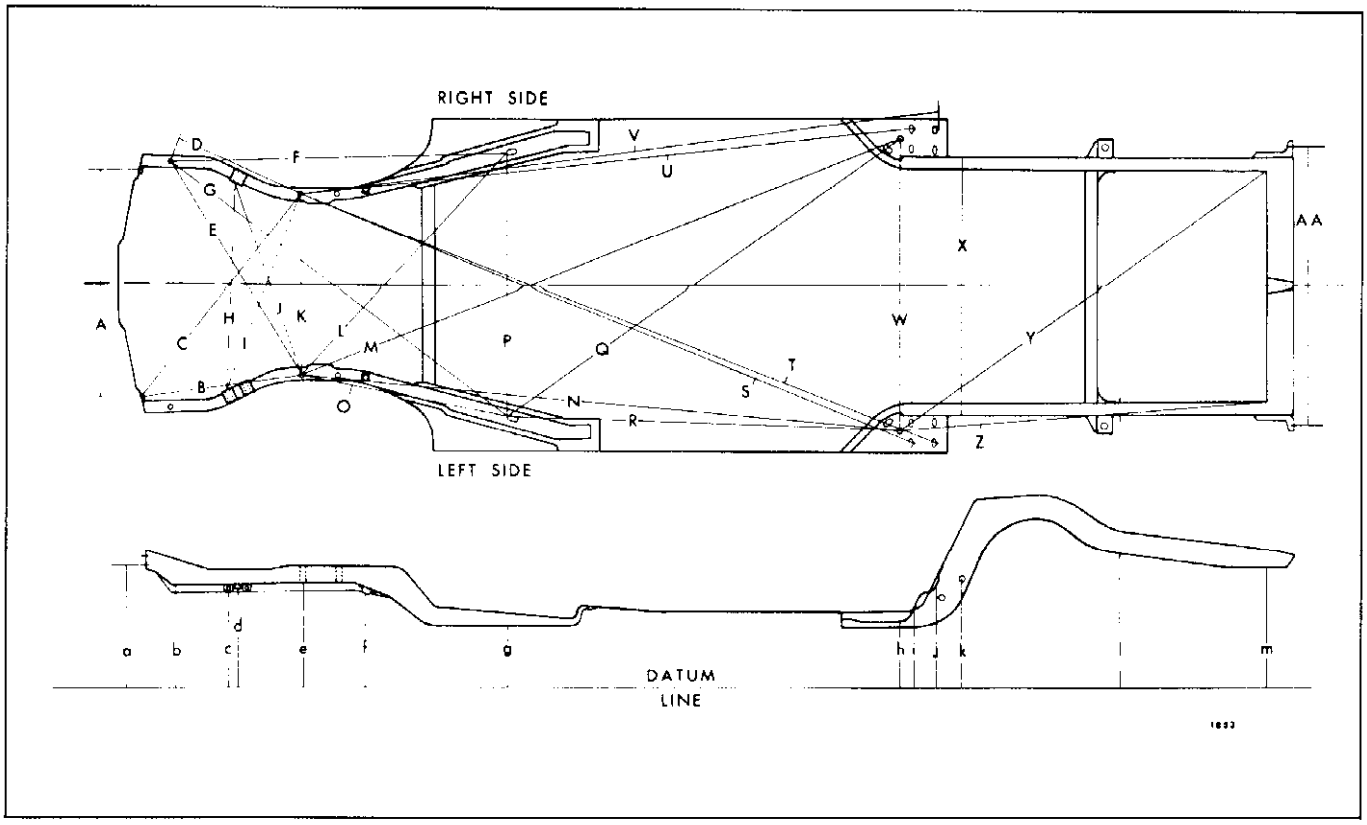


Fig. 3-2—Underbody Vertical Alignment Ref. Points

flush to the adjacent surface metal. Dimensions to body front tie down slots are measured to the front centerline edge of the slot (see Fig. 3-3). Dimensions to bolt or bolt hole locations are measured to the dead center of the thread diameter of the bolt or bolt hole, unless specified otherwise.

The following reference points are key locations and should be used wherever possible as a basis for checking other reference points:

1. Front suspension front attaching bolt holes or bolt heads.
2. 3/4 inch master gage hole in motor compartment side rail-to-rocker panel brace.
3. Rear suspension control arm lower and upper outer attaching bolt holes (upper edge of holes).

Horizontal Dimensions (Fig. 3-2)

Fig. Ref.	Dimension	Location
A	33-7/8	Center of front bumper lower attaching bolt holes.
B	24-3/8	Directly below center of front bumper lower attaching bolt hole and front suspension front attaching bolt head or bolt hole on same side of body.
C	39-1/16	Directly below center of front bumper lower attaching bolt hole and front suspension front attaching bolt hole or bolt head on opposite side of body.
D	15-7/8	3/4" hole in front compartment side rail and front suspension front attaching bolt hole or bolt head on same side of body.
E	35-9/16	3/4" hole in front compartment side rail and front suspension front attaching bolt hole or bolt head on opposite side of body.
F	46	3/4" hole in front compartment side rail and body tie down slot on same side of body (use front center of slot of side rail metal - See Fig. 3-3).
G	59-29/32	3/4" hole in front compartment side rail and body tie down slot on opposite side of body (use front center of slot of side rail metal - See Fig. 3-3).

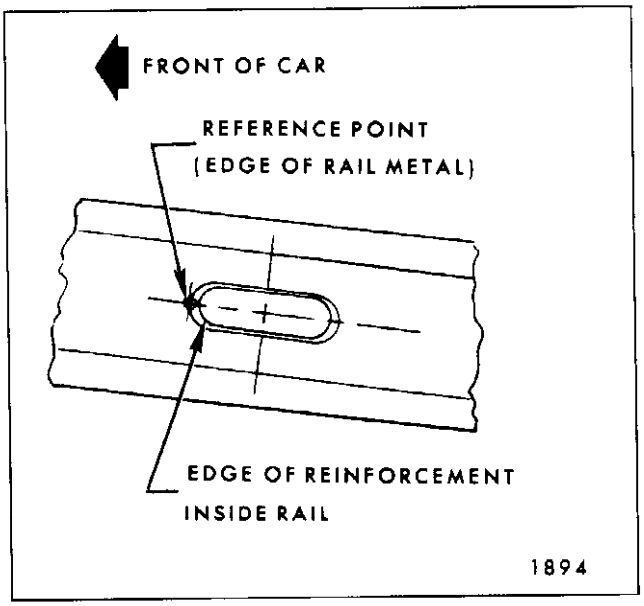


Fig. 3-3—Front Body-Tie Down Slot

Fig. Ref.	Dimension	Location
H	31-7/8	Lower inner edge of steering gear reinforcement directly below center of steering gear front attaching bolt hole (Fig. 3-4) and lower inner edge of front compartment right side rail directly below center of steering gear idler arm support lower attaching bolt hole (Fig. 3-5).

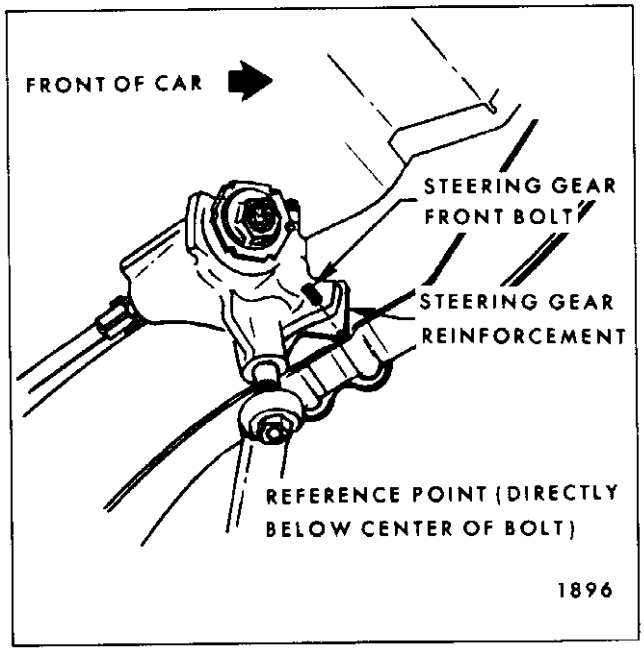


Fig. 3-4—Ref. Point at Steering Gear Reinforcement

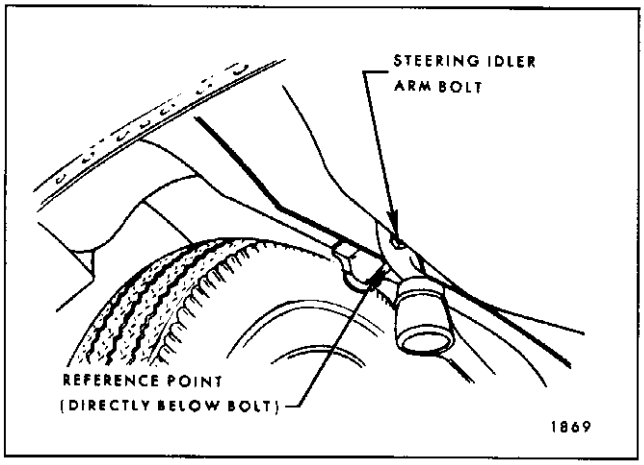


Fig. 3-5—Ref. Point at Steering Idler Arm

Fig. Ref.	Dimension	Location
I	31-15/16	Lower inner edge of steering gear reinforcement directly below center of steering gear front attaching bolt hole (Fig. 3-4) and front suspension front attaching bolt hole or bolt head on opposite side of body.
J	31-1/32	Lower inner edge of front compartment right side rail directly below center of steering gear idler arm support lower attaching bolt hole (Fig. 3-5) and front suspension front attaching bolt hole or bolt head on opposite side of body.
K	27-9/16	Front suspension front attaching bolt hole or bolt head.
L	45-23/32	Front suspension front attaching bolt hole or bolt head and body front tie down slot on opposite side of body (use front center of slot of side rail metal - See Fig. 3-3).
M	96-1/8	Front suspension front attaching bolt hole or bolt head on opposite side of body and 3/4" master gage hole in motor compartment side rail-to-rocker panel brace.
N	89-9/16	Front suspension front attaching bolt hole or bolt head and 3/4" master gage hole in motor compartment side rail-to-rocker panel brace on same side of body.
O	31-3/8	Front suspension front attaching bolt hole or bolt head and body front tie down slot on same side of body (use front center of slot of side rail metal - See Fig. 3-3).
P	40-3/16	Body front tie down slot (use front center of slot of side rail metal - See Fig. 3-3).
Q	72	Body front tie down slot (use front center of slot of side rail metal - See Fig. 3-3) and 3/4" master gage hole in motor compartment side rail-to-rocker panel brace on opposite side of body.
R	58-13/32	Body front tie down slot (use front center of slot of side rail metal - See Fig. 3-3) and 3/4" master gage hole in motor compartment side rail-to-rocker panel brace on same side of body.
S	98-1/8	Front suspension front attaching bolt hole or bolt head and rear suspension control arm lower outer attaching bolt hole (upper edge of hole) on opposite side of body.
T	101-3/8	Front suspension front attaching bolt hole or bolt head and rear suspension control arm upper outer attaching bolt hole (upper edge of hole) on opposite side of body.
U	91-3/8	Front suspension front attaching bolt hole or bolt head and rear suspension control arm lower outer attaching bolt hole (upper edge of hole) on same side of body.
V	94-7/8	Front suspension front attaching bolt hole or bolt head and rear suspension control arm upper outer attaching bolt hole (upper edge of hole) on same side of body.
W	44	3/4" master gage hole in motor compartment side rail-to-rocker panel brace.

Fig. Ref.	Dimension	Location
X	38-15/16	Outside edge of motor compartment side rail directly below transmission support upper attaching bolt. **NOTE:** This dimension is constant rearward to motor compartment rear cross rail.
Y	67-1/2	3/4" master gage hole in motor compartment side rail-to-rocker panel brace and lower edge of joint of motor compartment side rail and motor compartment rear cross rail on opposite side of body.
Z	55-1/32	3/4" master gage hole in motor compartment side rail-to-rocker panel brace and lower edge of joint of motor compartment side rail and motor compartment rear cross rail on same side of body.
AA	41-5/32	Rear bumper lower attaching holes.

Vertical Dimensions (Fig. 3-2)

Fig. Ref.	Dimension	Location
a	15-3/16	Center of front bumper lower attaching bolt holes.
b	12-9/32	Front edge of 3/4" diameter paint hole.
c	11-19/32	Lower inner edge of steering gear reinforcement directly below center of front attaching bolt hole (Fig. 3-4).
d	11-17/32	Lower inner edge of front compartment right side rail directly below center of steering idler arm support lower attaching bolt hole (Fig. 3-5).
e	12-13/32	Front suspension front attaching hole (front suspension removed).
	11-13/16	Front suspension front attaching bolt (suspension installed).
f	10-1/4	Front suspension rear attaching hole (front suspension removed).
	9-3/4	Front suspension rear attaching bolt (suspension installed).
g	6	Lower surface of front compartment side rail at body front tie down slot (front center of slot). Fig. 3-3.
h	6-13/16	3/4" master gage hole in motor compartment side rail-to-rocker panel brace.
i	8-3/8	Rear suspension control arm lower outer attaching bolt hole (upper edge of hole).
j	12-3/8	Rear suspension control arm upper outer attaching bolt hole (upper edge of hole).
k	13-13/32	Transmission support upper attaching bolt hole or bolt head.
l	18	Lower surface of motor compartment side rail at a point 1 inch rearward of read edge of motor compartment corner reinforcement.
m	15-3/32	Lower surface of motor compartment side rail adjacent to front edge of motor compartment rear cross rail.

UNDERBODY ALIGNMENT
Chevy II Styles

GENERAL BODY CONSTRUCTION

Description

Chevy II series bodies are of unitized construction with provisions for the attachment of an independent front end skirt assembly. The front end skirt assembly incorporates attachment provisions for the front end sheet metal, front suspension system, engine and other mechanical components. The removable front end skirt assembly is covered in detail in the "FRONT END SKIRT ASSEMBLY" section of the chassis manual.

The body is of integral all steel, welded construction. The over-all rigidity of the body is drawn

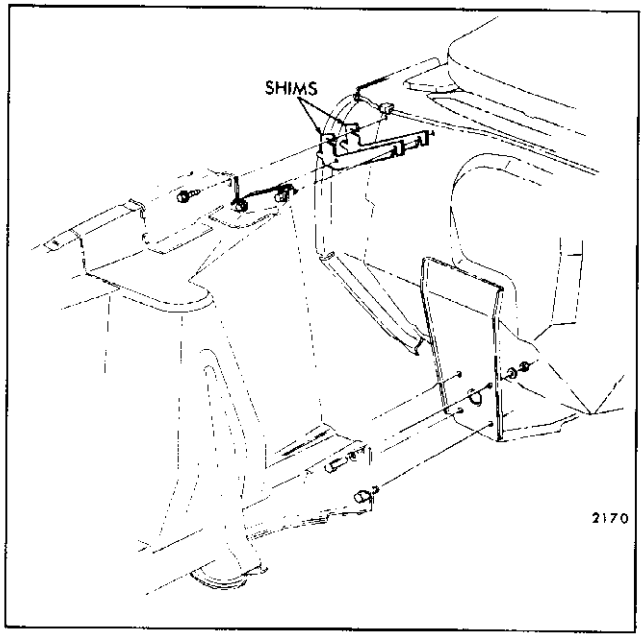


Fig. 3-6—Skirt-to-Dash Mounting

from each of the individual metal components which, when welded together, comprise the body shell assembly. Panels forming the cowl and dash and underbody incorporate attachment provisions for the front end skirt assembly and rear suspension system. These panels, therefore, contribute the greatest amount of strength to the body assembly.

UNDERBODY GENERAL SERVICE INFORMATION

Since each individual underbody component contributes directly to the over-all strength of the body, it is essential that proper welding, sealing and rust-proofing techniques be observed during service operations. Underbody components should be rust-proofed whenever body repair operations, which destroy or damage the original rust-proofing, are completed. When rust-proofing critical underbody components, it is essential that a good quality type of air dry primer be used (such as corrosion resistant zinc chromate). It is not advisable to use combination type primer surfacers.

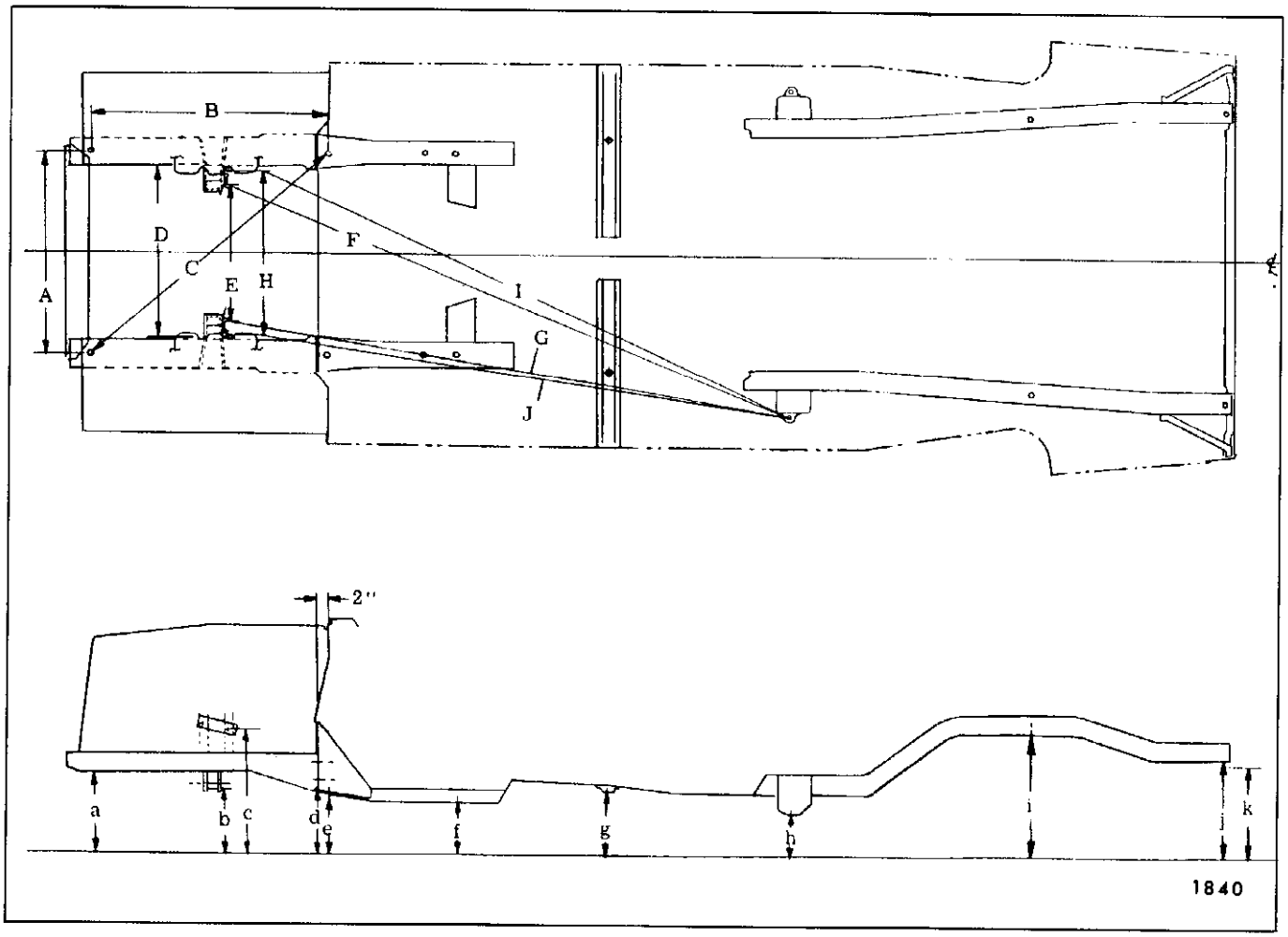


Fig. 3-7—Horizontal and Vertical Dimensions (Front Skirt Assembly)

ALIGNMENT CHECKING PROCEDURE

The underbody is comprised of body dash front braces, body floor pan cross braces, body compartment pan side rails, inner and outer rocker panels and other floor panel components. The underbody is of all welded construction. Misalignment in the underbody can affect front fender, door, rear compartment lid and glass opening alignment, station wagon tail gate and back body opening alignments. Most important, however, underbody misalignment can influence the suspension system, thereby causing many of the problems that arise from a suspension misalignment. It is essential, therefore, that underbody alignment be exact to within 1/16" of the specified dimensions.

In the event of collision damage, it is important that underbody alignment be thoroughly checked and, if necessary, realigned in order to accurately establish proper dimensions. There are many classifications of tools that may be employed to correct the average collision damage situation including frame straightening machines, lighter external pulling equipment and standard body jacks.

NOTE: Minor misalignment of the front end assembly to the body may be corrected by adding or removing shims at the upper skirt-to-dash attaching surface. Figure 3-6 shows both upper and lower attachment and the installed position of the shims. Shims are available in 1/32" and 1/8" thickness.

CAUTION: Do not change skirt assembly-to-dash shimming in an effort to adjust the door-to-fender gap or any other sheet metal appearance item. These shims regulate the front end assembly relationship to the body and should only be used to correct dimensions as shown in Figures 3-7 and 3-8.

To assist in checking alignment of the underbody components, repairing minor underbody damage or locating replacement parts, the following underbody dimensions and alignment checking information is presented.

Body Tram Gage

An accurate method of determining the alignment of the underbody utilizes a measuring tram gage. The tram gage required to perform all recommended measuring checks properly must be capable of extending to a length of 91". At least one of the vertical pointers must be capable of a maximum reach of 17".

Horizontal dimensions shown in the upper portion of Figures 3-7 and 3-8 are calculated on a plane parallel to the plane of the underbody. Precision measurements can be made only if the tram gage is properly adjusted so as to remain parallel to the plane of the underbody during measuring operations.

A proper tramming tool is essential for analyzing and determining the extent of collision misalignment present in underbody construction.

Principles of Tramming

In the upper portion of 3-7 and 3-8 all reference locations shown are symmetrical about the centerline of the vehicle. For example, when performing a cross-check of the body floor pan area, dimension "N" should measure the same distance in both diagonal directions of the cross-check operation. Cross checking operations are used to determine the relationship between two locations on the underbody.

To measure the distance accurately between any two reference points on the underbody, two specifications are required:

a. The horizontal dimension between the two points to be trammed.

b. The vertical dimension from the datum line to the points to be trammed. As an example, the diagonal measurement (calculated on a horizontal plane) between reference points of dimension line "N", shown in Figure 3-8, is 78 25/32 inches. The specifications from the datum line have a vertical height difference of 3 5/16 inches between the forward location of dimension "N" (at vertical dimension "e") and the rearward location of dimension "N" (at vertical dimension "h"). The vertical pointer used at the forward location should be positioned so as to extend 3 5/16 inches further from the tram bar than the pointer used at the rearward location. With the proper settings the tram bar will be on a plane parallel to that of the body plane. The exception to this would be when one of the reference locations is included in the misaligned area; then the parallel plane between the body and the tram bar may not prevail. After completion of the repairs, the tram gage should be set at the specified dimension to check the accuracy of the repair operation.

Car Preparation

Preparing the car for the underbody alignment check involves the following:

1. Place the car on level surface.

2. The weight of the car should be supported at the wheel locations.

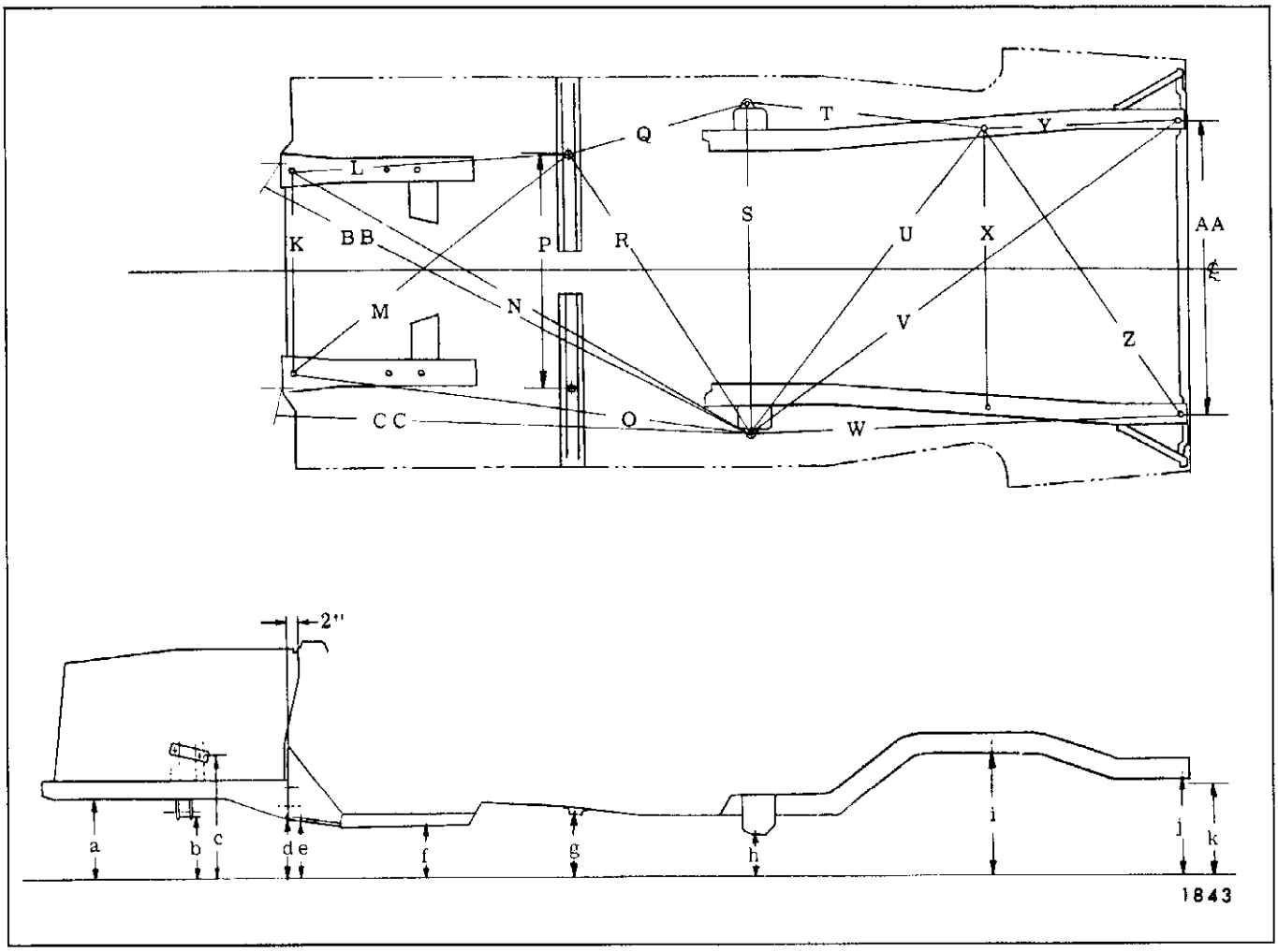


Fig. 3-8—Horizontal and Vertical Dimensions (Body Assembly)

3. A visual damage inspection should be made to eliminate needless measuring. Obviously damaged or misaligned areas can often be located by sight.

Tramming Sequence

The tramming sequence will vary depending upon the nature and location of the misaligned area.

Prior to performing any tramming operation, the accuracy of reference points to be used must be determined. A measurement that originates from a reference point which is included in a damaged area will produce untrue results and confuse the evaluation of the underbody condition. Unlike the conventional type of frame design, the unitized type of body construction seldom develops the condition of "diamond" in the floor pan area as a result of front or rear end collisions. Therefore, underbody alignment checking can usually originate from the body floor pan area. If inspection indicates that these locations have been disturbed and are not suitable for measuring, one of the undamaged suspension locations should be used as a beginning reference point. If a rare situation should exist where all of these locations are not suitable as reference points, repair operations should begin with the body floor pan area. All other underbody components should be aligned progressively from this area.

Underbody Alignment Reference Point Dimensions (Figures 3-7, 3-8, and 3-9)

Dimensions to gage holes and other unthreaded holes are measured to dead center of the holes and flush to the adjacent surface metal. Dimensions to bolt or bolt hole locations are measured to the dead center of the thread diameter of the bolt or bolt hole.

Figure 3-7 specifies dimension reference locations required for alignment of front end skirt assembly and for alignment of front end skirt assembly to body assembly. Figure 3-8 specifies

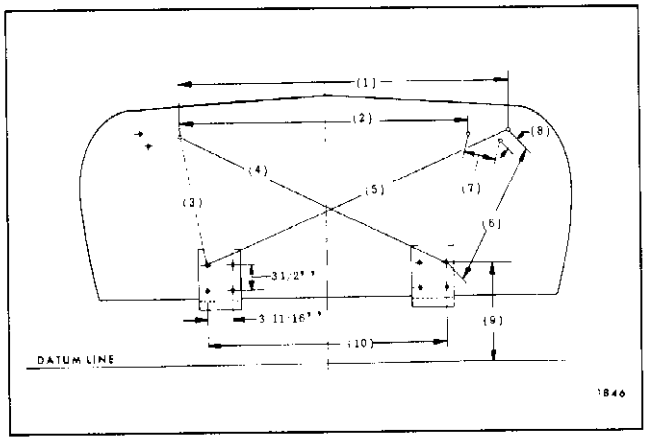


Fig. 3-9—Front View of Cowl and Dash

dimension reference locations required for alignment of underbody assembly. Figure 3-9 specifies cowl and dash reference locations required to check the skirt assembly attaching hole locations.

Horizontal Dimensions (Front End Skirt Assembly)

Fig. Ref.	Dimension	Location
A	30-5/32	15/32" gage hole at front of skirt side rails.
B	35	15/32" gage hole at front of skirt side rail to forward gage hole in dash front brace on same side of body.
C	46-3/16	15/32" gage hole at front of skirt side rail to forward gage hole in dash front brace on opposite side of body.
D	25-29/32	Skirt panel inner surface adjacent to front suspension upper control arm attaching points. (See Fig. 3-11).
E	20-7/8	Front suspension lower control arm adjusting cam guide (outer edge of inner flange - See Fig. 3-10).
F	90-19/32	Front suspension lower control arm adjusting cam guide (outer edge of inner flange - See Fig. 3-10) to gage hole in lower flange of rear spring front support on opposite side of body.
G	84-7/8	Front suspension lower control arm adjusting cam guide (outer edge of inner flange - See Fig. 3-10) to gage hole in lower flange of rear spring front support on same side of body.

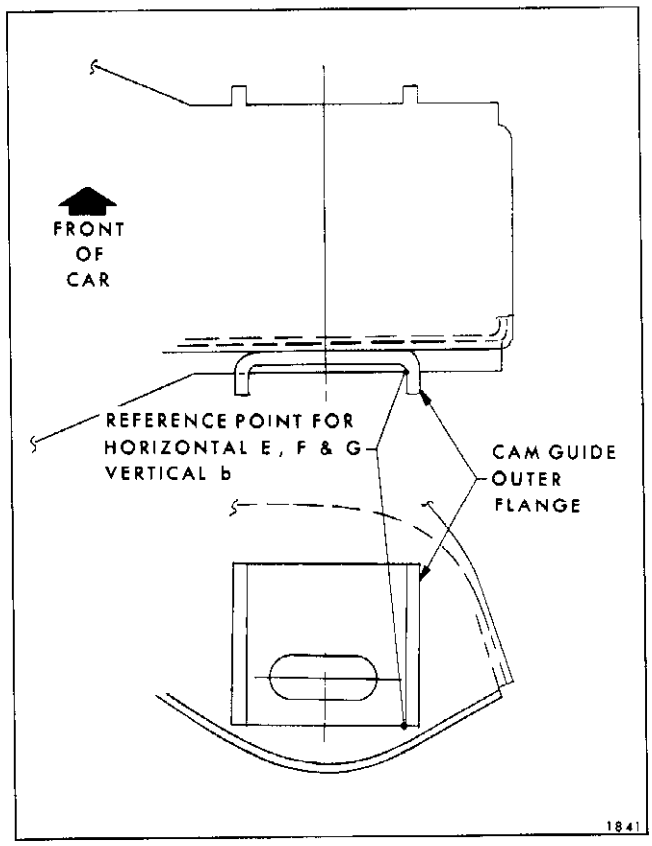


Fig. 3-10—Lower Control Arm Adjusting Cam Guide

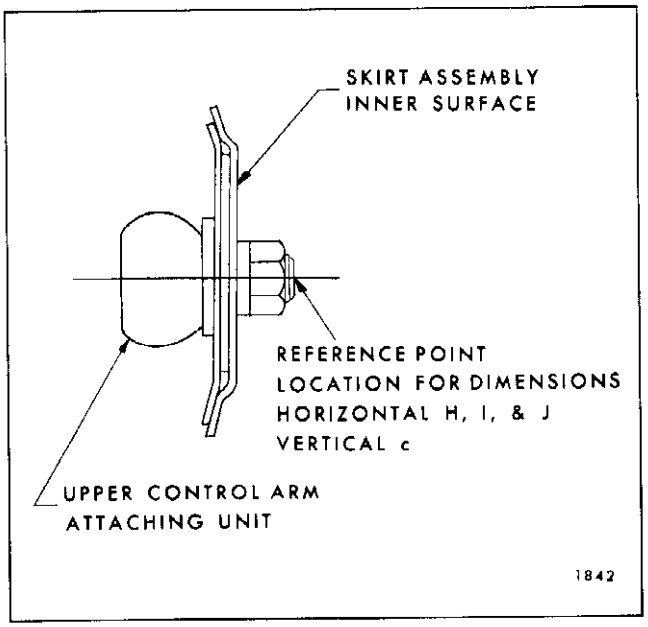


Fig. 3-11—Upper Control Arm Rear Attaching Stud

Fig. Ref.	Dimension	Location
H	24-1/2	Front suspension upper control arm rear attaching stud - center of thread end (See Fig. 3-11).
I	90-13/32	Front suspension upper control arm rear attaching stud - center of thread end (See Fig. 3-11) to gage hole in lower flange of rear spring front support on opposite side of body.
J	83-5/8	Front suspension upper control arm rear attaching stud - center of thread end (See Fig. 3-11) to gage hole in lower flange of rear spring front support on same side of body.

Horizontal Dimensions (Body Assembly)

Fig. Ref.	Dimensions	Location
K	30-5/32	Forward gage hole in dash front brace.
L	41-3/4	Forward gage hole in dash front brace to 11/32" gage hole in floor pan cross brace on same side of body.
M	53-1/16	Forward gage hole in dash front brace to 11/32" gage hole in floor pan cross brace on opposite side of body.
N	78-25/32	Forward gage hole in dash front brace to gage hole in lower flange of rear spring front support on opposite side of body.
O	69	Forward gage hole in dash front brace to gage hole in lower flange of rear spring front support on same side of body.
P	35-17/32	11/32" gage hole in floor pan cross brace.
Q	27-15/32	11/32" gage hole in floor pan cross brace to gage hole in lower flange of rear spring front support on same side of body.
R	49-19/32	11/32" gage hole in front pan cross brace to gage hole in lower flange of rear spring front support on opposite side of body.
S	48	Gage hole in lower flange of rear spring front support.
T	35-1/2	Gage hole in lower flange of rear spring front support to 1/4" gage hole in compartment pan side rail at center of kickup area on same side of body.
U	56-3/4	Gage hole in lower flange of rear spring front support to 1/4" gage hole in compartment pan side rail at center of kick-up area on opposite side of body.
V	79-1/16 (Sedan & Coupe)	Gage hole in lower flange of rear spring front support to rear bumper attaching bolt or bolt hole on opposite side of body.
	82-31/32 (Sta. Wag.)	
W	64-17/32 (Sedan & Coupe)	Gage hole in lower flange of rear spring front support to rear bumper attaching bolt or bolt hole on same side of body.
	69-9/32 (Sta. Wag.)	
X	40-13/16	1/4" unthreaded gage hole in compartment pan side rail at center of kick-up area.
Y	29-3/32 (Sedan & Coupe)	1/4" unthreaded gage hole in compartment pan side rail at center of kick-up area to rear bumper attaching bolt or bolt hole on same side of body.
	38-15/16 (Sta. Wag.)	
Z	51-1/4 (Sedan & Coupe)	1/4" unthreaded gage hole in compartment pan side rail at center of kick-up area to rear bumper attaching bolt or bolt hole on opposite side of body.
	54-3/32 (Sta. Wag.)	
AA	43-7/16	Rear bumper attaching bolt or bolt hole.
BB	80-7/8	Front face of dash lower attaching pad directly under centerline

Fig. Ref.	Dimension	Location
		of outer holes in attaching pad (See Fig. 3-12) to gage hole in lower flange of rear spring front support on opposite side of body.
CC	70-5/32	Front face of dash lower attaching pad directly under centerline of outer holes in attaching pad (See Fig. 3-12) to gage hole in lower flange of rear spring front support on same side of body.

Vertical Dimensions (Complete Underbody) (See Figure 3-8 and 3-7)

a	11-9/16	15/32" gage hole at front of skirt side rail.
b	9-3/16	Lowest point of front suspension lower control arm adjusting cam guide (See Fig. 3-10).
c	18-5/16	Center of front suspension upper control arm rear attaching stud center of thread end (See Fig. 3-11).
d	9-11/32	Joint of front end skirt assembly and dash lower attaching pad on line even with bottom surface of both members (See Fig. 3-12).
e	9-1/16	Lower surface of dash front brace at center of forward gage hole.
f	7-23/32	Lower surface of dash front brace at rear gage hole.
g	9-13/32	Lower surface of floor pan cross brace at 11/32" gage hole.
h	5-3/4	Lower surface of rear spring front support at gage hole in lower flange.
i	17-13/32	Lower surface of compartment pan side rail at 1/4" unthreaded gage hole at center of kick-up area.
j	13-7/8 (Sedan & Coupe)	Lower surface of compartment pan side rail spring support reinforcement at rear bumper attaching bolt hole (See Fig. 3-13).
	12-1/32 (Sta. Wag.)	

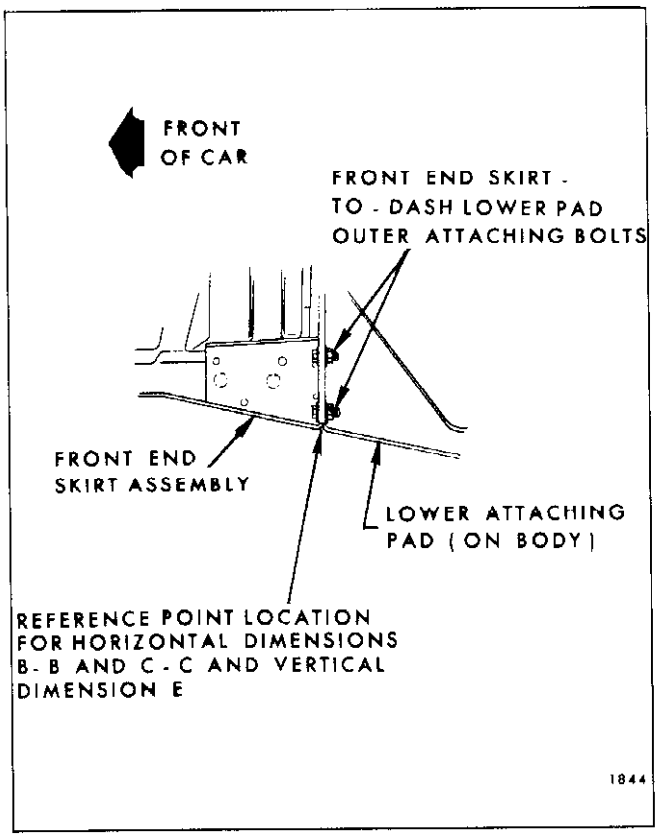


Fig. 3-12—Front End Skirt-to-Dash Lower Attaching Pad

Fig. Ref.	Dimension	Location
k	13-11/32 (Sedan & Coupe)	Center of lower surface of rear bumper attaching bolt head (See Fig. 3-13).

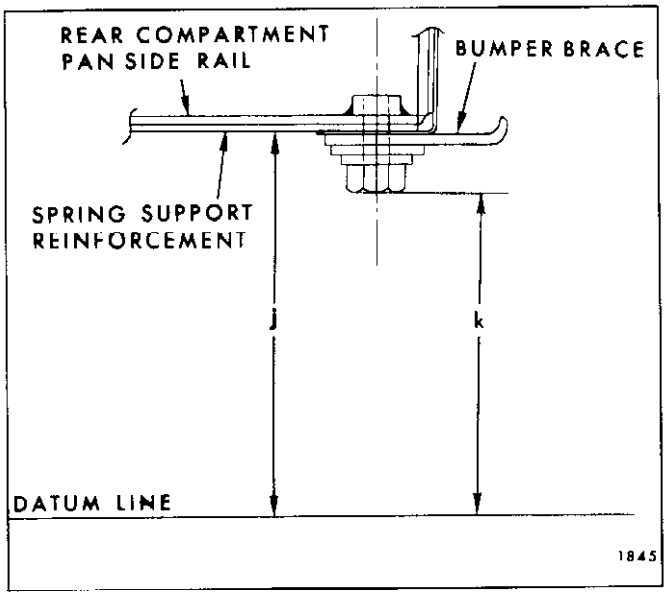


Fig. 3-13—Rear Bumper Attaching Bolt

Fig. Ref.	Dimension	Location
	11-15/32 (Sta. Wag.)	

Cowl and Dash Dimensions

All dimensions are between attaching holes for front end skirt assembly.

Fig. Ref.	Dimension	Location
(1)	46-11/16	Inner threaded hole in upper attaching surface to outer threaded hole on opposite side of dash.
(2)	41-3/32	Inner threaded hole in upper attaching surface to inner threaded hole on opposite side of dash.
*(3)	18-3/4	Inner threaded hole in upper attaching surface to upper outer hole in lower attaching pad on same side of dash.
*(4)	41-3/4	Inner threaded hole on upper attaching surface to upper outer hole in lower attaching pad on opposite side of dash.
*(5)	47	Upper outer hole in lower attaching pad to outer threaded hole in upper attaching surface on opposite side of dash.
*(6)	21-1/32	Upper outer hole in lower attaching pad to outer threaded hole in upper attaching surface on same side of dash.
(7)	4-11/16	Between the two innermost threaded holes in upper attaching surface on same side of dash.
(8)	1-7/8	Between the two outermost threaded holes in upper attaching surface on same side of dash.

*NOTE: When checking dimensions 3, 4, 5 or 6 the upper pointer should be extended 2" longer than the lower pointer.

UNDERBODY ALIGNMENT
"F" Body Styles

DESCRIPTION

"F" series bodies are of unitized construction. A stub frame supports the front end sheet metal, front suspension, engine and other mechanical components. Unitized construction demands that underbody components be properly aligned to insure correct suspension location. In the event of collision damage it is important that the underbody be thoroughly checked and, if necessary, realigned in order to accurately establish suspension locations.

The tools and materials needed to check alignment and repair collision damage are described in the Corvair and Chevy II Underbody Alignment sections.

To assist in checking alignment of the underbody components, repairing minor underbody damage or locating replacement parts, the following underbody dimensions and alignment checking information is presented.

UNDERBODY ALIGNMENT REFERENCE POINT DIMENSIONS (Fig. 3-14)

Dimensions to gage holes are measured to dead center of the holes and flush to adjacent surface metal unless otherwise specified. The master gage holes adjacent to the #1 body mount and in the side rails near the rear spring front attachment, are key locations and should be used wherever possible as a basis for checking other reference points.

Horizontal Dimensions (Fig. 3-14)

Fig. Ref.	Dimension	Location
A	38-3/16	Rear edge at centerline of 1" gage hole.
B	34-15/16	Rear edge at centerline of 1" gage hole and center of master

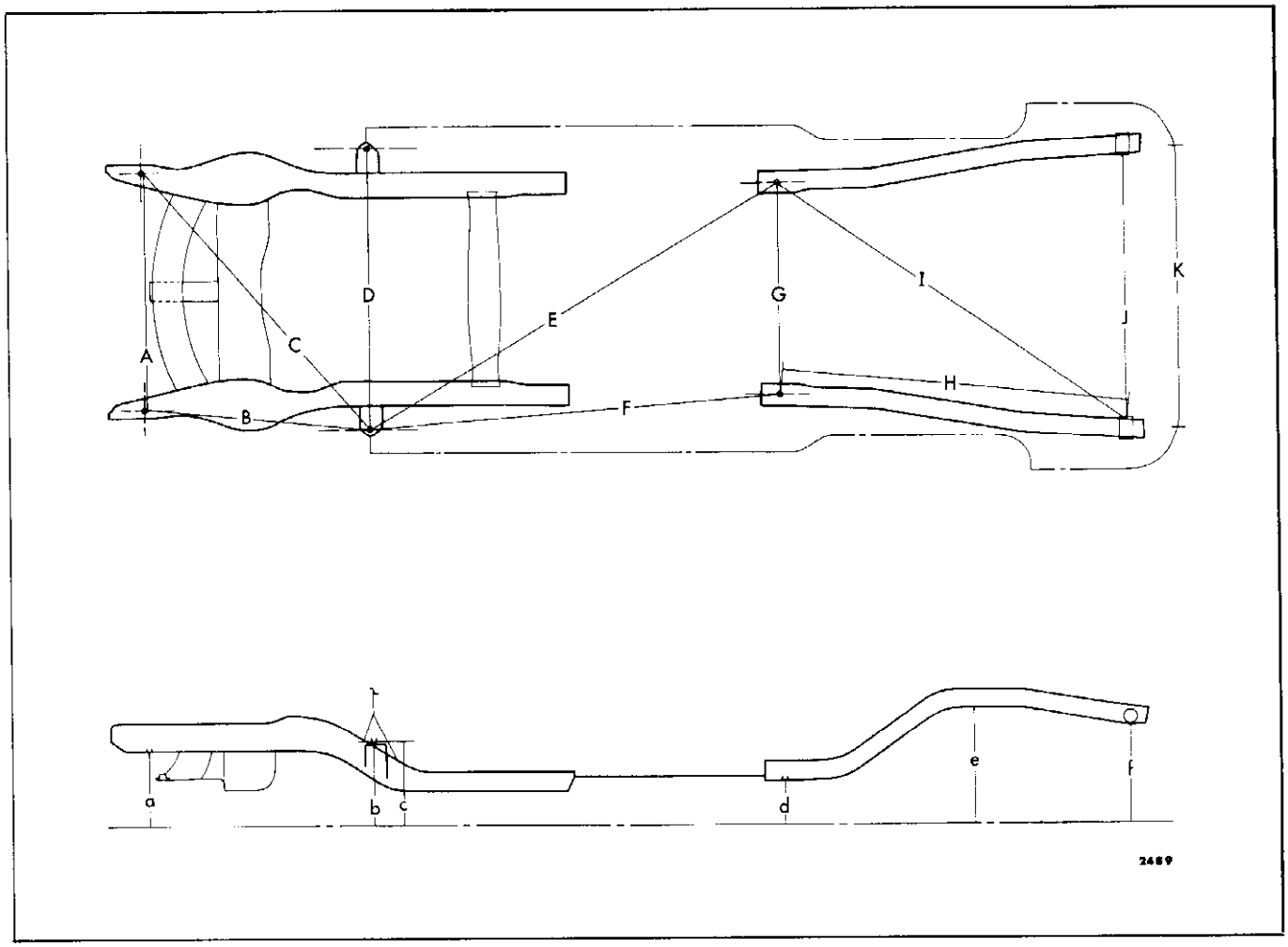


Fig. 3-14—Horizontal and Vertical Checking Dimensions

Fig. Ref.	Dimension	Location
		gage hole adjacent to #1 body mount on same side of frame.
C	54-11/16	Rear edge at centerline of 1" gage hole and center of master gage hole adjacent to #1 body mount in opposite side of frame.
D	44-9/16	Center of master gage hole adjacent to #1 body mount.
E	75-7/8	Center of master gage hole adjacent to #1 body mount and center of master gage hole in side rail on opposite side of body.
F	65-1/4	Center of master gage hole adjacent to #1 body mount and center of master gage hole in side rail on same side of body.
G	33-1/2	Center of master gage hole in side rail.
H	55-3/16	Center of master gage hole in side rail and a point at inboard edge of same side rail at centerline of shackle bolt hole (See Fig. 3-15).
I	66-11/16	Center of master gage hole in side rail and a point at inboard edge of opposite side rail at centerline of shackle bolt hole (See Fig. 3-15).
J	42-7/8	Inboard edge of side rail at centerline of shackle bolt hole (See Fig. 3-15).
K	44-7/8	Center of rear bumper lower attaching bolts.

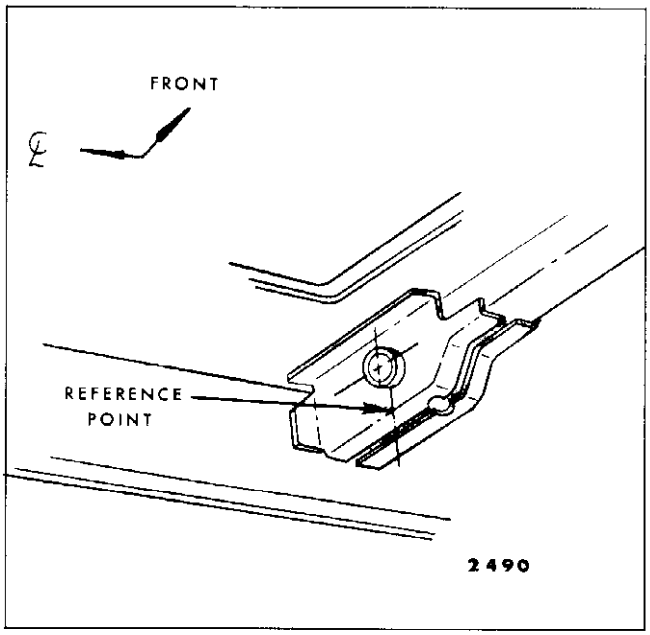


Fig. 3-15—Side Rail at Spring Rear Shackle Hole

Vertical Dimensions (Fig. 3-14)

Fig. Ref.	Dimension	Location
a	11-15/16	1" gage hole at front of frame.
b	13	Master gage hole adjacent to #1 body mount in frame.
c	13-13/16	Master gage hole adjacent to #1 body mount on body.
d	6-15/16	Master gage hole in side rail.
e	11-3/4	Lower surface of side rail at kick up either side of rear axle housing.
f	15-11/16	Lower surface of side rail at centerline of shackle bolt hole.

SECTION 4
STATIONARY GLASS

INDEX

Subject	Page
Adhesive Caulking - General Information	
Description	4-1
Service Procedures	4-1
Waterleak Correction	4-4
Windshield Glass - Adhesive Caulked Type	4-4
Description	4-4
Glass Installation - Short Method	4-4
Glass Installation - Extended Method	4-6
Windshield Glass - Rubber Channel	4-7
Removal	4-7
Installation	4-7
Waterleak Correction	4-9
Skylight Windows	4-9
Description	4-9
Removal	4-10
Installation	4-10
Rear Quarter Windows - Adhesive Caulked Type	4-12
Description	4-12
Removal	4-12
Installation	4-13
Rear Quarter Windows - Rubber Channel	4-15
Removal	4-15
Installation	4-15
Back Window	4-15
Description	4-15
Removal	4-15
Installation	4-15

ADHESIVE CAULKING—GENERAL INFORMATION
All Styles

DESCRIPTION

This concept of glass installation incorporates a synthetic self-curing rubber adhesive caulking compound that adheres to both glass and window opening pinchweld flange in place of the rubber channel that was formerly used. Applied to the glass while in a soft state the material begins to cure soon after exposure to air. Due to this fast curing characteristic, installation of the glass into the body opening must quickly follow application of material to glass. This method of glass installation is used on stationary glass, such as windshield glass, back glass, station wagon quarter glass and skylights.

Adhesive caulking GM Kit Part #4226000, which is designed for a short method windshield installation, has some of the materials needed to remove and replace a stationary glass and can be obtained through regular service parts channels.

GM Kit Part #4226000 consists of:

A. One tube of Adhesive Caulking Material

B. One nozzle (cut for the short method)

C. Steel music wire (.020 thickness)

D. Adhesive Caulking Primer (for priming old caulking material on pinchweld flanges).

The other materials that are needed to complete an installation are available as service parts or at local supply shops.

Additional materials required:

A. Caulking gun (standard household type reworked as follows).

1. Widen end-slot of caulking gun with a file to accept dispensing end of tube.

2. Grind down plunger disc on rod so that disc will fit into large end of tube.

B. Two pieces of wood for wire handles.

C. Black weatherstrip adhesive.

D. Paint Finish Primer - service part, used only on the extended method.

E. Rubber glass spacers.

SERVICE PROCEDURES

This type of glass installation requires an entirely different removal and installation service procedure. There are two methods of removal and

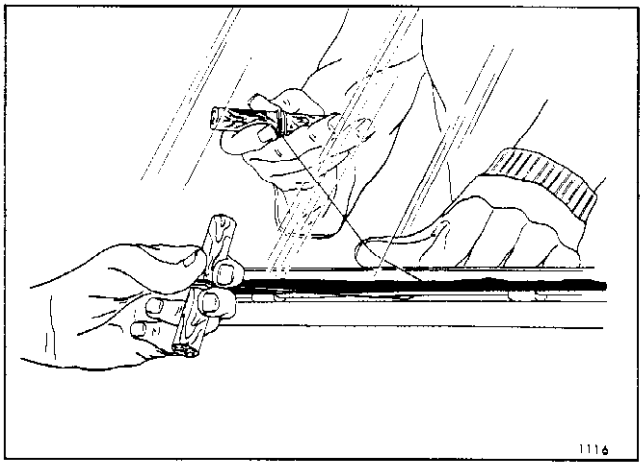


Fig 4-1—Cutting Adhesive Material

installation. They are called the short method and the extended method. The extended method requires the removal of all adhesive caulking material from the glass and the opening. The short method requires the removal of all adhesive caulking material from the glass only and the removal of a minimum of adhesive caulking material when cutting the glass from the body opening. No loose pieces of adhesive material or sealing strip material should be left around the opening. The short method installation is used on a windshield installation only.

IMPORTANT: When the glass is originally installed a sponge or rubber type filler sealing strip is applied to the inside surface of the glass prior to application of adhesive caulking material. For service replacements the sealing strips are not required and are not available as a service part. When replacing a glass, using the short method, the sealing strip must be trimmed from the adhesive material in the body opening for a good appearance.

Removal

The glass removal procedure will be the same for the extended or short method.

1. Place protective coverings around area of glass being removed.

2. Remove garnish moldings, escutcheons, reveal moldings, wiper arm assemblies, cowl air intake grille, rear view mirror support and instrument panel items (instrument panel cover) as required.

   NOTE: Reveal molding removal is covered in Exterior Molding Section 17. Tools necessary for molding removal are also described in the Exterior Molding Section.

3. Secure one end of steel music wire to a piece of wood (for handle) (Fig. 4-1). With the aid of a pair of long nose pliers insert the other end of wire through caulking material at lower inside corner of windshield along side of glass surface; then, secure that end of wire to another piece of wood (for handle).

4. With the aid of a helper, carefully cut (pull steel wire) through caulking material, up one side of glass across top, down opposite side and across bottom of glass (Fig. 4-1). Make sure inside wire is held close to plane of glass to prevent cutting an excessive amount of adhesive caulking material from the glass opening. This can be accomplished by holding the inside wire close to the plane of the glass with one hand while pulling the wire with the other hand. Keep tension on wire throughout cutting operation to prevent "kinks" in wire.

5. After cutting the adhesive material entire perimeter of glass, carefully remove glass.

Installation

NOTE: If the original glass is to be re-used, place it on a protected bench or holding fixture and remove old caulking material from glass with sharp scraper or razor blade. Remove all remaining traces with toluene or thinner dampened cloth.

IMPORTANT: Do not use oil base solvent. Any oil will prevent adhesion of new caulking material to glass.

1. Align glass to opening; mark glass to body with tape for proper alignment of glass to opening at time of installation.

2. Using a clean, lint-free cloth, briskly rub a generous amount of adhesive caulking primer over original adhesive caulking material that remains on pinchweld flange. Additional brisk application of primer on flat rubber spacers is necessary to insure a good bond of material to spacers.

   CAUTION: Do not allow primer to drop on painted surfaces or trim parts.

   NOTE: If the glass opening is freshly painted due to collision work, etc., apply paint finish primer to painted pinchweld flange. Paint finish primer is available as a service part.

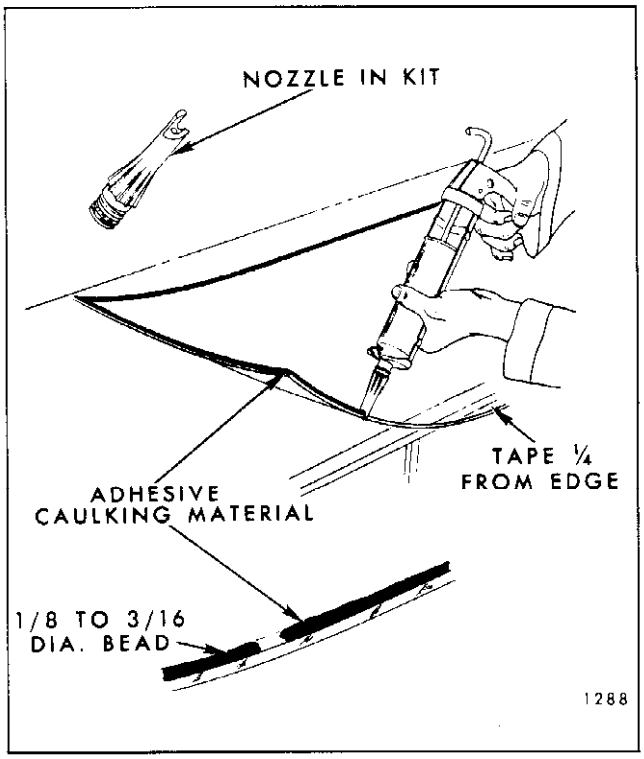


Fig. 4-2—Adhesive Glass Installation Short Method

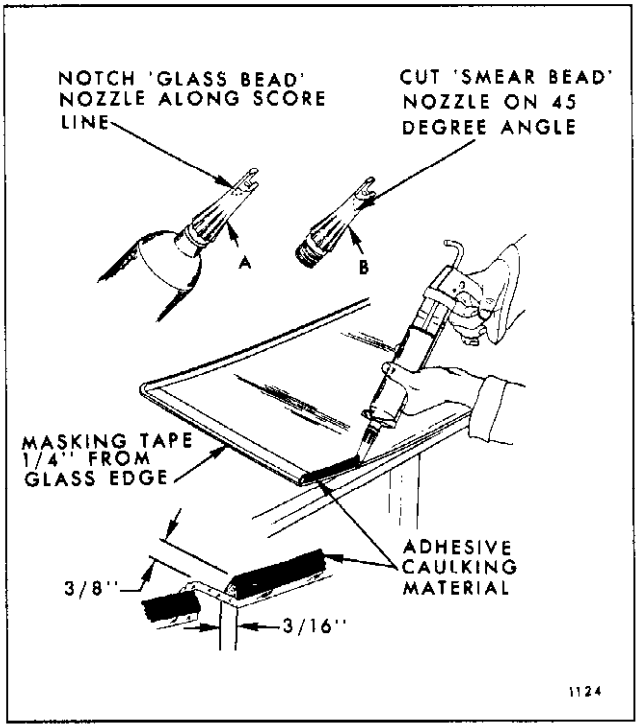


Fig. 4-3—Adhesive Glass Installation Extended Method

3. If short method installation is required, the nozzle furnished with the kit is pre-cut to dispense the proper size bead of caulking material (Fig. 4-2).

4. If extended method is required, cut off tip of one nozzle along score line (Fig. 4-3). This glass bead nozzle will be used to apply bead of adhesive caulking material to glass. Cut tip off other nozzle at 45° angle 1" below end of nozzle (Fig. 4-3). This nozzle will be used to apply "smear bead" of adhesive caulking material to pinchweld flange.

5. Wipe surface of glass to which bead of adhesive caulking material will be applied (between masking tape and edge of glass) with a clean, water-dampened cloth. Dry glass with a clean dry cloth.

6. Remove cap and protective end cover from one tube of adhesive caulking material and insert "glass bead" nozzle.

7. Positioning the gun and nozzle as shown in Figure 4-3, carefully apply a smooth continuous bead of caulking material 3/8" high by 3/16" wide at base completely around inside edge of glass. When material in first tube is dispensed, quickly insert second tube and continue application of bead. After application, check bead and fill all voids and air bubbles.

NOTE: Material begins to cure after 15 minutes exposure to air, therefore, perform following steps immediately and install glass in opening as soon as possible.

8. Remove "glass bead" nozzle and insert "smear bead" nozzle. Holding caulking gun at an angle so that angle-cut of nozzle rests flat on pinchweld flange, apply a thin (1/4" wide x 1/16" high) "smear bead" of adhesive caulking material completely around pinchweld flange.

9. Install glass in opening using tape marks as a guide.

10. Watertest windshield immediately using cold water spray. If any waterleaks are encountered, use flat-bladed tool or stick and work caulking material into leak point to correct leak. This operation is usually performed most effectively from outside the body.

CAUTION: Do not run a heavy stream of water directly on caulking material while the material is still soft.

11. Install previously removed hardware and trim parts.

WATERLEAK CORRECTION OF ADHESIVE CAULKED GLASS

Adhesive caulked glass installation waterleaks can be corrected in the following manner without removing and reinstalling the glass.

NOTE: The following procedure is applicable only with the use of adhesive caulking material and primer furnished in Kit Part #4226000 or equivalent.

1. Remove reveal moldings in area of leak.
2. Mark location of leak(s).

   IMPORTANT: If leak is between adhesive caulking material and body or between material and glass carefully push outward on glass in area of leak to determine extent of leak. This operation should be performed while water is being applied to leak area. Mark extent of leak area.

3. From outside body clean any dirt or foreign material from leak area with water; then dry area with air hose.
4. Using a sharp knife, trim off uneven edge of adhesive caulking material (see Operation "A" Fig. 4-4) at leak point and 3 to 4 inches on both sides of leak point or beyond limits of leak area.
5. Using a small brush, apply adhesive caulking material primer over trimmed edge of adhesive caulking material and over adjacent painted surface (see Operation "B" Fig. 4-4).
6. Apply adhesive caulking material, as shown in Operation "C" (Fig. 4-4), at leak point and 3 to 4 inches on both sides of leak point or beyond limits of leak area.

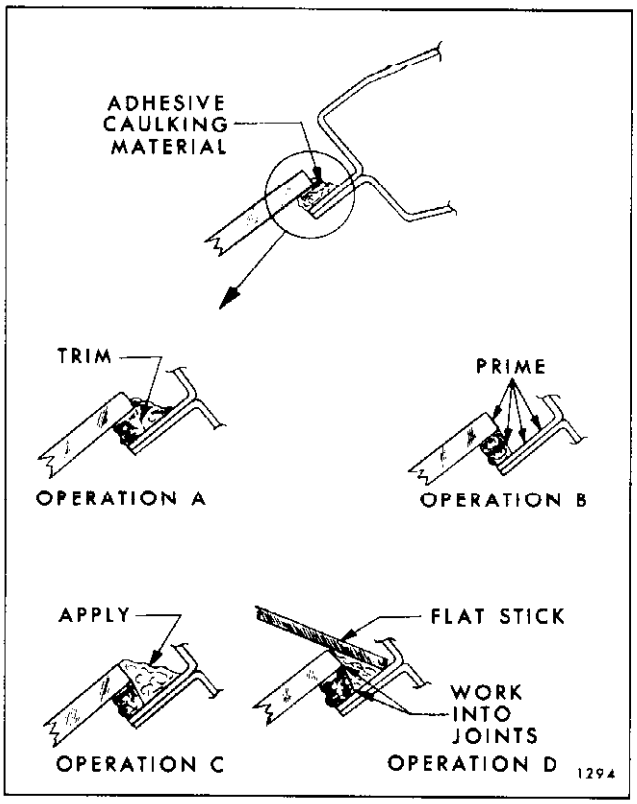


Fig. 4-4—Adhesive Glass Waterleak Correction

7. Immediately after performing step 6, use flat stick or other suitable flat-bladed tool to work adhesive caulking material well into leak point and into joint of original material and body to effect a watertight seal along entire length of material application (See Operation "D" Fig. 4-4).
8. Spray watertest to assure that leak has been corrected. DO NOT run a heavy stream of water directly on freshly applied adhesive caulking material.

WINDSHIELD GLASS—ADHESIVE CAULKED TYPE

DESCRIPTION

The windshield glass is retained in the opening by adhesive caulked material. Procedures covering the removal and replacement of the glass including cutting out of material, necessary service parts, application of material, watertesting and waterleak repairing are described in the preceding section. Specific details applying to windshield removal and installation will be covered in this section.

WINDSHIELD GLASS INSTALLATION (SHORT METHOD)

1. Remove glass as outlined in the preceding section, "Adhesive Caulking-General Information."
2. Inspect reveal molding retaining clips for damage. If upper end of clip is bent away from

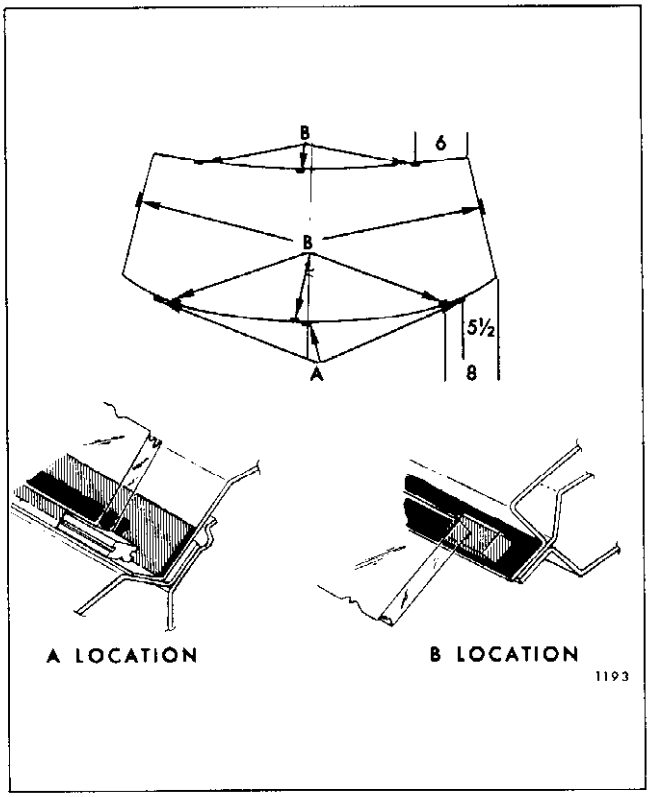


Fig. 4-5—Glass Spacers

body metal more than 1/32", replace or reform the clip. Be sure reveal molding clip screws are sealed.

3. If the original glass is to be re-used, remove all remaining traces of old caulking material with toluene or thinner dampened cloth.

4. Using black weatherstrip adhesive, cement three rubber spaces to lower windshield opening at location "A", Figure 4-5.

5. Place glass in opening, shim glass with spacers as necessary to properly align glass to opening. The glass should overlap the pinch-weld flange 3/8". Mark glass to windshield pillars with tape to assist in proper alignment at time of installation (Fig. 4-6).

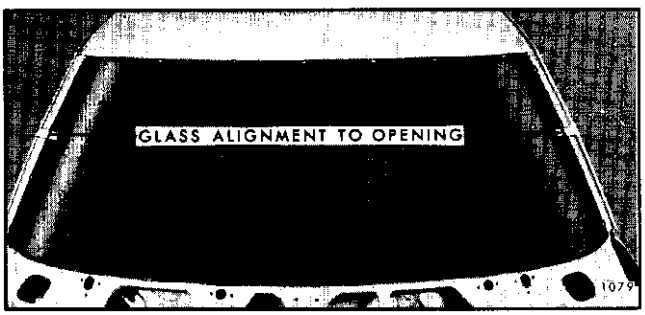


Fig. 4-6—Glass Alignment

6. Apply 1" wide masking tape to inside of windshield glass 1/4" inboard from edge of glass, across the top and down each side, to facilitate cleanup after installation.

7. Using a clean, lint-free cloth, briskly rub a generous amount of adhesive caulking primer on the freshly cut material in the opening.

   CAUTION: Do not allow primer to drop on painted surfaces or trim.

8. Wipe surface of glass to which bead of adhesive caulking material will be applied (between masking tape and edge of glass) with a clean, water dampened cloth. Dry glass with a clean dry cloth.

9. Apply a smooth continuous bead of adhesive caulking material to inside surface of glass next to edge completely around glass (Fig. 4-7). Material should be 1/8" to 3/16" in diameter.

   IMPORTANT: The operation of installing glass into the opening should be completed within 15 minutes from start of application of material to glass.

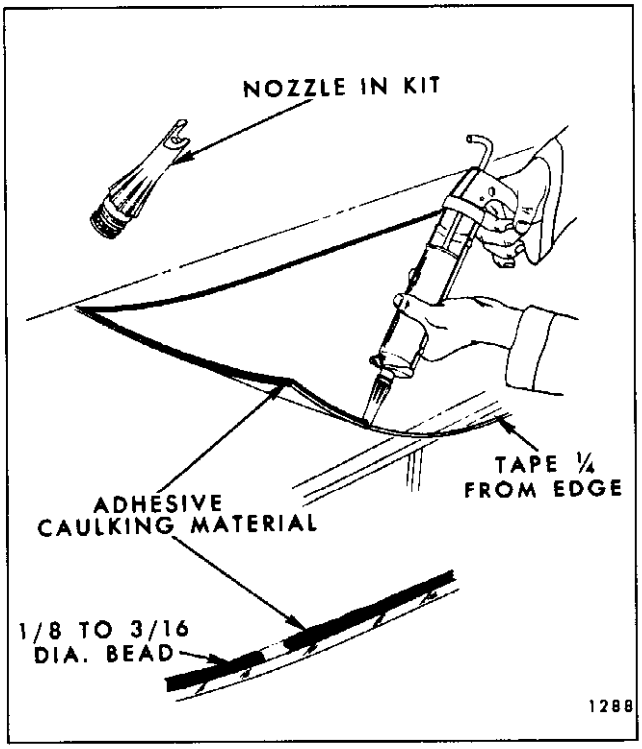


Fig. 4-7—Adhesive Caulking Material Application - Short Method

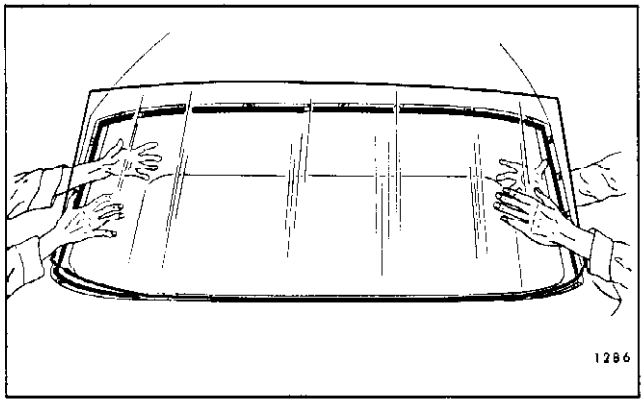


Fig. 4-8—Windshield Installation

10. With aid of helper, lift glass with one hand on outside of glass and one hand on inside of glass. Carefully move glass up to windshield opening maintaining glass in a horizontal position. While one man holds glass in this position, the second man can reach around the windshield pillar and hold glass; then, first man can reach around windshield pillar (Fig. 4-8). Carefully position glass into opening, making certain that glass is properly centered in opening and positioned on lower spacers. Use tape previously applied on windshield pillar to properly align glass (Fig. 4-6).

11. Press glass firmly to set caulking material. Use caution to avoid excessive squeeze-out of material.

    NOTE: Glass handling suction cups may be used when removing or installing the windshield glass.

12. Inspect installation for proper seal between new caulking material and original material. If a gap is encountered, apply sufficient caulking material to fill the void. On inside of body run a flat stick around the pinchweld flanges to push excess caulking material back into opening between glass and flanges. Remove any excess squeeze-out of material.

13. Watertest windshield immediately using cold water spray.

14. Remove masking tape from inside of glass.

15. Install reveal moldings, inside garnish moldings and previously removed parts.

WINDSHIELD GLASS INSTALLATION (EXTENDED METHOD)

1. Remove glass as outlined in General Information Section, remove major portion of adhesive caulking material from body pinchweld flange.

2. Inspect reveal molding retaining clips for damage. If upper end of clip is bent away from body metal more than 1/32", replace or reform the clip. Be sure reveal molding clip screws are sealed.

3. Using black weatherstrip adhesive cement three rubber spacers (#4459429 or equivalent) to upper windshield flange and two rubber spacers (#4459429 or equivalent) to windshield pillars at rabbet (View "B", Fig. 3-8). Cement three rubber spacers (#4459429 or equivalent) to lower windshield flange (View "B", Fig. 3-8). Cement three rubber spacers (#4871330 or equivalent) to lower windshield opening (View "A", Fig. 3-8). Both thinner (#4404196 or equivalent) and thicker (#4534314 or equivalent) rectangular spacers are available as service parts.

4. Position replacement windshield glass in body opening. Carefully check relationship of glass to body opening. The distance between the inside surface of the glass and body should not be less than 3/16". The glass should have 3/8" overlap around the entire opening. Where necessary to obtain proper spacing, use shim spacers as required. Mark position of glass on glass and windshield pillars with masking tape, for proper alignment of glass to opening at time of installation (Fig. 4-6). Remove glass and place on a protected bench or holding fixture.

5. If original glass is to be installed, remove old caulking material from glass with sharp scraper or razor blade. Remove remaining traces with toluene or thinner dampened cloth.

   NOTE: Do not use oil base solvent. Any oil will prevent adhesion of new caulking material to glass.

6. Apply 1" wide masking tape to inside of windshield glass 1/4" inboard from edge of glass, across the top and down each side, to facilitate cleanup after installation.

7. Using a clean, lint-free cloth, briskly rub a generous amount of adhesive caulking primer over original adhesive caulking material that remains on pinchweld flange. Additional brisk application of primer on flat rubber spacers is necessary to insure a good bond of material to spacers.

   CAUTION: Do not allow primer to drop on painted surfaces or trim parts.

   NOTE: If the windshield opening is freshly

painted due to collision work, etc., apply paint finish primer to painted pinchweld flange. Paint finish primer is available as a service part.

8. Cut off tip of one nozzle along score line (Fig. 4-9). This "glass bead" nozzle will be used to apply bead of adhesive caulking material to glass. Cut tip off other nozzle at 45° angle 1" below end of nozzle (Fig. 4-9). This nozzle will be used to apply "smear bead" of adhesive caulking material to pinchweld flange.

9. Wipe surface of glass to which bead of adhesive caulking material will be applied (between masking tape and edge of glass) with a clean, water-dampened cloth. Dry glass with a clean dry cloth.

10. Remove cap and protective end cover from one tube of adhesive caulking material and insert "glass bead" nozzle.

11. Positioning the gun and nozzle as shown in Figure 4-9 carefully apply a smooth continuous bead of caulking material 3/8" high by 3/16" wide at base completely around inside edge of glass. When material in first tube is dispensed, quickly insert second tube and continue application of bead. After application, check bead and fill all voids and air bubbles.

    NOTE: Material begins to cure after 15 minutes exposure to air, therefore, perform following steps immediately and install glass in opening as soon as possible.

12. Remove "glass bead" nozzle and insert "smear bead" nozzle (nozzle cut on 45° angle in step #8). Holding caulking gun at an angle so that angle-cut of nozzle rests flat on pinchweld flange, apply a thin (1/4" wide x 1/16" high) "smear bead" of adhesive caulking material completely around pinchweld flange.

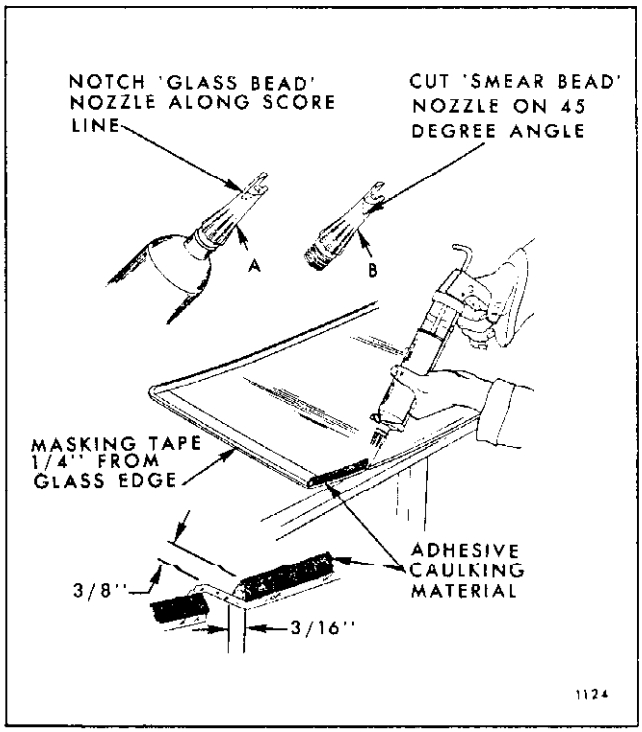


Fig. 4-9—Adhesive Caulking Installation - Extended Method

13. Install glass as outlined in steps 10 through 15 of short method installation.

WINDSHIELD GLASS—RUBBER CHANNEL—ALL X STYLES

REMOVAL

1. Place protective covering over hood, front fenders, instrument panel and front seat assembly.

2. Remove rear view mirror support.

3. Remove windshield wiper arm assembly.

4. On inside of body loosen lip of rubber channel from pinchweld flange along top and sides of windshield as follows: With palm of hand, apply pressure to glass near edge (Fig. 4-10). At the same time use a blunt putty knife or other suitable tool and carefully assist rubber channel over pinchweld flange.

5. After windshield rubber channel is free from pinchweld flange, with aid of helper, carefully lift windshield assembly from body opening and place it on a protected bench.

    NOTE: The windshield reveal moldings are installed in the rubber channel and are to be removed prior to removing rubber channel from the glass.

INSTALLATION

It is important that the body windshield opening be checked thoroughly before installation of the replacement windshield glass. The procedure below outlines the method which may be used to check the windshield opening.

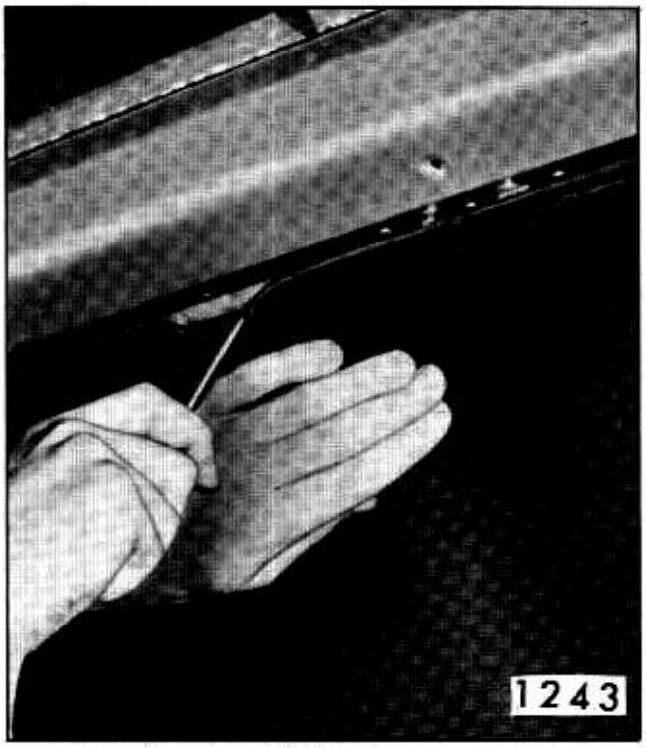


Fig. 4-10—Windshield Glass Removal

1. Check windshield rubber channel for any irregularities.

2. Clean off old sealer around windshield opening and check entire body opening flange for any irregularities.

3. Install five windshield checking blocks J-8942 or equivalent (Fig. 4-11) to pinchweld flange at the following locations. Position one block over lower pinchweld flange on each side of body approximately twelve inches inboard from the lower outer corner of the opening. Position one block in center on lower pinchweld flange. Position final blocks on upper pinchweld flange midway between center block and each outboard block on lower retaining flange.

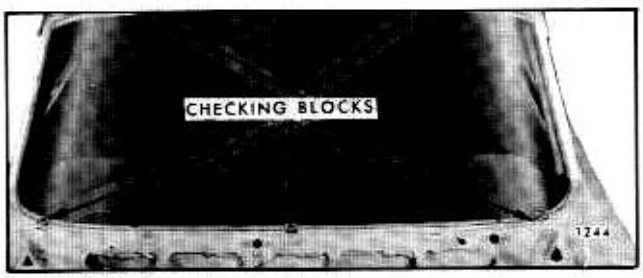


Fig. 4-11—Windshield Glass Checking Blocks

4. With aid of helper carefully position replacement glass on blocks in windshield opening.

   CAUTION: Care should be exercised to make certain glass does not strike body metal during installation. Edge chips can lead to future breaks.

5. With windshield glass supported and centered in body opening by checking blocks, check relationship of glass to body opening around entire perimeter of glass. Figure 4-12 shows a typical section taken through the glass channel and body opening. Check glass to body relationships as follows:

   a. The inside surface of the glass should be a uniform distance from pinchweld flange. The dimension should be from 1/4" to 5/16".

   b. The outer edge of glass should be a uniform distance from body metal, measured in the plane of the glass. This dimension should be from 5/16" to 3/8".

6. Mark any sections of body to be re-formed, remove glass and re-form opening as required.

7. Re-check windshield opening as outlined above. Then MARK THE CENTER LINE ON THE GLASS AND BODY so that glass can be accurately centered in opening when installed.

8. Install windshield.

   a. Clean out old sealer in glass cavity of windshield rubber channel and around base of rubber channel.

   b. Install rubber channel to glass and install reveal moldings in rubber channel.

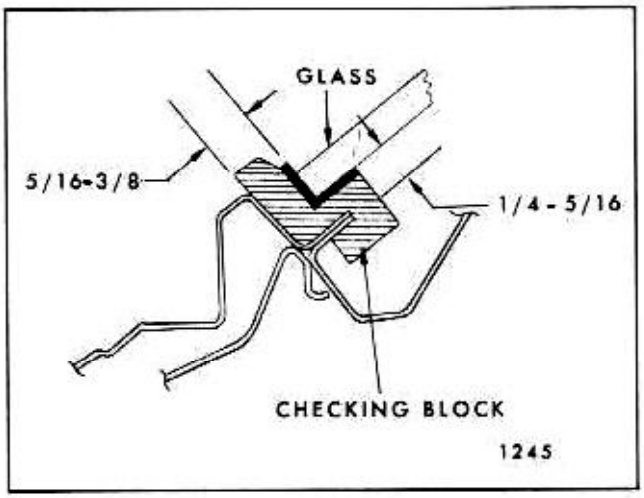


Fig. 4-12—Correct Position Of Checking Blocks

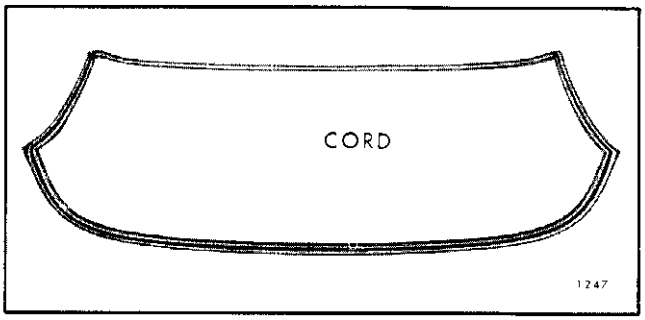


Fig. 4-13—Windshield Installation

c. Insert a strong cord in pinchweld cavity of rubber channel completely around windshield. Tie ends of cord and tape to inside surface of glass at bottom center of glass (Fig. 4-13).

d. Apply a ribbon of medium-bodied sealer completely around base of rubber channel as indicated in Figure 4-14, Item #1.

e. Apply a bead of medium-bodied sealer, approximately 1/4" in diameter to corner of windshield opening rabbet around each side of windshield for distance indicated in Figure 4-14, Item #3.

f. With aid of helper, carefully position and center windshield assembly in windshield opening.

CAUTION: Do not position glass by tapping or hammering at any time.

g. When the glass and channel are properly positioned in opening, slowly pull ends of cord, starting at lower center of windshield, to seat lip of rubber channel over pinchweld flange. Cord should be pulled first across bottom of windshield, then up each side and finally across top of windshield.

h. Using a pressure type applicator, seal inner and outer lips of rubber channel to glass with an approved weatherstrip adhesive as indicated in Figure 4-14, Item #2. Seals are to extend completely around rubber channel.

i. Clean off excess sealer from windshield glass with mineral spirits.

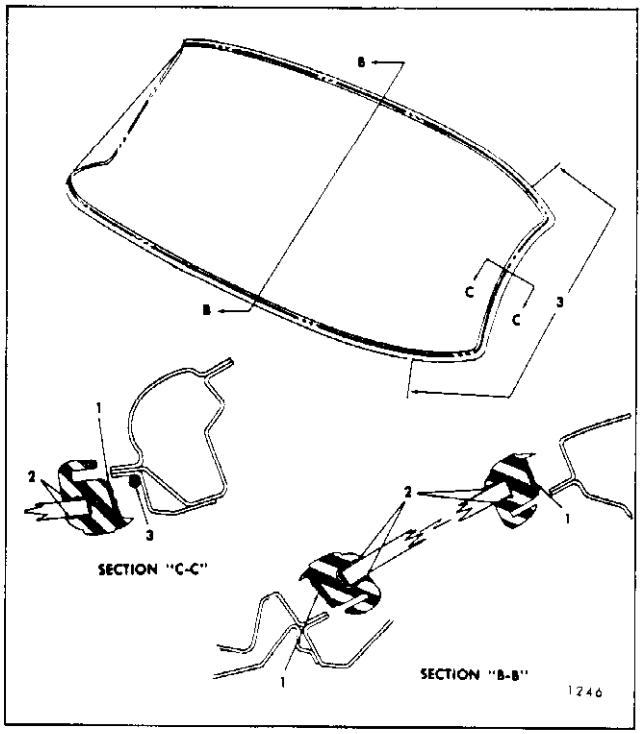


Fig. 4-14—Sealing Of Windshield Glass And Channel

j. Reinstall all previously removed parts and remove protective coverings.

WATERLEAK CORRECTION

In many instances minor waterleaks around the windshield may be corrected by performing the following operations.

1. Leaks between rubber channel and glass.

   a. Using a pressure applicator (plews oiler or equivalent) with a narrow tip, apply an approved weatherstrip adhesive (black) between glass and rubber channel on the outside of the glass completely around perimeter of glass.

2. Leaks between rubber channel and body.

   a. Use a pressure applicator with a narrow tip. Working from outside of body, apply medium-bodied sealer under outer lip of rubber channel around entire perimeter of body opening.

FRONT AND SIDE SKYLIGHT WINDOWS "55" AND "65" STYLES

DESCRIPTION

The front and side skylight window glass are retained in the body opening by adhesive caulked material. The extended method is to be used when replacing a skylight window glass. Procedures

covering the removal and replacement of adhesive caulked glass including cutting out of material, necessary service parts, application of material, watertesting and waterleak repairing are described in the "Adhesive Caulking-General Information" Section. Specific details applying to skylight window glass removal and installation, will be covered in this section.

REMOVAL

1. Remove glass as outlined in "Adhesive Caulking-General Information" Section. If the original glass is to be reused, place it on a protected bench or holding fixture and remove old caulking material from glass with sharp scraper or razor blade. Remove all remaining traces with toluene or thinner dampened cloth.

   NOTE: Do not use an oil base solvent. Any traces of oil will prevent adhesion of new caulking material to glass.

2. Using a sharp scraper or chisel, remove major portion of old caulking material from pinchweld flange around glass opening. It is not necessary that all material be removed, but there should not be any loose pieces left in the opening.

INSTALLATION

1. Check all reveal molding retaining clips. If upper end of clip is bent away from body metal more than 1/16 of an inch, either reform or replace clip. Check all clip screws and tighten as required. Place protective covering over interior trim below window opening.

2. Using black weatherstrip adhesive, cement flat rubber spacers #4459429 or equivalent (.20 x .63 x 1.0) to window opening pinchweld flanges at "X" locations as shown in Circle "A" in Figure 4-15.

   NOTE: Use sufficient adhesive to obtain a watertight seal beneath spacer, however, do not allow excessive squeeze-out. Weatherstrip adhesive is not compatible with the replacement adhesive material and waterleaks may develop at locations where these two materials are used together to form a seal.

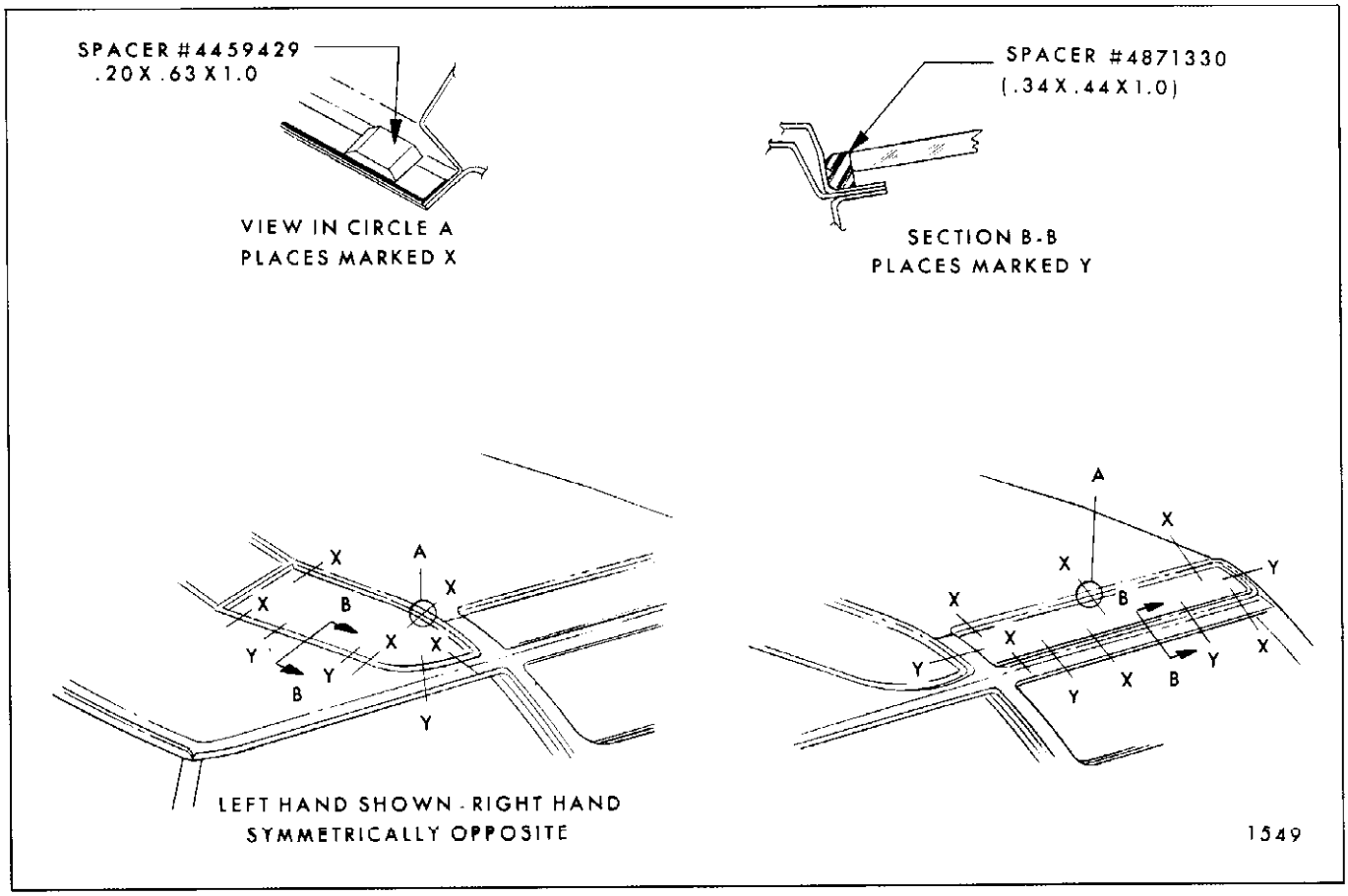


Fig. 4-15—Front and Side Skylight Rubber Spacer Installation

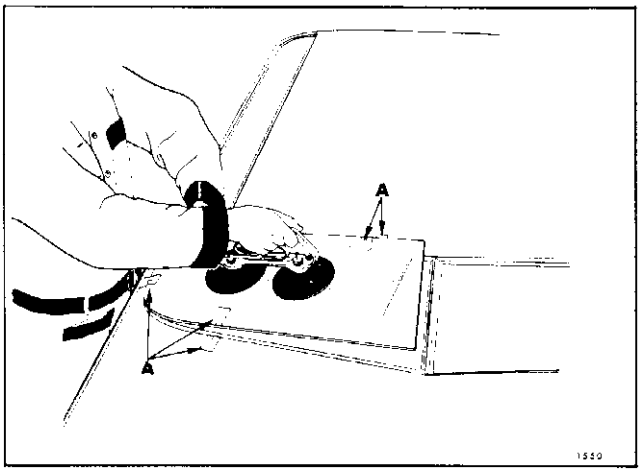


Fig. 4-16—Glass Suction Cup Usage

3. Using black weatherstrip adhesive, cement rectangular spacers #4871330 or equivalent (.34 x .44 x 1.0) to window opening rabbet at "Y" locations shown in Section "B-B" in Figure 4-15.

4. If the front skylight is being installed, attach glass handling suction cups to outer surface of glass and position glass in body opening (See Figure 4-16.

   If side skylight is being installed, carry glass to body with aid of a helper as shown in Figure 4-17.

   Supporting glass with one hand, extend other arm into body and back through window opening as shown in Figure 4-18 and lower glass into position.

5. Check relationship of glass to pinchweld flange around entire perimeter. Overlap of pinchweld flange should be equal with a minimum overlap of 3/16". Overlap across top may be varied by changing lower glass support spacers. Both thinner (#4404196 or equivalent) and thicker (#4534314 or equivalent) rectangular spacers are available as service parts.

6. Check relationship of glass contour to body opening. Gap space between glass and pinchweld flange should be no less than 1/8" nor more than 1/4". If difficulty is encountered staying between these limits, correction can be made by any one of the following methods:

   a. Reposition flat spacers.

   b. Apply more caulking material than is specified at excessive gap areas. Material can be applied to pinchweld flange or by allowing bead on glass to exceed 3/8" height at gap areas.

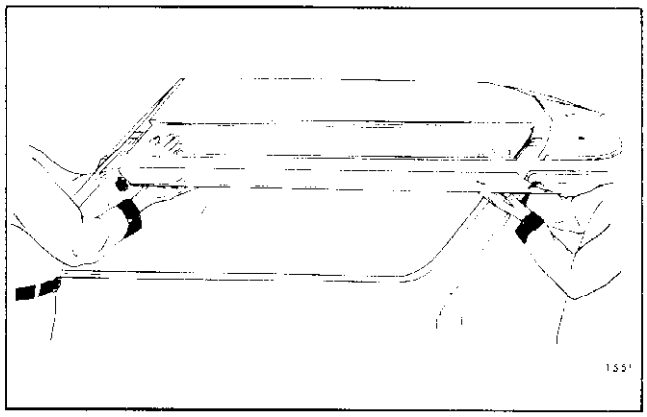


Fig. 4-17—Side Skylight Window Installation

   c. Change glasses - another glass may fit opening better.

   d. Rework pinchweld flange.

7. After final adjustments have been made and glass is in proper position, apply pieces of masking tape over edges of glass and body (see View "A" in Fig. 4-16 or 4-18 depending on window being installed). Tape on glass can be aligned with tape on body to guide glass into opening during installation.

8. Apply one inch masking tape completely around inner surface of glass 1/4" inboard from outer edge (see Fig. 4-19). Removal of tape after glass installation will aid in clean-up and give a smooth even edge to adhesive material.

9. Using a clean lint-free cloth liberally dampened with Adhesive Caulking Primer or equivalent (supplied in kit #4226000), briskly rub primer over original adhesive material remaining on pinchweld flange. Perform the following steps while allowing primer to dry for 5 to 10 minutes.

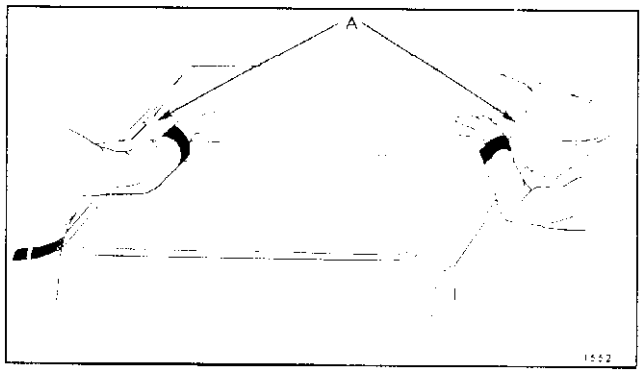


Fig. 4-18—Side Skylight Window Installation

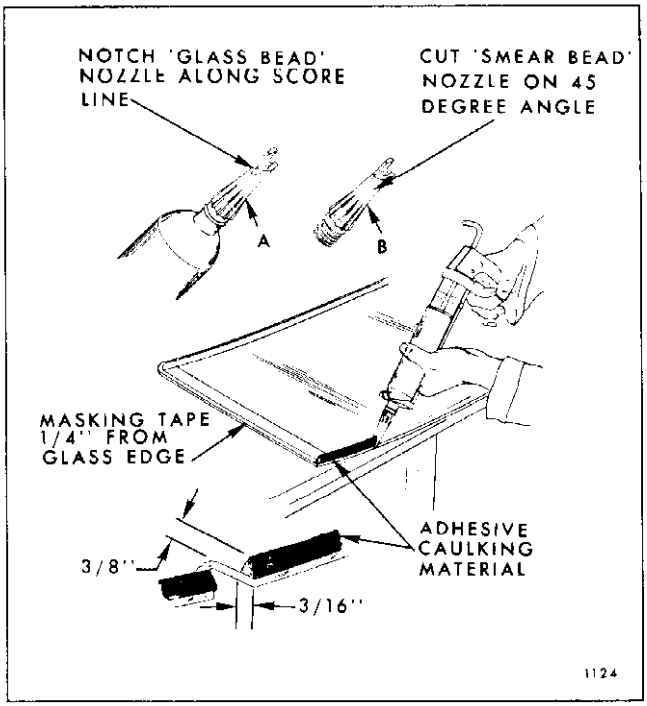


Fig. 4-19—Adhesive Caulking Material Application - Extended Method

NOTE: If the pinchweld flange has been repainted, prime pinchweld flange with Paint Surface Primer (or equivalent). Paint Surface Primer is available as a service part.

CAUTION: Use extreme care to avoid spilling any primer solution on trim or painted surfaces. Wipe any spills immediately as primers will etch trim or interior paint finishes on contact.

10. Wipe surface of glass to which bead of adhesive material will be applied (between applied masking tape and edge of glass) with a clean water-dampened cloth. Dry glass with a clean cloth.
11. Positioning gun and nozzle as shown in Figure 4-19, carefully apply a smooth continuous bead of caulking material 3/8" high by 3/16" wide at base completely around edge of glass.

    NOTE: Adhesive caulking material begins to cure after 15 minutes exposure to air; therefore, perform the following steps immediately and install glass in opening as quickly as possible.

12. Install glass in opening, focus attention on tape guides previously applied to obtain proper positioning.

    NOTE: When installing front skylight, position outer lower corner first as shown in Figure 4-16, and lower glass into opening.

13. Press glass firmly to set caulking material. Use caution to avoid excessive squeeze-out of material.

    NOTE: Glass handling suction cups may be used when removing or installing the skylight glass.

14. Inspect installation for proper seal between new caulking material and original material. If a gap is encountered, apply sufficient caulking material to fill the void. On inside of body run a flat stick around the pinchweld flanges to push excess caulking material back into opening between glass and flanges. Remove any excess squeeze-out of material.
15. Watertest installation immediately using cold water spray.
16. Remove masking tape from inside of glass.
17. Install reveal moldings, inside garnish moldings and previously removed parts.

REAR QUARTER STATIONARY WINDOW GLASS

"A & B" STATION WAGONS

DESCRIPTION

The rear quarter window glass is retained in the body opening by adhesive caulked material. The extended method is to be used when replacing a rear quarter window glass. Procedures covering the removal and replacement of adhesive caulked glass including cutting out of material, necessary service parts, application of material, watertesting and waterleak repairing are described in the "Adhesive Caulking - General Information" Section. Specific details applying to rear quarter window glass removal and installation will be covered in this section.

REMOVAL

1. Remove glass as outlined in "Adhesive Caulk-

ing-General Information" Section. If the original glass is to be re-used, place it on a protected bench or holding fixture and remove old caulking material from glass with sharp scraper or razor blade. Remove all remaining traces with toluene or thinner dampened cloth.

NOTE: Do not use an oil base solvent. Any trace of oil will prevent adhesion of new caulking material to glass.

2. Using a sharp scraper or chisel, remove major portion of old caulking material from pinchweld flange around rear quarter window opening. It is not necessary that all material be removed, but there should not be any loose pieces left in the opening.

INSTALLATION

1. Check all reveal molding retainer clips. If upper end of a clip is bent away from body metal more than 1/32 of an inch, replace or reform clip to insure adequate molding retention.

   NOTE: Check all clip attaching screws and tighten as required.

2. With black weatherstrip adhesive cement four flat spacers (.20 x .63 x 1.0 - Part No. 4459429 or equivalent) to pinchweld flange; two at top and two at bottom (see Fig. 4-20).

3. With black weatherstrip adhesive cement four rectangular spacers (.34 x .44 x 1.0 - Part No. 4871330 or equivalent) to rear quarter window opening rabbet; two at sides and two at bottom (see Fig. 4-20). Both side spacers should be cemented in the approximate position indicated in Figure 4-20. Both thinner (#4404196 or equivalent) and thicker (#4534314 or equivalent) rectangular spacers are available as service parts.

4. Position glass in opening by making contact along upper edge first and then swing in lower edge (see Fig. 4-21 and 4-22).

5. Check relationship of glass to pinchweld flange around entire perimeter. Overlap of pinchweld flange by glass should be equal with a minimum overlap of 3/16". Inadequate overlap across top may be corrected by replacing two rectangular glass support spacers across bottom with thicker spacers.

6. Check relationship of glass contour to body opening. Gap space between glass and pinchweld flange should be no less than 1/8" nor more than 1/4". If difficulty is encountered

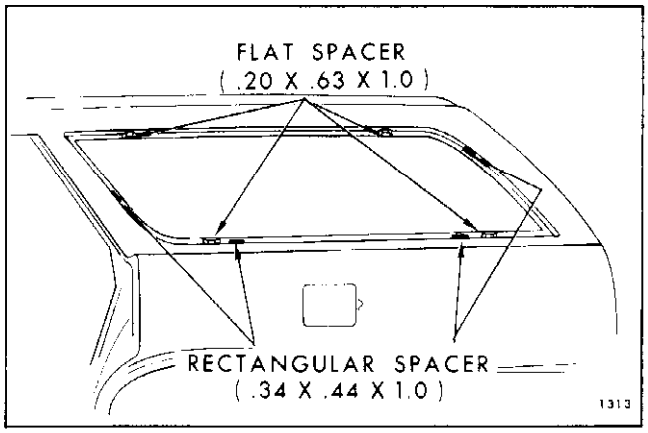


Fig. 4-20—Rear Quarter Window Spacer Installation

staying between these limits, correction can be made by any one of the following methods:

   a. Position another glass in opening to determine if a better fit can be obtained.

   b. Rework pinchweld flange.

   c. Apply more caulking material than is specified at excessive gap areas. Material can be applied to pinchweld flange or by allowing bead on glass to exceed specified 3/8" height at gap areas.

7. After final adjustments have been made and glass is in proper position, apply a piece of masking tape horizontally over front and rear edges of glass and body pillars (Fig. 4-22), so that tape on glass can be aligned with tape on body and act as a guide when glass is installed.

8. Apply one inch masking tape completely around edge of glass inner surface 1/4" inboard from outer edge (see Fig. 4-23).

9. From inside of body, apply masking tape around window opening to protect painted and trimmed surfaces.

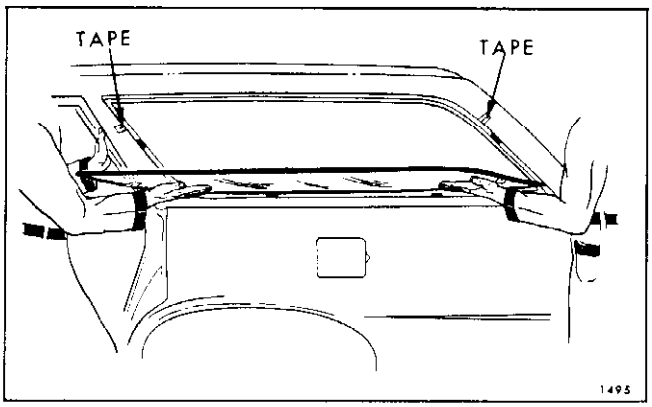


Fig. 4-21—Stationary Quarter Window Installation

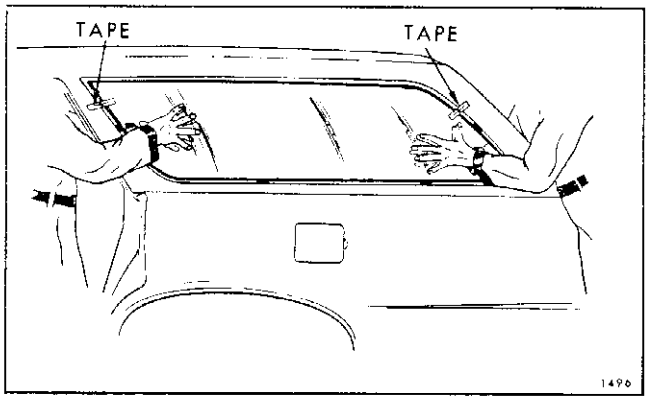


Fig. 4-22—Stationary Quarter Window Installation

10. Using a clean, lint free cloth, liberally dampened with Adhesive Caulking Primer, briskly rub primer over and into original adhesive caulking material that remains on pinchweld flange. If the pinchweld flange has been repainted, prime flange with Paint Primer, or equivalent.

11. Wipe surface of glass to which bead of adhesive caulking material will be applied (between masking tape and edge of glass) with a clean water-dampened rag. Dry glass thoroughly with a clean dry rag.

12. With caulking gun and nozzle positioned as illustrated in Figure 4-23, carefully apply a smooth continuous bead of caulking material 3/8" high by 3/16" wide at base completely around inside edge of glass.

    NOTE: When material in first tube is dispensed, quickly insert second tube and continue application of bead. This material begins to cure after fifteen (15) minutes exposure to air; therefore, perform the following steps immediately and install glass in the opening as quickly as possible.

13. Remove "glass bead" nozzle and insert "smear bead" nozzle. Holding caulking gun at an angle so that opening of nozzle rests flat on pinchweld flange, apply a thin (1/4" wide x 1/16" high) "smear bead" of adhesive caulking material completely around pinchweld flange.

14. Install glass (see Fig. 4-21 and Fig. 4-22). Make certain that glass sets properly on spacers and does not have to be shifted after material contacts pinchweld flange. Align tape on glass with tape on body to guide window into opening.

    NOTE: When setting glass in opening, make contact with upper edge of glass first and then swing in lower edge.

15. Press glass firmly to set caulking material. Use caution to avoid excessive squeeze-out of material.

    NOTE: Glass handling suction cups may be used when removing or installing the rear quarter glass.

16. Inspect installation for proper seal between new caulking material and original material. If a gap is encountered, apply sufficient caulking material to fill the void. On inside of body run a flat stick around the pinchweld flanges to push excess caulking material back into opening between glass and flanges. Remove any excess squeeze-out of material.

17. Watertest installation immediately using cold water spray.

18. Remove masking tape from inside of glass.

19. Install reveal moldings, inside garnish moldings and previously removed parts.

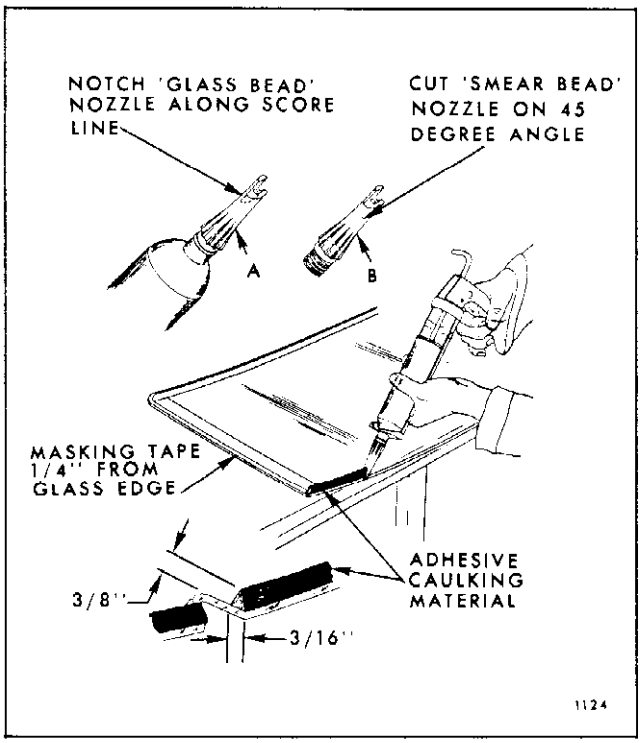


Fig. 4-23—Adhesive Caulking Material Application - Extended Method

REAR QUARTER STATIONARY WINDOW "X" STATION WAGON

REMOVAL

1. Remove rear quarter garnish moldings and rear quarter reveal moldings (see Molding Section 17 of Body Service Manual).
2. Remove quarter window upper and lower retainer and belt finishing molding supports.
3. Using a suitable tool, carefully break seal between window rubber channel and body opening. With the aid of a helper, carefully push glass and rubber channel assembly inboard and remove assembly from opening.

   CAUTION: Use care so that glass does not strike body metal. Edge chips can cause solid tempered safety plate glass to shatter: Do not attempt to grind glass.

INSTALLATION

1. Clean off old sealer from rubber channel and body opening to assure a smooth sealing surface.
2. Apply a bead of black weatherstrip adhesive into glass cavity in rubber channel and install rubber channel to glass.
3. Apply a ribbon of medium-bodied sealer completely around window opening.
4. Insert window assembly into opening and install upper and lower window retainers.
5. Using a pressure type applicator, apply weatherstrip adhesive (black) between glass and lip of rubber channel completely around outside of window.
6. Clean off excess sealer and replace previously removed parts.

BACK WINDOW GLASS
Removal and Installation
All Styles Except Station Wagons and Convertibles

DESCRIPTION

The back window glass is retained in the body opening by adhesive caulked material. The extended method is to be used when replacing a back window glass. Procedures covering the removal and replacement of adhesive caulked glass including cutting out of material, necessary service parts, application of material, watertesting and waterleak repairing are described in the "Adhesive Caulking-General Information" Section. Specific details applying to back window glass removal and installation, will be covered in this section.

REMOVAL

1. Removal glass is outlined in "Adhesive Caulking-General Information" Section. If the original glass is to be re-used, place it on a protected bench or holding fixture and remove old caulking material from glass with sharp scraper or razor blade. Remove <u>all</u> remaining traces with toluene or thinner dampened cloth.

   NOTE: Do not use an oil base solvent. Any trace of oil will prevent adhesion of new caulking material to glass.

2. Using a sharp scraper or chisel, remove major portion of old caulking material from pinchweld flange around back window opening. It is not necessary that all material be removed, but there should not be any loose pieces left in the opening.

INSTALLATION

1. Check all reveal molding retaining clips. If upper end of a clip is bent away from body metal more than 1/32 of an inch, replace or reform clip to insure adequate molding retention. Tighten all loose clip screws.
2. With black weatherstrip adhesive cement two flat spacers (.20 x .63 x 1.0 Part #4459429 or equivalent) to pinchweld flange at top, approximately fifteen inches each side of centerline of opening (Fig. 4-24).
3. With black weatherstrip adhesive, cement four rectangular spacers (.34 x .44 x 1.0 Part #4871330 or equivalent) to back window opening rabbet - one in center of each side and two at bottom, approximately nineteen inches from centerline of opening (Fig. 4-24).

   NOTE: A thicker (Part #4534314) or thinner

(Part #4404196) spacer can be used in an emergency in lieu of spacer listed in step 3.

4. Cement (with black weatherstrip adhesive) three flat spacers (.20 x .63 x 1.0 Part #4459429 or equivalent) at bottom, one in center and one each approximately 22 inches from centerline.

   NOTE: The rectangular spacers across the bottom support the weight of the glass, therefore, make certain that they are well positioned so they will not rock or slide out.

5. Position glass in opening and check relationship of glass to pinchweld flange around entire perimeter. Overlap of pinchweld flange by glass should be equal with a minimum overlap of 3/16". Inadequate overlap across top may be corrected by replacing two rectangular glass support spacers across bottom with thicker spacers.

6. Check relationship of glass contour to back window opening. Gap space between glass and pinchweld flange should be no less than 1/8" nor more than 1/4". If difficulty is encountered staying between these limits, corrections can be made by any one of the following methods.

   a. Substitute another glass to determine if it will fit opening better.

   b. Rework pinchweld flange.

   c. Apply more caulking material than is specified at excessive gap areas. Material can be applied to pinchweld flange by allowing bead on glass to exceed specified 3/8" height at gap areas.

7. After final adjustments have been made and glass is in proper position in opening, apply a piece of masking tape horizontally over each side edge of glass and rear quarter extension (Fig. 4-25), so that when glass is being installed, tape on glass can be aligned with tape on body and serve as a guide.

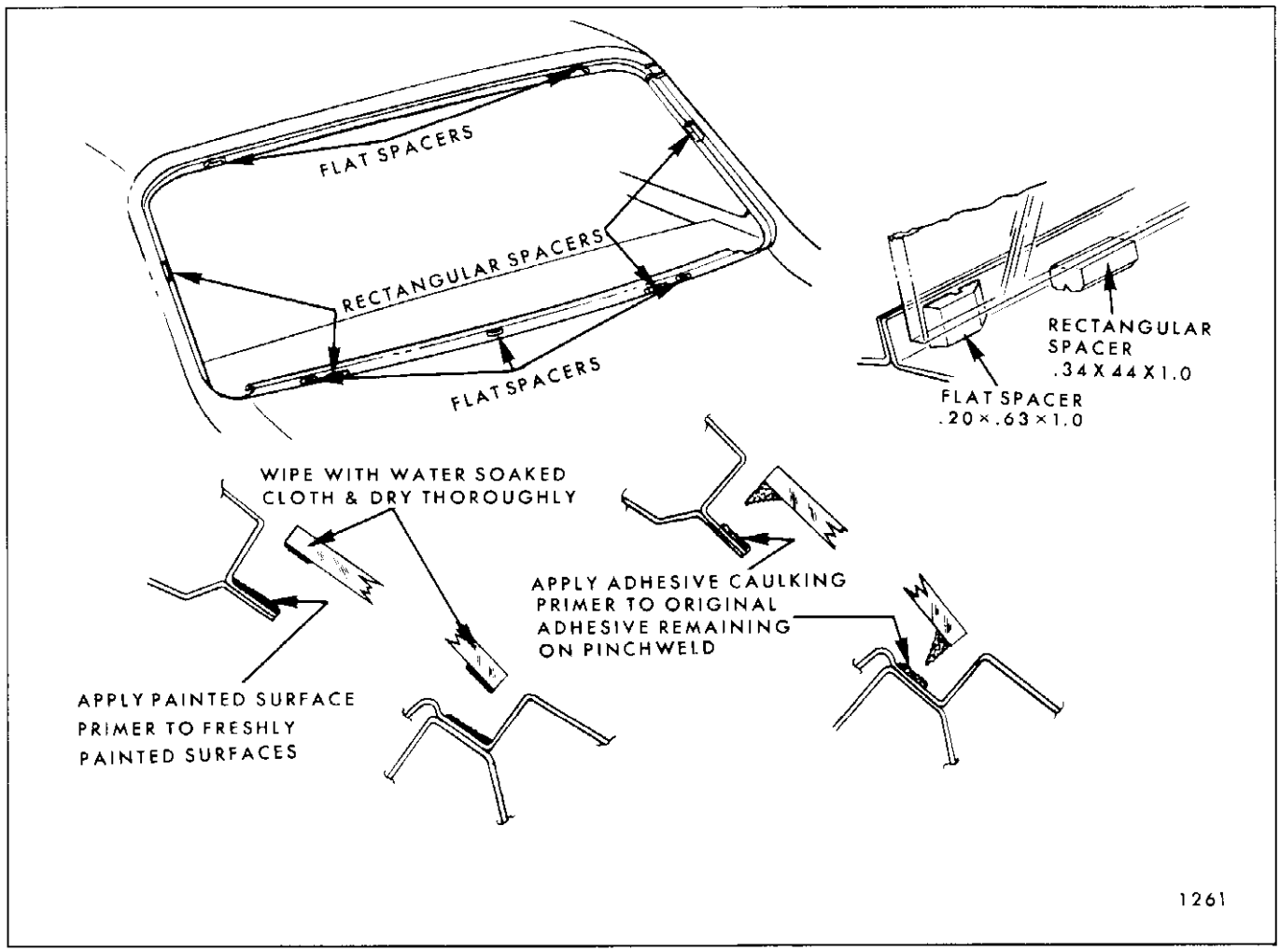


Fig. 4-24—Back Window Adhesive Caulked Installation

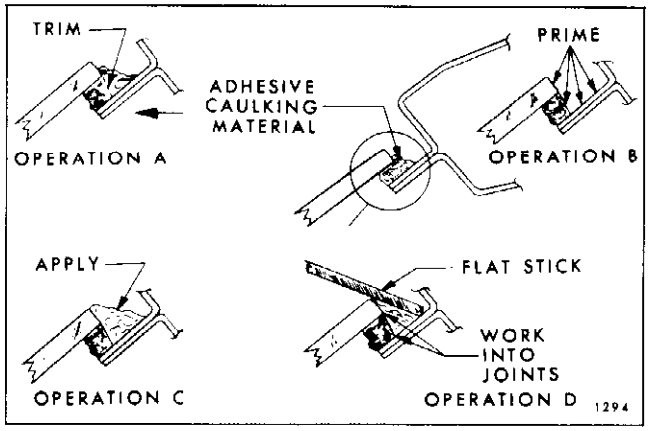


Fig. 4-25—Back Window Installation

8. Apply one inch masking tape to inner surface of glass 1/4" inboard from outer edge up both sides and across top. Do not apply tape to bottom edge of glass. Instead, apply masking tape over painted feature strip below back window opening. (See Fig. 4-26.)

9. Using a clean, lint-free cloth liberally dampen with Adhesive Caulking Primer, briskly rub primer over original adhesive caulking compound remaining on pinchweld flange.

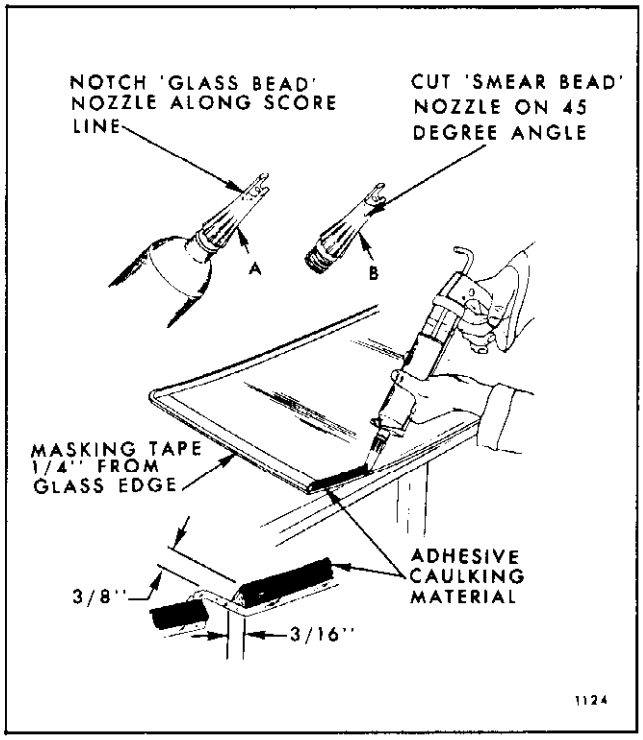


Fig. 4-26—Adhesive Caulking Installation - Extended Method

NOTE: If the pinchweld flange has been repainted, prime flange with Paint Surface Primer, or equivalent.

10. Wipe surface of glass to which bead of adhesive caulking material will be applied (between masking tape and edge of glass) with a clean, water-dampened rag. Dry glass thoroughly with a clean, dry rag.

11. With caulking gun and nozzle positioned as illustrated in Figure 4-26 carefully apply a smooth continuous bead of caulking material 3/8" high by 3/16" wide at base completely around inside edge of glass.

NOTE: When material in first tube is dispensed, quickly insert second tube and continue application of bead. This material begins to cure after fifteen minutes exposure to air, therefore, perform the following steps immediately and install glass in the opening as quickly as possible.

12. Remove "glass-bead" nozzle and insert "smear-bead" nozzle. Holding caulking gun at an angle so that angle-cut of nozzle rests flat on pinchweld flange, apply a thin (1/4" wide x 1/16" high) "smear-bead" of adhesive caulking material completely around pinchweld flange.

13. Install glass in body opening making certain that glass sets properly on spacers and does not have to be shifted after material contacts pinchweld flange. Align tape on glass with tape on body to guide window into opening. (See Fig. 4-25).

NOTE: When setting glass into opening, it should be in the same plane as opening so that all edges of glass contact pinchweld flange at approximately the same time.

14. Press glass firmly to set caulking material. Use caution to avoid excessive squeeze-out of material.

NOTE: Glass handling suction cups may be used when removing or installing the glass.

15. Inspect installation for proper seal between new caulking material and original material. If a gap is encountered, apply sufficient caulking material to fill the void. On inside of body run a flat stick around the pinchweld flanges to push excess caulking material back into opening between glass and flanges. Remove any excess squeeze-out of material.
16. Watertest installation immediately using cold water spray.
17. Remove masking tape from inside of glass.
18. Install reveal moldings, inside garnish moldings and previously removed parts.

SECTION 5
FRONT END

INDEX

Subject	Page
BODY VENTILATION	5-1
Description - All Exc. 26657 and "E" Body	5-1
Shroud Side Finishing Panel - "A, B, C, D & E"	5-1
Shroud Side Air Outlet Duct - "A, B, C, D & E"	5-2
Shroud Side Finishing Panel and Air Outlet Duct - "F, X & Z"	5-2
Shroud Side Air Outlet Duct Door - "A, B, C, D & E"	5-2
Shroud Side Air Outlet Duct Door - "F, X, & Z"	5-3
Shroud Side Air Outlet Duct Door Control Cable - "A, B, C, D & E"	5-3
Shroud Side Air Outlet Duct Door Control Cable - "F, X & Z"	5-5
Description - 26657 and "E" Body Styles	5-5
INSTRUMENT PANEL	5-5
Instrument Panel Compartment Door - All Exc. "E" and Cadillac "C"	5-5
Instrument Panel Door Locks - All Exc. "E" and Cadillac "C"	5-7
Instrument Panel Cover - Chevrolet	5-7
FRONT COMPARTMENT - CORVAIR	5-8
Description	5-8
Front Compartment Lid	5-8
Front Compartment Lid Torque Rods	5-8
Front Compartment Lid Lock Cylinder	5-9
Front Compartment Lid Lock Assembly	5-10
Front Compartment Lid Lock Striker	5-10
Front Compartment Lid Gutter Weatherstrip	5-11

BODY VENTILATION

DESCRIPTION—All Styles Except 26657 and "E" Body Styles

The body ventilation system incorporates the use of a shroud top air intake grille, which is either attached by screws or is an integral part of the shroud upper panel. The air entering the shroud top air intake grille flows through a duct which guides the air into the body through a shroud side duct panel air outlet assembly. The door in the outlet assembly regulates the flow of air and is adjusted by the use of a cable and knob control.

Water entering the shroud top air intake grille flows down the shroud side duct panel and is discharged through openings in the rocker panels.

SHROUD SIDE FINISHING PANEL "A-B-C-D-E" Body Styles

Removal and Installation

1. Remove sill plate and screws securing finishing panel and grille to outlet (Fig. 5-1).

2. Removing finishing panel to hinge pillar attaching screw (Fig. 5-1).

3. Slide finishing panel rearward disengaging panel from front body hinge pillar pinchweld flange and remove panel assembly.

4. To install, reverse removal procedure.

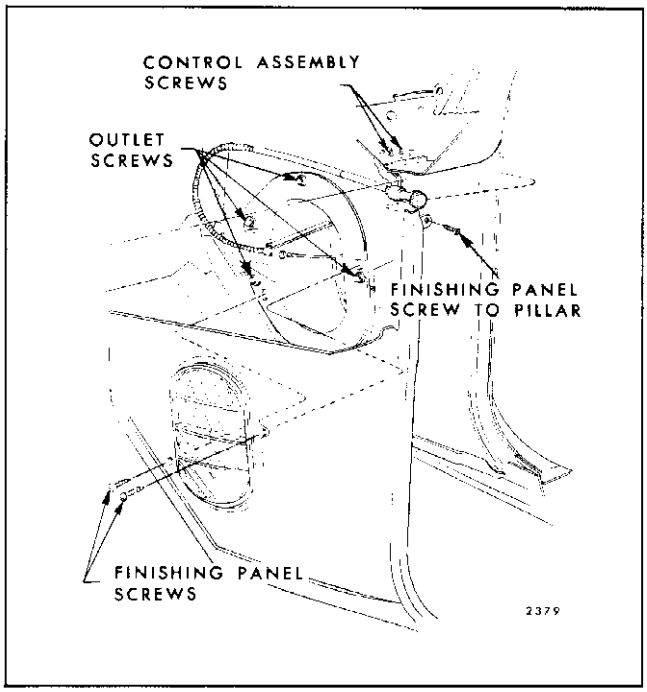


Fig. 5-1—Shroud Side Finishing Panel and Shroud Side Air Outlet Duct Assembly - "A-B-C-D-E" Styles

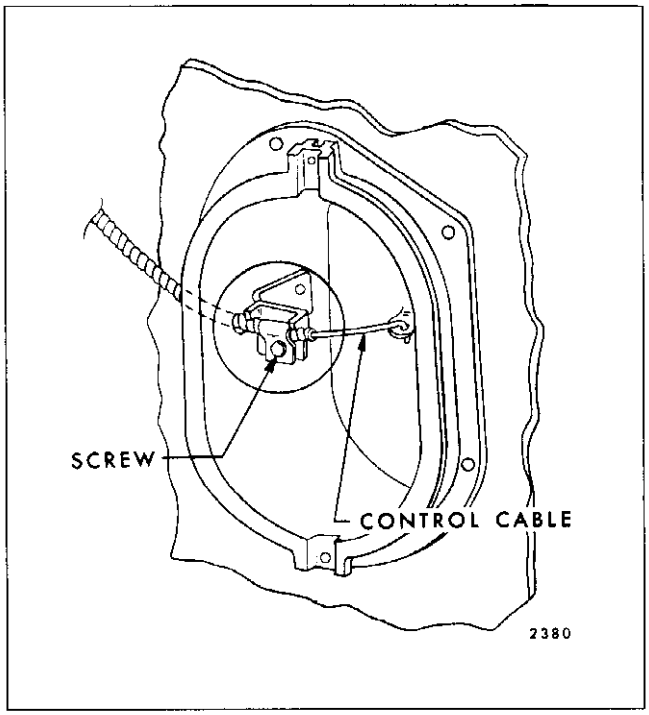


Fig. 5-2—Air Outlet Control Cable

SHROUD SIDE AIR OUTLET DUCT ASSEMBLY "A-B-C-D-E" Body Styles

Removal and Installation

1. Remove shroud side finishing panel.
2. Disengage control cable from outlet assembly and loosen cable attaching screw (Fig. 5-2).
3. Remove screws securing outlet assembly to shroud panel and remove outlet assembly (Fig. 5-1).

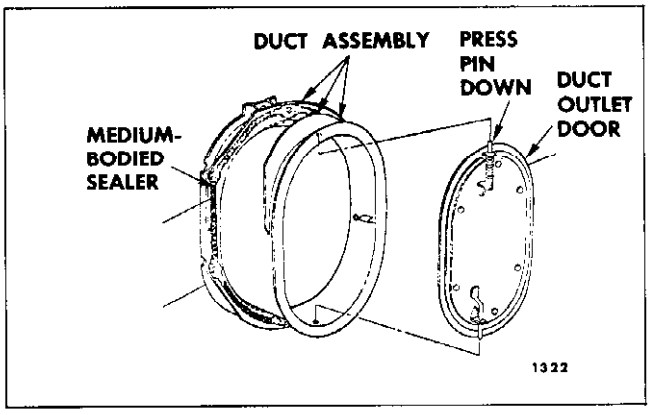


Fig. 5-3—Shroud Side Air Outlet Duct Assembly and Sealing

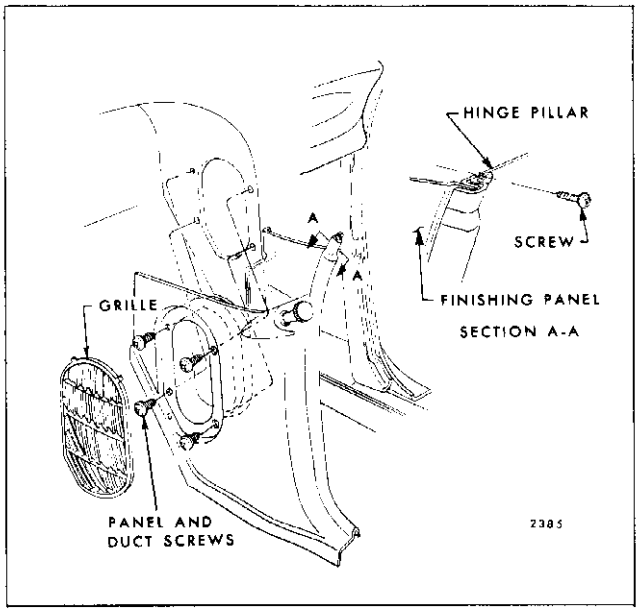


Fig. 5-4—Shroud Side Finishing Panel and Air Outlet Duct Assembly - " -X-Z" Styles

4. To install, apply a bead of medium-bodied sealer around entire inner flange of outlet assembly (Fig. 5-3) and reverse removal procedure.

SHROUD SIDE FINISHING PANEL AND AIR OUTLET DUCT ASSEMBLY— " -X-Z" Body Styles

Removal and Installation

1. With a flat-bladed tool (screw driver or equivalent), pry the outlet grille from the assembly (Fig. 5-4).
2. Remove screws attaching finishing panel and duct assembly to shroud (Fig. 5-4).
3. Remove sill plate.
4. Remove finishing panel to hinge pillar attaching screw (Fig. 5-4), and remove assembly.
5. To install, apply a generous bead of medium-bodied sealer to flange of finishing panel and duct assembly (Fig. 5-5) and reverse removal procedure.

SHROUD SIDE AIR OUTLET DUCT DOOR

Removal and Installation— ("A-B-C-D-E" Styles)

1. Remove shroud side air outlet duct assembly.

2. Press down on upper door hinge pin (Fig. 5-3) and remove door assembly.

3. To install, reverse removal procedure.

SHROUD SIDE AIR OUTLET DUCT DOOR

Removal and Installation—("F-X-Z" Styles)

1. Remove shroud side finishing panel and air outlet duct assembly.

2. Disconnect control cable from door (Fig. 5-5).

3. Press down on upper door hinge pin (Fig. 5-5) and remove door assembly.

4. To install, reverse removal procedure.

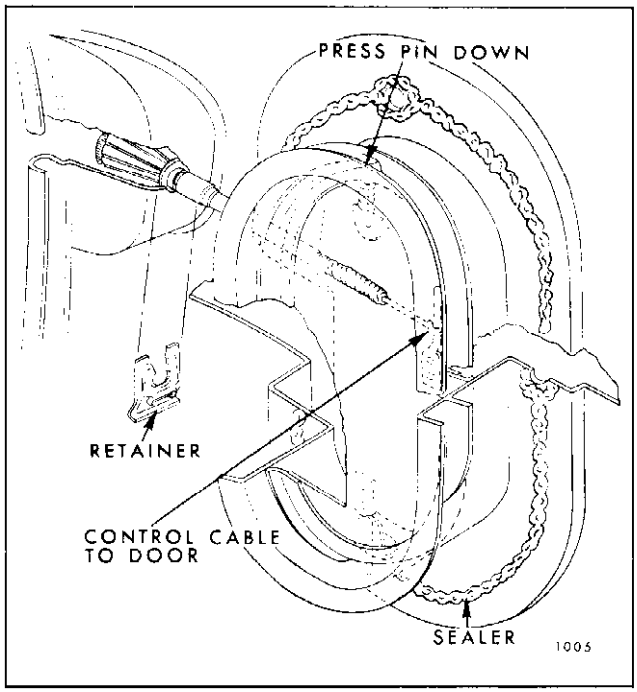


Fig. 5-5—Shroud Side Finishing Panel and Air Outlet Duct Assembly - "F-X-Z" Styles

SHROUD SIDE AIR OUTLET DUCT DOOR CONTROL CABLE

Removal and Installation—("A-B-C-D-E" Styles)

1. Remove shroud side trim panel.

2. Disconnect cable on door.

3. Loosen attaching screw securing cable to shroud side air outlet duct assembly (Fig. 5-2).

4. Remove screws securing control assembly to instrument panel (Fig. 5-1) and remove control assembly.

5. To install, reverse removal procedure.

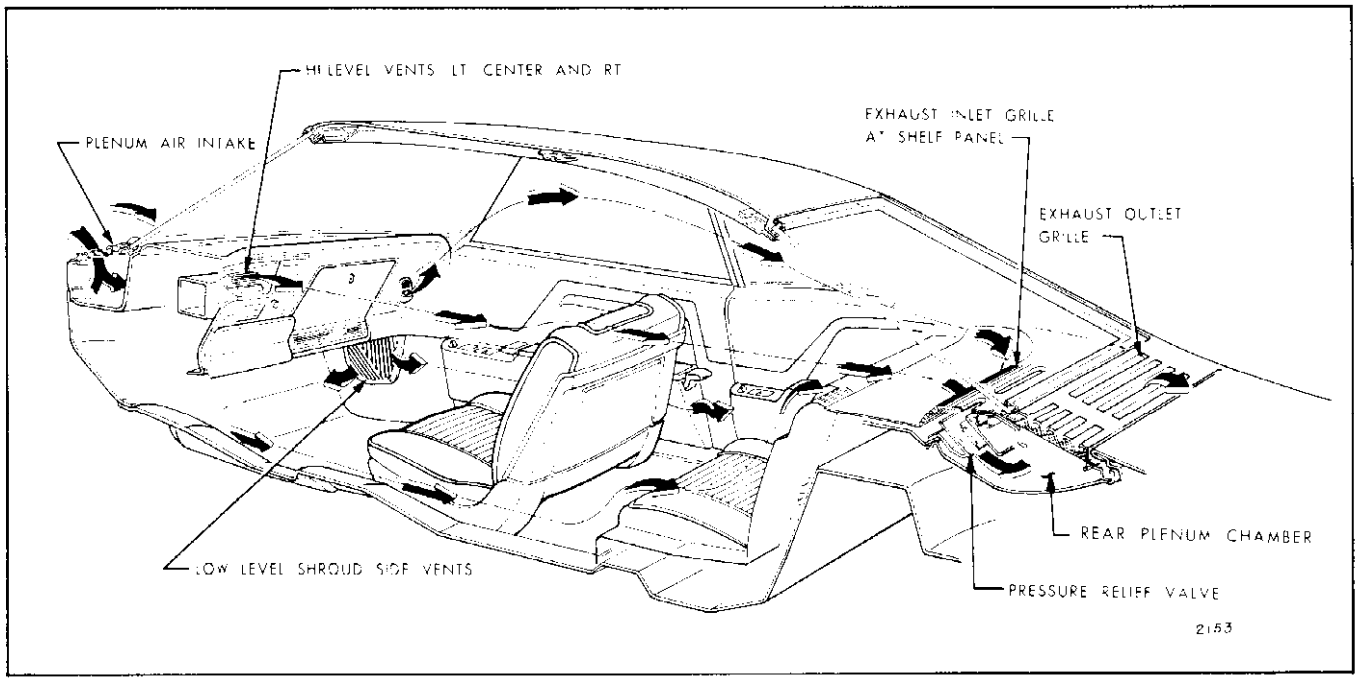


Fig. 5-6—Body Ventilation - Buick "E" Body

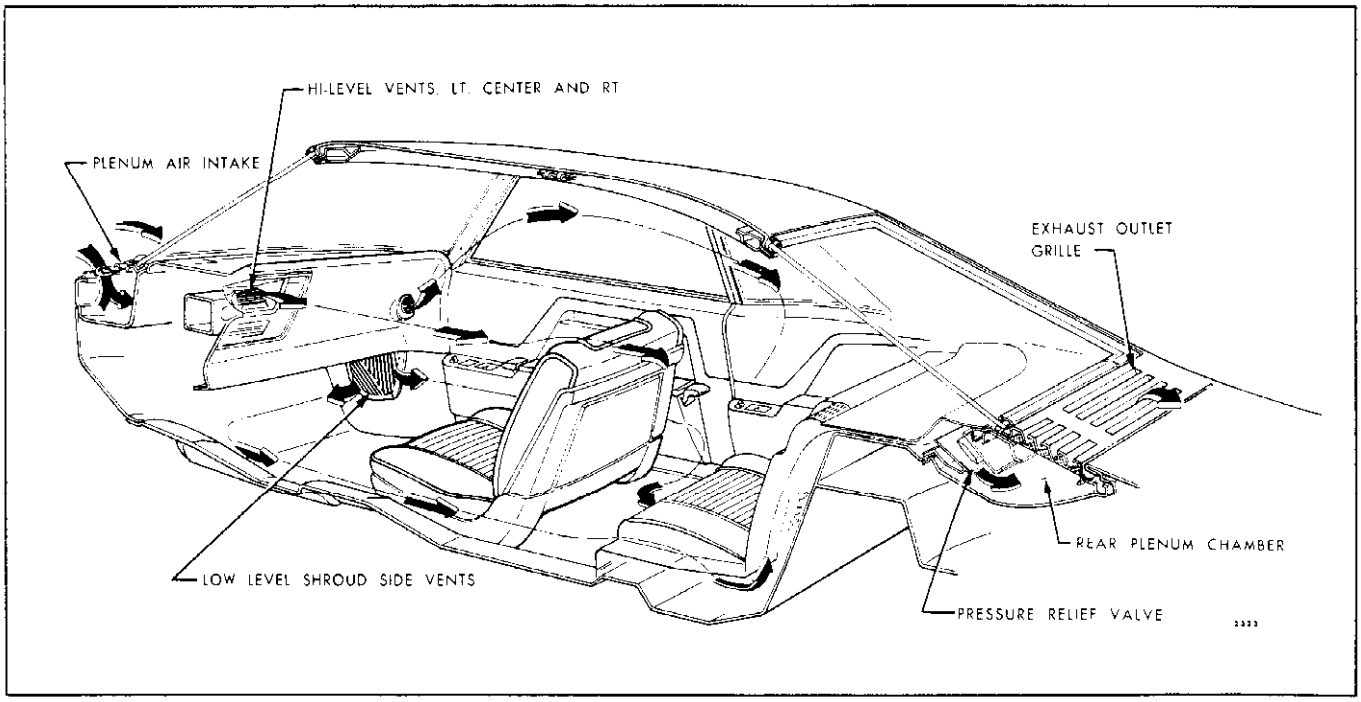


Fig. 5-7—Body Ventilation - Oldsmobile "E" Body

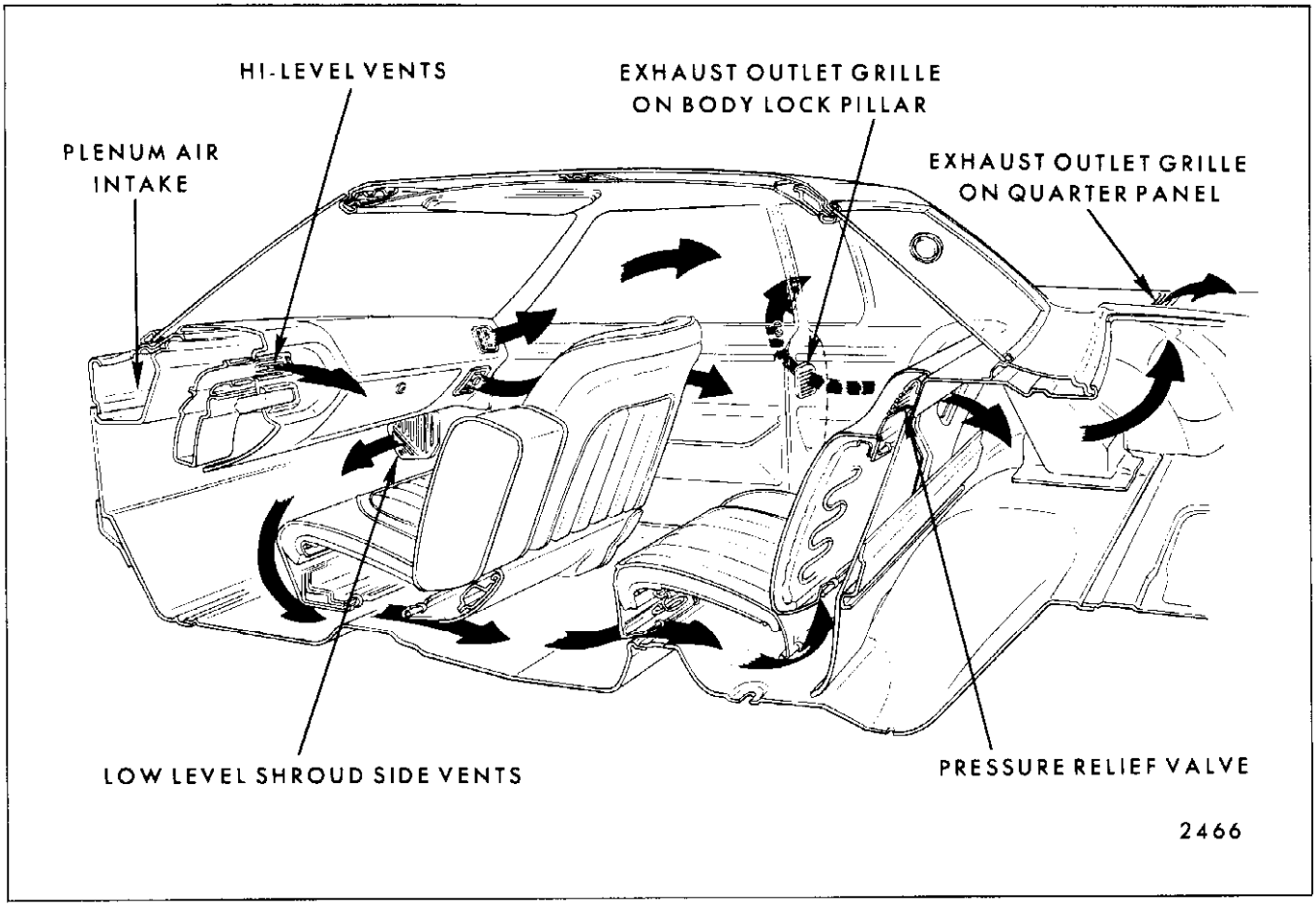


Fig. 5-8—Body Ventilation - Cadillac "E" Body

SHROUD AIR OUTLET DUCT DOOR CONTROL CABLE

Removal and Installation—("F-X-Z" Styles)

1. Remove outlet grille and outlet duct assembly.
2. Disconnect cable on door.
3. Remove retainer securing control assembly to finishing panel (Fig. 5-5) and remove control assembly.
4. To install, reverse removal procedure.

DESCRIPTION—26657 and "E" Body Styles

The "26657" and "E" body styles incorporate the same air inlet principles as the other styles. The exhausting air on the 26657 style is routed out under the rear seat, up back of the rear seat back, and out through pressure relief valves. Air passes through the pressure relief valves into the plenum chamber and out through the grille in the body lock pillar.

The exhausting air on the Buick "E" body is routed out through pressure relief valves located in the rear compartment shelf and rear plenum chamber. Air passes through a grille in the rear compartment shelf trim panel down through the pressure relief valve and out of the rear plenum chamber grille.

The exhausting air on the Oldsmobile "E" body is routed out under the rear seat, up back of the rear seat back and out through pressure relief valves (Fig. 5-7). Air passes through the pressure relief valves into the plenum chamber and out through the plenum chamber grille.

The exhausting air on the Cadillac "E" body is routed out under the rear seat, up back of the rear seat back and out through pressure relief valves. Air passes through the pressure relief valves into the plenum chamber and out through the grilles in the quarter panel and the body lock pillar.

Water entering the rear plenum chamber is drained out through attached hoses that extend through the floor pan or rear quarter filler panel.

INSTRUMENT PANEL

INSTRUMENT PANEL COMPARTMENT DOOR—All Except "E" Bodies and "C" Cadillac Bodies

Removal and Installation

The instrument compartment door hinges and stops are an integral part of the door or attached by screws. The hinges and door assemblies are attached to the instrument panel by screws. To remove the door assemblies, remove attaching screws securing hinge to instrument panel (Figs. 5-9, 5-10, 5-11 and 5-12), lift door, rotate counterclockwise to remove stop from opening in panel.

To install, reverse removal procedure.

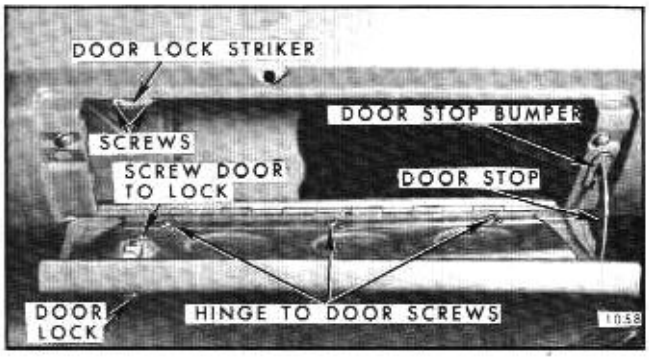


Fig. 5-9—Instrument Panel Compartment Door

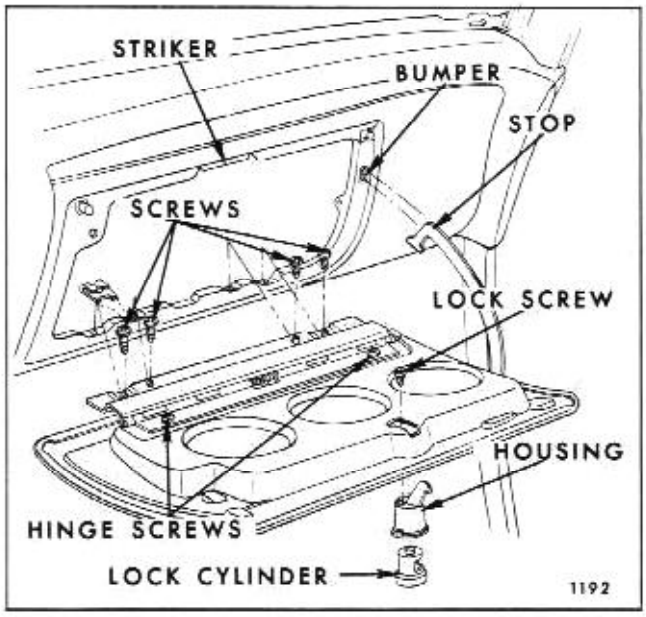


Fig. 5-10—Instrument Panel Compartment Door

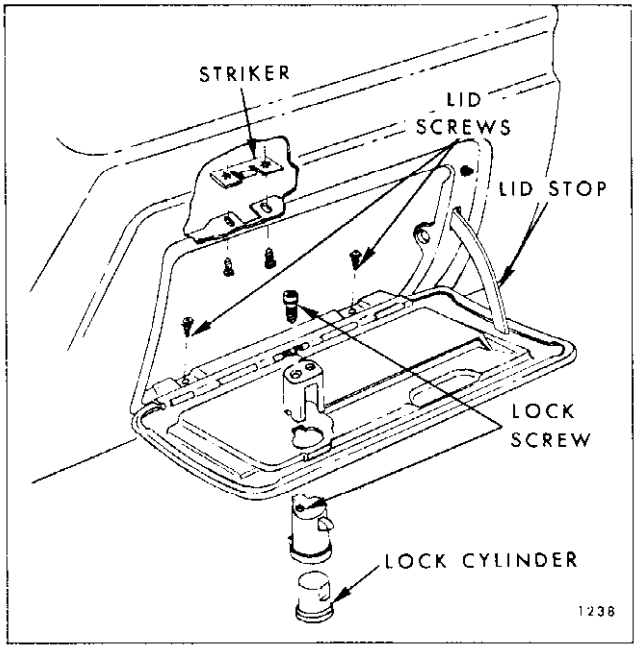


Fig. 5-11—Instrument Panel Compartment Door

Adjustments

1. To move door up or down, shim between hinge and instrument panel or loosen door-to-hinge screws and position door as desired.
2. To move door in or out, loosen hinge-to-instrument panel and position door as desired.

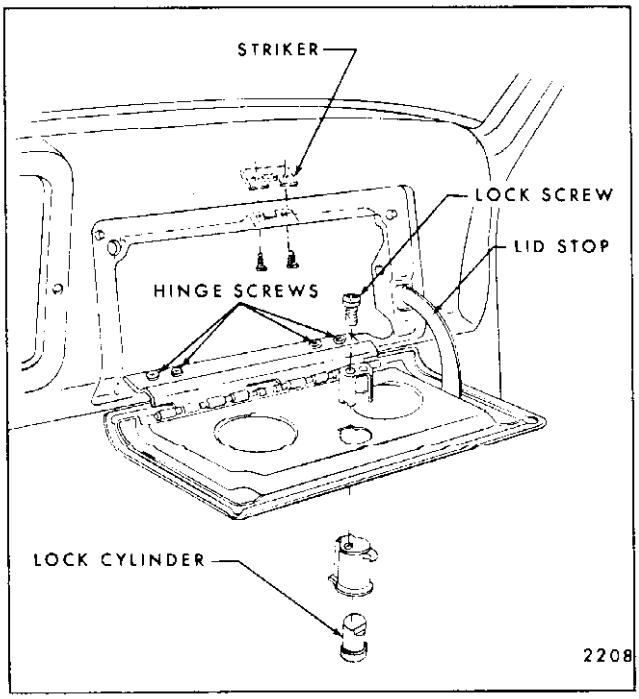


Fig. 5-12—Instrument Panel Compartment Door

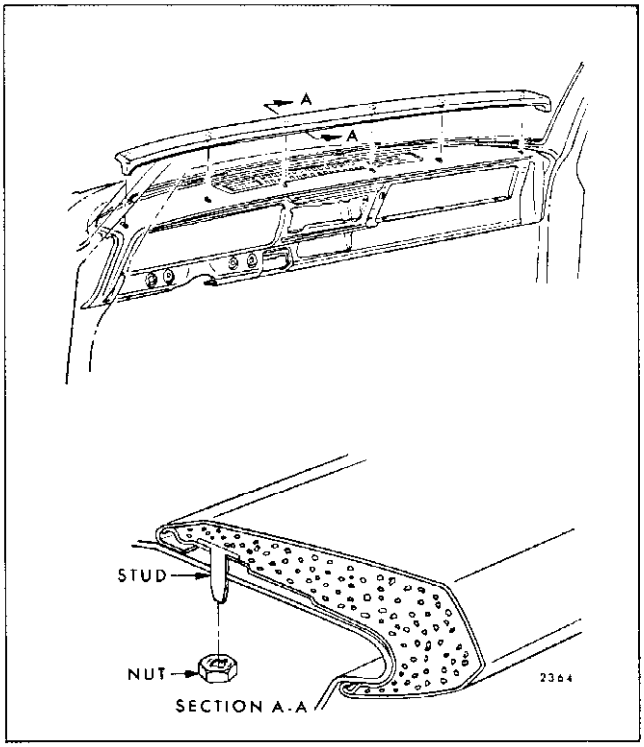


Fig. 5-13—Instrument Panel Cover - "X" Body

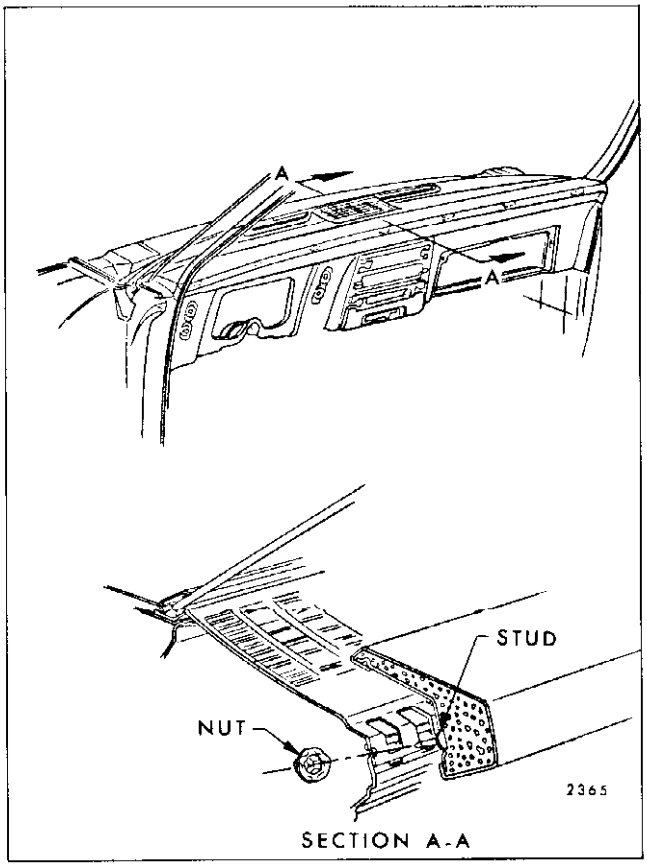


Fig. 5-14—Instrument Panel Cover - "F" Body

3. To move door right or left, loosen hinge-to instrument panel screws and position door as desired.

4. Striker plates are adjustable on the instrument panel by loosening the attaching screws and positioning the striker plate as desired (Figs. 5-9, 5-10, 5-11 and 5-12).

INSTRUMENT PANEL DOOR LOCKS All Except "E" Bodies and "C" Cadillac Bodies

Removal and Installation

1. Open compartment door, remove screw attaching lock to door inner panel and remove lock assembly (Figs. 5-9, 5-10, 5-11 and 5-12).

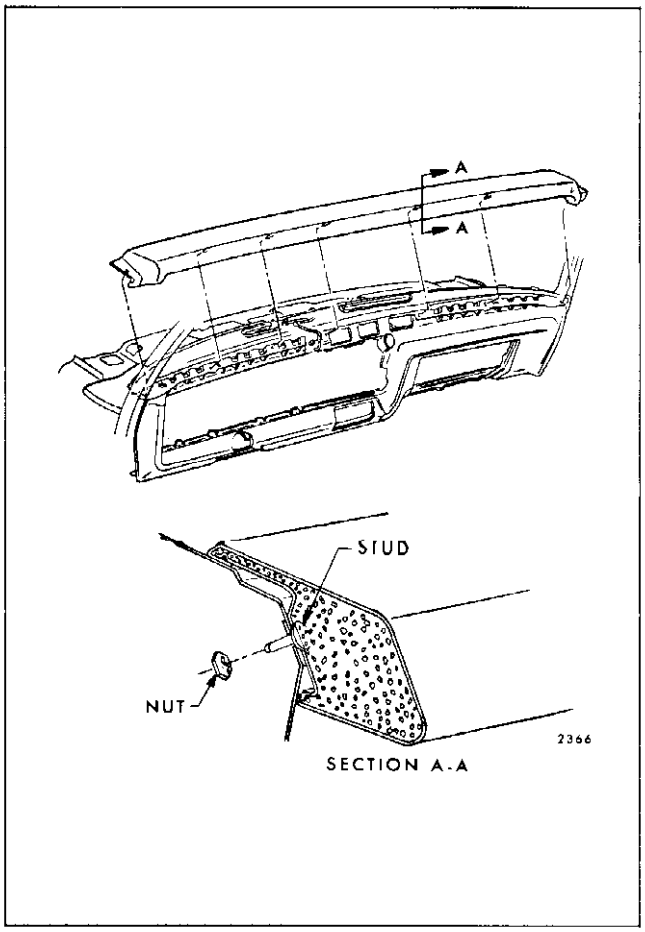


Fig. 5-15—Instrument Panel Cover - "B" Body

INSTRUMENT PANEL COVER— All Chevrolet Styles

The instrument panel cover is secured to the instrument panel by studs and nuts. In addition, the "A" body cover is secured by clips and screws. Figures 5-13, 5-14, 5-15 and 5-16 illustrate the cover attachments for each of the Chevrolet bodies.

Removal and Installation

1. Remove windshield side garnish moldings where necessary.

2. On "A" bodies, remove exposed screws on outboard ends of cover (Fig. 5-16).

3. Remove instrument panel cluster and glove box.

4. Working through cluster and glove box opening, remove attaching nuts and carefully remove cover assembly.

5. To install, reverse removal procedure.

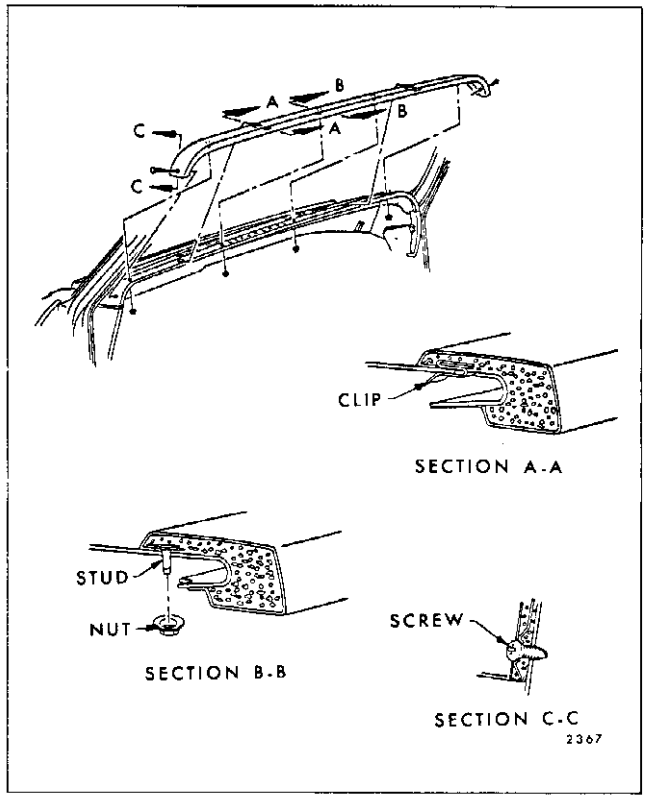


Fig. 5-16—Instrument Panel Cover - "A" Body

FRONT COMPARTMENT—CORVAIR

DESCRIPTION

Each front compartment lid hinge assembly employs the use of an individual torque rod which acts as a counterbalance and hold-open for the lid. Notches are provided in the torque rod retainer for adjustment of the rods.

The front compartment lid lock assembly consists of a side action snap-bolt mechanism equipped with a safety latch and is secured to a support on the front end panel. The end of the lock assembly acts as a guide by entering the striker when the lid is in a closed position.

A single section cement-on type front compartment weatherstrip is used on all styles.

FRONT COMPARTMENT LID

Removal and Installation

1. Open lid and place a protective cover over surfaces of front compartment opening to prevent damage to painted areas.
2. Scribe (pencil) location of hinge straps on inner panel.
3. With the aid of a helper, remove hinge to lid attaching bolts from each hinge and remove lid. (See Fig. 5-17).

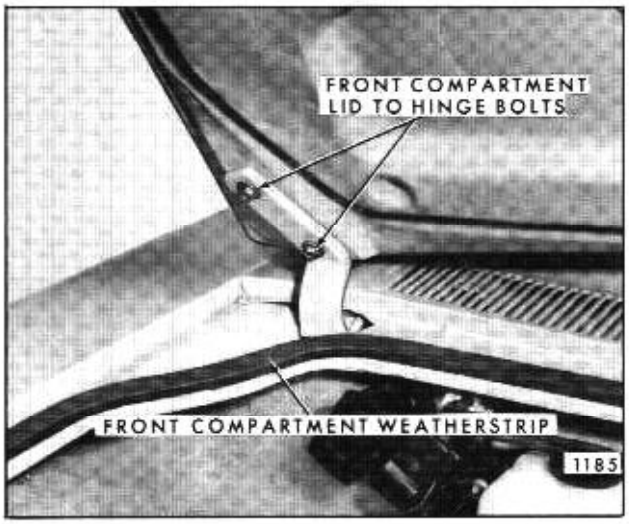


Fig. 5-17—Front Compartment Weatherstrip and Front Compartment Lid Attaching Bolts

4. To install, align hinges to lid within scribe marks and reverse removal procedure.

Adjustments

1. Adjustments to the front compartment lid may be made forward or rearward and side to side in body opening by loosening hinge to upper shroud attaching bolts at each hinge. Adjust hinge as required and secure bolts (See Fig. 5-18).
2. To adjust the lid up or down at one or both sides, install shims between the hinge strap and lid as follows:
   a. To raise rear edge of lid at hinge area, place shim between hinge strap and lid inner panel at rear attaching bolt (Fig. 5-17).
   b. To lower rear edge of lid at hinge area, place shim between hinge strap and lid inner panel at front attaching bolt (Fig. 5-17).
3. Check front compartment lid lock to insure proper engagement with striker.

FRONT COMPARTMENT LID TORQUE RODS

The torque rod removal and installation tool, J 21928 is designed to remove, replace or reset tension for one or both rods without removing the

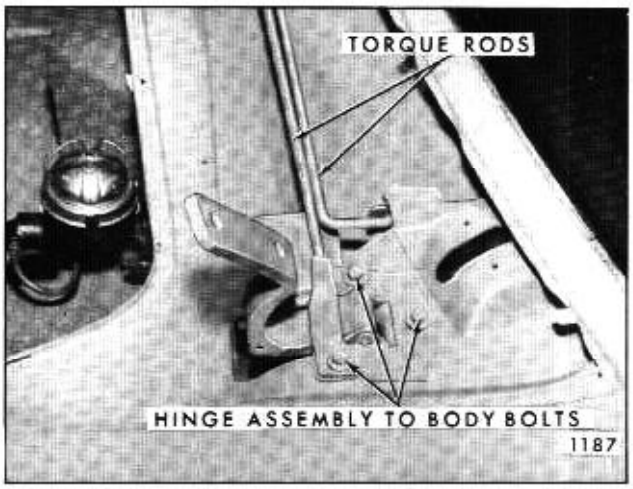


Fig. 5-18—Front Compartment Lid Hinge Removal

front compartment lid. This double-ended tool is designed with a different end for right and left side of body.

Removal and Installation

1. Install protective covering over compartment lid and lower part of windshield.
2. Open compartment lid and prop same in a full open position.
3. Remove windshield wiper arms.
4. Remove shroud top air intake grille.
5. Remove torque rod clamp to shroud, located to right of center of shroud (Fig. 5-19).
6. Install tool J 21928 (Fig. 5-19) to lid torque rod on right side of body. Securely grasp tool and move it toward windshield to disengage rod from retaining notch. Carefully disengage tool from rod.
7. In like manner remove rod on left side of body (Fig. 5-20).

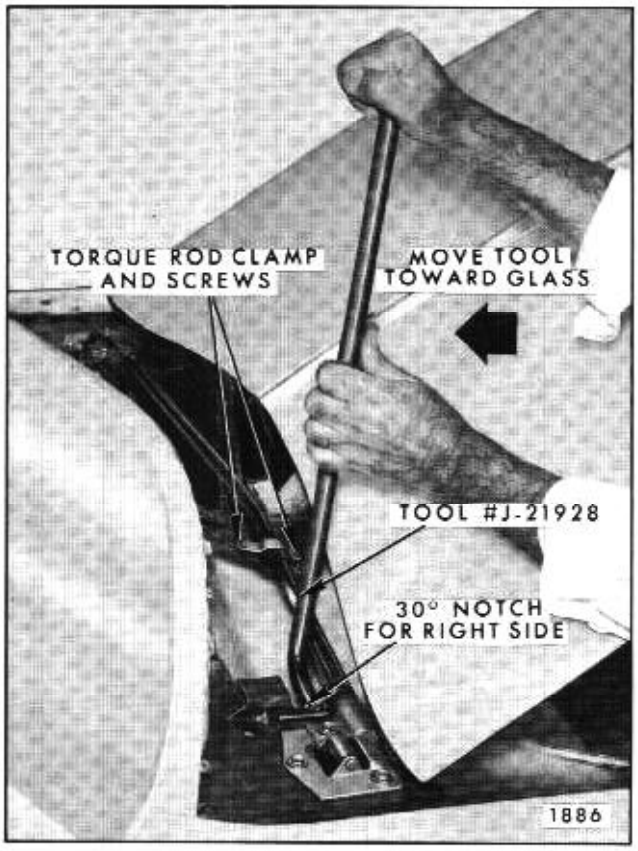


Fig. 5-19—Torque Rod Removal - Right Side

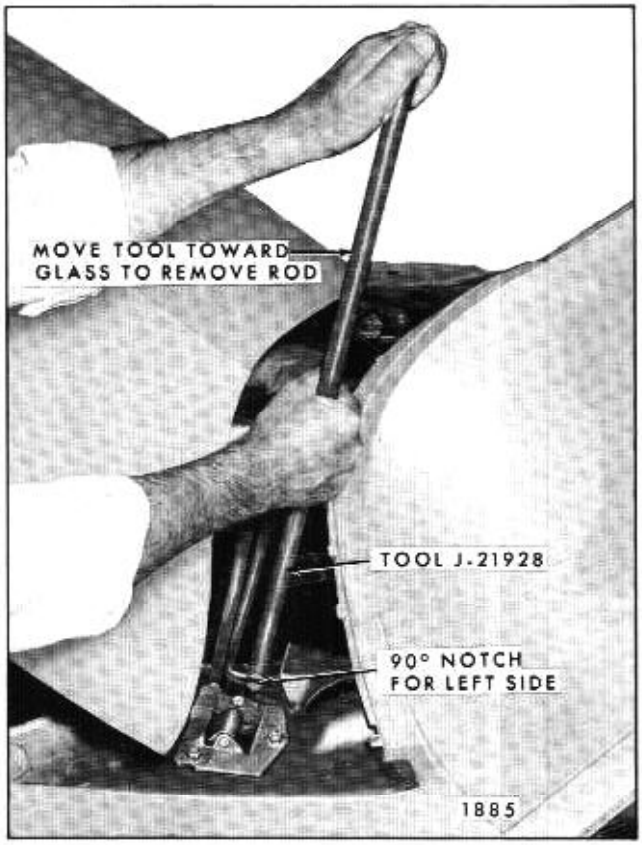


Fig. 5-20—Torque Rod Removal - Left Side

NOTE: Front compartment lid hinge assembly removal should be made only after torque rods are removed.

8. To install, apply a coat of No. 630AAW Lubriplate or equivalent to torque rod end that contacts hinge roller and reverse removal procedure, locating torque rods in the same notch in retainer as they were before removal. Check tension on lid. If additional tension is required reset torque rod.

FRONT COMPARTMENT LID LOCK CYLINDER ASSEMBLY

The front compartment lid lock cylinder is attached to the front end panel molding which is secured to the front end panel by studs and nuts. (See Fig. 5-21)

Removal and Installation

1. Remove front end panel molding assembly as explained in the "Exterior Molding" section of this manual (See index).

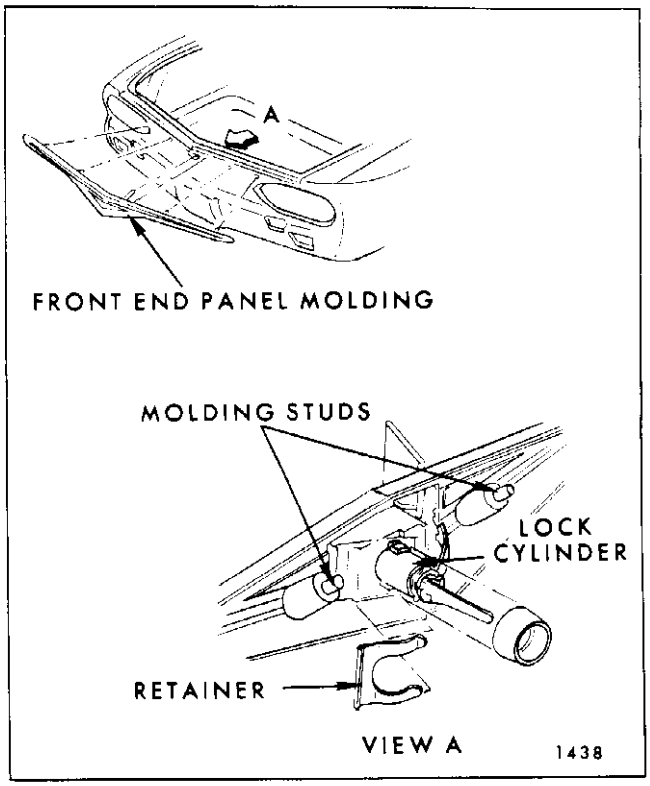


Fig. 5-21—Front Compartment Lid Lock Removal

2. Remove lock cylinder retainer and remove lock cylinder from molding.

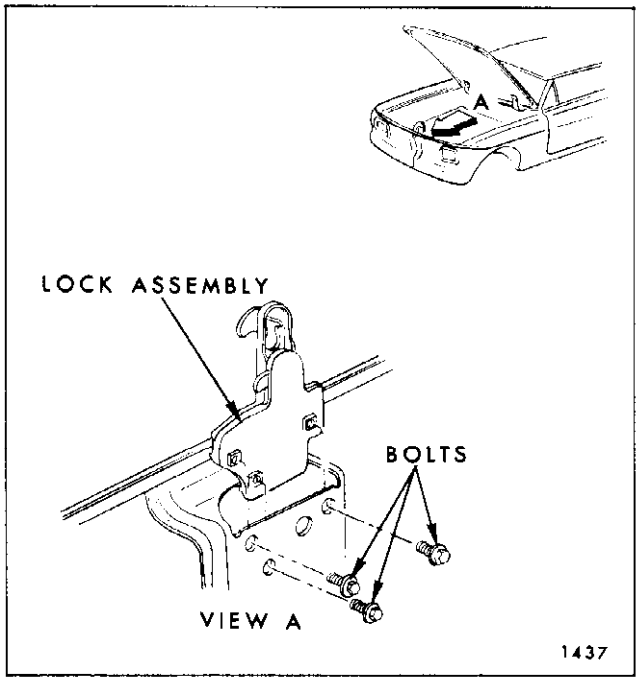


Fig. 5-22—Front Compartment Lid Lock

3. To install, reverse removal procedure. Make certain that molding is properly sealed to front end panel.

FRONT COMPARTMENT LID LOCK ASSEMBLY

Removal and Installation

1. Remove front end panel molding and lid lock cylinder assembly.

2. Remove screws (Fig. 5-22) securing lock to lid lock support and remove lock assembly.

3. To install, reverse removal procedure.

   NOTE: If lock does not properly engage in striker opening, the lock may be adjusted forward by installing emergency spacer(s) between lock and support.

FRONT COMPARTMENT LID LOCK STRIKER

Removal and Installation

1. Mark (pencil) location of front compartment lid lock striker on striker support.

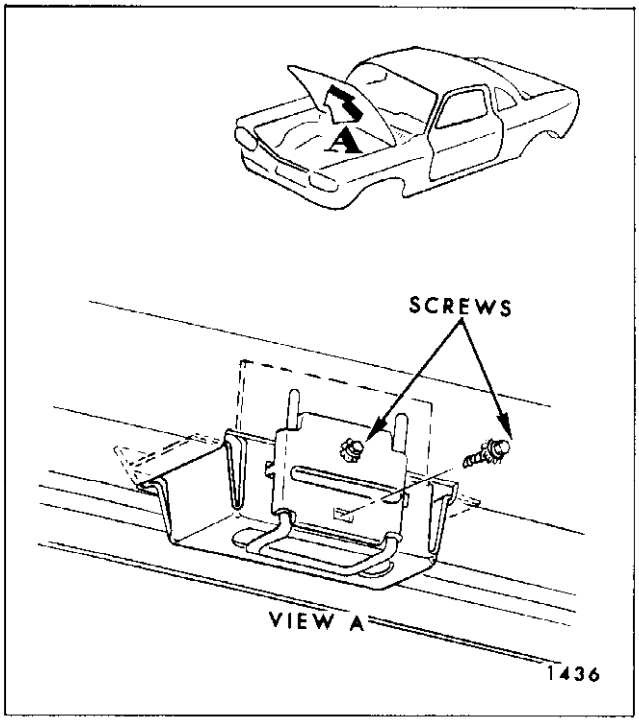


Fig. 5-23—Front Compartment Lid Lock Striker

2. Remove striker retainer plate attaching bolts and remove retainer plate and striker (Fig. 5-23).

3. To install, position striker within scribe marks and reverse removal procedure. Insure proper engagement of striker to lock.

Adjustments

1. To adjust striker up, down, right or left, loosen retainer plate attaching bolts (while holding plate in position). Adjust striker as required and tighten bolts.

   NOTE: Since the upper end of the lid lock acts as a guide by entering the striker when the lid is closed, align the front compartment lid properly in the body opening prior to making any striker adjustments.

FRONT COMPARTMENT LID GUTTER WEATHERSTRIP

Removal

1. Separate "butt" ends of weatherstrip at front of compartment opening.

2. With a flat-bladed tool, carefully disengage weatherstrip from its cemented foundation in gutter around entire perimeter of front compartment and remove weatherstrip.

Installation

1. Remove excess cement from gutter around entire front compartment opening to insure a smooth cementing surface.

2. Using a brush, apply approved sealer along the base and around the entire perimeter of gutter.

   NOTE: Apply a sufficient amount of weatherstrip cement along lower inboard corner of gutter so that after installation of weatherstrip, cement will spread and fill complete area.

3. Center weatherstrip at area between lid hinges using color or tape identification mark at center of weatherstrip as guide.

4. Using a flat-bladed tool, such as a putty knife with rounded corners, insert weatherstrip into gutter across top, down sides and across top front of compartment opening in that order. Roll or press weatherstrip to insure a good seal and proper retention of weatherstrip.

5. When a new weatherstrip is required, trim the ends to form a "butt" joint at front of opening. Using a brush, apply weatherstrip cement on both ends of new weatherstrip and secure ends together to form a matching joint.

6. Allow sufficient time for cement to set before closing front compartment lid.

SECTION 6

DOORS

INDEX

Subject	Page
FRONT AND REAR DOORS	6-2
Weatherstrips	6-2
Door Bottom Drain Hole Sealing Strips	6-3
Door Bottom Auxiliary Sealing Strip	6-3
Inner Panel Water Deflector	6-4
Spring Clips	6-6
Outside Handles - Removal	6-6
Outside Handles - Disassembly	6-7
Lock Strikers - All Except "X" Styles	6-7
Lock Strikers - "X" Styles	6-8
Glass Run Channel Inner and Outer Strip Assemblies	6-9
Side Roof Rail Weatherstrip and Retainer	6-10
Side Roof Rail Weatherstrip Adjustment	6-14
Center Pillar Weatherstrips - "C-69" Styles	6-14
Specified Body Opening Clearance Tolerances	6-15
FRONT DOORS	6-22
Description	6-22
Hinges - Removal	6-22
Hinges - Adjustment	6-35
Inner Panel Cam	6-36
Lock Remote Control	6-36
Lock Assembly and Vacuum Actuator	6-38
Lock Vacuum Actuator	6-39
Lock Cylinder Assembly - All Except Chevrolet "B" Four-Door Styles	6-39
Lock Cylinder Assembly - Chevrolet "B" Four-Door Styles	6-40
Ventilator Regulator - (Manual and Electric) - "B - C" Styles	6-41
Ventilator Assembly - "A" and "X" Closed Styles	6-42
Ventilator Casting - "X-37" Styles	6-44
Ventilator Assembly - "A", "F", "X" and "Z" Hardtop and Convertible Styles	6-45
Ventilator Weatherstrip - "A" and "F" Styles	6-47
Ventilator Assembly - "B-11-35-45 and 69" Styles	6-47
Ventilator Assembly and Disassembly - "B-11-35-45-69" Styles	6-48
Ventilator Assembly - All Except "B-11-35-45-57-69" Styles	6-49
Ventilator Assembly and Disassembly All Except "B-11-35-45-57-69" Styles	6-50
Window Assembly - "A" and "X" Closed Styles.	6-51
Window Lower Sash Channel Cam - "E-F-Z" Styles	6-53
Window Sash Channel Guide Plate - "A-17-39-67" Styles	6-54
Window Up-Travel Stops - All Except "B-C" Styles	6-55
Window Assembly - "A-17-67" Styles	6-56
Window Assembly - "A-39" Styles	6-57
Window Assembly - "E" Styles	6-58
Window Assembly - "F" Styles	6-60
Window Assembly - "X-37" Styles	6-62
Window Assembly - "Z" Styles	6-63
Window Assembly - "B-11-35-45-69" Styles	6-64
Window Assembly - All "B-C" Except "B-11-35-45-57-69" Styles	6-65
Window Assembly - 26657 Style	6-67
Window Regulator - Manual and Electric - "A-E-F-X-Z" Styles	6-70
Window Regulator - Manual and Electric - 26657 Style	6-71
Window Regulator - Manual and Electric - All "B-C" Except "B-11-35-45-57-69" Styles	6-71
Window Regulator - Electric - "B-35-45-69" Styles	6-72
Window Regulator - Manual - "B-11-35-45-69" Styles	6-72
Window Regulator Electric Motor	6-72
Window Rear Glass Run Channel - "A-17-39-67" Styles	6-73
Window Front Guide Channel - "E" Styles	6-74
Window Rear Guide Channel - "E" Styles	6-74
Window Rear Guide Assembly - "F" Styles	6-74
Window Glass Run Channels - "X-37" Styles	6-75
Window Glass Run Channels - "X-11-35-69" Styles	6-75
Window Rear Glass Run Channel - "Z" Styles	6-75
Window Glass Run Channel - "B-11 35-45-69" Styles	6-76
Window Guide and Guide Plate Assembly - All "B-C" Except "B-11-35-45-57-69" Styles	6-76
Window Front Guide - 26657 Style	6-76
Window Rear Guide - 26657 Style	6-77
Door Wedge Plates - "67" Styles	6-78
Vacuum Door Lock System	6-78
Vacuum Lock Selector Valves	6-79
Vacuum Door Lock Actuator	6-79
Vacuum Lock Remote Control Assembly	6-81
Vacuum Lock Storage Tank	6-81
Vacuum Lock Trouble Diagnosis Procedure	6-82
REAR DOORS	
Description - All Styles	6-87
Hinges - All Styles	6-87
Lock Remote Control - All Styles	6-87
Lock Assembly - "B-35-45-69" Styles	6-87
Lock Assembly & Vacuum Actuator - "B-35-45 & 69" Styles	6-95
Lock Vacuum Actuator - 68069 & 68169 Styles	6-96
Inner Panel Cam - All Except "X" Styles	6-96
Window Lower Sash Channel Cam - All Except "X" Styles	6-96
Window Stationary Ventilator Division Channel - "X-35 & 69" Styles	6-97
Window Stationary Ventilator Assembly - "X-35 & 69" Styles	6-98
Window Assembly - All Closed Styles	6-99
Window Assembly - "A-39" Styles	6-99
Window Assembly - All "B-C 39" Styles & All "C-49 & 69" Styles Except 68069 & 68169 Styles	6-103
Window Assembly - 68069 & 68169 Styles	6-104
Ventilator Regulator - 68069 & 68169 Styles	6-106
Ventilator Assembly - 68069 & 68169 Styles	6-106
Window & Ventilator Adjustments - 68069 & 68169 Styles	6-107

Subject	Page
Window Assembly - "Z-39" Styles	6-108
Window Glass Run Channel - "A-35-55-65 & 69" Styles	6-110
Window Guide Channels - "A-39" Styles	6-111
Window Glass Run Channel - "B-35-45 & 69" Styles	6-111
Window Guide (Front or Rear) - All "B-C 39" & "C-49-69" Styles Except 68069-169 Styles	6-112
Front Guide & Guide Plate - 68069 & 68169 Styles	6-112
Window Glass Run Channel - "X-35 & 69" Styles	6-113
Window Front or Rear Guide - "Z-39" Styles	6-114
Window Regulator Assembly - "A-35-55-65 & 69" Styles & "X-35 & 69" Styles	6-114
Window Regulator - Manual & Electric - All "B" & "C" Styles	6-114
Window Regulator Assembly - "A-Z 39" Styles	6-116
Window Regulator Electric Motor Removal - All Styles	6-116

FRONT AND REAR DOORS

INTRODUCTION

This section of the manual contains the service operations that are necessary for the removal, installation, adjustment and sealing of door assemblies and individual door hardware components. The procedures are arranged in the sequence that they would be performed when servicing a door. To locate specific procedures, refer to the "Door Index".

Hardware items are divided into three categories. Those which are common to all doors are found under "Front and Rear Doors" which also includes door and side roof rail weatherstrips. Items which are peculiar to front or rear doors are found under "Front Doors" or "Rear Doors" respectively.

Door trim service procedures are covered in Section 14 of this manual (See index).

Body series or style references in the procedures are explained under "General Information" in Section 1 of this manual.

FRONT AND REAR DOOR WEATHERSTRIPS—

Both the front and rear doors use nylon fasteners to retain the door weatherstrips. The fasteners are a component part of the weatherstrip and secure the weatherstrip to the door by engaging piercings in the door panels. The serrations of the fastener retain the fastener in the piercing and also seal the openings from water entry (See Fig. 6-1).

On "B" Body Sedan Styles, nylon fasteners are used around the entire perimeter of the door. On "A" and "X" Closed Styles, nylon fasteners are used below the belt line only. Weatherstrip adhesive retains the weatherstrip around the door upper frame above the beltline (Fig. 6-2).

In addition to the nylon fastener, "B" Body Sedan Styles use a limited amount of weatherstrip adhesive at the beltline. All styles other than closed styles use plastic fasteners at the belt.

To disengage nylon fasteners from door panel piercings use tool J 21104 or equivalent (Fig. 6-1). This tool permits removal of the weatherstrip without damaging the serrations on the fasteners so that the weatherstrip can be reinstalled if desired.

Although a replacement door weatherstrip will include the nylon fasteners, individual fasteners are available as a service part.

Removal

1. On all hardtop and convertible styles, remove exposed plastic fasteners at belt line. On all "E" body styles, all "B" body hardtop and convertible styles and "C-39 and 69" styles (front and/or rear doors), remove door trim assembly to gain access to weatherstrip fastener (See Fig. 6-3).
2. On sedan styles, use a flat-bladed tool to break cement bond between door and weatherstrip. On "B" Body Sedan Styles, weatherstrip adhesive is used for a distance of 9" at beltline (See Figs. 6-4 and 6-5). On "A" and "X" sedan styles, weatherstrip is retained by weatherstrip adhesive completely around door upper frame (See Fig. 6-2).
3. On all styles, use tool J 21104 or equivalent to disengage weatherstrip from door where weatherstrip is retained by nylon fasteners. Nylon fastener usage is below the beltline on all styles, and above the belt only on "B" Body Sedan Styles.

Installation

1. If previously removed weatherstrip is to be

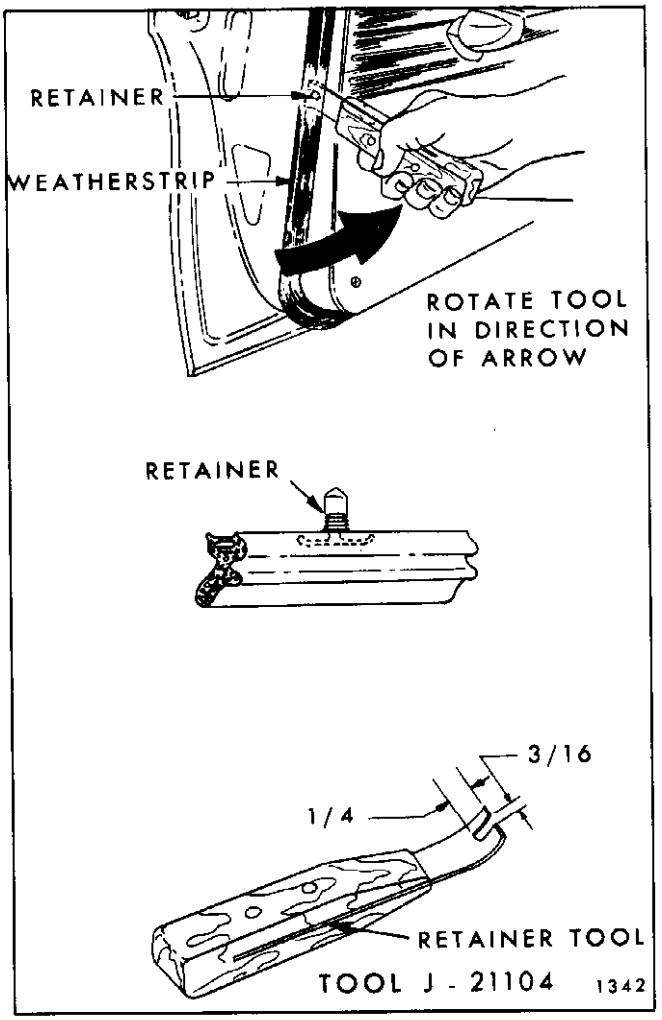


Fig. 6-1 —Door Weatherstrip Removal

reinstalled, inspect nylon fasteners and replace those that are damaged.

2. Clean off all old weatherstrip adhesive from door.

3. On styles without door upper frames, position weatherstrip to door and install plastic fasteners at front and rear ends of weatherstrip.

4. On sedan styles with door upper frames, position color-coded section of weatherstrip to door as follows:

   a. On front doors, color code should be located at rear upper corner of door upper frame (Fig. 6-4).

   b. On rear doors, color coded section should begin at beltline of door lock pillar and extend upward (Fig. 6-5).

5. Tap nylon fasteners into door piercings using a hammer and blunt caulking tool.

6. On "A" and "X" Sedan Styles, apply a bead of black weatherstrip adhesive to gutter of door upper frame as shown in section "A-A", Figure 6-2. Allow adhesive to become tacky, then, install weatherstrip.

7. After all fasteners have been installed on sedan styles, apply weatherstrip adhesive between door and weatherstrip outboard surface at the following locations:

   a. For 5" around rear upper corner of front door upper frame (Circle "A", Figure 6-4) and 9" down door lock pillar starting at beltline.

   b. On sedan rear doors, 9" down both door lock pillar and door hinge pillars starting at beltline (Fig. 6-5).

   c. On door lock pillar on hardtop styles start-in at beltline and extending down 2".

   NOTE: If weatherstrip becomes damaged at fastener location and will not retain fastener, remove fastener and secure weatherstrip to door with weatherstrip adhesive. If more than two consecutive fastener locations become damaged, replace weatherstrip.

Although weatherstrip adhesive is specified only at specific locations, it can be used at any point where additional retention is required.

DOOR BOTTOM DRAIN HOLE SEALING STRIPS

Door bottom drain slot sealing strips (dust barriers) are attached to door inner panels over door bottom drain slots to prevent entry of dust and cold air at these locations (Fig. 6-6).

To remove sealing strips, use a flat-bladed tool to pry retaining plugs from door inner panel piercings.

To install, insert a blunt pointed tool such as dull ice pick or scratch awl into strip retaining plugs and push plugs into door panel piercings.

DOOR BOTTOM AUXILIARY SEALING STRIP—All Pontiac "B" Styles, All 16600 Series, All Cadillac Styles and All "E" Body Styles

The door bottom auxiliary sealing strip is secured to the door inner panel with weatherstrip adhesive. The strip is installed after water deflector installation and prior to trim installation. As shown in

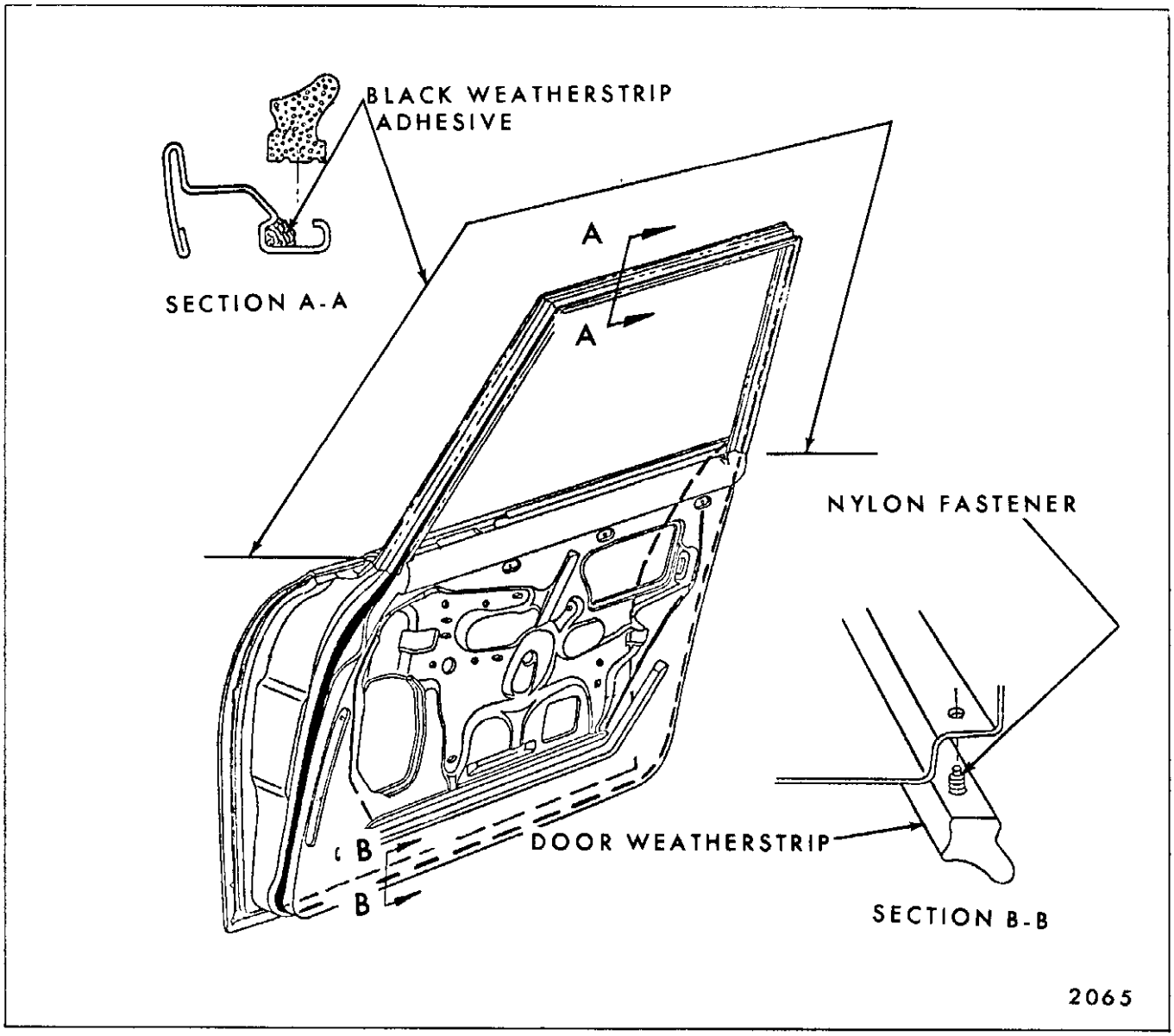


Fig. 6-2—Door Weatherstrip - "A & X" Closed Styles

section "A-A", Fig. 6-7, the upper edge of the strip is aligned with the water deflector drain slot. The rolled, semi-bulbular section of the sealing strip extends down below the door trim pad when the trim is installed and fills the opening between the door and door sill plate.

FRONT AND REAR DOOR WATER DEFLECTORS

A waterproof deflector is used to seal the door inner panel and prevent entry of water into body. The deflector is secured by a string loaded sealing material along both front and rear edges and by the application of waterproof sealing tape at front and rear lower corners. Whenever work is performed on front or rear doors where the water deflector has been disturbed, the deflector must be properly sealed and taped to the inner panel to prevent serious waterleaks. It is important that all service personnel performing door hardware adjustments or sealing operations be aware of the importance of using the specified material and recommended removal and installation or replacement procedures. For service sealing, body caulking compound is recommended if additional sealing material is required.

When access to the inner panel is required to perform service operations, the deflector may be completely or partially detached from the inner panel. If the existing water deflector is damaged,

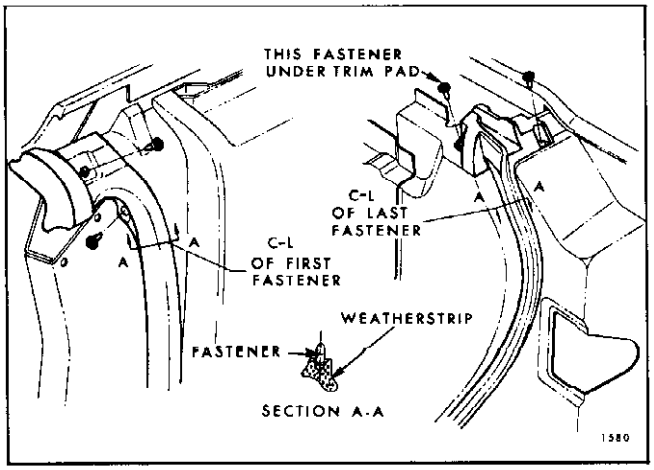


Fig. 6-3 — Door Weatherstrip - Attachment Under Trim Assemblies

so that it will not properly seal the door, replacement of the deflector is required.

The following procedure covers complete removal and installation of the water deflector. If only partial removal of the deflector is required, perform only those steps which are necessary to expose the required area of the door inner panel.

Removal

1. Remove door trim assembly.
2. Remove waterproof body tape securing top of water deflector to door inner panel.
3. Using a flat-bladed tool such as a putty knife, carefully break cement bond between water deflector and door inner panel down both sides of deflector. Make certain tool blade is between inner panel and string that is imbedded in sealer (Fig. 6-7).

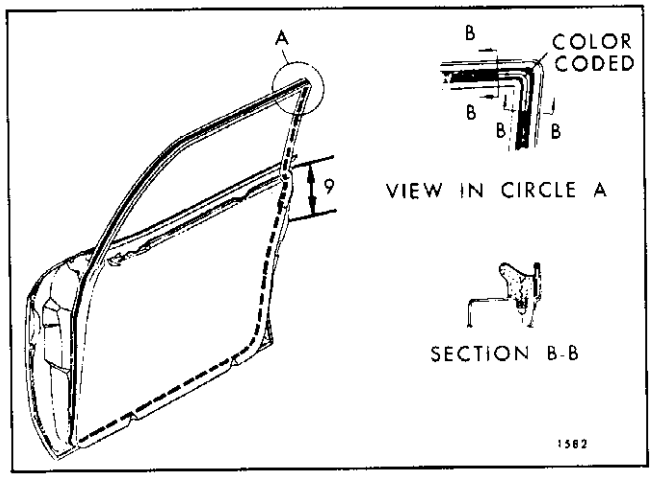


Fig. 6-4 — Front Door Weatherstrip

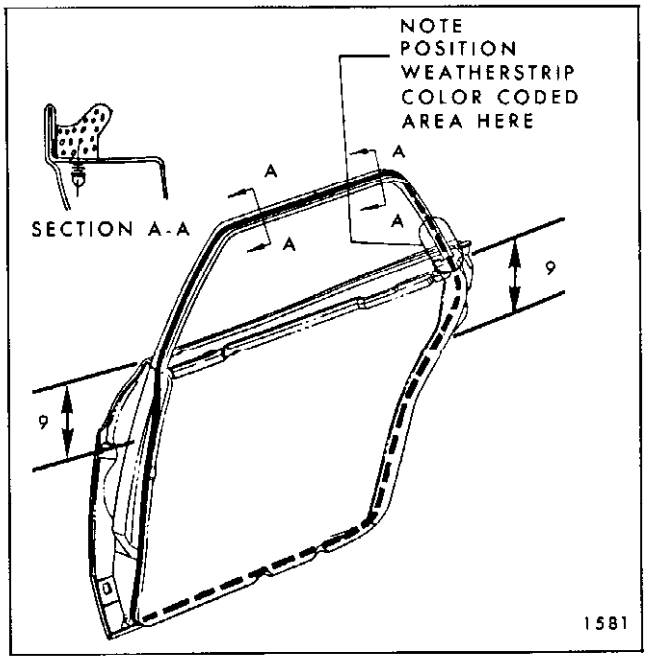


Fig. 6-5 — Rear Door Weatherstrip

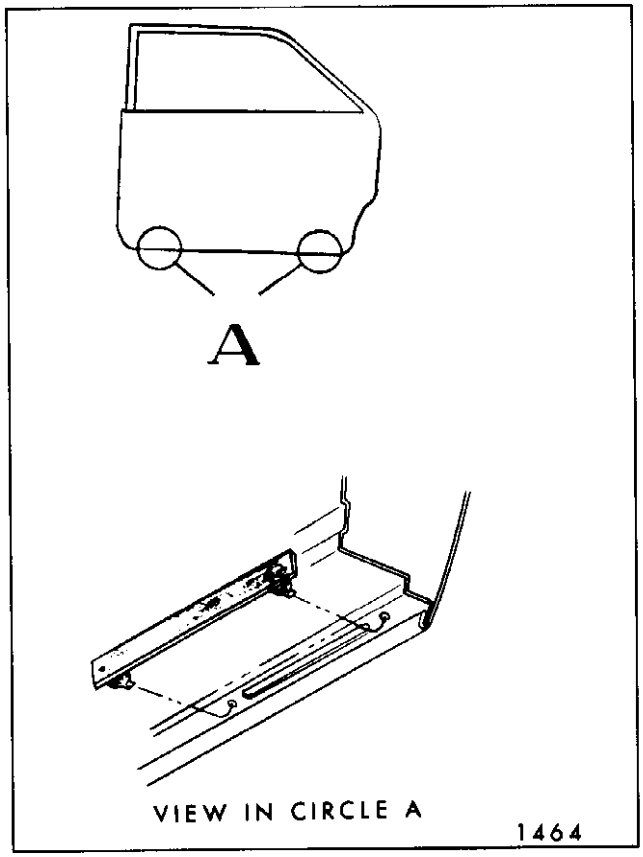


Fig. 6-6 — Door Bottom Drain Hole Sealing Strips

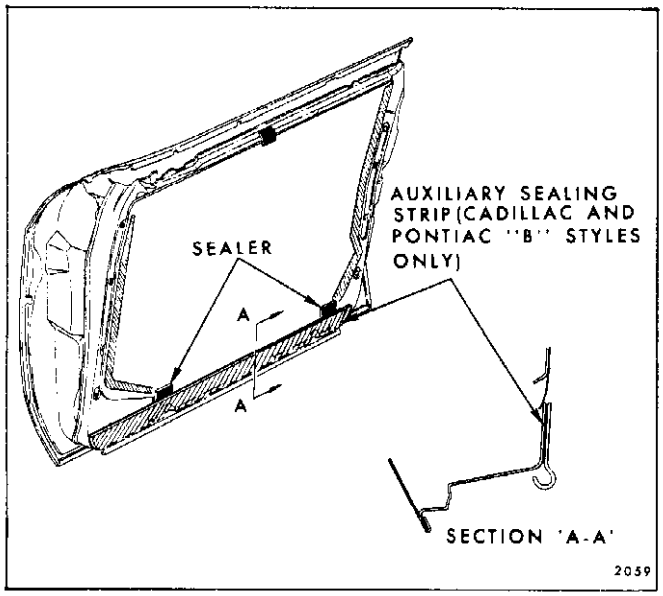


Fig. 6-7—Door Inner Panel Sealing

4. When seal has been broken down both sides of deflector, carefully remove tape from inner panel at lower corners of water deflector. Disengage water deflector from inner panel drain slot and remove deflector. On styles so equipped, it will be necessary to partially remove door bottom auxiliary sealing strip to permit removal of tape at bottom of deflector (Fig. 6-7).

Installation

1. Inspect water deflector and, where necessary, repair any tears or holes with waterproof body tape applied to both sides of deflector.

2. If a new water deflector is to be installed, use old water deflector as a template. Trim new deflector to proper size and cut holes for door inside hardware. If old sealer does not effect a satisfactory seal, apply a bead of body caulking compound (approximately 3/16" diameter) to inner panel at unsealed areas.

3. Position water deflector to door inner panel and insert lower edge of deflector in retaining slot. Then firmly roll or press edges of deflector to obtain a good bond between deflector and door inner panel.

   NOTE: On styles using polyethylene coated paper, black shiny side should be against inner panel.

4. Seal lower corners of deflector by re-applying previously removed tape or new pieces of 2" or 2-1/2" waterproof body tape.

5. On styles with door inner panel hardware attachments that are outboard of water deflector, seal attaching bolt head and panel piercing with body caulking compound.

SPRING CLIPS

A spring clip is used to secure remote control connecting rods and inside locking rod connecting links to door lock levers. A slot in the clip provides for disengagement of the clips, thereby facilitating detachment of linkage.

To disengage a spring clip, use a screwdriver, or other suitable tool, to slide clip out of engagement (See Fig. 6-8).

FRONT AND REAR DOOR OUTSIDE HANDLE ASSEMBLY—All Styles

Removal and Installation

1. Raise door window. Remove door trim assembly and detach upper rear corner of inner panel water deflector sufficiently to gain access to door outside handle attaching screws (Fig. 6-9).

2. Remove screws through access hole and remove door handle and gaskets from outside of body.

   NOTE: On 68069 and 68169 Styles it is necessary to remove rear door ventilator regulator as described in the rear door section in order to remove rear door outside handle.

3. To install, reverse removal procedure.

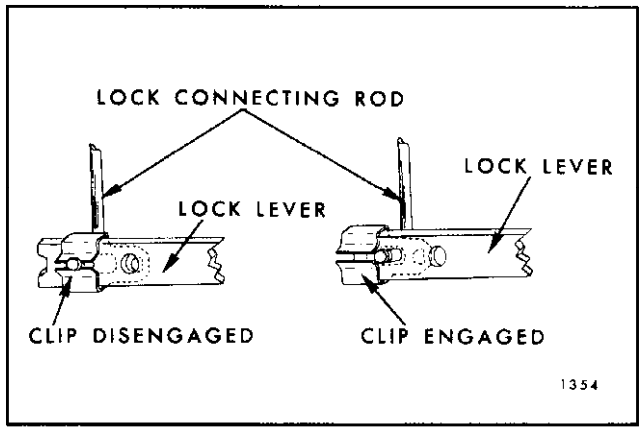


Fig. 6-8—Door Lock Spring Clip

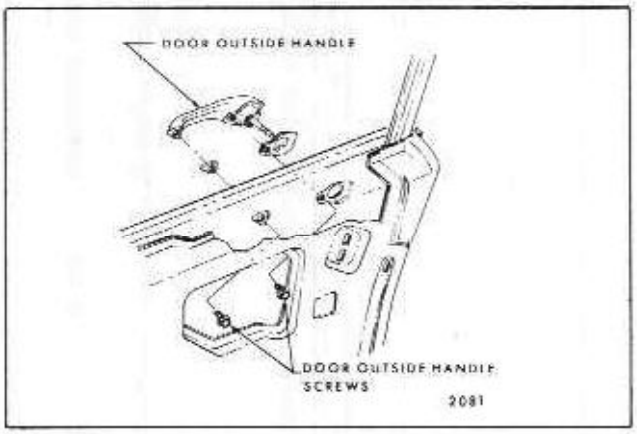


Fig. 6-9—Door Outside Handle Removal

DOOR OUTSIDE HANDLE DISASSEMBLY AND ASSEMBLY—All Styles

1. Remove door outside handle as previously described.

2. Depress retainer slightly and rotate 1/4 turn in either direction. Remove retainer, spring, push buttom and shaft and sealing washer from handle (See Fig. 6-10 for front door handles and Fig. 6-11 for rear door handles).

   NOTE: Parts are serviced as shown in the illustrations; separate components for the front door handle, and a push button, spring, and retainer assembly for the rear door handle except on "E" Body Styles. On "E" Styles the front door push button, spring, and retainer are serviced as an assembly.

3. To assemble, reverse disassembly procedure.

FRONT AND REAR DOOR LOCK STRIKERS—All Styles Except "X" Body

The front and rear door lock striker consists of a single metal bolt and washer assembly that is threaded into a tapped, floating cage plate located in the body lock pillar. With this design, the door is secured in the closed position when the door lock fork-bolt snaps-over and engages the striker bolt.

Removal and Installation

1. Mark position of striker on body lock pillar using a pencil.

2. Insert a 5/16" wrench into hex-head fitting in head of striker bolt and remove striker (Fig. 6-12).

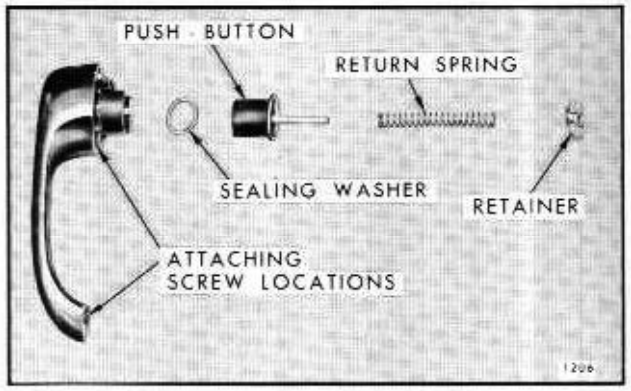


Fig. 6-10—Front Door Outside Handle

3. To install, reverse removal procedure. Make certain striker is positioned within pencil mark. Also, make certain that paint protecting plastic washer is installed (Fig. 6-12).

   IMPORTANT: Whenever a door has been removed and reinstalled or realigned, the door should not be closed completely until a visual check is made to determine if lock fork-bolt will correctly engage with striker.

Adjustments

1. To adjust striker up or down, or in or out, loosen striker bolt and shift striker as required, then tighten striker.

2. To determine if striker fore or aft adjustment is required, proceed as follows:

   a. Make certain door is properly aligned.

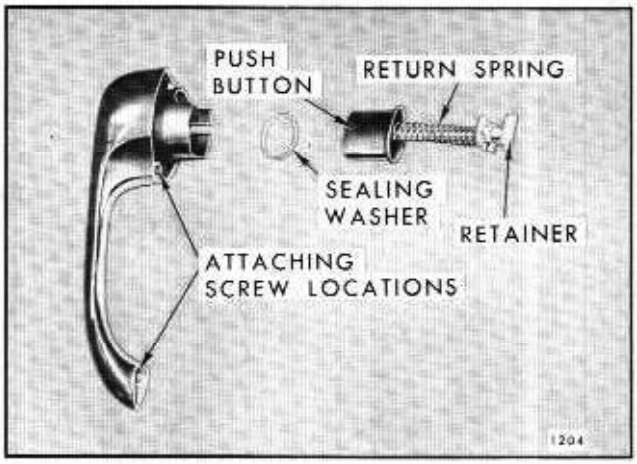


Fig. 6-11—Rear Door Outside Handle

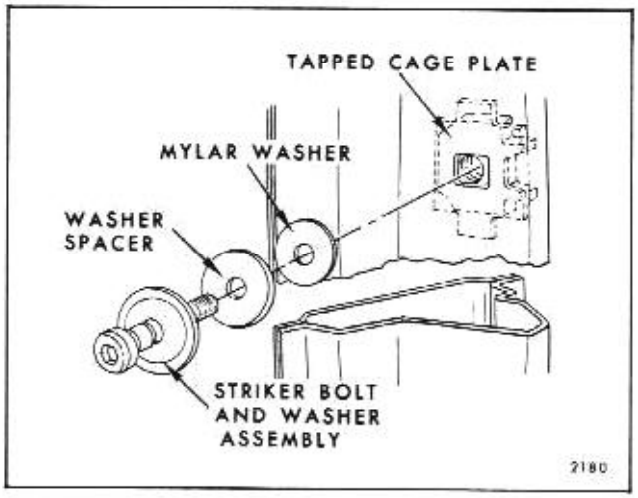


Fig. 6-12—Door Lock Striker Installation

b. Apply modeling clay or body caulking compound to lock bolt opening as shown in Fig. 6-13.

c. Close door only as far as necessary for striker bolt to form an impression in clay or caulking compound as shown in Fig. 6-13.

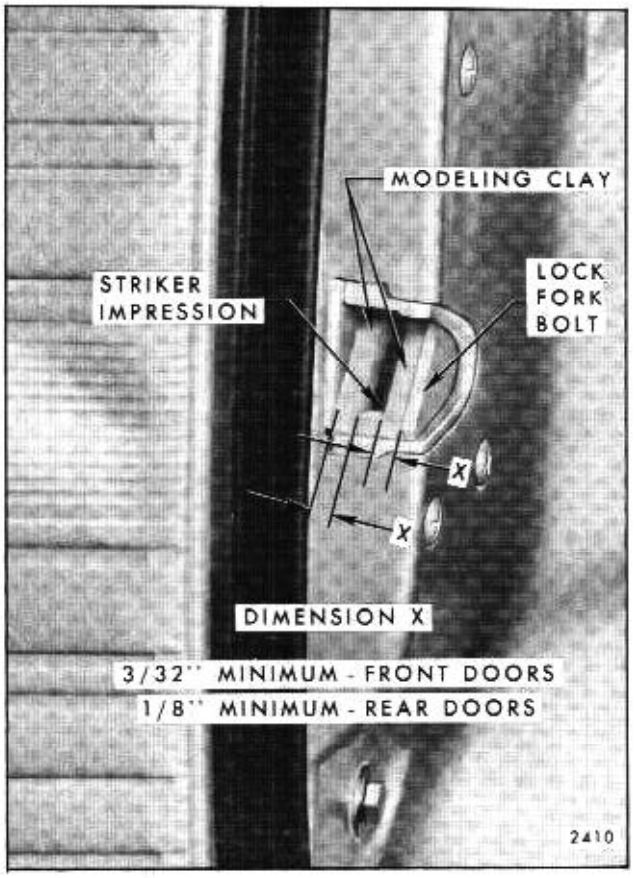


Fig. 6-13—Lock to Striker Engagement

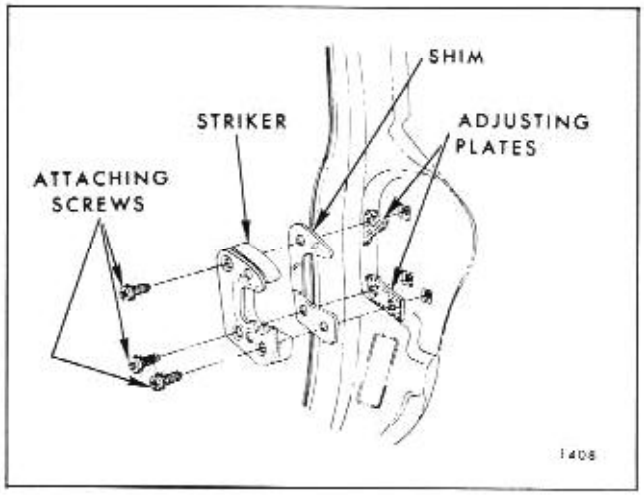


Fig. 6-14—Door Lock Striker Installation

CAUTION: Do not close door completely. Complete door closing will make clay removal very difficult.

d. Measure striker impression as follows:

Striker head should be centered fore and aft as shown, however, some tolerances are allowed. In any alignment, it is important that minimum dimensions, as outlined in Figure 6-13, be strictly maintained. The following spacers are available as service parts and can be used individually or in combination to achieve the desired alignment.

5/64" spacer - Part #4469196

5/32" spacer - Part #4469197

1/4 " spacer - Part #4469194

5/16" spacer - Part #4469195

FRONT AND REAR DOOR LOCK STRIKERS—"X" Body Styles

As shown in Figure 6-14, the door lock striker is secured to the center pillar or body lock pillar by cross-recessed attaching screws. By loosening the screws the striker can be adjusted up-or-down and in-or out. By adding or subtracting shims, the striker can be adjusted fore or aft.

Removal and Installation

1. With a pencil, mark position of striker on body pillar.

2. Remove door lock striker attaching screws and

remove striker and adjusting plates from pillar (Fig. 6-14).

3. Prior to installation, seal all striker plate attaching screw holes with body caulking compound.

4. Apply a 1/8" bead of body caulking compound around entire back surface of striker plate.

5. Place striker and adjusting plates within scribe marks on pillar and install striker plate attaching screws.

   CAUTION: Whenever a door has been removed and installed or realigned, the door SHOULD NOT be closed completely until a visual check is made to determine if lock extension will engage in striker notch. A single shim is installed behind the striker assembly in production (Fig. 6-14).

This shim can be removed or additional shims (available as service parts) can be installed if required. Removal or addition of shims provides fore or aft adjustment of the striker. To adjust striker up or down and in or out, proceed as follows:

Loosen striker plate attaching screws and shift striker and adjusting plates as required and tighten attaching screws (Fig. 6-14).

FRONT DOOR WINDOW GLASS RUN CHANNEL INNER AND OUTER STRIP ASSEMBLIES (DRAFT STRIPS)

Draft strips are used to form a belt seal between door inner and outer panels and glass assembly. The construction and attachment of these strips vary with the body style involved, as follows:

"B & C" Hard Top and Convertible Styles - Inverted lip inner ("J" strip) - Rubber outer

"B & C" Closed Styles - Multifilament pile inner (pile) - Rubber outer

"A-07-17-39 and 67" Styles - "J" strip inner - pile outer

"A-11-69-35-55-65 and 80" Styles - pile inner - rubber outer

"X-37" styles - "J" Strip inner - pile outer

"X-11-69 and 35" Styles - pile inner - rubber outer

"E" - All Styles - "J" strip inner - pile outer

"Z" - All Styles - pile inner - pile outer

"F" - All Styles - pile inner - "J" Strip outer

On all "B & C", "E & A" bodies equipped with deluxe trim, the inner draft strip is attached to the door trim pad. All "B & C" outer draft strips are attached with screws but need not be removed to facilitate door window removal. All "X-E" and the remaining "A" body style inner draft strips are attached by clips. All "A-F-X-E and Z" outer draft strips are attached with a combination of clips and screws (usually one at each end, front and rear).

On those styles equipped with a rubber lip outer draft strip, only the inner draft strip need be removed to facilitate door glass removal. On all other styles, however, both inner and outer draft strips must be removed preceding door glass removal.

Removal and Installation

NOTE: This procedure covers only draft strips attaching directly to either the door inner or outer panels. When the draft strip is attached to a trim pad, it is removed as part of the trim assembly.

1. The door window must be low enough to provide adequate clearance between top edge of glass and draft strip to be removed. If simply lowering window will not accomplish this needed clearance, proceed as follows:

   a. On styles equipped with a bolted-on lower stop, or rubber stop in guide cam, remove stop and lower window to bottom of door.

   b. On styles equipped with a welded-on lower stop, remove stop bumper to gain the required clearance.

   c. If additional clearance is still needed, remove door window lower sash channel cam and lower glass to bottom of door.

2. Remove draft strip attaching screws.

   NOTE: On most outer draft strips, the forward attaching screw is hidden beneath the ventilator division channel. This will require either removal or loosening of ventilator assembly to gain access.

3. Apply cloth-backed tape as a protective cover to painted surfaces adjacent to strip assembly to be removed.

4. Insert a flat-bladed tool (slotted to fit over tang of clip) between door panel return flange and strip assembly at clip locations (Fig. 6-15). Carefully pry clips from slots in panel and remove strip assembly.

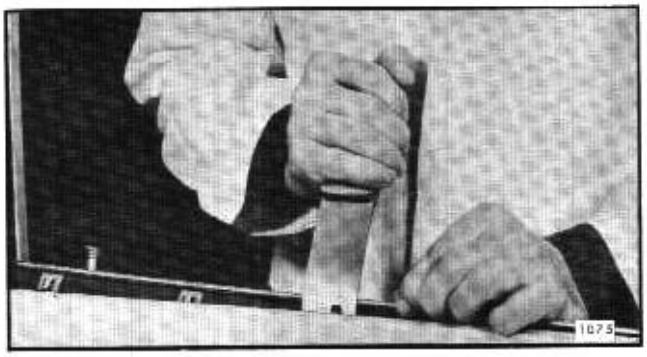


Fig. 6-15—Glass Run Channel Inner - Outer Strip Assembly Removal - "A-X-Z" Styles

5. To install, position strip assembly so that tang of clips start into slots in door panel, then press at each clip location and engage clips.

   Prior to installing strip assembly, reform clip tangs to assure positive retention when installed.

   NOTE: To make strip assembly removal tool, make a 1/4" wide by 3/8" deep slot in a J-2772 headlining inserting tool or equivalent.

SIDE ROOF RAIL WEATHERSTRIP AND RETAINER

The side roof rail weatherstrip is cemented to a side roof rail weatherstrip retainer, which, in turn, is secured with screws to the side roof rail. The adhesive that retains the weatherstrip also protects against water entry between the retainer and weatherstrip. A saturated polyurethane foam sealing strip prevents water entry between the retainer and side roof rail.

Removal—(All "17-37-39-57" Styles, "B-87" Styles and "C-69" Styles)

1. Remove plastic fasteners at front and screw at rear of side roof rail weatherstrip. On "C-69" styles, plastic fasteners are used at front of front door side rail weatherstrip and screw at rear of rear door side rail weatherstrip (See Fig. 6-16 for "17-37-39-57" and "B-87" styles and Fig. 6-17 for "C-69" Styles).

2. While carefully pulling weatherstrip out of retainer, simultaneously break cement bond between weatherstrip and weatherstrip retainer using a flat-bladed tool.

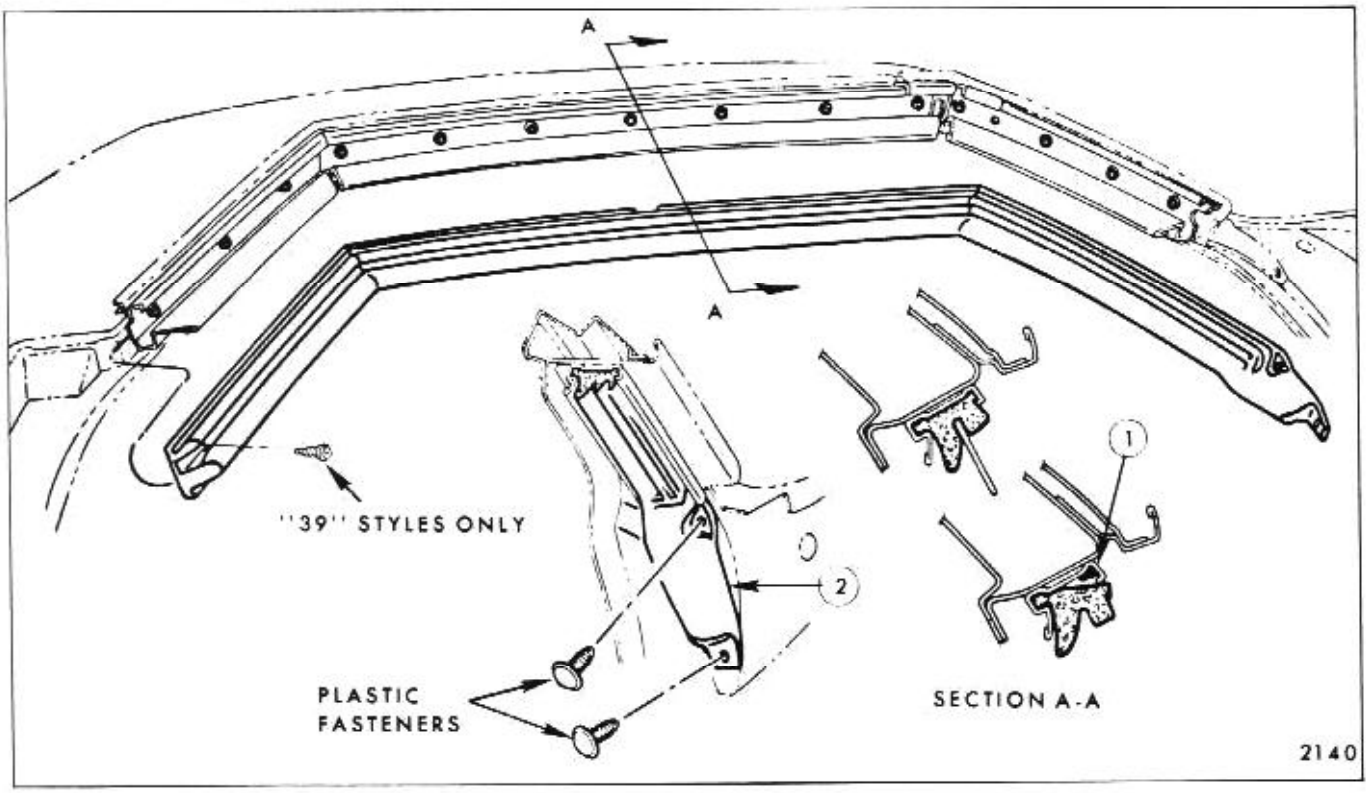


Fig. 6-16—Side Roof Rail Weatherstrip - All "17-37-39-57" Styles and "B-87" Styles

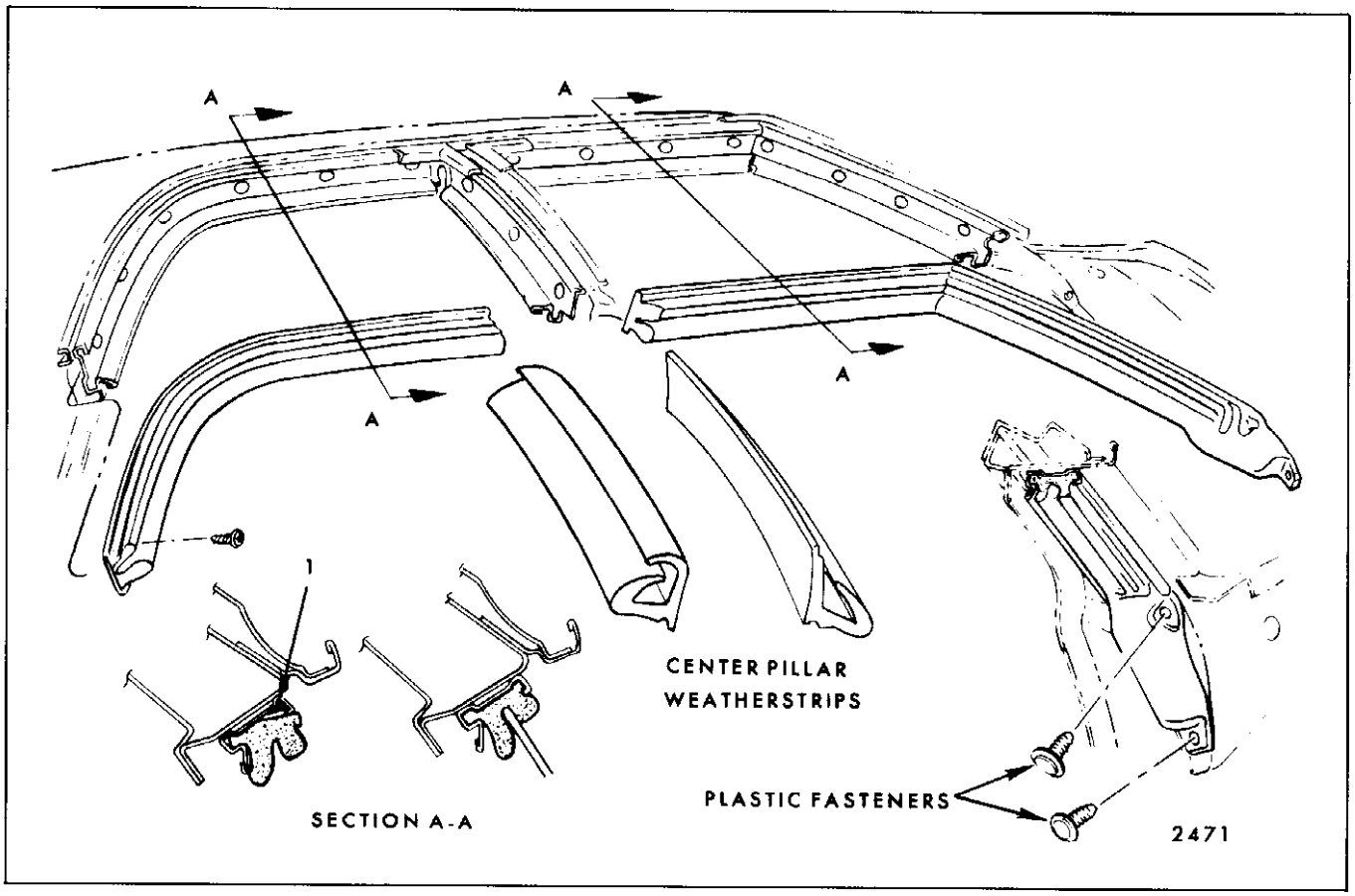


Fig. 6-17 — Side Roof Rail and Center Pillar Weatherstrips - "C-69" Styles

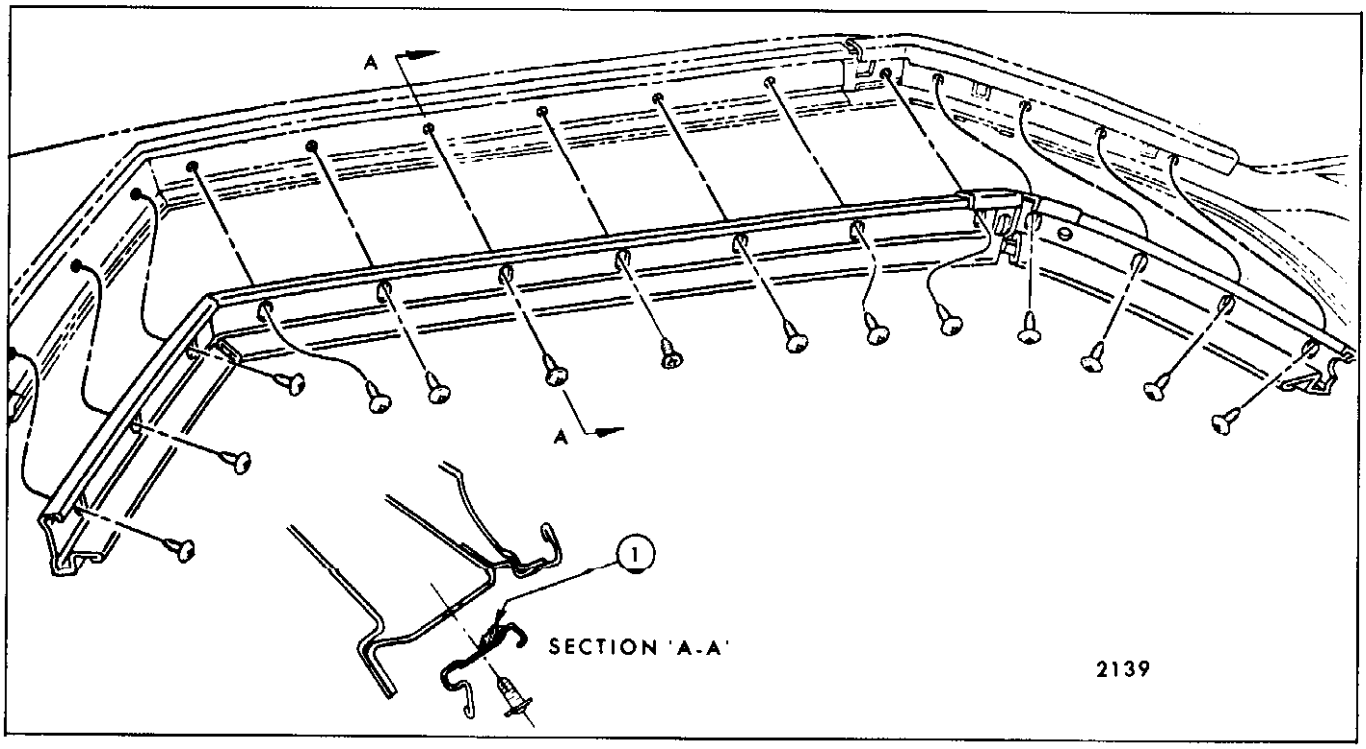


Fig. 6-18 — Side Roof Rail Weatherstrip Retainer - All "17-37-39-57" Styles & "B-87" Styles

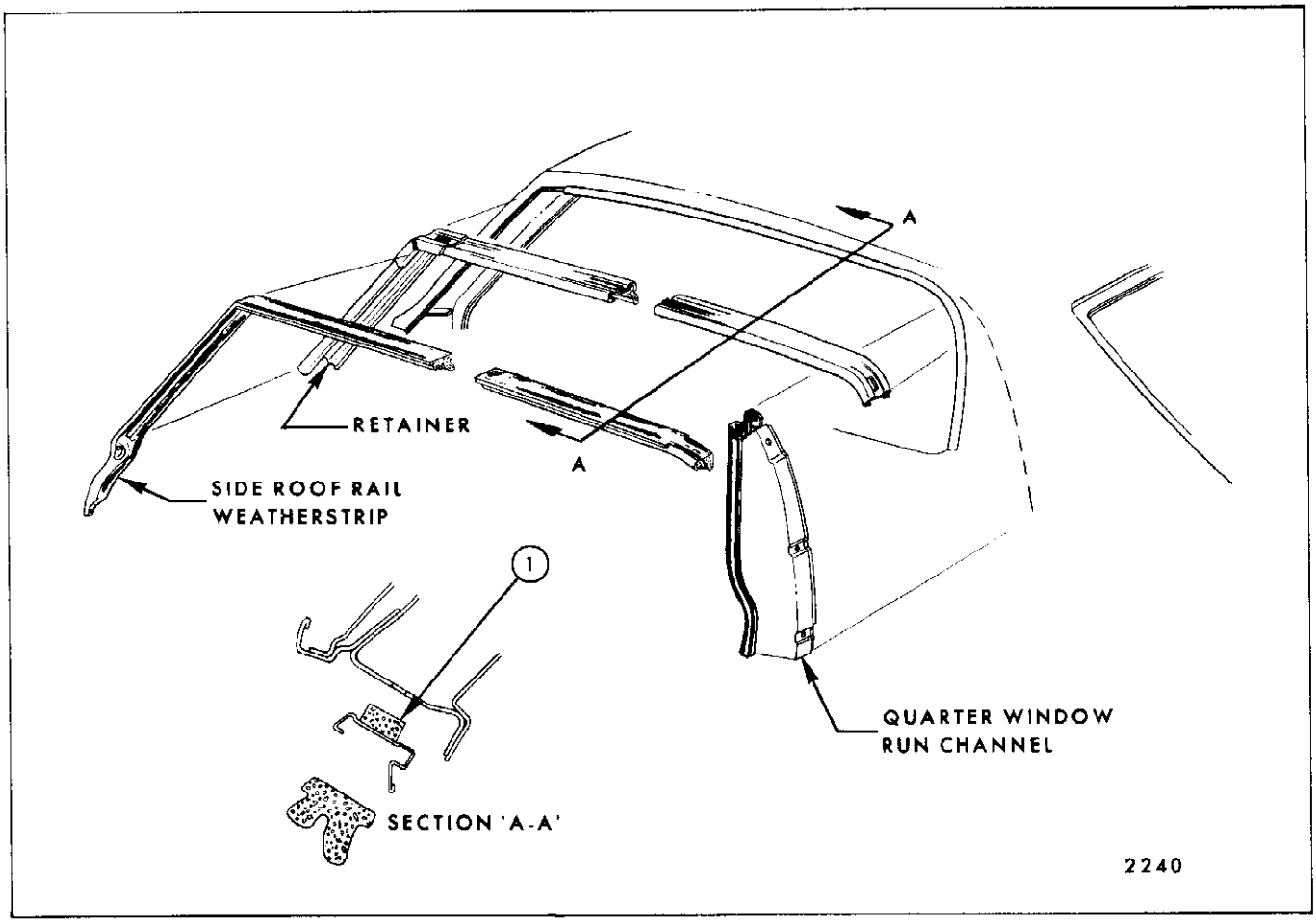


Fig. 6-19 — Side Roof Rail Weatherstrip & Retainer - "B & C-47" Styles

3. With weatherstrip removed, screws securing weatherstrip retainer to side roof rail are exposed. Remove screws to remove side roof rail weatherstrip retainer (Fig. 6-18).

Removal—(Chevrolet "B-47" Styles and Cadillac "C-47" Styles)

1. At front of weatherstrip, disengage plastic fasteners from front body hinge pillar (Fig. 6-19).

2. Remove screw inserted through weatherstrip into side roof rail at rear of weatherstrip where it joins quarter window run channel.

3. Starting at front body hinge pillar, carefully pull weatherstrip out of retainer while simultaneously using a flat-bladed tool to break cement bond between retainer and weatherstrip.

4. If retainer is to be removed, remove attaching screws and pull retainer forward.

Removal—(Buick and Oldsmobile "E-87" Styles)

1. Remove plastic fasteners at front of weatherstrip (See Fig. 6-20).

2. Remove rear quarter courtesy light lens. If attaching screws securing rear section of side roof rail weatherstrip are accessible, remove screws. If not, proceed as follows:

   a. Remove rear seat cushion, rear seat back and rear quarter upper trim assembly (See Trim Index).

   b. Remove screw(s) securing side roof rail weatherstrip (rear section) to side roof rail (See Fig. 6-20), and rear quarter panel.

3. While carefully pulling weatherstrip out of retainer, simultaneously break cement bond between weatherstrip and retainer using a flat-bladed tool.

4. With weatherstrip removed, screws securing weatherstrip retainer to side roof rail are

exposed. Remove screws to remove side roof rail weatherstrip retainer (see Fig. 6-20).

NOTE: The following procedure outlines the recommended process of servicing side roof rail weatherstrips on "E-87" styles when only that portion over the door glass requires replacement.

The side roof rail weatherstrip consists of two sections connected by a vulcanized joint. The front section (over door glass) can be serviced separately from the rear section (over rear quarter window). Replacement of the rear section requires replacement of the entire side roof rail weatherstrip. Replacement of front section, however, can be accomplished individually by utilizing the following procedure.

1. With a sharp implement, sever the vulcanized joint and remove front section of side roof rail weatherstrip as outlined in the preceding procedure.

2. Obtain a service replacement weatherstrip:

Part No. 7646017 - Right

Part No. 7646018 - Left

NOTE: The service weatherstrip is equipped with a nylon patch, half of which is cemented in place (See Fig. 6-21). The other half is to be cemented over the rear section of side roof rail weatherstrip (over quarter window) as directed in step #3.

3. Install replacement weatherstrip in the normal manner and form a butt joint to quarter run channel (see illustration). Use an approved weatherstrip adhesive (preferably black) to form butt joint.

4. With an approved neoprene cement, install remainder of nylon patch (see Fig. 6-21) to cover butt joint.

Removal—(Cadillac "E-47" Styles)

1. At front of weatherstrip, disengage plastic fasteners from front body hinge pillar (See Fig. 6-22).

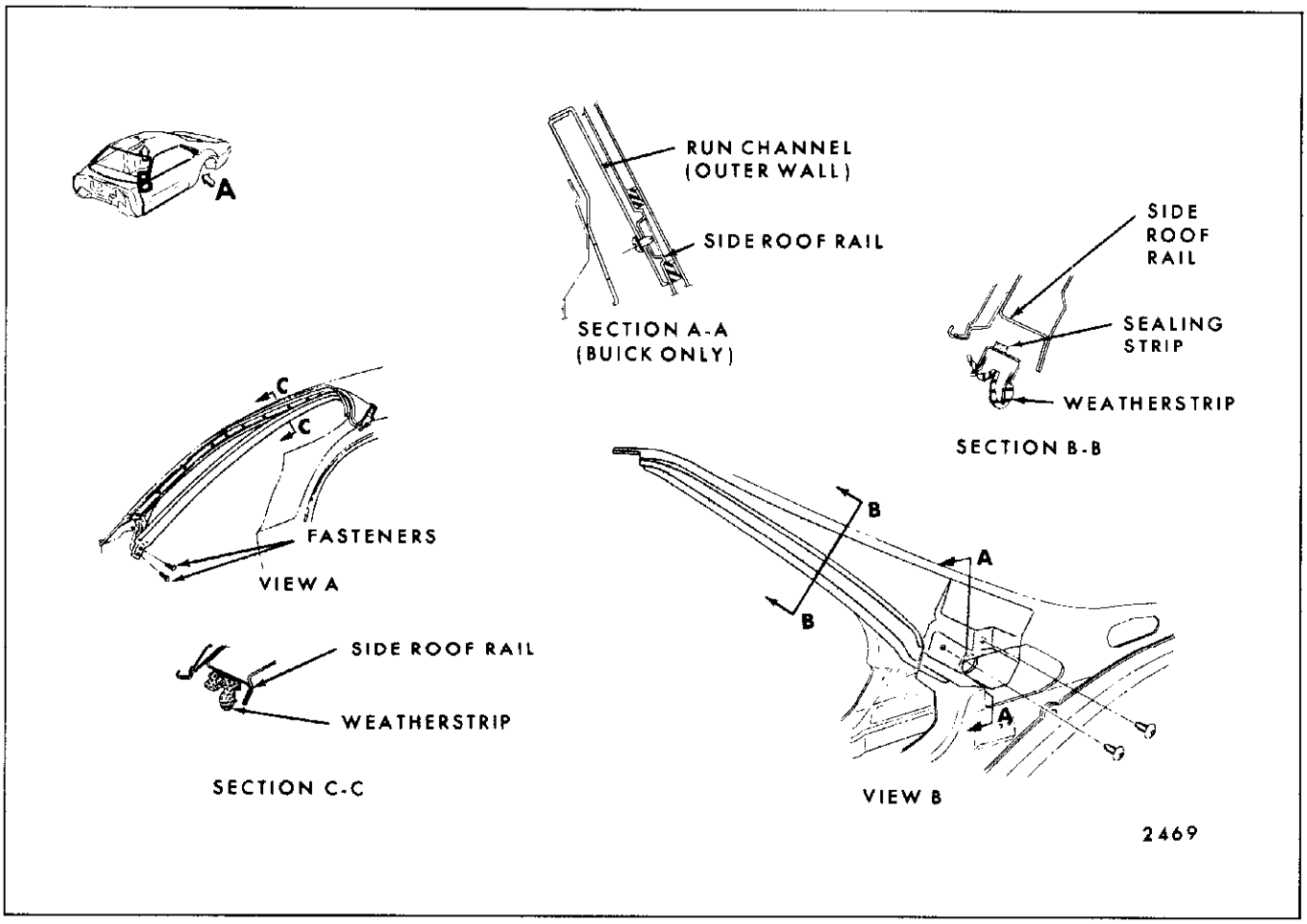


Fig. 6-20 — Side Roof Rail Weatherstrip Assembly - "E-87" Styles

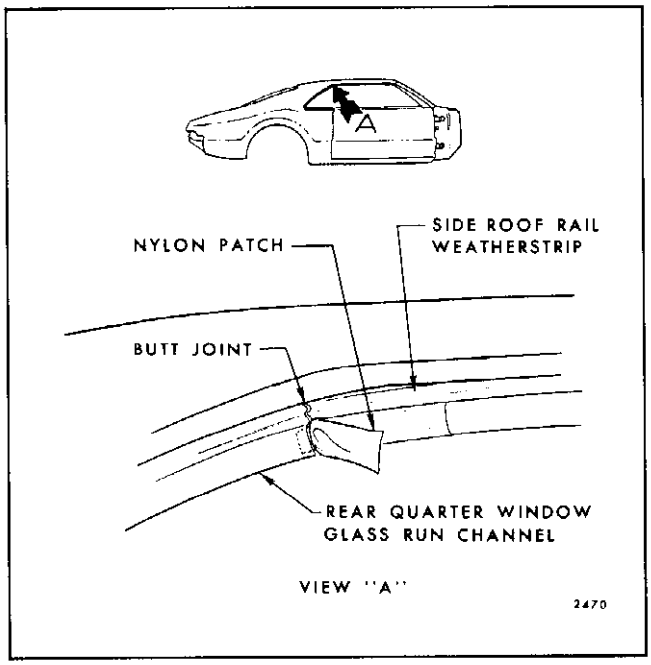


Fig. 6-21 — Side Roof Rail Weatherstrip Repair - "E-87" Styles

2. Lower rear quarter window and remove screw at rear of side roof rail weatherstrip (See Fig. 6-22).

3. While carefully pulling weatherstrip out of retainer, simultaneously break cement bond between weatherstrip and retainer, using a flat-bladed tool.

4. With weatherstrip removed, screws securing weatherstrip retainer to side roof rail are exposed. Remove screws to remove side roof rail weatherstrip retainer (See Fig. 6-22).

Installation (All Styles)

1. If retainer were removed, remove and discard saturated polyurethane foam sealing strip from side roof rail weatherstrip retainer and/or side roof rail (See Fig. 6-20).

2. Scrape off any excess black weatherstrip adhesive from weatherstrip retainer.

3. Apply a continuous bead of a "pumpable" type body caulking compound to surface of retainer that mates with side roof rail ("1", Fig. 6-18). Apply bead outboard of attaching screw holes.

4. Position retainer to body and install attaching screws.

5. Apply a bead of black weatherstrip adhesive to outboard flange of weatherstrip retainer ("1", Figs. 6-16 and 6-17). Extend adhesive down front body hinge pillar to seal lower front end of weatherstrip that is retained with plastic fasteners.

6. Position front end of weatherstrip to body and install plastic fasteners. Then, using a flat-bladed tool, begin engaging weatherstrip with retainer as shown in Section "A-A", Figures 6-16 and 6-17. Engage inboard lip of weatherstrip first, then, outboard lip.

7. After weatherstrip has been installed along length of retainer, install screw at rear end of weatherstrip where so equipped.

SIDE ROOF RAIL WEATHERSTRIP ADJUSTMENT

The side roof rail weatherstrip can be adjusted either inboard or outboard to effect a proper seal with the door or quarter window. To reposition the weatherstrip, disengage the inboard edge of weatherstrip from retainer and loosen retainer attaching screws. Adjust retainer as required and tighten screws. For proper relationship of weatherstrip to door window, refer to "Front Door Window Adjustments".

CENTER PILLAR WEATHERSTRIPS— "C-69" Styles

The center pillar weatherstrips are retained with adhesive in retainers that are screwed to the center pillar. In addition, the weatherstrips are retained at the top by a barb in the retainer that engages the weatherstrip. Due to the presence of the barb, a center pillar weatherstrip cannot be removed by sliding it out at the bottom of the retainer. Instead, it must be worked out of the retainer with a flat-bladed tool. Starting at the lower end and working upward, disengage weatherstrip from retainer outboard flange.

Although the weatherstrip cannot be slid out of the retainer, it is installed by engaging the upper end of the strip with the lower end of the retainer and sliding the strip upward. Prior to installing weatherstrip, apply a bead of black weatherstrip adhesive to outboard flange of retainer to secure weatherstrip when it is installed.

NOTE: The center pillar weatherstrips can be adjusted inboard or outboard to achieve a better seal with the door window. To reposition the weatherstrip, remove weatherstrip from retainer and adjust retainer in or out as required.

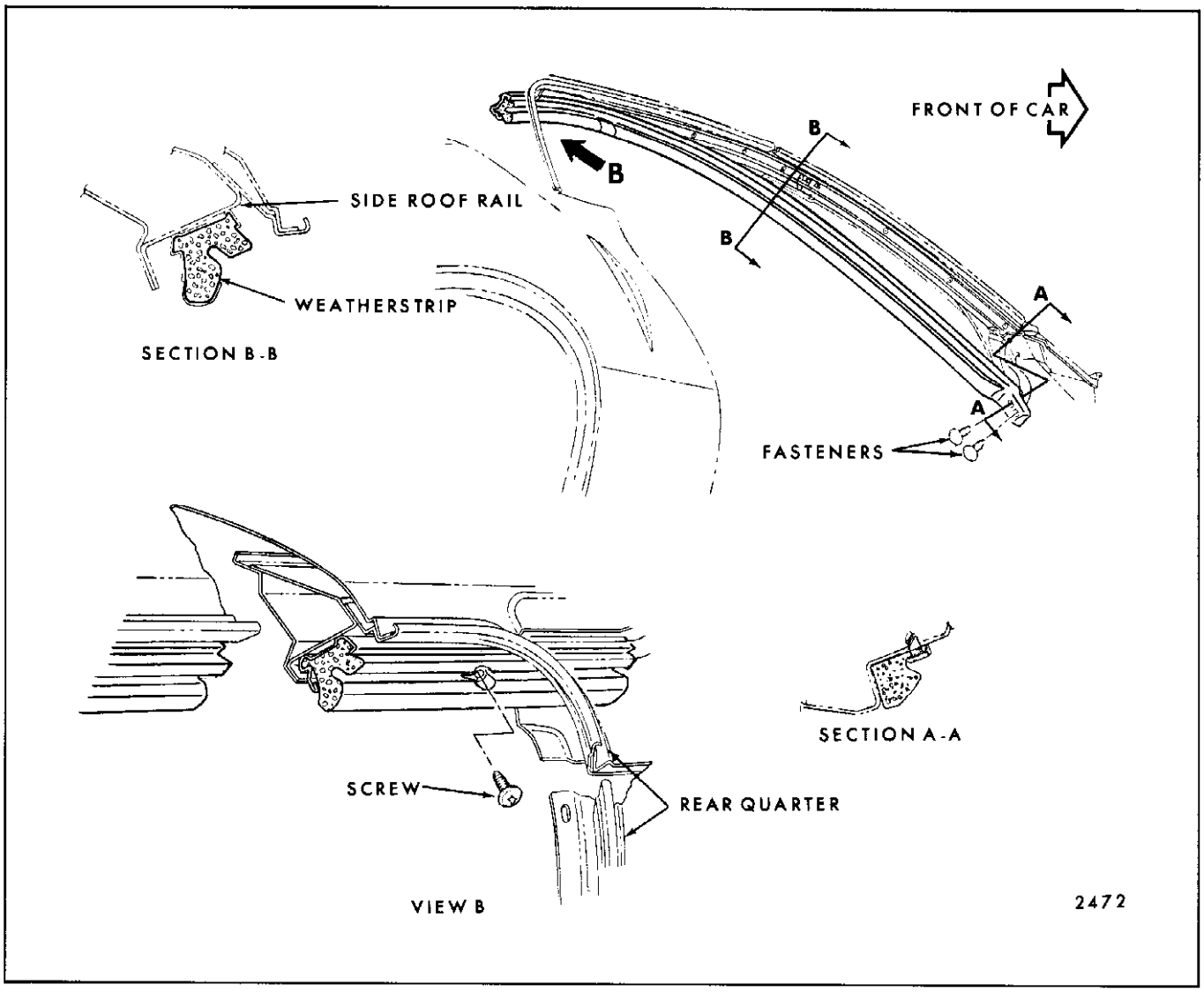


Fig. 6-22 — Side Roof Rail Weatherstrip Assembly - "E-47" Styles

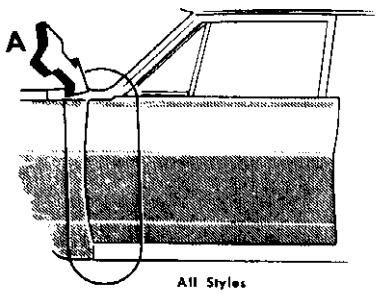
SPECIFIED BODY OPENING CLEARANCE TOLERANCES—All Styles

Figures 6-23, 6-24, 6-25, 6-26, 6-27 and 6-28 show specified body opening gap spacing tolerances and deviations from flush alignment permissible between fender and front door and front to rear door on all 1967 body styles.

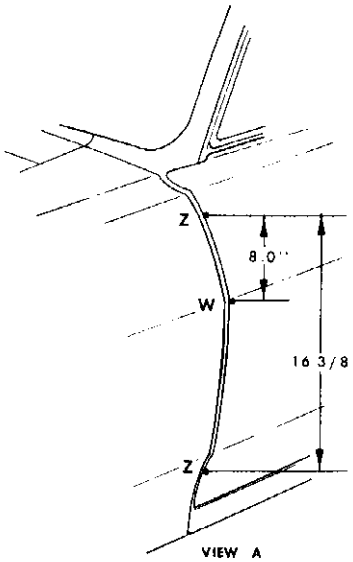
Deviations from flush alignment are required at those locations where a swing-in type hinge is used and the leading edge of the door swings inboard of adjacent body metal.

SPECIFIED BODY OPENING CLEARANCE TOLERANCES

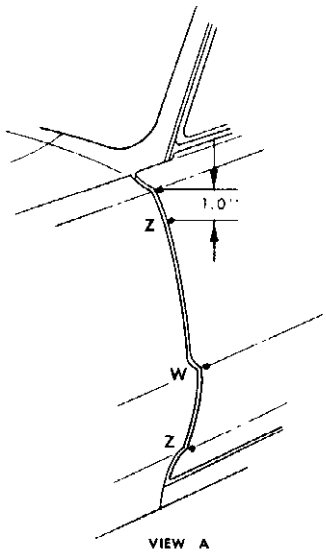
"A" Body Styles



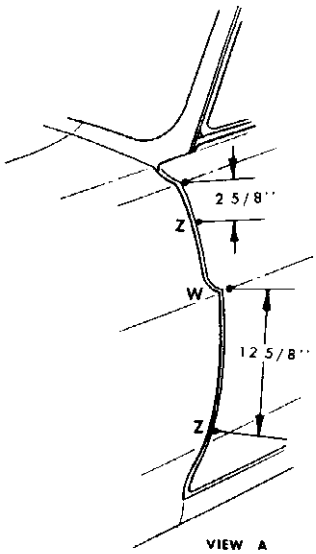
All Styles



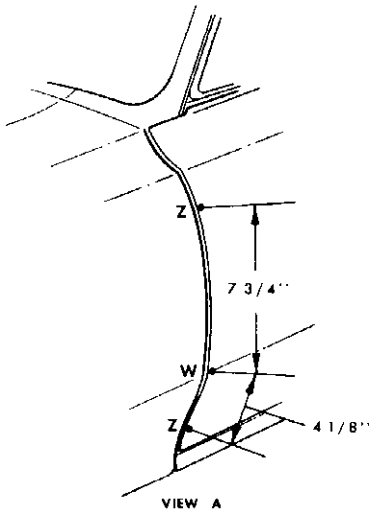
VIEW A
CHEVROLET



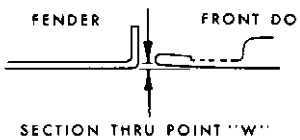
VIEW A
PONTIAC



VIEW A
BUICK



VIEW A
OLDSMOBILE



SECTION THRU POINT "W"

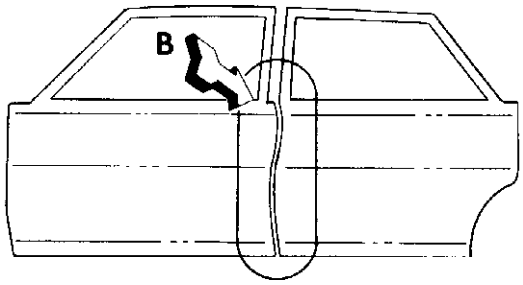
WITH FENDER AND FRONT DOOR FLUSH AT POINTS "Z", FRONT DOOR SWING CLEARANCE ALLOWANCE AT POINT "W" IS:

CHEV. — 5/64"	PLUS	1/16"	MINUS	NOTHING
PONT. — 1/16"	"	"	"	"
OLDS. — 5/64"	"	"	"	"
BUICK — 3/32"	"	"	"	"

2482

Fig. 6-23 — Specified Body Opening Clearance Tolerances - "A" Body Styles

SPECIFIED BODY OPENING CLEARANCE TOLERANCES
"A" Body 4 Door Styles

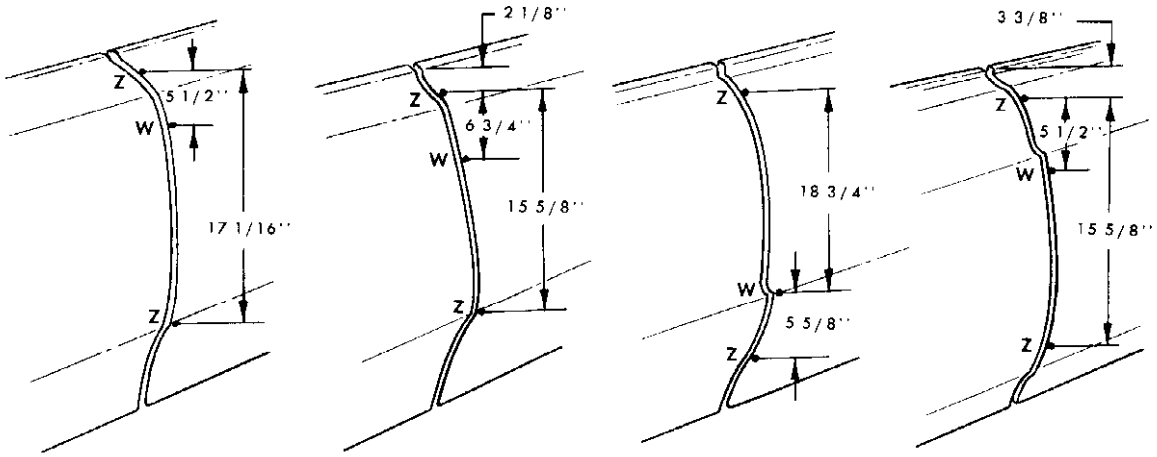


FRONT TO REAR DOOR RELATIONSHIP
IS FLUSH TO 1/16" OUTBOARD AT
POINTS "Z"

FRONT TO REAR DOOR GAP SPACING
IS 3/16" PLUS 1/32" MINUS 1/16"

SEE DIMENSIONS SHOWN UNDER
VIEW OF EACH SERIES

SECTION SHOWING CLEARANCE BETWEEN FRONT AND REAR DOOR



VIEW B
CHEVROLET

VIEW B
PONTIAC

VIEW B
OLDSMOBILE

VIEW B
BUICK

1966
WITH FRONT AND REAR DOOR FLUSH AT POINTS "Z"
REAR DOOR SWING CLEARANCE ALLOWANCE AT POINT "W" IS:

CHEV. — 5/64" PLUS 1/32" MINUS NOTHING
PONT. — 1/16" " " " "
OLDS. — 3/32" " " " "
BUICK — 3/32" " " " "

2483

Fig. 6-24 — Specified Body Opening Clearance Tolerances - "A" Body - 4-Door Styles

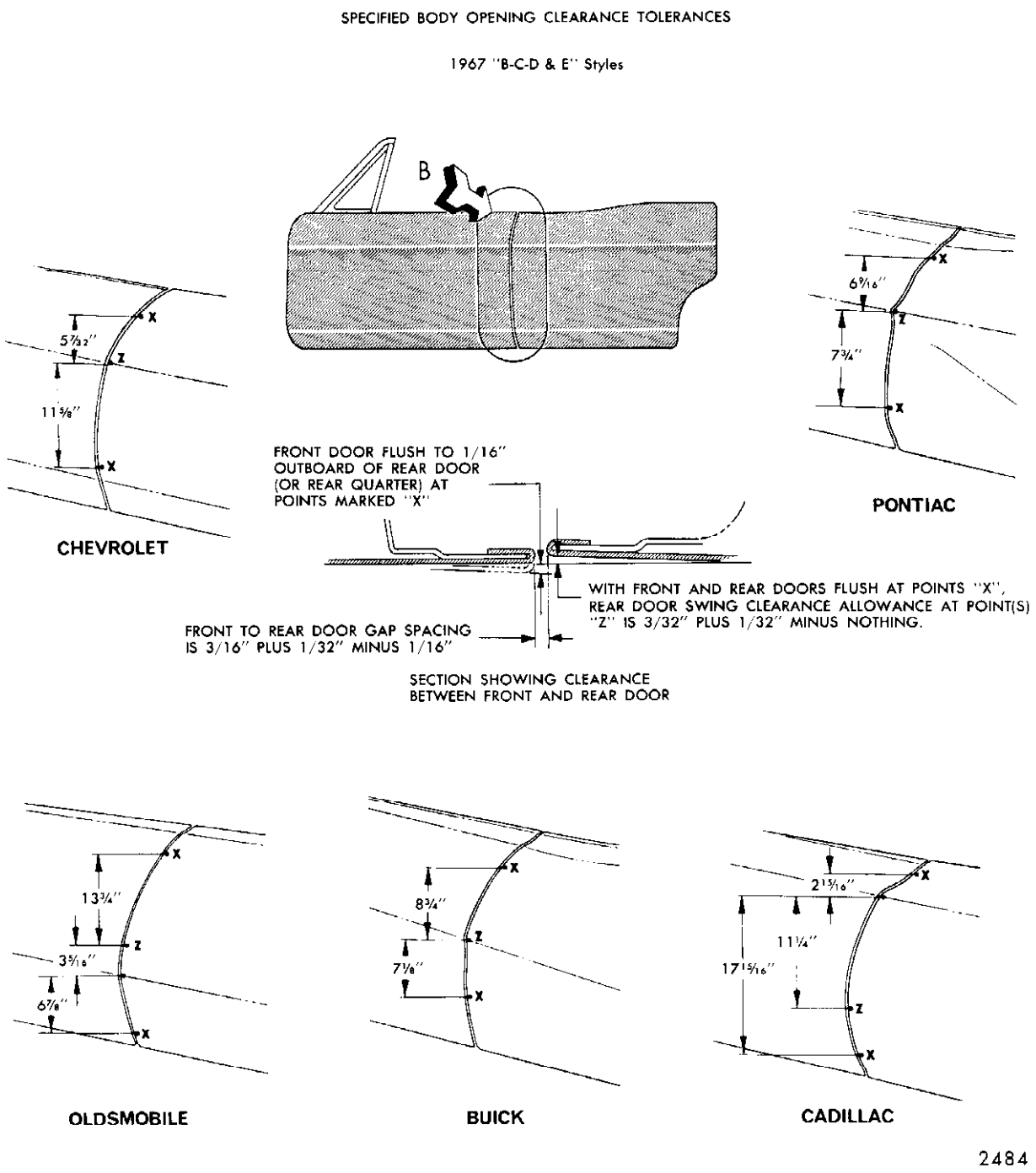
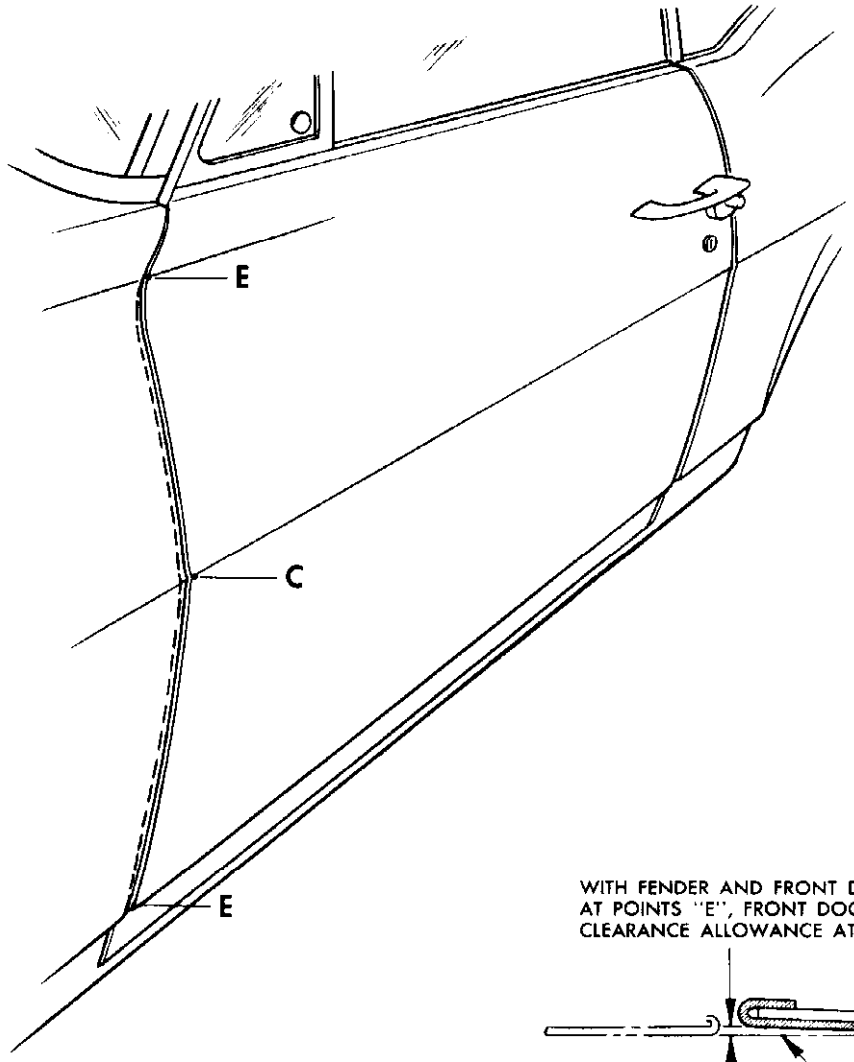


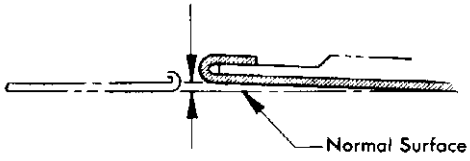
Fig. 6-25 — Specified Body Opening Clearance Tolerances - "B-C-D-E" Styles

SPECIFIED BODY OPENING CLEARANCE TOLERANCES

1967 "F" Body



WITH FENDER AND FRONT DOOR FLUSH AT POINTS "E", FRONT DOOR SWING CLEARANCE ALLOWANCE AT POINT "C" IS 3/32"



Section showing clearance between fender and front door

2485

Fig. 6-26—Specified Body Opening Clearance Tolerances - "F" Body Styles

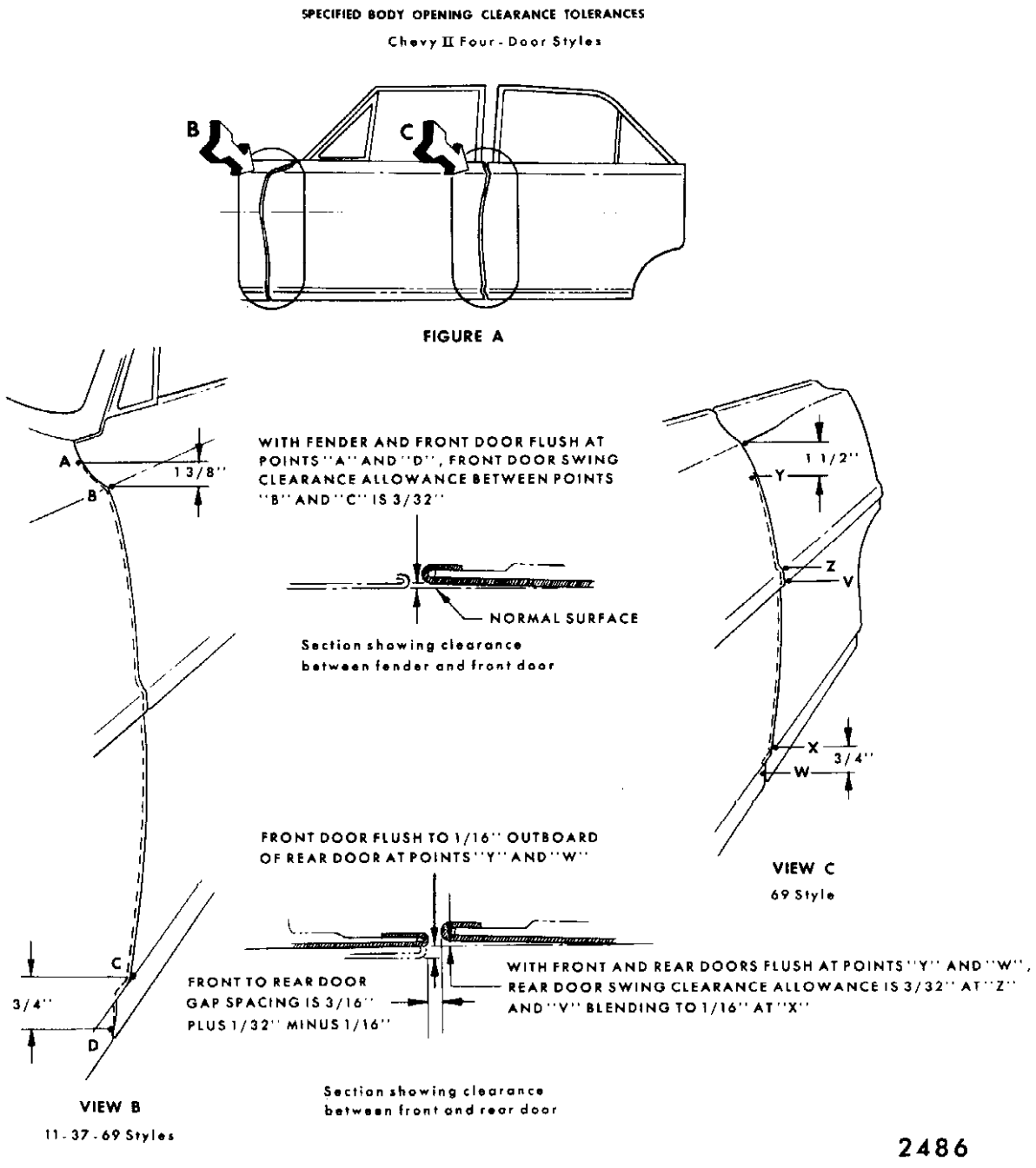
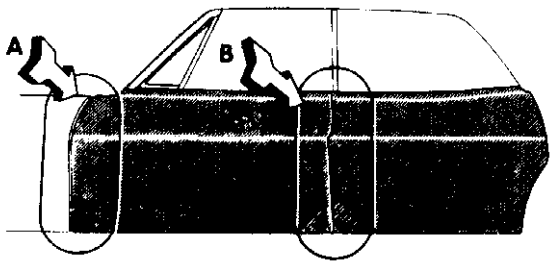
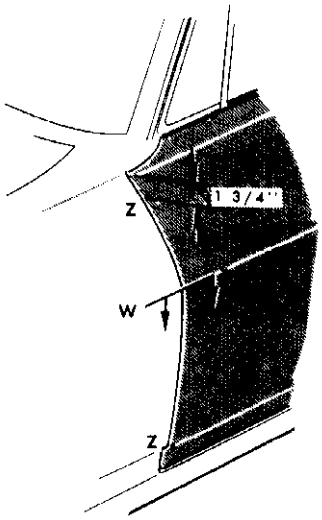


Fig. 6-27 — Specified Body Opening Clearance Tolerances - Chevy II 4-Door Styles

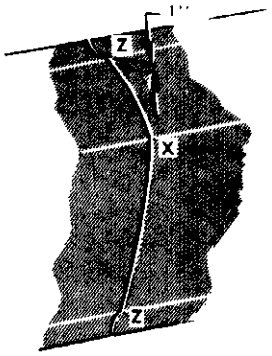
SPECIFIED BODY OPENING CLEARANCE TOLERANCES

Corvair Body Styles



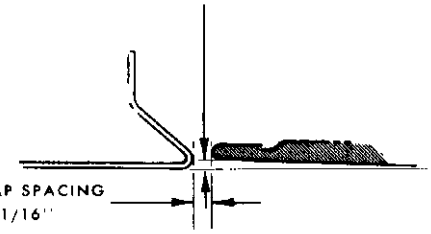


VIEW A



VIEW B

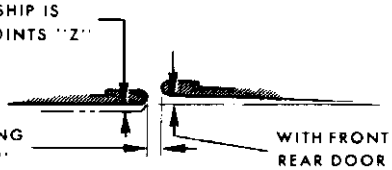
WITH FENDER AND DOOR FLUSH AT POINTS "Z", FRONT DOOR SWING CLEARANCE ALLOWANCE AT POINT "W" IS 3/32" PLUS 1/16" MINUS NOTHING



FENDER TO FRONT DOOR GAP SPACING IS 3/16" PLUS 1/32" MINUS 1/16"

Section "W" of View A

FRONT TO REAR DOOR RELATIONSHIP IS FLUSH TO 1/16" OUTBOARD AT POINTS "Z"



FRONT TO REAR DOOR GAP SPACING IS 3/16" PLUS 1/32" MINUS 1/16"

WITH FRONT AND REAR DOOR FLUSH AT POINTS "Z", REAR DOOR SWING CLEARANCE ALLOWANCE AT POINT "X" IS 3/32" PLUS 1/32" MINUS NOTHING

Section through "X" in View B

2487

Fig. 6-28 — Specified Body Opening Clearance Tolerances - Corvair Styles

REAR DOORS

DESCRIPTION

Information in this section concerns operations applicable to rear doors only. Procedures for removal of water deflectors, door handles and weatherstrips are outlined in the "Front and Rear Door" section of this manual - see index. Door trim assemblies are covered in Section 14 of manual - see index.

Illustrations 6-112, 6-113, 6-114, 6-115, 6-116, 6-117 and 6-118 are typical of rear doors with the trim assembly and inner panel water deflector removed. These figures identify the component parts of the rear door assembly (by style), their relationship and various attaching points.

REAR DOOR HINGES—All Styles

As the rear door hinges are secured with screws to both the door and center pillar, the door can be removed by either removing the door from the hinges or by removing the door and hinges as an assembly from the center pillar.

Removal

1. With a pencil, mark location of hinges on door or center pillar, depending on removal method being used.
2. On styles equipped with electric window regulators or vacuum operated locks, proceed as follows:
   a. Remove door trim assembly and inner panel water deflector.
   b. Disconnect wire harness connector from regulator motor and/or vacuum hoses from lock actuator.
   c. Remove electric conduit from door, then remove wire harness and/or vacuum hoses from door through conduit access hole.
3. With door properly supported, remove upper and lower hinge attaching screws (or bolts) from door or center pillar and remove door from body. Figure 6-119 and 6-120 are typical of rear door hinge attachment.

Installation

1. Clean off old sealer at hinge attaching areas.
2. Apply a coat of heavy-bodied sealer to surface of hinge that mates with door or center pillar to prevent corrosion.
3. With aid of a helper, lift door into position and loosely install hinge screws. Align hinges within pencil marks previously made and tighten hinge screws.
4. Install all previously removed parts and check door for proper alignment.

Adjustments

In-or-out and up-or-down adjustment is available at the door side hinge attaching screws. Fore-or-aft and a slight up-or-down adjustment is available at the body side (center pillar) hinge attaching screws except on "X" Styles.

REAR DOOR LOCK REMOTE CONTROL

The remote control is secured to the door inner panel by three attaching bolts. On some styles it is mounted on the inboard surface of the door inner panel, and on others, on the outboard surface. Figure 6-121 identifies "B" style installation, other styles are similar.

Removal and Installation

1. Remove rear door trim assembly and inner panel water deflector.
2. Remove remote control attaching bolts (Fig. 6-121).
3. Pivot remote to disengage it from remote control to lock connecting rod and remove remote control from door.
4. To install, reverse removal procedure. Make certain anti-rattle clip on lock connecting rod is properly positioned.

REAR DOOR LOCK ASSEMBLY—"B-35-45 and 69" Styles

Removal and Installation

1. Remove rear door trim assembly and inner panel water deflector.
2. Remove door lock remote control.

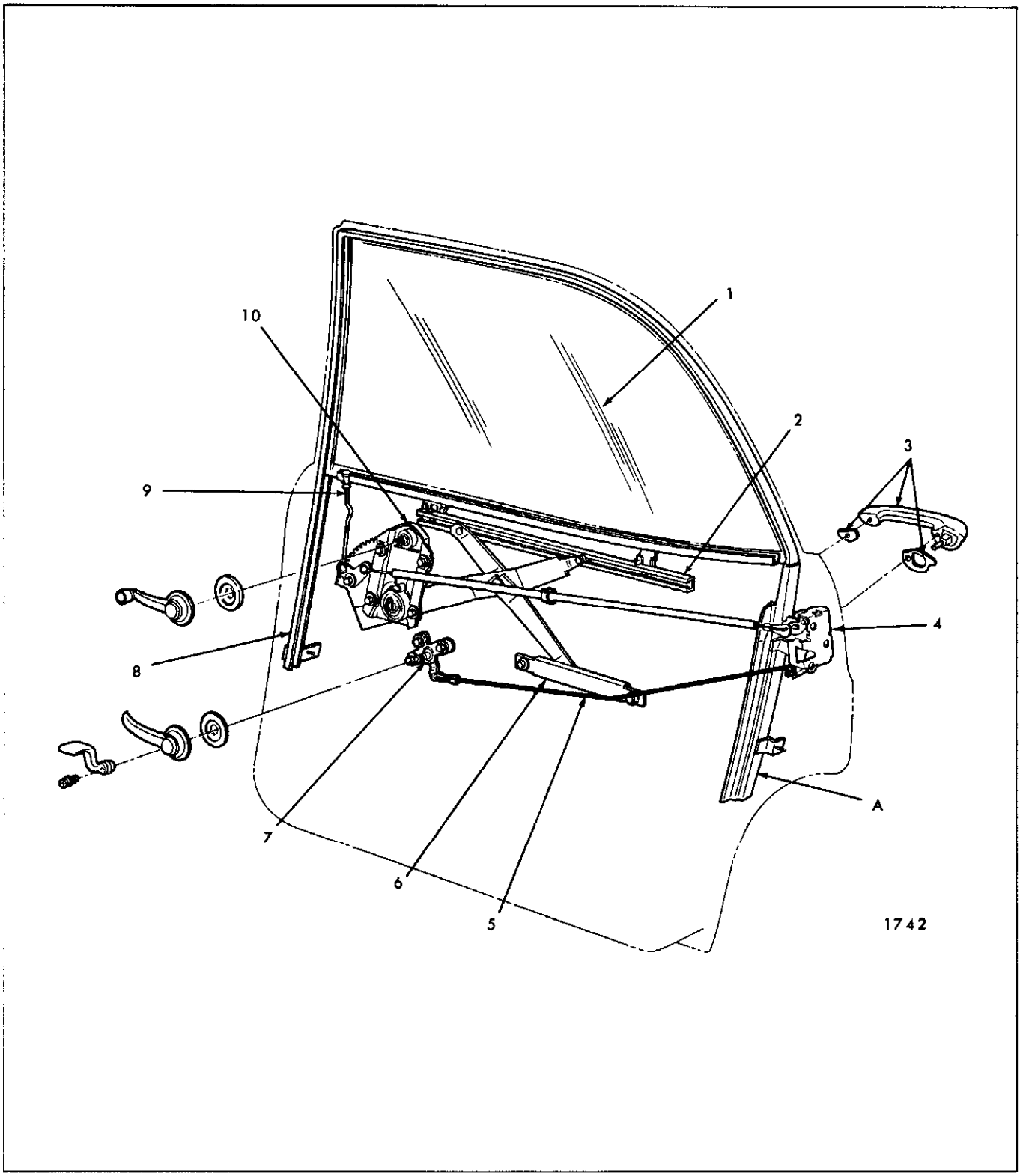


Fig. 6-112—Rear Door Hardware - "A" Closed Styles

1. Outside Handle and Sealing Gasket
2. Lock Assembly
3. Remote Control Connecting Rod
4. Remote Control
5. Inner Panel Cam
6. Lock to Locking Lever Rod
7. Window Regulator
8. Inside Locking Rod
9. Window Lower Sash Channel Cam

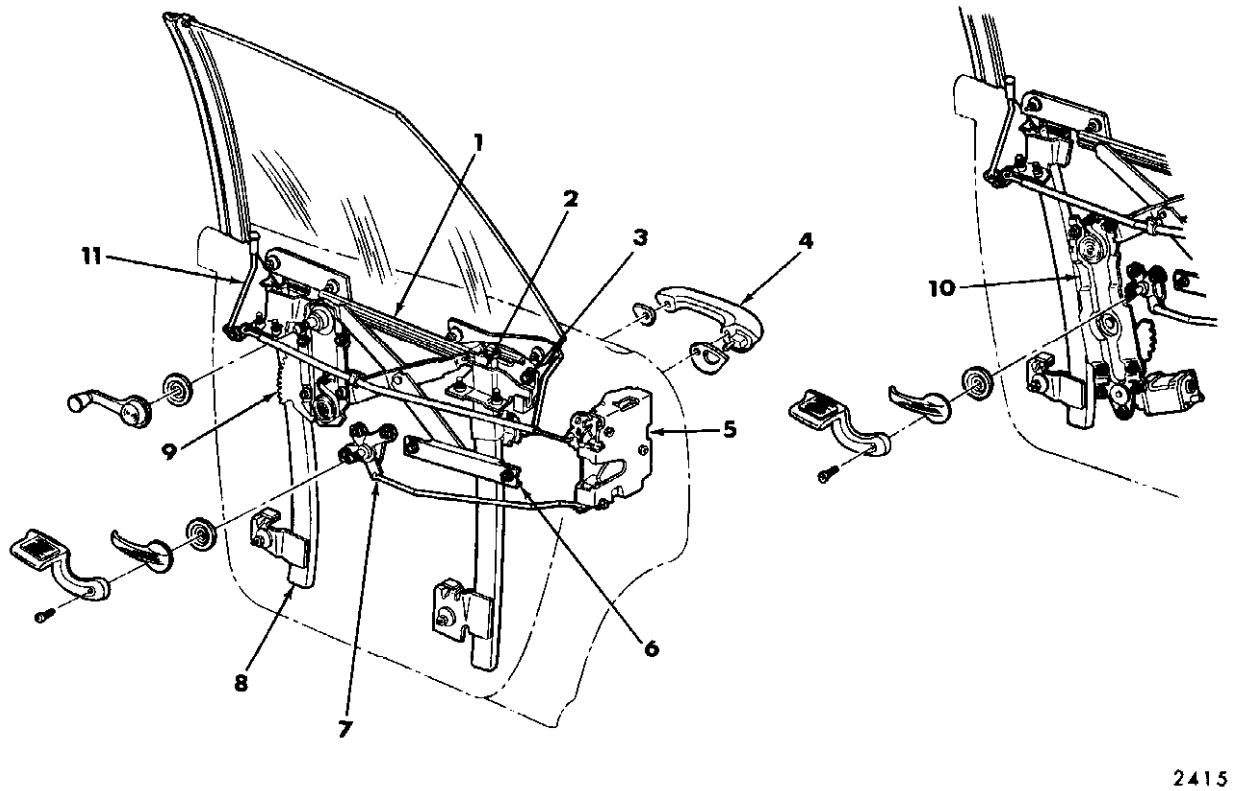


Fig. 6-113 — Rear Door Hardware - "A-39" Styles

1. Sash Channel Cam
2. Rear Guide
3. Rear Up-Stop
4. Outside Handle and Sealing Gaskets
5. Lock
6. Inner Panel Cam
7. Remote Control
8. Front Guide
9. Regulator (Manual)
10. Regulator (Electric)
11. Inside Locking Rod

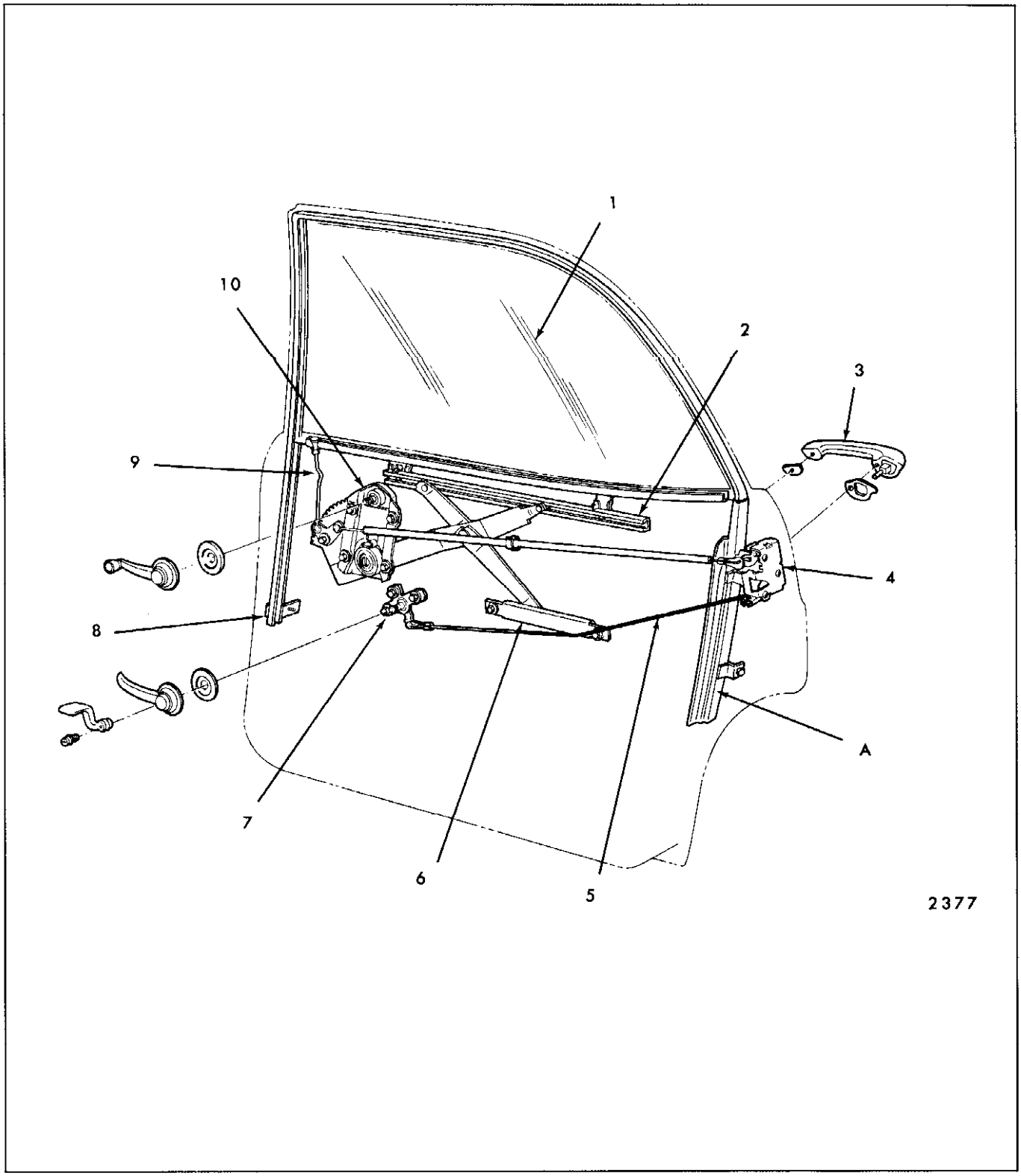


Fig. 6-114—Rear Door Hardware - "B" Closed Styles

1. Window Assembly
2. Lower Sash Channel Cam
3. Outside Handle and Sealing Gaskets
4. Door Lock
5. Remote Control Connecting Rod
6. Inner Panel Cam
7. Remote Control
8. Glass Run Channel (Extends Completely Around Window to Point "A")
9. Inside Locking Rod
10. Window Regulator

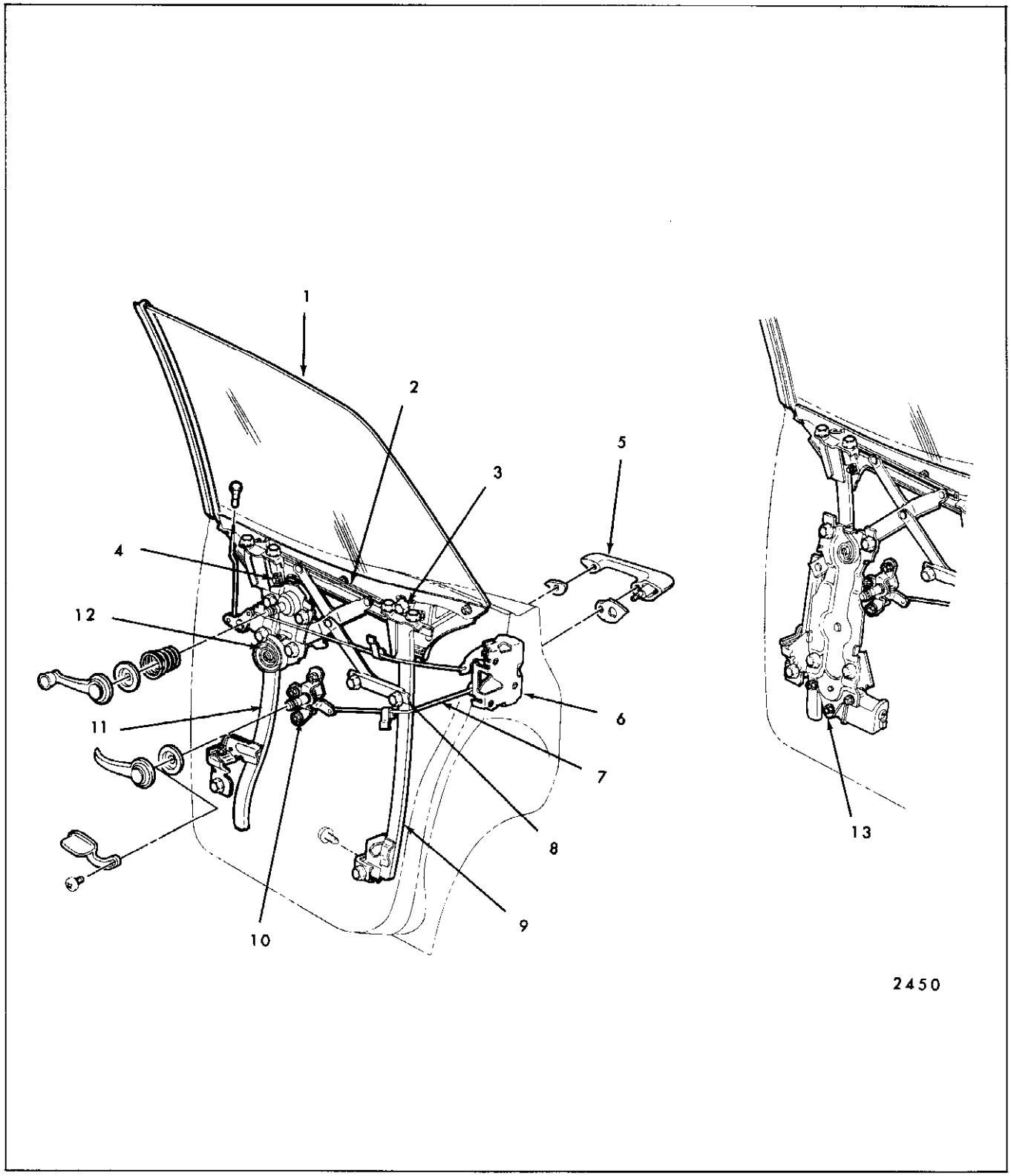


Fig. 6-115—Rear Door Hardware - "B-C 39" and "C-49-69" Except 68069-169 Styles

1. Rear Door Window Assembly
2. Lower Sash Channel Cam
3. Rear Guide Window Up-Stop
4. Front Guide Window Up-Stop
5. Outside Handle and Gaskets
6. Door Lock
7. Remote Control to Lock Connecting Rod
8. Inner Panel Cam
9. Rear Guide
10. Remote Control
11. Front Guide
12. Window Regulator - Manual
13. Window Regulator - Electric

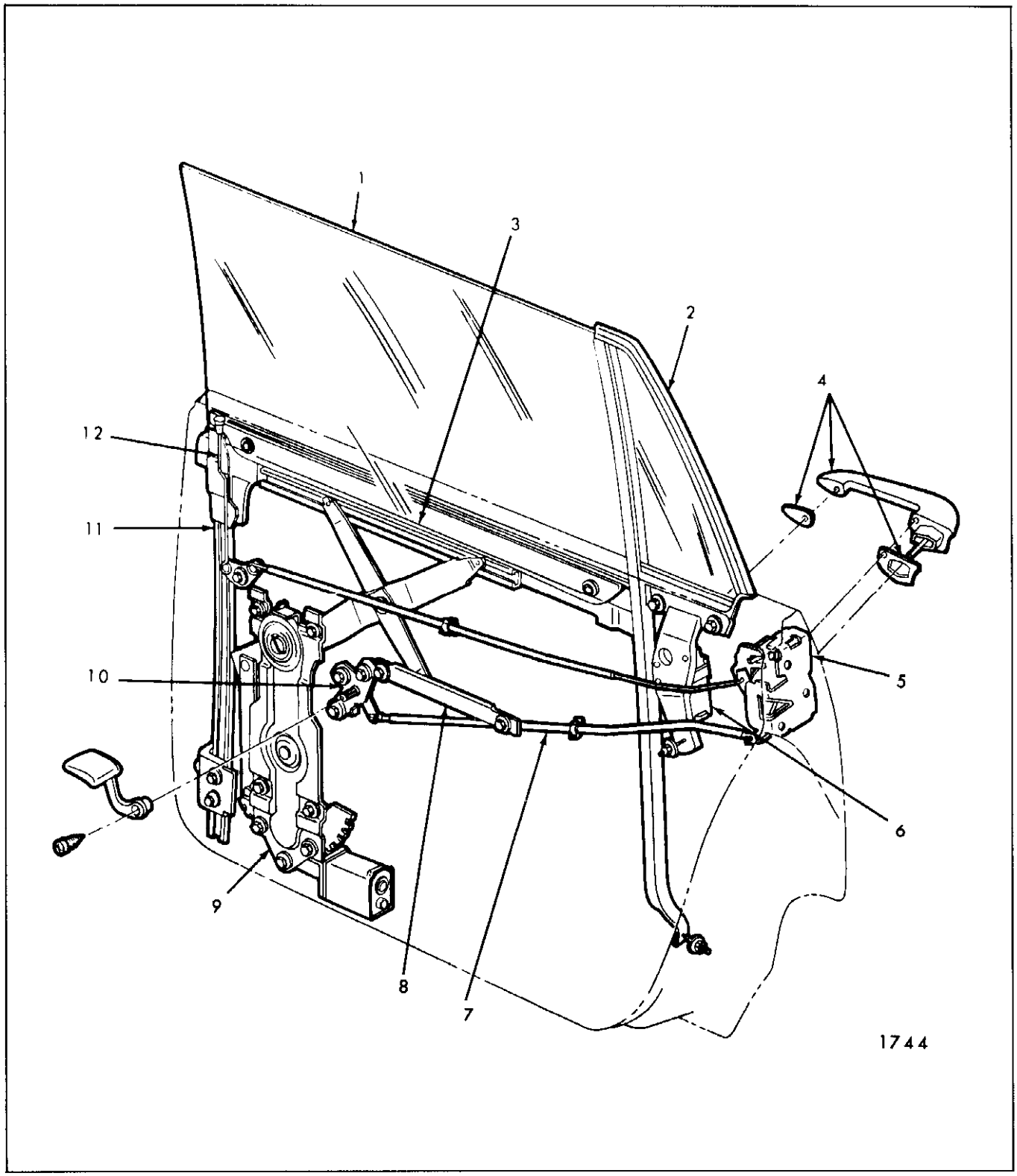


Fig. 6-116—Rear Door Hardware - 68069-68169 Styles

1. Window Assembly
2. Ventilator Assembly
3. Lower Sash Channel Cam
4. Outside Handle and Sealing Gaskets
5. Door Lock
6. Ventilator Regulator (Power Operated)
7. Remote Control Connecting Rod
8. Inner Panel Cam
9. Window Regulator (Power Operated)
10. Remote Control
11. Window Front Guide
12. Inside Locking Rod

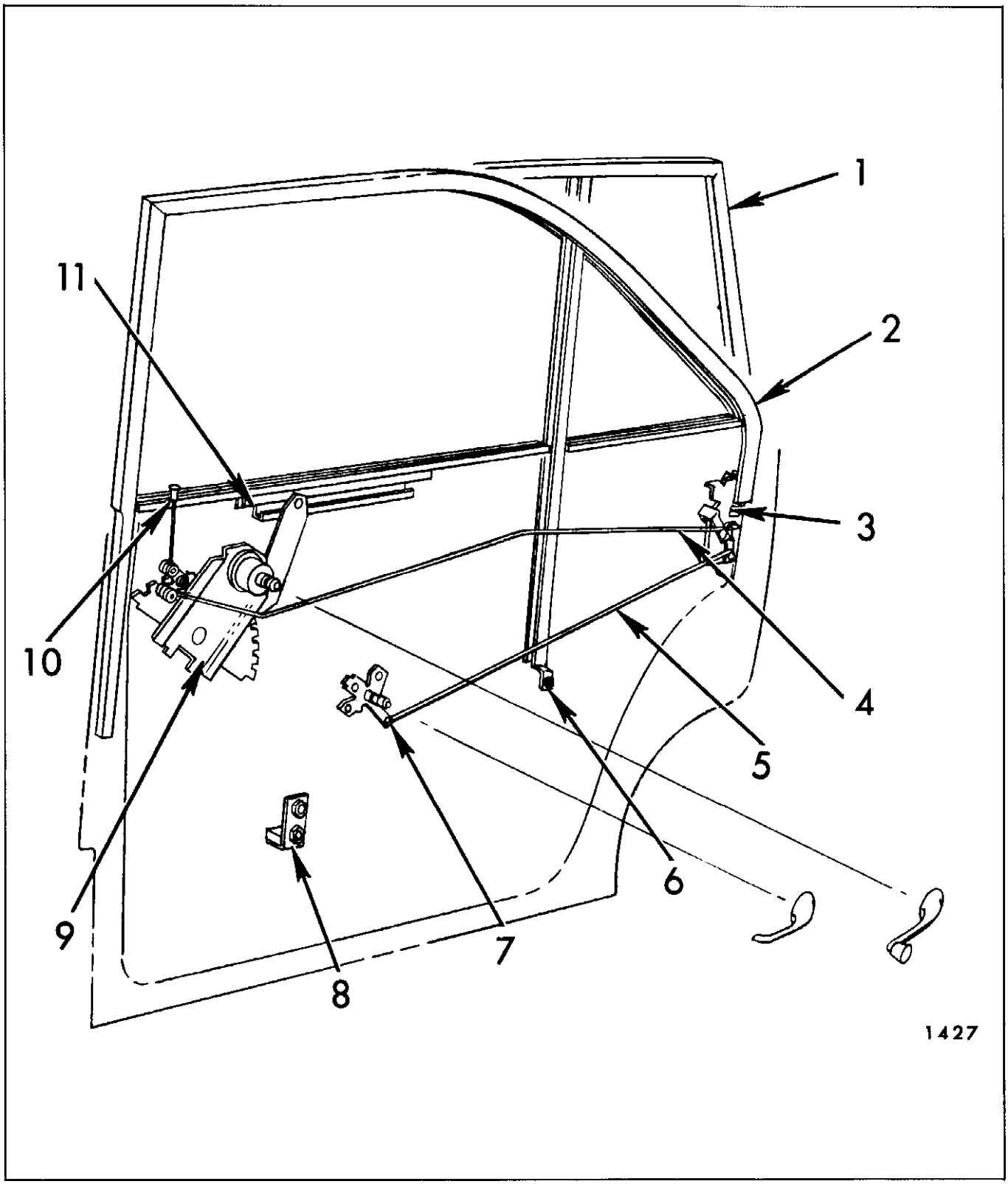


Fig. 6-117—Door Hardware - "X-35 and 69" Styles

1. Upper Frame - "35" Styles
2. Upper Frame - "69" Styles
3. Lock Assembly
4. Lock to Locking Lever Rod
5. Remote Control Connecting Rod
6. Ventilator Division Channel
7. Remote Control Assembly
8. Window Lower Stop
9. Window Regulator Assembly
10. Inside Locking Rod
11. Window Lower Sash Channel Cam

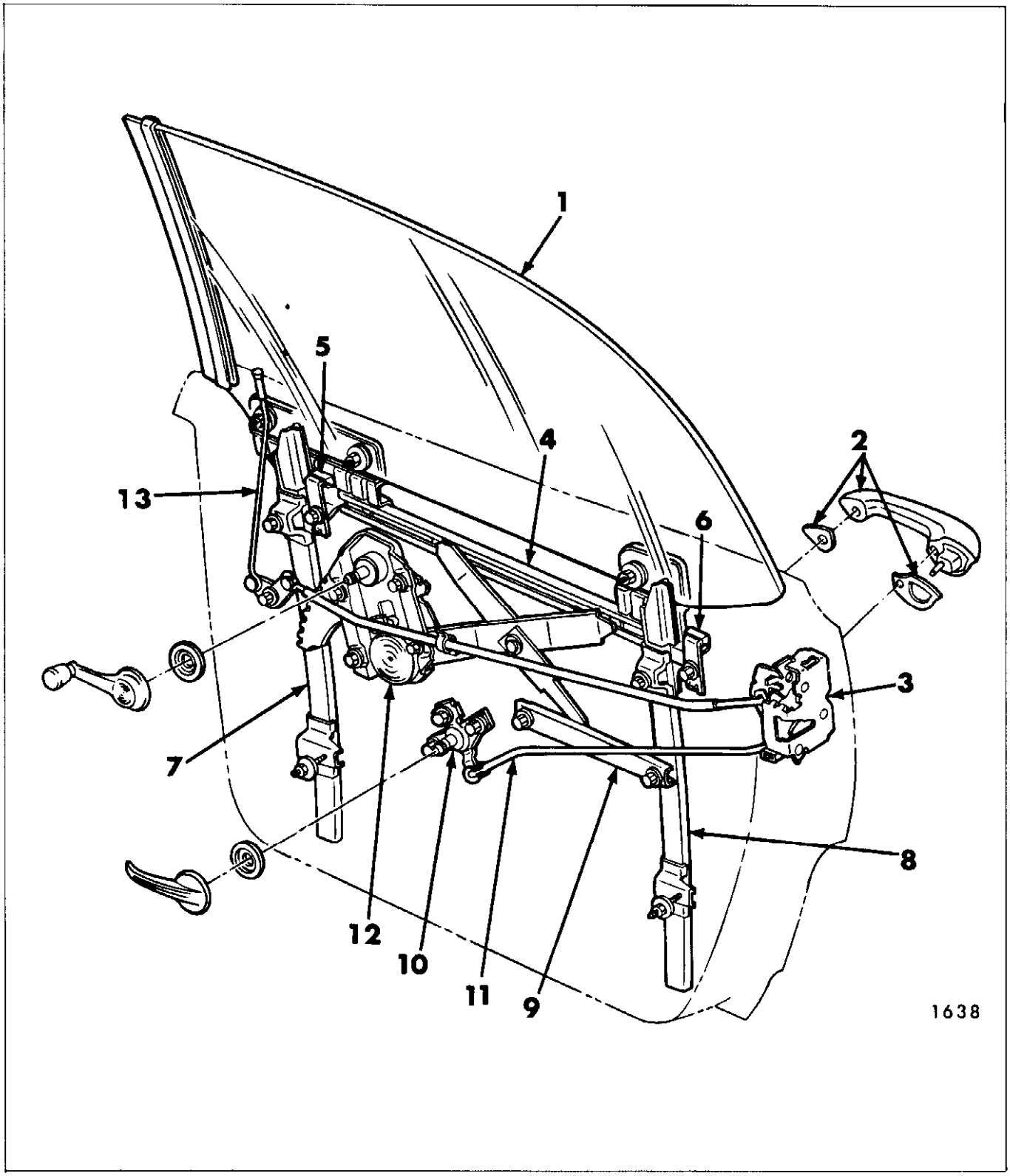


Fig. 6-118—Rear Door Hardware - "Z-39" Styles

1. Window Assembly
2. Outside Handle and Sealing Gaskets
3. Door Lock
4. Lower Sash Channel Cam
5. Front Up-Travel Stop
6. Rear Up-Travel Stop
7. Window Front Guide
8. Window Rear Guide
9. Inner Panel Cam
10. Remote Control
11. Remote Control Connecting Rod
12. Window Regulator
13. Inside Locking Rod

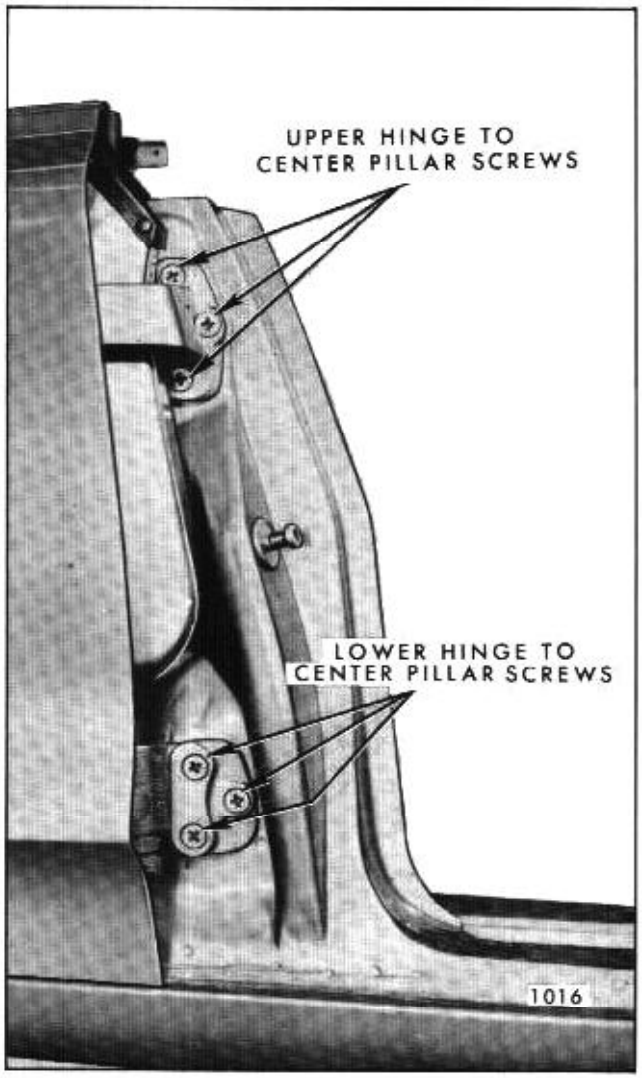


Fig. 6-119—Rear Door Hinge Attachment

3. Remove inside locking rod to lock connecting rod link attaching bolt (Fig. 6-121).
4. Remove lock attaching screws (Fig. 6-122 hardtop style shown, closed styles similar).
5. Disengage connecting rods from clips on door lock (for clip disengagement refer to "Door Lock Spring Clips" in Front and Rear door section) and remove lock from door.
6. To install, reverse removal procedure. Check lock for proper operation prior to installing water deflector.

REAR DOOR LOCK ASSEMBLY AND VACUUM ACTUATOR—All Except "B 35-45 and 69" Styles

Removal and Installation

1. Remove door trim assembly and inner panel water deflector.
2. Operate glass to full-up position.
3. Working through access hole, disengage lock connecting rods from spring clips on door lock (for clip disengagement refer to "Door Lock Spring Clips" in Front and Rear Door Section).
4. Remove door lock attaching screws (Fig. 6-122) and remove lock from door.
5. To install, reverse removal procedure.

NOTE: On styles equipped with vacuum lock actuators (except 68069-169 styles), disconnect vacuum hoses from actuator and remove lock and actuator as an assembly. Vacuum actuator is attached to lock with screws which can be removed only in a bench operation (Fig. 6-123).

On 68069-169 Styles, remove vacuum actuator and link assembly screws (Fig. 6-124 and 6-125) and allow vacuum actuator to hang loose during lock removal.

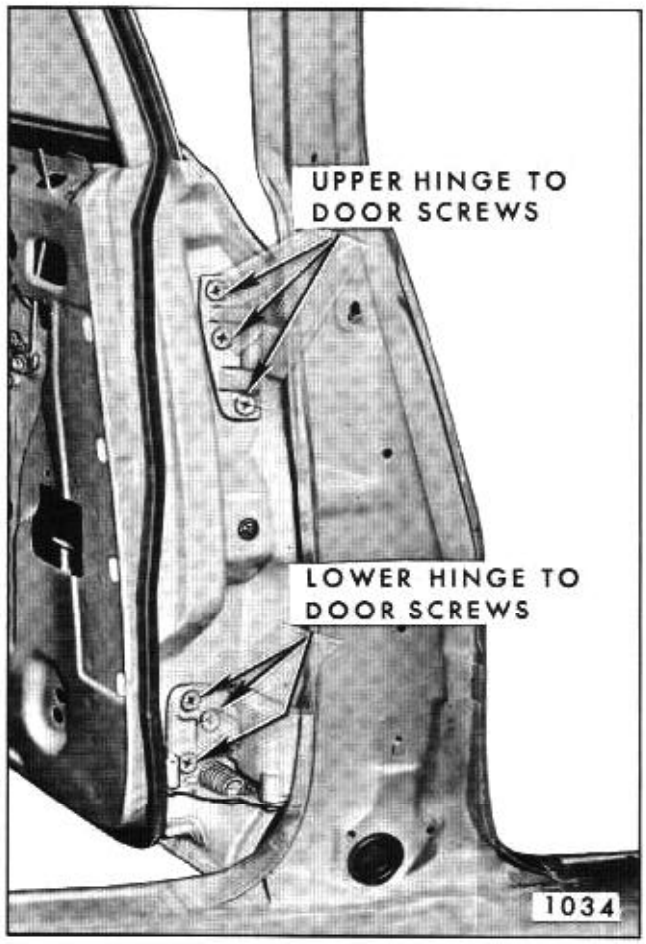


Fig. 6-120—Rear Door Hinge Attachment

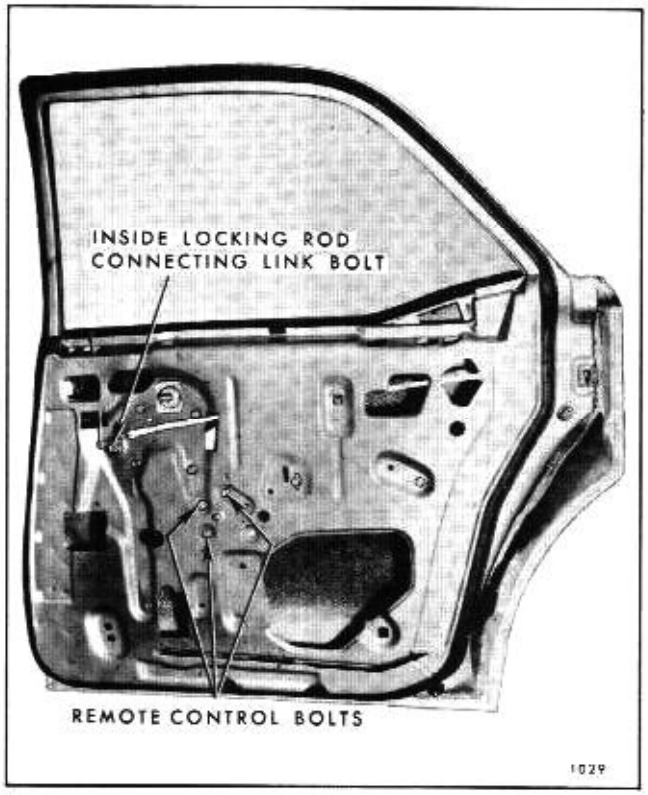


Fig. 6-121—Door Lock Remote Control - "B" Style Shown - Other Similar

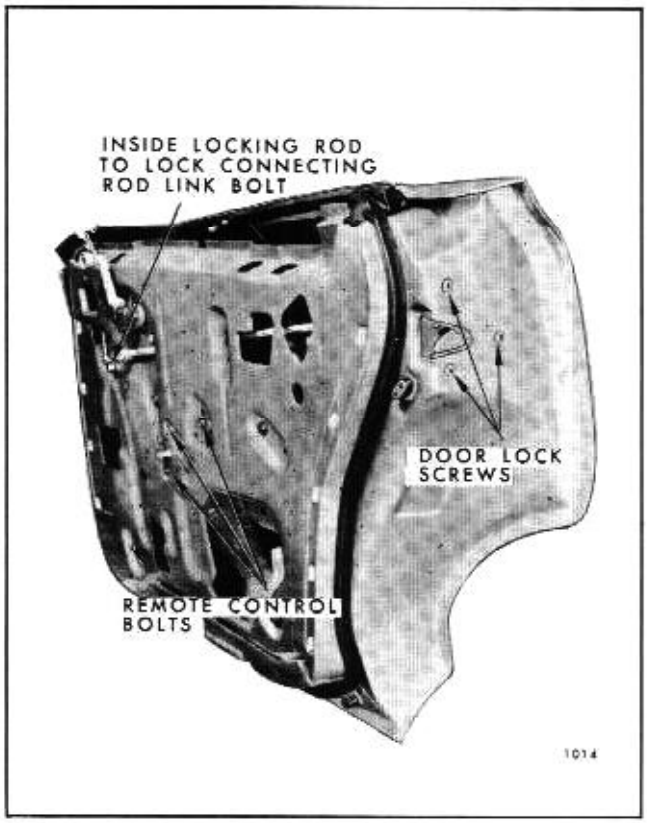


Fig. 6-122—Rear Door Lock Removal - Hardtop Style Shown, Closed Style Similar

REAR DOOR LOCK VACUUM ACTUATOR—68069 and 68169 Styles

Removal and Installation

1. Remove door trim assembly and inner panel water deflector.
2. Disconnect inside locking rod from door lock spring clip (Refer to Front and Rear Door section under "Door Lock Spring Clips" for disengagement).
3. Remove inside locking to lock connecting rod link bolt (Fig. 6-124).
4. Disconnect vacuum hoses from vacuum actuator.
5. Remove vacuum actuator and link assembly attaching screws (Fig. 6-124 and 6-125).
6. Pivot (rotate) actuator and linkage assembly, then, pull connecting rod forward through linkage. Remove actuator assembly from door.
7. To install, reverse removal procedure. Check lock operation prior to installing water deflector.

REAR DOOR INNER PANEL CAM—All Except "X" Styles

Removal and Installation

1. Remove door trim assembly and inner panel water deflector.
2. Remove inner panel cam attaching bolts (Figs. 6-126 and 6-127). Disengage cam from regulator balance arm roller and remove cam from door.
3. To install, reverse removal procedure. Adjust front end of cam for proper window operation. Correct adjustment of cam will prevent a rotated (cocked) door window.

WINDOW LOWER SASH CHANNEL CAM—All Except "X" Styles

Removal and Installation

1. Remove door trim assembly and inner panel water deflector.

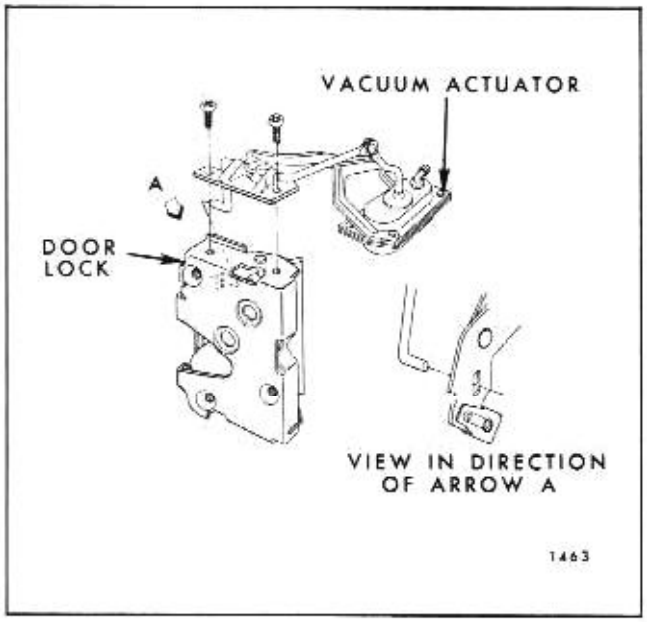


Fig. 6-123—Rear Door Vacuum Lock Actuator

2. Dependent on body style and power options involved, operate window to a position specified in Figures 6-126, 6-127 and 6-128 to make cam screws accessible and remove cam screws.

3. On "Z" Styles, remove sash channel cam front screw first, then, raise window and remove rear screw. Support window during cam removal.

4. On "A" Body Styles, remove front and rear cam attaching screws with glass in the fully lowered position.

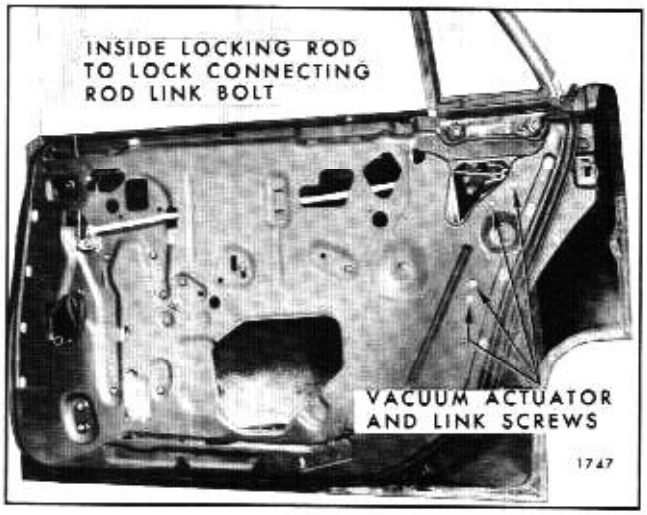


Fig. 6-124—Vacuum Lock Actuator Removal - 68069-68169 Styles

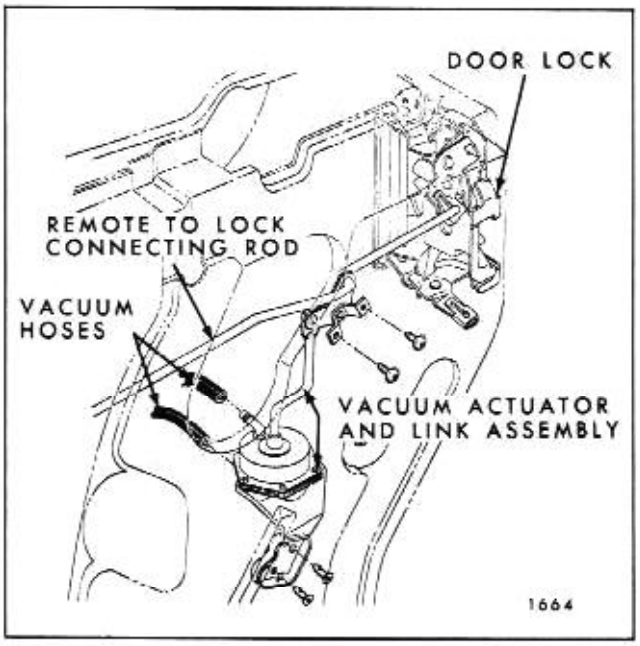


Fig. 6-125—Rear Door Vacuum Lock Actuator and Link Assembly - 68069-68169 Styles

5. To install, reverse removal procedure.

REAR DOOR WINDOW STATIONARY VENTILATOR DIVISION CHANNEL—"X-35 and 69" Styles

The stationary ventilator division channel is held into place by one division channel to door upper frame attaching screw and one lower adjusting stud and nut. This assembly acts as a rear door window rear glass run channel and also holds the stationary ventilator window in proper position.

Removal and Installation

1. Remove door trim assembly and detach inner panel water deflector sufficiently to gain access to the lower adjusting stud and nut (See Fig. 6-129).

2. Remove door window lower stop.

3. Remove ventilator division channel lower adjusting stud and nut.

4. Carefully lower door window and remove division channel to door upper frame attaching screw (See Fig. 6-130).

5. Rotate upper section of division channel forward and inboard and remove assembly from door.

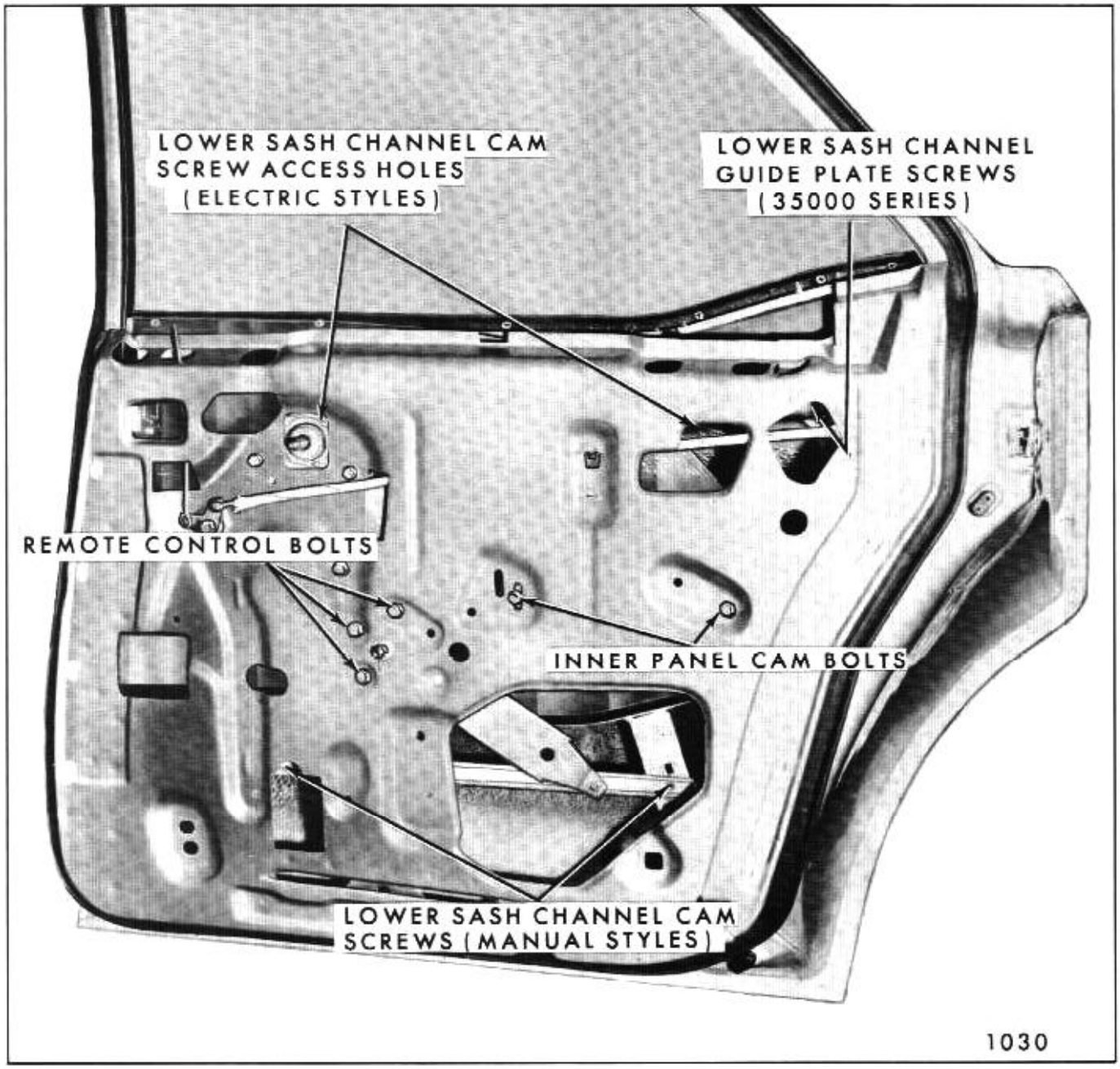


Fig. 6-126—Rear Door Hardware Attachment - "B" Closed Styles Shown - Other Styles Similar

6. To install, reverse removal procedure. In or out and fore or aft adjustment of this part is available at the lower adjusting stud and nut only.

REAR DOOR WINDOW STATIONARY VENTILATOR ASSEMBLY— "X-35 and 69" Styles

The rear door stationary ventilator assembly is set within a rubber channel and held into place by pressure of the ventilator division channel.

Removal and Installation

1. Remove door trim assembly and detach inner panel water deflector.
2. Remove lower stop and carefully lower door window to extreme bottom of door.
3. Remove stationary ventilator division channel (see Fig. 6-129).

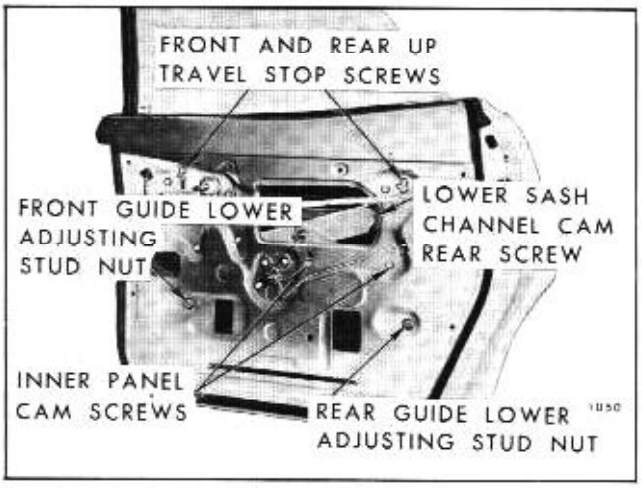


Fig. 6-127 — Rear Door Hardware - "Z-39" Styles

4. Pull stationary ventilator window forward and remove from door.

5. To install, reverse removal procedure.

REAR DOOR WINDOW ASSEMBLY— All Closed Styles

The rear door window assembly consists of a frameless solid tempered safety plate glass window and a press-on lower sash channel assembly. When handling window, make certain glass does not develop edge chips or deep scratches which could cause solid safety plate glass to shatter.

Removal and Installation ("A-35-55-65 and 69" Styles)

1. Lower door window, remove door trim pad and detach inner panel water deflector.

2. Remove inner panel cam. On styles not equipped with a hang-on trim pad, remove inner belt seal (draft strip).

3. Rotate rear edge of glass downward until front edge is free of door upper frame and lower sash channel cam slides off regulator balance arm roller.

4. Rotate glass upward and forward to disengage lower sash channel cam from regulator lift arm roller and remove door window outboard of door upper frame (See Fig. 6-131, View "A" and "B").

5. To install, reverse removal procedure.

REAR DOOR WINDOW ASSEMBLY— "A-39" Styles

Removal and Installation

1. Raise door window, remove trim pad and detach inner panel water deflector.

2. On styles not equipped with a hang-on door trim pad, remove inner and outer belt seal (draft strip).

3. Remove front and rear glass up-stops and window lower sash channel cam.

4. Pull rear door glass straight up and remove assembly from door (see Fig. 6-132).

   NOTE: The window regulator lift and balance arms are designed with a slight outboard spring. When removing glass, pull regulator arms toward inner panel to ease removal procedure. If necessary, the front and rear guides can be loosened at upper attaching points (see Fig. 6-132).

5. To install, reverse removal procedure.

Adjustments

The up-travel stops can be adjusted to control height of door glass; the inner panel cam is adjustable at the rear attaching bolt to correct a rotated window; the upper attaching bolts of front and rear guides provide fore or aft and in or out movement of glass. The lower adjusting studs can be positioned to tip the window inboard or outboard at top edge of glass to maintain proper seal and to ease window operation (see Fig. 6-132).

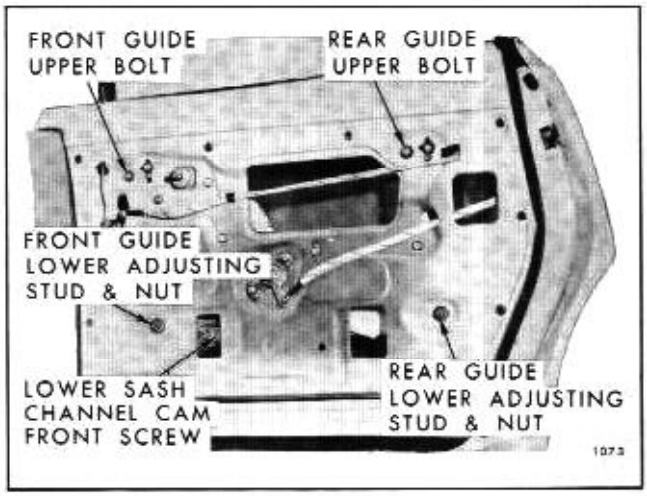


Fig. 6-128 — Rear Door Hardware - "Z-39" Styles

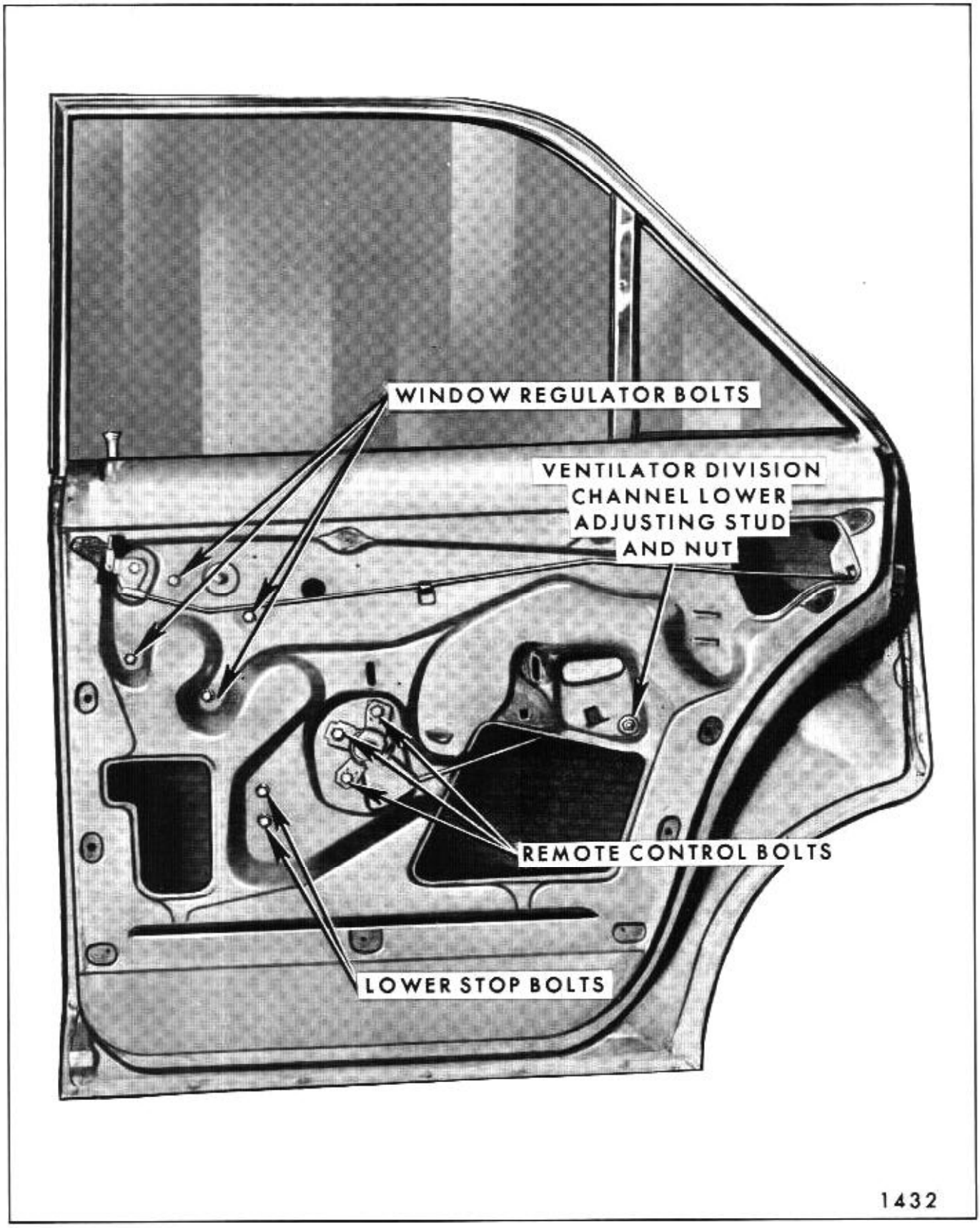


Fig. 6-129—Rear Door Hardware - "X-35 and 69" Styles

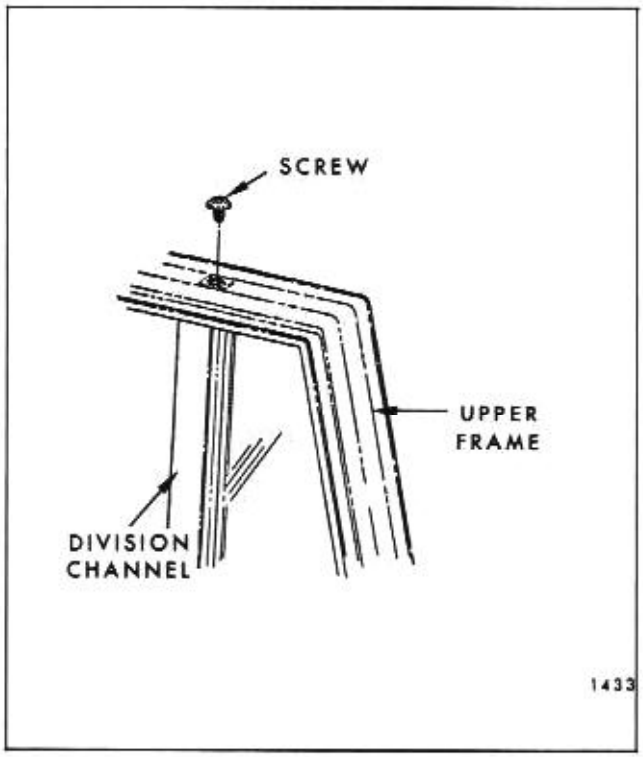


Fig. 6-130 — Rear Door Ventilator Attachment - "X" Styles

The rear door is equipped with four separate window stops - two up-travel (front and rear) and two down-travel (front and rear). The two down-travel stops are integral components of either the front or rear window guides and are not individually adjustable.

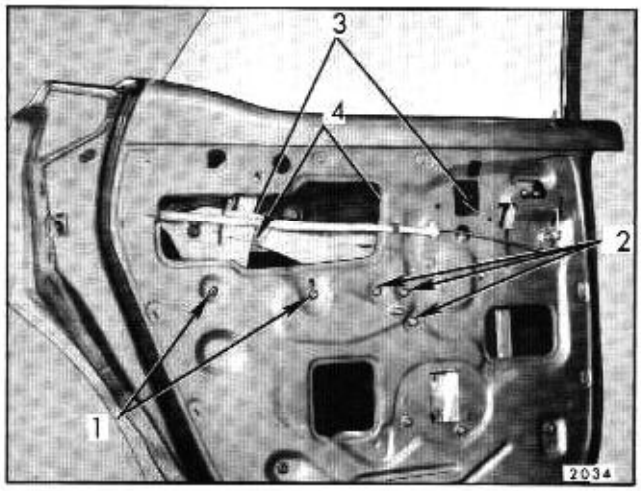


Fig. 6-132 — Rear Door Hardware - "A-39" Style

1. Inner Panel Cam Bolts
2. Remote Control Bolts
3. Front and Rear Up-Stop Bolts (Hidden)
4. Sash Channel Cam Screws

The two up-travel stops (front and rear) are attached to the window lower sash channel. When glass is raised, the stop comes in contact with a designed extension of either the front or rear guide. Stops are secured by a single bolt and are adjustable up or down. See Figure 6-133 for front up-travel stop attachment and Figure 6-134 for rear up-stop attachment.

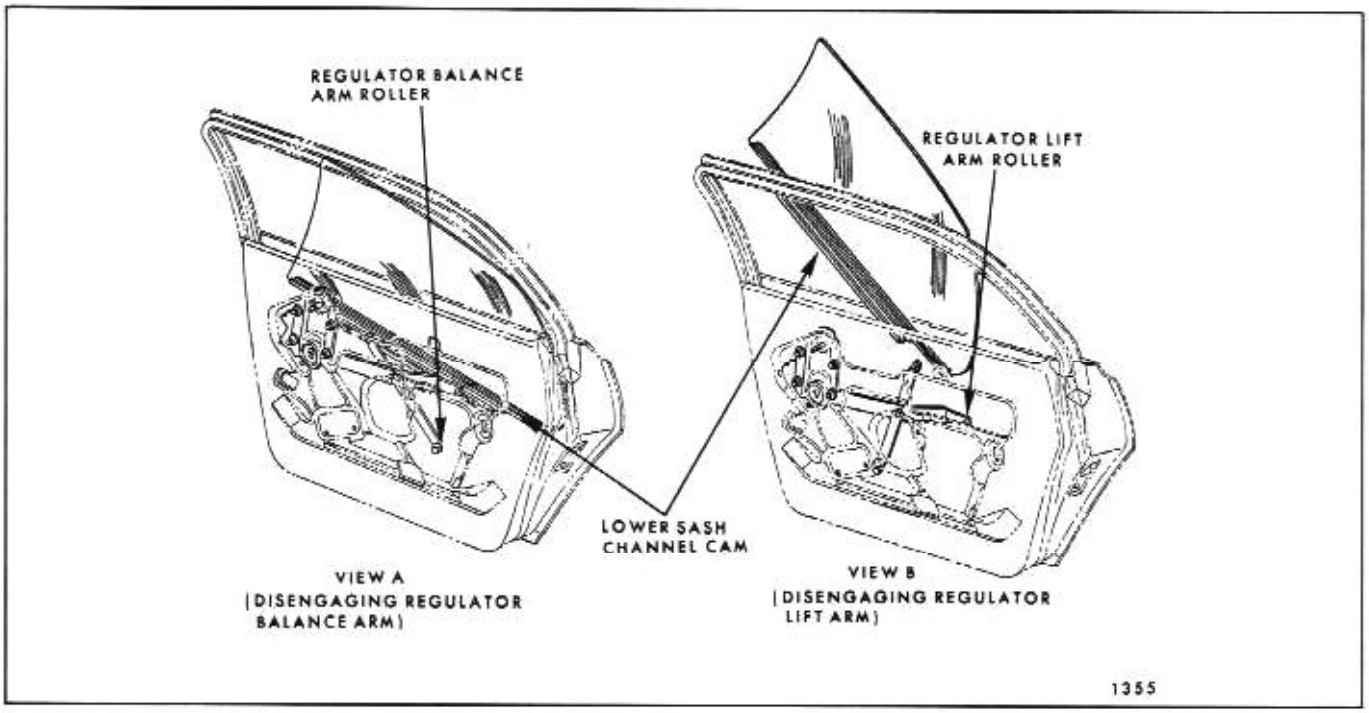


Fig. 6-131 — Rear Door Window Removal - "A" Closed Styles

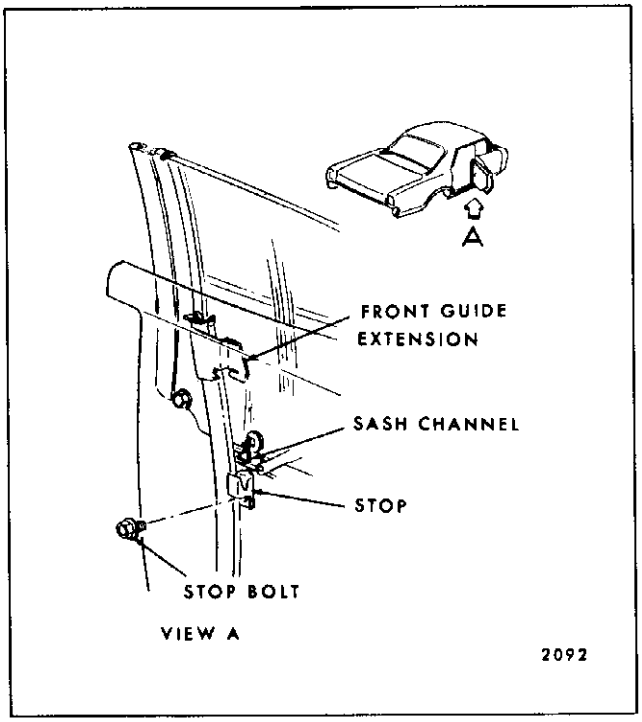


Fig. 6-133—Window Front Up-Stop - "A-39" Style

Removal and Installation ("B-35-45 and 69" Styles)

1. Remove door trim assembly and inner panel water deflector.

2. On 35000 Series "69" Styles, lower window approximately 3" down from full-up position. Remove lower sash channel rear guide plate attaching screws through upper rear access hole and remove guide plate (Fig. 6-126).

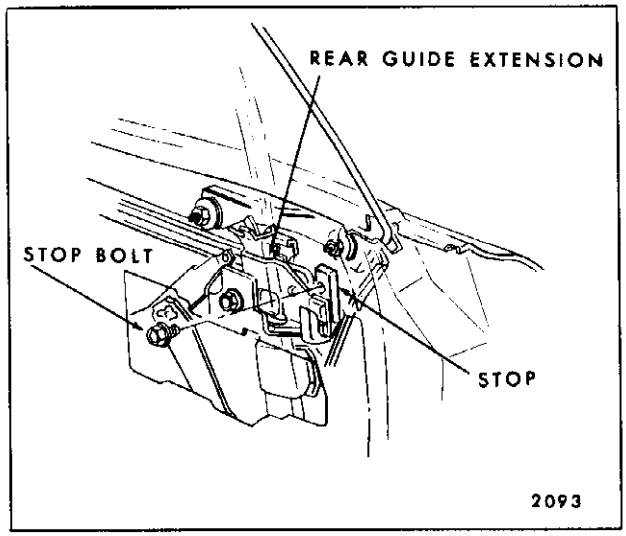


Fig. 6-134—Window Rear Up-Stop - "A-39" Style

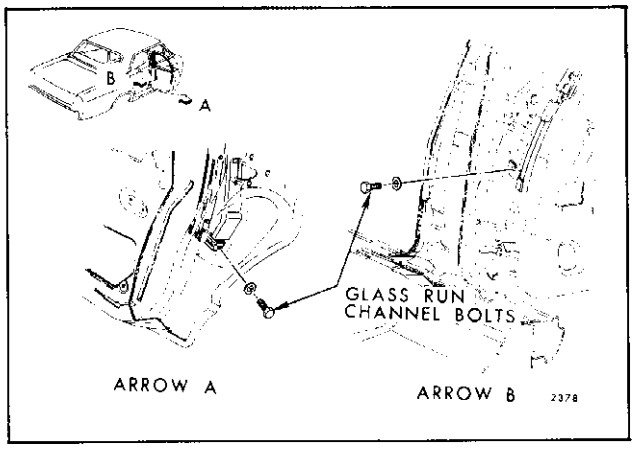


Fig. 6-135—Glass Run Channel Retention - "B" Closed Styles

3. Operate window to position shown in Figure 6-126 and remove lower sash channel cam attaching screws (window slightly down on electric styles and full down on manual).

4. Remove glass run channel front and rear attaching bolts (Fig. 6-135).

5. Pivot window in opening (raise front edge) to disengage front and rear edges of glass from glass run channel, then remove window inboard of door upper frame.

6. To install, reverse removal procedure.

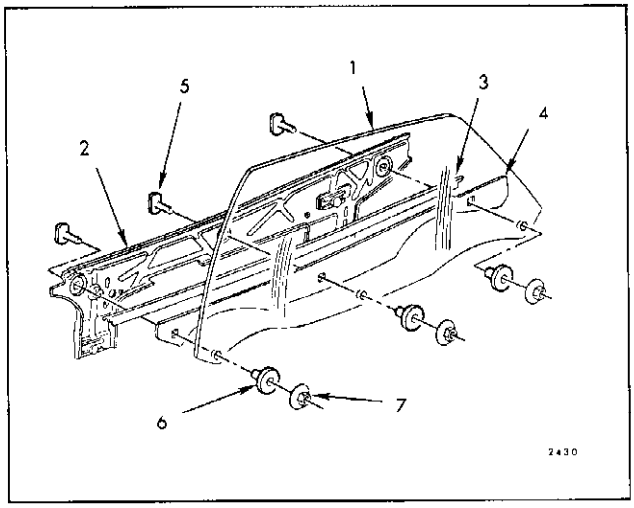


Fig. 6-136—Rear Door Window Assembly - "C-69" Styles Except 68069-169 Styles

1. Rear Door Window Assembly
2. Lower Sash Channel Assembly
3. Lower Sash Channel Upper Outer Filler
4. Lower Sash Channel Lower Outer Filler
5. Glass to Sash Channel Bolts
6. Sash Channel Bolt Spacers
7. Glass to Sash Channel Bolt Nuts

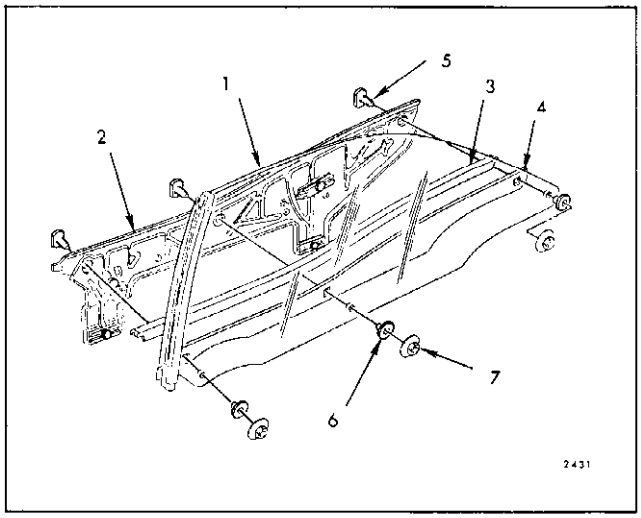


Fig. 6-137—Rear Door Window Assembly - "B-C 39" and "C-49" Styles

1. Rear Door Window Assembly
2. Lower Sash Channel Assembly
3. Lower Sash Channel Upper Outer Filler
4. Lower Sash Channel Lower Outer Filler
5. Glass to Lower Sash Channel Bolts
6. Glass to Lower Sash Channel Bolt Spacers
7. Glass to Lower Sash Channel Bolt Nuts

REAR DOOR WINDOW ASSEMBLY— All "B-C 39" Styles and All "C-49 and 69" Styles Except 68069 and 68169

The rear door window assembly consists of a frameless piece of solid tempered safety plate glass and a bolt-on lower sash channel. With this design, the window is removed from the door as an assembly and door glass replacement made in a bench operation.

Figures 6-137 and 6-136 are exploded views of the "B-C-39" and "C-49 and 69" Style rear door window assemblies (except 68069 and 68169 Styles) and identify the specific components and their assembly sequence.

NOTE: When replacing door glass, replace glass to sash channel spacers. When installing glass to sash channel, torque nuts to 72 inch lbs. (6 foot lbs.).

Removal and Installation

1. Remove door trim assembly and inner panel water deflector.

2. Remove front and rear up-stop attaching bolts ("1" and "2", Fig. 6-138) and remove stops.

3. Loosen front and rear guide upper attaching bolts ("3" and "4", Fig. 6-138).

4. Loosen front and rear guide lower attaching bolts ("5" and "6", Fig. 6-138).

5. Remove window stabilizer strip assemblies ("7", Fig. 6-138).

6. Lower window to almost full-down position and remove lower sash channel cam screws ("8", Fig. 6-138). Support window while removing screws.

7. Lift window assembly straight upward and remove it from door.

8. To install, reverse removal procedure. Adjust guides and stops for proper window alignment as described below.

Window Adjustments

1. To adjust the top of door glass in-or-out in relation to the side roof rail weatherstrip, loosen the front and rear guide upper and lower attaching bolts ("3-4-5-6", Fig. 6-138).

   a. To move top edge of glass inboard, shift bottom of front and rear guides outboard, and top of guides inboard.

   b. To move top edge of glass outboard, adjust top of guides outboard and bottom of guides inboard.

   NOTE: When repositioning window in or out at the beltline, adjust window stabilizer strip assemblies ("7", Fig. 6-138), to provide window stability with window in full up position.

2. To adjust window assembly fore or aft, loosen front guide upper bolts and front guide lower support attaching bolts ("3" and "9", Fig. 6-138) and reposition window as required.

3. To correct a window that is "cocked" in the window opening, proceed as follows:

   a. Check window up stops ("1" and "2", Fig. 6-138). Either stop positioned too high or too low can cause window to "cock".

   b. Check inner panel cam adjustment. Raising or lowering adjustable end of cam ("10", Fig. 6-138) changes relationship of front upper corner of glass to rear upper corner.

   NOTE: Window must be partially lowered for cam adjustment.

   c. If window lower sash channel is flush at beltline, but window is cocked in relation to

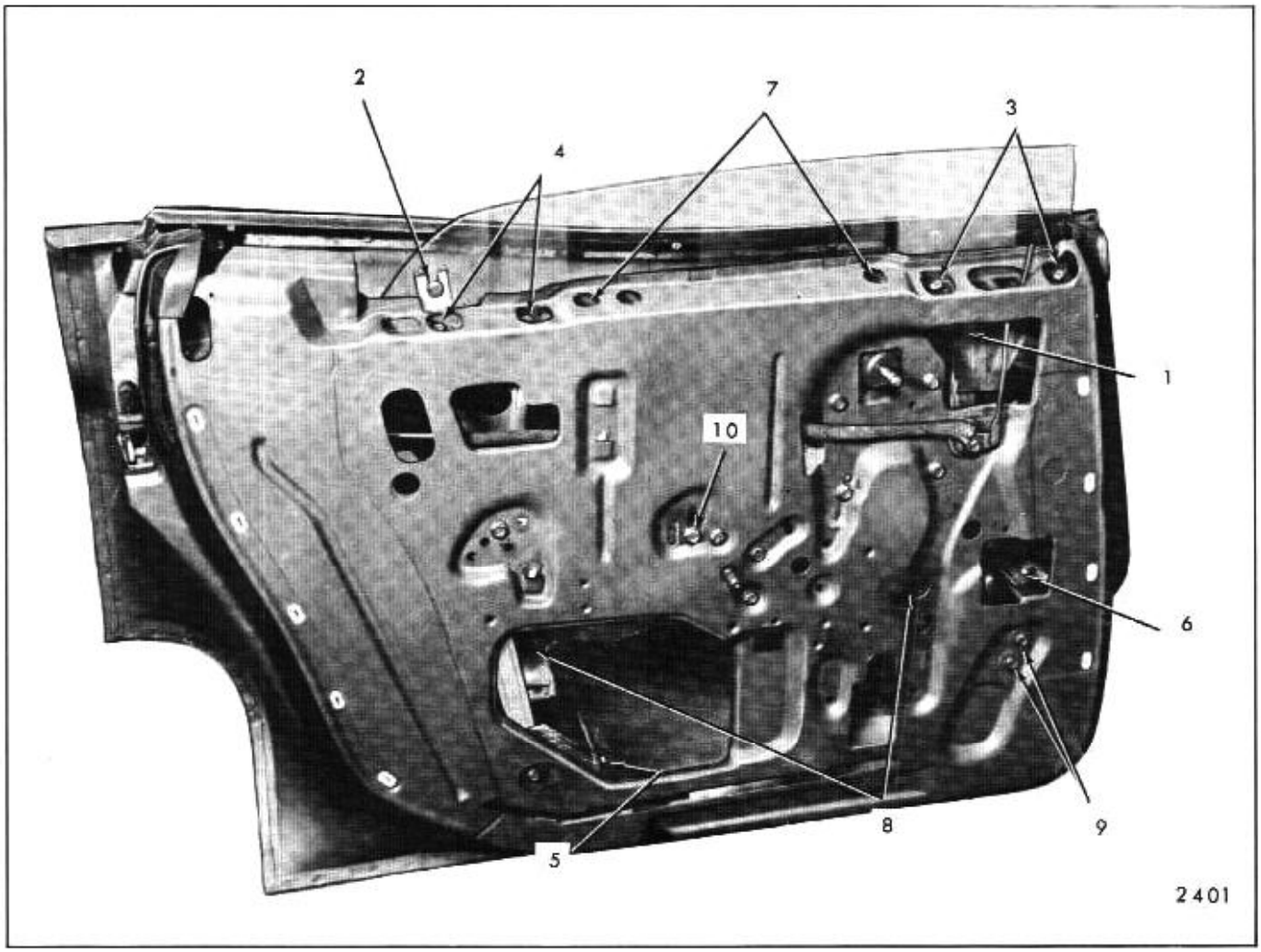


Fig. 6-138—Rear Door Hardware - "B-C 39", "C-49-69" Styles Except 68069-169

1. Window Front Up-Stop
2. Window Rear Up-Stop
3. Front Guide Upper Attaching Bolts
4. Rear Guide Upper Attaching Bolts
5. Rear Guide to Lower Support Bracket Bolt
6. Front Guide to Lower Support Bracket Bolt
7. Window Stabilizer Strips
8. Lower Sash Channel Cam Attaching Screws
9. Front Guide Support Bracket Attaching Bolts
10. Inner Panel Cam Front Attaching Bolt

side roof rail, reposition glass on lower sash channel. Oversize holes in glass allow a limited amount of shifting of glass in relation to lower sash channel.

NOTE: Glass to sash channel attaching nuts are accessible with an open end wrench. After repositioning glass, tighten nuts sufficiently to prevent glass slippage.

4. To obtain proper up-travel of window for good contact with side roof rail weatherstrip, loosen front and rear upper stops ("1" and "3", Fig. 6-138). Position window as desired and tighten stops.

REAR WINDOW ASSEMBLY— 68069 and 68169 Styles

The rear door window assembly consists of a frameless piece of solid tempered safety plate glass and a bolt-on lower sash channel assembly. With this design, the window is removed as an assembly and door glass replacement made in a bench operation.

Figure 6-139 is an exploded view of the rear door window and identifies the various components and their assembly sequence.

NOTE: When replacing door glass, replace glass

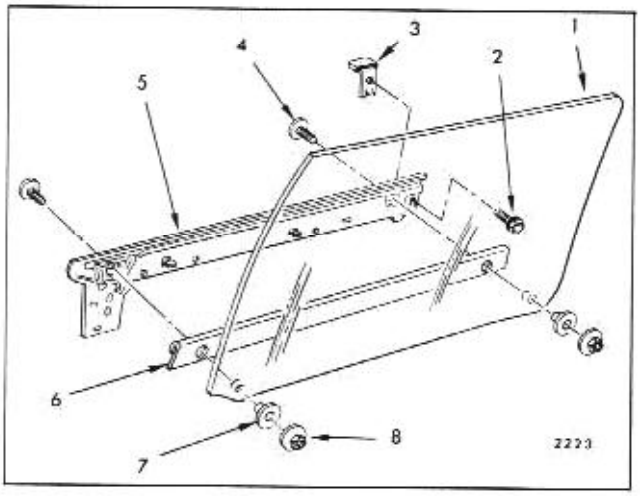


Fig. 6-139 — Rear Door Window Assembly - 68069-68169 Style

1. Door Window Glass
2. Rear Stop to Sash Channel Screw
3. Window Rear Stop
4. Glass to Lower Sash Channel Bolt
5. Window Lower Sash Channel
6. Window Lower Sash Outer Filler
7. Glass to Lower Sash Channel Spacer
8. Glass to Lower Sash Channel Nut

to sash channel spacers. When installing nuts on glass to sash channel attaching bolts, torque to 72 inch lbs. (6 foot lbs.)

Removal and Installation

1. Remove rear door trim assembly and inner panel water deflector.
2. With glass in full-up position, remove front and rear up-travel stop attaching bolts, two bolts on front stop, one on rear (Figs. 6-140 and 6-141).
3. Lower glass approximately 2" and remove lower sash channel cam attaching screws (Fig. 6-142).
4. While supporting glass by pressing it rearward into ventilator division channel, remove lower sash channel to guide plate attaching nuts (Fig. 6-141).
5. Disengage lower sash channel from weld-on studs on sash channel guide plate and remove window assembly from door.

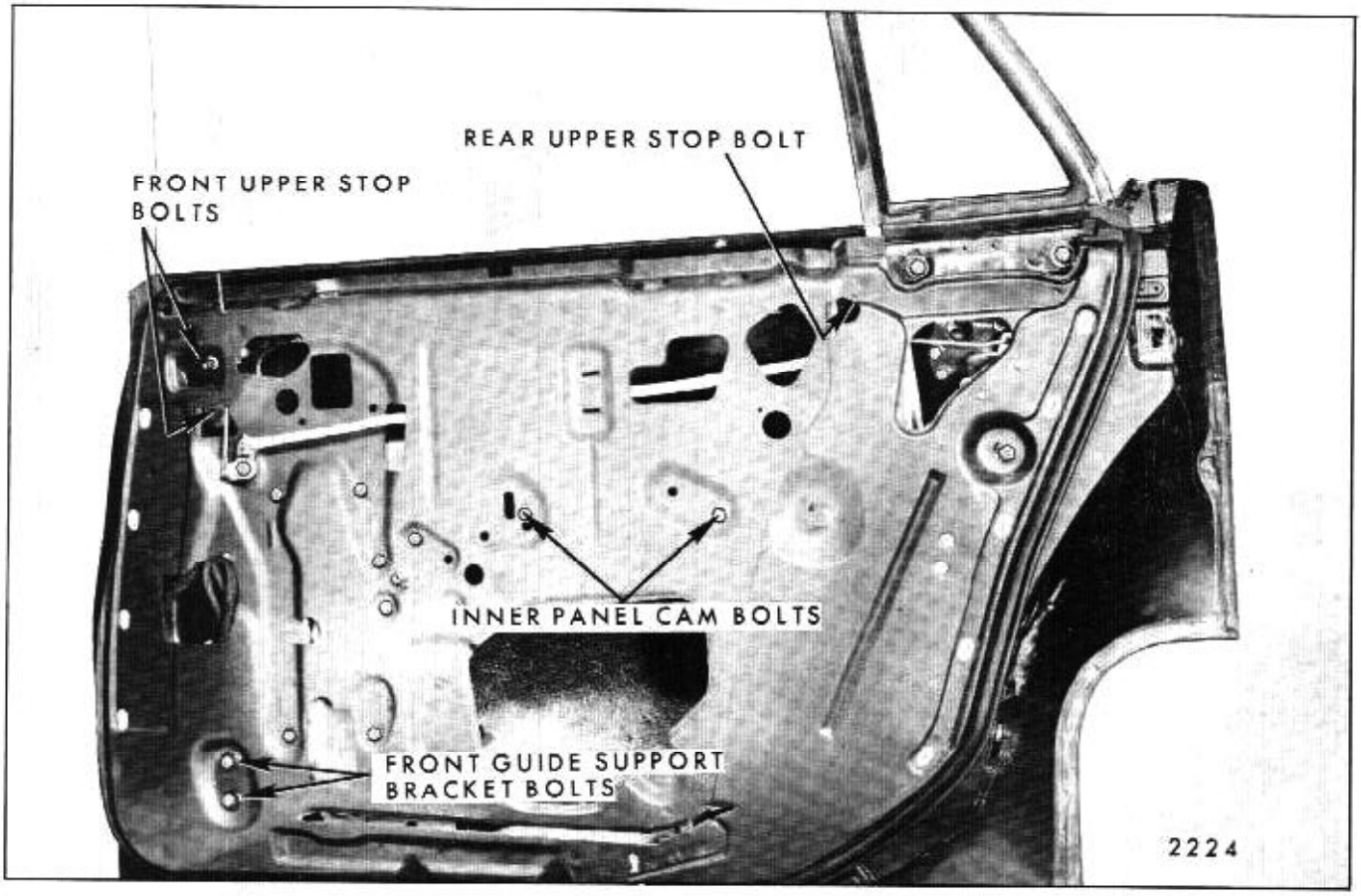


Fig. 6-140 — Rear Door Window Removal - 68069-68169 Styles

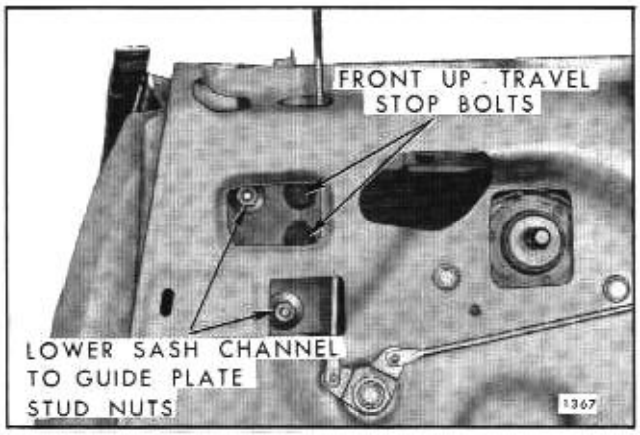


Fig. 6-141 — Rear Door Window Removal - 68069-68169 Styles

6. To install, reverse removal procedure. Adjust window for proper operation and alignment as described under "Rear Door Window and/or Ventilator Adjustments".

REAR DOOR VENTILATOR REGULATOR— 68069 and 68169 Styles

Removal and Installation

1. Remove door trim assembly and inner panel water deflector. Operate door glass to full-up position.

2. Disconnect ventilator regulator wire harness connector at regulator motor.

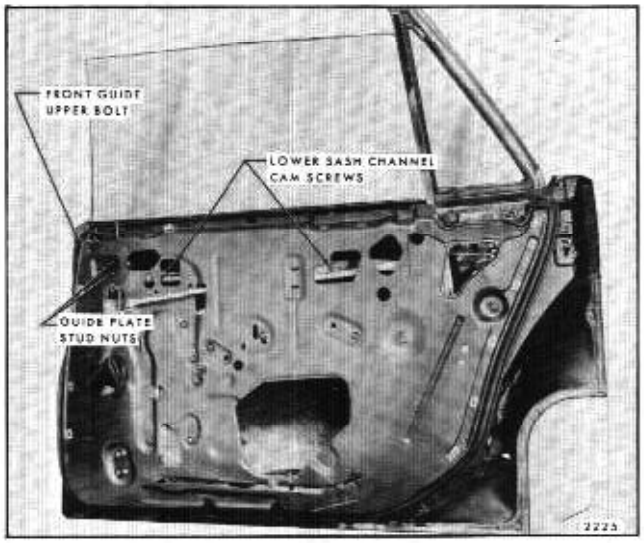


Fig. 6-142 — Rear Door Window Removal - 68069-68169 Styles

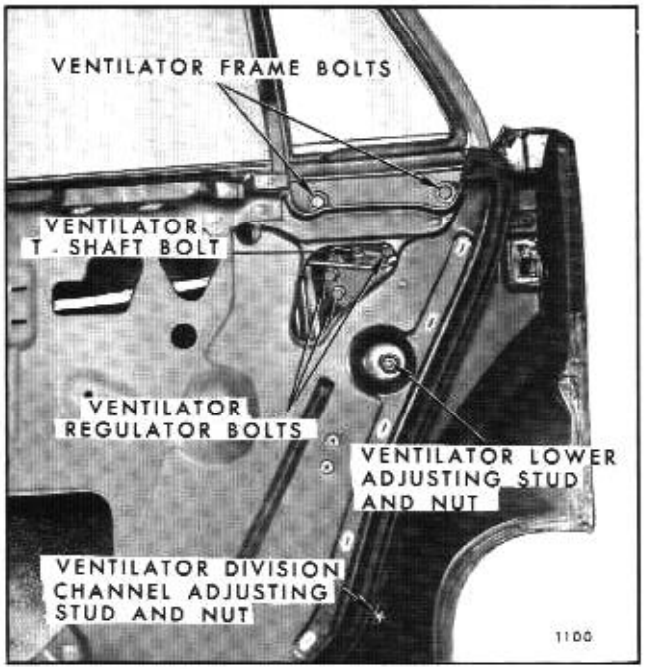


Fig. 6-143 — Rear Door Ventilator Attachments - 68069-68169 Styles

3. Remove ventilator "T-shaft" to regulator attaching bolt (Fig. 6-143).

4. Remove ventilator regulator to ventilator frame attaching bolts (Fig. 6-143).

5. Disengage ventilator regulator from ventilator "T-shaft" and remove regulator through access hole.

6. To install, reverse removal procedure.

REAR DOOR VENTILATOR ASSEMBLY— 68069 and 68169 Styles

Removal and Installation

1. Remove rear door ventilator regulator as previously described.

2. Remove ventilator lower frame and ventilator division channel lower adjusting stud nuts (Fig. 6-143).

3. Remove ventilator lower frame attaching bolts (Fig. 6-143).

4. Lift ventilator assembly up approximately 3" and remove ventilator lower frame adjusting stud through access hole.

5. Lift ventilator upward and remove from door. Twist ventilator 90° to remove division channel lower adjusting stud at belt.

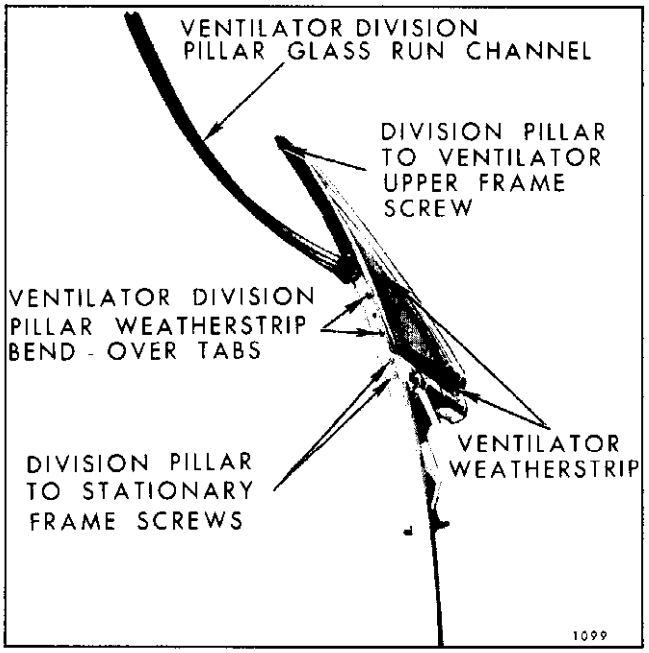


Fig. 6-144 — Rear Door Ventilator Assembly - 68069-68169 Styles

6. To install, reverse removal procedures. Adjust ventilator for proper operation and alignment as described under "Rear Door Window and/or Ventilator Adjustments".

Ventilator Disassembly

1. Remove ventilator assembly from door as previously described.

2. Remove ventilator division pillar glass run channel strip assembly by disengaging lower end and pulling strip upward (Fig. 6-144).

3. Remove division pillar to ventilator stationary frame attaching screws (Fig. 6-144).

4. Remove division pillar to ventilator upper frame (and rubber bumper) attaching screw (Fig. 6-144) and separate ventilator frame and division channel.

5. Align bosses on ventilator "T-shaft" with slots in ventilator lower frame. Using hand pressure only, force ventilator downward to disengage ventilator upper pivot from ventilator casting.

6. Straighten division pillar weatherstrip bend-over tabs (Fig. 6-144), and remove weatherstrip.

7. Pull ventilator weatherstrip from front frame. Three clips retain it down front edge and it may be necessary to pry between weatherstrip and frame at these locations.

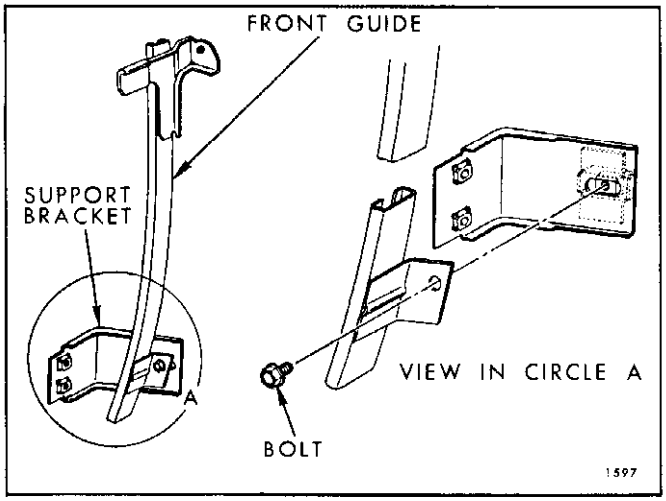


Fig. 6-145 — Front Guide to Support Bracket Attachment - 68069-68169 Styles

8. To assemble, reverse removal procedure.

NOTE: The above procedure covers complete disassembly of the ventilator, which in most cases, will not be required. When servicing a ventilator assembly, select only those steps necessary.

REAR DOOR WINDOW AND/OR VENTILATOR ADJUSTMENTS— 68069 and 68169 Styles

1. To adjust door window or ventilator assembly in-or-out in relation to side roof rail, adjustment is provided at the following attachments:

   a. Door window front guide to support assembly attaching bolt (Fig. 6-145). Access to this bolt can be gained through large access hole.

   b. Front guide upper attaching bolt (Fig. 6-142).

   c. Ventilator division channel and ventilator frame lower adjusting studs (Fig. 6-143).

These attachments can be adjusted in combination or individually to achieve desired adjustment. When adjusting ventilator adjusting studs, loosen ventilator lower frame attaching bolts prior to adjustment, then, retighten after adjustment.

2. To adjust door window fore-or-aft, loosen guide plate to lower sash channel attaching

nuts (Fig. 6-141). Adjust window fore-or-aft as required and tighten nuts.

3. To adjust ventilator fore-or-aft, or to rotate it in opening, loosen ventilator attaching bolts, adjusting stud nuts, and "T-shaft" attaching bolt (Fig. 6-143). Position ventilator as required and tighten loosened attachments.

4. To correct a rotated (cocked) window, loosen inner panel cam attaching bolts (Fig. 6-140). Adjust cam as required and tighten bolts.

5. To obtain proper up-travel of door window, loosen front and rear up-travel stop attaching bolts (Fig. 6-140). Operate window to desired position. While exerting upward force on stops, tighten stop attaching bolts.

6. To eliminate a bind between ventilator division channel and front guide (improve operation of a properly adjusted door window), loosen front guide support bracket attaching bolts and front guide to support bracket attaching bolt (Figs. 6-140 and 6-145). Operate glass to full-down position and tighten support bolts. Operate glass 1/3 up from down position and tighten guide to support attaching bolt.

Removal and Installation ("X-35 and 69" Styles)

1. Raise door window; remove door trim assembly and detach inner panel water deflector.

2. Remove rear door window stationary ventilator assembly division channel and glass.

3. Slide glass rearward to disengage regulator lift arm roller from lower sash channel cam and remove window from door inboard of door window frame (see Fig. 6-146).

4. To install, reverse removal procedure. Prior to installation of water deflector, lubricate sash channel cam with 630AAW Lubriplate or equivalent. Check operation of window and, where required, adjust window assembly as described under "Rear Door Window Adjustments".

REAR DOOR WINDOW ASSEMBLY— "Z-39" Styles

The rear door window assembly consists of a solid tempered safety plate glass window and a bolted-on lower sash channel. With this design, the door glass and sash channel are removed from the door as a unit and glass replacements made in bench operations. Figure 6-147 is an exploded view of the rear door window assembly and identifies the various components and their assembly sequence. When assembling window, torque sash channel nuts to 72 inch pounds (6 foot pounds). Also, replace glass to sash channel spacers.

CAUTION: Use care to make certain that glass does not strike hard objects. Edge chips or deep scratches can cause solid tempered safety plate glass to shatter. Do not attempt to drill or grind glass.

Removal and Installation

1. Remove window lower sash channel cam and both inner and outer glass run channel strip assemblies as previously described.

2. Loosen attaching screws for both front and rear up-travel stops and turn stops 45° into slots provided in inner panel.

3. Raise window and remove it from door at belt line.

4. To install, reverse removal procedure. Adjust window for proper alignment as described in "Rear Door Window Adjustments".

Rear Door Window Adjustments

To make any rear door window adjustments, it is first necessary to remove the trim pad and water deflector.

1. To adjust the top of the window in or out in relation to the side roof rail, loosen the front and rear guide lower adjusting stud nuts (Fig. 6-148). Adjust studs in or out as required, then tighten stud nuts.

2. To adjust up-travel of window, loosen front and rear up-travel stop attaching screws (Fig. 6-148). Adjust window to desired position; then, while exerting a slight downward force on stops, tighten attaching screws.

3. To rotate glass in the opening (raise or lower upper front corner of glass), loosen inner panel cam attaching screws (Fig. 6-148). Adjust front of cam up or down as required, then tighten attaching screws.

4. To relieve a bind within the guides or to adjust window assembly fore or aft, loosen front and rear guide upper attaching screws and lower adjusting stud nuts. With window in full up position and properly aligned with front door window, tighten upper attaching screws. Lower to full down position and tighten adjusting stud nuts.

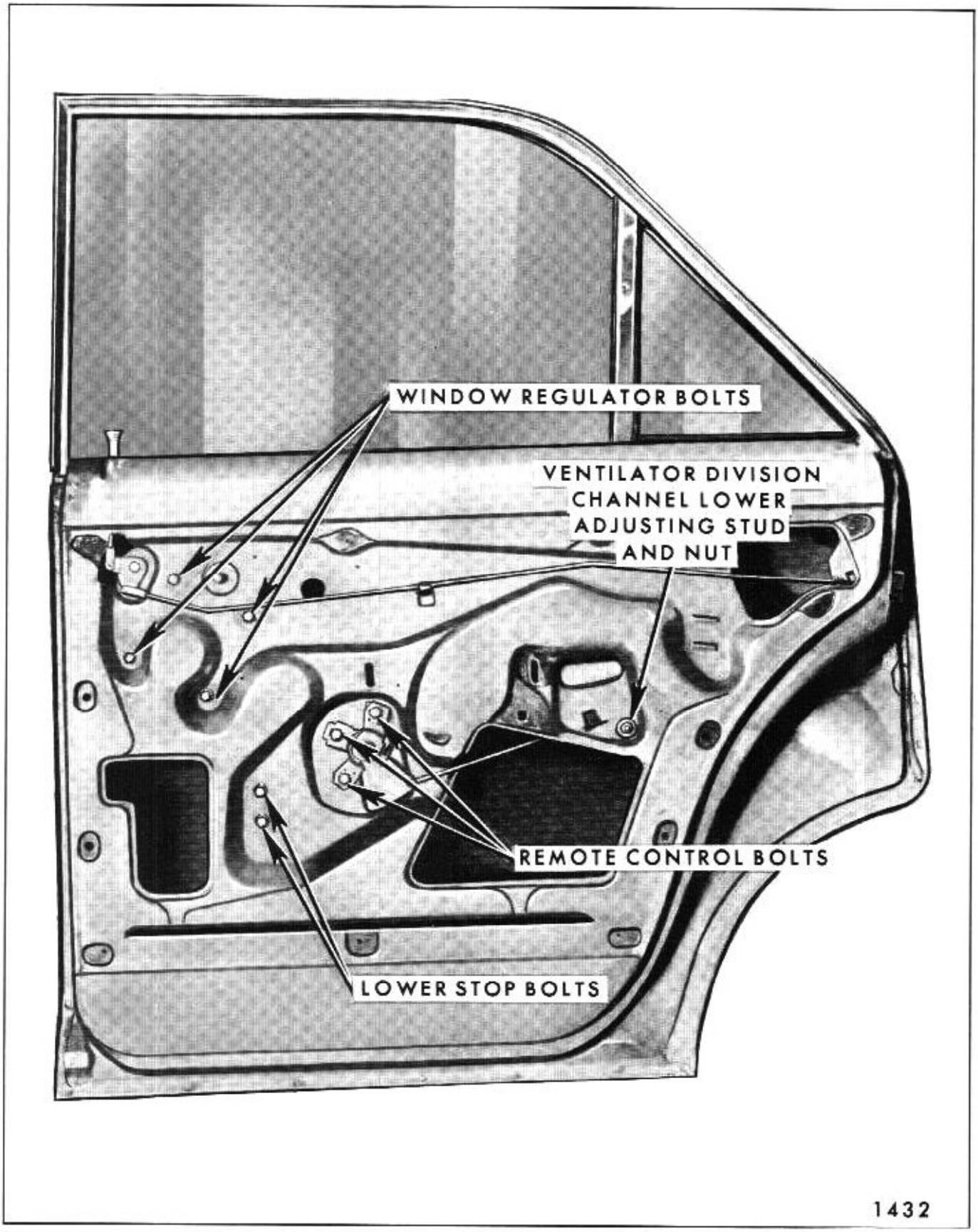


Fig. 6-146—Rear Door Hardware - "X-35 and 69" Styles

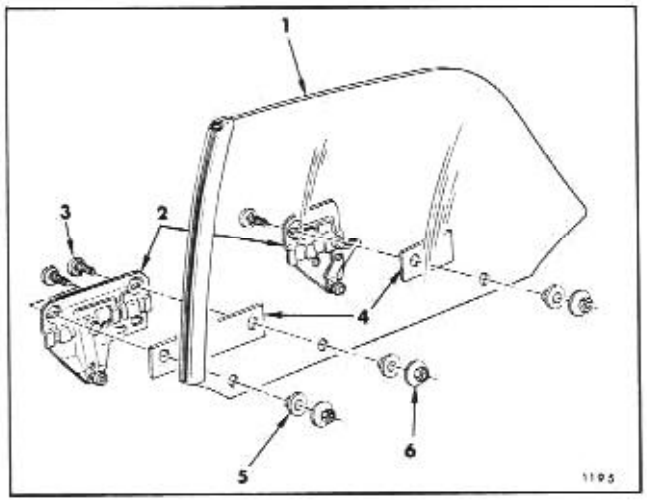


Fig. 6-147—Rear Door Window Assembly - "Z-39" Styles

1. Rear Door Window Glass
2. Window Lower Sash Channel Support Assemblies, Front and Rear
3. Glass to Lower Sash Channel Support Attaching Bolts
4. Glass to Lower Sash Channel Support Filler, Front and Rear
5. Glass to Lower Sash Channel Support Spacers
6. Glass to Lower Sash Channel Support Nuts

REAR DOOR WINDOW GLASS RUN CHANNEL—"A-35-55-65 and 69" Styles

A soft "flocked" run channel is used for all rear door windows.

Removal and Installation

1. Remove rear door trim pad and detach inner panel water deflector.

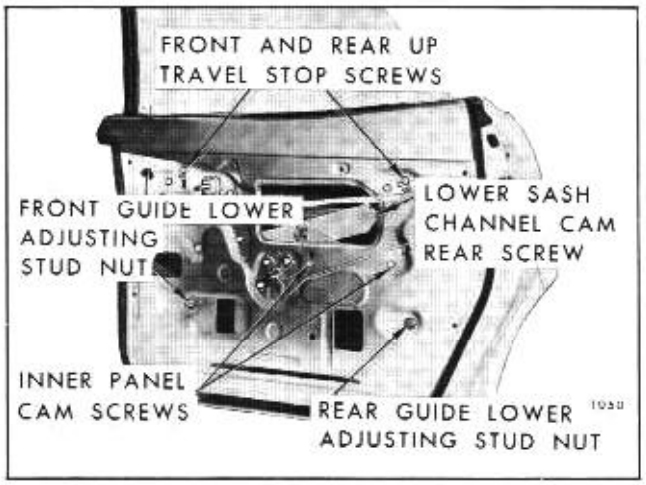


Fig. 6-148—Rear Door Hardware - "Z-39" Styles

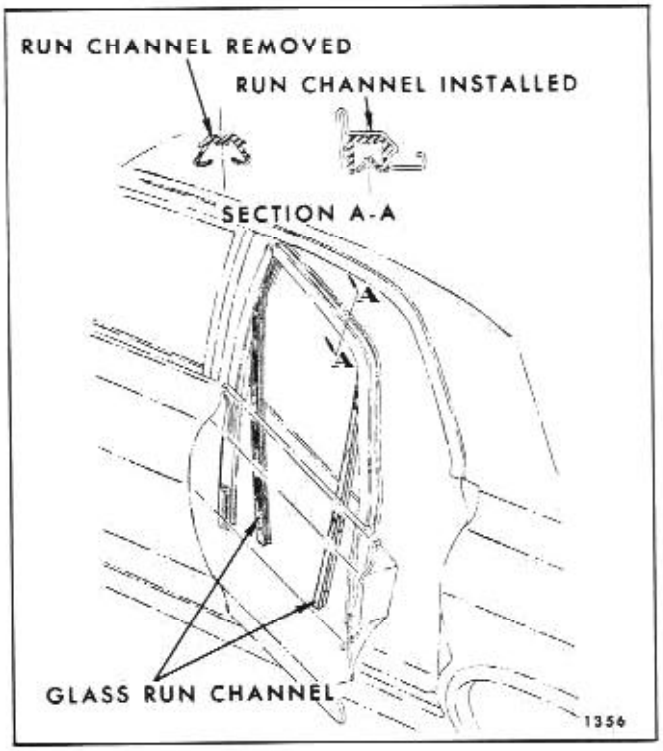


Fig. 6-149—Glass Run Channel - "A" Closed Styles

2. Remove rear door window.
3. With finger pressure, squeeze run channel together and gently pull run channel out of rear door upper frame and remove from door (See Fig. 6-149).
4. To install, reverse removal procedure.

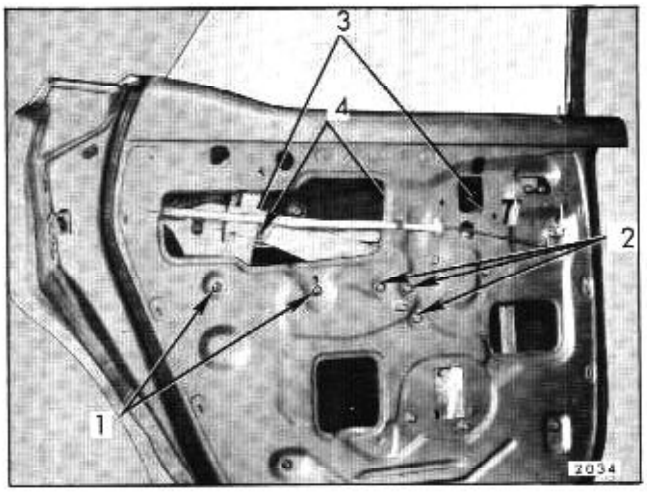


Fig. 6-150—Rear Door Hardware - "A-39" Styles

1. Inner Panel Cam Bolts
2. Remote Control Bolts
3. Front and Rear Up-Stop Bolts (Hidden)
4. Sash Channel Cam Screws

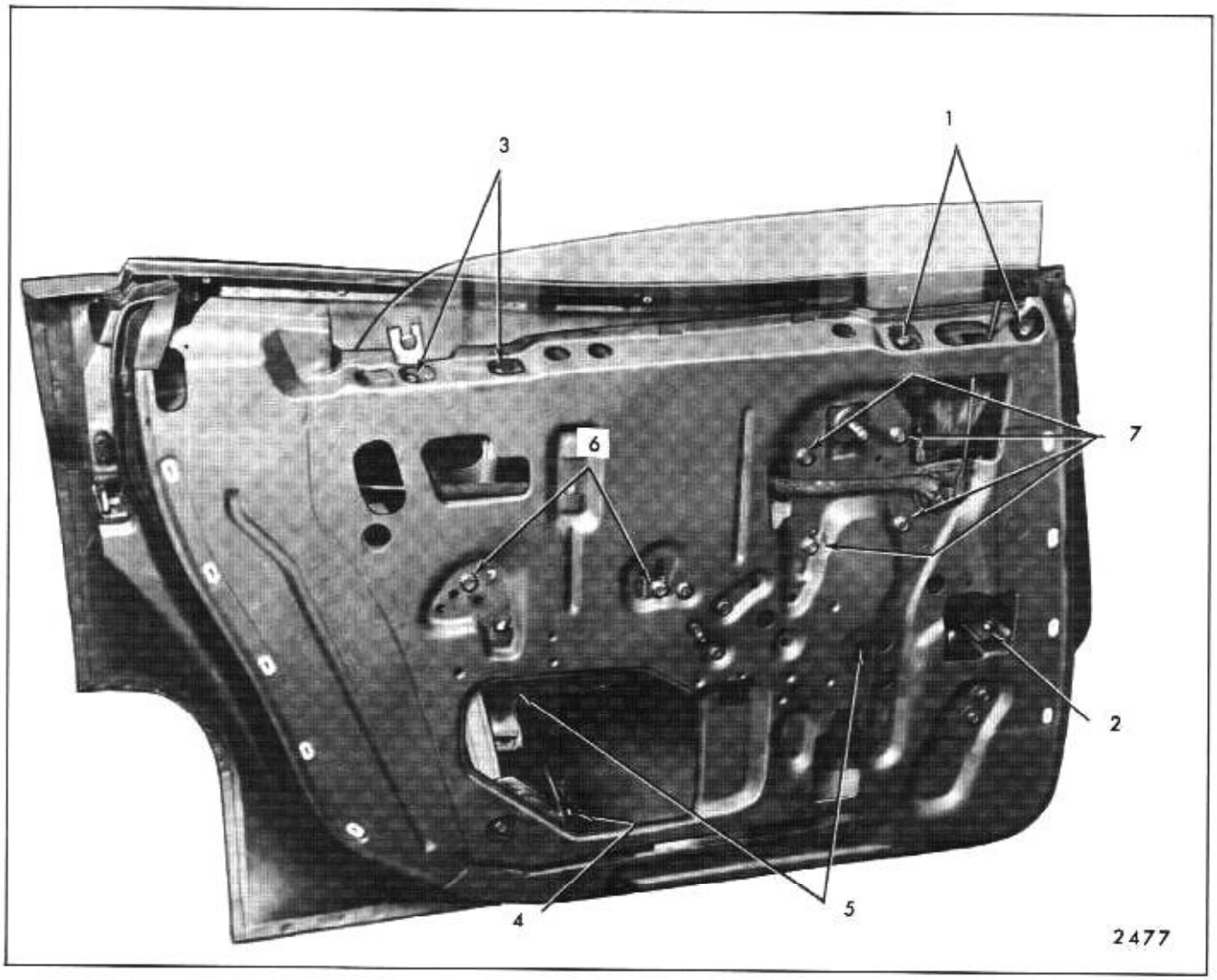


Fig. 6-151—Rear Door Hardware - "B-C 39" and "C-49-69" Styles Except 68069-169 Styles

1. Front Guide Upper Attaching Bolts
2. Front Guide to Lower Support Bracket Bolt
3. Rear Guide Upper Attaching Bolts
4. Rear Guide to Lower Support Bracket Bolt
5. Lower Sash Channel Cam Attaching Screws
6. Inner Panel Cam Attaching Bolts
7. Window Regulator Attaching Bolts

IMPORTANT: The glass run channel must be properly seated and conform to shape of door upper frame to achieve proper glass operation.

REAR DOOR WINDOW GUIDE CHANNELS—"A-39" Styles

Removal and Installation

1. Remove door trim pad and detach inner panel water deflector.
2. Remove rear door window assembly.
3. On guide to be removed, remove upper attaching bolts and lower adjusting stud nut and remove guide (see Fig. 6-150).
4. To install, reverse removal procedure.

REAR DOOR WINDOW GLASS RUN CHANNEL—All "B-35-45 and 69" Styles

Removal and Installation

1. Remove rear door window assembly as previously described.
2. Pull run channel into window opening to disengage run channel clips from door upper frame and remove run channel from door.
3. To install, reverse removal procedure. Prior to installation, apply a continuous bead of

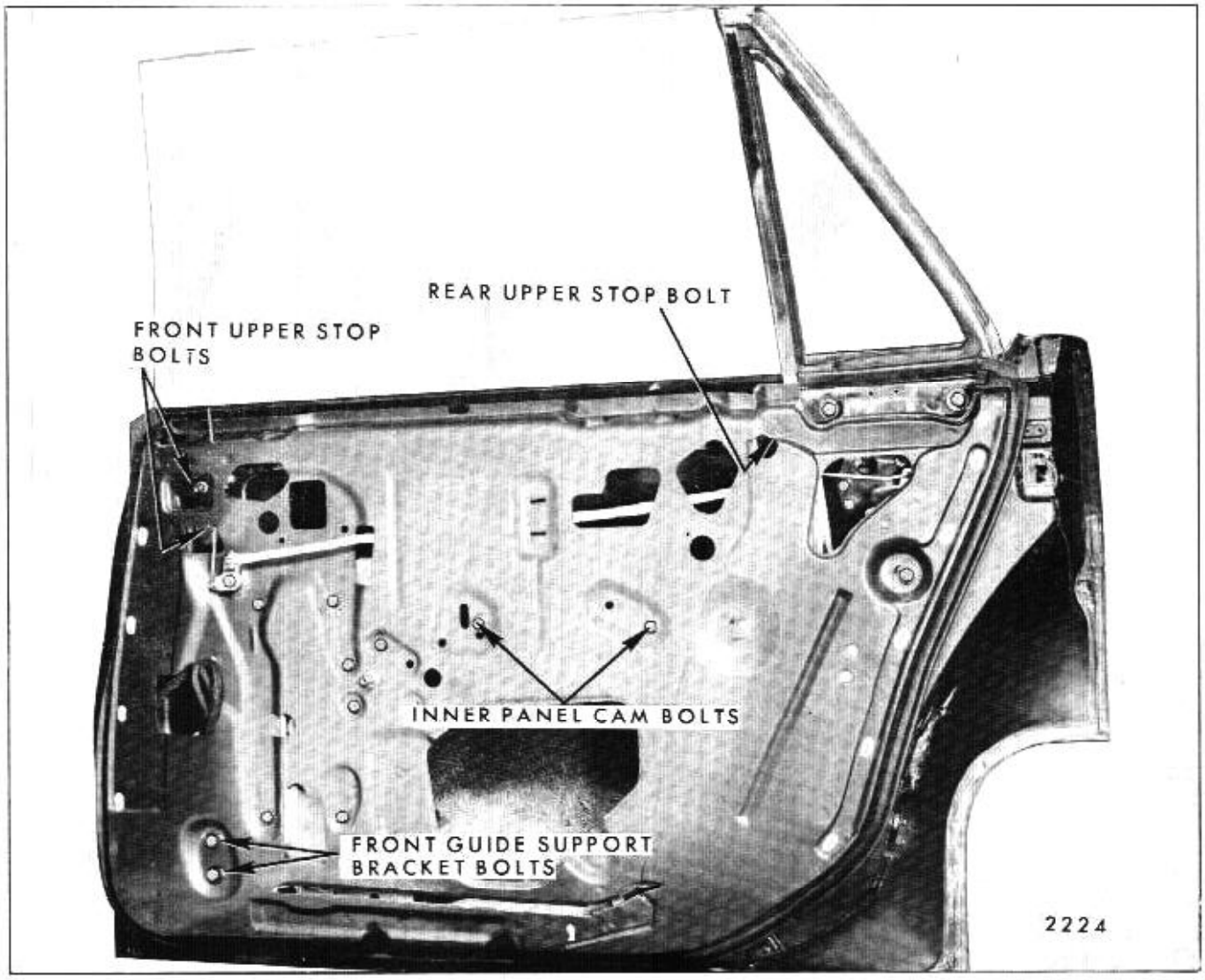


Fig. 6-152—Front Guide and Upper Stop Removal

caulking compound to door upper frame from belt line to belt line to effect a weathertight seal between door frame and run channel. If preferred, sealer can be applied to run channel rather than door upper frame.

REAR DOOR WINDOW GUIDE (FRONT OR REAR)—All "B-C 39" and "C-49-69" Styles Except 68069-169

Removal and Installation

1. Remove rear door window assembly as previously described.
2. Remove guide upper and lower attaching bolts ("1" and "2", or "3" and "4"), Fig. 6-151 and remove guide through access hole.
3. To install, reverse removal procedure.

REAR DOOR FRONT GUIDE AND GUIDE PLATE—68069 and 68169 Styles

Removal and Installation

1. Remove rear door trim assembly and inner panel water deflector.
2. Operate window to full-up position.
3. Remove front upper stop attaching bolts and remove stop (Fig. 6-152).
4. Remove front guide support bracket attaching bolt (Fig. 6-152).
5. Remove front guide upper attaching bolt (Fig. 6-153).

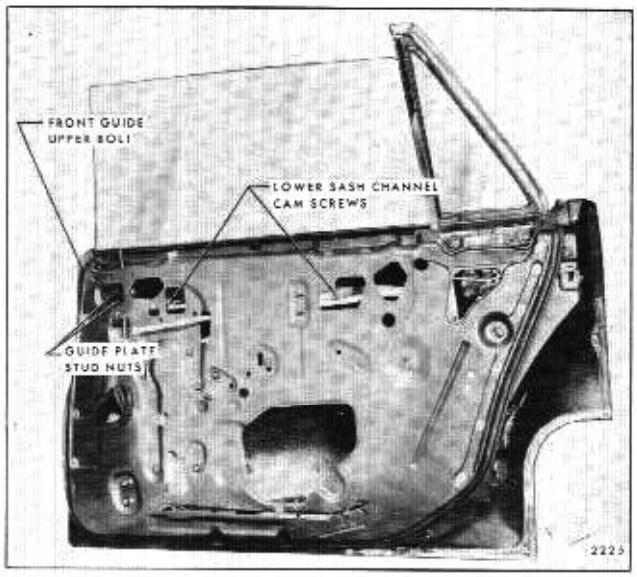


Fig. 6-153—Front Guide and Guide Plate Removal

6. Remove guide plate to lower sash channel attaching stud nuts (Fig. 6-153 and 6-154).

7. Remove front guide and guide plate as an assembly through access holes (Fig. 6-155).

8. To install, reverse removal procedure. Adjust front guide for proper window operation as described in door window adjustment procedure.

REAR DOOR WINDOW GLASS RUN CHANNEL—"X-35 and 69" Styles

Removal and Installation

1. Remove rear door trim pad and detach inner panel water deflector.

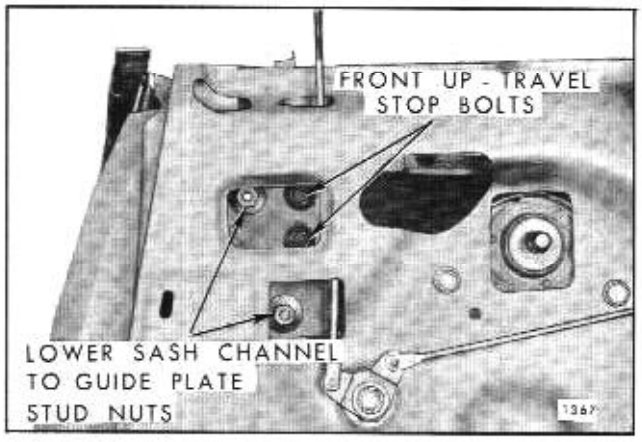


Fig. 6-154—Window Guide Plate Removal

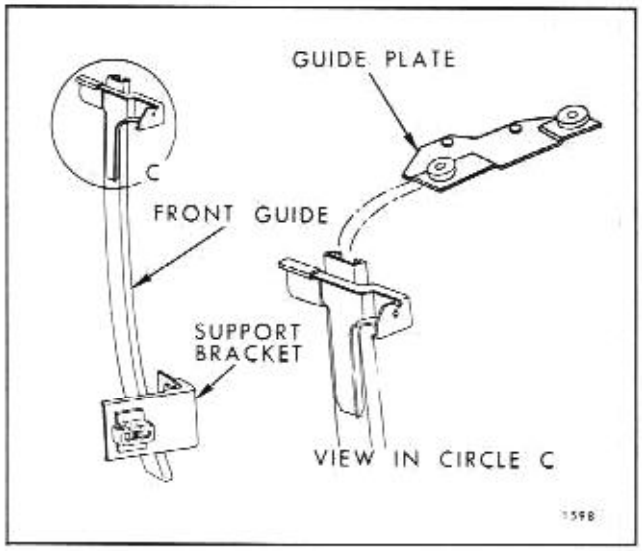


Fig. 6-155—Front Guide and Guide Plate - 68069-68169 Styles

2. Remove rear door window.

3. With finger pressure, squeeze run channel together at rear end and gently pull run channel out of rear door upper frame (See Fig. 6-156).

4. To install, reverse removal procedure.

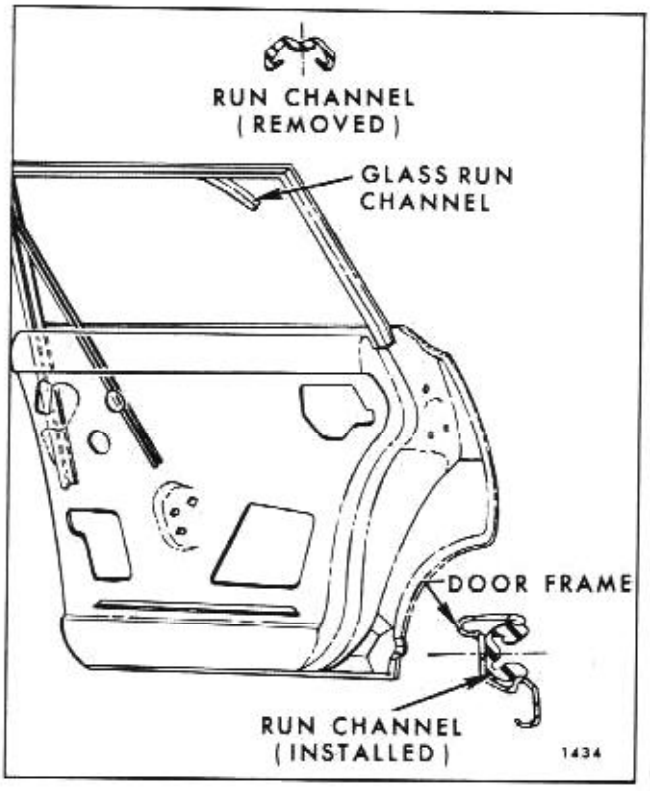


Fig. 6-156—Window Run Channel Installation - "X" Closed Styles

IMPORTANT: The glass run channel must be properly seated and conform to shape of door upper frame to achieve proper glass operation.

REAR DOOR WINDOW FRONT OR REAR GUIDE—"Z-39" Styles

Removal and Installation

1. Remove door trim pad and inner panel water deflector.

2. Loosen front and rear up-travel stop attaching screws. Rotate stops so that the stop tabs enter angled slots. Raise window as far as possible.

3. Remove upper attaching screw and lower adjusting stud nut from guide being removed. Lower guide to disengage it from sash channel roller, then remove guide through large access hole.

4. To install, reverse removal procedure.

REAR DOOR WINDOW REGULATOR ASSEMBLY—"A-35-55-65 and 69" Styles and "X-35 and 69" Styles

Removal and Installation

1. Raise door window, remove door trim pad and detach inner panel water deflector.

2. Secure window in the full-up position by installing a twelve to fifteen inch piece of body tape (2" or 2-1/2" in width) over window frame and firmly pressing tape to both sides of glass. This is necessary to positively hold glass in the up position during removal of window regulator.

3. Remove inner panel cam on "A" Body Styles.

4. Remove window regulator attaching bolts and move regulator assembly rearward to disengage lift arm rollers (and balance arm rollers on "A" Styles) from window lower sash channel cam and remove regulator through large access hole (See Fig. 6-157).

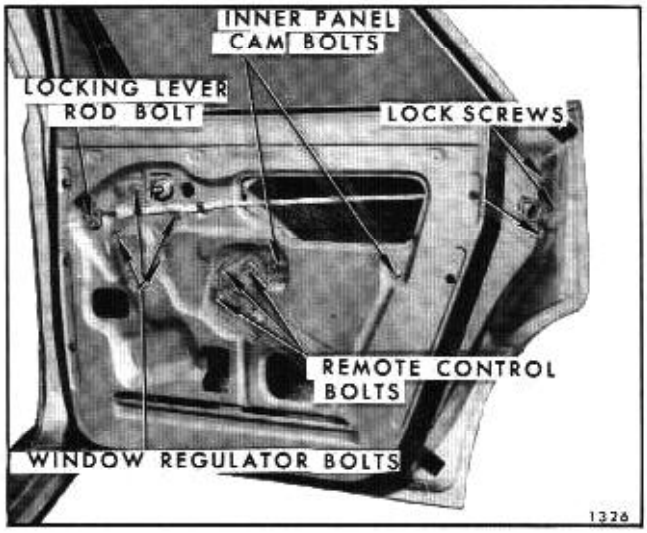


Fig. 6-157—Rear Door Hardware - "A" Styles Shown

5. To install, reverse removal procedure. Cycle window several times to insure proper operation before installing water deflector and door trim pad.

REAR DOOR WINDOW REGULATOR—MANUAL AND ELECTRIC—All "B & C" Styles

Removal and Installation

1. Remove rear door trim assembly and inner panel water deflector.

2. Remove lower sash channel cam attaching screws (Fig. 6-158 for "closed" styles; "5", Fig. 6-151 for "hardtop" styles). While supporting glass, disengage cam from rollers on regulator lift and balance arms and remove cam.

3. Raise window and prop it in full-up position.

4. Remove inner panel cam attaching bolts (Fig. 6-158 for "closed" styles; "6", Fig. 6-151 for "hardtop" styles).

5. On styles equipped with electric window regulators, disconnect body wire harness from window regulator at window regulator motor.

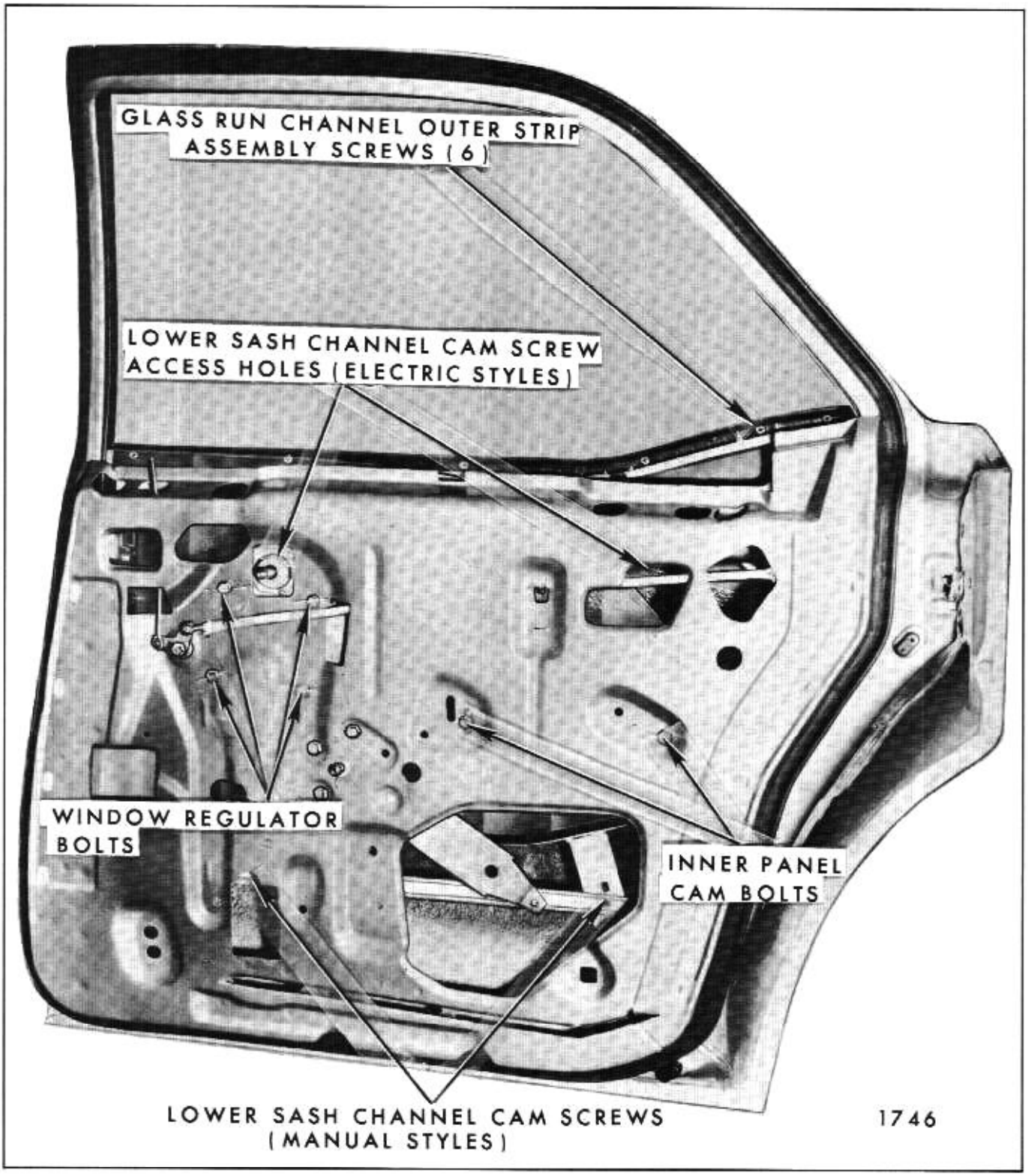


Fig. 6-158—Window Regulator Removal - "B" Closed Styles

6. Remove window regulator attaching bolts and remove regulator through large access hole (Figs. 6-158 for "closed" styles; "7", Fig. 6-151 for "hardtop" styles).

7. To install, reverse removal procedure.

REAR DOOR WINDOW REGULATOR ASSEMBLY—"A-Z 39" Styles

Removal and Installation

1. Remove door trim pad and detach inner panel water deflector.
2. Remove rear door window.
3. On "A" body electric styles, disconnect motor from wire harness.
4. Remove regulator attaching bolts and remove regulator assembly (See Fig. 6-150).
5. To install, reverse removal procedure.

REAR DOOR WINDOW REGULATOR ELECTRIC MOTOR REMOVAL— All Styles

If it is necessary to remove the electric motor from the regulator, refer to "Front Door" section for the proper procedure. The tension on the lift arm assist spring can cause serious injury if the motor is removed without use of the cautionary measures described in the procedure.

SECTION 7
REAR QUARTER

INDEX

Subject	Page
Description	7-1
Inner Panel Sealing	7-2
Window Assembly - "A & B-11" and "A-07" Styles	7-2
Window Adjustments - "A & B" Closed Styles	7-3
Window Assembly - "X-11" Style	7-4
Window Adjustments - "X" Closed Styles	7-4
Window Regulator (Manual and Electric) - "A, B & X" Closed Styles	7-5
Window Rear Glass Run Channel - All Closed Styles	7-7
Window Front Glass Run Channel - All Closed Styles	7-8
Window Guide Assembly - "X-11" Styles	7-8
Window Outer Strip Assembly - All Closed Styles	7-9
Window Rear Vertical Inner Sealing Strip Assembly - "C-47" Styles	7-9
Window Assembly - All Hardtop and Convertible Styles Except "B-C" Series	7-10
A. Removal and Installation - "A-17 & 67" Styles	7-10
Adjustments - "A-17 & 67" Styles	7-11
B. Removal and Installation - "E-87" Style	7-12
Adjustments - "E-87" Style	7-12
C. Removal and Installation - "E-47" Style	7-12
Adjustments - "E-47" Style	7-13
D. Removal and Installation - "F-37 & 67" Styles	7-16
Adjustments - "F-37 & 67" Styles	7-17
E. Removal and Installation - "X-37" Style	7-17
Adjustments - "X-37" Style	7-18
F. Removal and Installation - "Z-37" Style	7-19
Adjustments - "Z-37" Style	7-19
Window Assembly - "B-C 47-57-67-87" Styles	7-20
Removal and Installation	7-20
Adjustments	7-21
Window Regulator (Manual or Electric) - "B-C 47-57-67-87" Styles	7-22
Window Regulator Assembly (Manual or Electric) "A, E, F, X & Z" Hardtop and Convertible Styles	7-24
Window Front Guide - "B-C 47-57-67-87" Styles	7-25
Window Front Guide Assembly - "A-X-Z" Hardtop and Convertible Styles and "E-87" Styles	7-25
Window Rear Guide Assembly - "A-X-Z" Hardtop and Convertible Styles and "E-87" Styles	7-26
Window Guide Assembly - All "F" Styles	7-26
Window Glass Run Channel - "E-47" Styles	7-26

DESCRIPTION

On closed style bodies, rear quarter windows operate within glass run channels. On hard-top and convertible styles, nylon rollers, which are components of the lower sash channel or bolt directly to window glass, operate within window front and rear guides.

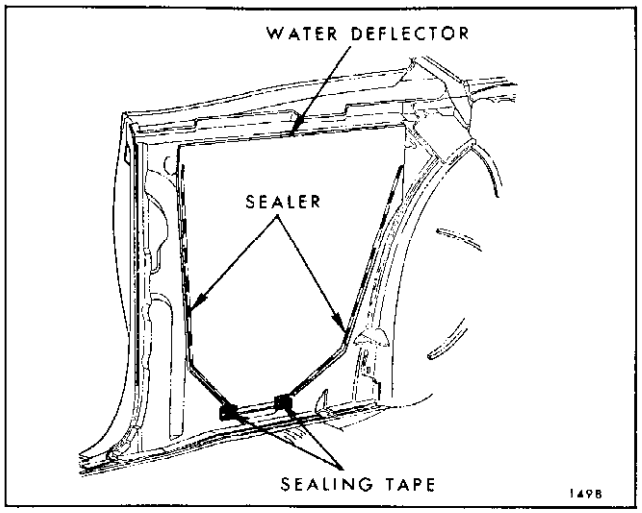


Fig. 7-1—Rear Quarter Inner Panel Sealing - Typical of Water Deflector Installation

All side windows are constructed of solid tempered safety plate glass. Use caution when handling these

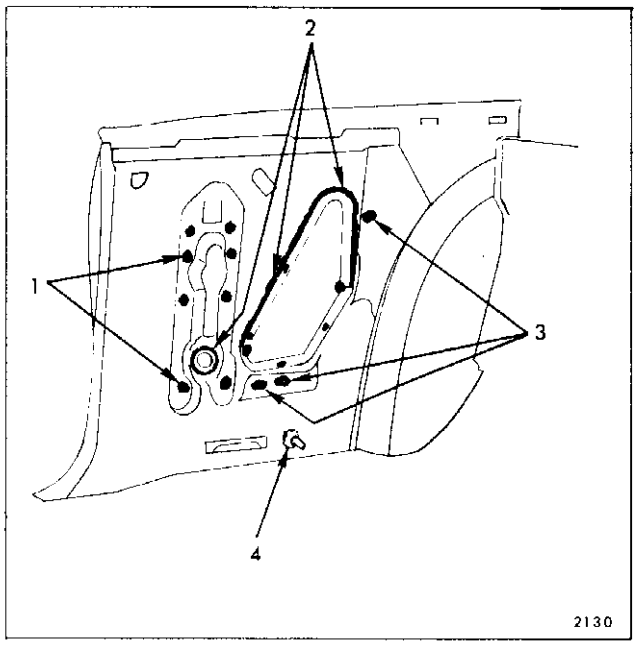


Fig. 7-2—Rear Quarter Inner Panel Sealing - "67" Styles

1. Regulator Attaching Bolt Slots
2. Access Hole Covers
3. Window Guide Adjusting Stud Slots
4. Electrical Harness Grommet

assemblies which may shatter if chipped or deeply scratched. **DO NOT** attempt to grind or drill glass.

In order to perform any service operations in the rear quarter, it is necessary to remove the rear quarter trim as specified in the trim section (see index).

REAR QUARTER INNER PANEL SEALING

All rear quarter inner panels are sealed with one or a combination of water deflectors, access hole covers, sealing plugs (or grommets) and body sealer. Service procedures for inner panel water deflectors are outlined in the "Front and Rear Door" section of this manual (see index). Figure 7-1 is typical of a water deflector installation.

Inner panel access hole covers are retained by screws and sealed with a non-hardening body sealer. Usually, removal of either the water deflector or access hole cover will provide the clearance required for service procedures of rear quarter hardware. Whenever any seal has been disturbed, however, the area must be carefully resealed to prevent waterleaks. Body caulking compound is recommended for service sealing. Figure 7-2 illustrates quarter inner panel sealing on styles which use individual seals at all hardware attaching locations.

Figures 7-3, 7-4, 7-5, 7-6, 7-7, 7-8, 7-9, 7-10, 7-11, 7-12, 7-13, 7-14 and 7-15 illustrate the rear quarter hardware components and their relationship to each other on various styles.

REAR QUARTER WINDOW— "A & B-11" and "A-07" Styles

Removal and Installation

1. Remove rear quarter trim assembly and inner panel water deflector.
2. On "A" styles, remove glass run channel outer strip assembly. Refer to index of "Front and Rear Door" section for strip assembly removal.

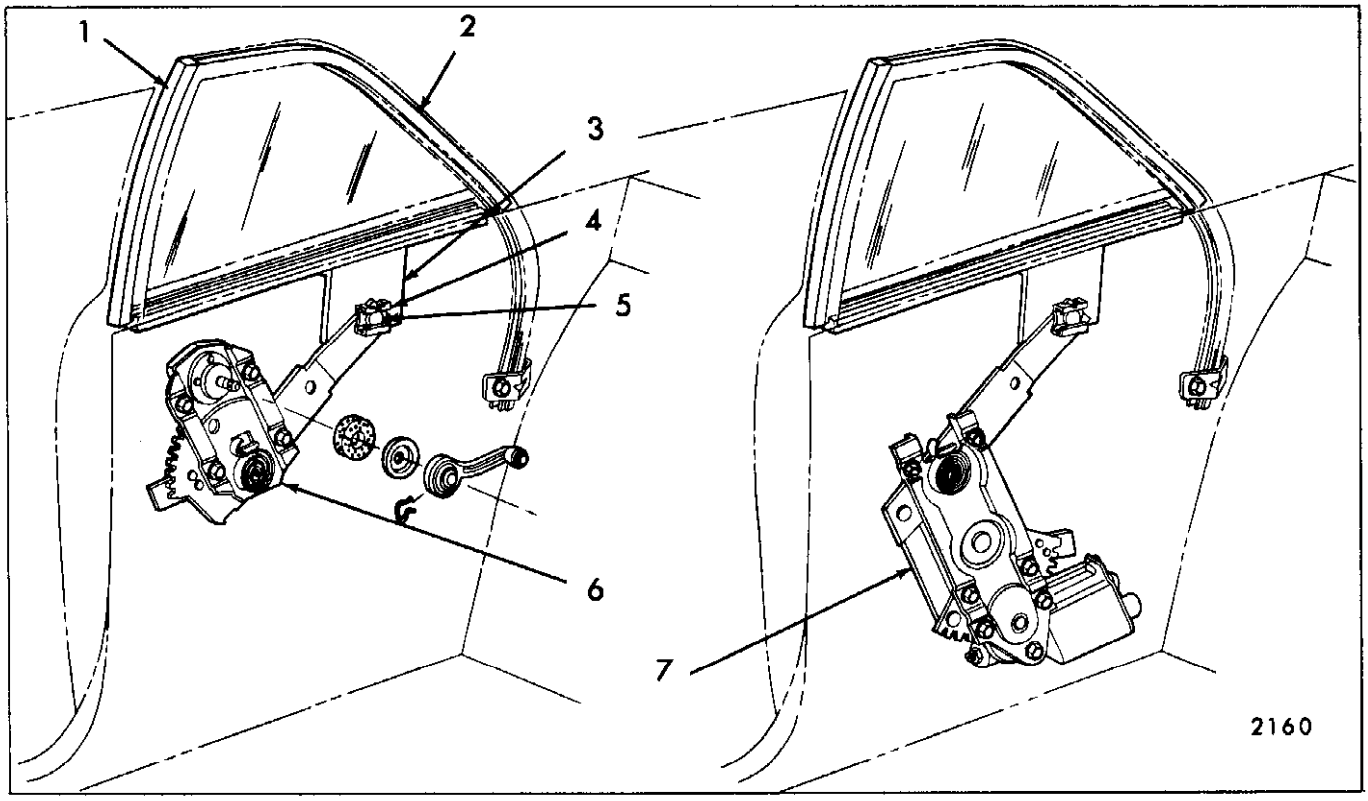


Fig. 7-3—Rear Quarter Hardware - "A & B-11" Styles

1. Front Glass Run Channel
2. Rear Glass Run Channel
3. Window Lower Sash
4. Clip Retainer
5. Pivot Pin
6. Regulator (Manual)
7. Regulator (Electric)

3. Lower window to a position shown in Figure 7-16 for "A-07" styles and Figure 7-17 for "A-11" Styles.

4. Supporting window with one hand, disengage clip retainer securing regulator lift arm to pivot pin on window lower sash channel ("11" styles) or to lower edge of glass ("07" style).

5. Lower front edge of glass until nylon guide at top of window front vertical sash comes out of front glass channel and rear edge of glass comes out of rear run channel. Then, lift glass up (rear edge first) and remove window from body outboard of window opening.

6. To install, reverse removal procedure.

REAR QUARTER WINDOW ADJUSTMENTS—"A & B" Closed Styles

All window assembly adjustments are provided at the window regulator attaching screws.

1. To obtain proper seating of the glass in the upper glass run channels, or proper contact between belt sealing strips and lower sash channel, loosen regulator attaching screws and adjust window as required.

2. To eliminate a fore and aft bind between the glass run channels (hard operating window), or a condition where window will not stay in rear run channel, loosen rear run channel attaching bolt and adjust run channel fore or aft as required.

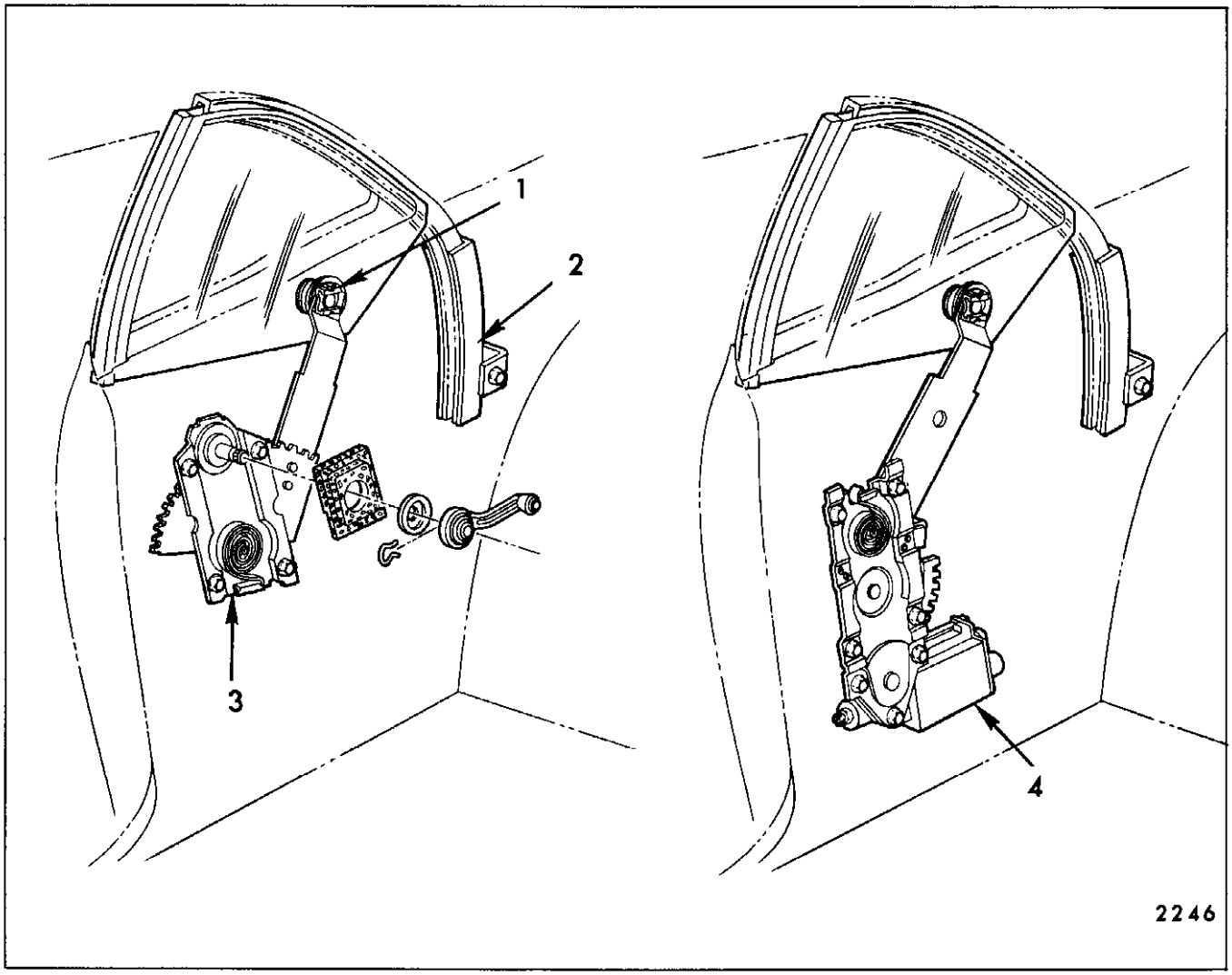


Fig. 7-4—Rear Quarter Hardware - "A-07" Style

1. Glass Retainer
2. Glass Run Channel
3. Window Regulator (Manual)
4. Window Regulator (Electric)

REAR QUARTER WINDOW—"X-11" Style

Removal and Installation

1. Remove rear quarter trim assembly and inner panel water deflector.
2. Remove glass run channel inner and outer strip assemblies (at belt). Refer to index of "Door" section for removal procedure.
3. With window in the full up position, remove window support to regulator plate attaching screws (Fig. 7-18).
4. Operate window regulator down. Disengage window assembly from regulator arm and tilt rear of window downward to disengage window from glass run channels. Lift window upward and inboard and remove from body.
5. To install, reverse removal procedure.

REAR QUARTER WINDOW ADJUSTMENTS—"X" Closed Styles

For proper operation of rear quarter window and correct seating of glass in run channels, adjust rear quarter window in the following sequence:

1. With the window in the full "up" position, loosen the window support to regulator plate attaching screws and the center guide attaching screws.
2. Using hand pressure, press window upward and forward to make certain it is "bottomed" in the upper and forward glass run channels.
3. Tighten window support to regulator plate attaching screws and center guide upper attaching screw.

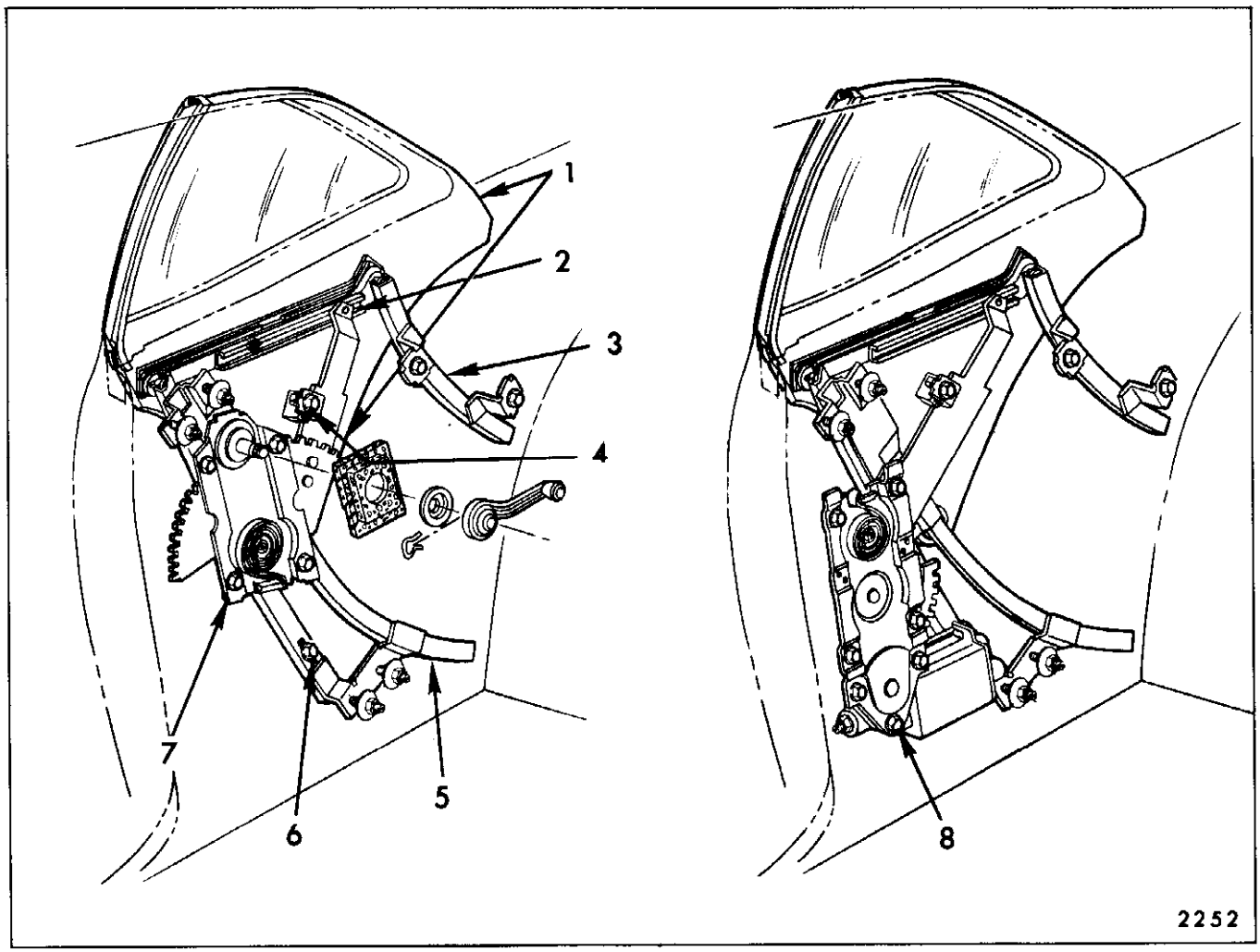


Fig. 7-5—Rear Quarter Hardware - "A-17" Style

1. Window Glass
2. Sash Channel Cam
3. Rear Guide
4. Up-Stop
5. Front Guide
6. Down-Stop
7. Window Regulator (Manual)
8. Window Regulator (Electric)

4. Lower window to full "down" position. Tighten center guide lower attaching screw while forcing lower portion of guide rearward.

   NOTE: Do not apply too much pressure when forcing guide rearward as this tends to make front edge of glass dig into front run channel.

REAR QUARTER WINDOW REGULATOR (MANUAL AND ELECTRIC)— "A, B & X" Closed Styles

Removal and Installation

1. Remove rear quarter trim assembly and inner panel water deflector. On electric styles, disconnect feed wire from regulator motor.

2. On "A & B" styles, disengage clip retainer from pivot pin on window lower sash channel (see Fig. 7-16 and 7-17). Raise window to full-up and prop in that position.

3. On "X" styles, remove support to regulator plate screws (Fig. 7-18). Raise window to full-up and prop in that position.

4. On "A & B" styles, remove regulator to inner panel screws and remove regulator through large access hole (see Fig. 7-19).

5. On "X" styles, remove regulator to inner panel screws (Fig. 7-18). Disengage roller on regulator plate from window guide and remove regulator through large access hole.

6. To install, reverse removal procedure.

   NOTE: The procedure for removing electric motor from regulator is described under "Door and Quarter Window Regulator Electric Motor Assembly" in the Door section of this manual.

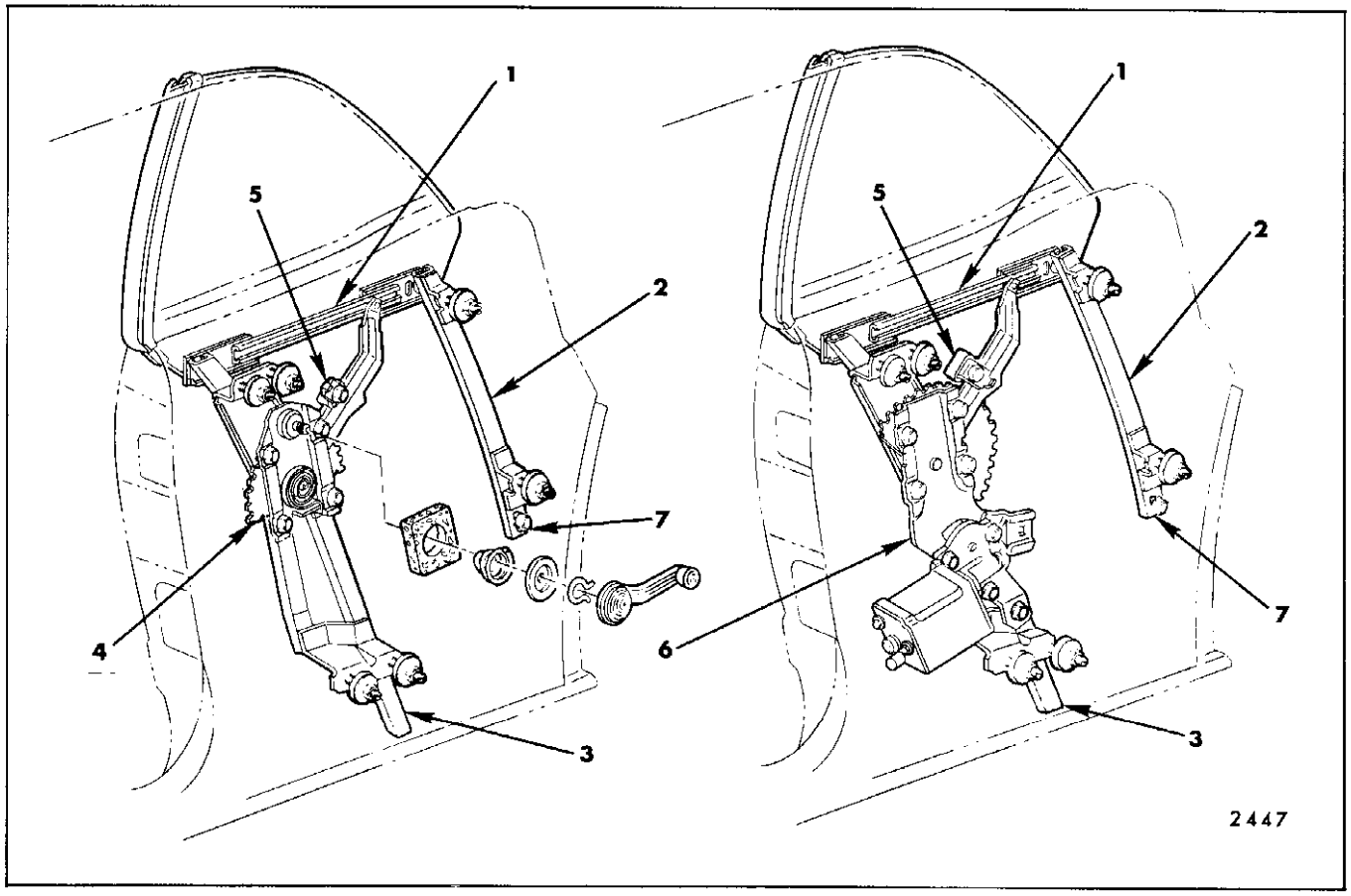


Fig. 7-6—Rear Quarter Hardware - "A-67" Styles

1. Sash Channel Cam
2. Rear Guide
3. Front Guide
4. Window Regulator (Manual)
5. Up-Stop
6. Window Regulator (Electric)
7. Rear Guide Lower Stop

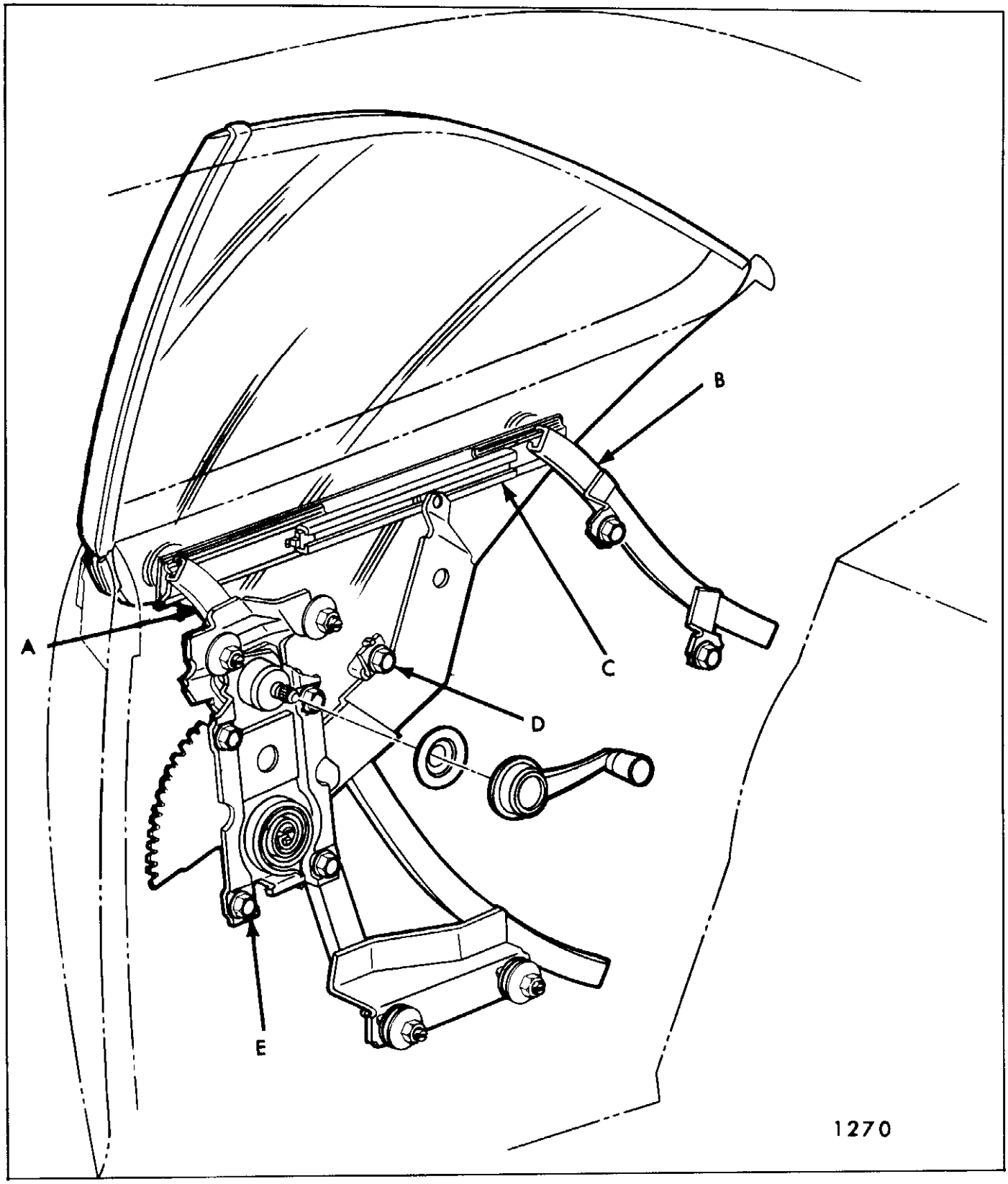


Fig. 7-7—Rear Quarter Hardware - "B-87" Styles

A. Front Guide
B. Rear Guide
C. Lower Sash Channel Cam
D. Window Up-Stop
E. Window Regulator

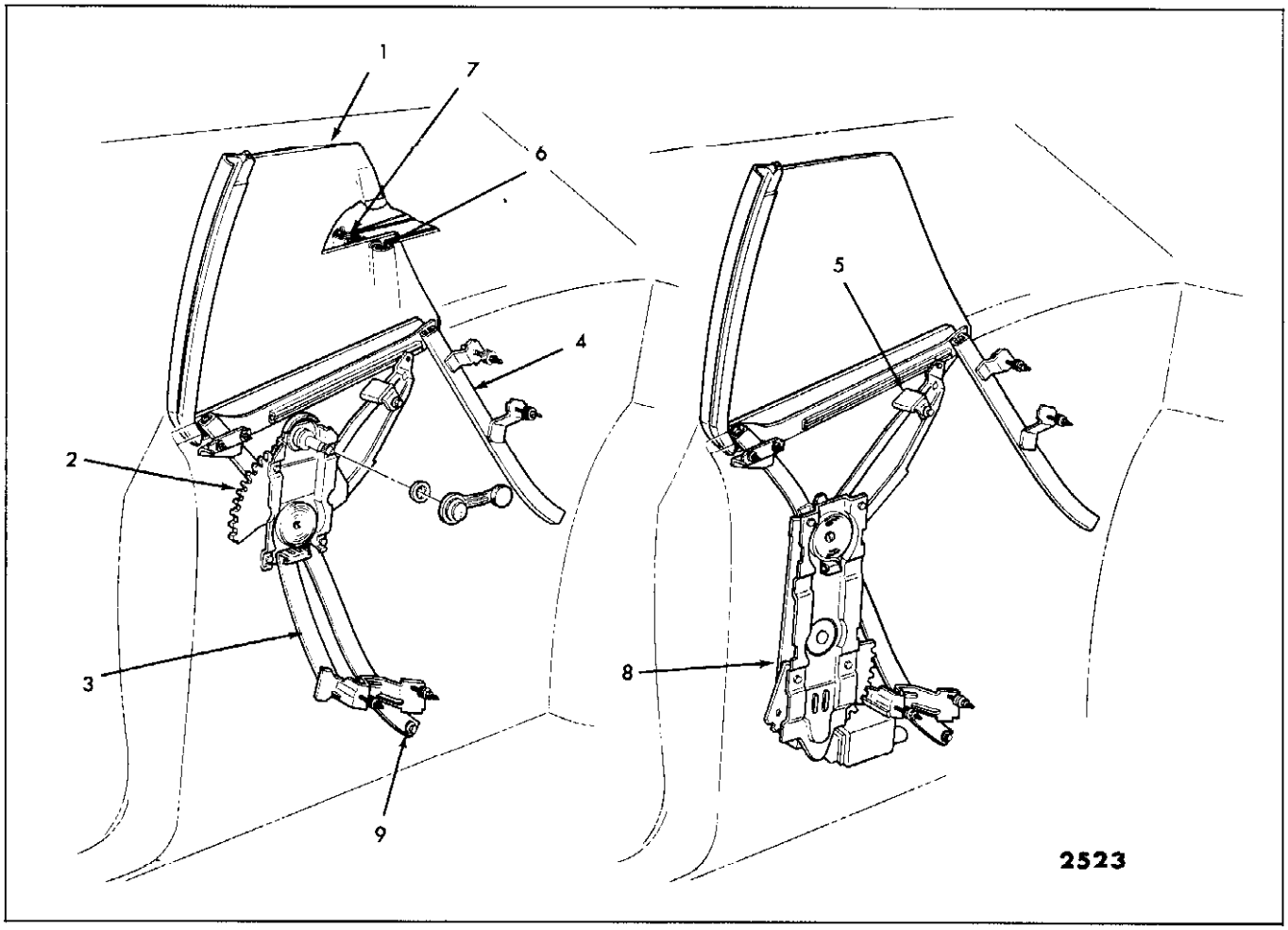


Fig. 7-8—Rear Quarter Hardware - "C-47" Styles Shown, "B-C 57-67" Styles Similar

1. Quarter Window Assembly
2. Window Regulator (Manual)
3. Front Guide
4. Rear Guide
5. Window Upper Stop
6. Section Through Vertical Inner Sealing Strip
7. Section Through Roof Rear Drip Molding (With Integral Outer Sealing Strip)
8. Window Regulator (Electric)
9. Window Lower Stop

REAR QUARTER WINDOW REAR GLASS RUN CHANNEL—All Closed Styles

Removal and Installation

1. Remove rear quarter window as previously described.
2. Remove run channel to inner panel attaching bolt (Fig. 7-20).
3. On "A-07" style, remove screws securing run channel to side roof rail along length of run channel.
4. Using a flat-bladed tool, carefully pry run channel retaining clips from piercings in side roof rail.

NOTE: If difficulty is encountered disengaging run channel, inspect inside of channel for the presence of screws.

5. At belt line on "A" styles, disengage tab on rear run channel from side roof rail by moving run channel downward into opening between the panels; then, remove run channel from body.
6. Prior to installation, inspect foam sealing material for any damage that would result in waterleaks, and replace as necessary.
7. To install, reverse removal procedure.

REAR QUARTER WINDOW FRONT GLASS RUN CHANNEL—All Closed Styles

Removal and Installation

1. Remove rear quarter window as previously described.
2. On "A" styles, remove screws along length of run channel securing channel to body (Fig. 7-20).
3. On all styles, using a flat bladed tool, pry run channel from body pillar and remove run channel (Fig. 7-21).
4. To install, reverse removal procedure. Prior to installation inspect sealing material on body pillar or run channel and replace or add to as required.

REAR QUARTER WINDOW GUIDE ASSEMBLY—"X-11" Styles

Removal and Installation

1. Remove rear quarter trim assembly and trim finishing upper molding.
2. Detach inner panel water deflector sufficiently to gain access to guide attaching screws.
3. Remove guide attaching screws, disengage guide from roller on regulator arm and remove guide through access hole (See Fig. 7-22).
4. To install, reverse removal procedure.

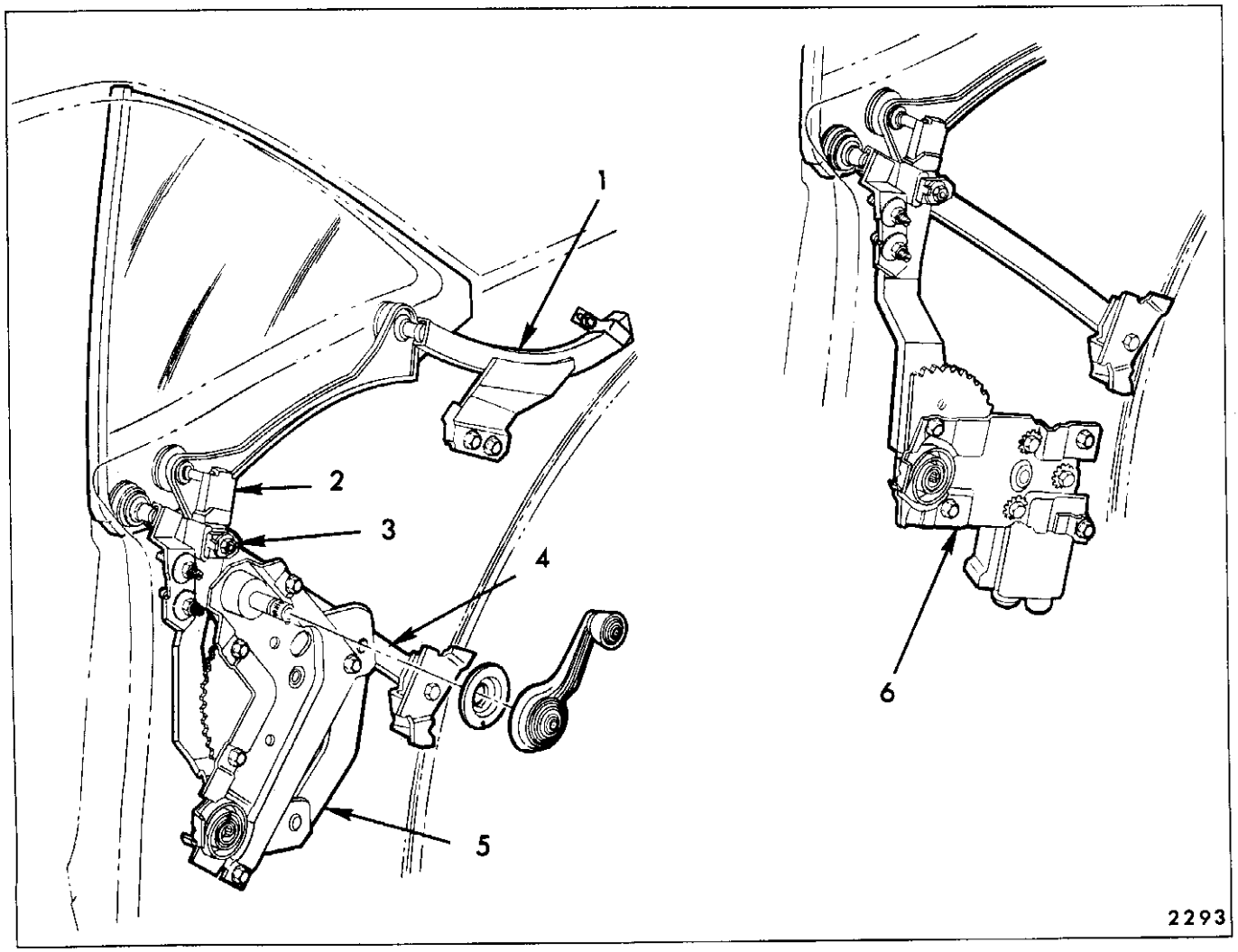


Fig. 7-9—Rear Quarter Hardware - Buick "E" Styles

1. Rear Guide
2. Regulator Lift Arm Cam
3. Up-Stop
4. Front Guide
5. Regulator (Manual)
6. Regulator (Electric)

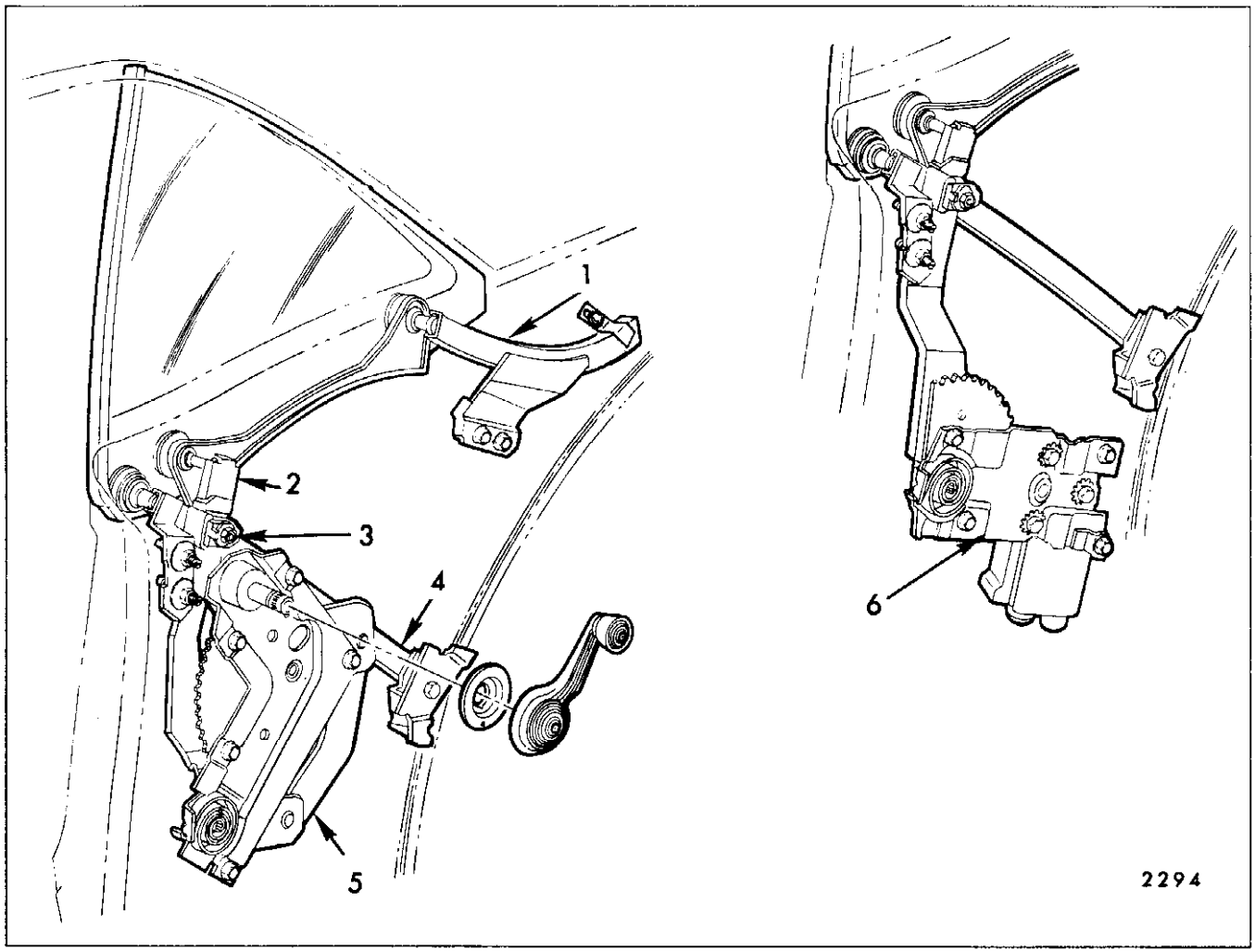


Fig. 7-10—Rear Quarter Hardware - Oldsmobile "E" Body

1. Rear Guide
2. Regulator Lift Arm Cam
3. Up-Stop
4. Front Guide
5. Regulator (Manual)
6. Regulator (Electric)

REAR QUARTER WINDOW OUTER STRIP ASSEMBLY—All Closed Styles

1. Remove rear quarter trim assembly and inner panel water deflector.

2. On "A & B" styles, disengage window assembly from regulator lift arm by removing slotted retainer (see Fig. 7-17). On "X" styles remove support to regulator plate screws (Fig. 7-18).

3. Lower window assembly to bottom of rear quarter and rest it against outer panel.

4. On styles with screw retained strip assemblies, remove screws securing outer strip to rear quarter outer panel return flange and remove strip from body (see Fig. 7-23). On styles with clip retained strip assemblies, refer to index of "Door" section for removal procedure.

   NOTE: Use care not to damage strip assembly or adjacent painted surfaces.

5. To install, reverse removal procedure.

REAR QUARTER WINDOW REAR VERTICAL INNER SEALING STRIP ASSEMBLY—"C-47" Styles

The rear vertical inner sealing strip assembly serves as a glass run channel above the belt for the rear quarter window. As shown in Figure 7-24

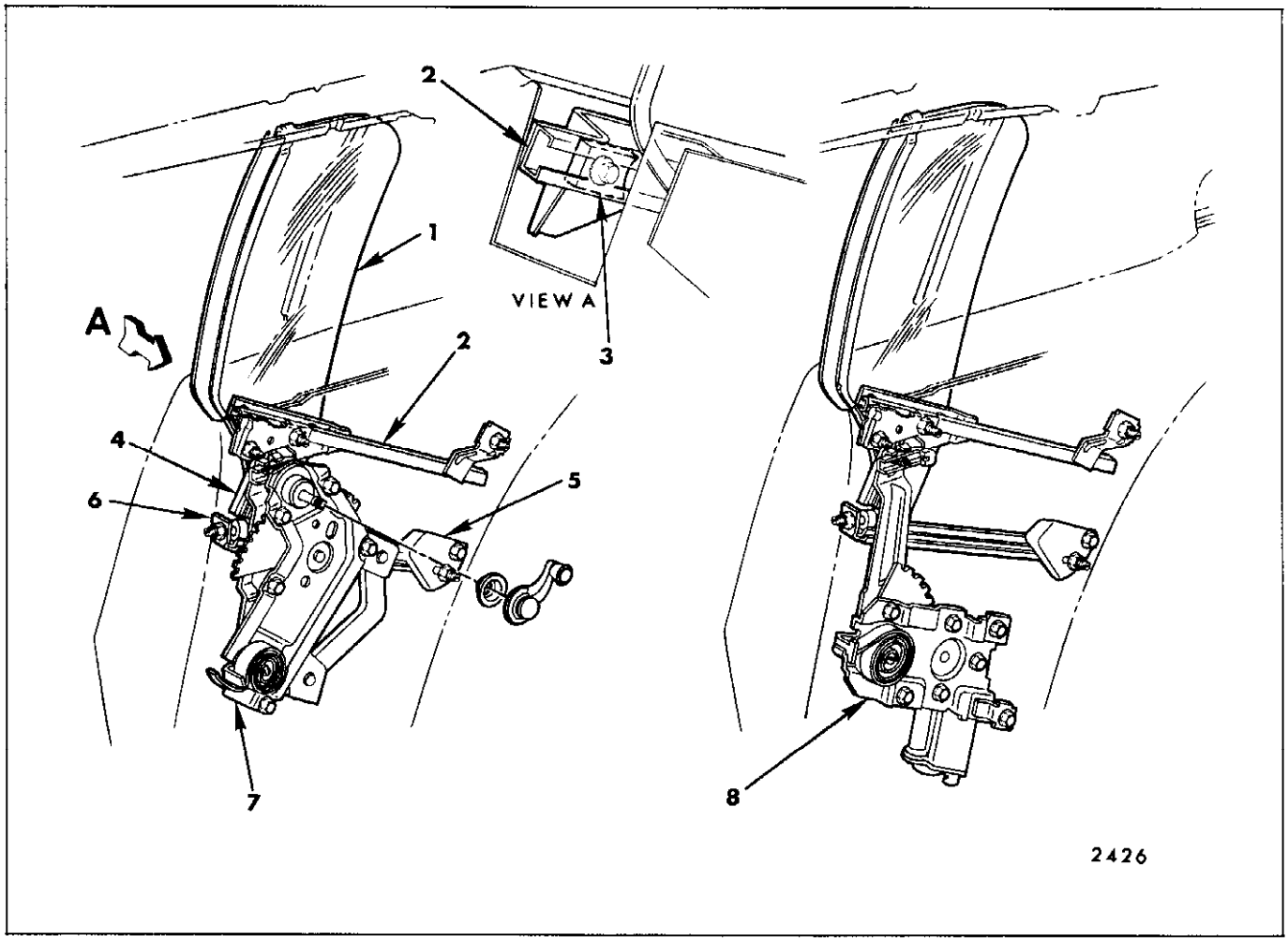


Fig. 7-11—Rear Quarter Hardware - Cadillac "E" Body

1. Rear Quarter Window
2. Sash Channel Cam
3. Sash Channel Cam Stop
4. Vertical Cam
5. Glass Run Channel
6. Glass Run Channel Strip
7. Regulator (Manual)
8. Regulator (Electric)

the strip assembly is retained by clips which snap-over the leading edge of the quarter inner upper panel.

To remove the strip assembly, it is necessary to remove the rear quarter trim assembly and the side roof rail rear finishing molding which covers the sealing strip clips.

REAR QUARTER WINDOW ASSEMBLY— All Hardtop and Convertible Styles Except "B-C" Series

The rear quarter window is made of solid tempered safety plate glass. Consequently, it cannot be drilled or ground, or develop scratches or edge chips as it will shatter. The window assembly consists of a pressed-on front vertical sash channel and a bolt-on lower sash channel assembly.

NOTE: When reinstalling glass to sash channel bolts, or nylon roller nuts, torque to 72 inch pounds (6 foot pounds). Also, replace glass to sash channel spacers (rubber).

Refer to front of this section for hardware drawings which can assist in performing any of the following procedures. To perform any of these service operations, remove rear quarter trim assembly and inner panel water deflector or access hole cover.

A. REMOVAL AND INSTALLATION— "A-17 & 67" Styles

1. Lower folding top on "67" styles.

2. Remove rear guide upper and lower attaching screws (Fig. 7-25 and 7-26). Disengage guide from sash channel roller and remove guide.

3. Remove glass run channel outer strip assembly (draft strip - see "Door" index of manual).

4. Remove the lower two adjusting stud nuts of the quarter window front guide and all but the top attaching bolt of window regulator (see Fig. 7-27).

5. Rotate regulator counter-clockwise until lift arm roller is free of quarter window sash channel cam. Rotate rear edge of glass upward (outboard of side rail on "17" styles) and remove window (see Fig. 7-27).

NOTE: If additional clearance is needed on "17" styles, the side roof rail weatherstrip can be detached at quarter window area.

6. To install, reverse removal procedure.

ADJUSTMENTS—"A-17 & 67" Styles

To perform any rear quarter window adjustments, it is necessary to remove the rear quarter trim assembly.

1. To adjust window "fore or aft", loosen front

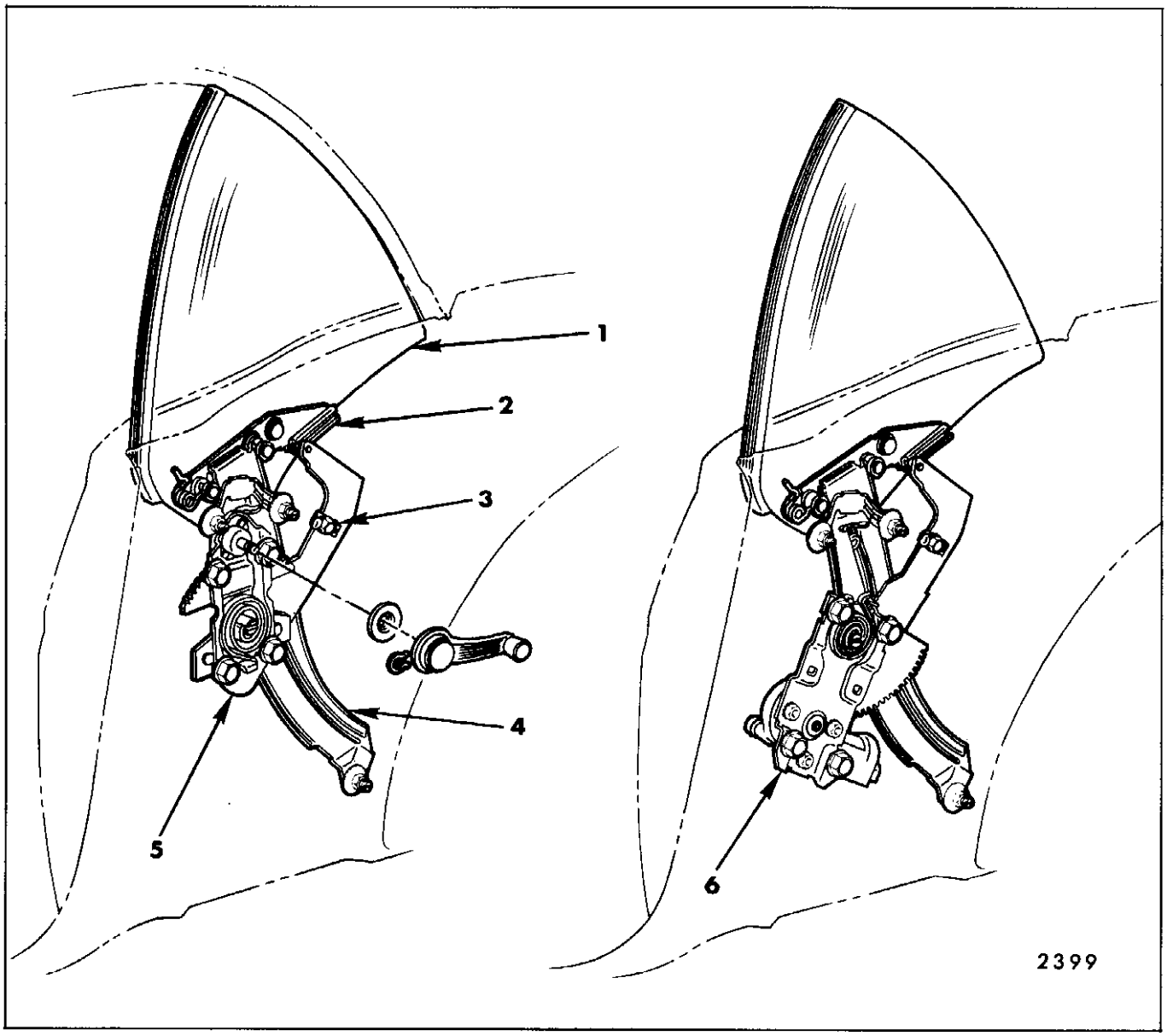


Fig. 7-12—Rear Quarter Hardware - "F" Body Styles

1. Rear Quarter Window
2. Sash Channel Cam
3. Up-Stop
4. Window Guide
5. Regulator (Manual)
6. Regulator (Electric)

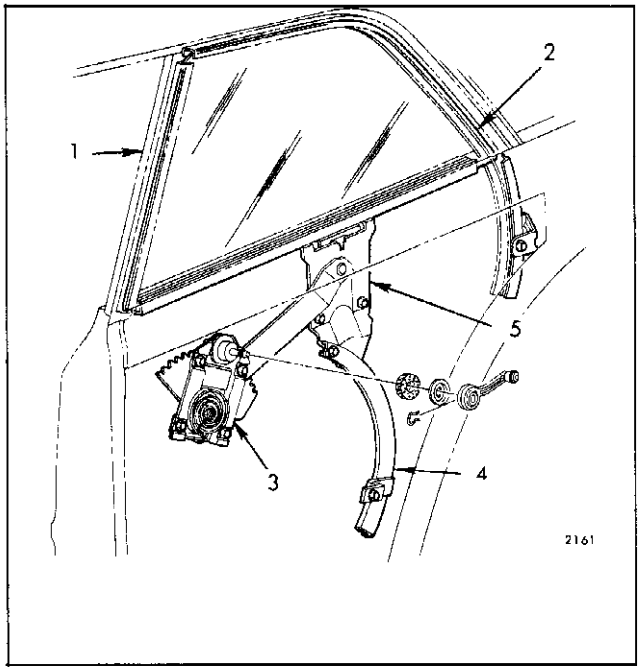


Fig. 7-13—Rear Quarter Hardware - "X-11" Style

1. Front Glass Run Channel
2. Rear Glass Run Channel
3. Window Regulator
4. Window Guide
5. Window Support to Regulator Plate

and rear guide adjusting stud nuts, position window and guides as required, and tighten nuts.

2. To adjust window "in or out" at belt line, loosen front guide upper adjusting stud nuts, adjust studs in or out as required, and tighten stud nuts.

3. To adjust top of window "in or out", loosen front guide lower adjusting stud nuts, adjust studs in or out as required, and tighten stud nuts.

4. To relieve a "fore or aft" binding condition between front and rear guides, loosen rear guide adjusting stud nut. Operate window to "full-down" position and tighten remaining stud nut.

5. To limit up-travel of window, adjust window stop as required (see Fig. 7-25 and 7-26).

B. REMOVAL AND INSTALLATION— "E-87" Styles

1. With window in a full-up position, remove rear guide upper and lower attaching bolts. Disengage guide from roller on window assembly and remove guide through access hole (see Fig. 7-28).

2. With quarter window partially lowered, remove nuts securing regulator lift arm cam to regulator lift arm and remove cam.

   NOTE: Lift arm must be pushed inboard slightly to remove cam.

3. While supporting glass, remove quarter window front guide attaching bolts and lower guide to bottom of rear quarter.

4. Remove quarter window inboard of roof panel.

5. To install, reverse removal procedure. Fig. 7-29 is an exploded view of the quarter window assembly and identifies the various components and their assembly sequence.

ADJUSTMENTS—"E-87" Styles

Fore and aft alignment is determined by positioning front guide. Adjusting rear guide will provide parallel condition of quarter window to door for constant seal. In or out alignment is determined by upper two adjusting studs and nuts at front guide. The adjustable up-stop will provide up or down alignment and partially fore and aft alignments by controlling window travel.

NOTE: Adjustments on regulator lift arm cam are provided to permit maximum travel but caution must be observed so not to interfere with quarter trim assembly at belt.

C. REMOVAL AND INSTALLATION— "E-47" Styles

1. Remove rear quarter window lower garnish molding.

2. Remove inner panel cam adjusting stud nuts and turn studs inboard sufficiently to clear rear quarter inner panel (See Fig. 7-30).

3. Remove lock pillar sealing strip (rubber flap at belt line).

4. With quarter window fully forward, disengage inner panel cam from window rollers by sliding cam rearward. Remove cam from body.

5. Remove nut securing regulator lift arm to window vertical sash channel glass roller (see Fig. 7-30). Disengage lift arm from roller stud. Remove stud from top of vertical sash channel cam (see Fig. 7-31).

6. Pull glass forward and remove inboard of side roof rail.

7. To install, reverse removal procedure.

ADJUSTMENTS—"E-47" Styles

Critical rear quarter window adjustments can be achieved at the lock pillar and DO NOT require seat and side wall trim removal (see Fig. 7-32).

1. Remove lock pillar grille.
2. The forward glass stop can be adjusted fore and aft by loosening lock nut and turning stud in or out (see Fig. 7-32).

   NOTE: Stop bolt also retains forward attachment of glass run channel.

3. A slight amount of in or out adjustment of glass is provided by an elongated slot at glass run channel forward attachment (see Figure 7-32).

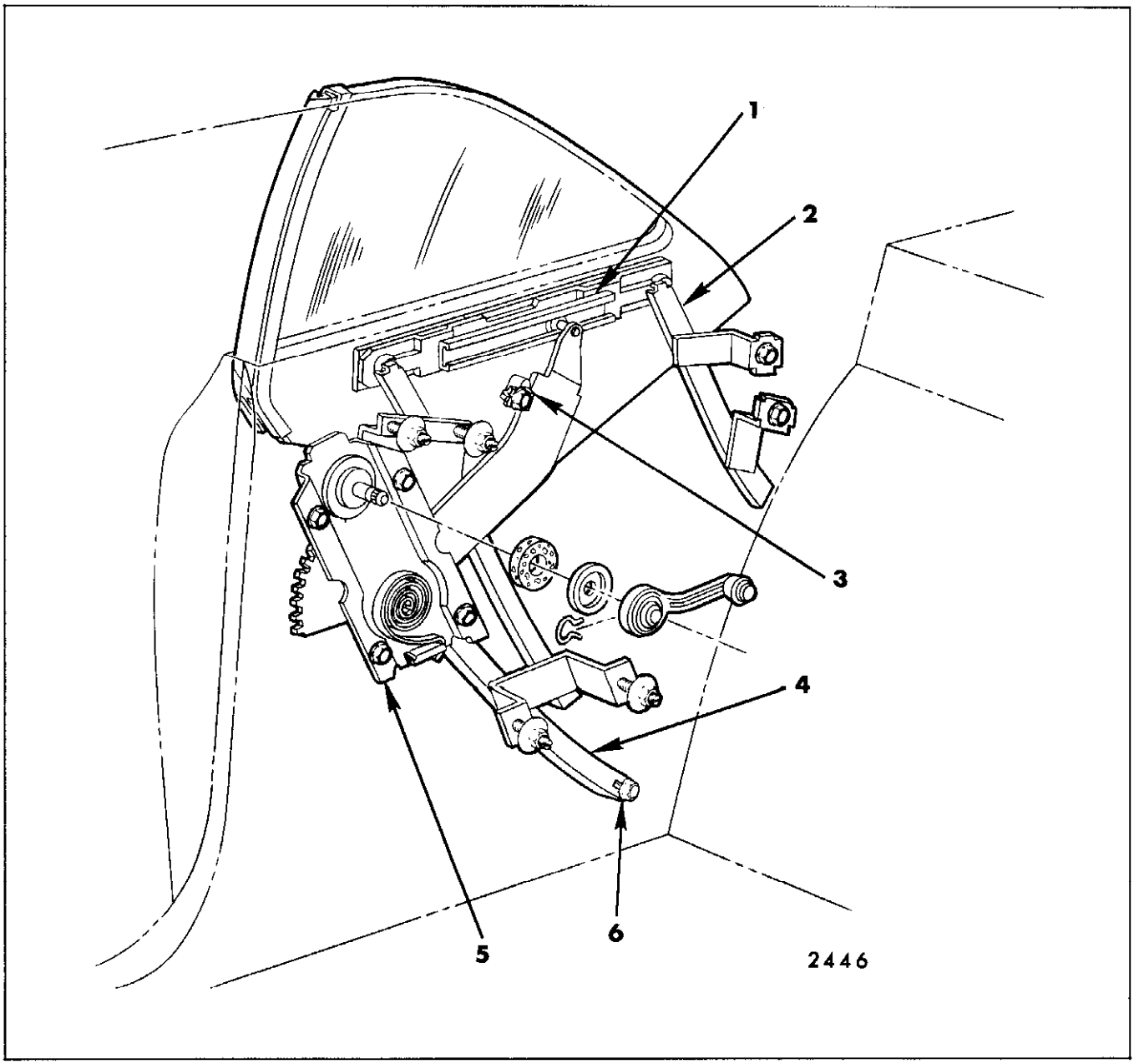


Fig. 7-14—Rear Quarter Hardware - "X-37" Style

1. Sash Channel Cam
2. Rear Guide
3. Upper Stop
4. Front Guide
5. Window Regulator
6. Front Guide Stop

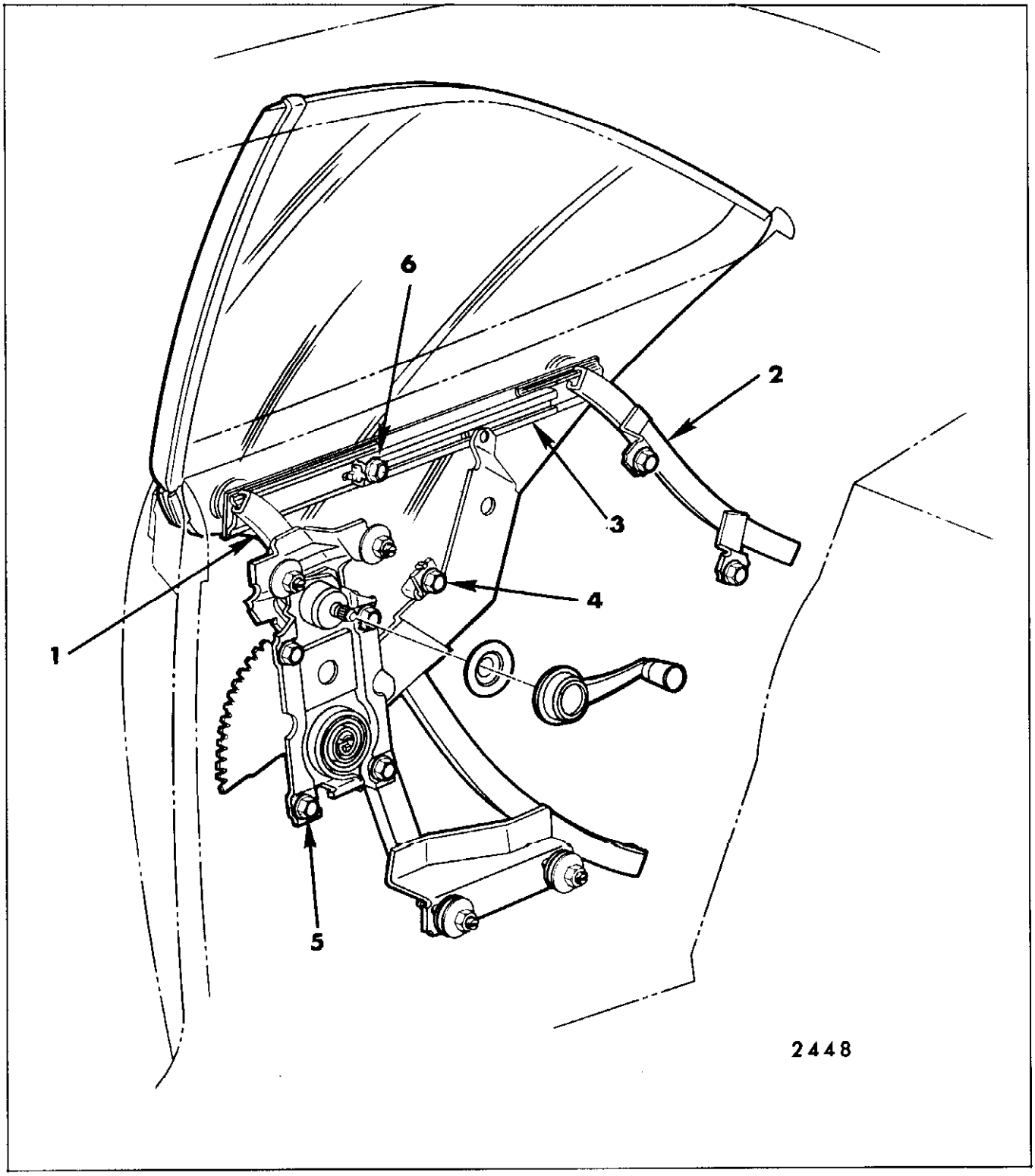


Fig. 7-15—Rear Quarter Hardware - "37" Styles

1. Front Guide
2. Rear Guide
3. Lower Sash Channel Cam
4. Window Up-Stop
5. Window Regulator
6. Window Down-Stop

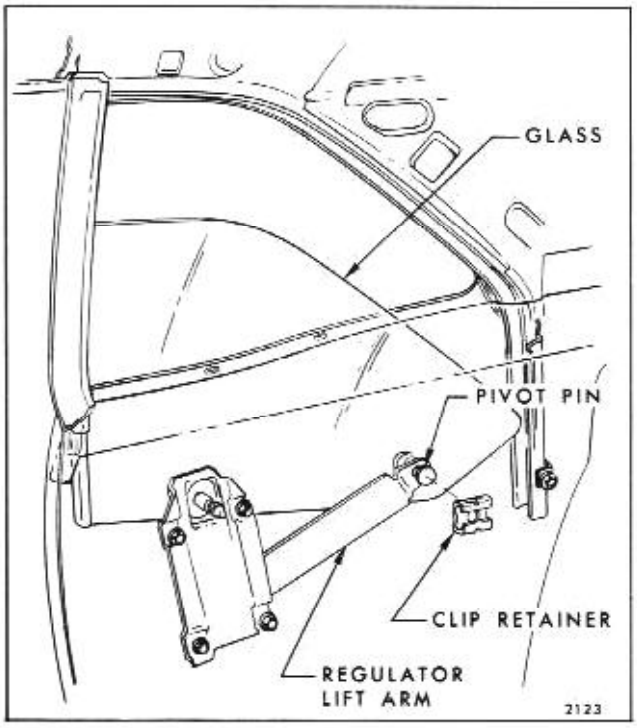


Fig. 7-16—Rear Quarter Window Attachment - "A-07" Styles

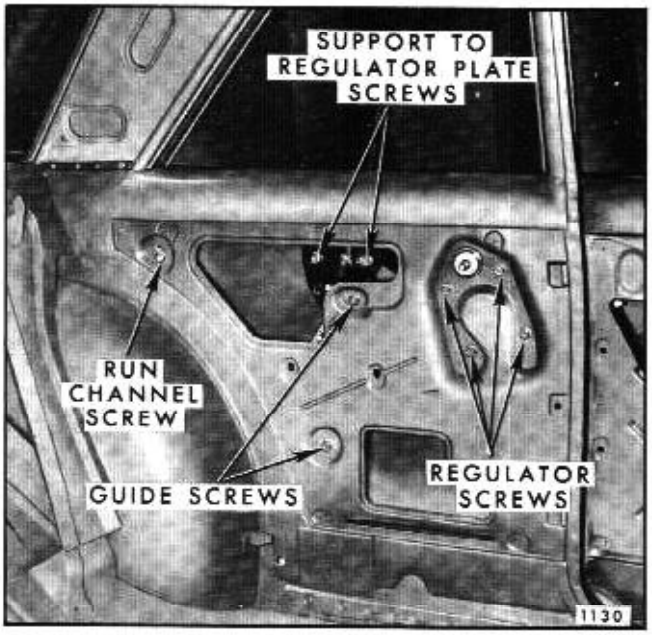


Fig. 7-18—Rear Quarter Hardware Attachment - "X-11" Style

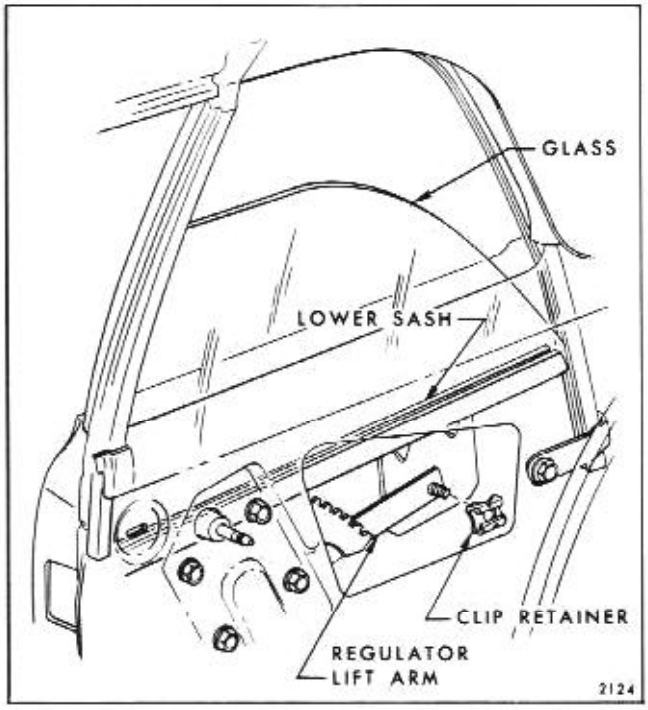


Fig. 7-17—Rear Quarter Window Attachment - "A and B-11" Styles

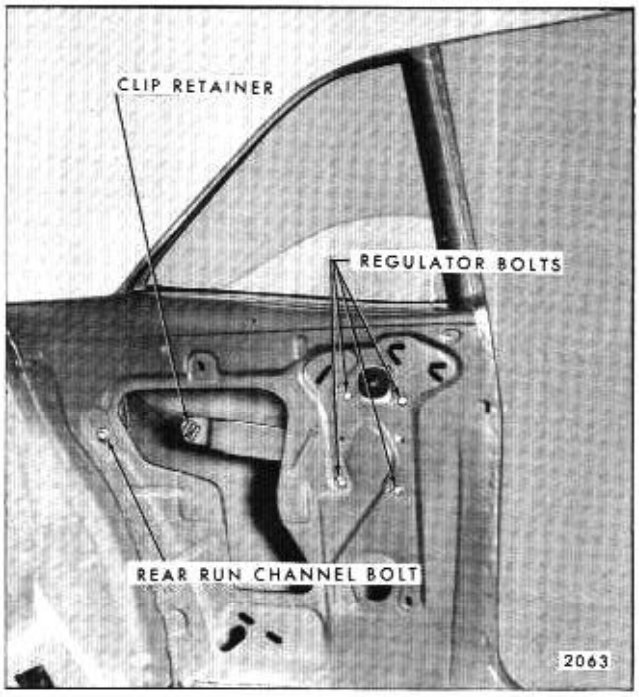


Fig. 7-19—Rear Quarter Hardware Attachment - "A-07" Styles Shown, "11" Styles Similar

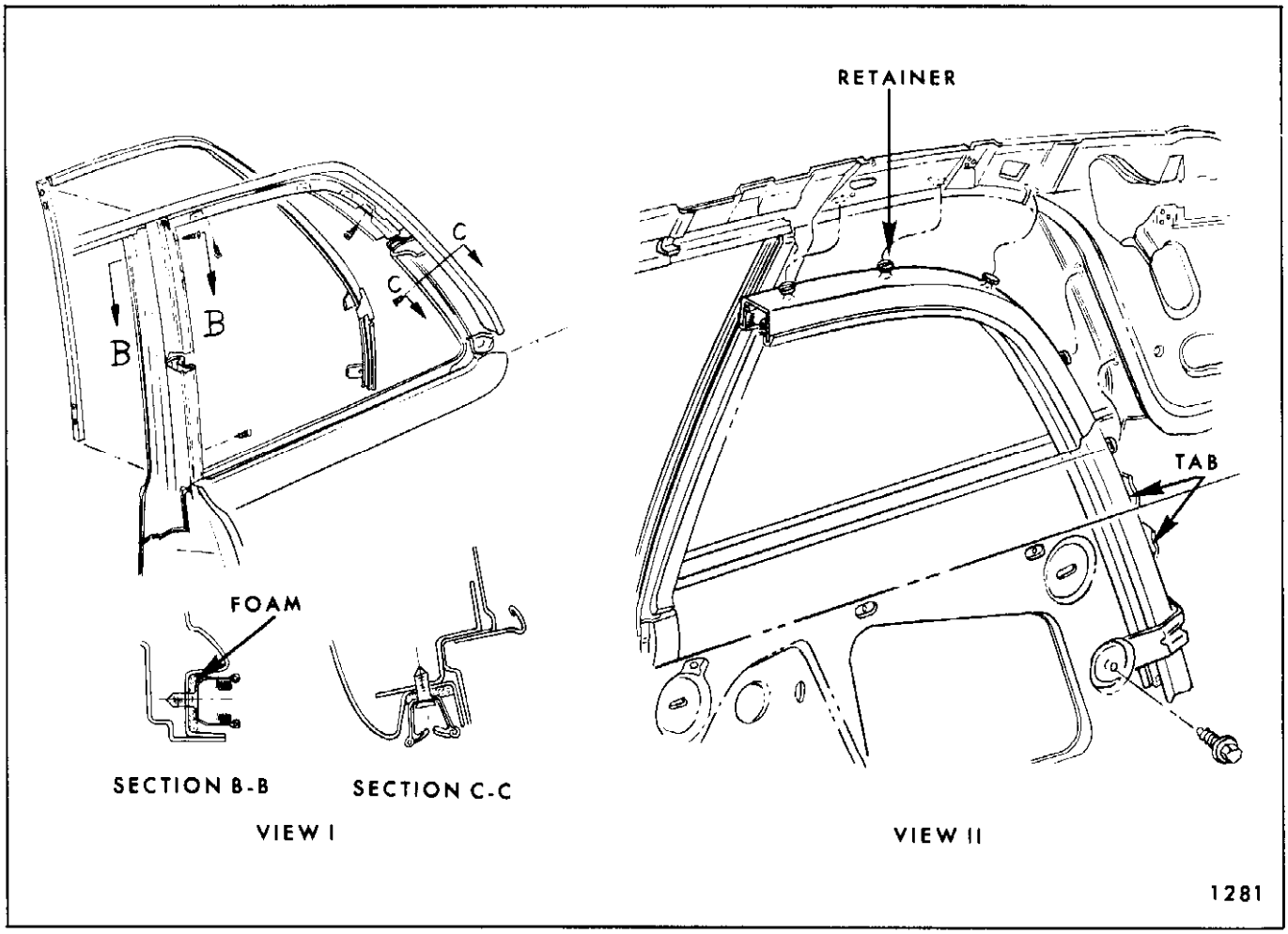


Fig. 7-20—Rear Quarter Window Glass Run Channels - Typical of all Closed Styles

4. A secondary glass stop is located in vertical sash channel cam (see Fig. 7-11). This stop is retained by a single bolt and is accessible through lock pillar grille opening (see Fig. 7-32).

   NOTE: Major glass adjustment is available at inner panel cam adjusting studs and nuts (see Fig. 7-30). In addition, the glass run channel rear attachment provides in or out and up or down adjustment. Also, a glass lower stop is attached to the rear plate of the glass run channel. This stop is adjustable fore and aft.

D. REMOVAL AND INSTALLATION— "F-37 & 67" Styles

1. Remove rear quarter window regulator assembly (see index).

2. On convertible styles, lower folding top.

3. Remove upper two nuts of front guide adjusting studs (see Fig. 7-33).

4. Remove lock pillar sealing strip and glass run channel outer strip assembly (belt seal). Removal and installation of lock pillar sealing strips is covered in the "Door" section of this manual (see index). The outer belt seal is retained by screws.

5. On "67" styles, pull window straight up and remove from body. On "37" styles, remove glass outboard of roof panel.

6. To install, reverse removal procedure.

   NOTE: Figure 7-34 illustrates relationship of window assembly to guide. Figure 7-35 illustrates all components of the rear quarter window assembly.

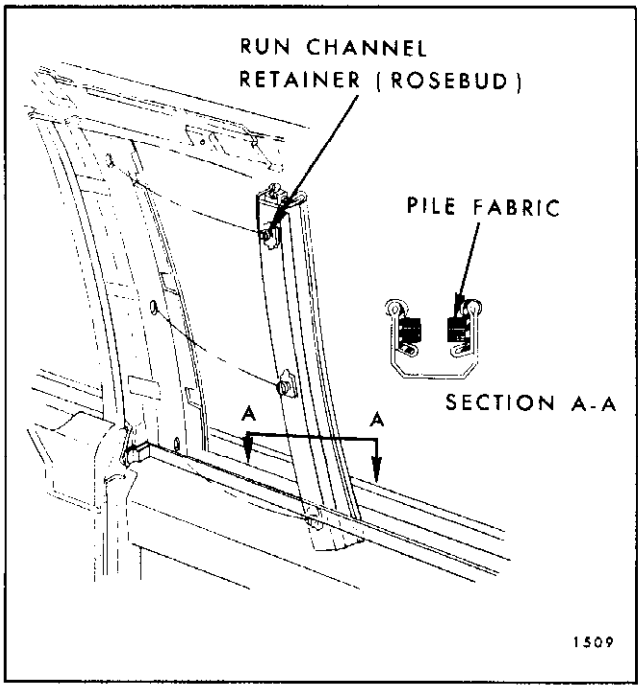


Fig. 7-21—Rear Quarter Window Front Glass Run Channels

ADJUSTMENTS—"F-37 & 67" Styles

In or out and fore or aft adjustment is provided by inner panel slots and adjusting studs of window guide. Up or down travel of glass is controlled by stop located on regulator lift arm (see Fig. 7-33).

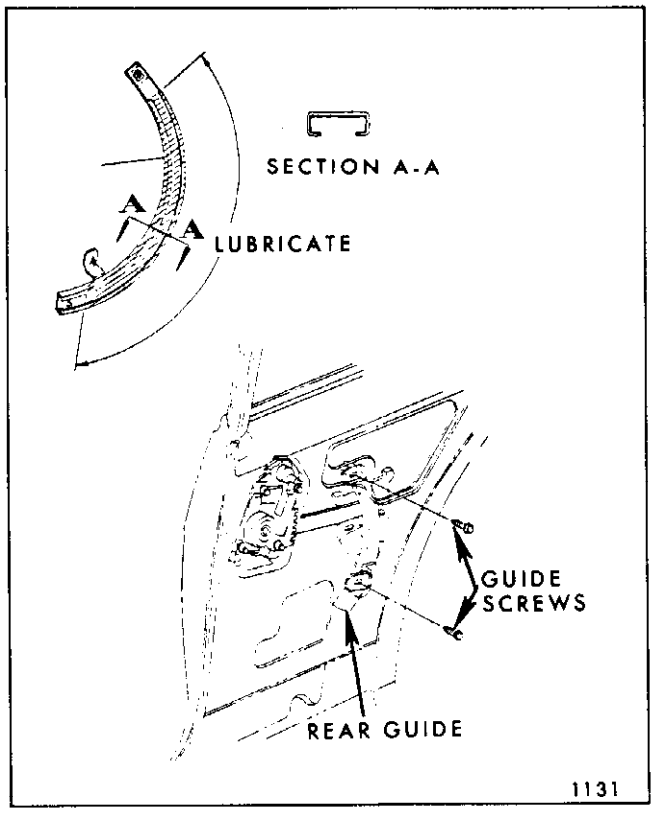


Fig. 7-22—Rear Quarter Window Guide - "X-11" Styles

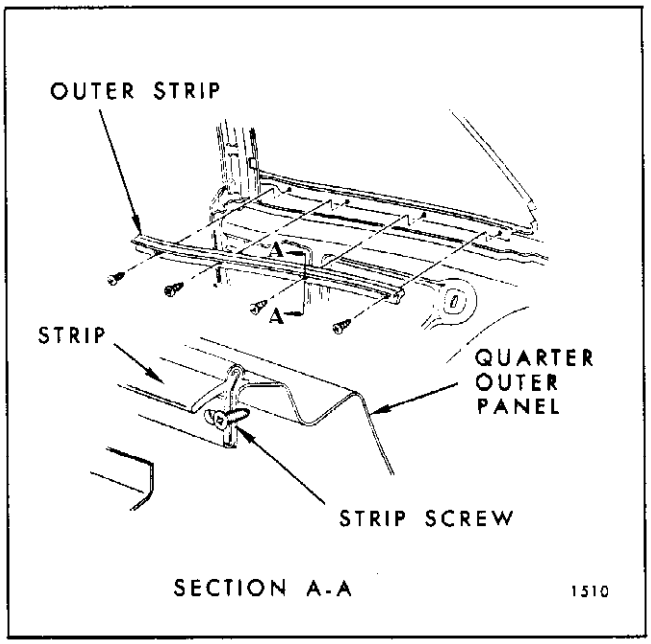


Fig. 7-23—Rear Quarter Window Outer Strip Assembly - All Closed Styles

E. REMOVAL AND INSTALLATION— "X-37" Styles

1. With window in full-up position, remove rear

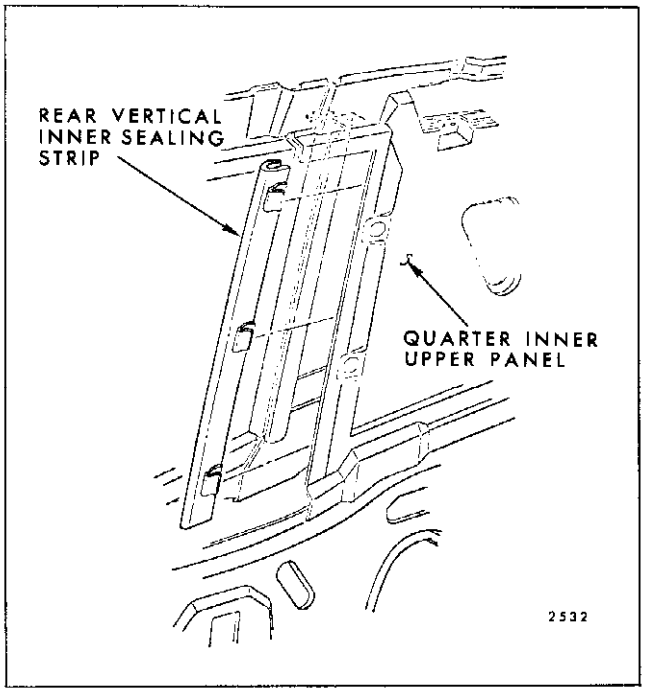


Fig. 7-24—Rear Quarter Window Rear Vertical Inner Sealing Strip Assembly - "C-47" Styles

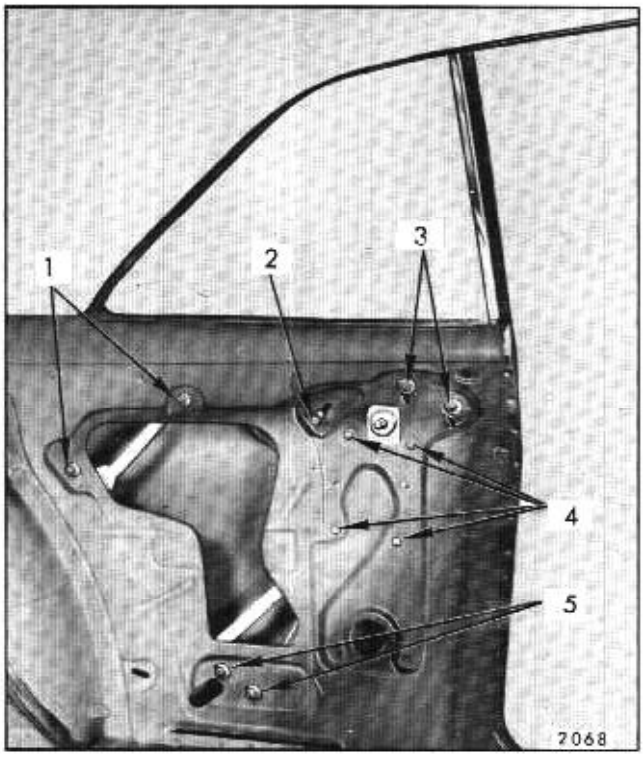


Fig. 7-25—Rear Quarter Hardware - "A-17" Style

1. Rear Guide Adjusting Studs and Nuts
2. Up-Stop Bolts
3. Front Guide Upper Adjusting Studs and Nuts
4. Regulator Bolts
5. Front Guide Lower Adjusting Studs and Nuts

guide upper and lower attaching bolts (Fig. 7-36). Disengage guide from roller on window assembly and remove guide through access hole.

2. Remove glass run channel inner and outer strip assemblies (draft strips) as outlined in the "Front and Rear Door" section of this manual - see index. Remove lock pillar sealing strip.

3. Remove front guide lower two adjusting stud nuts and loosen upper two nuts (see Fig. 7-36).

4. Rotate rear edge of glass upward until regulator lift arm roller is free of sash channel cam and two front glass rollers are out of front guide channels. Remove glass inboard of side rail.

NOTE: If additional clearance is needed, the side roof rail weatherstrip can be detached at quarter window area.

5. To install, reverse removal procedure. Figure 7-37 is an exploded view of the quarter window assembly and identifies the various components and their assembly sequence.

ADJUSTMENTS—"X-37" Style

To perform any rear quarter window adjustments, it is necessary to remove the rear quarter trim assembly.

1. To adjust window "fore or aft", loosen front and rear guide adjusting stud nuts, position window and guides as required, and tighten nuts.

2. To adjust window "in or out" at belt line, loosen front guide upper adjusting stud nuts, adjust studs in or out as required, and tighten stud nuts.

3. To adjust top of window "in or out", loosen front guide lower adjusting stud nuts, adjust studs in or out as required, and tighten stud nuts.

4. To relieve a "fore or aft" binding condition between front and rear guides, loosen front

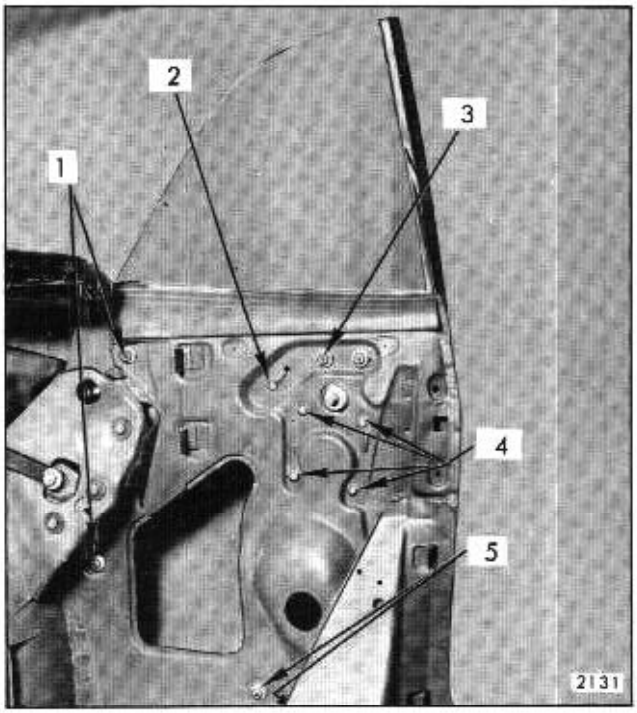


Fig. 7-26—Rear Quarter Hardware - "A-67" Styles

1. Rear Guide Adjusting Studs and Nuts
2. Up-Stop Bolt
3. Front Guide Upper Adjusting Studs and Nuts
4. Regulator Bolts
5. Front Guide Lower Adjusting Studs and Nuts

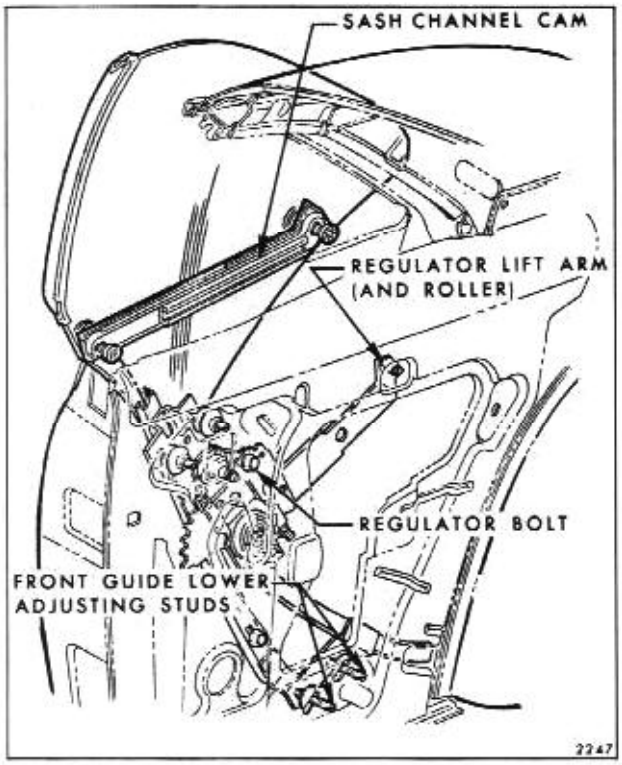


Fig. 7-27—Rear Quarter Window Removal - "A-17 and 67" Styles

and rear guide adjusting stud nuts. Operate window to "full-up" position and tighten upper adjusting stud nuts. Operate window to "full-down" position and tighten remaining stud nuts.

NOTE: When adjusting studs on front guide, make certain that adjacent studs are adjusted equally to prevent creation of a bind between cam channels.

5. To limit up-travel of window, adjust window stop as required (see Fig. 7-14).

6. The quarter window front guide is also equipped with an adjustable down-travel stop (see Fig. 7-14).

F. REMOVAL AND INSTALLATION—"Z-37" Styles

1. With window in full-up position, remove rear guide upper and lower attaching bolts (Fig. 7-38). Disengage guide from roller on window assembly and remove guide.

2. Remove regulator as described in a following procedure (see index).

3. Slide rear quarter window upward and forward and pivot top rear corner of glass to a point outboard of side roof rail. Continue movement of glass upward and forward to disengage front glass rollers from front guide assembly and remove rear quarter window from body.

4. To install, reverse removal procedure. Figure 7-39 is an exploded view of the quarter window assembly and identifies the various components and their assembly sequence.

ADJUSTMENTS—"Z-37" Styles

1. The quarter window up-stop can be utilized for adjustments of glass to side roof rail weatherstrip (see Section "A-A" in Fig. 7-40).

2. The rear guide can be adjusted to gain proper fore and aft contact of rear quarter window vertical weatherstrip to rear edge of front door window (see section "C-C" and "F-F" in Fig. 7-40).

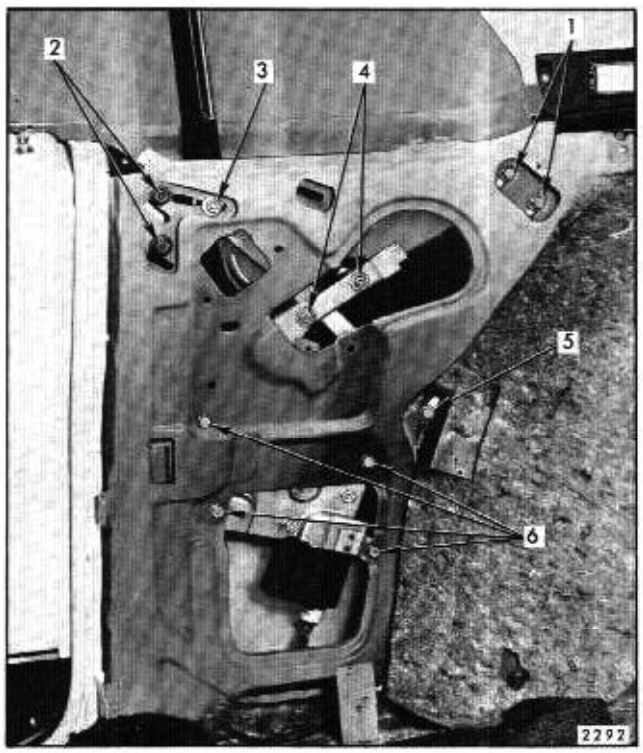


Fig. 7-28—Rear Quarter Hardware - "E" Body

1. Rear Guide Attaching Bolts
2. Front Guide Upper Adjusting Studs and Nuts
3. Up-Stop Attaching Bolts
4. Regulator Lift Arm Cam Attaching Nuts
5. Front Guide Lower Attaching Bolt
6. Regulator Attaching Bolts (4 for Electric, 5 for Manual)

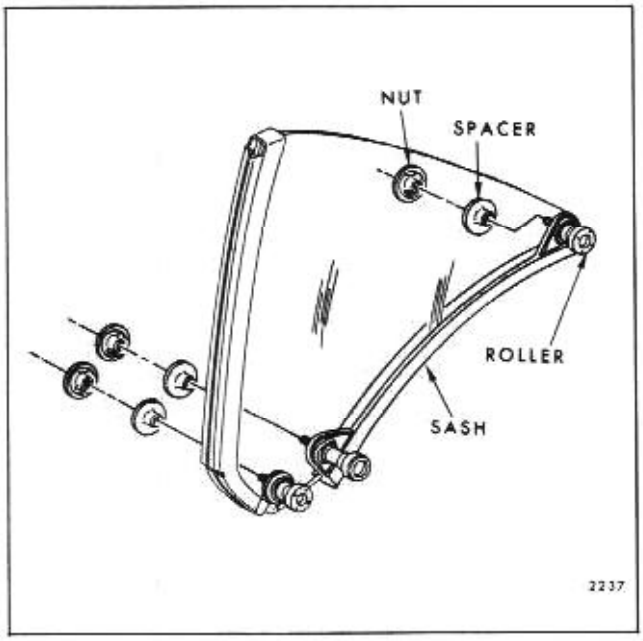


Fig. 7-29—Rear Quarter Window Assembly - "E-87" Styles

3. The upper two adjusting studs of the rear quarter window front guide are used for "in or out" and "fore or aft" adjustment of quarter window at front leading edge (see Section "D-D" in Fig. 7-40).

4. The lower two adjusting studs of rear quarter window front guide are adjustable "up or down" and "fore or aft" for proper operation of quarter window (see Section "E-E" in Fig. 7-40).

5. A secondary up-travel stop is located at forward end of sash channel cam (see Fig. 7-7).

REAR QUARTER WINDOW ASSEMBLY— "B-C 47-57-67-87" Styles

The rear quarter window assembly consists of a solid tempered safety plate glass window, a pressed-on front vertical sash channel and a bolt-on lower sash channel and cam assembly.

To service any of the component parts requires moving the entire window assembly from the body. Inaccessibility of the lower sash channel to glass attaching bolts prevents separation of glass from sash channel with window assembly installed.

Figures 7-41 and 7-42, which are exploded views of the "47" and "87" style quarter windows, are typical of all hardtop and convertible styles.

NOTE: When reinstalling lower sash channel and nylon rollers to quarter window, torque attaching nuts to 72 inch pounds (6 foot pounds). Also, replace sash channel and nylon roller rubber spacers.

Removal and Installation

1. Remove rear quarter trim assembly and inner panel water deflector or inner panel access hole cover. On "67" styles, lower folding top.

2. On "C-47" styles, remove roof rear drip molding (see "Molding" section) and quarter window rear vertical inner sealing strip assembly as described in a preceding procedure.

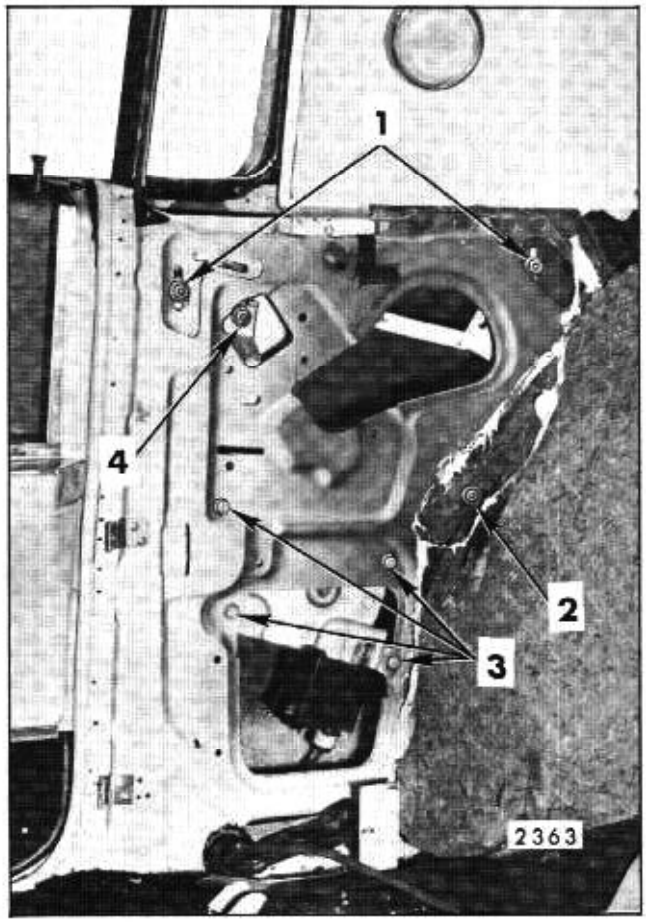


Fig. 7-30—Rear Quarter Hardware - "E-47" Styles

1. Inner Panel Cam Adjusting Studs and Nuts
2. Glass Run Channel Rear Adjusting Stud and Nut
3. Regulator Attaching Bolts
4. Regulator Lift Arm to Cam Glass Roller Attaching Nut

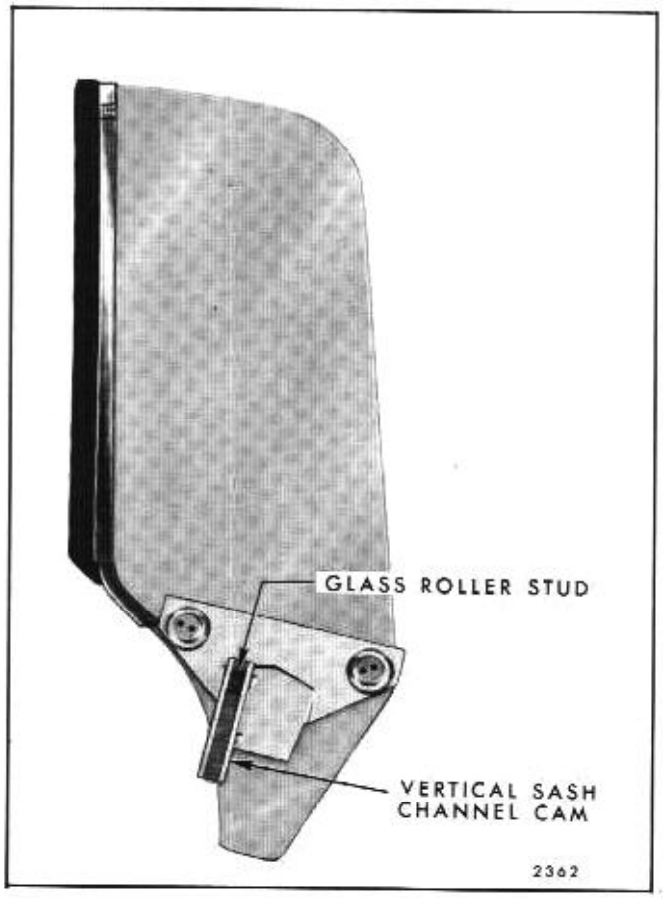


Fig. 7-31—Rear Quarter Window Assembly - "E-47" Styles

3. With window in full-up position, remove rear guide adjusting stud nuts ("1", Fig. 7-43). Disengage guide from roller on window assembly and remove guide through access hole.

4. With window lowered to half-down position, remove front guide lower adjusting stud nuts "2", and loosen upper adjusting stud nuts "3". Push lower adjusting studs "2" outboard to disengage from slots in inner panel.

5. Grasping both window assembly and lower end of front guide, swing them forward sufficiently to disengage window regulator lift arm roller from lower sash channel cam at rear of cam.

6. Supporting window assembly, allow front guide upper adjusting studs "3" to drop to bottom of the slots provided in inner panel.

7. Remove window assembly by lifting upward and inboard.

8. To install, reverse removal procedure. Adjust window for proper alignment as described in following adjustment procedure.

Adjustments

1. Rear quarter window up-travel is determined by position of the window up stop "4" (Fig. 7-43). To change the window upper limits, loosen the stop attaching bolt and position the stop as desired.

2. Fore or aft position of the window is determined by the position of the front and rear guides. To adjust the window, loosen the front and rear guide adjusting stud nuts "1", "2" and "3" (Fig. 7-43) and reposition the window as required.

3. In or out adjustment of the window assembly, or only the top of the window, can be obtained by utilizing the front and rear guide adjusting studs (Fig. 7-43). To reposition the window in or out, adjust the guide upper and lower adjusting studs in the same direction. To adjust the top of the window in or out, adjust the lower adjusting studs in the opposite direction of the upper studs.

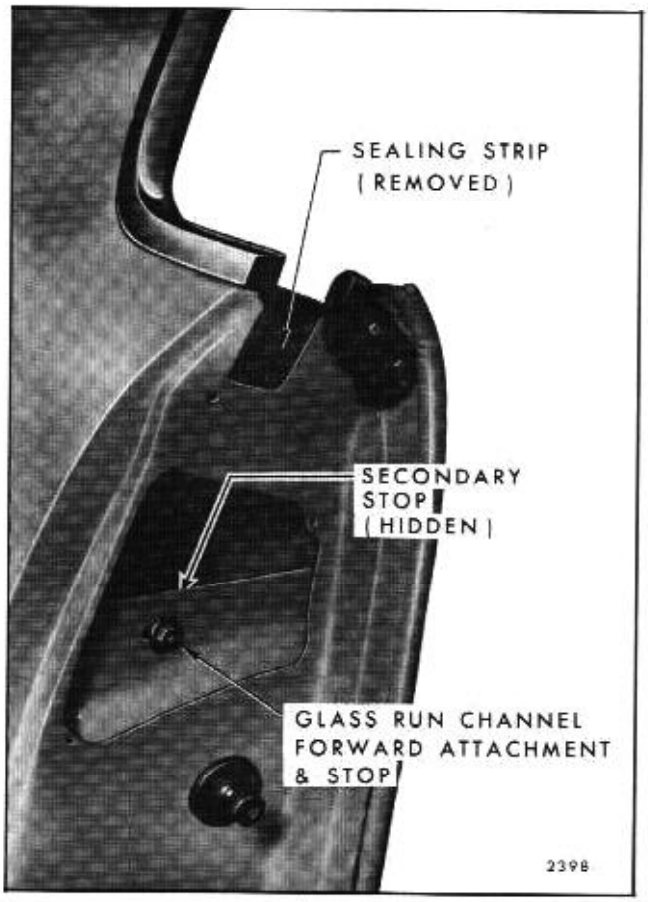


Fig. 7-32—Rear Quarter Window Hardware Attachments on Lock Pillar

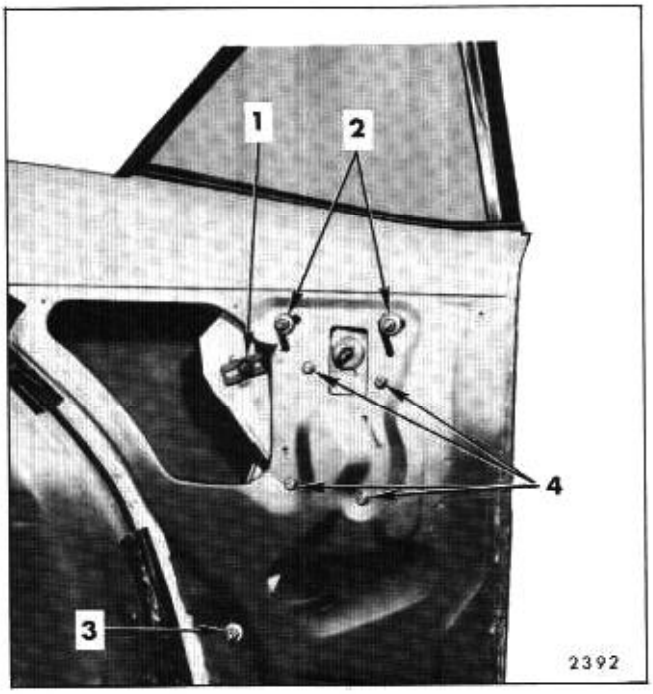


Fig. 7-33—Rear Quarter Window Hardware - "F" Styles

1. Window Up-Stop
2. Window Guide Upper Adjusting Stud and Nuts
3. Window Guide Lower Adjusting Stud and Nut
4. Window Regulator Bolts

4. To control the down-travel of the quarter window (fully lowered position), adjust the down travel stop. The down stop is located in the sash channel cam on "B-C 67" and "C-57" styles ("5", Fig. 7-43), and in the front guide on the remaining "B-C" hardtop styles as shown in Figure 7-44.

REAR QUARTER WINDOW REGULATOR (MANUAL OR ELECTRIC)— "B-C 47-57-67-87" Styles

Removal and Installation

1. Remove rear quarter trim assembly. On "67" styles remove inner panel access hole cover. On "47-57-87" styles, remove inner panel water deflector.

2. On "67" styles with electric window regulators, disconnect wire harness at in-line connector located inboard of inner panel. **DO NOT** attempt to disconnect permanent connector at motor. On "47-57-87" styles, disconnect wire harness connector at motor.

3. If window regulator failed with window in full-up position, proceed as follows:

   a. Prop window in full-up position.

   b. Remove window regulator attaching bolts "6", (Fig. 7-43).

   c. Disengage regulator lift arm roller from lower sash channel cam at rear of cam and remove regulator through access hole.

4. If regulator failed with window in full-down position, proceed as follows:

   a. Remove regulator attaching bolts "6" (Fig. 7-43).

   b. Supporting window, move regulator forward to disengage lift arm roller at front of lower sash channel cam.

   NOTE: On styles with down stop in cam ("5", Fig. 7-43), remove stop prior to disengaging regulator roller.

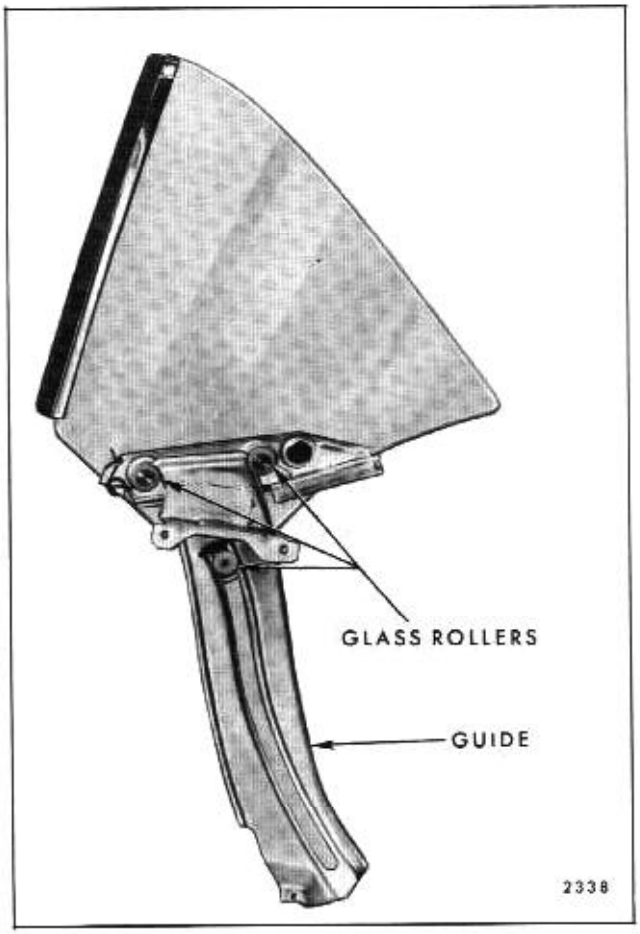


Fig. 7-34—Rear Quarter Window and Guide Assembly - "F" Styles

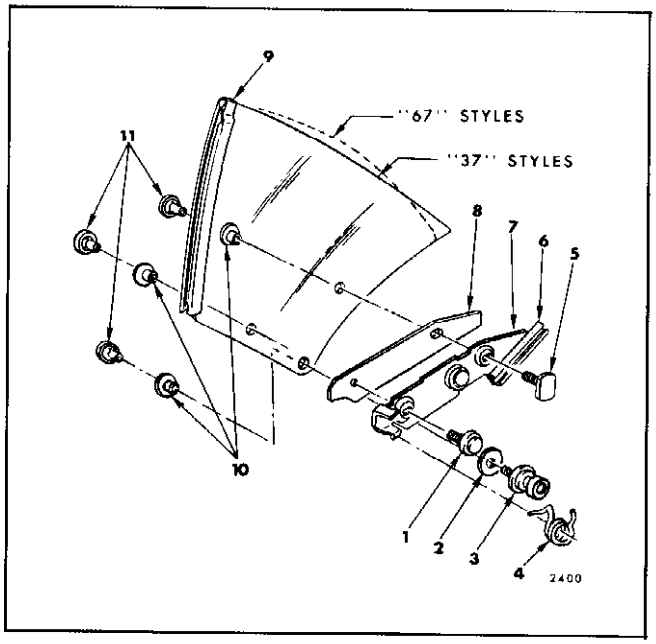


Fig. 7-35—Rear Quarter Window Assembly - "F" Styles

1. Lower Sash Channel Front Roller
2. Guide Roller Washer (Rubber)
3. Guide Lower Roller
4. Guide Roller Spring
5. Glass to Sash Channel Bolt
6. Lower Sash Channel Cam
7. Lower Sash Channel
8. Lower Sash Channel Filler
9. Vertical Sash Channel
10. Glass to Sash Channel Bushing
11. Glass to Sash Channel Nut

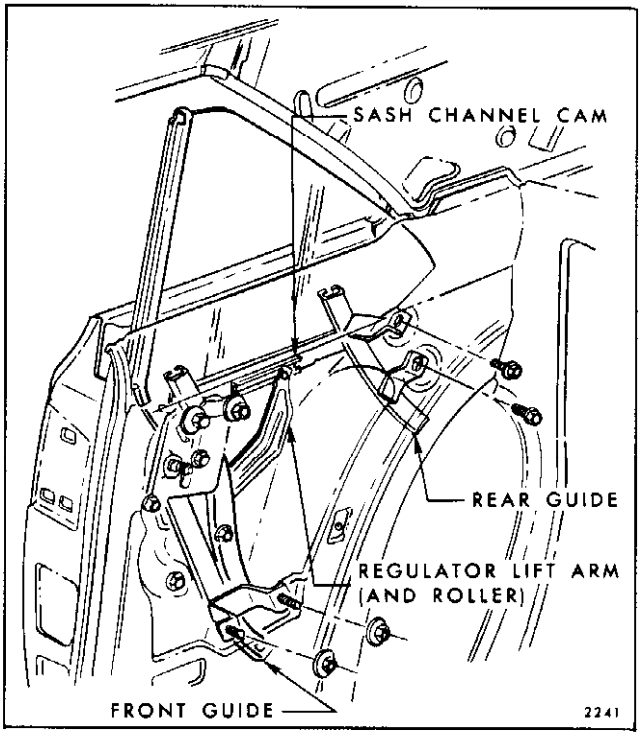


Fig. 7-36—Rear Quarter Hardware - "X-37" Style

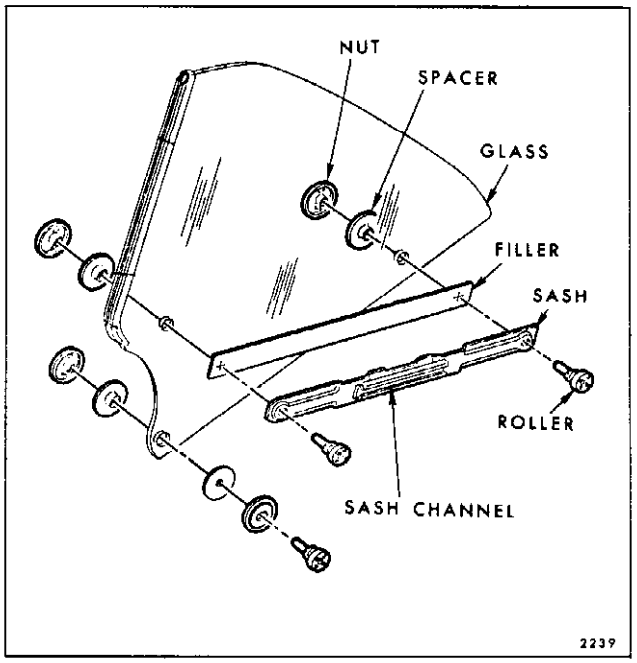


Fig. 7-37—Rear Quarter Window Assembly - "X-37" Style

c. Manually raise window and prop in full-up position.

d. Remove regulator through access hole.

5. To install, reverse removal procedure.

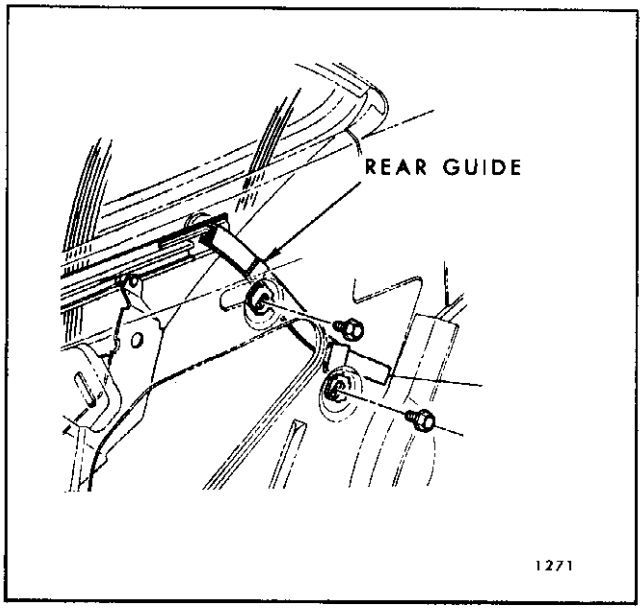


Fig. 7-38—Rear Quarter Window Rear Guide Assembly - "Z-37" Styles

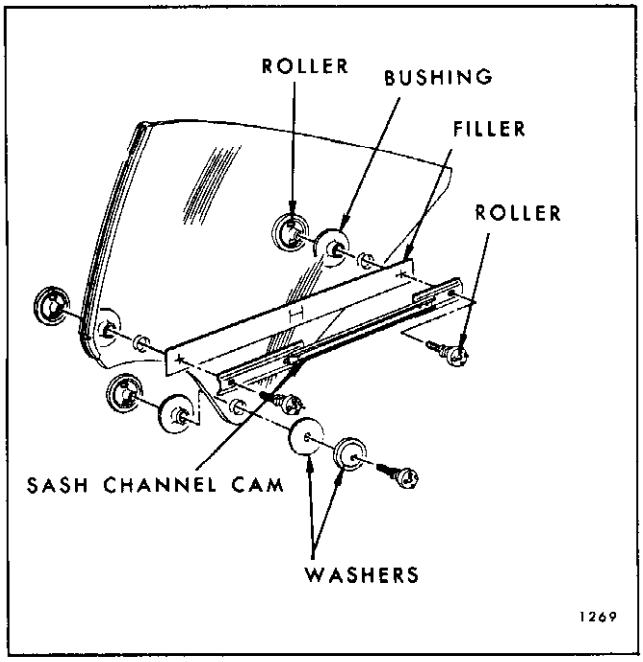


Fig. 7-39—Rear Quarter Window Assembly - "Z-37" Styles

REAR QUARTER WINDOW REGULATOR ASSEMBLY (MANUAL OR ELECTRIC)— "A, E, F, X & Z" Hardtop and Convertible Styles

Removal and Installation

1. Remove rear quarter trim assembly and inner panel access hole cover (or water deflector). On electric styles, disconnect feed wire from regulator or "in-line" connector.

2. On "E-87" styles, remove rear quarter window. On "A, X & Z-37" styles, prop window in a full-up position.

3. On "Z-37" styles, remove rear quarter window rear guide assembly.

4. On "E-47" styles, disconnect regulator lift arm from quarter window as described in "Rear Quarter Window Assembly" (see index).

5. Remove regulator to quarter inner panel attaching bolts, disengage lift arm roller from sash channel cam and remove regulator.

   NOTE: If necessary, loosen upper attaching points of front guide to gain additional clearance.

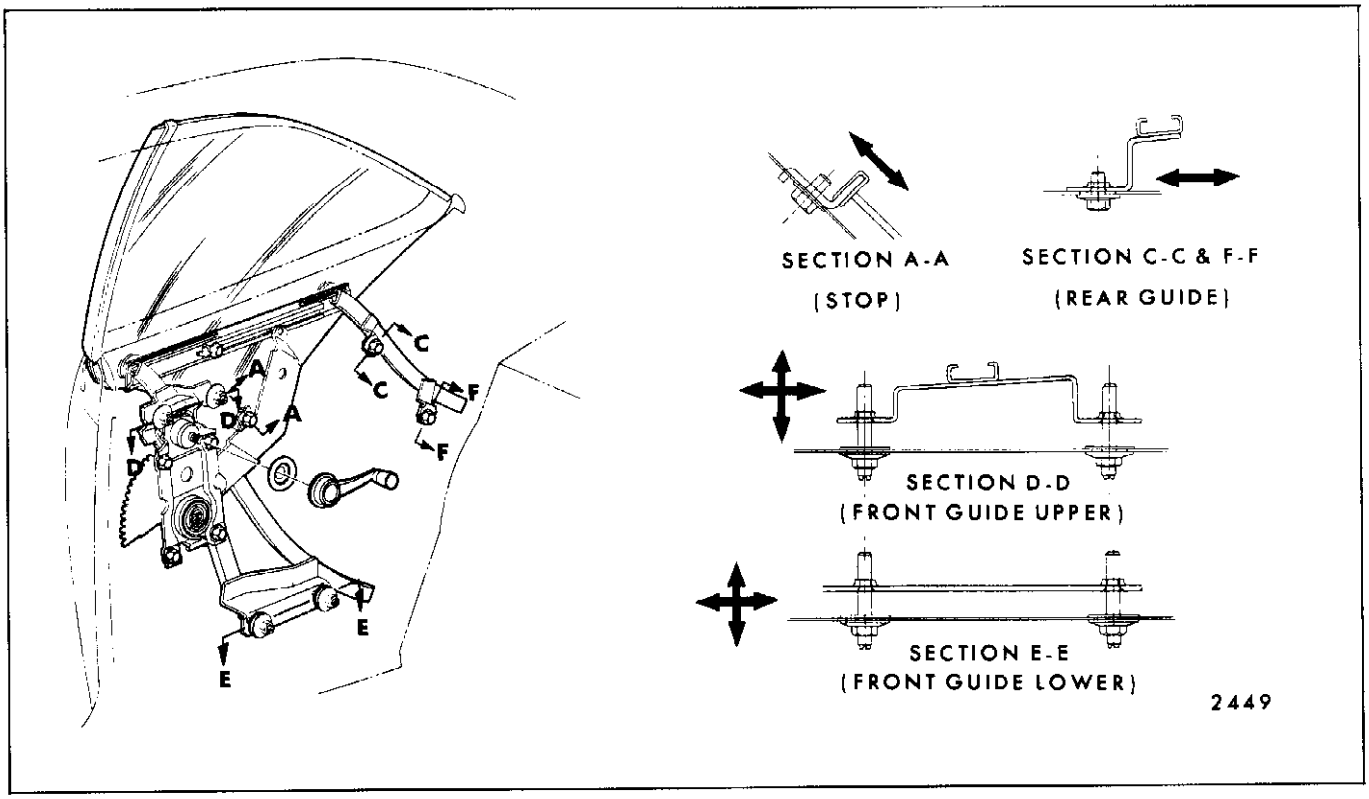


Fig. 7-40—Rear Quarter Window Adjustments - "Z-37" Styles (Arrows Indicate Adjustment Direction Available)

6. To install, reverse removal procedure.

NOTE: The procedure for removing the electric motor from the regulator is described under "Door and/or Quarter Window Regulator Electric Motor Assembly".

REAR QUARTER WINDOW FRONT GUIDE—"B-C 47-57-67-87" Styles

Removal and Installation

1. Remove rear quarter trim assembly and inner panel water deflector or access hole cover.
2. With window in full-up position, remove front guide upper and lower adjusting stud nuts ("2" and "3", Fig. 7-43).
3. Pull guide downward and rearward to disengage from rollers on window assembly and remove guide through access hole.
4. To install, reverse removal procedure.

REAR QUARTER WINDOW FRONT GUIDE ASSEMBLY—"A-X-Z" Hardtop and Convertible Styles and "E-87" Styles

Removal and Installation

1. Remove rear quarter window assembly.
2. On "A, X & Z" styles, remove front guide upper and lower adjusting stud nuts (refer to Fig. 7-25 and 7-26. These illustrations are for "A" Bodies but are indicative of all styles).

NOTE: As explained under "Rear Quarter Window Assembly" - Removal and Installation for "E" bodies, the front guide attachments must be removed and guide lowered prior to removal of window assembly.

3. Disengage guide adjusting studs from slots in quarter inner panel and remove guide through access hole on all except "E" styles. On "E" bodies, remove front guide between rear quarter inner and outer panels at belt.
4. To install, reverse removal procedure. Adjust guide for proper window operation as specified under "Rear Quarter Window Adjustments".

NOTE: The rear channel of the front guide of most styles is equipped with an adjustable lower stop to control height of quarter window in the lowered position (see Fig. 7-44).

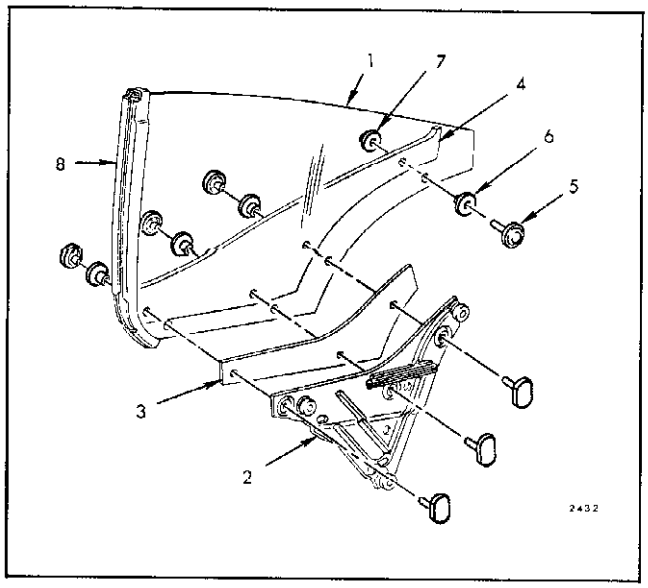


Fig. 7-41—Rear Quarter Window Assembly - "B-87" Styles

1. Rear Quarter Window
2. Lower Sash Channel Assembly
3. Lower Sash Channel Inner Filler
4. Lower Sash Channel Outer Filler
5. Bolt
6. Spacer
7. Nut
8. Front Vertical Sash Channel

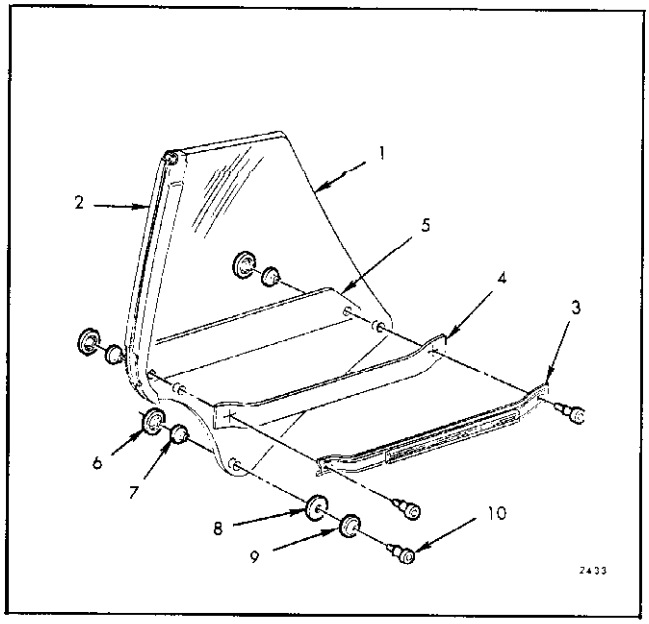


Fig. 7-42—Rear Quarter Window Assembly - "B-C-47-57-67" Styles

1. Rear Quarter Window
2. Front Sash Channel
3. Lower Sash Channel
4. Lower Sash Channel Inner Filler
5. Lower Sash Channel Outer Filler (Not on "B-57" Styles)
6. Nut
7. Spacer (Rubber)
8. Washer (Rubber)
9. Washer (Metal)
10. Roller

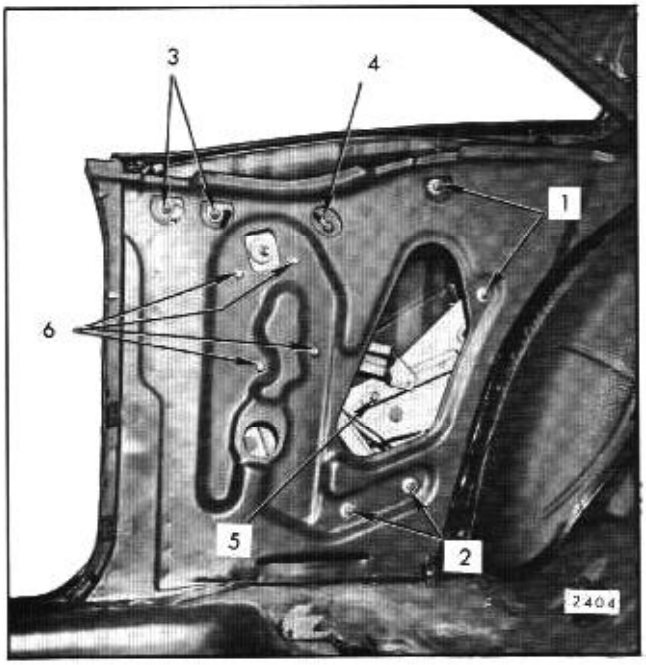


Fig. 7-43—Rear Quarter Hardware - "B-C" Coupe Styles

1. Rear Guide Adjusting Studs and Nuts
2. Front Guide Lower Adjusting Studs and Nuts
3. Front Guide Upper Adjusting Studs and Nuts
4. Window Upper Stop
5. Window Lower Stop ("B-C-67" and "C-57" Styles Only - See Figure 7-44 for remaining Coupe Styles)

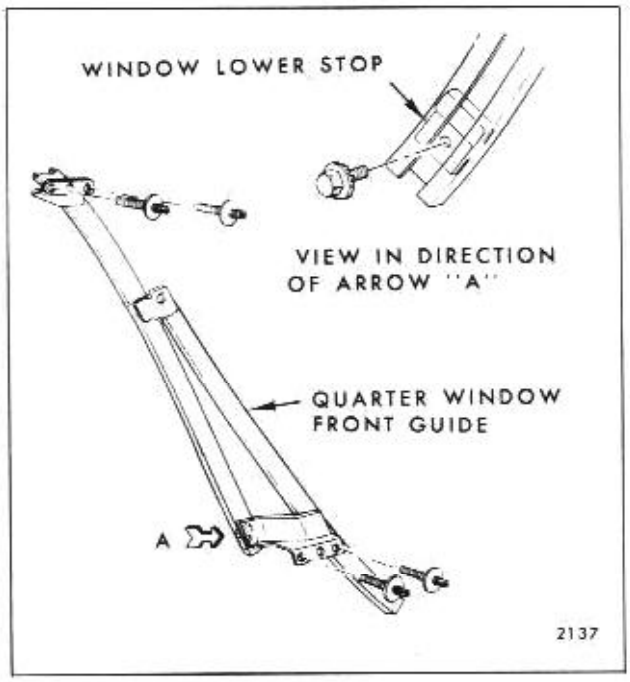


Fig. 7-44—Rear Quarter Window Lower Stop Adjustment - Styles so Equipped

REAR QUARTER WINDOW REAR GUIDE ASSEMBLY—"A-X-Z" Hardtop and Convertible Styles and "E-87" Styles

Removal and Installation

1. Remove rear quarter trim assembly and inner panel water deflector (or access hole cover).
2. As shown in Figures 7-36, 7-38, 7-25, 7-26 and all phantom views, rear guides are retained by two (2) bolts or adjusting studs. By providing a minimum of support for rear quarter window, these bolts or stud nuts can be removed and the guide disengaged from glass roller.
3. To install, reverse removal procedure. Adjust guide for proper window operation as specified under "Rear Quarter Window Adjustments".

REAR QUARTER WINDOW GUIDE ASSEMBLY—All "F" Styles

Removal and Installation

1. Remove rear quarter window regulator assembly.
2. Remove rear quarter window assembly.
3. Remove guide attaching nuts (3) and remove guide through large access hole (see Fig. 7-33).
4. To install, reverse removal procedure.

REAR QUARTER WINDOW GLASS RUN CHANNEL—"E-47" Styles

Removal and Installation

1. Remove rear quarter trim assembly and inner panel water deflector.
2. Remove lock pillar grille (see Fig. 7-32).
3. Remove run channel rear attachment (on inner panel - see Fig. 7-30) and forward attachment (under lock pillar grille).
4. With rear quarter window fully forward, remove glass run channel in a rearward motion.
5. To install, reverse removal procedure.

SECTION 8

REAR COMPARTMENT LID

INDEX

Subject	Page
Rear Compartment Lid Description	8-1
Lid - All Except Corvair	8-1
Engine Lid - Corvair	8-2
Front Panel - Oldsmobile and Buick "E" Body	8-3
Lid Hinge Strap	8-3
Torque Rod Adjustment	8-3
Engine Lid Support - Corvair	8-4
Lid Lock Cylinder - Chevrolet "B&X", Buick "A-B-C&E" and Oldsmobile "A&C" Styles	8-4
Lid Emblem and Lock Cylinder Assembly - Cadillac	8-4
Lid Lock Cylinder - Chevrolet "A&F", Pontiac "A&B" (Except 26657), Oldsmobile "B"	8-4
Lid Lock Cylinder - Pontiac 26657	8-5
Lid Lock Cylinder - Oldsmobile "E"	8-5
Lid Lock	8-6
Lid Lock Striker	8-6
Lid Lock Striker Engagement - All Except Corvair and Cadillac with Mechanical Closing Unit	8-6
Engine Lid Latch - Corvair	8-7
Engine Lid Latch Striker - Corvair	8-7
Lid Vacuum Unlocking System	8-7
Lid Vacuum Release Unit	8-7
Lid Mechanical Pull-Down Unit - Cadillac	8-8
Lid Mechanical Pull-Down Unit Cable - Cadillac	8-9
Lid Mechanical Pull-Down Unit Hydraulic Cylinder - Cadillac	8-9
Lid Mechanical Pull-Down Unit Adjustments - Cadillac	8-10
Lid Lock Electric Release Unit - Pontiac "A & B"	8-11
Electric Release Lock	8-11
Rear Compartment Weatherstrip - All Styles	8-11

REAR COMPARTMENT
All Styles Except Corvair

DESCRIPTION

The rear compartment lid employs two torque rods which are mounted between the hinge assemblies to act as a counterbalance and hold-open for the lid. Notches in the hinge rod support plate allow for the adjustment of the rods to increase or decrease lid operating effort.

The rear compartment lid lock employs a side-action snap-bolt mechanism that has provisions at the attaching locations for lateral adjustment. Up and down adjustment to correct lid locking effort is available at the striker attaching locations.

All styles use a single section cement-on type weatherstrip which is cemented to the rear compartment gutter completely around the lid opening.

REAR COMPARTMENT LID— All Styles Except Corvair

Removal and Installation

1. Open lid and place protective covering along edges of rear compartment opening to prevent damage to painted surfaces.

2. Where necessary, disengage wire harness from clips on hinge and rear compartment lid inner panel and remove wire harness.

3. On styles with rear compartment lid lock vacuum release option in compartment lid, disconnect vacuum hose from vacuum release unit and remove hose from lid.

4. On styles with rear compartment lid lock electric release option in compartment lid, disconnect feed wire at connector.

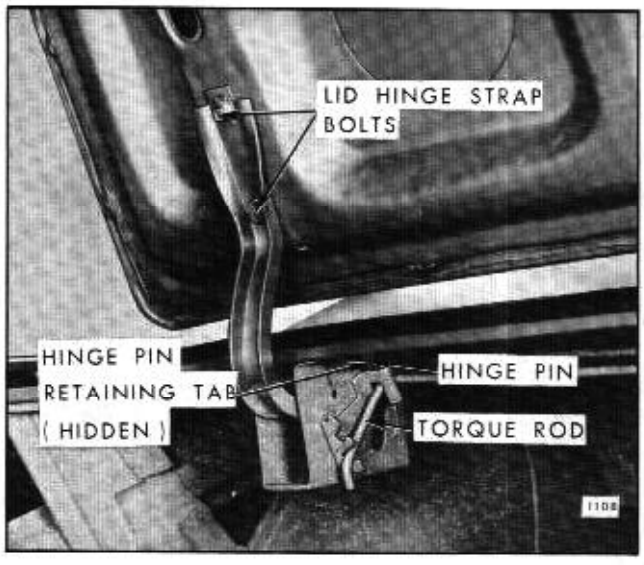


Fig. 8-1 —Rear Compartment Lid Attachment

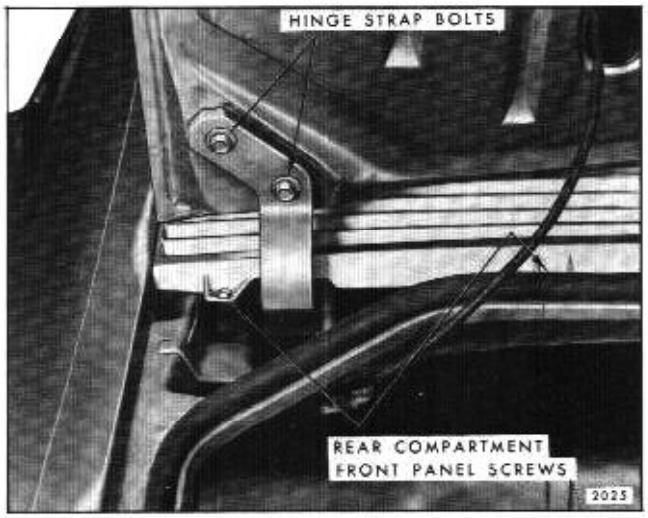


Fig. 8-2—Rear Compartment Lid Attachment

5. Mark location of hinge straps on rear compartment lid inner panel.

6. With the aid of a helper, remove lid attaching bolts and remove lid (Fig. 8-1 for "A, B, C, X and 69347 "E" Styles, Fig. 8-2 for 39487, 39687 and 49487 "E" Styles and Fig. 8-3 for "F" Styles).

7. To install, align compartment lid within scribe marks and reverse removal procedure.

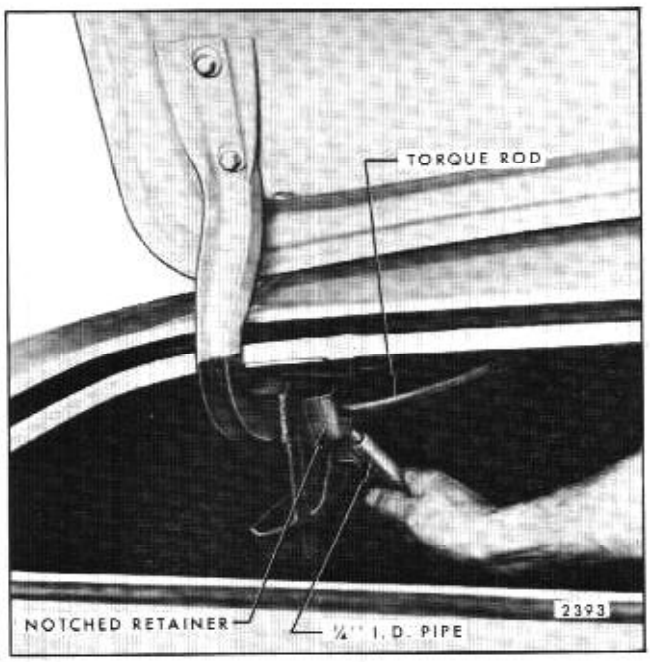


Fig. 8-3—Rear Compartment Torque Rod Adjustment - Chevrolet "F" Styles

Adjustments

1. Forward, rearward and side-to-side adjustments of lid are provided at hinge strap attaching points. The lid can be raised or lowered at hinge bolt locations by the use of shims installed between inner panel and hinge strap.

2. The lock and striker are adjustable for correct lock-to-striker engagement and proper lid closing effort.

ENGINE COMPARTMENT LID—Corvair Styles

Removal and Installation

1. Raise lid and place protective covering over adjacent paint finish.

2. Mark position of hinge straps on lid inner panel.

3. With the aid of a helper holding lid in open position, remove lid support attaching bolts from lid (See Fig. 8-4).

4. With lid properly supported, remove hinge strap attaching bolts and remove engine compartment lid from body (See Fig. 8-4).

5. To install, reverse removal procedure, aligning hinge straps within scribe marks.

Adjustments

1. To adjust the engine compartment lid forward,

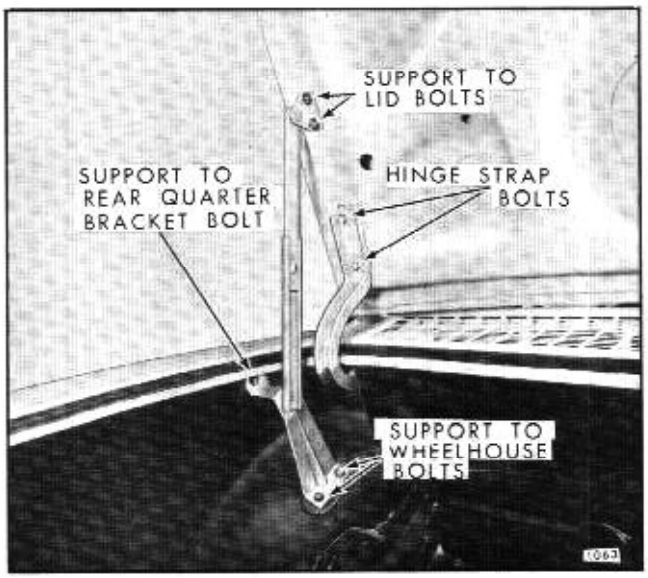


Fig. 8-4—Engine Compartment Lid Support

rearward or sideways in the body opening, loosen hinge strap-to-lid attaching bolts and shift lid to required position, then tighten bolts.

2. The lid latch and striker are adjustable for proper engagement when closing lid.

REAR COMPARTMENT FRONT PANEL—39487, 39687 and 49487 "E" Styles

Removal and Installation

1. Raise rear compartment lid and remove lower screws of panel (see Fig. 8-2).
2. Remove back window lower reveal molding.
3. Remove upper screws of rear compartment front panel and remove panel.
4. To install, reverse removal procedure.

REAR COMPARTMENT LID HINGE STRAP

Removal and Installation

1. Place protective covering over upper portion of rear compartment opening and provide support for lid on side from which hinge strap is to be removed.
2. Disengage any wire harness or vacuum hose that may interfere with hinge strap removal.
3. Mark location of hinge strap on lid inner panel and remove bolts securing hinge strap to lid.
4. Disengage torque rod from notched retainer on inboard face of opposite side hinge box. On "B, C & E" Styles, except 39487, 39687 and 49487 use 1/2" I.D. pipe; on "A & X" Styles use tool J-21412 as shown in Figure 8-5.

   On "E" 39487, 39687 and 49487 Styles use tool J-22291 as shown in Figure 8-6. On "F" Styles use 1/4" I.D. pipe as shown in Figure 8-3.
5. Disengage opposite end of torque rod from movable portion of hinge strap and remove rod.
6. On all styles except "E & F", bend up hinge pin retaining tab and drive out pin. Remove hinge strap from body.
7. On "E & F" Styles the hinge strap is retained to the hinge with a hollow-nosed rivet. To remove rivet, drilling is required.
8. To install strap to hinge, reverse removal procedure.

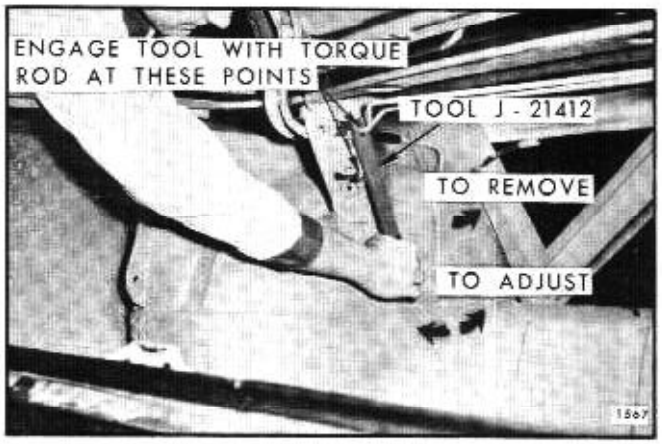


Fig. 8-5 — Rear Compartment Torque Rod Adjustments

REAR COMPARTMENT TORQUE ROD ADJUSTMENT

The amount of effort required to open and close the rear compartment lid is determined by the position of the torque rods in the adjusting plate hinge box notches. If the torque rod is located in the lowest notch, the amount of effort required to open the lid is the greatest and the amount of effort required to close the lid is the least. If the torque rod is located in the top notch, the amount of effort to open the lid is the least and the amount of effort to close the lid is the greatest (Fig. 8-1).

NOTE: It is not necessary to adjust the left and right hand torque rods at the same time or to the same final position (notch).

On "B & C" and 69347 "E" Styles adjust rod with a length of 1/2" I.D. pipe. On "A & X" Styles use tool J-21412 as shown in Figure 8-5. If tool is not available, fabricate equivalent as shown in Figure 8-7. On 39487, 39687 and 49487 "E" Styles, use

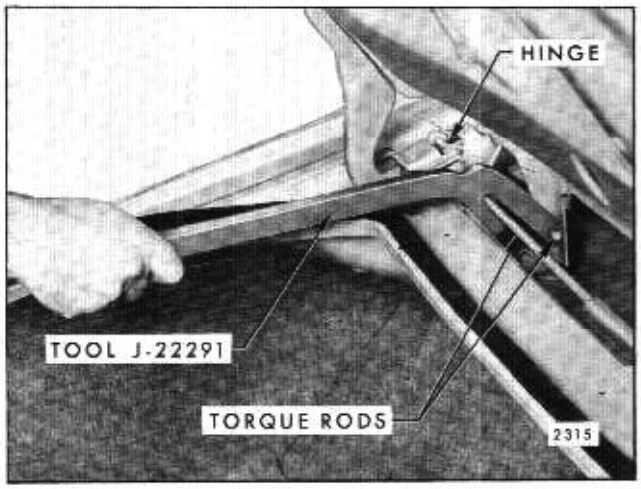


Fig. 8-6 — Usage of Tool J-22291

tool J-22291 as shown in Figure 8-6. If tool is not available, fabricate equivalent as shown in Figure 8-8. On "F" Styles use 1/4" I.D. pipe as shown in Figure 8-3.

ENGINE COMPARTMENT LID SUPPORT—Corvair Styles

Removal and Installation

1. Prop engine compartment lid in a full open position.

2. Remove the two attaching bolts securing support to lid, the two bolts securing support to wheelhouse and the single bolt securing support to rear quarter bracket (see Fig. 8-4) and remove support from body.

3. To install, reverse removal procedure. To insure good operation, lubricate telescoping channels of support with Lubriplate or its equivalent.

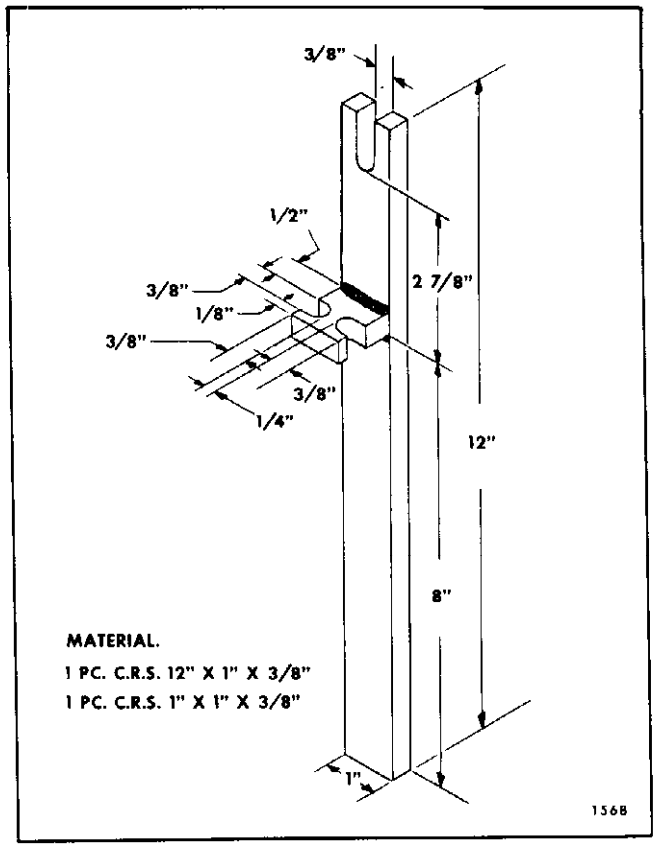


Fig. 8-7—Rear Compartment Torque Rod Adjusting Tool

REAR COMPARTMENT LID LOCK CYLINDER Chevrolet "B & X" Styles, Buick "A, B, C, E" Styles Oldsmobile "A & C" Styles

Removal and Installation

1. Open rear compartment lid. Remove lock cylinder retainer attaching screw(s) located on lid inner panel below lock cylinder and adjacent to lid hemming flange (Fig. 8-9).

2. Pull retainer downward to disengage from lock cylinder and remove. Lock cylinder and shaft can now be removed from compartment lid outer panel.

3. To install, reverse removal procedure. Make certain lock cylinder shaft engages with lock and that gasket mates properly with compartment lid outer panel to form a watertight seal. Check lock for proper operation.

REAR COMPARTMENT LID EMBLEM AND LOCK CYLINDER ASSEMBLY—All Cadillac Styles

Removal and Installation

1. Open rear compartment lid. Remove access hole cover screws at lower rear of lid inner panel and remove cover.

2. Working through access hole, remove stud nuts securing compartment lid emblem and lock cylinder assembly and lock cylinder guard.

3. Remove guard through access hole, then remove compartment lid emblem and lock cylinder assembly from lid outer panel (Fig. 8-10).

4. To remove lock cylinder from emblem, remove lock cylinder shaft and spring and rotate cylinder counter-clockwise.

5. To install, reverse removal procedure. Make certain that emblem gasket mates properly with lid outer panel and that emblem stud holes are sealed to protect against waterleaks.

REAR COMPARTMENT LID LOCK CYLINDER—Chevrolet "A & F", Pontiac "A & B" (Except 26657) and Oldsmobile "B"

Removal and Installation

1. Open rear compartment lid and remove screw securing lock cylinder retainer to rear compartment lid lock support (Fig. 8-11).

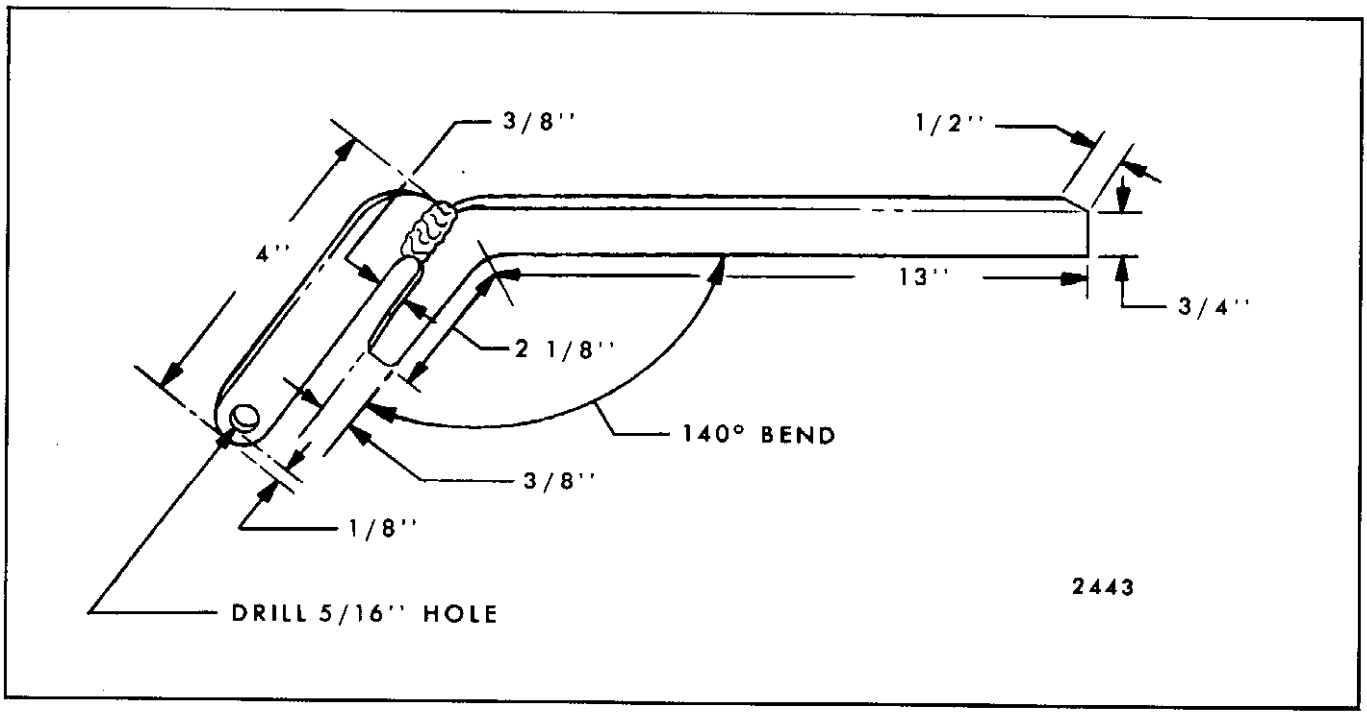


Fig. 8-8—Tool J-22291 "E" Body Torque Rod Adjusting Tool

2. Slide retainer laterally to disengage it from lock cylinder and remove lock cylinder assembly and sealing gasket from rear end panel.

3. To install, reverse removal procedure.

REAR COMPARTMENT LID LOCK CYLINDER ASSEMBLY— Pontiac 26657 Styles

Removal and Installation

1. Open rear compartment lid. Working through access holes provided in rear end panel, remove nuts securing lock cylinder assembly to studs on rear end panel molding.

2. Move lock cylinder and shaft assembly forward to enable disengaging shaft from cylinder and remove shaft and cylinder from body.

3. To install, reverse removal procedure.

REAR COMPARTMENT LID LOCK CYLINDER ASSEMBLY— Oldsmobile "E" Styles

Removal and Installation

1. Open rear compartment lid. Remove nuts marked "1" securing lock cylinder assembly to retainer (Fig. 8-12). Remove cylinder and shaft assembly from outer rear compartment lid.

2. To remove cylinder and shaft assembly from escutcheon, remove nuts marked "2" (Fig. 8-12).

3. To install, reverse removal procedure.

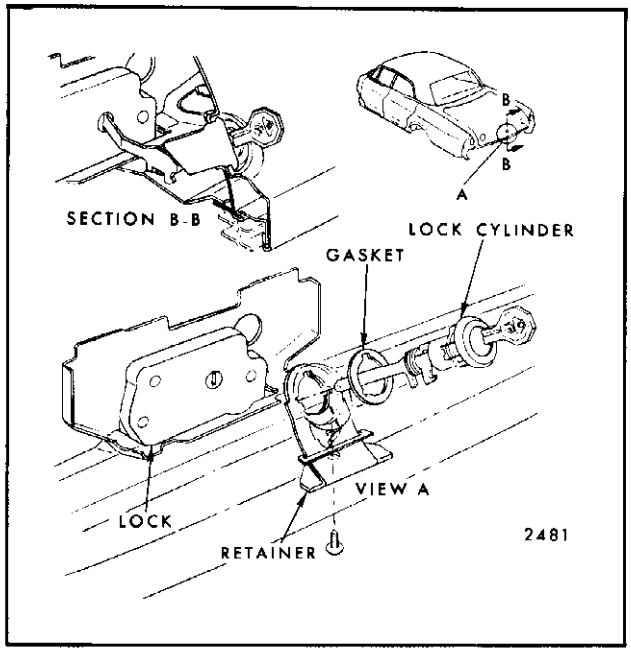


Fig. 8-9—Rear Compartment Lid Lock Cylinder - Chevrolet "B" Shown

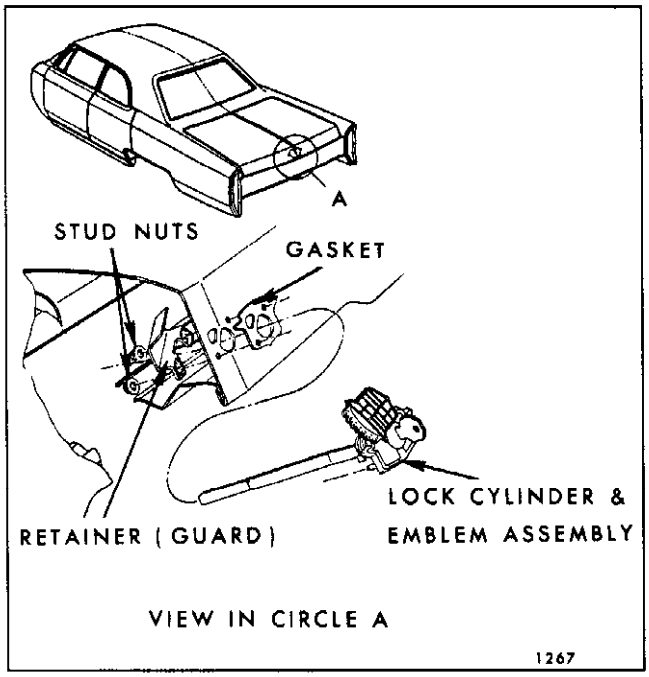


Fig. 8-10 — Rear Compartment Lid Lock Cylinder and Emblem Assembly

REAR COMPARTMENT LID LOCK

Removal and Installation

1. Remove rear compartment lid lock cylinder as previously described.
2. On styles so equipped, remove rear compartment lid vacuum release unit.
3. Remove rear compartment lid lock attaching bolts and remove lock from lid (Fig. 8-13 and 8-14).
4. To install, reverse removal procedure. Check lock engagement with striker and make necessary lateral adjustments before securing attaching bolts.

REAR COMPARTMENT LID LOCK STRIKER

Removal and Installation

1. Open rear compartment lid. Mark vertical position of striker by scribing a line on striker at top of striker support or at base of lid inner panel.
2. Remove striker attaching screws and remove striker (Fig. 8-13 and Fig. 8-14).
3. To install, reverse removal procedure. Close lid to check lock to striker engagement and make any necessary vertical adjustments before tightening striker screws.

REAR COMPARTMENT LID LOCK STRIKER ENGAGEMENT—All Styles Except Corvair and Cadillac Styles with Mechanical Closing Unit Option

IMPORTANT: Since the rear compartment lock frame acts as a guide when entering the striker, make sure rear compartment lid is properly positioned in body opening before performing striker engagement check.

1. Insert a small quantity of modeling clay on frame of lock at both sides of the lock bolt (Figs. 8-13 and 8-14). Close lid with moderate force.

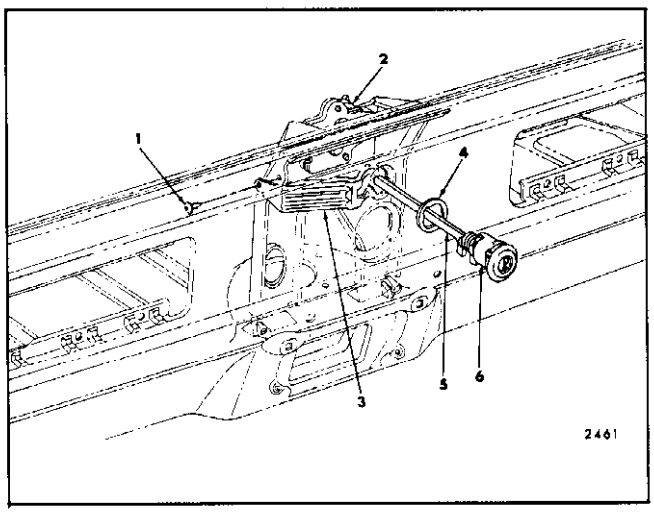


Fig. 8-11 — Rear Compartment Lid Lock Cylinder Assembly - Chevrolet "F" Style Shown

1. Retainer Attaching Screw
2. Lock
3. Retainer
4. Gasket
5. Shaft
6. Cylinder

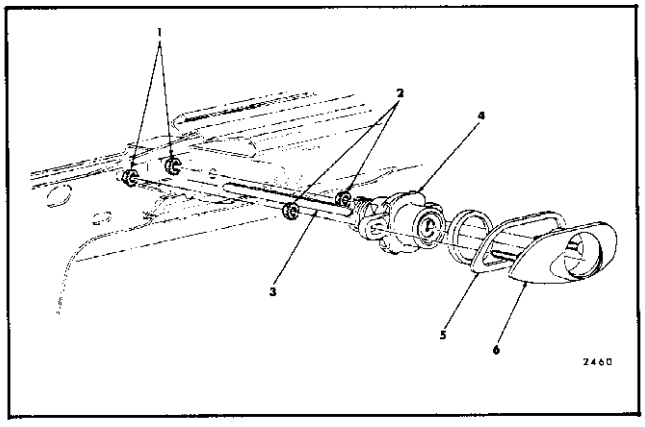


Fig. 8-12 — Rear Compartment Lid Lock Cylinder Assembly - Oldsmobile "E" Style Shown

1. Retainer Attaching Nuts
2. Cylinder Attaching Nuts
3. Shaft
4. Cylinder
5. Gasket
6. Escutcheon

2. Open lid and check amount of engagement of striker with lock frame as indicated by the compression of the clay. The striker bar impressions in the clay should be even on both sides of the lock frame. Where required, loosen striker or lock attaching screws; adjust lock sideways or striker up or down to obtain proper engagement; then, tighten screws.

ENGINE COMPARTMENT LID LATCH— All Corvair Styles

Removal and Installation

1. Raise engine compartment lid and mark position of latch.
2. Remove two bolts securing latch to engine compartment inner panel and remove assembly from body (See Fig. 8-15).
3. To install, align latch assembly within scribe marks and install attaching bolts. Check engagement of latch with striker and perform any adjustments that may be required.

ENGINE COMPARTMENT LATCH STRIKER—Corvair

Removal and Installation

1. Raise engine compartment lid and mark position of striker on rear end panel.
2. Remove attaching bolts and remove striker from body (See Fig. 8-16).
3. To install, align striker within scribe marks and install attaching bolts. Check engagement of latch within striker and perform any adjustments that may be required.

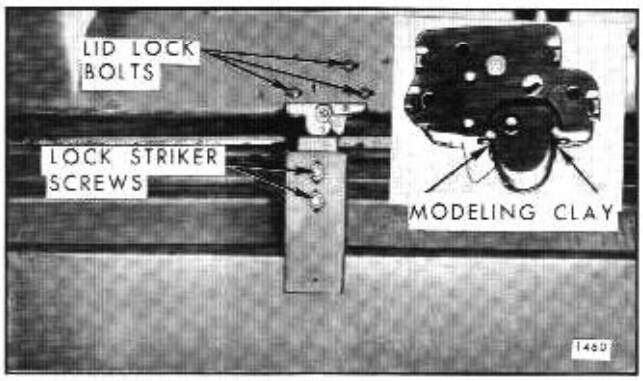


Fig. 8-13 — Rear Compartment Lid Lock and Striker

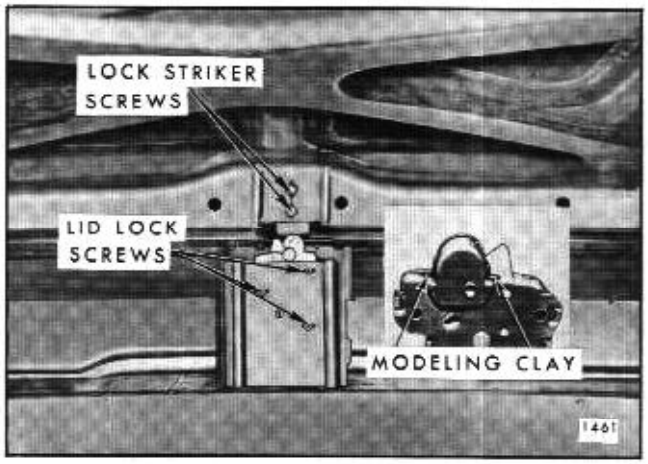


Fig. 8-14 — Rear Compartment Lid Lock and Striker

REAR COMPARTMENT LID VACUUM UNLOCKING SYSTEM— Styles Equipped with Option

The rear compartment lid vacuum lock system is a side-action snap-bolt type lock with a vacuum release unit attached that unlocks the lock upon the introduction of vacuum in the unit. The vacuum is stored in a storage tank located on the shroud panel and is controlled by a switch located in the instrument panel compartment box. By actuating the switch, vacuum enters into the line extending from the storage tank to the vacuum release unit, thereby unlocking the lid lock. As this is only an unlocking feature, the rear compartment lid must be closed manually.

REAR COMPARTMENT LID VACUUM RELEASE UNIT— Styles Equipped with Option

Removal and Installation

1. Remove rear compartment lid lock cylinder as previously described.

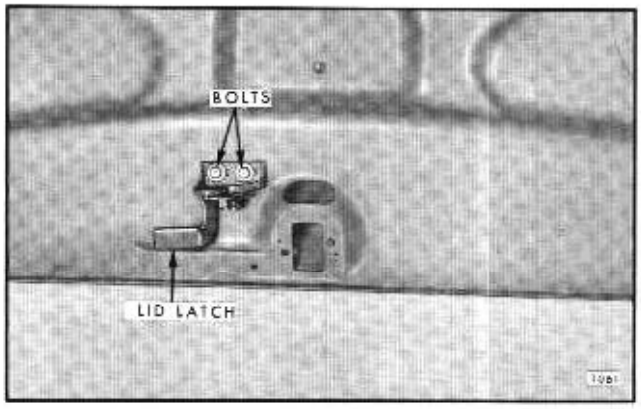


Fig. 8-15 — Engine Compartment Lid Latch Assembly

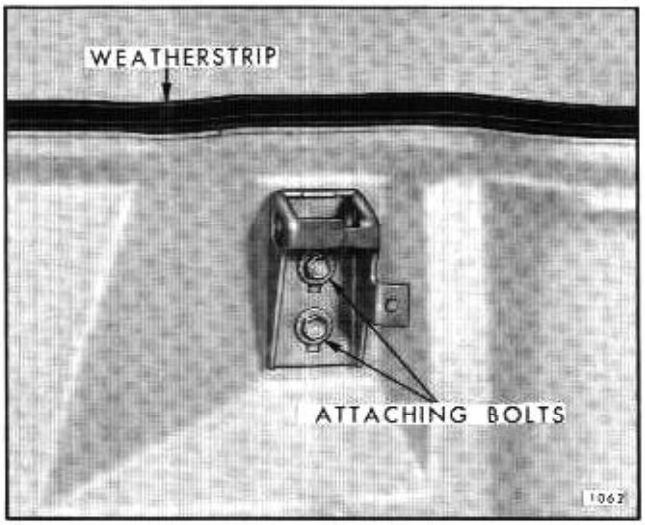


Fig. 8-16 — Engine Compartment Lid Latch Striker

2. Disconnect vacuum hose from vacuum release unit. Remove attaching bolts shown in illustration and remove vacuum unit (Figs. 8-17 and 8-18 for typical illustrations).

3. To install, reverse removal procedure. Check unit for proper operation.

REAR COMPARTMENT LID MECHANICAL PULL-DOWN UNIT—All Cadillac Styles

The rear compartment lid mechanical pull-down unit is used in conjunction with the opening unit. When the rear compartment lid is lowered to a point where the lid lock engages with striker, the mechanical closing unit pulls the lid the remaining distance (7/8") to the fully closed position.

To act as a safety feature and slow the action of the closing unit, a hydraulic cylinder is incorporated in the mechanism. The cylinder is attached to a bell crank at the right rear compartment lid hinge and to the closing unit by a cable. As the lid is lowered and the lock latches to the striker, but before the mechanical closing feature is tripped, the piston extends to a "full-out" position. Then, as the lid is lowered to actuate the mechanical closing feature, the piston compresses the fluid in the cylinder retarding the closing action of the spring in the hydraulic cylinder.

Removal and Installation

1. Open rear compartment lid. Remove mechanical pull-down unit cover panel. Depress striker slightly to relieve tension from cable and disengage clip securing cable to pull-down control arm (Fig. 8-19).

2. Disengage clip securing cable conduit to cable adjusting bracket and disengage cable and cable conduit from pull-down unit (Fig. 8-19).

3. Scribe (mark) position to pull-down unit on rear end panel and supports to facilitate reinstalling unit in same position. Remove pull-down unit attaching bolts and remove unit from body (Fig. 8-20).

4. To install, reverse removal procedure.

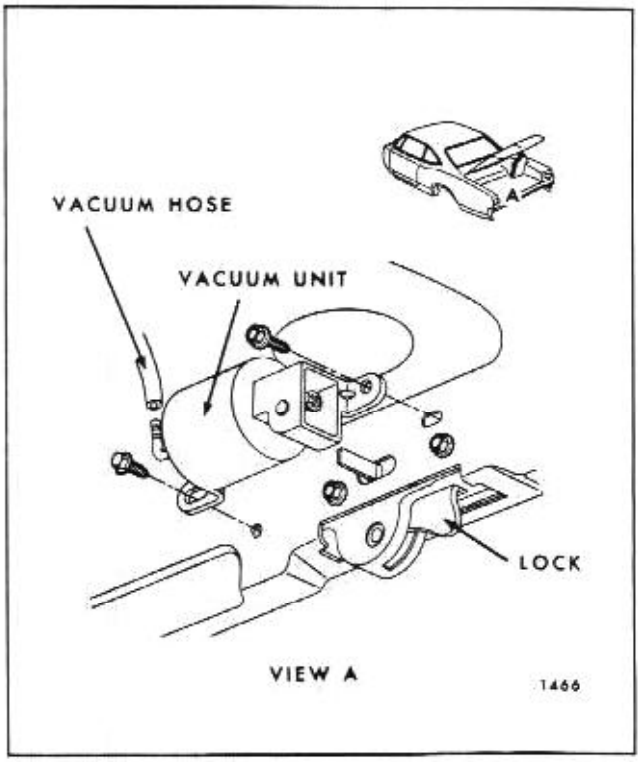


Fig. 8-17 — Rear Compartment Vacuum Release Unit

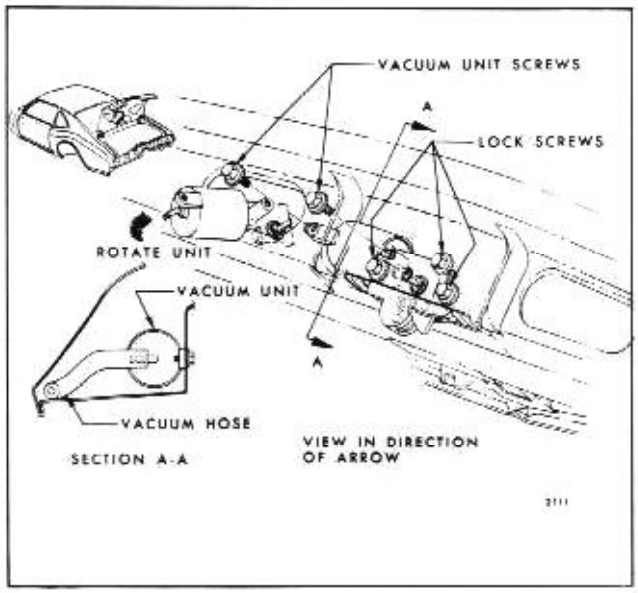


Fig. 8-18 — Rear Compartment Lid Vacuum Release Unit

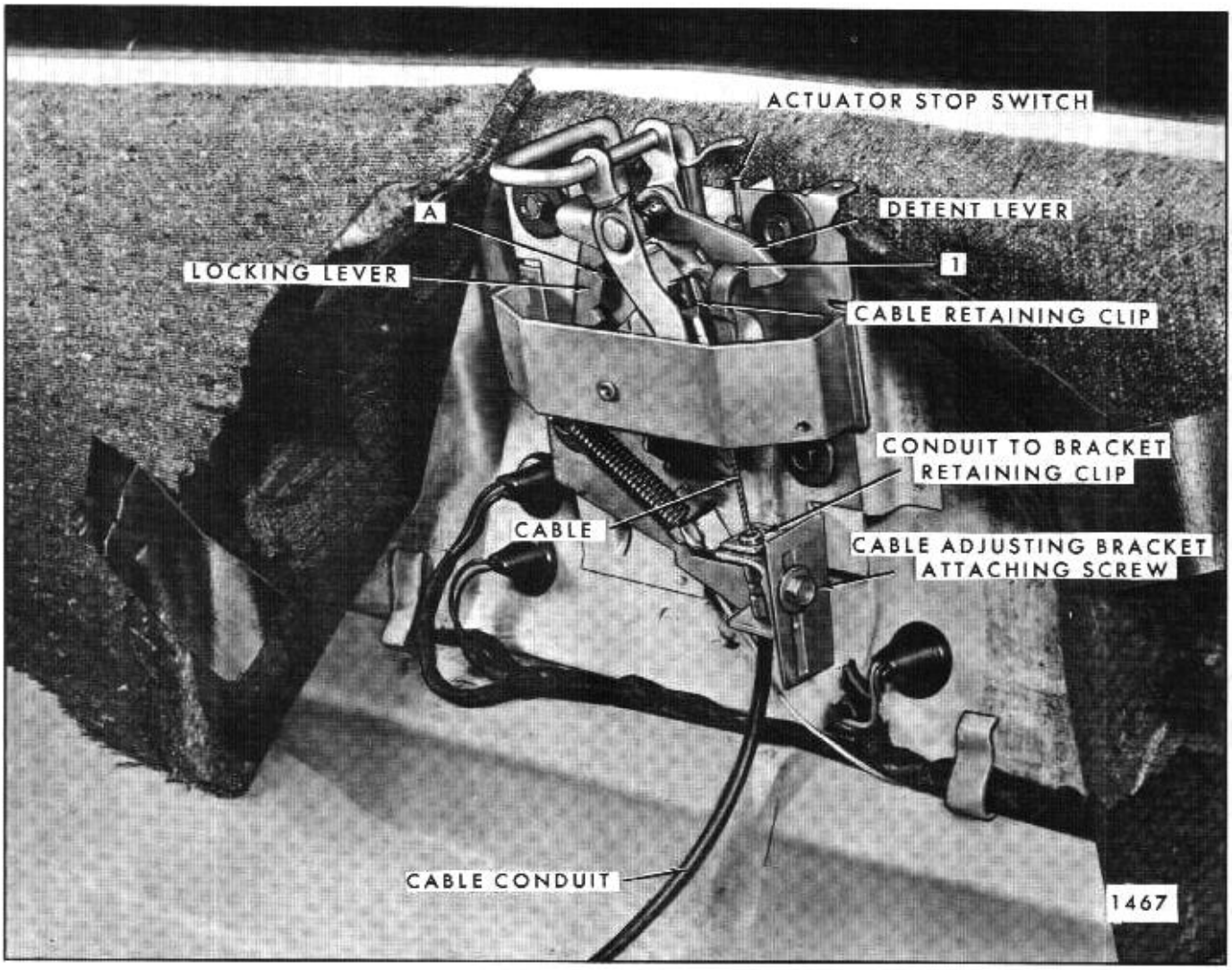


Fig. 8-19—Rear Compartment Lid Mechanical Pull-Down Unit

REAR COMPARTMENT LID MECHANICAL PULL-DOWN UNIT CABLE—All Cadillac Styles

Removal and Installation

1. On lower end of hydraulic cylinder pull clip away from hooked end of pull-down unit cable. Disengage cable from slot in cylinder. Disengage cable conduit retaining clip from support on wheelhouse and remove cable and conduit from support (Fig. 8-21).

2. Repeat this procedure at other end of cable, disengaging clips securing cable to pull-down unit and cable conduit to adjusting bracket (Fig. 8-19), and remove cable from body.

3. To install, reverse removal procedure.

REAR COMPARTMENT LID MECHANICAL PULL-DOWN UNIT HYDRAULIC CYLINDER—All Cadillac Styles

Removal and Installation

1. Disengage cable from lower end of hydraulic cylinder as described under "Rear Compartment Lid Mechanical Pull-Down Unit Cable - Removal".

2. Lift cylinder to disengage upper end from shoulder of shaft on link assembly and remove cylinder.

3. To install, reverse removal procedure.

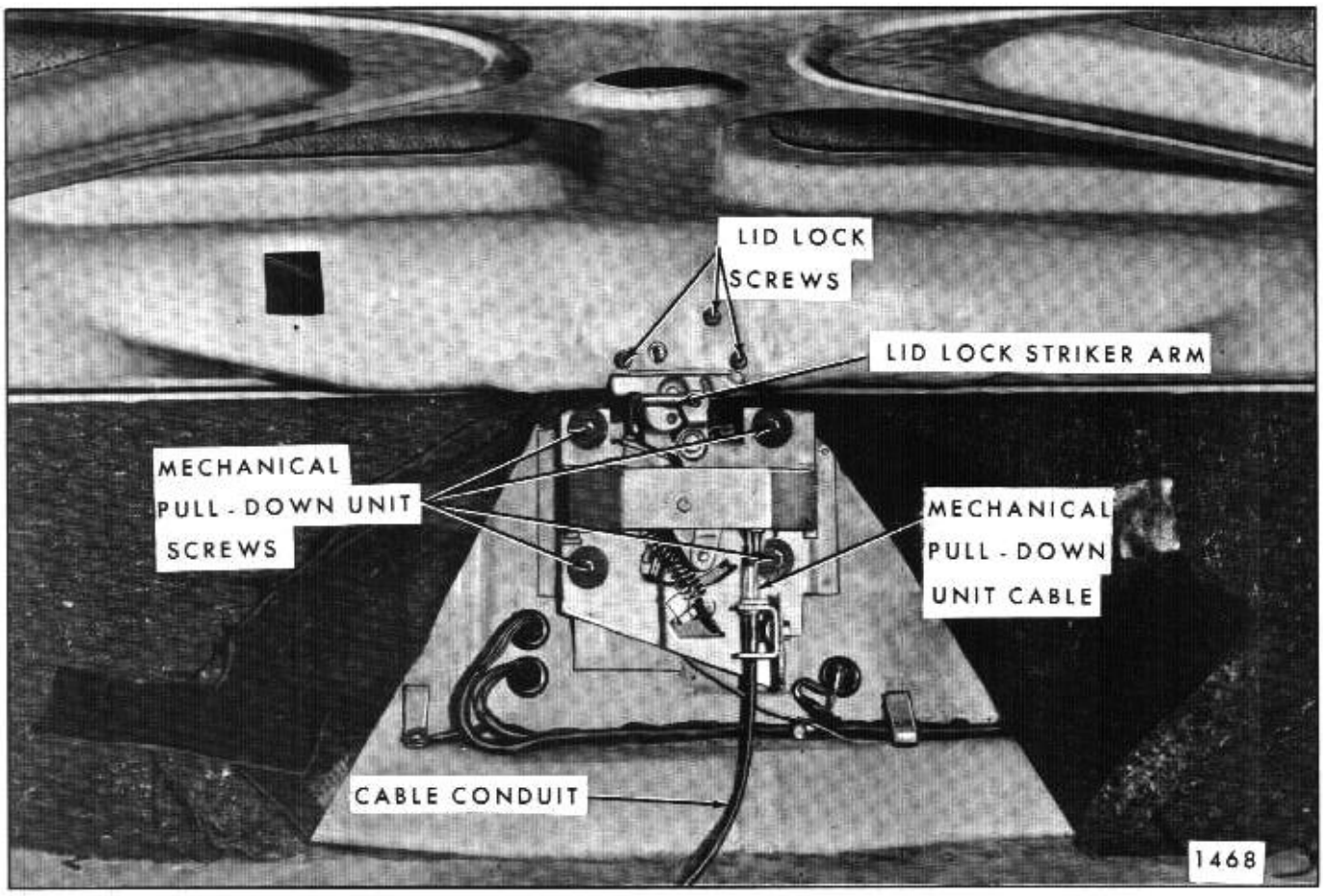


Fig. 8-20—Rear Compartment Lid Mechanical Pull-Down Unit

REAR COMPARTMENT LID MECHANICAL PULL-DOWN UNIT ADJUSTMENTS— All Cadillac Styles

To actuate the mechanical pull-down unit the rear compartment lid lock must properly engage the striker arm and depress the detent lever of the pull-down unit. This engagement can be checked by lowering the lid and visually checking lock and striker alignment. If adjustment is necessary, obtain lateral adjustment at lock attaching screw locations and "up or down" adjustment at pull-down unit attaching screw locations.

For proper operation of the pull-down unit, the pull-down unit cable must be adjusted to the proper tension. If the cable has too much tension it will not allow the pull-down unit to return to its full-up position and "cock". This is apparent when as the lid begins to lower, so does the pull-down unit.

Too little tension in the cable results in a lessening of pull-down effort in the unit and, consequently, a misaligned (high) rear compartment lid.

To increase cable tension, position hydraulic cylinder end of cable in the upper slot on the lower end of the cylinder ("1" in Fig. 8-21). If more tension, or finer adjustment, is required, loosen cable adjusting bracket attaching screw (Fig. 8-19). Adjust bracket downward (to increase cable travel) and tighten attaching screw.

To decrease cable tension, position hydraulic cylinder end of cable in lower slot on hydraulic cylinder ("2" in Fig. 8-20). For finer adjustment, or to lessen tension still more, loosen cable adjusting bracket attaching screw (Fig. 8-19). Adjust bracket upward to desired position and tighten attaching screw.

IMPORTANT: The lack of lubrication between the toggle and the detent lever ("1", Fig. 8-19) can greatly increase the effort required to trip (unlock) the pull-down unit. Therefore, make certain point of contact between these two levers is lubricated with 630 AAW Lubriplate or its equivalent.

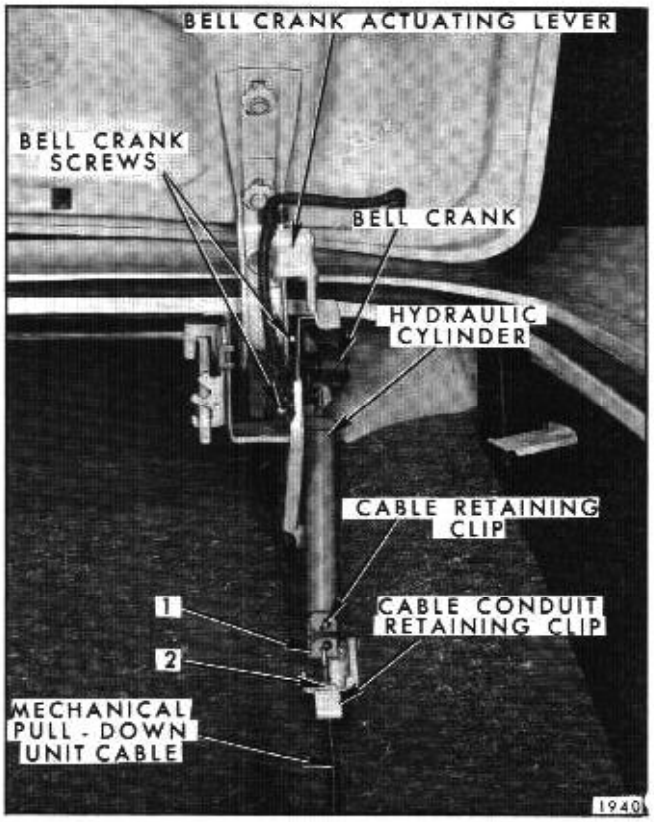


Fig. 8-21 — Mechanical Pull-Down Unit Hydraulic Cylinder

REAR COMPARTMENT LID LOCK ELECTRIC RELEASE UNIT— Pontiac "A & B" Option

Rear compartment lid lock electric release unit option on Pontiac "A & B" Styles is a side-action snap-bolt type lock with an electric release unit attached. The release unit is controlled by a switch located in the instrument panel compartment box. As this is only an unlocking feature, the rear compartment lid must be closed manually.

REAR COMPARTMENT LID LOCK ELECTRIC RELEASE OPTION

Removal and Installation

1. Open rear compartment lid. Remove rear compartment lid lock cylinder and shaft as previously described.

2. Remove bolts securing rear compartment lid lock assembly to rear compartment lid anchor plate (Fig. 8.22).

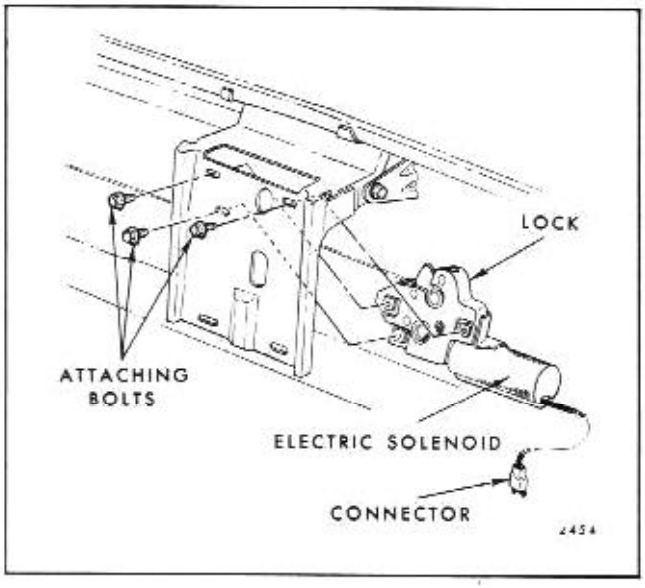


Fig. 8-22 — Rear Compartment Electric Release Unit

3. Disconnect electric feed wire at connector.

4. Remove lock and electric release assembly.

5. To install, reverse removal procedure.

REAR COMPARTMENT WEATHERSTRIP— All Styles

Removal

1. Separate "butt" ends of weatherstrip at rear compartment opening (Fig. 8-23).

2. Using a flat-bladed tool, carefully disengage weatherstrip from its cemented foundation in gutter completely around opening and remove weatherstrip from body.

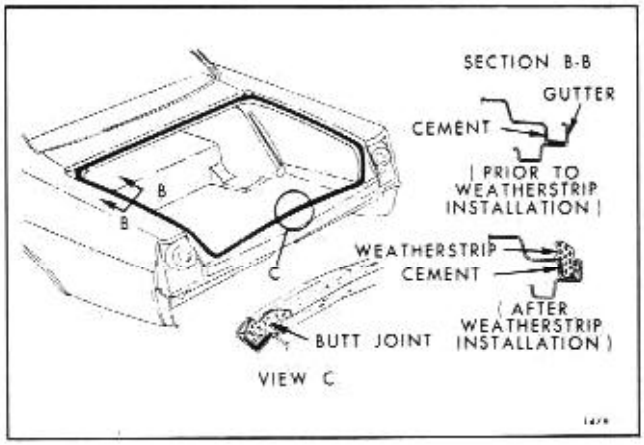


Fig. 8-23 — Rear Compartment Weatherstrip Assembly

Installation

1. Clean out-gutter around entire rear compartment opening to provide a clean cementing surface.

2. Apply (brush) a continuous coat of black weatherstrip adhesive to surfaces of the rear compartment gutter.

3. Using a flat-bladed tool, such as a putty knife, insert weatherstrip into gutter starting with one end of weatherstrip at rear center of gutter and working completely around gutter.

4. If a new weatherstrip is being installed, trim end to form a butt joint at rear center of opening. Brush weatherstrip adhesive (black) on both ends of weatherstrip and secure ends together to form a butt joint.

5. Using a pressure type applicator, apply weatherstrip adhesive (neoprene type) between weatherstrip and outer surface of gutter completely around opening to assure a watertight seal.

6. Roll or press weatherstrip to aid in obtaining a good cement bond. Allow sufficient time for cement to set before closing rear compartment lid.

SECTION 9
TAIL GATE

INDEX

Subject	Page
Description	9-1
Inner Panel Cover	9-1
Inner Panel Water Deflector	9-1
Inner Panel Access Hole Covers	9-2
Hinge Assembly	9-2
Support Assemblies	9-2
Tail Gate Assembly	9-3
Window Assembly - Manual or Electric	9-4
Window Regulator - Manual or Electric	9-5
Window Electric Regulator Motor Assembly	9-5
Window Regulator Outside Handle - Manual or Electric	9-7
Window Lower Glass Run Channels	9-7
Jamb Switch - Electric Styles	9-8
Remote Control Inside Handle - "B" Styles	9-9
Lock Remote Control Assembly	9-9
Lock Assembly	9-9
Lock Striker	9-10
Lock Striker Adjustments	9-11
Torque Rod	9-11
Window Inner and Outer Strip Assemblies	9-12
Tailgate Bottom Drain Hole Sealing Strips	9-12
Opening Weatherstrip	9-12
Upper Glass Run Channel - "A & B" Body	9-13
Upper Glass Run Channel - "X" Body	9-14

TAIL GATES
All Station Wagon Styles

DESCRIPTION

All tail gates incorporate either a manually or electrically operated window that can be lowered into the gate or raised into the back body opening. The manual window is operated by a regulator control handle located in the tail gate outer panel. The power window can be operated by either of two control switches; one on the instrument panel and one at the lock cylinder (key operated) of the tail gate outer panel. All styles using a power tail gate window are equipped with an electrical switch that prevents movement of the window with gate in any position other than fully closed.

The tail gate is unlocked by means of a remote control inside handle which cannot be opened until the gate window is fully lowered. All tail gates are counter-balanced by a torque rod that assists in reducing the effort required to open or close the tail gate.

Unless otherwise stated, the tail gate service procedures outlined in this manual pertain to all station wagon styles.

TAIL GATE INNER PANEL COVER

The inner panel cover is attached to the tail gate inner panel by a series of screws. Removal is obvious except in those cases where the tail gate cannot be opened. This could occur if a power operated window motor fails with glass in the up position. In such circumstances, proceed as follows:

1. The attaching screws on "A & X" Body Styles are still accessible with gate in the closed position. On "B" Body Styles. however, remove the side and center screws of the cover and slide panel up to remove from tail gate.

   NOTE: The bottom retainer screws need not be removed as they secure retainer only. The tail gate inner panel cover is held in the bottom retainer by slots in side and center section metal strips. (See Fig. 9-1).

2. Once the inner panel cover has been removed, it is possible to remove the access hole covers and window sash channel cams as explained in the following pages. At this point, the tail gate window can be lowered and the gate opened.

TAIL GATE INNER PANEL WATER DEFLECTOR

A waterproof paper deflector is sealed against the tail gate inner panel to deflect water toward the bottom of the gate and out the drain holes.

IMPORTANT: Whenever work is performed on the tail gate that requires any detachment of the water deflector, it must be properly resealed to the inner panel.

Removal

1. Remove tail gate inner panel cover.
2. Using a flat-bladed tool, carefully break cement bond securing water deflector to inner

Fig. 9-1—Inner Panel Cover

panel. Make sure string, located within sealer, is against water deflector and carefully slide tool between sealer and inner panel along both sides and top to disengage deflector from inner panel. If the entire deflector need not be removed, detach only that portion necessary.

Installation

1. Inspect deflector and repair any damage noted with body waterproof tape applied to both sides.
2. If a new deflector is to be installed, use old deflector as a template.
3. If needed, apply a bead of body caulking compound (approximately 3/16" diameter) to tail gate inner panel. (See Fig. 9-2). The inner panel cover attaching screw holes should also be sealed with body caulking compound.
4. Position water deflector to tail gate with polyethylene coated side (black) against inner panel. Firmly press sealed areas to obtain a good bond between deflector and inner panel.

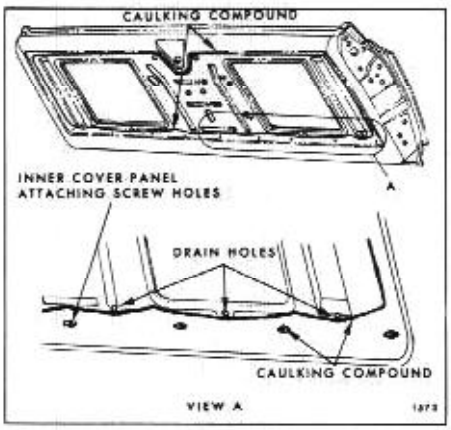


Fig. 9-2—Tail Gate Sealing

TAIL GATE INNER PANEL ACCESS HOLE COVERS

Removal and Installation

1. Remove tail gate inner panel cover and water deflector.
2. Remove screws securing right and left access hole covers to tail gate inner panel and remove covers. (See Fig. 9-3).
3. To install, reverse removal procedure.

TAIL GATE HINGE ASSEMBLY

Removal and Installation

1. Open tail gate and provide support for gate on side from which hinge is to be removed.
2. Remove escutcheon covering hinge entrance hole in tail gate outer panel by sliding retaining lips through "T" slot.
3. Remove tail gate hinge attaching bolts from tail gate and body (See Figs. 9-4 and 9-5) and remove hinge from gate.
4. To install, reverse removal procedure. Prior to installation, apply a coat of heavy-bodied sealer to surface of hinge that contacts body.
5. Check alignment of tail gate in opening and adjust as required.

TAIL GATE SUPPORT ASSEMBLIES

Removal and Installation

1. Open tail gate and support it in that position.
2. Remove screws securing support to tail gate and to body lock pillar and remove support. (See Figs. 9-4 and 9-5).

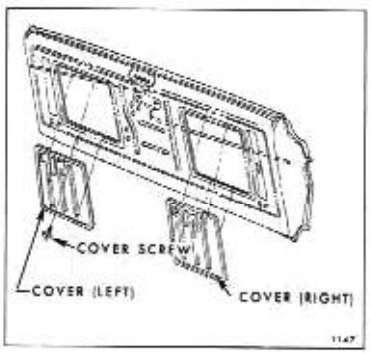


Fig. 9-3—Tail Gate Inner Panel Access Hole Covers

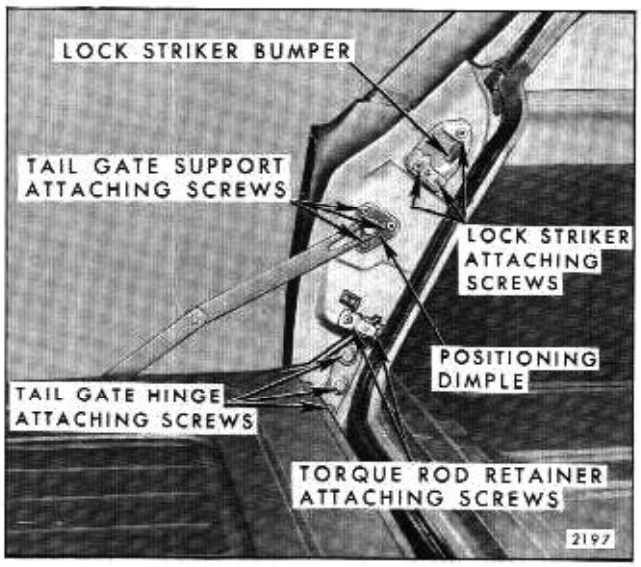


Fig. 9-4—Tail Gate Torque Rod, Hinge and Support Attachments "B & A" Body Styles

3. To install, reverse removal procedure.

   NOTE: Objectionable slack in either support can be corrected by rotating support plate(s) at body pillar.

TAIL GATE ASSEMBLY

The basic hardware of all tail gates is similar, regardless of the style involved. For purposes of proper identification, however, Figures 9-6 ("B" Body), 9-7 ("A" Body) and 9-8 ("X" Body) identify the major hardware components of each specific body type.

Removal and Installation

1. Open tail gate and remove inner panel cover, water deflector and both access hole covers.

2. Raise tail gate to an approximate vertical position to relieve torque rod tension. Remove torque rod retainer attaching screws and remove retainer. On "B & A" Body Styles, this retainer is on the left body pillar as shown in Figure 9-4. On "X" Body Styles, however, the retainer is located on the right side of the rear body cross bar. (See Fig. 9-9).

3. On styles equipped with power operated tail gate windows, proceed as follows:

   a. Remove tail gate window as described under "Tail Gate Window Assembly, Removal and Installation".

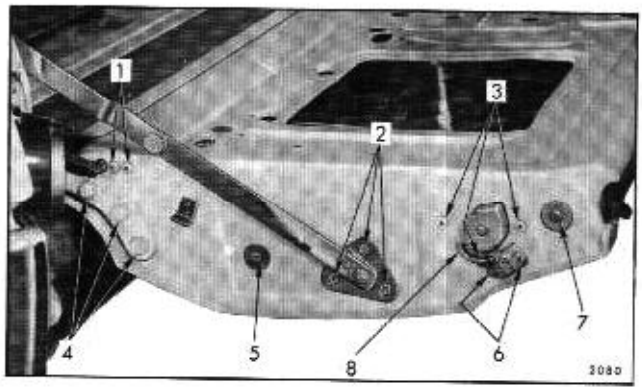


Fig. 9-5—Tail Gate Hardware - Left Side

1. Torque Rod Bearing Plate Screws
2. Support to Tail Gate Bolts
3. Tail Gate Lock Screws
4. Hinge to Tail Gate Bolts
5. Glass Run Channel Lower Bolt
6. Jamb Switch Screws
7. Glass Run Channel Upper Bolt
8. Jamb Switch Arm

   b. Disconnect wire harness at key switch, jamb switch and at motor. Remove harness from tail gate.

4. While properly supporting tail gate, remove right and left support to gate attaching screws and fold supports against body. (See Fig. 9-5).

5. With the aid of a helper, remove right and left tail gate hinge to gate attaching bolts and remove tail gate from body. (See Fig. 9-5).

6. To install, reverse removal procedure. Prior to installation, apply a coat of heavy bodied sealer to surface of hinges that contact tail gate.

Adjustments

Up or down and fore or aft adjustment is provided at hinge to gate attaching bolts. Side to side adjustment is available at hinge to body opening attaching bolts by using shims.

NOTE: Following any adjustments of the tail gate, check engagement of locks to strikers as described in "Tail Gate Lock Striker Adjustment".

TAIL GATE WINDOW ASSEMBLY—MANUAL OR ELECTRIC

Removal and Installation

1. Remove tail gate inner panel cover, water deflector and both access hole covers.

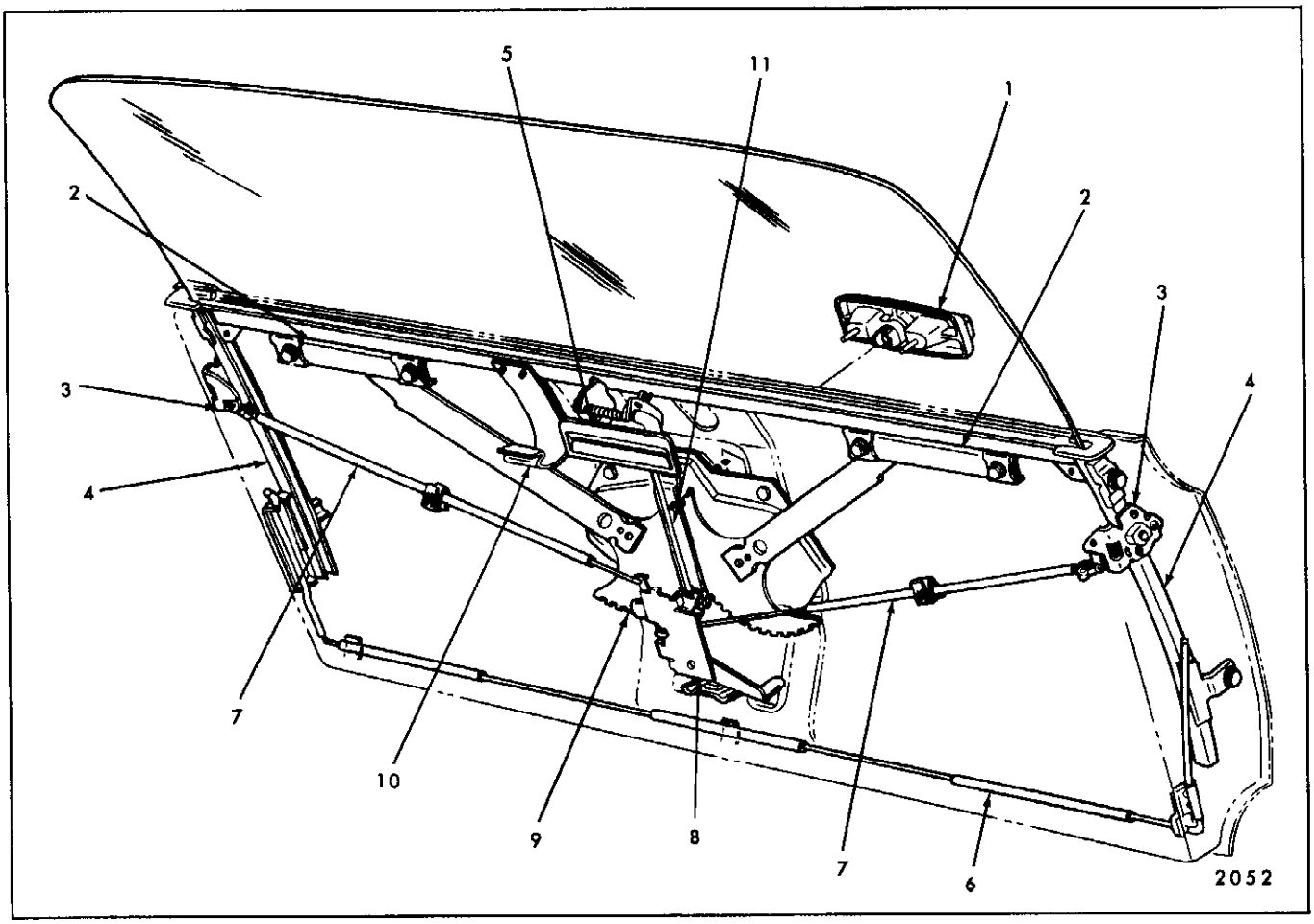


Fig. 9-6—Tail Gate Hardware - "B" Body Styles

1. Outside Handle or Key Switch
2. Sash Channel Cams
3. Locks
4. Lower Glass Run Channels
5. Inside Handle
6. Torque Rod
7. Remote Control Connecting Rods
8. Remote Control
9. Regulator
10. Anti-Rattle Clip
11. Inside Handle Push Rod

2. Operate tail gate window to a point that sash channel cam attaching bolts are accessible as depicted in Figure 9-10.

   NOTE: On styles equipped with power operated tail gate windows, engage jamb switch and operate window to any position desired. Engaging the tail gate jamb switch, makes it possible to operate the window (by key switch) with gate in the lowered position. This jamb switch is located on the left side of the tail gate on "B" Bodies and the right side for "A & X" Bodies. "B & A" Bodies have a switch of similar design that can be engaged by merely pushing arm with a finger. (See Fig. 9-5). On "X" Bodies, however, the jamb switch consists of two contact plates, one on gate and one on body pillar. These plates can be engaged with gate open by connecting them with a length of body wire. (See Fig. 9-11).

3. Remove right and left cam attaching bolts (Fig. 9-10). Slide cams sideways to disengage from regulator lift arm rollers and remove cams from tail gate.

4. Pull window straight out to remove from tail gate.

5. To install, reverse removal procedure.

Adjustments

The tail gate glass run channels can be adjusted to relieve a binding glass. To correct a rotated glass condition, loosen window regulator attaching screws and rotate regulator clockwise or counter clockwise as required.

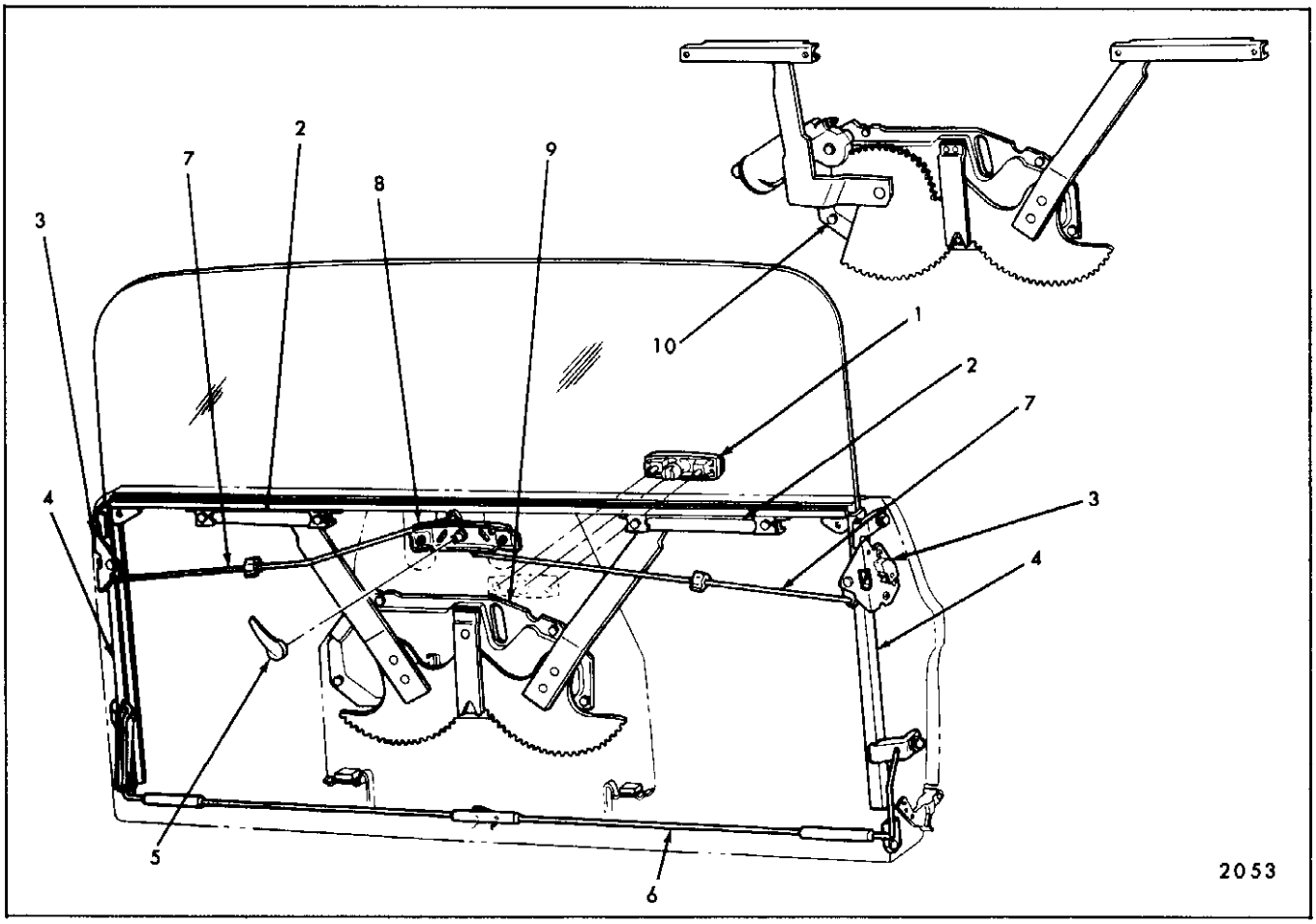


Fig. 9-7 — Tail Gate Hardware - "A" Body Styles

1. Outside Handle or Key Switch
2. Sash Channel Cams
3. Locks
4. Lower Glass Run Channels
5. Inside Handle
6. Torque Rod
7. Remote Control Connecting Rods
8. Remote Control
9. Regulator (Manual)
10. Regulator (Electric)

TAIL GATE WINDOW REGULATOR— MANUAL OR ELECTRIC

Removal and Installation

1. Remove tail gate window assembly.
2. On styles equipped with a power operated tail gate window, disconnect electric harness at regulator motor connector.

   CAUTION: DO NOT operate regulator motor after window assembly has been disengaged from regulator or after regulator has been removed from tail gate. Operation of motor with load removed may damage unit.
3. Remove bolts securing regulator to support and remove regulator, with motor attached, from tail gate.
4. To install, reverse removal procedure.

TAIL GATE WINDOW ELECTRIC REGULATOR MOTOR ASSEMBLY

Removal

1. Open tail gate and remove tail gate inner cover panel.
2. Detach inner panel water deflector and remove inner panel right access hole cover.
3. Disconnect wire harness connector from motor.

   IMPORTANT: The following operation must be performed if the window is removed or disengaged from the regulator lift arms. The

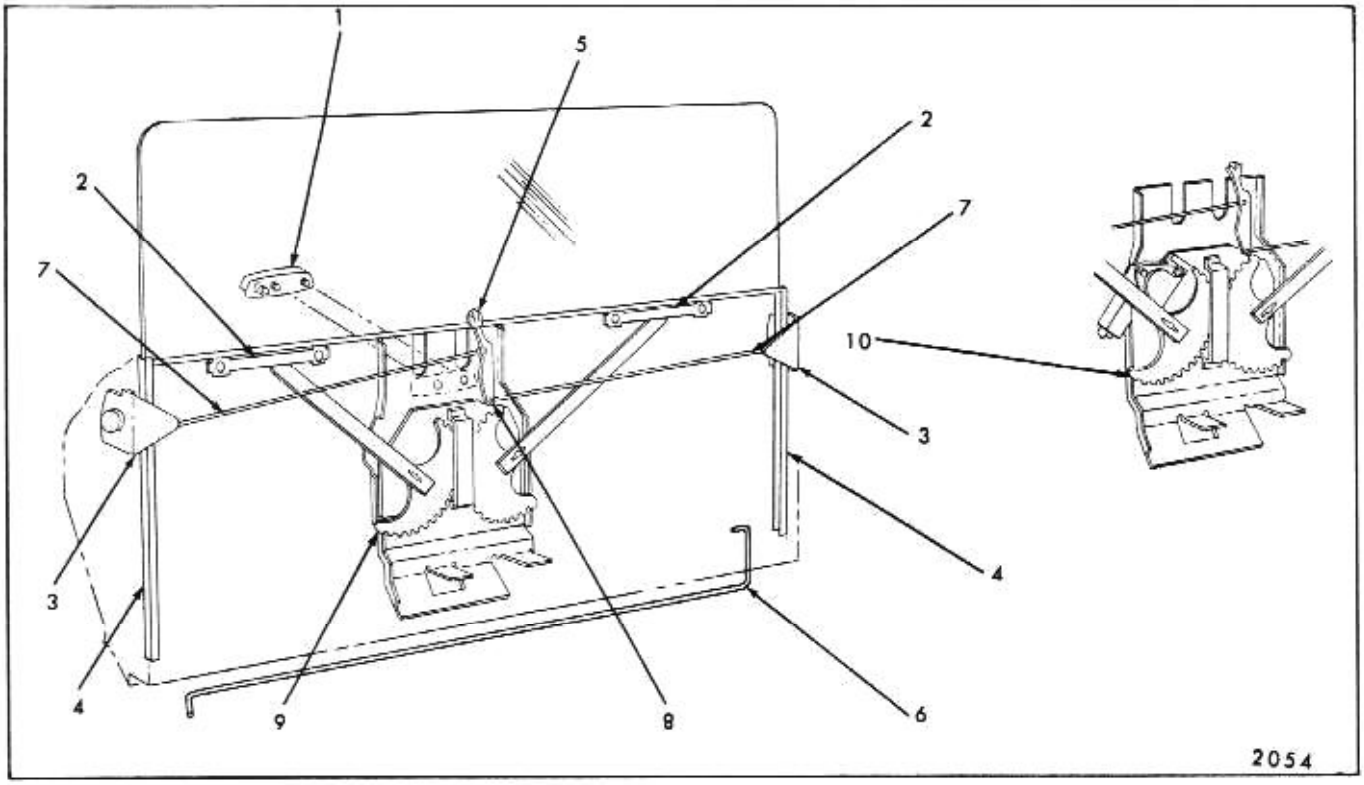


Fig. 9-8—Tail Gate Hardware - "X" Body Styles

1. Outside Handle or Key Switch
2. Lower Sash Channel Cams
3. Locks
4. Lower Glass Run Channels
5. Inside Handle
6. Torque Rod
7. Remote Control Connecting Rods
8. Remote Control
9. Regulator (Manual)
10. Regulator (Electric)

regulator lift arms, which are under tension from the counter-balance spring, can cause serious injury if the motor is removed without locking the sector gears in position.

4. Drill a 1/8" hole through regulator sector and back plate. (See Fig. 9-12). DO NOT drill hole closer than 1/2" to edge of sector gear of back plate. Install a pan head sheet metal tapping screw (#10-12 x 5/8) in drilled hole to lock sector gears in position.

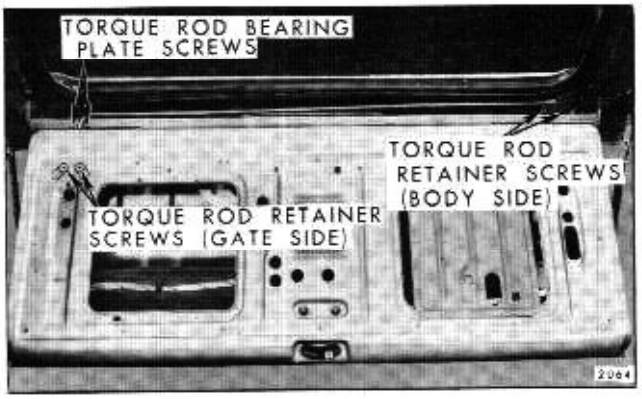


Fig. 9-9—Tail Gate Hardware "X" Body Styles

5. Loosen regulator right upper attaching screw. Remove the three regulator motor attaching screws and remove motor assembly from regulator and tail gate.

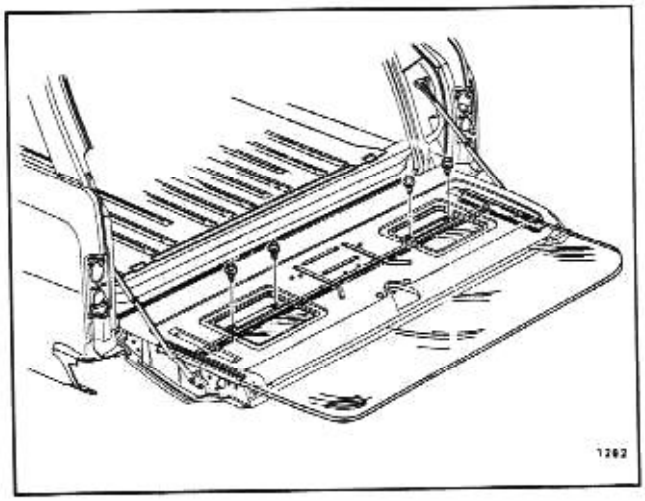


Fig. 9-10—Tail Gate Inner Panel Cams Attachment

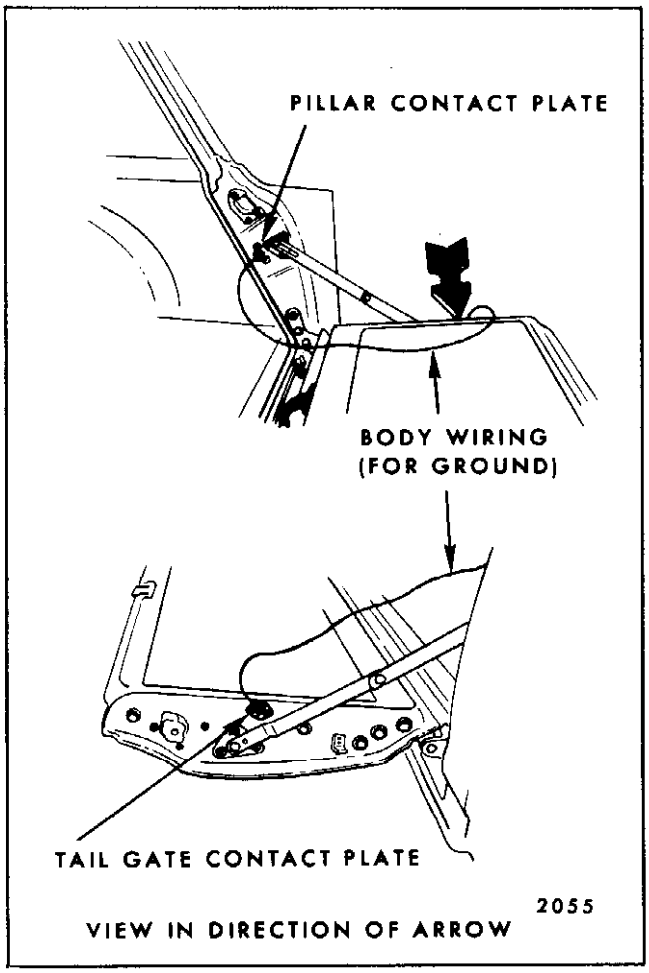


Fig. 9-11—"X" Body Tail Gate Jamb Switch

Installation

1. Lubricate the motor drive gear and regulator sector teeth with Lubriplate or its equivalent.

2. With tail gate in an open position, install regulator motor to regulator. Make sure the motor pinion gear teeth mesh properly with the sector gear teeth before installing the three motor attaching screws.

3. Tighten regulator attaching screws and remove screw locking sector gears into a fixed position.

4. Connect wire harness to motor and cycle tail gate window prior to installation of inner panel access hole cover, water deflector and cover panel.

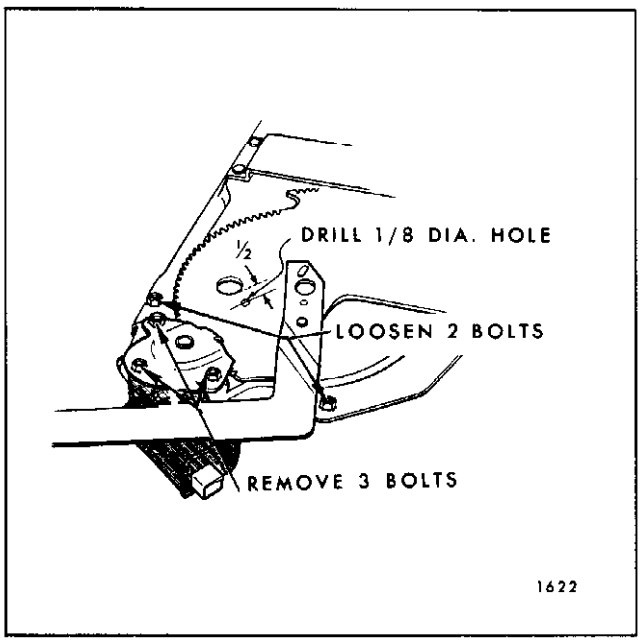


Fig. 9-12—Tail Gate Regulator Motor Assembly

TAIL GATE WINDOW REGULATOR OUTSIDE HANDLE—MANUAL OR ELECTRIC

Removal and Installation

1. Lower tail gate and remove inner panel cover and water deflector.

2. Position tail gate window so that outside handle (or key switch) attaching nuts are accessible through gate inner panel and window regulator access holes. (See Fig. 9-13).

3. Remove nuts securing handle (or key switch) to tail gate and remove handle and sealing gasket. (See Fig. 9-14).

   NOTE: On electrical styles, disconnect wire harness from connector on escutcheon (key switch).

4. To install, reverse removal procedure.

TAIL GATE WINDOW LOWER GLASS RUN CHANNELS

Removal and Installation

1. Remove tail gate window.

2. Remove bolts securing run channel(s) to tail gate. (See Fig. 9-5).

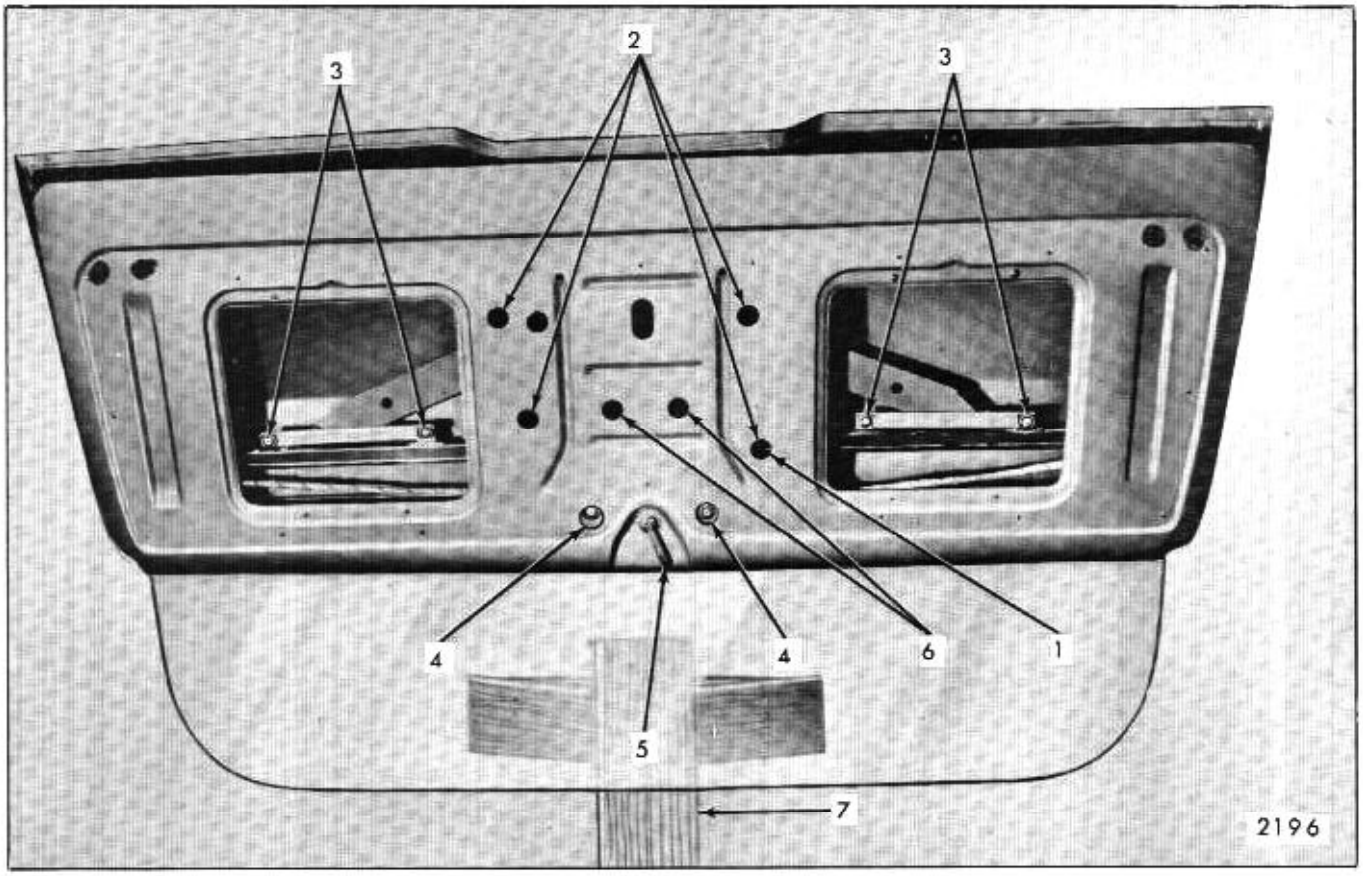


Fig. 9-13—Tail Gate Window Hardware

1. Access Hole for Regulator Adjusting Screw
2. Access Holes for Window Regulator Attaching Screws
3. Window Lower Sash Channel Cams Attaching Screws
4. Lock Remote Control Attaching Screws
5. Lock Remote Control Handle Attaching Screw
6. Access Holes for Outside Handle or Key Switch
7. Support Glass

3. Pull run channel(s) down into tail gate and remove through inner panel access hole.

4. To install, reverse removal procedure.

TAIL GATE JAMB SWITCH—ELECTRIC STYLES

The electric jamb switch is used to prevent operation of the tail gate window with the tail gate in an open position.

Removal and Installation

1. Remove screws securing jamb switch to tail gate, disconnect attached wire and remove switch. (See Fig. 9-15).

NOTE: Figure 9-15 illustrates the jamb switch on a "B" Body but is indicative of all styles.

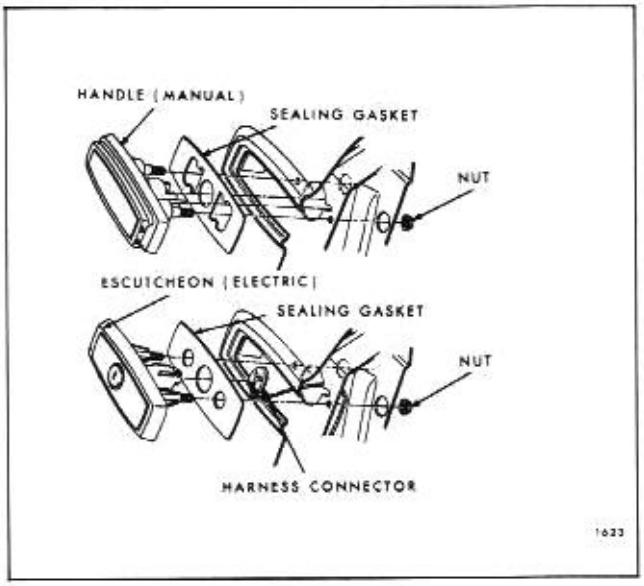


Fig. 9-14—Tail Gate Outside Handle Assemblies

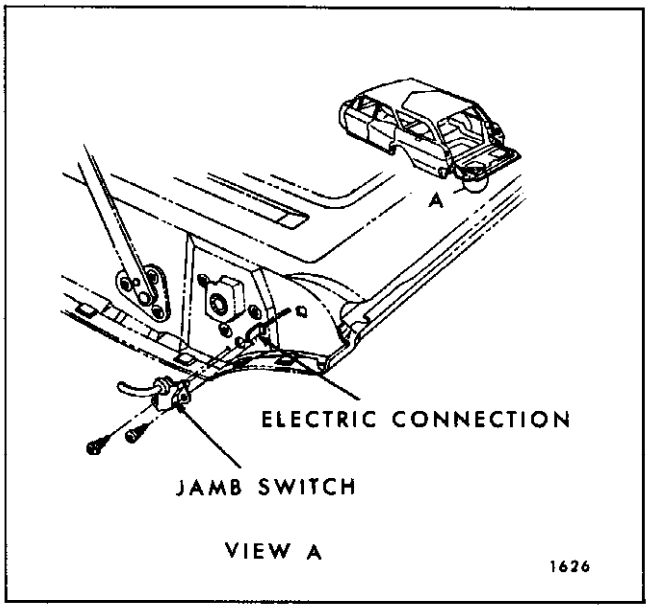


Fig. 9-15—Tail Gate Jamb Switch

2. To install, reverse removal procedure.

TAIL GATE REMOTE CONTROL INSIDE HANDLE "B" STYLES

Removal and Installation

1. Raise inside handle and disengage remote push rod from spring clip. (See Fig. 9-16).

2. Remove screws securing handle to inner panel and remove handle.

3. To install, reverse removal procedure.

   NOTE: The inside handle on "A & X" Body Styles is retained by a single attaching screw.

TAIL GATE LOCK REMOTE CONTROL ASSEMBLY

Removal and Installation

1. Remove tail gate window assembly.

2. Disconnect remote control to lock connecting rods at remote assembly by sliding clip out of engagement. (See Section "B-B" in Fig. 9-17).

3. On "X" Body Styles, remove remote control inside handle attaching screw and remove handle. (See View II in Fig. 9-17). Pry out and remove escutcheon.

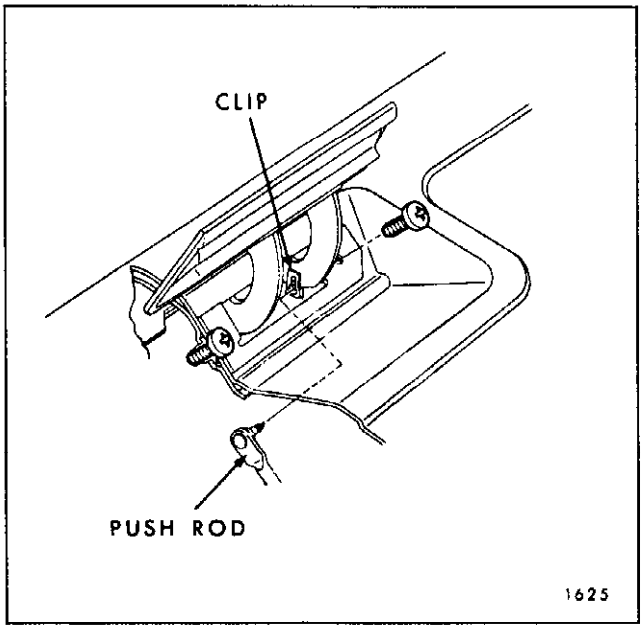


Fig. 9-16—Tail Gate Inside Handle Attachment

4. Remove remote control attaching bolts and remove assembly from tail gate. On "B" Body Styles, it will be necessary to disengage remote from inside handle push rod. (See Fig. 9-17 for "X" Body Styles and Fig. 9-18 for "B & A" Body Styles).

5. To install, reverse removal procedure.

   NOTE: The remote adjusting nut on "B" and "A" Body Styles (Fig. 9-18) can be adjusted to increase or decrease remote operating effort.

TAIL GATE LOCK ASSEMBLY— RIGHT OR LEFT SIDE

Removal and Installation

1. Remove tail gate window assembly.

2. Remove tail gate window lower glass run channel on side from which lock is to be removed.

3. Remove screws securing lock to tail gate. (See Fig. 9-19).

4. Move lock assembly to tail gate access hole, disengage remote rod anti-rattle clip and remove lock assembly.

5. To install, reverse removal procedure.

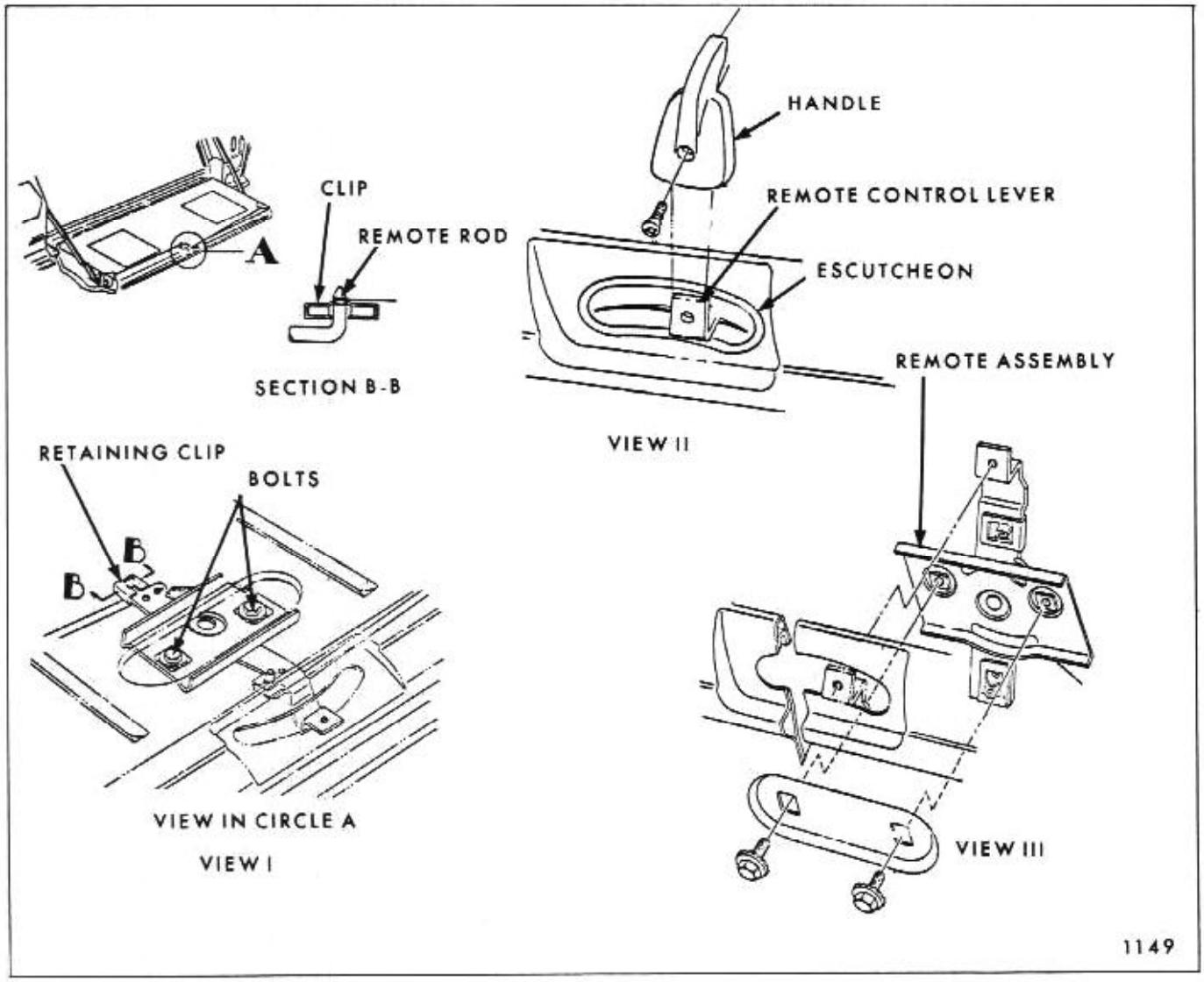


Fig. 9-17 — Tail Gate Lock Remote Control Assembly - "X" Body Styles

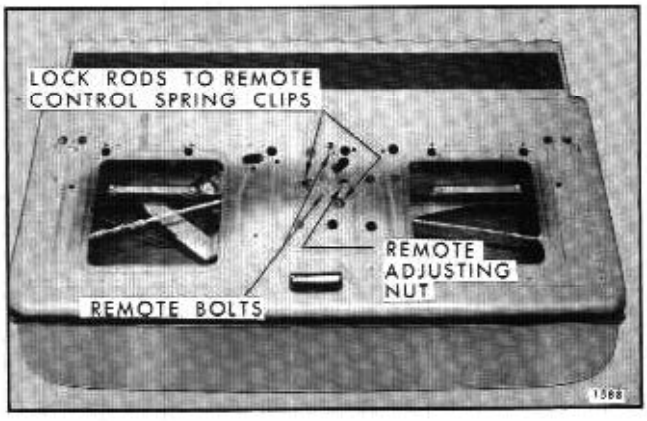


Fig. 9-18 — Tail Gate Hardware - "A & B" Body Styles

TAIL GATE LOCK STRIKER— RIGHT OR LEFT SIDE

Removal and Installation

1. Open tail gate and mark (pencil) position of striker on body pillar. (See Fig. 9-4).
2. Remove lock striker attaching screws and remove striker and adjusting plates from body pillar.
3. To install, align striker and components within pencil marks and install attaching screws. (See Fig. 9-20).

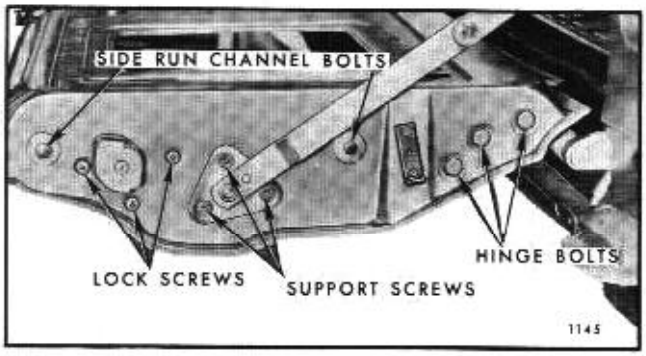


Fig. 9-19 — Tail Gate Lock and Support

TAIL GATE LOCK STRIKER ADJUSTMENTS

1. To adjust the tail gate lock striker up or down or forward or rearward, loosen striker attaching screws, shift striker and adjusting plates to desired position and tighten attaching screws.

2. DIMENSIONAL SPECIFICATIONS FOR USE OF DOOR LOCK STRIKER SERVICE SPACERS.

   a. Tail gate should be properly aligned before checking spacer requirements.

   b. To determine if tail gate lock striker service spacers are required, apply modeling clay or body caulking compound in the lock striker notch where the lock extension engages and close tail gate to form a measureable impression in the clay or caulking compound, as shown in Figure 9-21.

When dimension "A" from inside face of striker teeth to center of lock extension is less than 3/16" install service spacers and proper length striker attaching screws as follows:

Dimension "A"	Spacers Required	Thickness	Striker Attaching Screws*
3/16" to 1/8"	1	1/16"	Original Screw
1/8" to 1/16"	1	1/8"	Service Screw (1/8" Longer)
1/16" to 0	1 (1/8" Spacer) 1 (1/16" Spacer)	3/16" (Total)	Service Screw (1/4" Longer)
0 to 1/16" Interference	2 (1/8" Spacer)	1/4" (Total)	Service Screw (1/4" Longer)

*Zinc or cadmium-plated flat-head cross-recess screw with countersunk washer.

NOTE: Dimension "B" from center of lock extension to inside face of striker should never be less than 1/16".

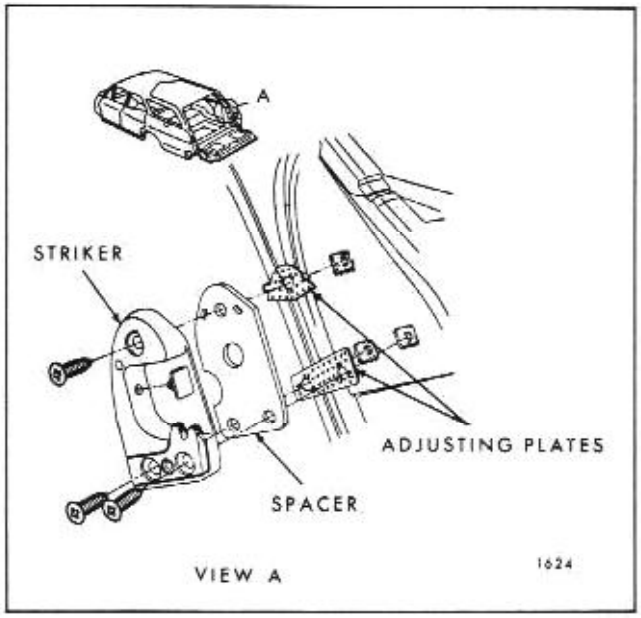


Fig. 9-20 — Tail Gate Lock Striker Assembly

TAIL GATE TORQUE ROD

Removal and Installation

1. Remove tail gate window assembly and torque rod retainer(s). (See Figs. 9-4 and 9-9).

2. Remove screws securing torque rod bearing plate to tail gate. (See Fig. 9-5 for "B & A" Bodies and Fig. 9-9 for "X" Bodies).

Fig. 9-21 — Tail Gate Lock Striker Caulking Check

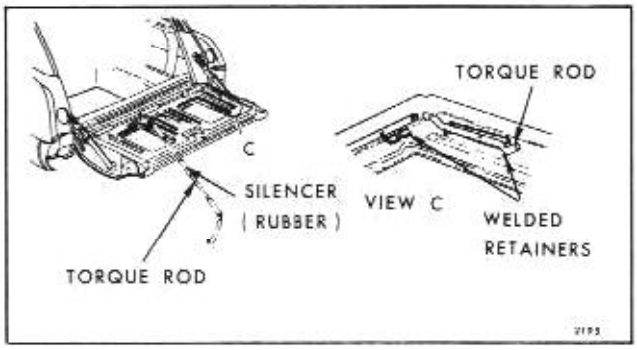


Fig. 9-22 — Tail Gate Torque Rod

3. On "B & A" Body Styles, disengage torque rod from welded retainers. (See View "C" in Fig. 9-22).

4. On "B & A" Body Styles, remove torque rod silencer (rubber) from left side of torque rod (exposed). Work torque rod out of opening on left side and remove rod through top of gate. (See Fig. 9-22).

5. On "X" Body Styles, remove torque rod from gate through entrance hole. (See Fig. 9-9).

6. To install, reverse removal procedure.

TAIL GATE WINDOW INNER AND OUTER STRIP ASSEMBLIES

Removal and Installation

Both strip assemblies are retained by clips in either the inner or outer panel of tail gate. The outer strip is additionally retained by two screws, one at each extreme end. To remove either strip, first remove screws and, using a flat tool, remove strip assemblies. To install, reverse removal procedure. (See Fig. 9-23).

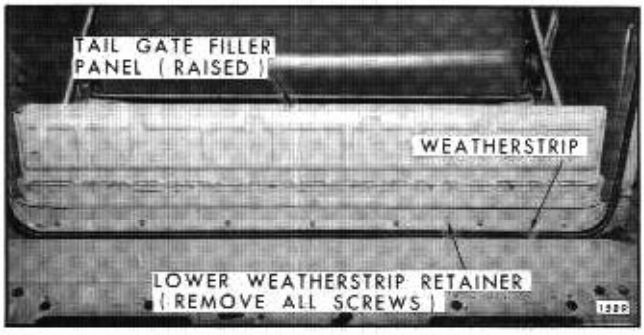


Fig. 9-24 — Tail Gate Weatherstrip Retention

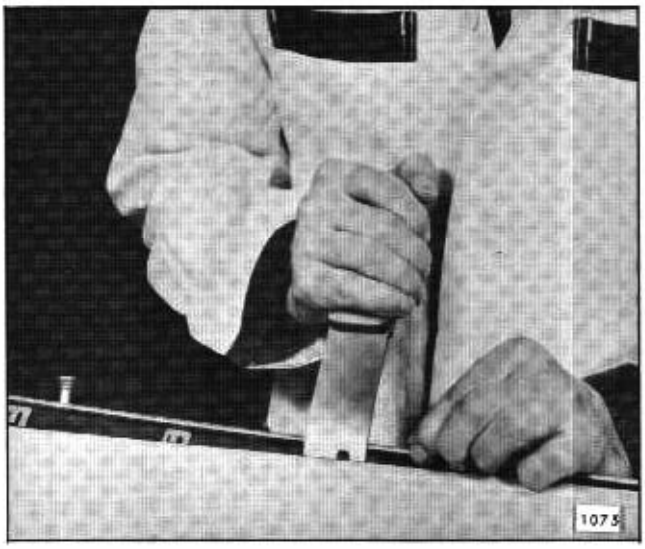


Fig. 9-23 — Tail Gate Strip Assembly Removal

TAIL GATE BOTTOM DRAIN HOLE SEALING STRIPS

Removal and Installation

1. With a flat-bladed tool carefully pry out snap-on fastener at each end of strip and remove sealing strip from tail gate.

2. To install sealing strips, reverse removal procedure. To prevent strip from adhering to the tail gate panel and blocking the drain holes, apply a sparing amount of silicone rubber lubricant on the center section of the sealing strip. (See illustration under "Front and Rear Door Bottom Drain Hole Sealing Strips").

TAIL GATE OPENING WEATHERSTRIP

Removal and Installation

1. Open tail gate and remove fasteners and/or screws securing weatherstrip to right and left body pillars (at belt). On "B" Body Styles, remove screws securing lower weatherstrip retainer to rear body cross bar. (See Fig. 9-24).

2. With a flat bladed tool, carefully remove weatherstrip all along rail gate opening.

3. To install, apply a bead of black weatherstrip cement into retainer along entire opening and reverse removal procedure.

TAIL GATE WINDOW UPPER GLASS RUN CHANNEL "B & A" BODY STYLES

Removal and Installation

1. Open tail gate. With finger pressure only, squeeze run channel at one end and pull channel out of retainer.

2. Once run channel has been removed, the retainer attaching screws are exposed. (See Fig. 9-25). The retainer can be adjusted by loosening attaching screws, shifting retainer to desired position and tightening screws. If retainer is removed, seal same with medium bodied sealer prior to installation.

3. To install, reverse removal procedure.

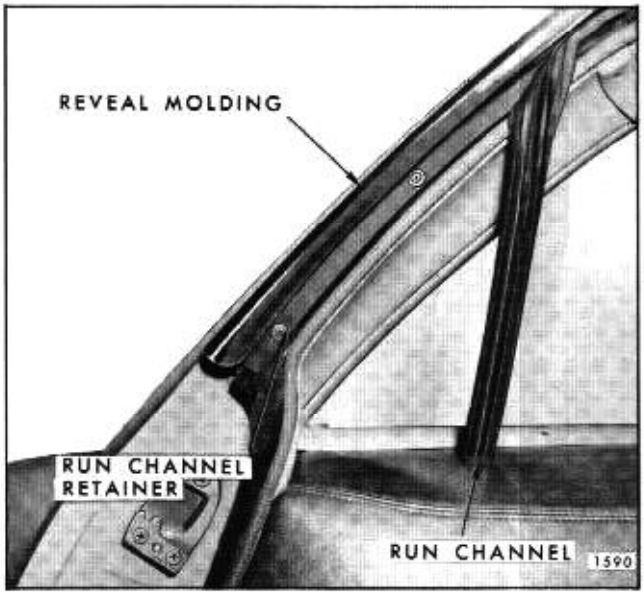


Fig. 9-25 — Tail Gate Upper Glass Run Channel Retention

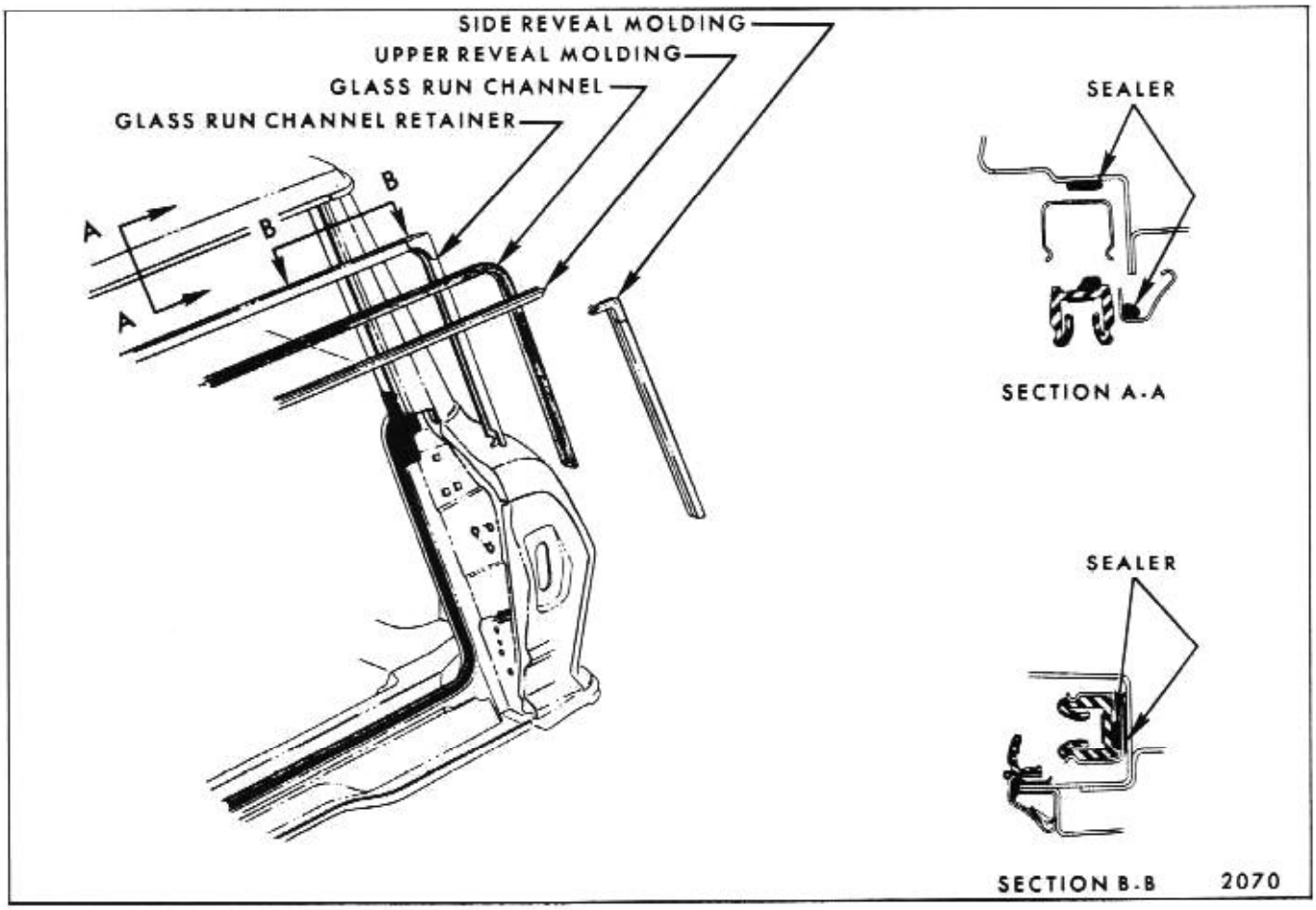


Fig. 9-26 — Tail Gate Opening Sealing - "X" Body Styles

TAIL GATE WINDOW UPPER GLASS RUN CHANNEL "X" BODY STYLES

Removal and Installation

1. Open tail gate and remove exposed clip at each end of glass run channel securing channel to body pillar at belt line.
2. Carefully break cement bond between run channel and retainer and remove run channel.
3. Remove screws to run channel retainer and remove retainer.
4. Prior to installation of either run channel or retainer, seal contact areas with medium bodied sealer as depicted in Sections "A-A" and "B-B" in Figure 9-26.
5. To install, reverse removal procedure.

SECTION 10

TRIM CLEANING

INDEX

Subject	Page
Introduction	10-1
General Instructions	10-1
Cleaning Fabrics With Volatile Cleaners	10-1
Cleaning Fabrics With Detergents	10-2
Precautions for Cleaning Fabrics	10-2
Cleaning Genuine Leather and Coated Fabrics	10-3
Cleaning Folding Top and Fabric Roof Cover Material	10-3
Cleaning Floor Carpets	10-3
Removal of Specific Stains From Automotive Upholstery	10-3
Blood	10-4
Candy	10-4
Chewing Gum	10-4
Fruit, Fruit Stains, Liquor and Wine	10-4
Grease and Oil	10-4
Ice Cream	10-4
Nausea	10-4
Shoe Polish and Dressings	10-5
Tar	10-5
Urine	10-5
Lipstick	10-5
Ball Point Ink	10-5

INTRODUCTION

This procedure has been prepared to assist service personnel in cleaning automotive upholstery, floor carpets, headlining and folding tops using the latest approved methods for removing soil and stain.

GENERAL INSTRUCTIONS

There are four general types of trim materials used in automotive bodies.

1. Fabrics that may be either plain fabrics (broadcloth), or pattern fabrics which are manufactured with synthetic (nylon, rayon) fibers.
2. Genuine leather.
3. Coated fabrics (vinyl or mylar).
4. Flocked headlining.

Dust and dirt particles that accumulate on the upholstery of a car should be removed every few weeks, or oftener if the car is given constant hard use. This is done with a whisk broom or vacuum cleaner.

CAUTION: Do not use a whisk broom on fabrics having raised tapestry patterns since damage to the fine threads may result. On flocked headlining use whisk broom and volatile cleaners only. Detergents leave rings.

Before attempting to remove spots or stains from upholstery fabrics, determine as accurately as possible:

1. Nature and age of the spot or stain.
2. The effect of stain removing agents on the color structure and general appearance of the fabric.

For best results, stains should be removed from upholstery as soon as possible after they have been made. If they are allowed to stand for some time, they often become set and removal becomes more difficult, frequently impossible.

There are three basic types of acceptable cleaners available to car owners:

1. Volatile cleaners (colorless liquids).
2. Detergents.
3. Neutral soap (nonalkaline).

Many types of these cleaners can be obtained through GM Dealer or other reputable supply houses.

The volatile cleaners have great solvent powers for grease, oils and general road grime. Detergents generally loosen up stains satisfactorily; however, the use of improper type detergents involves risk of damage to the color or finish of fabrics.

CLEANING FABRICS WITH VOLATILE CLEANERS

Care should be taken not to use too much solvent and to apply it only with clean cloths. It is the solvent that does the work - so only a minimum of pressure should be applied.

1. Brush away all loose particles of dirt and soil.

2. Dampen a clean cloth (cheese cloth may be used) with the volatile cleaner. Open the cloth and allow a portion of the cleaner to evaporate so that the cloth is just slightly damp.

3. Using very light pressure and a circular lifting motion, rub the stained area, starting at the outer edge and working toward the center until the entire area has been covered. Change to a clean portion of the cloth every few strokes.

4. Using a clean white blotter, blot stained area to remove any excess cleaner. Change to a new portion of the blotter each time stained area is blotted. The blotting action should be repeated until no stain is transferred to the blotter surface.

5. Before proceeding, wait several minutes to allow most of the volatile cleaner to evaporate. DO NOT saturate stained area. This will avoid the danger of the cleaner penetrating to the padding under the upholstery. Certain cleaners will deteriorate sponge rubber which is often used in padding.

6. It may be necessary to repeat steps 2, 3, 4 and 5 several times before the stain has been satisfactorily removed. Each time a clean cloth should be used.

7. If a ring should form on the fabric when removing a stain, the entire area of the trim assembly should be cleaned as described in the preceding steps.

8. The cleaned upholstery should be allowed to dry completely before using.

Some volatile cleaners are toxic and harmful; therefore, the following safety precautions should be used.

1. Always use in a well ventilated area. Car windows and garage doors must be open when such cleaners are used.

2. Avoid prolonged or repeated breathing of vapors from cleaner.

3. Avoid prolonged or repeated contact with the skin.

4. Keep away from eyes and mouth.

5. Some cleaners are flammable and every precaution and care must be exercised in handling these cleaners.

6. Always follow directions specified by the manufacturer of the product used (label directions).

CLEANING FABRICS WITH DETERGENTS

1. Make a solution of the detergent in lukewarm water, working up thick, frothy suds.

2. With a clean cloth or sponge, dampened with lukewarm water, apply suds only to the surface of the upholstery using light to medium pressure. Repeat several times, applying more suds with a clean portion of the cloth or sponge.

3. With a second clean cloth, dampened with lukewarm water, rub over the area with medium pressure to remove excess detergent and loose material.

4. With a clean dry cloth, wipe off all excess moisture. A vacuum cleaner may also be used.

5. Allow the upholstery to dry partially; then, repeat the above treatment, if necessary, to remove stain.

6. When the upholstery is satisfactorily cleaned, allow to dry completely before using.

PRECAUTIONS FOR CLEANING FABRICS

1. Solutions containing water are not recommended for general cleaning of broad cloth. Water has great destructive powers on the high face or high gloss finish of broad cloth, causing the nap to curl and roughen to such an extent that the finish is destroyed or made very unsightly. However, in some cases where it is necessary to use a solution containing water to remove a stain, the resultant disturbance to the finish of the material may be preferable to the stain.

2. Do not use as a cleaning solvent, any gasoline which is colored or which contains tetraethyl lead.

3. Do not use solvents such as acetone, lacquer thinners, enamel reducers or nail polish remover, as a cleaning solvent.

4. Do not use laundry soaps, bleaches or reducing agents, such as the following: chloride of lime, javelle water, hydrogen peroxide, sodium hydrosulphite, potassium permanganate, chlorine or chlorine water, sulphurous acid (sulphur dioxide), sodium thiosulphate (photographers' hypo). The use of these agents tends to weaken fabric and to change its color.

5. Do not use too much cleaning fluid; some interior trim assemblies are padded with rubber,

and volatile cleaners are generally solvents for rubber. The application of too much cleaner may destroy these rubber pads or leave a solvent ring.

CLEANING GENUINE LEATHER AND COATED FABRICS

Care of genuine leather and coated fabrics is a relatively simple but important matter. The surface should be wiped occasionally with a dry cloth, and whenever dirt accumulates, the following cleaning instructions should be used:

1. Lukewarm water and a neutral soap should be used. Apply a thick suds to the surface, worked up on a piece of gauze or cheesecloth.

   NOTE: When cleaning coated fabrics, a nonflammable detergent may be substituted for neutral soap.

2. The operation should be repeated, using only a damp cloth and no soap.

3. The surface should then be wiped dry with a solft cloth.

Polishes and cleaners used for auto body finishes, volatile cleaners, furniture polishes, oils, varnishes or household cleaning and bleaching agents should never be used.

CLEANING FOLDING TOP AND FABRIC ROOF COVER MATERIAL

The top should be washed frequently with neutral soap suds, lukewarm water and a brush with soft bristles. Rinse top with sufficient quantities of clear water to remove all traces of soap.

IMPORTANT: Care must be exercised to keep the soaps and cleaners from running onto body finish, as it may cause streaks if allowed to run down and dry.

If the top requires additional cleaning after using soap and water, a mild foaming cleanser can be used. Rinse the whole top with water, then apply a mild foaming type cleanser to the entire top. Scrub with a small, soft bristle hand brush, adding water as necessary until the cleanser foams to a soapy consistency. Remove the first accumulated soilage with a cloth or sponge before it can be ground into the top material. Apply additional cleanser to the area and scrub until the top is clean. After the entire top has been cleaned, rinse the top generously with clear water to remove all traces of cleanser. If desired, the top can be supported from the underside during the scrubbing operations.

After cleaning a convertible top, always be sure the top is thoroughly dry before it is lowered. Lowering the top while it is still wet or damp may cause mildew and unsightly wrinkles.

Do not use volatile cleansers or household bleaching agents on the top material.

CLEANING FLOOR CARPETS

Thoroughly brush or vacuum the floor carpet. In many instances, the floor carpet may require no further cleaning. If carpet is extremely soiled, remove carpet from car and thoroughly vacuum to remove loose dirt; then, with a foaming type upholstery cleaner, clean approximately one square foot of carpet at a time. After each area is cleaned, remove as much of the cleaner as possible with a vacuum cleaner. After cleaning the carpet, use an air hose to "fluff" the carpet pile, then dry the carpet. After the carpet is completely dried, use an air hose to again fluff the carpet pile.

NOTE: If the carpet is not extremely soiled, the carpet may be cleaned in the car by applying a sparing amount of foaming type upholstery cleaner with a brush.

If oil or grease spots are still present on the carpet, they may be removed by using a volatile cleaner; however, the cleaner must be used very sparingly since it may have a tendency to remove some of the dye coloring.

REMOVAL OF SPECIFIC STAINS FROM AUTOMOTIVE UPHOLSTERY

Some types of stains and soilage including blood, ink, chewing gum, etc., require special consideration for most satisfactory results. For these and other stains, specific instructions are outlined in succeeding paragraphs. It must be expected, particularly where water treatment is specified, that discoloration and finish disturbance may occur. In some cases, fabric disturbance may be considered preferable to the stain itself. By following the procedures outlined with normal care and caution, reasonably satisfactory results can be expected.

Blood

DO NOT use hot water or soap and water on blood stains since they will set the stain, thereby making its removal practically impossible.

Rub the stain with a clean cloth saturated with cold

water until no more of the stain will come out. Care must be taken so that clean portions of cloth are used for rubbing the stain.

This treatment should remove all of the stain. If it does not, apply a small amount of household ammonia water to the stain with a cloth or brush. After a lapse of about one minute, continue to rub the stain with a clean cloth dipped in clear water.

If the stain remains after the use of water and ammonia, a thick paste of corn starch and cold water may be applied to the stained area. Allow the paste to remain until it has dried and absorbed the stain. Then pick off the dry starch. Brush the surface to remove starch particles that remain. For bad stains, several applications of starch paste may be necessary.

Candy

Candy stains, other than candy containing chocolate, can be removed by rubbing the affected area with a cloth soaked with very hot water. If the stain is not completely removed, rub area lightly (after drying) with a cloth wet with volatile cleaner. This will usually remove the stain.

Candy stains resulting from cream and fruit-filled chocolates can be removed more easily by rubbing with a cloth soaked in lukewarm soapsuds (mild neutral soap) and scraping, while wet with a dull knife. This treatment is followed with a rinsing by rubbing the spot with a cloth dipped in cold water.

Stains resulting from chocolate or milk chocolate can be removed by rubbing the stain with a cloth wet with lukewarm water. After the spot is dry, rub it lightly with a cloth dipped in a volatile cleaner. Using a clean white blotter, blot area to remove excess cleaner and chocolate stain. Repeat blotting action until stain is no longer transferred to surface of blotter.

Chewing Gum

Harden the gum with an ice cube, and scrape off particles with a dull knife. If gum cannot be removed completely by this method, moisten it with a volatile cleaner and work it from the fabric with a dull knife, while gum is still moist.

Fruit, Fruit Stains, Liquor and Wine

Practically all fruit stains can be removed by treatment with very hot water. Wet the stain well by applying hot water to the spot with a clean cloth. Scrape all excess pulp, if present, off the fabric with a dull knife; then, rub vigorously with a cloth wet with very hot water. If the stain is very old or deep, it may be necessary to pour very hot water directly on the spot, following this treatment with the scraping and rubbing. Direct application of hot water to fabrics is not recommended for general use since discoloration may result.

If the above treatments do not remove stain, allow fabric to dry thoroughly; then, rub lightly with a clean cloth dipped in a volatile cleaner. This is the only further treatment recommended.

Soap and water are not recommended since they will probably set the stain and cause a permanent discoloration. Drying the fabric by means of heat (such as the use of an iron) is not recommended.

Grease and Oil

If grease has been spilled on the material, as much as possible should be removed by scraping with a dull knife or spatula before further treatment is attempted.

Grease and oil stains may be removed by rubbing lightly with a clean cloth saturated with a volatile cleaner. Be sure all motions are toward the center of the stained area, to decrease the possibility of spreading the stain. Use a clean white blotter, blot area to remove excess cleaner and loosened grease or oil. Repeat blotting action until grease or oil stain is no longer transferred to blotter.

Ice Cream

The same procedure is recommended for the removal of ice cream stains as that used in removing fruit stains.

If the stain is persistent, rubbing the spot with a cloth wet with warm soapsuds (mild neutral soap) may be used to some advantage after the initial treatment with hot water. This soap treatment should be followed with a rinsing, by rubbing with a clean cloth wet with cold water. After this dries, rubbing lightly with a cloth wet with volatile cleaner will clear up the last of the stain by removing fatty or oil matter.

Nausea

Sponge with a clean cloth, dipped in clear cold water. After most of the stain has been removed in this way, wash lightly with soap (mild neutral), using a clean cloth and lukewarm water. If odor persists treat area with a water-baking soda solution (1 teaspoon baking soda to 1 cup of tepid water). Then rub with another clean cloth dipped in cold water. If any of the stain remains after this treatment, gently rub clean with a cloth moistened with a volatile cleaner.

Shoe Polish and Dressings

On types of shoe dressings which contain starch, dextrine or some water soluble vehicle, allow the polish to dry; then, brush the spot vigorously with a brush. This will probably be all the treatment that is necessary. If further treatment is required, moisten the spot with cold water and after it has dried, repeat the brushing operation.

Paste or wax type shoe polishes may require using a volatile cleaner. Rub the stain gently with a cloth wet with a volatile cleaner until the polish is removed. Use a clean portion of the cloth for each rubbing operation and rub the stained area from outside to center. Blot stained area to remove as much of the cleaner as possible.

Tar

Remove as much of the tar as possible with a dull knife. Moisten the spot lightly with a volatile cleaner, and again remove as much of the tar as possible with a dull knife. Follow this operation by rubbing the spot lightly with a cloth wet with the cleaner until the stain is removed.

CAUTION: It is possible that the cleaner will dissolve the tar causing it to bleed. Generally tar will stain trim materials and this type of stain will be very difficult to remove.

Urine

Sponge the stain with a clean cloth saturated with lukewarm soapsuds (mild neutral soap) and then rinse well by rubbing the stain with a clean cloth dipped in cold water. Then saturate a clean cloth with a solution of one part household ammonia water and five parts water. Apply the cloth to the stain and allow solution to remain on affected area for one minute; then, rinse by rubbing with a clean wet cloth.

Lipstick

The compositions of different brands of lipsticks vary, making the stains very difficult to remove. In some instances, a volatile cleaner may remove the stain. If some stain remains after repeated applications of the volatile cleaner, it is best to leave it rather than try other measures.

Ball Point Ink

Sponge stain with cool water, work a detergent into it and rinse. Generally this type stain will be very difficult to remove.

SECTION 11

HEADLINING

INDEX

Subject	Page
Headlining - Cloth and Vinyl Coated - All Styles Except "55 - 65" Station Wagon Styles	11-1
Description	11-1
Removal of Headlining	11-1
Installation of Headlining	11-3
Headlining - Flocked Type	11-4
Description	11-4
Removal of Headlining	11-4
Installation of Headlining	11-6
Headlining - "55 and 65" Station Wagon Styles	11-6
Description	11-6
Front Headlining	11-6
Removal	11-6
Installation	11-8
Rear Headlining	11-8
Removal	11-8
Installation	11-8

HEADLINING—CLOTH AND VINYL COATED ALL STYLES—EXCEPT "55 AND 65" STATION WAGONS

DESCRIPTION

The headlining assembly is formed to the contour of the roof panel by concealed listing wires. The listing wires are retained to the headlining by listing wire pockets which are part of the headlining assembly.

Depending upon the body type and style, the listing wires are attached to the side roof rails by either inserting wires directly into holes in side rail or into a clip which is screwed into the side rail. (See View "A and B" in Fig. 11-1.)

On certain styles, the listing wires are further attached to the roof panel by tabs on the front to rear longitudinal roof bow. (See View "D" in Fig. 11-1.)

When pinchweld finishing lace is used at the windshield and back window or back body opening, the headlining is attached by means of cement at those areas.

Where garnish moldings are utilized the headlining is tacked or stapled in addition to being cemented at the windshield and back window or back body opening (View "E", Fig. 11-1 and Fig. 11-2).

The headlining is retained along the side roof rails by cementing or the use of a pronged retainer. Depending upon the style, garnish moldings or pinchweld finishing lace is also used to assist in retaining the headlining. The side roof rail garnish moldings are secured to the pinchweld flange by clips that are located in the molding. (See Figs. 11-3 and 11-4.)

On styles where a upper quarter trim panel is utilized, the headlining is tacked or stapled to a trim stick in the roof extension area (See Fig. 11-2). The upper quarter trim is retained by clips (See Fig. 11-2). On "E" Body Styles the upper quarter trim is further retained by cementing the forward edge to the side roof rail. On styles where the headlining covers the entire roof extension area, the headlining is retained along the rear compartment shelf by a pronged retainer (See Fig. 11-5).

REMOVAL

1. Place protective coverings over seat cushions and backs.
2. Prior to removing headlining, remove following hardware and trim assemblies if present.
   a. Windshield side and upper garnish moldings or finishing lace.
   b. Rear view mirror support.
   c. Sun shade supports.
   d. Dome or rear quarter courtesy lamps.
   e. Coat hooks.
   f. Side roof rail moldings or finishing lace.
   g. Back window garnish moldings or finishing lace.
   h. Center pillar finishing moldings.
   i. Rear quarter trim, where necessary.

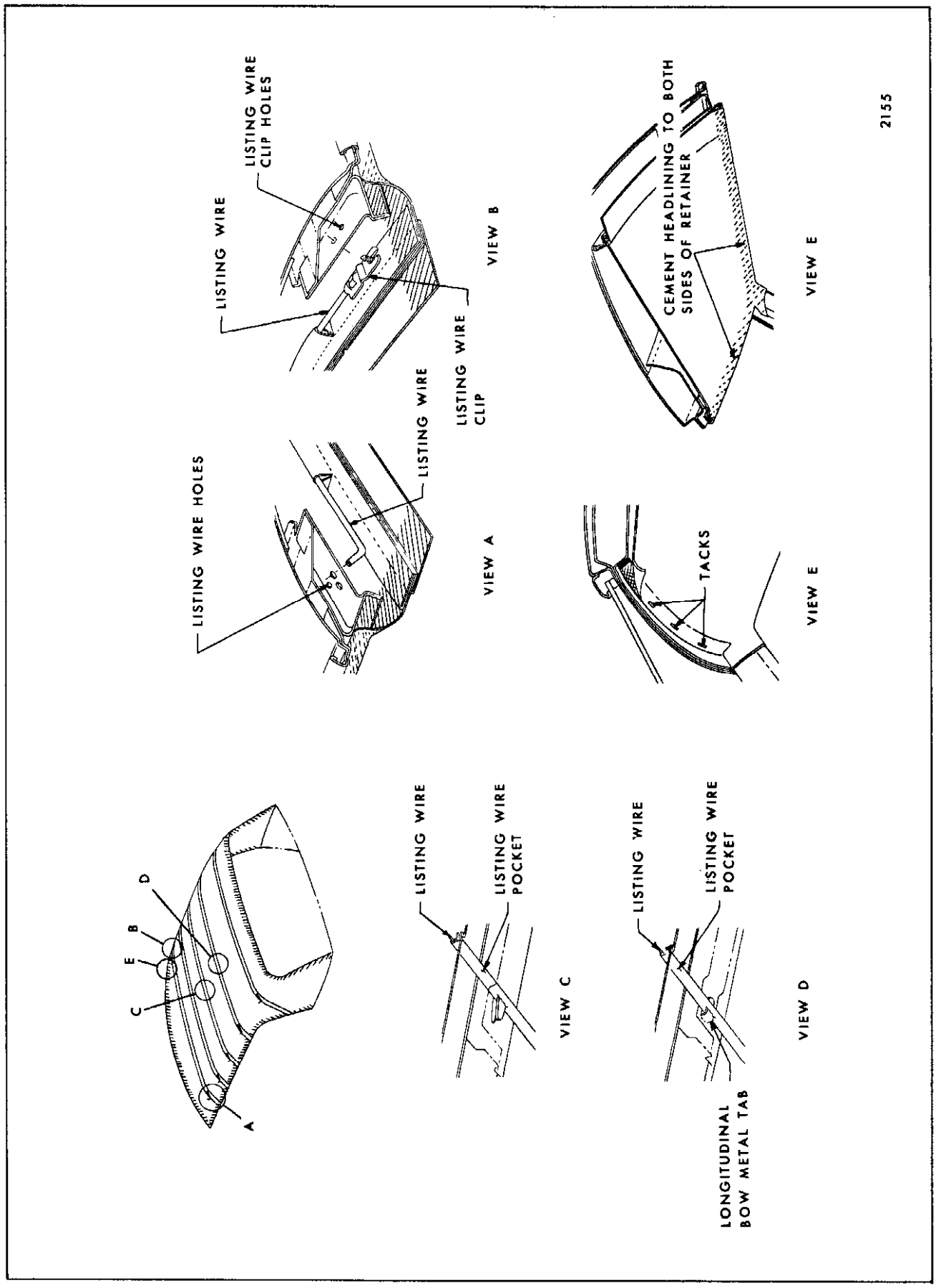


Fig. 11-1 – Vinyl and Cloth Headlining Installation

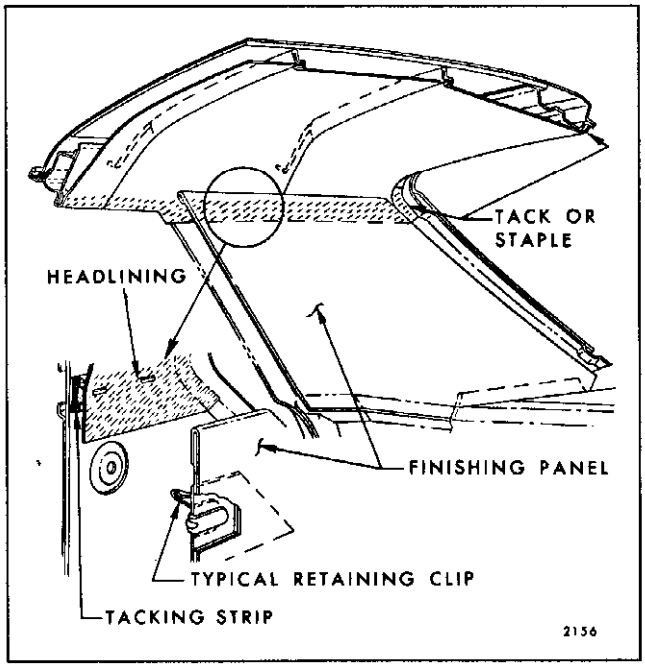


Fig. 11-2 — Upper Quarter Trim Installation

j. Upper quarter trim finishing panel (on styles so equipped).

k. Back body opening garnish moldings or finishing lace.

l. Shoulder strap anchor plate and escutcheon.

3. Carefully remove tacks or staples securing headlining at windshield and back window opening or back body opening.

4. On styles using pronged retainers, use headlining inserting tool, J-2772 or similar wide-bladed tool and carefully disengage headlining from pronged retainers where present.

5. Carefully detach cemented edge of headlining around entire perimeter.

6. Starting at front of body, carefully disengage No. 1 and No. 2 listing wires from side roof inner rails and supporting tabs on longitudinal (front to rear) bow on styles so equipped (View "D" in Fig. 11-1). In like manner, working from rear of body, disengage listing wires from side roof rails and supporting tabs on longitudinal bow. Exercise care to keep headlining material clean by gathering or folding headlining with listing wires on outside.

7. At No. 3 listing wire, bend down tab securing listing wire (View "C" in Fig. 11-1) and remove headlining assembly from body.

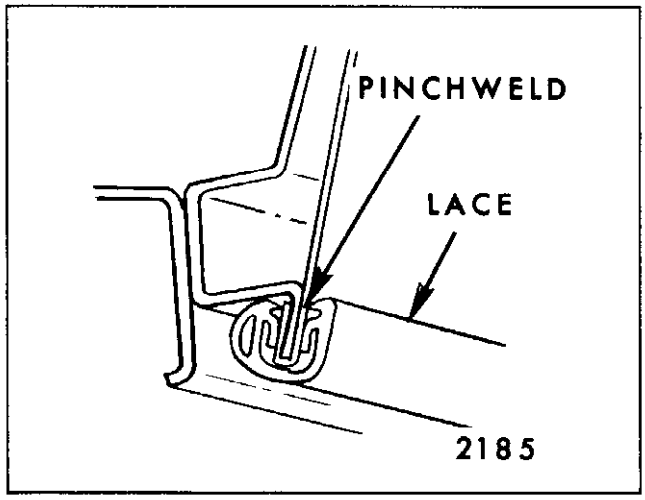


Fig. 11-3 — Pinchweld Finishing Lace

IMPORTANT: Note in which holes listing wires are installed in side roof rails. Listing wires should be placed in same hole when replacing headlining.

8. If replacing headlining, remove listing wires from pockets of old headlining.

IMPORTANT: Listing wires removed from old headlining must be installed in corresponding pockets of new headlining.

INSTALLATION

1. If previously removed, install listing wires into corresponding pockets of new headlining assembly.

2. Apply approved trim cement to headlining attaching surface at windshield, side roof rail and back window or back body opening. On styles that utilize pinchweld finishing lace be certain cement is applied to both sides of retainer at windshield and back window or back body opening. (View "E", Fig. 11-1 and Fig. 11-5).

3. Lift headlining assembly into body and install No. 3 listing wire and listing wire pocket over metal tab at roof bow (View "C", Fig. 11-1). Bend up tab to secure listing wire to bow. Make certain headlining is centered in body.

4. When new headlining is being installed on styles equipped with longitudinal bow (except cloth headlining) slit listing wire pockets at each tab location on longitudinal bow (approximately 1-1/2" in length). Working rearward from No. 3 listing wire, install listing wires in side roof rails and over tabs on longitudinal

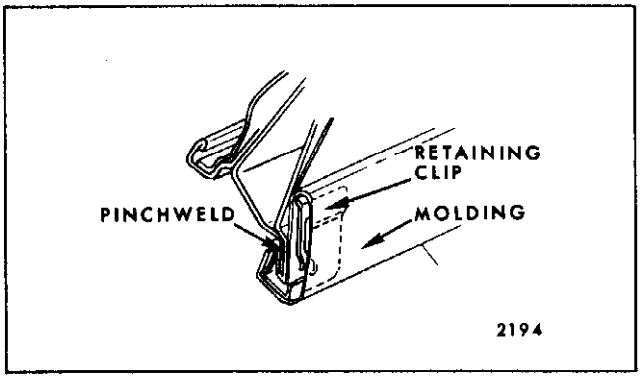


Fig. 11-4 — Side Roof Rail Garnish Moldings

bow. In like manner, working forward, install No. 2 and No. 1 listing wires. (View "D", Fig. 11-1).

NOTE: Listing wires may be adjusted up or down by utilizing appropriate holes in side roof rails. Listing wires should rest tight against roof panel after installation. (Views "A" and "B" in Fig. 11-1).

5. Stretch and secure headlining at windshield and back window or back body opening. Stretch and secure headlining at rear quarters and side roof rails. Permanently attach material removing draws and wrinkles and replace all previously removed inside hardware and trim assemblies.

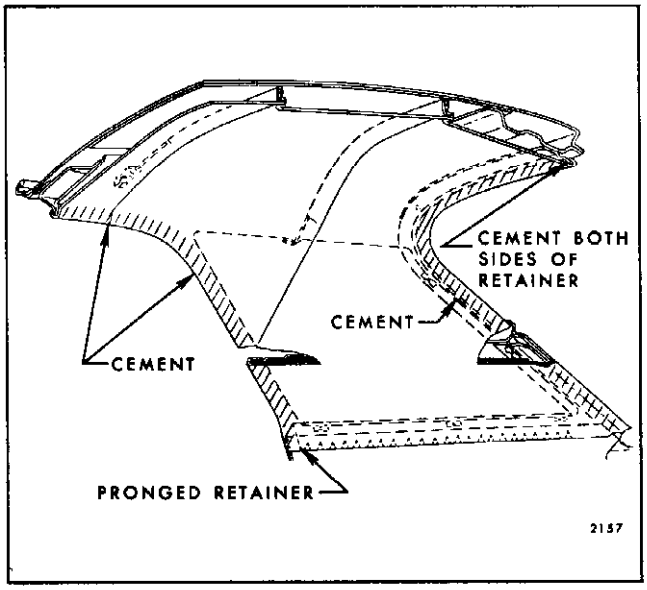


Fig. 11-5 — Headlining Installation at Roof Extension

HEADLINING—FLOCKED HEADLININGS

DESCRIPTION

The flocked headlining assembly consists of five individual sections.

The headlining sections are secured in place by retainers formed to the contour of the roof panel. Plastic moldings are snapped over the retainers and cover the retainers and edges of the headlining sections. Windshield, back window and side roof rail garnish moldings, also assist in holding the headlining in place.

When necessary, the headlining sections may be individually removed and replaced.

REMOVAL (ONE OR MORE SECTIONS)

1. Place protective coverings over seat cushions and backs.

2. Remove side roof rail moldings. If removing front section of headlining, remove windshield upper and side garnish moldings, sunshade support assemblies and rear view mirror support. If removing rear section, remove back window garnish moldings, side roof rail garnish moldings and rear quarter trim assembly to gain access to headlining at side roof rail area. If center sections are removed, where required, remove dome lamps, coat hooks, coat hook spacers (if present) and shoulder strap anchor plates and escutcheons.

3. With flat-bladed tool, carefully pry one end of plastic molding from retainer and remove (View "C", Fig. 11-6). Remove plastic moldings from both retainers securing section of headlining being removed.

4. When removing individual sections, use flat-bladed tool and carefully pry one edge of headlining section from retainer and remove from body.

5. If removing headlining section at back window, remove tacks or staples securing section at back window opening.

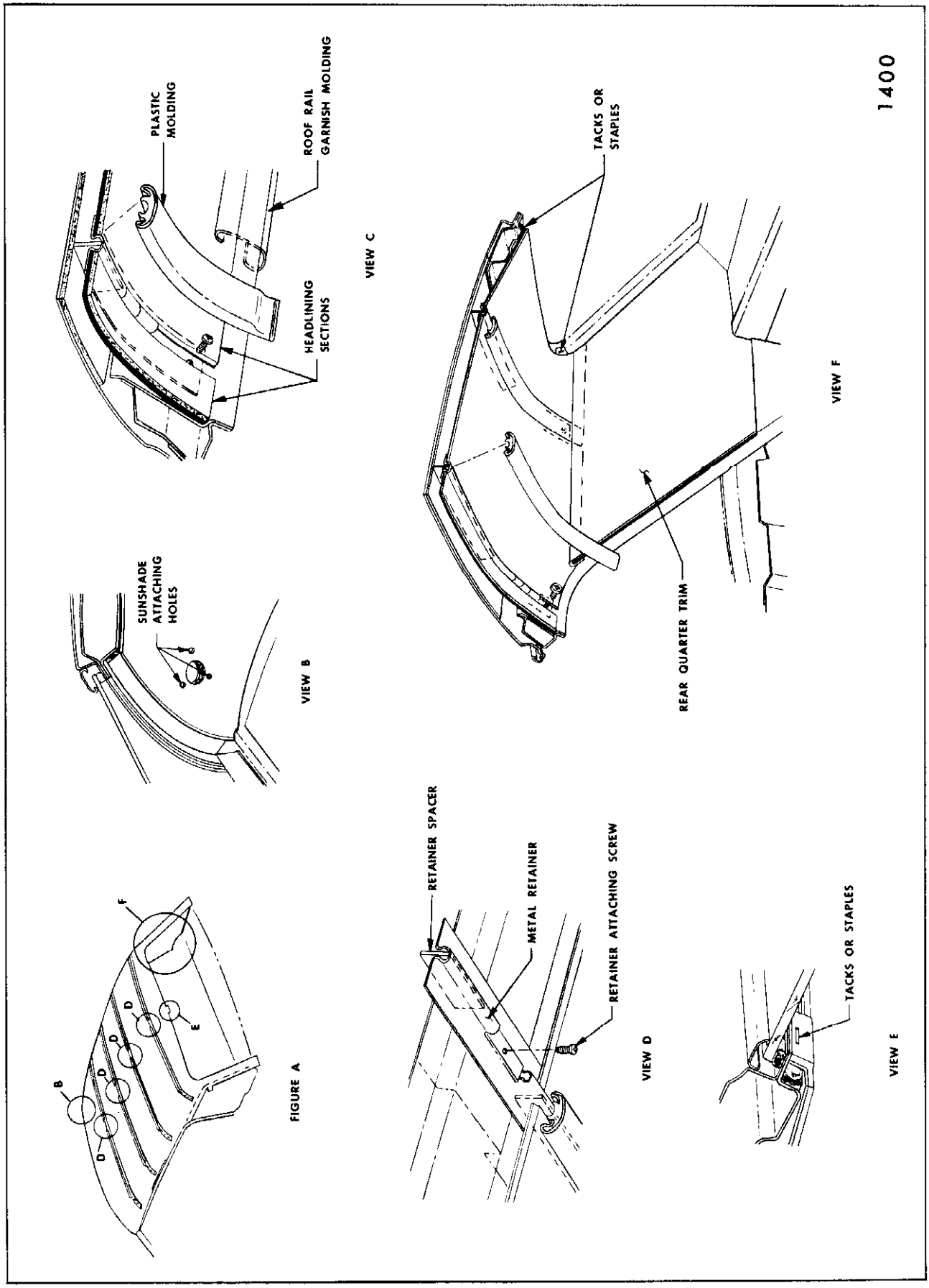


Fig. 11-6—Flocked Headlining Installation

6. When retainers are required to be removed, remove screws securing retainer to roof (View "D", Fig. 11-6). Retainer spacers are installed between the metal retainers and roof (View "D", Fig. 11-6).

INSTALLATION:

1. If retainers were removed, make certain that retainer spacer shown in View "D", of Figure 11-6 is installed prior to installing retainers.

   NOTE: Retainers should be tight against roof panel after installation.

2. Install headlining sections by positioning one edge in retainer and centering section in relation to other sections and side roof rails; then carefully snap remaining edge in other retainer. Snap plastic molding over retainers (View "C", Fig. 11-6).

3. If installing rear section of headlining assembly, position forward edge of section in retainer. Center and align section in relation to side roof rails and back window opening and stay tack section in place. Recheck alignment; then starting at center of back window area, permanently tack section to tacking strips at back window opening (View "F", Fig. 11-6).

4. If installing front section of headlining assembly, position appropriate edge in retainer. Center headlining section in relation to other sections, side roof rails, and sunshade support attaching holes (View "B", Fig. 11-6). Install sunshade supports.

   NOTE: Forward edge of front section and rearward edge of rear section are also secured in place by windshield or back window garnish moldings.

5. Install all previously removed hardware and remove protective coverings.

   NOTE: When installing side roof rail moldings, make certain edge of headlining section is covered by side roof rail moldings.

HEADLINING—"55 AND 65" STATION WAGON STYLES

DESCRIPTION

The "55 and 65" station wagon styles use two separate headlining assemblies and may be removed and replaced separately.

The front headlining is formed to the contour of the roof panel by concealed listing wires (View "A", Fig. 11-7). The ends of the listing wires are installed into holes in the side roof inner rails (View "B"), and may be adjusted up and down or fore and aft.

The headlining material is cemented to metal retainers and side roof rail pinchweld flanges (View "B", "C" and "D", Fig. 11-7). Escutcheons, moldings, and finishing lace cover the edges and assist in holding the material in place.

The rear headlining is formed to the contour of the roof panel by concealed listing wires (View "E", Fig. 11-7). The ends of the listing wires are installed into clips which are secured to the side roof inner rails by screws (View "F", Fig. 11-7). The edges of the material are cemented to the retainer flanges (View "G", Fig. 11-7). Finishing lace and moldings cover the edges and assist in holding the material in place.

CAUTION: Clean hands are essential when working with headlining material.

FRONT HEADLINING ASSEMBLY

Removal

1. Place protective covers over front seat cushion and back.

2. Prior to removal of the front headlining, remove the following items:

   a. Sunshade supports.

   b. Rear view mirror support.

   c. Windshield upper corner escutcheons.

   d. Center lock pillar upper finishing plates.

   e. Side skylight front upper garnish molding.

   f. Coat hooks.

   g. Courtesy lamps.

   h. Front skylight center division garnish molding.

   i. Front headlining finishing lace.

   j. Rear of headlining finishing lace.

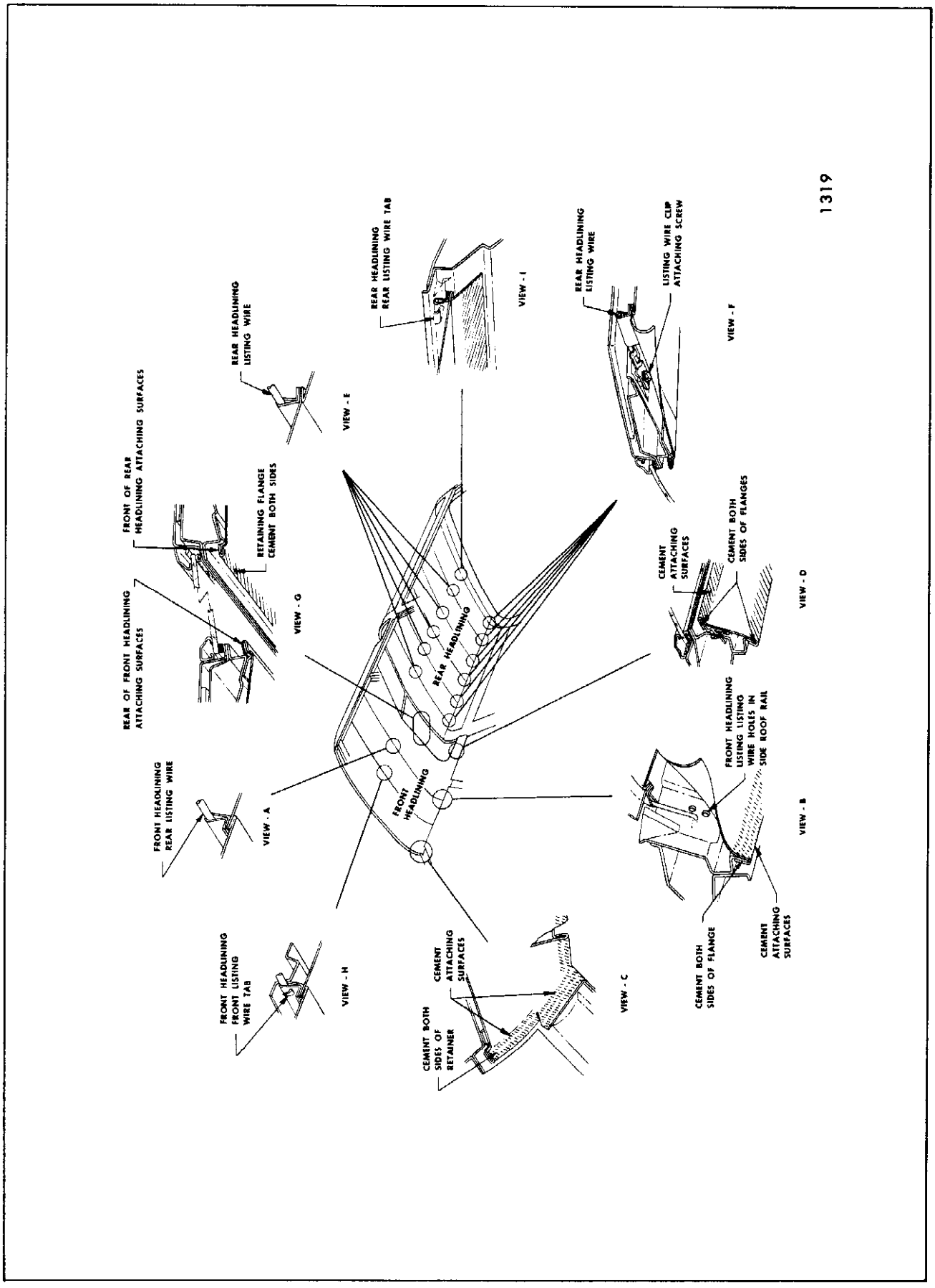


Fig. 11-7—Headlining Installation "55" and "65" Styles

k. Finishing lace over front and rear doors.

l. Shoulder strap anchor plate and escutcheon (if present).

3. Starting at front, carefully detach all cemented edges of headlining material from retainers and flanges.

4. Bend down tab at front listing wire (View "H", Fig. 11-7); remove listing wires from inner rails. Gather or roll headlining with listing wires on outside to keep headlining clean and remove old headlining assembly.

IMPORTANT: Note into which holes ends of listing wires are installed in side roof rails. Listing wires should be placed in same holes when replacing headlining. If replacing headlining remove listing wires from pockets of old headlining.

Installation

1. If previously removed, install listing wires into pockets of headlining.

IMPORTANT: Listing wires removed from old headlining must be installed in corresponding pockets of replacement headlining.

2. Apply approved trim cement to headlining attaching surfaces.

3. Apply approved trim cement to metal retainers and flanges.

4. Lift headlining into body, install listing wires into holes in side roof rail, center headlining to roof, hook front listing wire over tab on roof bow and bend down tab (View "H", Fig. 11-7).

NOTE: Listing wires should rest tight against roof panel. Working from front to rear, attach headlining to retainers and flanges while stretching and removing wrinkles. Reinstall all previously removed parts.

REAR HEADLINING ASSEMBLY

Removal

1. Place protective covering over seats and floor.

2. Prior to removing headlining, remove the following items:

a. Sunshade supports.

b. Front skylight center division garnish molding.

c. Side skylight front upper garnish molding.

d. Rear roof headlining trim finish molding.

e. All finishing lace around perimeter of headlining.

3. Carefully detach headlining at cemented edges.

4. Starting at front remove listing wires from roof inner rails (View "F", Fig. 11-7).

5. At rear listing wire bend down tab securing wire to bow (View "I", Fig. 11-7).

6. Gather or roll headlining with listing wires on outside to keep headlining clean and remove headlining assembly from car.

Installation

1. If previously removed, install listing wires into pockets of new headlining assembly.

IMPORTANT: Listing wires removed from old headlining must be installed in corresponding pockets of new headlining.

2. Apply approved trim cement to attaching surfaces of headlining material.

3. Apply approved trim cement to retaining flanges of roof panel.

4. Lift headlining into body, install center of rear listing wire over hook at rear bow and bend over tab (View "I", Fig. 11-7).

5. Working forward install remainder of listing wires into clips and secure clips to roof (View "F", Fig. 11-7).

6. Listing wires must rest tight against the roof. If necessary adjust listing wires by moving clips at attaching screws.

7. Attach entire perimeter of headlining to retaining flanges, removing wrinkles by stretching the material as required.

8. Replace previously removed parts.

SECTION 12
ROOF COVER

INDEX

Subject	Page
Fabric Roof Covers (All Styles Except Station Wagons)	12-1
Description	12-1
Removal	12-1
Installation	12-3
Fabric Roof Covers (Station Wagon Styles)	12-6
Description	12-6
Removal	12-6
Installation	12-8
Tail Gate Fabric Cover	12-10
Description	12-10
Removal	12-10
Installation	12-11

FABRIC ROOF COVER (ALL STYLES EXCEPT STATION WAGONS)

DESCRIPTION

The roof panel fabric cover is a vinyl coated fabric covering applied to the roof panel. The fabric covering is made in sections which are dielectrically joined at the seams.

On certain styles a pad is located between the fabric cover and roof panel. The pad is cemented to the roof panel with nitrile type non-staining cement. The roof panel fabric is cemented around the perimeter only and not to the pad.

On other styles the roof panel fabric is cemented to the entire surface of the roof panel with nitrile type non-staining cement.

The roof panel cover is attached at the windshield and back window opening by drive nails or staples. Drive nails are used at the belt line of the rear quarter area. A flexible retainer secures the fabric cover inside the right and left drip moldings.

NOTE: On certain styles where roof panel moldings are utilized, the fabric roof cover is not secured at the windshield opening or inside the roof drip moldings. The retainers utilized to retain the roof panel moldings also secure the fabric roof cover.

Prior to and during removal and installation of fabric roof cover, review Figure 12-1, 12-2, 12-3, 12-4 and 12-5.

Figures 12-1 and 12-2 are applicable for all styles. Figure 12-4 is to be referred to when working on styles not equipped with roof panel moldings. Figure 12-3 is applicable only to styles equipped with a pad. Figure 12-5 should be referred to when working on styles equipped with roof panel moldings.

REMOVAL

1. The following parts must be removed prior to removing the roof panel fabric cover:
   a. Windshield assembly (except styles equipped with roof panel moldings).

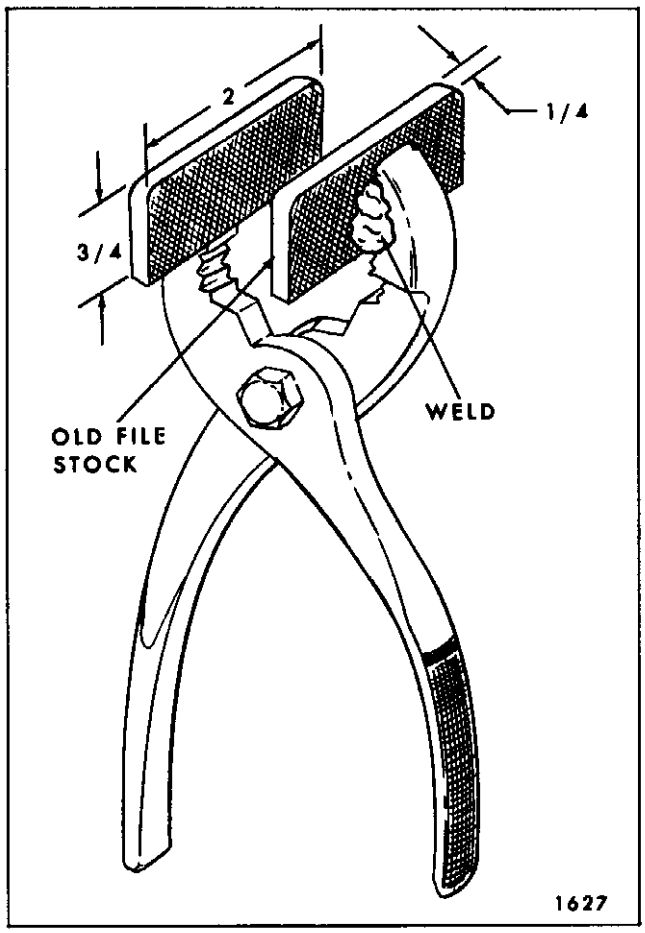


Fig. 12-1 — Fabric Cover Pliers

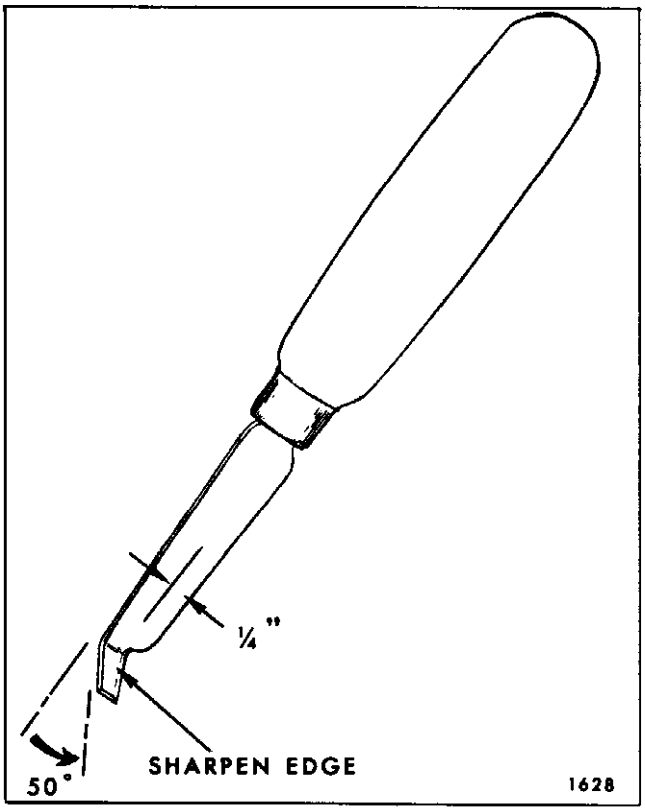


Fig. 12-2 — Fabric Cover Trimming Knife

b. Roof drip molding scalps (except styles equipped with roof panel moldings).

c. Back window assembly.

d. Rear quarter belt reveal moldings and rear end belt reveal moldings.

e. Rear extension panel emblem and/or nameplate assembly.

f. All roof panel moldings and molding retainers on styles so equipped (View "B", Fig. 12-5).

2. Clean off all excess adhesive caulking material from windshield and back window openings.

3. Remove drive nails and/or staples from edge of fabric cover at windshield, back window openings, and at roof panel extension (at belt).

NOTE: Drive nails can best be removed by first driving a screwdriver or suitable tool under the heads of the nails to loosen them. Diagonal cutters or similar tool can then be used to grasp nails and twist them out. Unnecessary enlargement of holes in roof panel should be avoided.

4. Remove flexible retainers securing fabric cover inside right and left drip moldings. (View "C", Fig. 12-4). The retainers may be removed by inserting tip of screwdriver or similar tool under retainer at front of drip molding. While exerting slight outward force on drip molding with pliers, disengage fingers of retainer from drip molding flange. Do not damage drip molding. New retainers are to be used when replacing fabric cover.

NOTE: On styles equipped with roof panel moldings, front and side retainers are to be removed by first removing spring clips from weld-on studs (View "B", Fig. 12-5).

5. Prior to removing fabric cover, application of heat to cemented areas will permit easier loosening of cemented edges.

CAUTION: Heat may be applied by lamps held 18" (minimum) from fabric only until fabric is warm. If lamps are held too close or fabric cover is heated over 200°F, the fabric may lose its grain, blister, or become very shiny.

6. Loosen cemented edges of fabric roof cover at windshield, side roof rails, back window, and rear quarter areas; then, carefully remove fabric cover from remaining cemented area of roof panel.

IMPORTANT: On styles where a pad is present, exercise care when removing fabric cover so pad will not be damaged.

7. On styles equipped with pad, inspect padding and, if necessary, replace damaged area. Padding may be removed by applying xylol solvent such as 3M Adhesive Cleaner, or equivalent to affected area. Allow solvent to dissolve adhesive and remove padding. Exercise care to avoid softening of roof panel paint finish.

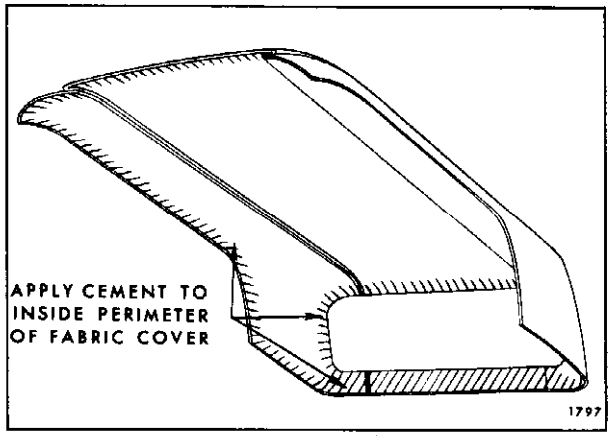


Fig. 12-3 — Cementing Fabric Cover with Pad

8. Replace pad by cementing pad to roof panel with nitrile vinyl trim adhesive.

INSTALLATION

1. Check all cementing surfaces on body to insure a smooth surface. Cementing surface must be smooth to prevent "highlighting" of excess cement through fabric cover after new cover has been installed. Clean off old cement as required.

   NOTE: A xylol solvent such as 3M Adhesive Cleaner or equivalent should be used to remove or smooth out excess old cement. Apply solvent and allow to soak before rubbing.

   CAUTION: Be certain to follow manufacturer's directions when using cleaner.

2. On style equipped with roof panel moldings, completely mask off area of roof panel which is not covered by fabric cover. Extend tape over windshield upper reveal molding so solvent will not contact paint or adhesive caulking material. On all other styles, mask portion of windshield and back window opening where adhesive caulk material will be later applied. In addition, all doors and flat painted surfaces (hood, rear compartment lid, etc.) should be masked.

3. Where possible, install new cover at room temperature (approximately 72°), to permit easier fitting and removing of wrinkles from new cover assembly.

   NOTE: Where new cover is installed at temperatures below 72°, fabricated pliers as shown in Figure 12-1 will aid in removing wrinkles.

4. Determine center line of roof panel by marking center points on windshield and back window opening with tape or equivalent.

5. Lay cover on roof panel and fold cover lengthwise, precisely at center location. Mark center location at front and rear of cover.

6. Remove cover from roof panel and lay cover with lining side upward on a clean flat area.

7. a. On styles where pad is not present, apply an even application of nitrile non-staining vinyl trim adhesive (such as 3M Vinyl Trim Adhesive or Permalastic Vinyl Trim Adhesive or equivalent) over entire lining side of fabric cover.

      NOTE: Neoprene non-staining weatherstrip adhesive may be used if the above is not available.

   b. On styles equipped with pad, apply nitrile type trim adhesive to that part of lining side of cover that will contact the metal portion of the roof panel. Cement should be applied so it will overlap the pad approximately 1".

      NOTE: It is recommended that the nitrile trim adhesive be applied with a spray gun. As an alternate method, a brush or roller may be used. If spraying method is utilized, a spray gun with a pressure cup and specific Fluid Tip and air cap should be used as shown on chart below (or equivalent).

	Devilbiss		Binks	
Gun Model	MBC-510	JGA-502	62	18
1 Qt. Pressure	KB-519	KB-519	80-256	80-210
Air Cap	24	24	66PG	66PG
Fluid Tip	E	E	66	66
Fluid Needle	E	E	365	65

   The recommended air pressures are as follows:

   A. Air Line Pressure - 50 Lbs.

   B. Cup Pressure - 2 to 4 Lbs.

   Permalastic or 3M Vinyl Trim Adhesive purchased in the field is of spraying consistency. If rolling method is used, a mohair type roller should be utilized. Make certain cement is applied evenly and there are no highlights from excess cement build-up.

8. Allow cement on fabric roof cover to thoroughly dry.

9. Lay cover on roof panel and align to correspond with center line of roof panel. Determine proper material overhang to windshield and back window openings (approximately 2" overhang at seam area at back window and windshield opening).

10. a. On styles not equipped with pad, fold one half of cover back at centerline and apply nitrile type vinyl trim adhesive to exposed half of roof panel (Do not include drip molding or roof extension area). Starting in center at centerline and working toward drip molding, cement cover to area while cement is wet. As cover is being "unfolded" and cemented, it should be thoroughly "slicked" down to avoid wrinkles or air bubbles.

b. On styles equipped with pad, install drive nail at seam areas only in back window opening. Apply cement to one side of exposed roof panel (including drip moldings) where cover is attached (make certain cement overlaps pad approximately 1") and cement cover to areas. On styles with roof panel moldings, relief notches must be cut in fabric roof cover at weld-on studs.

NOTE: When installing fabric cover to inside of drip molding, a small thin-edge piece of plastic or similar material may be used to insert cover in place inside drip rails. Exercise care so damage will not occur to cover when performing this operation.

11. Repeat Steps 10a and b on opposite side of roof panel.

NOTE: Make certain that cover is free of wrinkles and seams are straight. Fabric cover pliers may be used in aiding removal of wrinkles.

12. Apply cement across the top of windshield and back window opening and cement cover in these areas.

NOTE: Relief notches must be cut in cover where weld-on studs are present and at upper radius of windshield and back window opening.

13. Using hammer and flat end punch install drive nails at top of windshield and back window openings (View "B" and "E" Figure 12-4 show typical drive nail installation). Drive nails are not to be used at weld-on studs on roof panel on styles equipped with roof panel moldings.

NOTE: When installing drive nails it is best to first use an awl or similar tool to initiate a hole in metal. Drive nails should be spaced approximately 2" apart on styles with felt pad and 3" apart for other styles in a straight area, and 1" apart at a radius. Strike drive nails only hard enough to seat them. Installation of drive nails should also be as low as possible in windshield and back window opening. This will aid in preventing cutting edge of fabric cover due to a missed hammer blow when drive nails are installed.

14. Apply cement to roof extension areas and below back window opening on styles where covers extend below back window.

15. On styles where cover extends below back window opening, cement cover in that area prior to performing Step 16.

16. Cement cover at roof extension areas by pulling cover down and rearward. When operation is completed, fabric cover should be free of all wrinkles and draws in this area.

17. Cement cover into side of back window opening. If weld-on studs are present, cut relief notches in cover.

18. Using flat end punch and hammer, install drive nails at side of back window opening (styles with pad only) and along belt line at extension area (all styles). Drive nails at belt are to be spaced 3" apart.

19. On styles equipped with roof panel moldings, position roof panel cover retainers over weld-on studs and install retaining clips.

20. On styles where roof panel cover extends down windshield pillar, cement fabric roof cover to windshield pillar.

21. On styles equipped with roof panel moldings, trim fabric cover along roof panel molding retainers (View "B", Fig. 12-5). Trimming tool (J-21092) or suitable small knife may be used to trim cover (See Figure 12-2). Do Not Damage Paint Finish. At front corners, raise cemented edge of cover and using scissors or sharp knife cut radius so roof panel moldings cover cut edge. Recement fabric cover to roof panel (See View "A", Fig. 12-5). Remove masking tape from roof panel.

22. On all styles, trim material along belt line at roof extension area. On styles where fabric cover extends below back window, trim cover along rear end belt molding area. If it is necessary to trim material from outer edge of fabric cover around windshield or back window opening, raise cemented edge and cut as required. Edge of fabric cover should exist as shown in View "B" and "E", Fig. 12-4. Do Not Damage Paint Finish.

23. On styles not equipped with roof panel moldings perform the following operations.

a. Cement fabric cover into drip moldings (styles without pad).

b. Using fabric cover trimming tool (J-21092), or suitable small knife, trim fabric cover just under lip of roof drip molding (View "C", Fig. 12-4). A tool may be fabricated to trim material along side roof rail drip moldings as illustrated in Figure 12-2.

c. Install flexible retainer starting at radius area above rear door or quarter window. Working toward rear of body, carefully

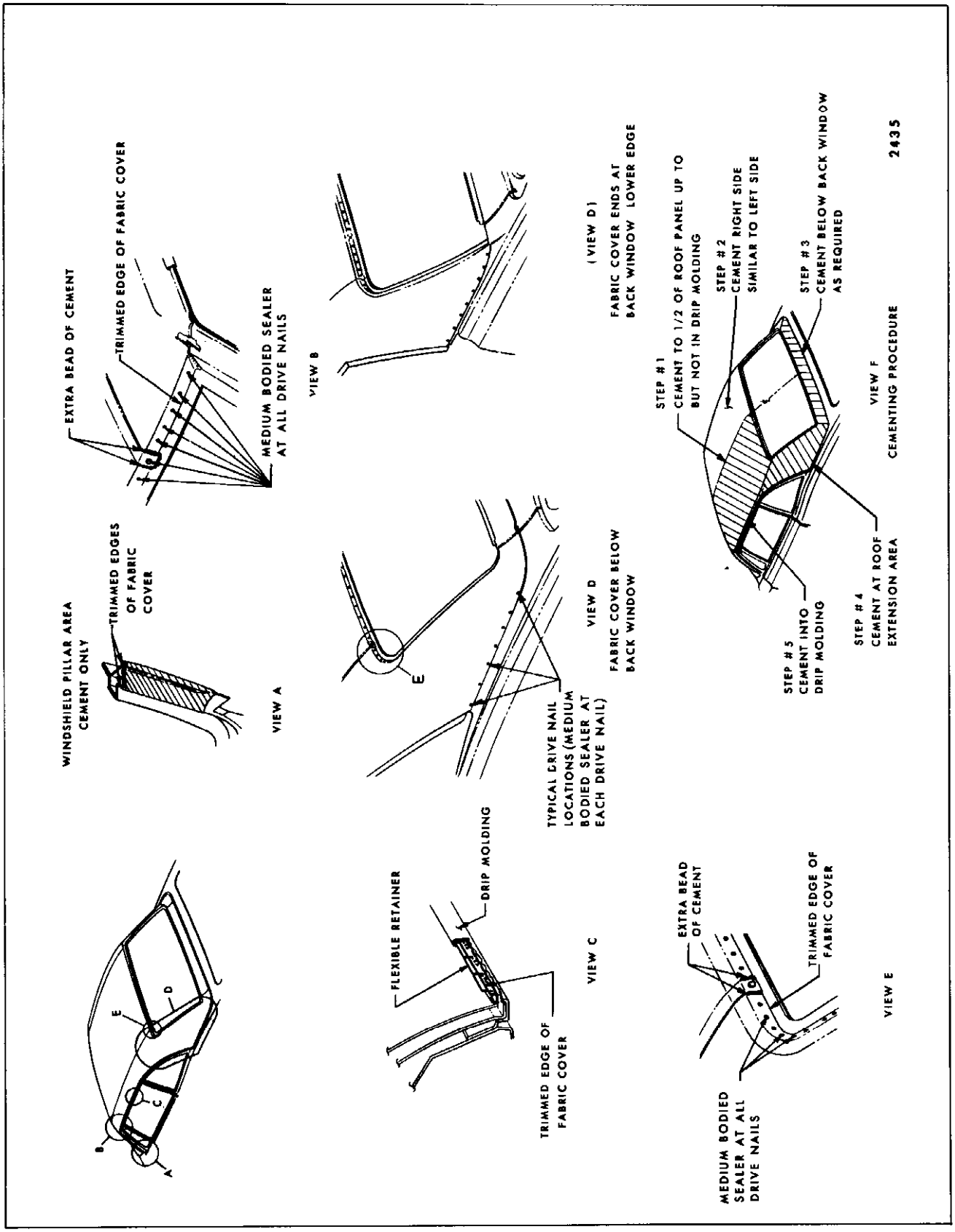


Fig. 12-4—Fabric Roof Cover Installation - Styles without Roof Panel Molding

insert retainer into drip molding so that outside edge is under drip molding flange (See View "C", Fig. 12-4). Use fibre or wood block with slight concave end to push retainer downward. DO NOT DAMAGE RETAINER.

24. a. On styles without pad, install medium bodied sealer at each drive nail and relief notch in the windshield and back window opening.

    b. On styles with pad, apply medium bodied sealer across the top of windshield opening (styles where cover is installed in windshield opening) and back window opening.

25. Remove masking tape from windshield and back window opening.

26. Install all previously removed moldings and assemblies.

    NOTE: Normally minor creases or fold marks will gradually disappear after cover assembly has been in service.

    IMPORTANT: If nitrile adhesive is used, fabric cover should be allowed to dry approximately four hours after installation. If fabric cover is subjected to extreme direct sunlight or heat immediately after installation, blistering due to trapped solvents may occur.

27. Use mineral spirits, kerosene or equivalent to remove windshield and back window adhesive caulking material from fabric cover.

    IMPORTANT: Do not apply excessive pressure when wiping cover, as damage may occur to fabric cover.

    NOTE: In the event slight bubbles or wrinkles exist in fabric cover, they can be repaired as follows:

    a. Pierce bubble with small needle.

    b. Apply a dampened shop towel over area.

    c. Using a low heat home type iron, apply iron to dampened towel using back and forth strokes until wrinkle or bubble disappears. Be certain shop towel does not become dry as excess heat will permanently damage fabric roof cover.

FABRIC ROOF COVER (STATION WAGON STYLES)

The procedure for removal and installation of the fabric cover on station wagon styles is divided into two sections. The roof panel fabric cover procedure is followed by the tailgate fabric cover procedure.

NOTE: The roof panel fabric cover assembly is ordered as a separate service part. The fabric used on the tailgate is ordered as "yardage material" in the normal manner.

DESCRIPTION

The roof panel fabric cover is cemented to the entire surface of the roof panel and tailgate with nitrile type non-staining cement. In addition to cement, the fabric cover is attached at the windshield by drive nails and in the tailgate opening by two screws at the seams. Drive nails are used at the belt line of the back body opening pillar. A flexible retainer secures the fabric cover inside the right and left drip moldings.

Prior to and during removal and installation of fabric roof cover, review Fig. 12-1, 12-2 and 12-6.

REMOVAL

1. The following parts must be removed prior to removing the roof panel fabric cover:

   a. Windshield pillar drip molding.

   b. Windshield assembly.

   c. Back body opening upper and side reveal moldings.

   d. Roof drip molding scalps.

   e. Back body pillar cover finishing molding retainers.

   f. Tailgate upper glass run channel.

2. Clean off all excess adhesive caulking material from windshield opening.

3. Remove screws, drive nails and/or staples from edge of fabric cover at windshield, and at back body pillar.

   NOTE: Drive nails can best be removed by first driving a screwdriver or suitable tool

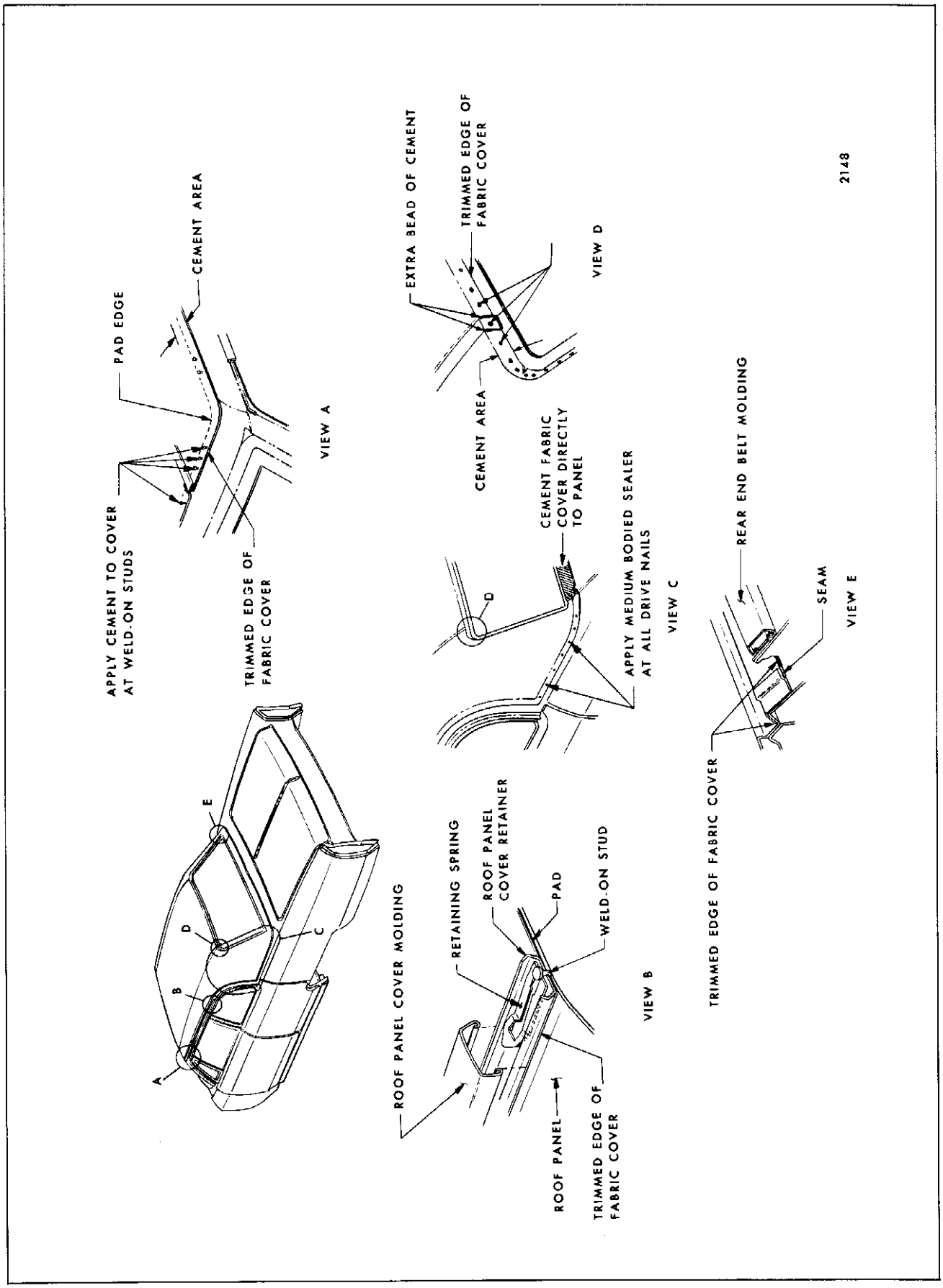


Fig. 12-5—Fabric Roof Cover Installation - Styles with Roof Panel Molding

under the heads of the nails to loosen them. Diagonal cutters or similar tool can then be used to grasp nails and twist them out. Unnecessary enlargement of holes in roof panel should be avoided.

4. Remove flexible retainers securing fabric cover inside right and left drip moldings (See Section "A-A", Fig. 12-6). The retainers may be removed by inserting tip of screwdriver or similar tool under retainer at front of drip molding. While exerting slight outward force on drip molding with pliers, disengage fingers of retainer from drip molding flange. DO NOT DAMAGE DRIP MOLDING.

   NOTE: New flexible retainers should be used when replacing fabric cover.

5. Prior to removing fabric cover, application of heat to cemented areas will permit easier loosening of cemented edges.

   CAUTION: Heat may be applied by lamps held 18" (minimum) from fabric only until fabric is warm. If lamps are held too close or fabric cover is heated over 200°F, the fabric may lose its grain, blister, or become very shiny.

6. Loosen cemented edges of fabric roof cover at windshield area, drip moldings, back body opening, and back body pillar areas; then, carefully remove fabric cover from remaining cemented area of roof panel.

INSTALLATION

1. Check all cementing surfaces on body to insure a smooth surface. Cementing surface must be smooth to prevent "highlighting" of excess cement through fabric cover after new cover has been installed. Clean off old cement as required.

   NOTE: A xylol solvent such as 3M Adhesive Cleaner or equivalent, should be used to remove or smooth out excess old cement. Apply solvent and allow to soak before rubbing.

   CAUTION: Be certain to follow manufacturer's directions when using cleaner.

2. Mask all painted surfaces below belt line, including hood windshield pinchweld flange, instrument panel, and back body opening to protect painted surfaces.

   CAUTION: Avoid prolonged contact of saturated masking materials to painted surfaces or paint etching may result.

3. Where possible, install new cover at room temperature (approximately 72°F), to permit easier fitting and removing of wrinkles from new cover assembly.

   NOTE: Where new cover is installed at temperatures below 72°F, pliers fabricated as shown in Figure 12-1 will aid in removing wrinkles.

4. Determine center line of roof panel by marking center points on windshield and back body opening with chalk or equivalent.

5. Fold cover lengthwise, precisely at center location. Mark center location at front and rear of cover.

6. Remove cover from roof panel and lay cover with lining side upward on a clean surface.

7. Apply an even application of nitrile non-staining vinyl trim adhesive (such as 3M Vinyl Trim Adhesive or Permalastic Vinyl Trim Adhesive or equivalent) over entire lining side of fabric cover. Neoprene non-staining weatherstrip adhesive may be used if the above is not available.

   NOTE: It is recommended that nitrile trim adhesive be applied by spraying. As an alternate method, a roller or brush may be used. If spraying method is utilized, a spray gun with a pressure cup, and specific Fluid Tip and air cap should be used as shown on chart below (or equivalent).

	Devilbiss		Binks	
Gun Model	MBC-510	JGA-502	62	18
1 Qt. Pressure	KB-519	KB-519	80-256	80-210
Air Cap	24	24	66PG	66PG
Fluid Tip	E	E	66	66
Fluid Needle	E	E	365	65

The recommended air pressures are as follows:

A. Air Line Pressure - 50 lbs.

B. Cup Pressure - 2 to 4 lbs.

Permalastic or 3M Vinyl Trim Adhesive purchased in the field is of spraying consistency. If rolling method is used, a mohair type roller should be utilized. Make certain cement is applied evenly and there are no highlights from excess cement build-up.

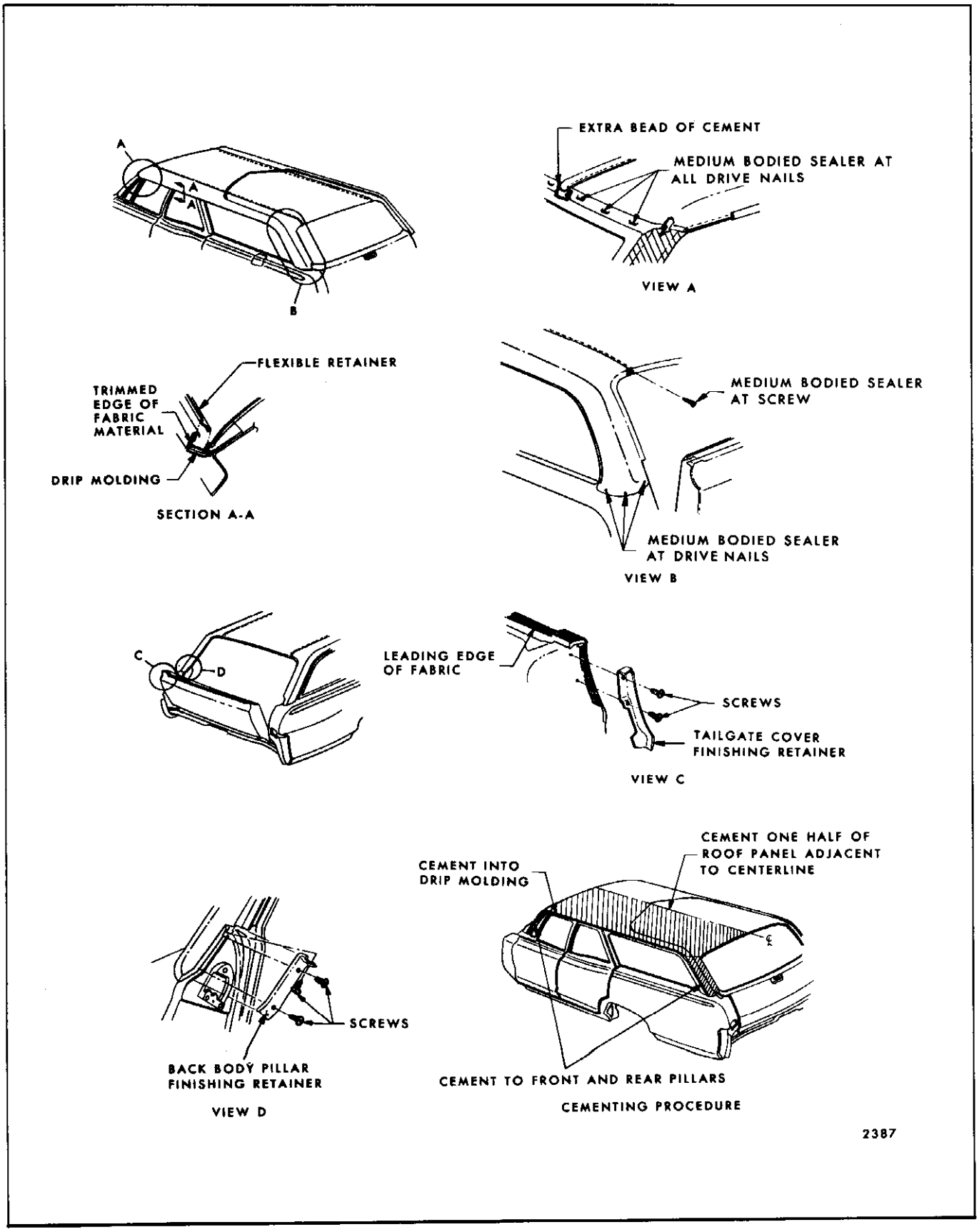


Fig. 12-6—Fabric Roof Cover Installation - Station Wagon Styles

8. Allow cement on fabric roof cover to thoroughly dry.

9. Lay cover on roof panel and align to correspond with center line of roof panel. Determine proper material overhang to windshield and back body openings (approximately 3" overhang at seam area at back body and windshield opening).

10. Fold one half of cover back at centerline and apply nitrile type vinyl trim adhesive to exposed half of roof panel (Including drip molding). Starting in center at centerline and working toward drip molding, immediately cement cover to area. As cover is being "unfolded" and cemented, it should be thoroughly "slicked" down with hands to avoid wrinkles or air bubbles.

    NOTE: When installing fabric cover to inside of drip molding, a small thin edge piece of plastic, or similar material, may be used to insert cover in place inside drip molding. Exercise care to prevent damage to cover when performing this operation.

11. Repeat Step 10 on opposite side of roof panel.

    NOTE: Make certain that cover is free of wrinkles and seams are straight. Fabric cover pliers may be used in aiding removal of wrinkles.

12. Apply cement to windshield and back body pillars and in windshield and back body openings. Cement cover in those areas.

    NOTE: Relief notches must be cut in cover where any weld-on studs are present.

13. Using hammer and flat end punch install drive nails at top of windshield opening.

    NOTE: When installing drive nails it is best to first use an awl or similar tool to initiate a hole in metal. Drive nails should be spaced approximately 3" apart in a straight area, and 1" apart at a radius. Strike drive nails only hard enough to seat them. Installation of drive nails should also be as low as possible in windshield opening. This will aid in preventing cutting edge of fabric cover due to a missed hammer blow when drive nails are installed.

14. Install drive nails at belt line of back body pillar area and screws in back body opening. Do Not use awl for punching holes at belt line. Use existing holes or drill.

15. Trim off material at windshield opening, windshield pillar, back body opening, and back body pillar.

16. Using fabric cover trimming tool (J-21092), or suitable small knife, trim fabric cover just under lip of roof drip molding (Section "A-A", Figure 12-6). A tool may be fabricated to trim material along roof drip rail moldings as illustrated in Figure 12-2.

17. Install flexible retainer starting at front end of drip molding. Working toward rear of body, carefully insert inner edge of retainer into drip molding and snap fingers of retainer under drip molding flange. Use fibre or wood block with slight concave end to push retainer downward. DO NOT DAMAGE RETAINER.

18. Apply medium bodied sealer at each drive nail and at 2 screws at seam area in back body opening (View "A" and "B", Fig. 12-6).

19. Remove all masking tape.

20. Install all previously removed moldings and assemblies.

    NOTE: Normally minor creases or fold marks will gradually disappear after cover assembly has been in service.

    IMPORTANT: If nitrile adhesive is used, fabric cover should be allowed to dry approximately four hours after installation. If fabric cover is subjected to extreme direct sunlight or heat immediately after installation, blistering due to trapped solvents may occur.

TAIL GATE FABRIC COVER

DESCRIPTION

The tail gate fabric cover is a vinyl coated fabric of one section and is cemented to the surface of tailgate.

REMOVAL

1. The following parts must be removed prior to removing the tailgate fabric cover.

a. Tail gate belt reveal molding.

b. Tail gate window lower reveal molding.

c. Tail gate cover finishing retainer.

2. Prior to removing fabric cover, application of heat to cemented areas will permit easier loosening of cemented edges.

   CAUTION: Heat may be applied by lamps held 18" (minimum) from fabric only until fabric is warm. If lamps are held too close or fabric cover is heated over 200°F, the fabric may lose its grain, blister or become very shiny.

3. Loosen cemented edges of fabric cover on tail gate, then carefully remove cover from remaining cemented area.

INSTALLATION

1. Check cementing surfaces on body to insure a smooth surface. Cementing surface must be smooth to prevent "highlighting" of excess cement through fabric cover after new cover has been installed. Clean off old cement as required.

   NOTE: A xylol solvent such as 3M Adhesive Cleaner or equivalent, should be used to remove or smooth out excess old cement. Apply solvent and allow to soak before rubbing.

   CAUTION: Be certain to follow manufacturer's directions when using cleaner.

2. Mask area below fabric break line on tailgate to protect painted surfaces.

   CAUTION: Avoid prolonged contact of saturated masking materials to painted surfaces or paint etching may result.

3. To permit easier fitting and removing of wrinkles from new cover assembly, where possible, install new cover at room temperature (approximately 72°).

4. Position and install fabric cover on tailgate as follows:

   a. Place fabric cover on protected surface with inner layer of material exposed.

   b. Apply adhesive material to entire inner surface of fabric roof cover and allow to thoroughly dry.

      NOTE: See Note under Step 7 in Fabric Roof Cover (Station Wagon Styles) installation procedure for method in applying cement.

   c. Apply adhesive material to exposed surface of tail gate panel including inner flange.

   d. Immediately position fabric to top leading edge of tail gate panel and work material down to molding attaching holes (See View "C", Fig. 12-6).

   e. Wrap fabric around flange on tailgate.

   f. Trim off excess material on tail gate flange (View "C", Fig. 12-6).

5. Install all previously removed moldings and assemblies.

   IMPORTANT: If nitrile adhesive is used, fabric cover should be allowed to dry approximately four hours after installation. If fabric cover is subjected to extreme direct sunlight or heat immediately after installation, blistering due to trapped solvents may occur.

6. Remove all masking tape.

   NOTE: For repair of wrinkles or bubbles see Note at conclusion of Installation procedure of "Fabric Roof Cover (All Styles except Station Wagons)".

SECTION 13
FOLDING TOP

INDEX

Subject	Page
Folding Top Trim Assembly - Complete	13- 1
Removal of Top and Back Curtain Trim Assembly	13- 1
Installation of Top and Back Curtain Trim Assembly	13- 4
Folding Top Trim - Less Back Curtain	13-14
Removal of Folding Top Trim Cover	13-14
Installation of Folding Top Trim Cover	13-17
Back Curtain Assembly - Complete	13-20
Removal	13-20
Installation	13-22
Folding Top Silencer	13-24
Removal	13-24
Installation	13-26
Hydro-Lectric System	13-26
Description	13-26
Motor and Pump Assembly	13-26
Reservoir Tube	13-28
Operation of Folding Top	13-28
Operation of Pump Assembly	13-28
Fluid Control Valve	13-29
Mechanical Checking Procedure	13-29
Electrical Checking Procedure	13-30
Check for Current at Folding Top Control Switch	13-30
Checking Folding Top Control Switch	13-30
Checking Switch to Motor Lead Wires	13-30
Checking Motor Unit	13-30
Hydraulic Checking Procedure	13-31
Check Hydraulic Fluid Level in Reservoir	13-31
Checking Operation of Lift Cylinders	13-31
Checking Pressure at the Pump	13-32
Folding Top Lift Cylinder	13-33
Filling of Hydro-Lectric Reservoir	13-33
Manual Lift Assembly - Manually Operated Tops	
Description	13-35
Removal and Installation	13-35
Folding Top Catch Clips	13-36
Folding Top Adjustments - "A" Styles	13-36
Adjustment of Folding Top Front Roof Rail Wedge Plate	13-36
Adjustment of Top at Front Roof Rail	13-36
Front Roof Rail Lock Assembly	13-38
Front Roof Rail Lock Adjustment	13-38
Adjustment of Top Control Link	13-39
Adjustment of Top at Male Hinge	13-39
Trouble Shooting Chart	13-39
Folding Top Adjustments - "B & C" Styles	13-42
Description	13-42
Adjustment of Folding Top Front Roof Rail Guide	13-42
Adjustment of Folding Top at Front Roof Rail	13-42
Front Roof Rail Lock Assembly	13-43
Front Roof Rail Lock Adjustment	13-43
Adjustment of Top Control Link Adjusting Plate	13-43
Adjustment of Top at Male Hinge Support	13-44
Trouble Shooting Chart	13-45
Folding Top Adjustments - "F" Styles	13-49
Description	13-49
Adjustment of Folding Top at Front Roof Rail	13-49
Front Roof Rail Lock Assembly	13-49
Front Roof Rail Lock Adjustment	13-49
Adjustment of Top Control Link	13-49
Adjustment of Top at Male Hinge	13-49
Trouble Shooting Chart	13-51

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.

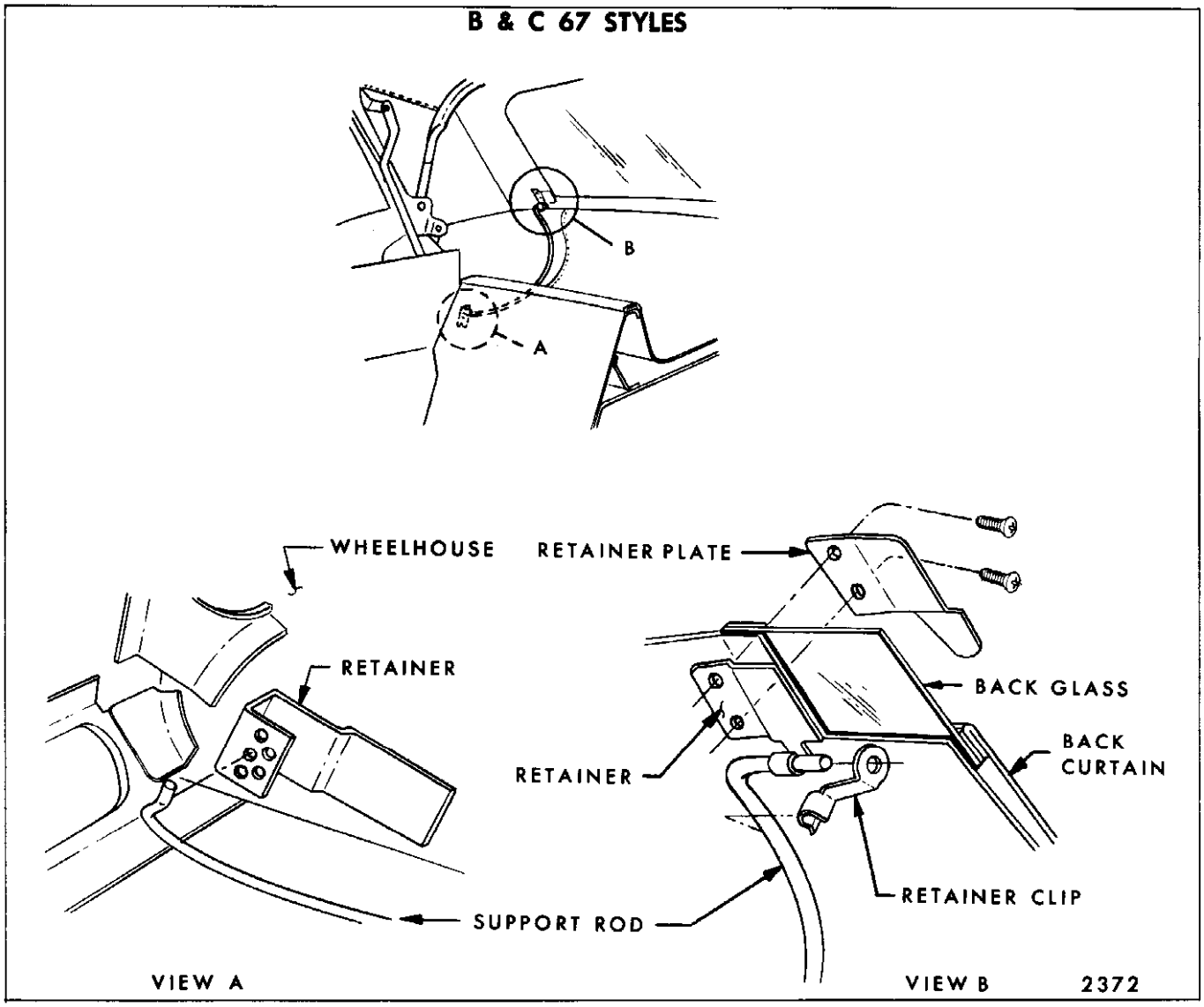


Fig. 13-1 — "B & C" Body Back Glass Support Rod Attachments

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).

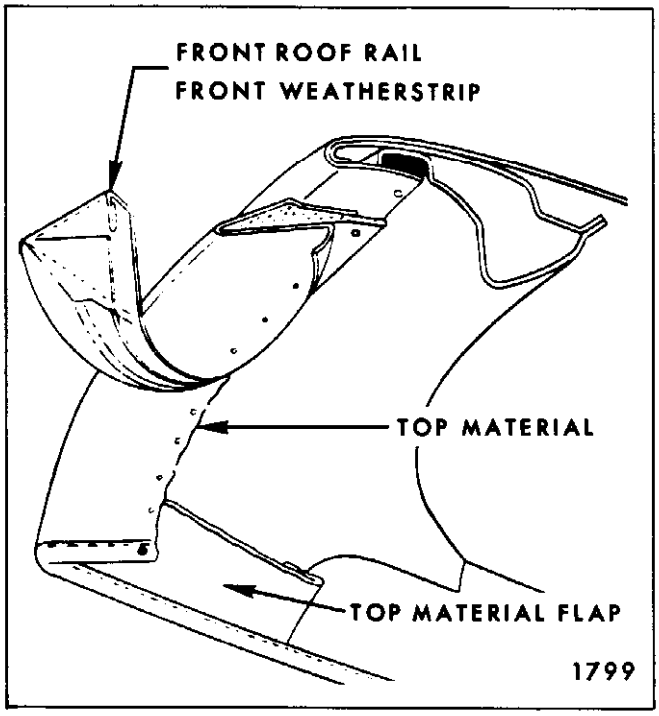


Fig. 13-2 — Top Material At Front Roof Rail

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.

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

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.

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

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.

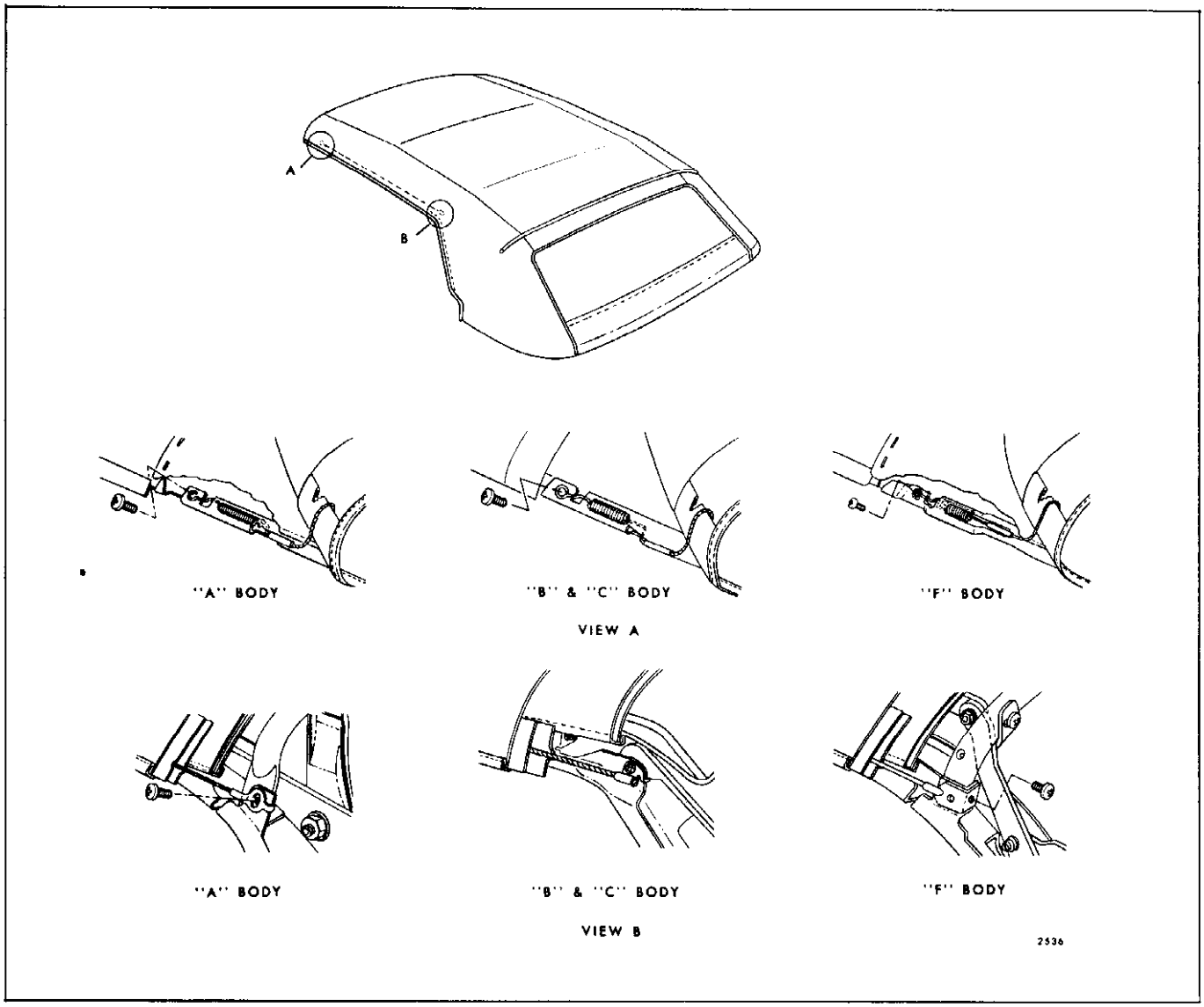


Fig. 13-3 — Convertible Top Material Hold Down Cable

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 1/16" on "B & C" Styles, 13 3/16" on "F" Styles and 15 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 correspond 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"

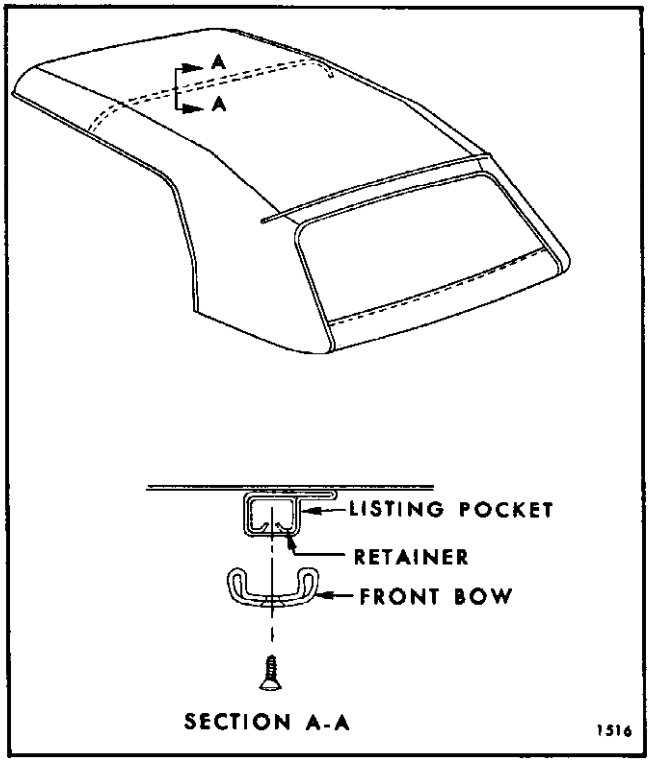


Fig. 13-4 — Listing Pocket Retainer

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 1/16" for "B & C" Styles, 13 3/16" for "F" Styles and 15 3/4" for "A" Styles.

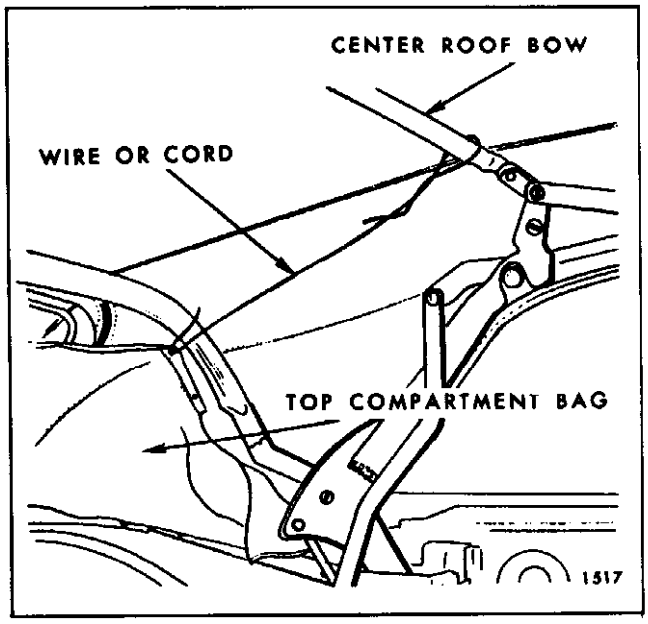


Fig. 13-5 — Top Compartment Bag Tied to Center Bow

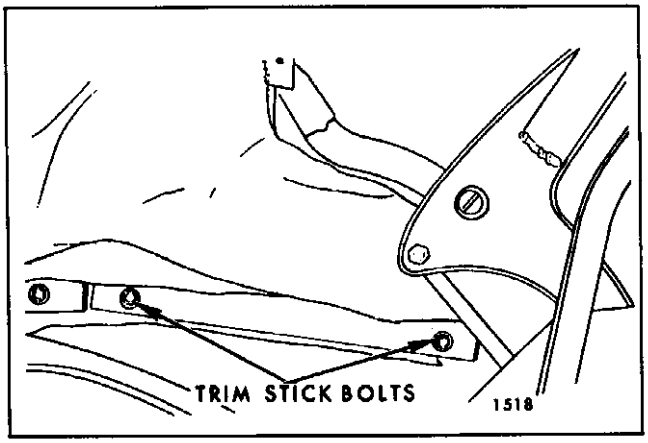


Fig. 13-6 — Rear Quarter Trim Stick

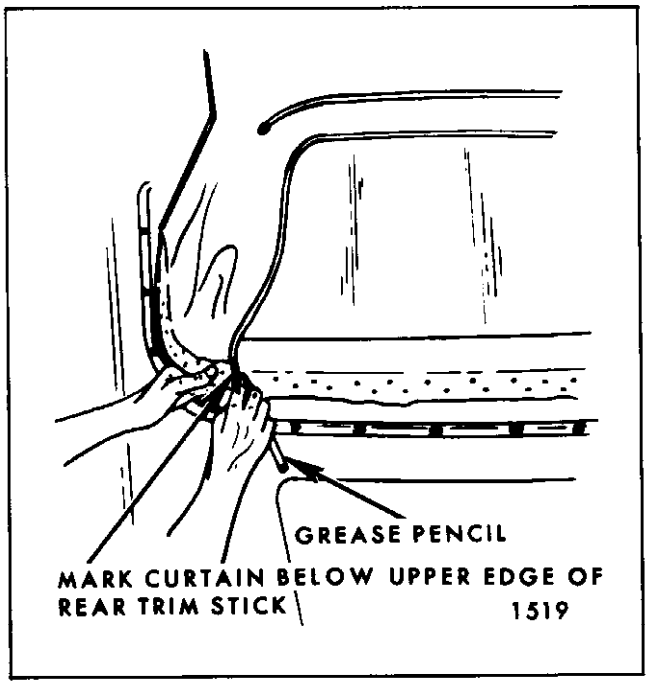


Fig. 13-7 — Locating Edge of Top Material

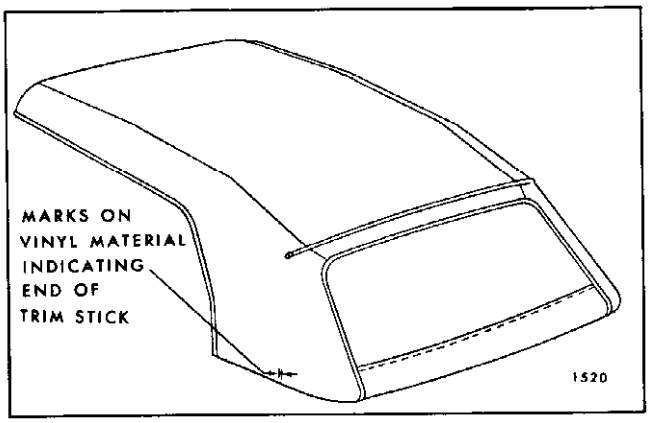


Fig. 13-8 — Marking Top Material

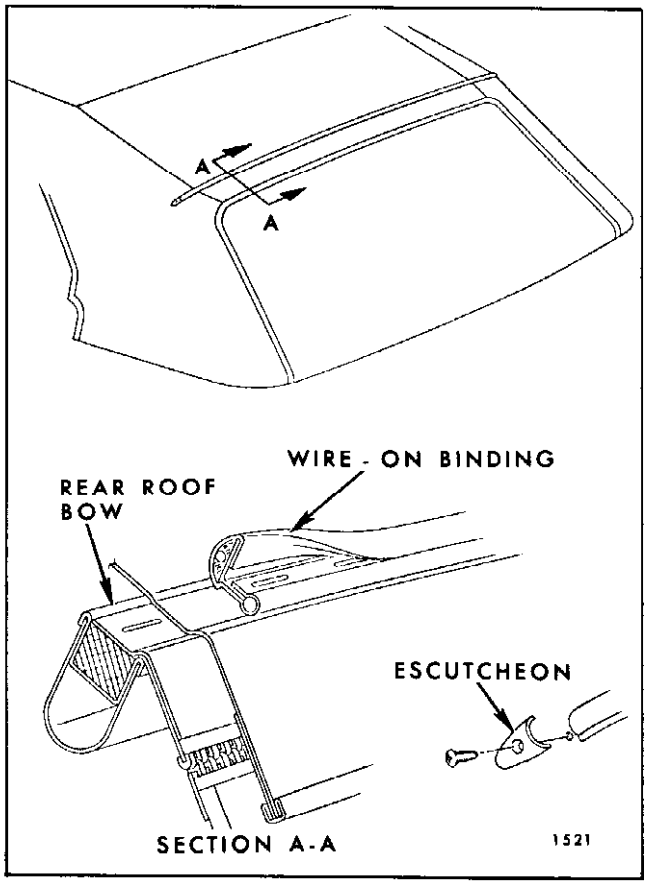


Fig. 13-9 — Rear Roof Bow Wire-On Binding

NOTE: Dimension may vary ±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.

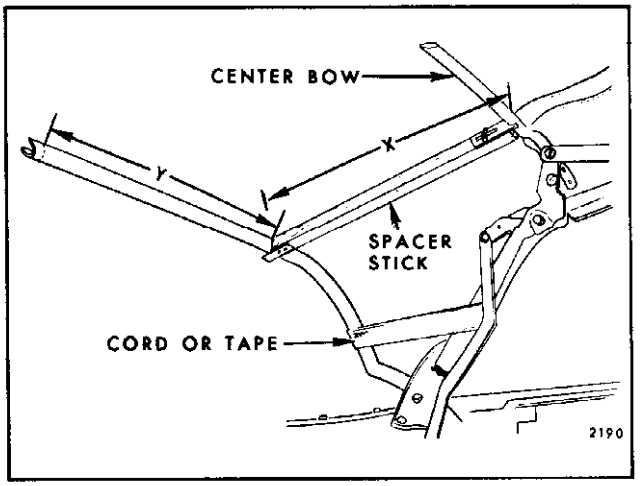


Fig. 13-10 — Spacer Stick Installation

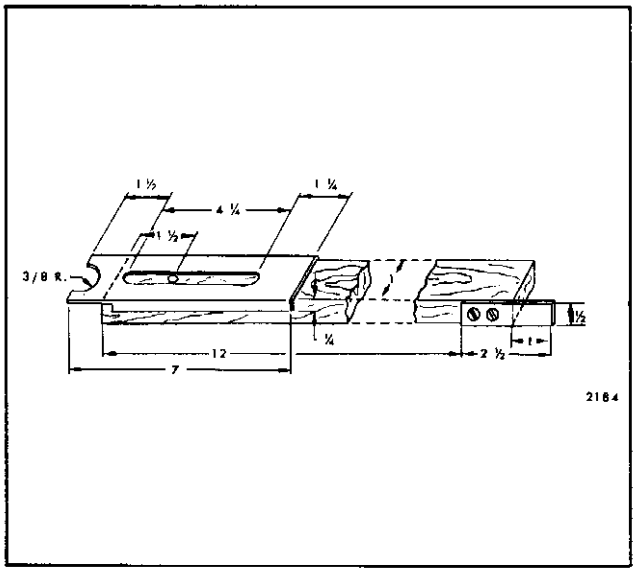


Fig. 13-11 — Spacer Stick Dimensions

MATERIAL PER STICK

Wood - 1/2 x 1 x 14-1/2
Steel - 1/32 x 1/2 x 2-1/2
Steel - 1/32 x 1-1/2 x 7
2 Screw #6 x 1/2"
Bolt 1/4 - 20 UNC - 2A x 1"
Wingnut 1/4 x 20 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.

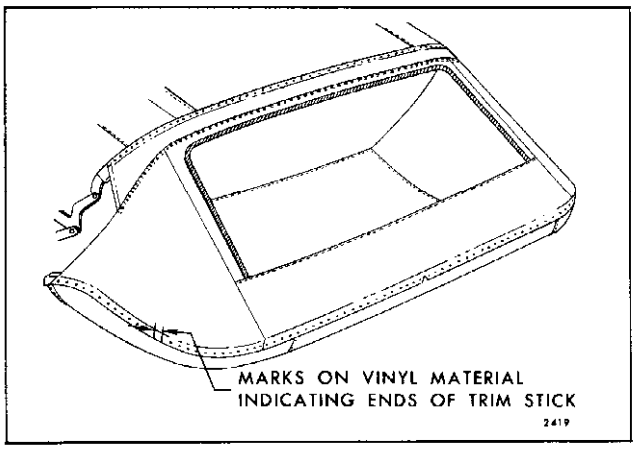


Fig. 13-12 — Marking Back Curtain

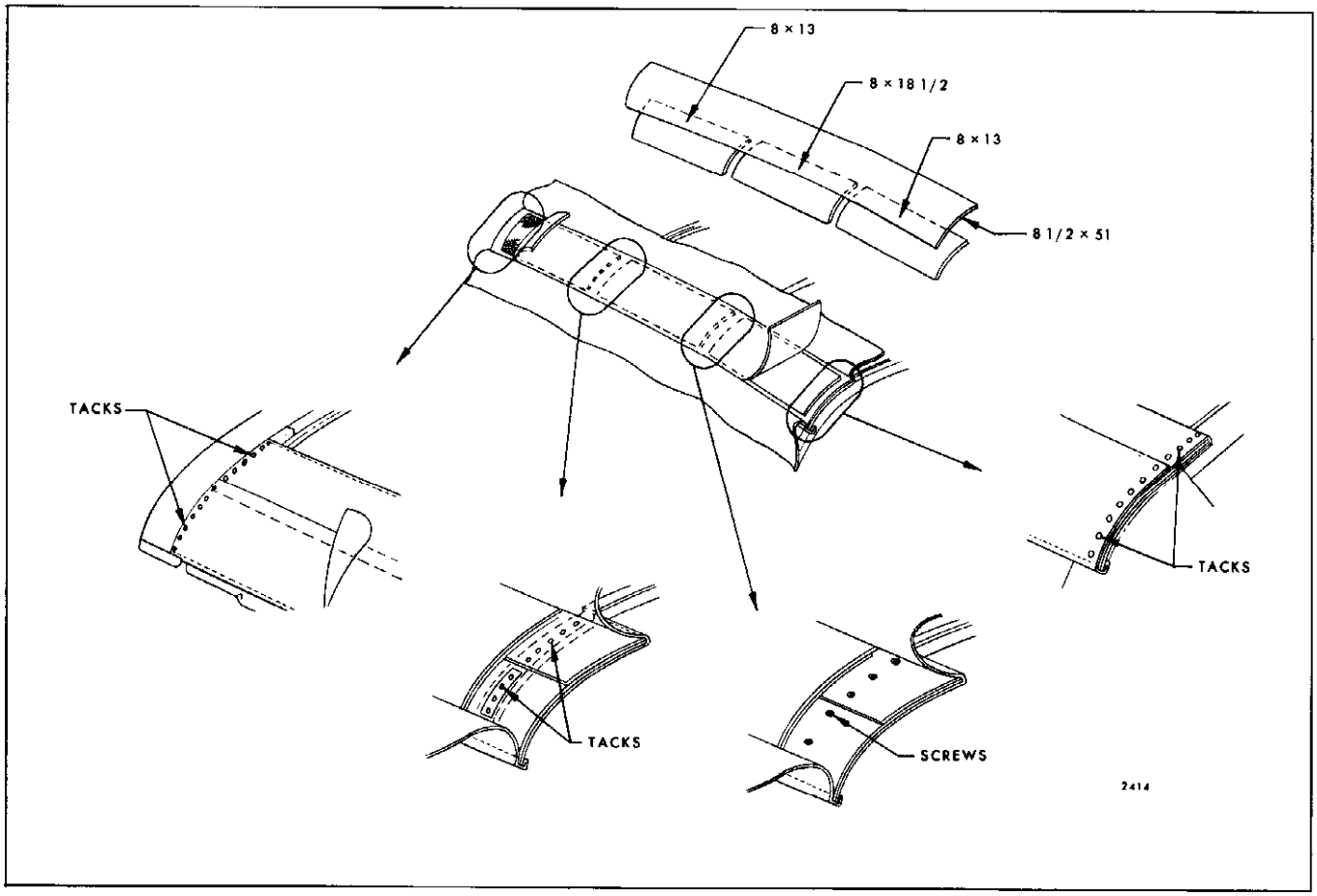


Fig. 13-13—"A" Body Side Stay Pad Installation

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 pinchweld 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 outboard to right and left sides, tack back curtain to rear bow. Make sure all fullness has been

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

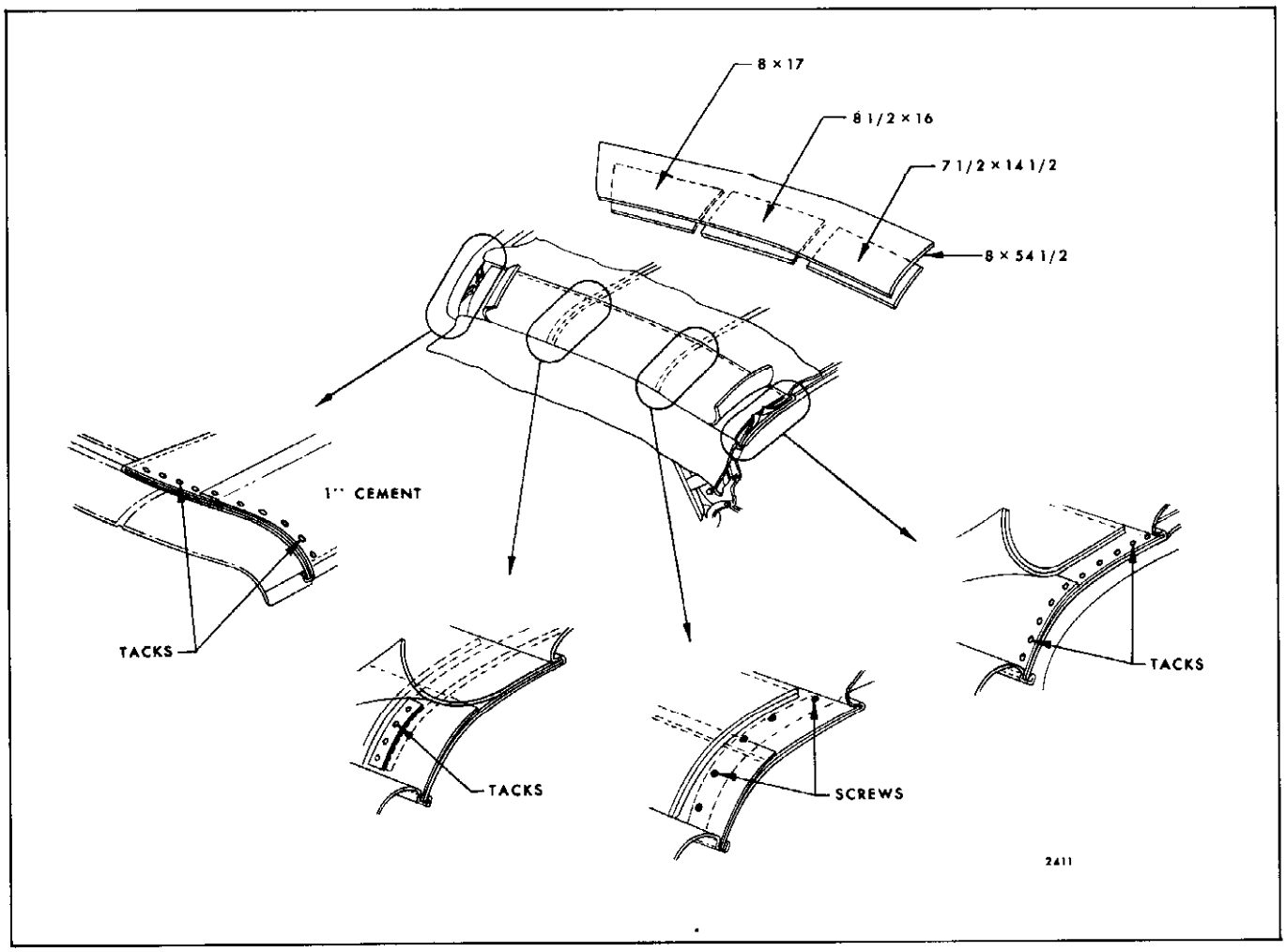


Fig. 13-14—"B" Body Side Stay Pad Installation

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 (±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

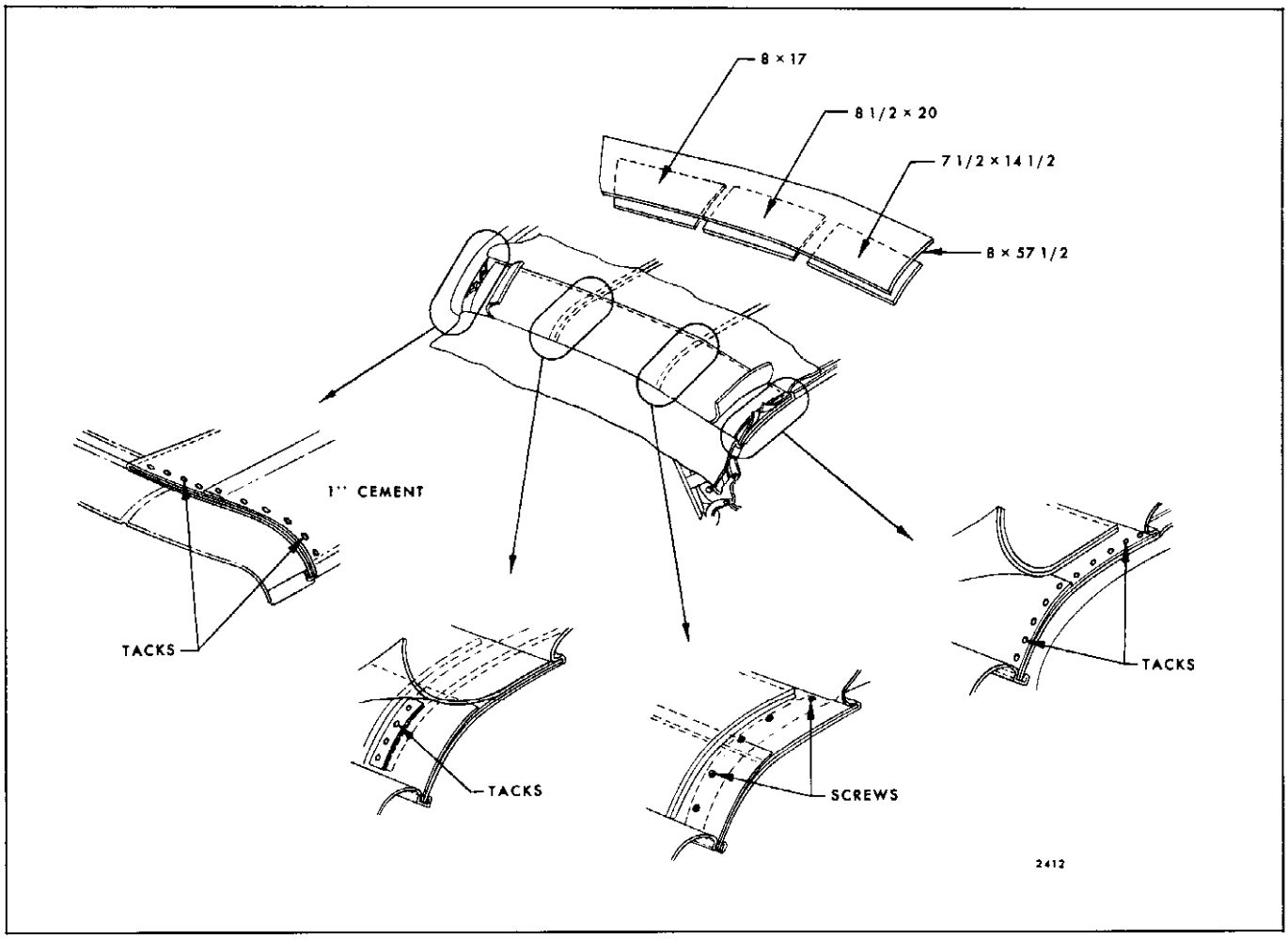


Fig. 13-15—"C" Body Side Stay Pad Installation

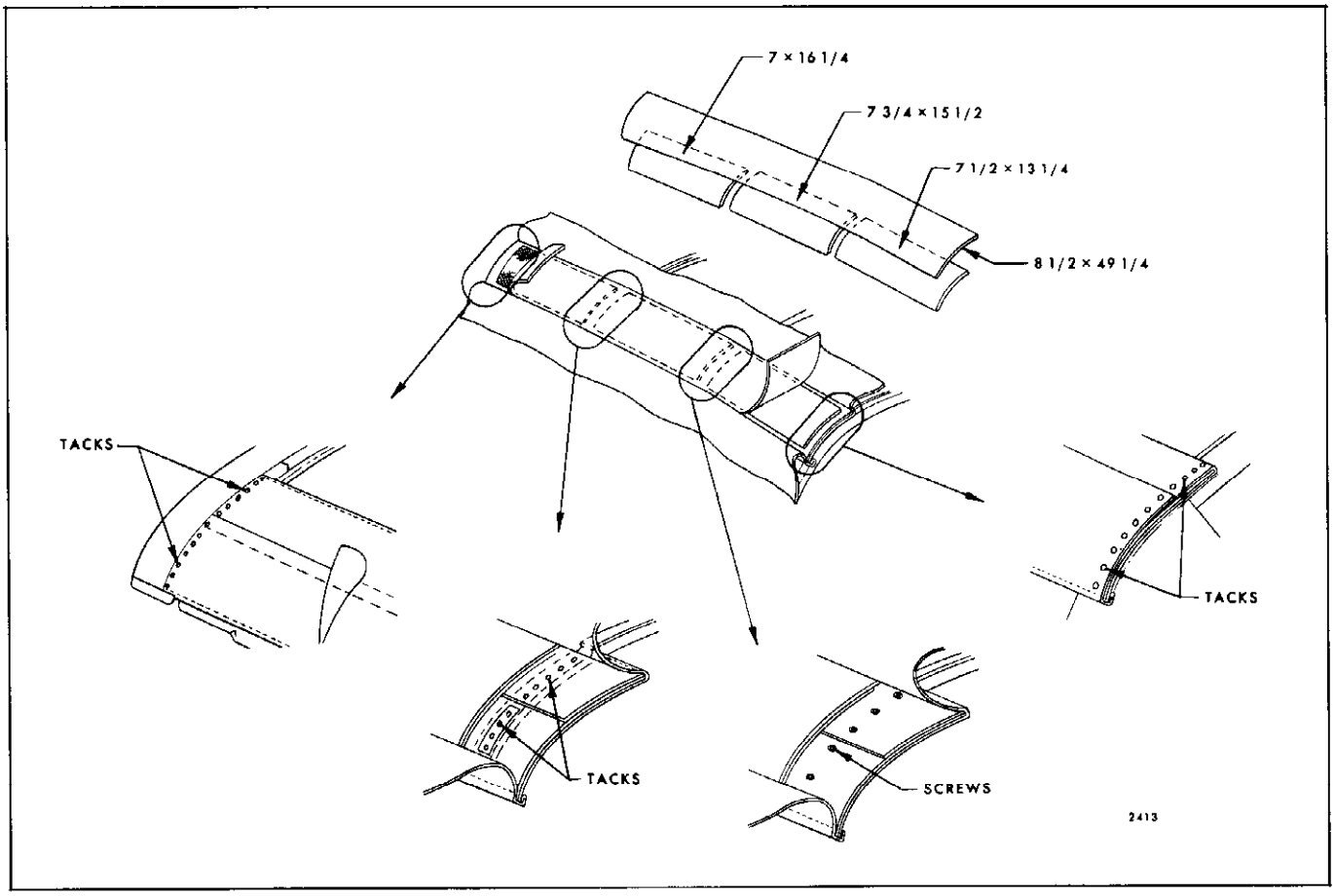


Fig. 13-16—"F" Body Side Stay Pad Installation

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.

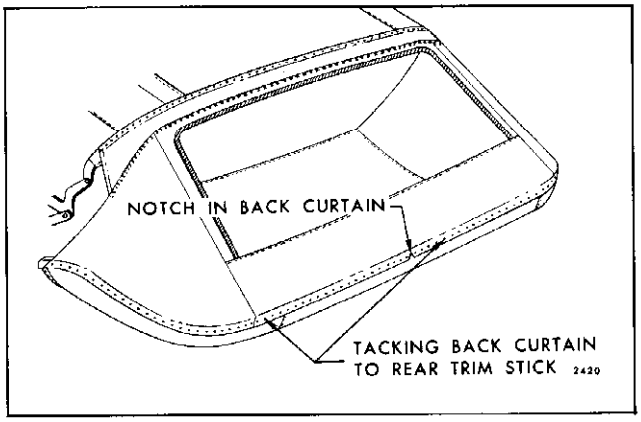


Fig. 13-17—Back Curtain Installation

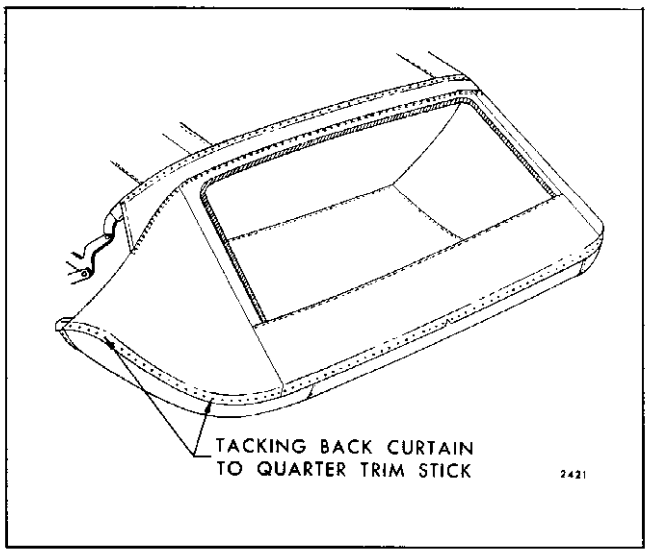


Fig. 13-18 — Back Curtain Installation

NOTE: The deck seam mark will vary slightly (±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. (See Fig. 13-26).

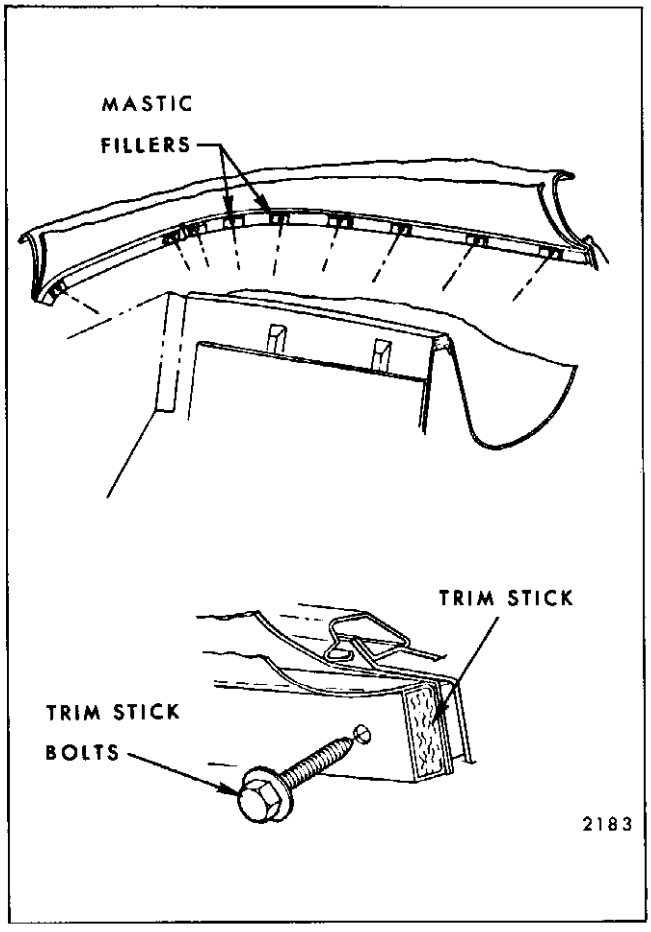


Fig. 13-19 — Checking Trim Stick Fillers

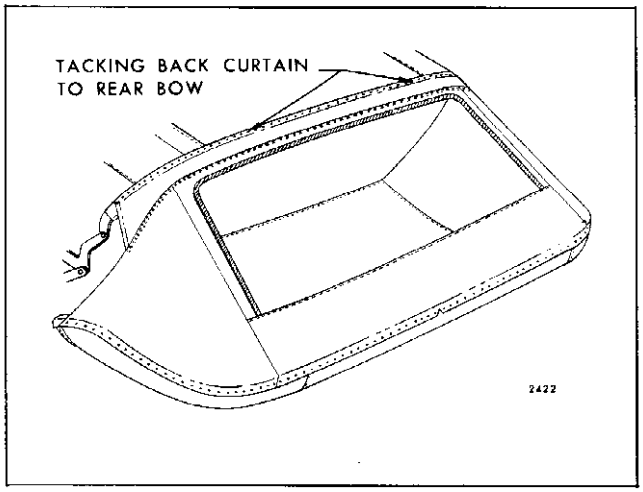


Fig. 13-20 — Back Curtain Installed

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.

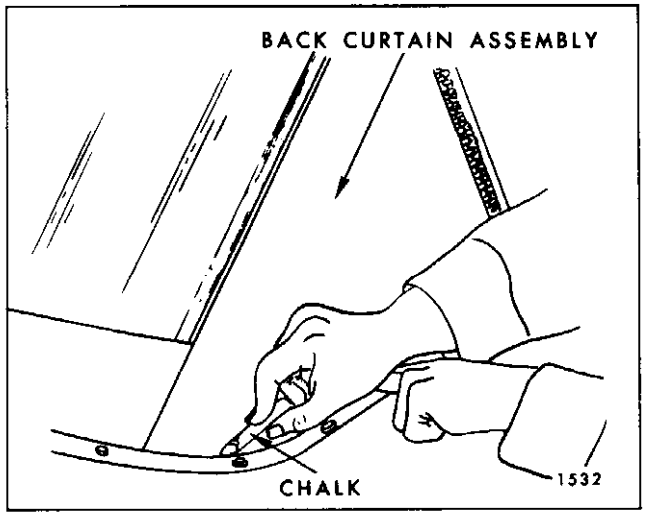


Fig. 13-21 — Marking Back Curtain

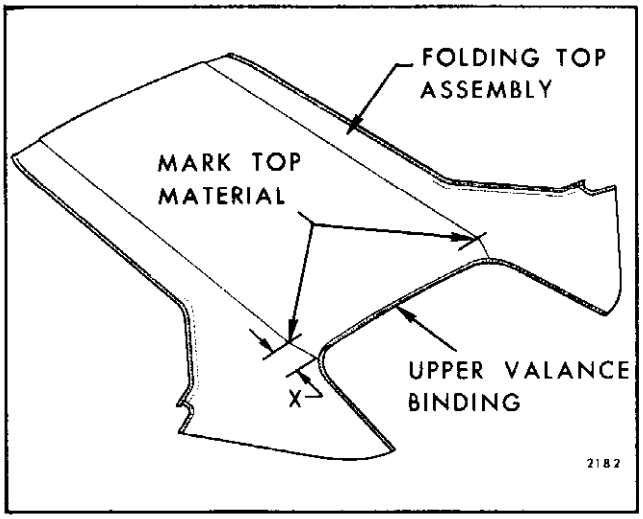


Fig. 13-22 — Marking Top Material

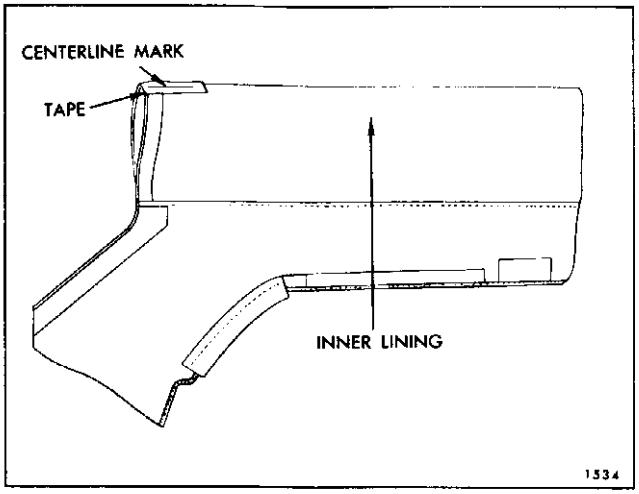


Fig. 13-23 — Marking Folding Top Material

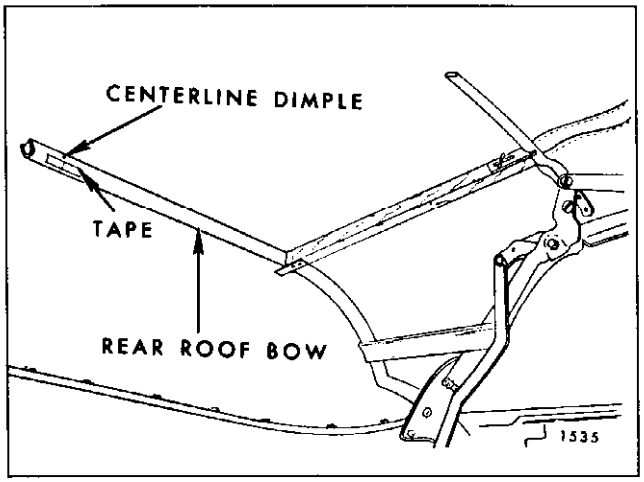


Fig. 13-24 — Marking Rear Roof Bow

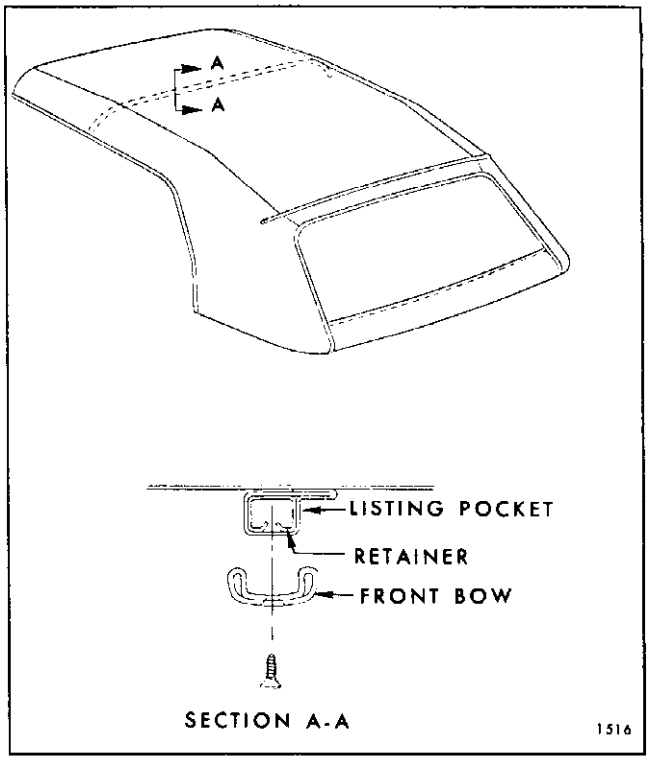


Fig. 13-25 — Listing Pocket Retainer

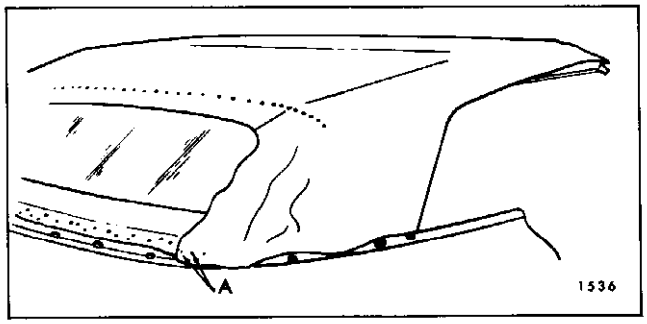


Fig. 13-26 — Tacking Top Material

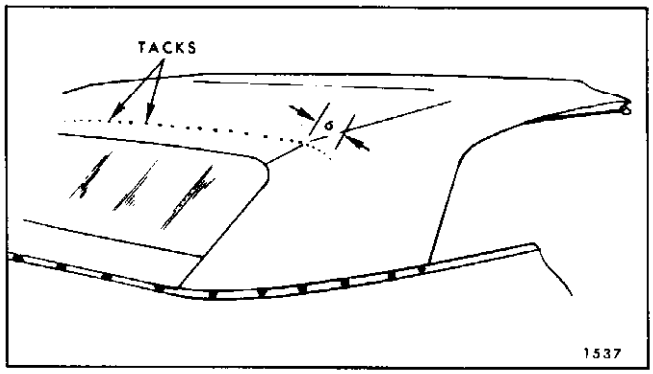


Fig. 13-27 — Tacking Outboard Of Seams

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).

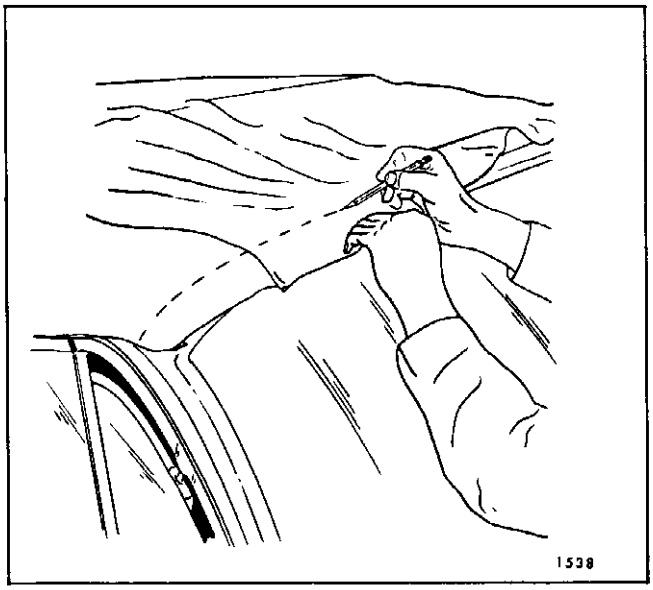


Fig. 13-28 — Marking Top Material At Front Roof Rail

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.

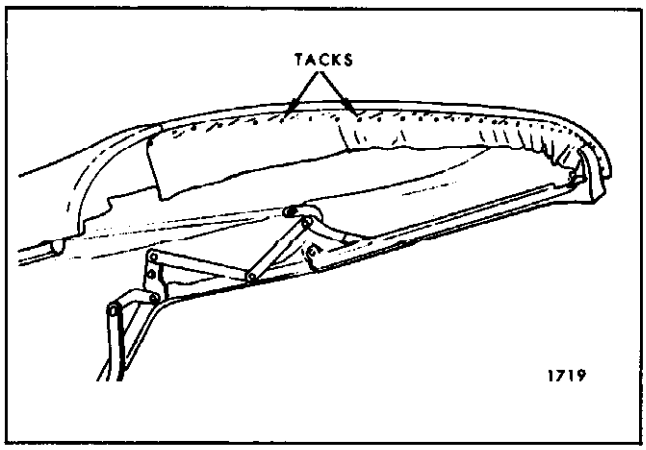


Fig. 13-29 — Installation Of Top Material To Front Roof Rail

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.

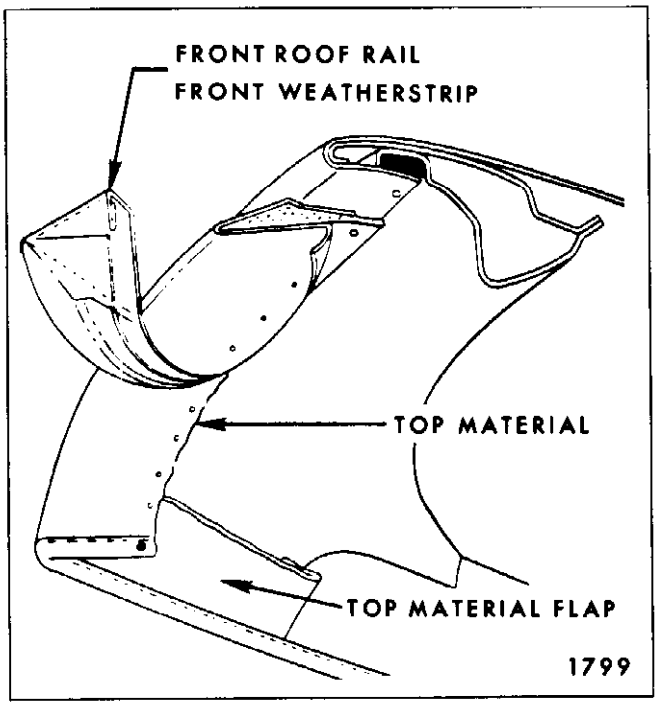


Fig. 13-30 — Top Material At Front Roof Rail

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.

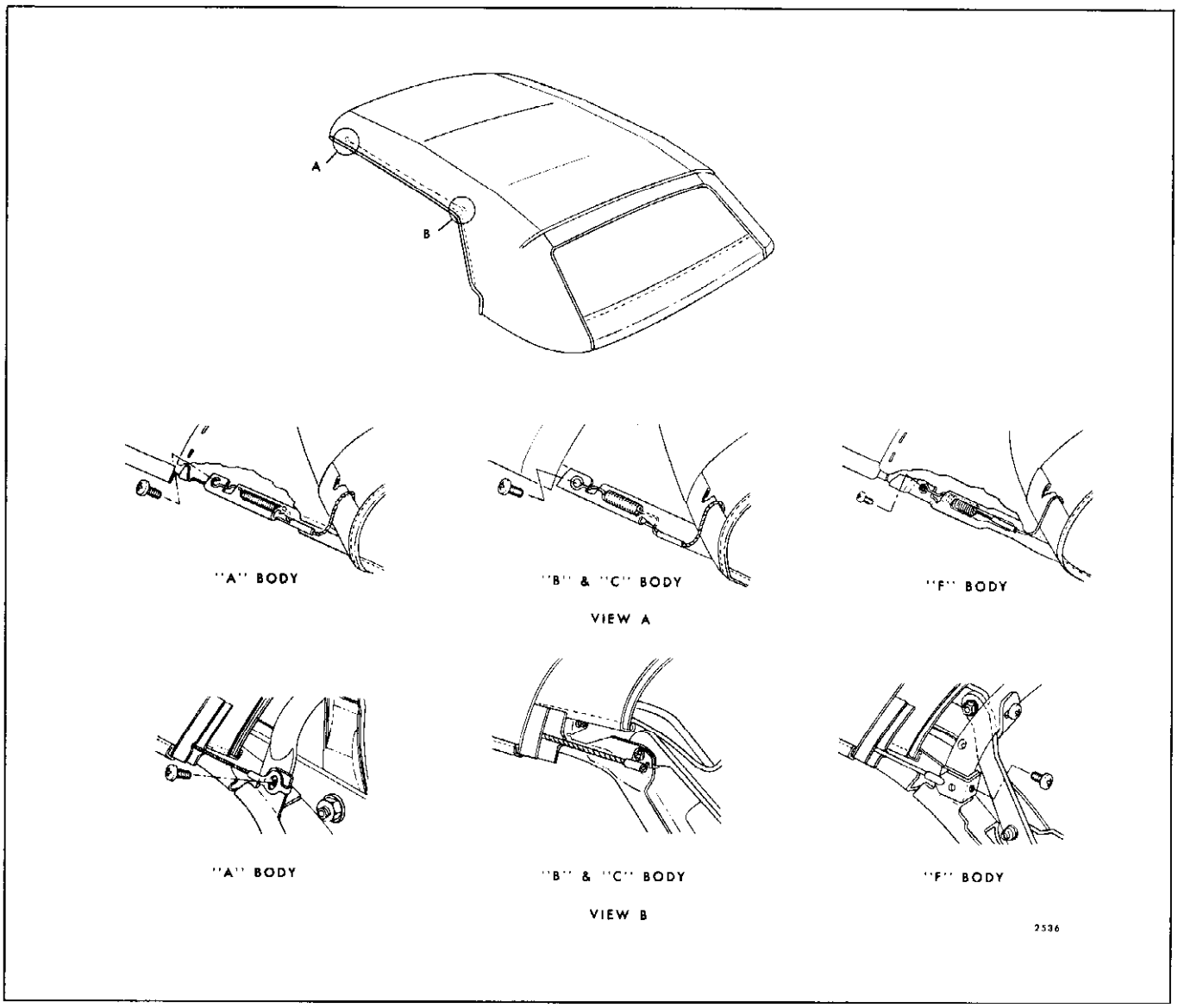


Fig. 13-31 —Convertible Top Material Hold Down Cable

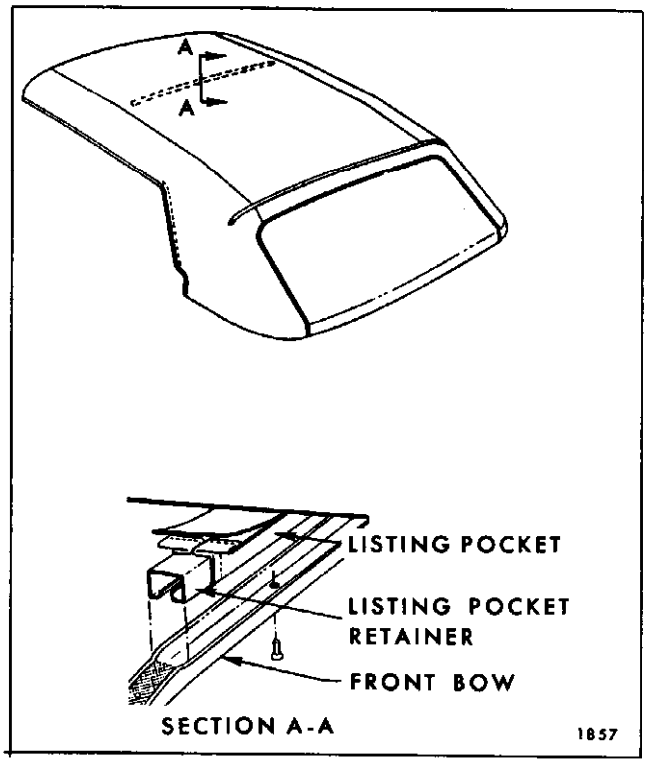


Fig. 13-32 — Listing Pocket Retainer

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).

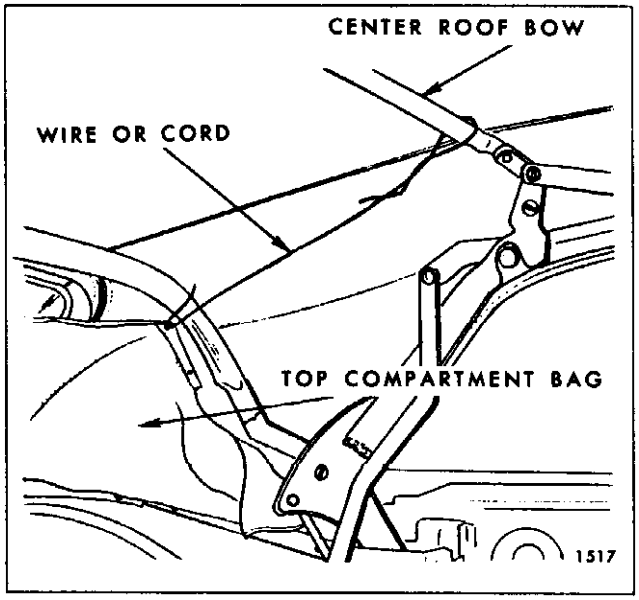


Fig. 13-33 — Top Compartment Bag Tied To Center Rail

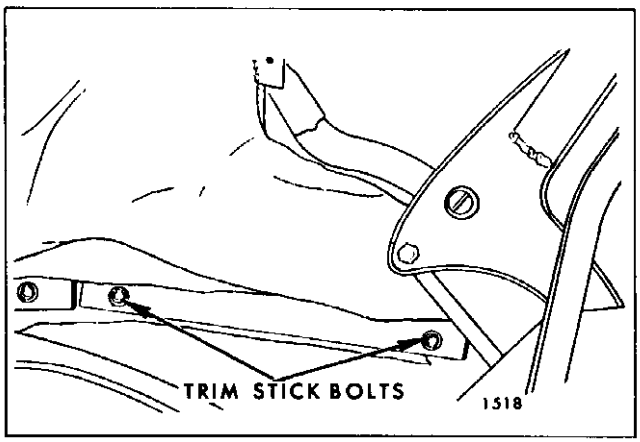


Fig. 13-34 — Rear Quarter Trim Stick

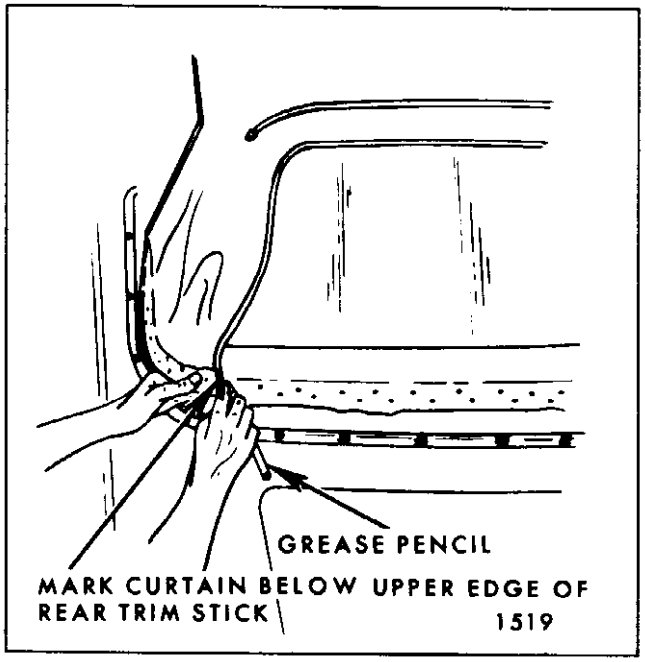


Fig. 13-35—Locating Edge Of Top Material

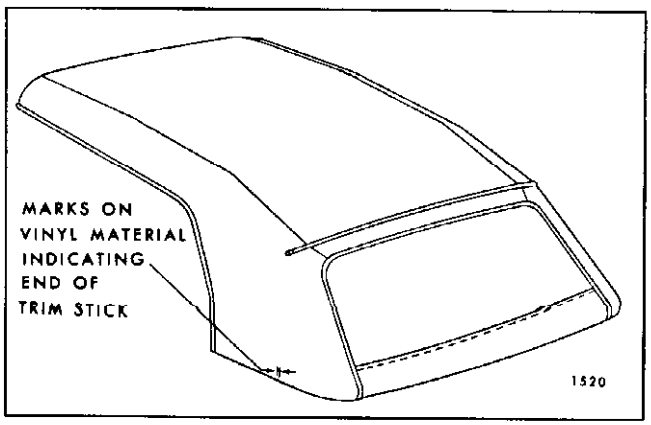


Fig. 13-36 — Marking Top Material

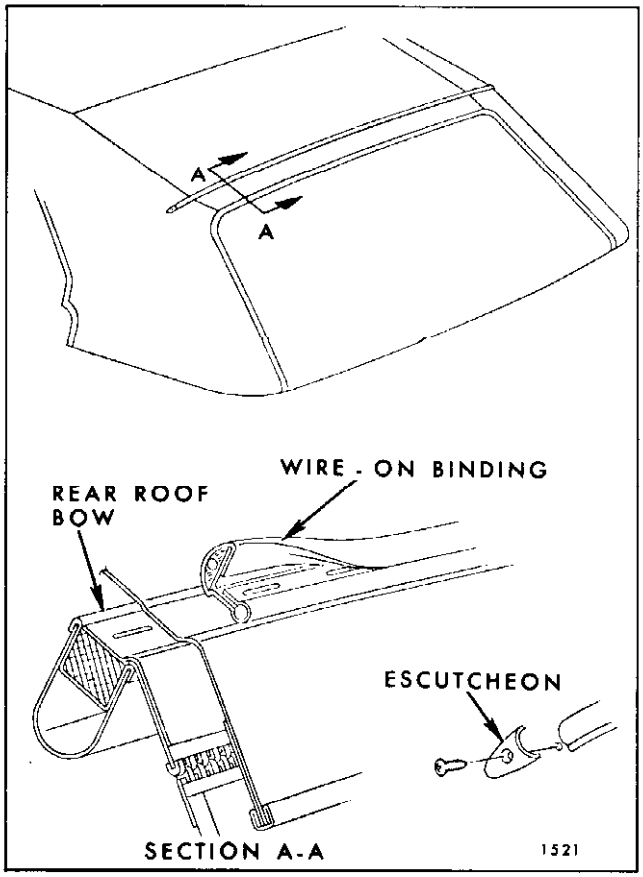


Fig. 13-37 — Rear Roof Bow Wire-On Binding

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.

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

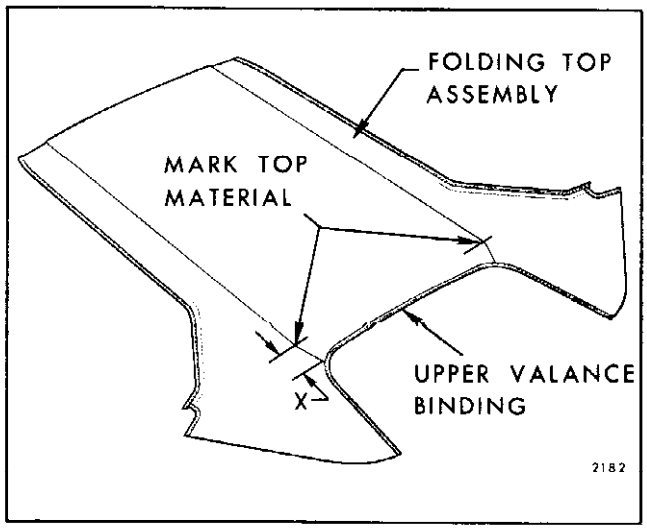


Fig. 13-38 — Marking Top Material

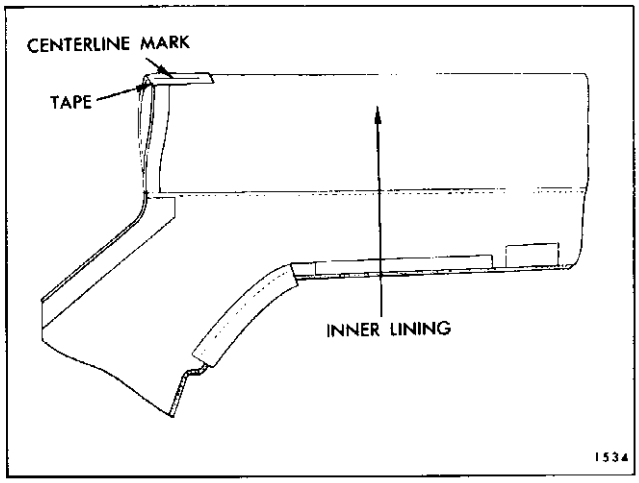


Fig. 13-39 — Marking Folding Top Material

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.

   NOTE: The deck seam mark will vary slightly (±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.

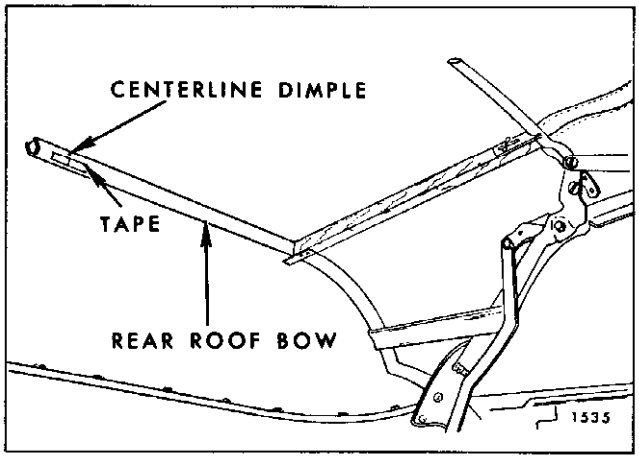


Fig. 13-40—Marking Rear Roof Bow

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 (±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

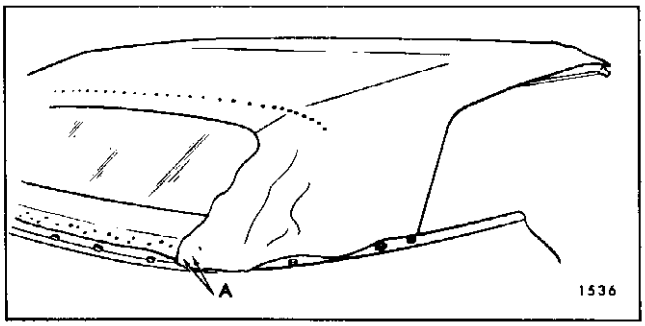


Fig. 13-41—Tacking Top Material

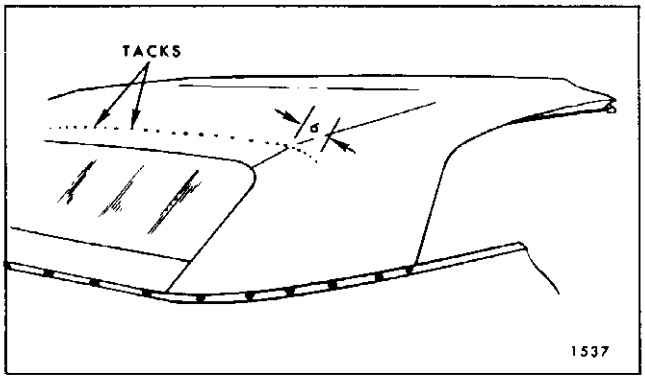


Fig. 13-42 — Tacking Outboard of Seams

are completely driven in to represent finished condition.

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.

    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

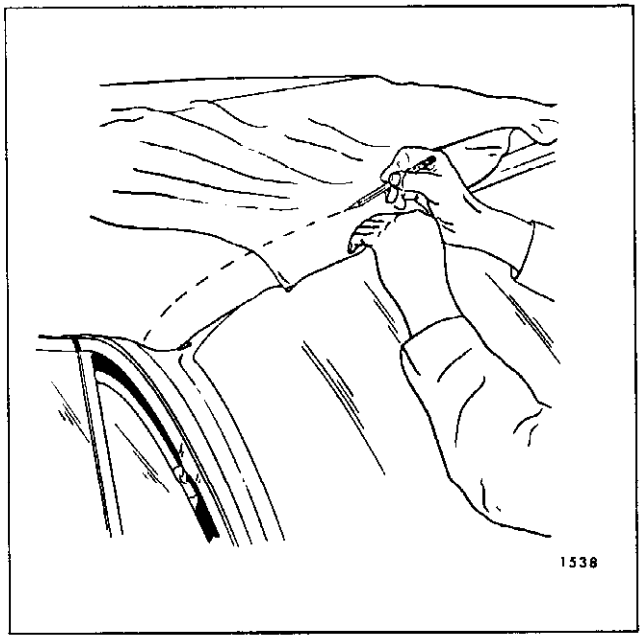


Fig. 13-43 — Marking Top Material At Front Roof Rail

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

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).

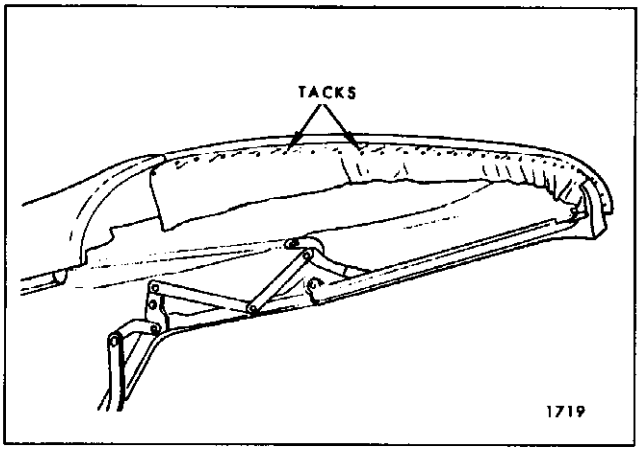


Fig. 13-44 — Installation Of Top Material To Front Roof Rail

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).

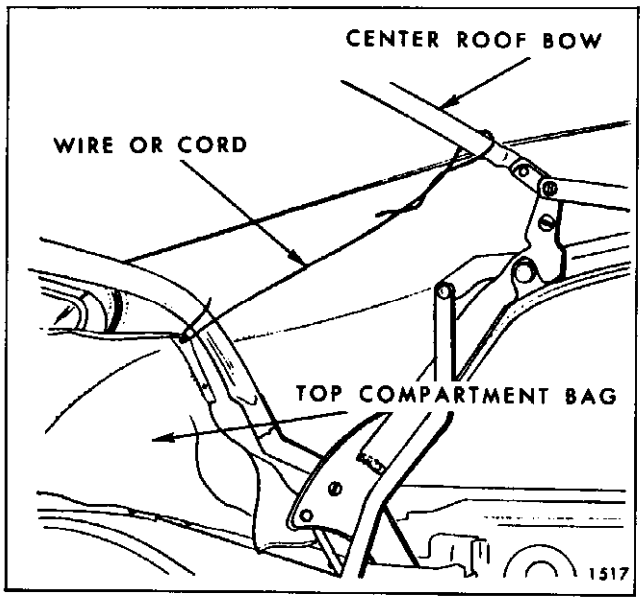


Fig. 13-45—Top Compartment Bag Tied To Center Rail

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.

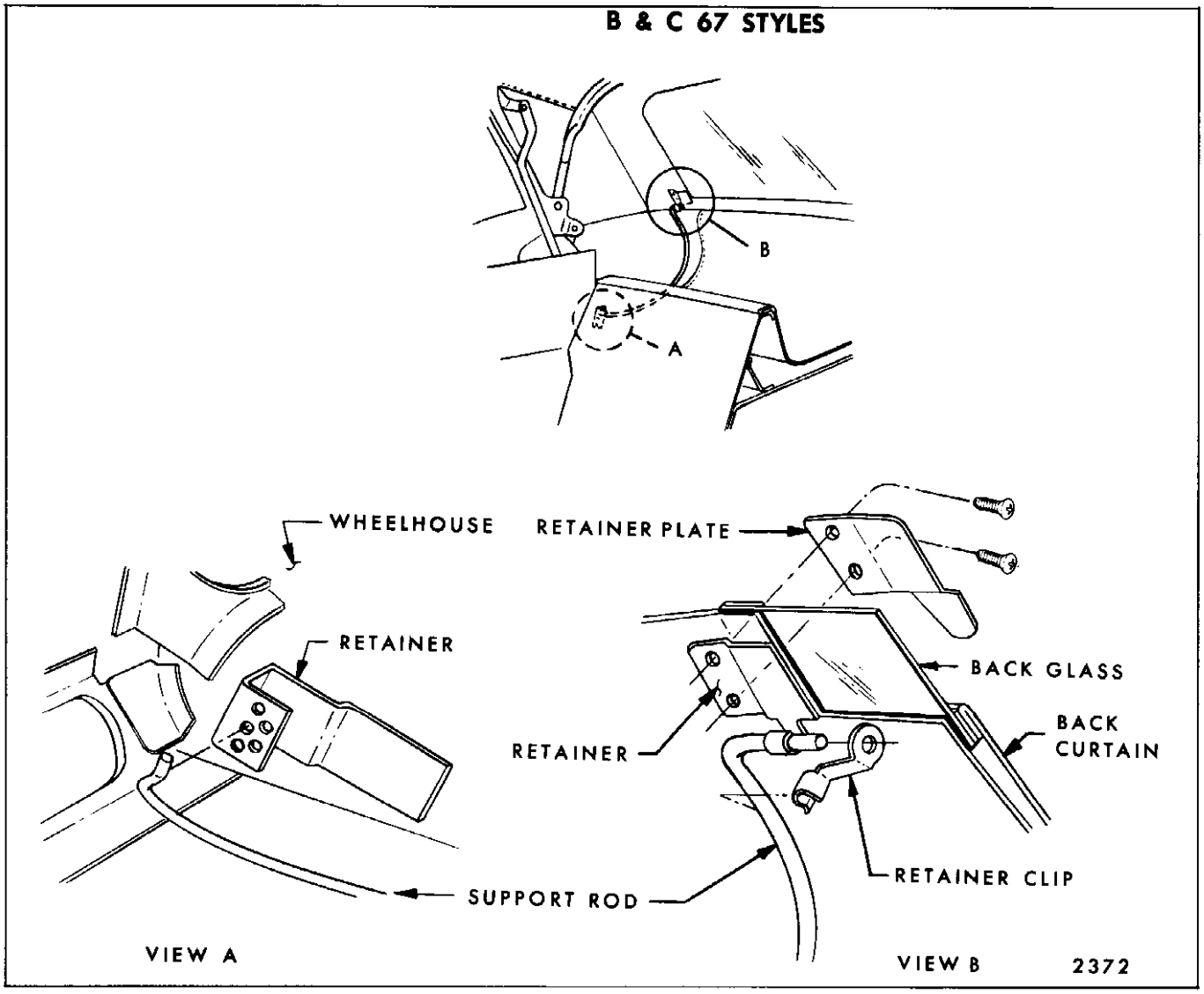


Fig. 13-46—"B & C" Body Back Glass Support Rod Attachments

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.

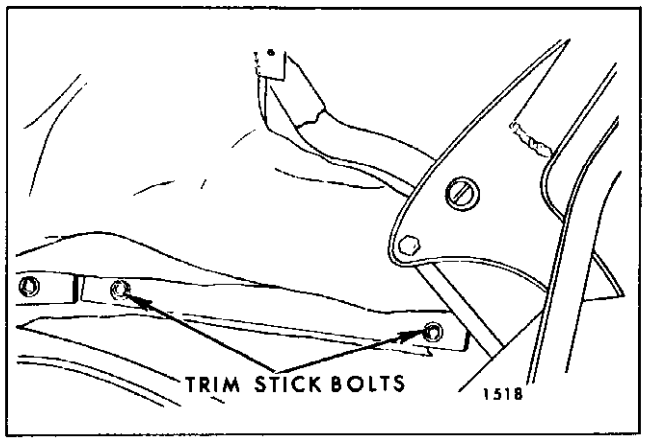


Fig. 13-47—Rear Quarter Trim Stick

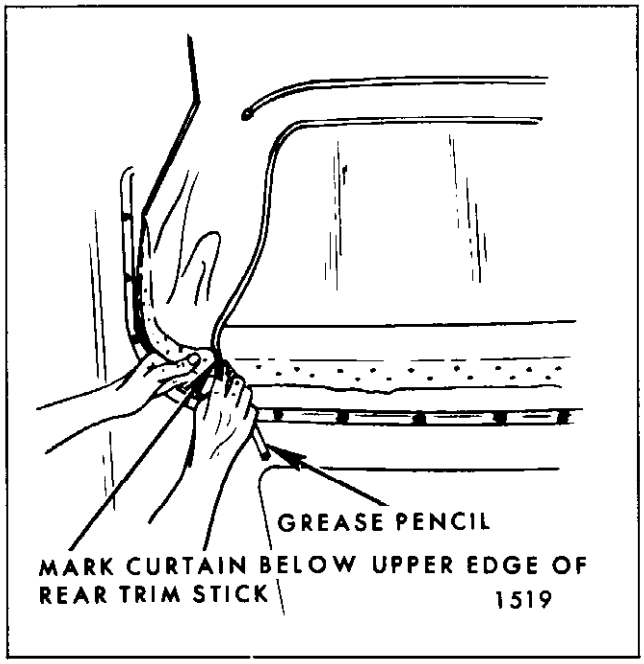


Fig. 13-48 — Locating Edge Of Top Material

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 ±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.

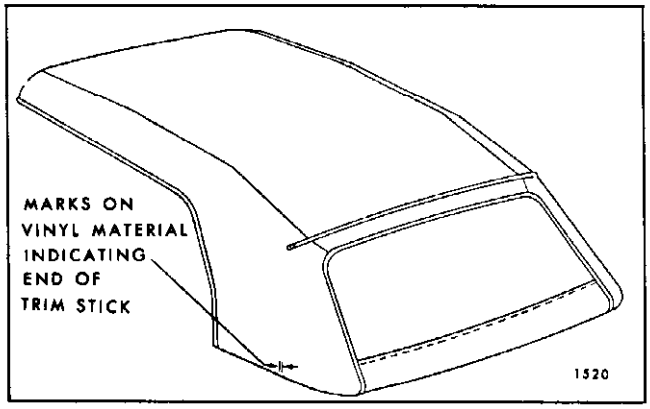


Fig. 13-49 — Marking Top Material

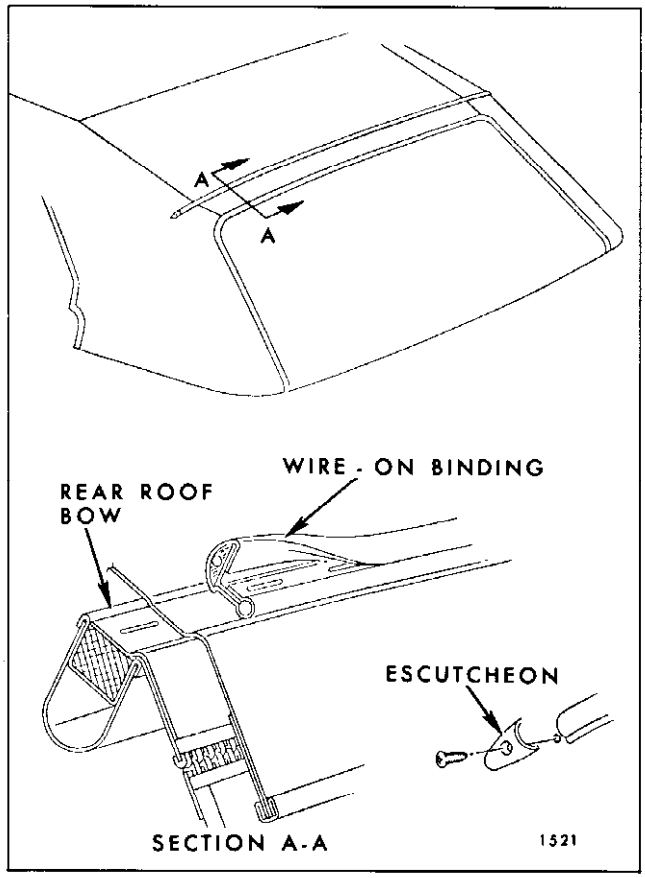


Fig. 13-50 — Rear Roof Bow Wire-On Binding

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,

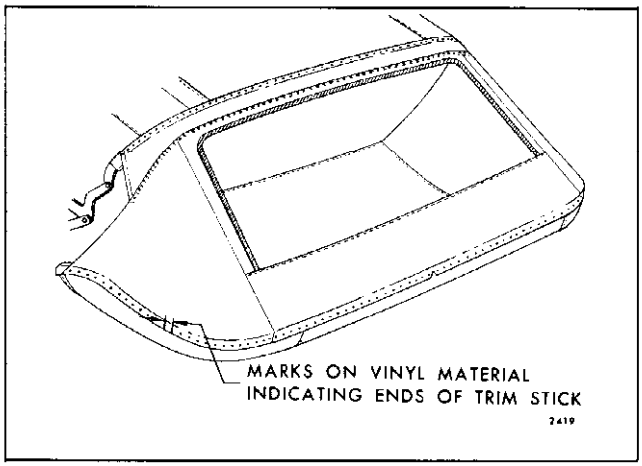


Fig. 13-51 — Marking Back Curtain

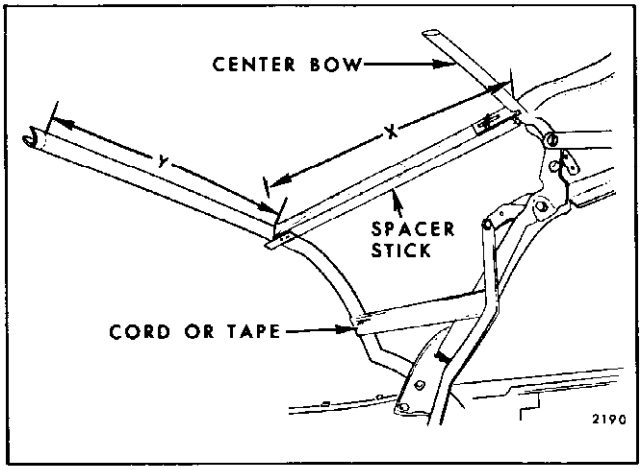


Fig. 13-52 — Spacer Stick Installation

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.

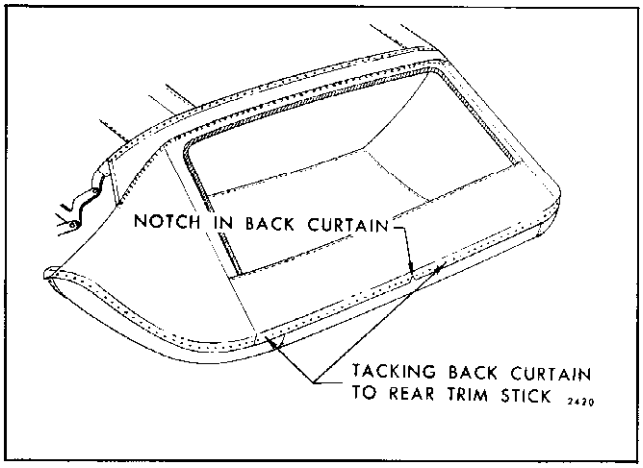


Fig. 13-53 — Back Curtain Installation

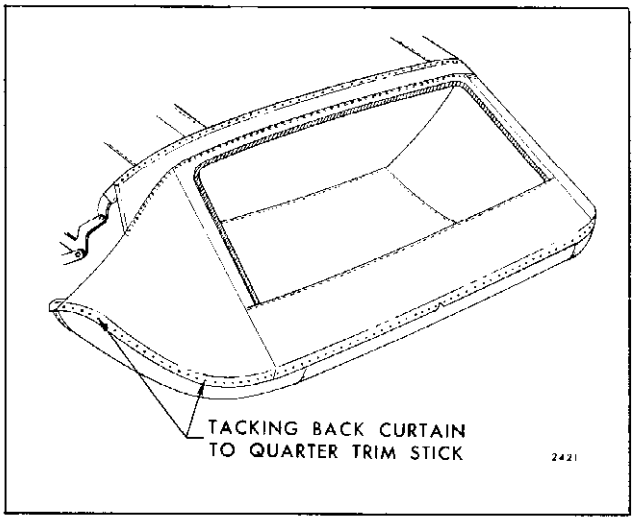


Fig. 13-54 — Back Curtain Installation

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.

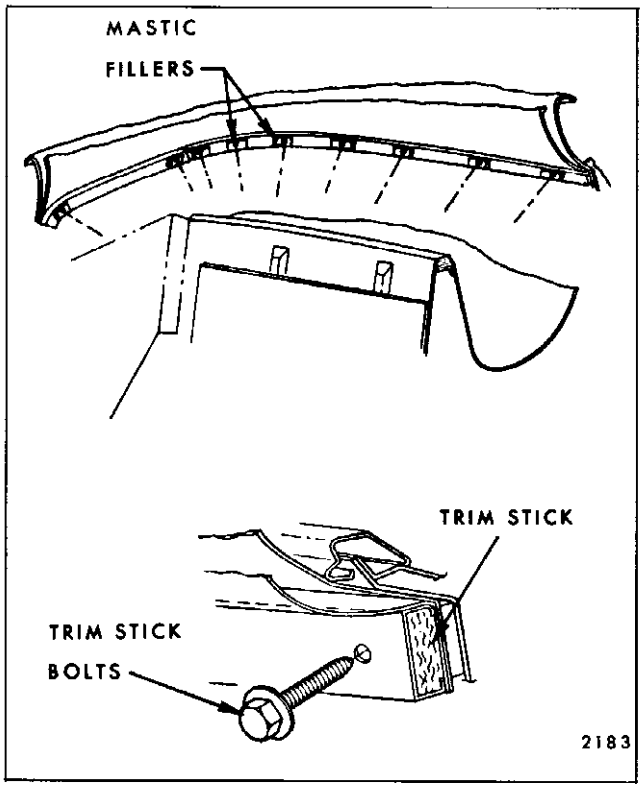


Fig. 13-55 — Checking Trim Stick Fillers

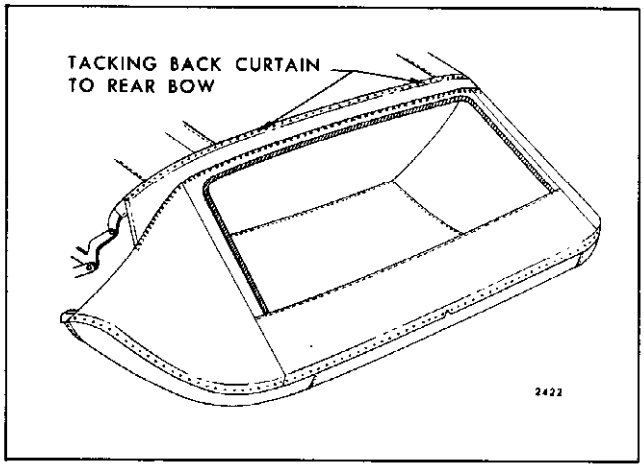


Fig. 13-56 — Back Curtain Installed

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).

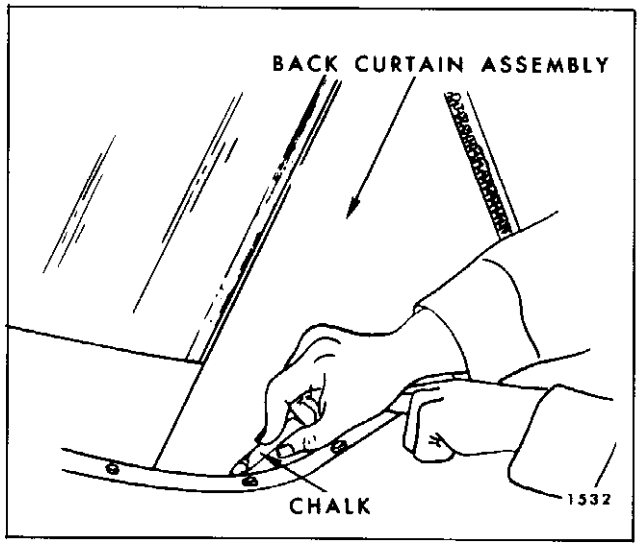


Fig. 13-57 — Marking Back Curtain

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 rear ward 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

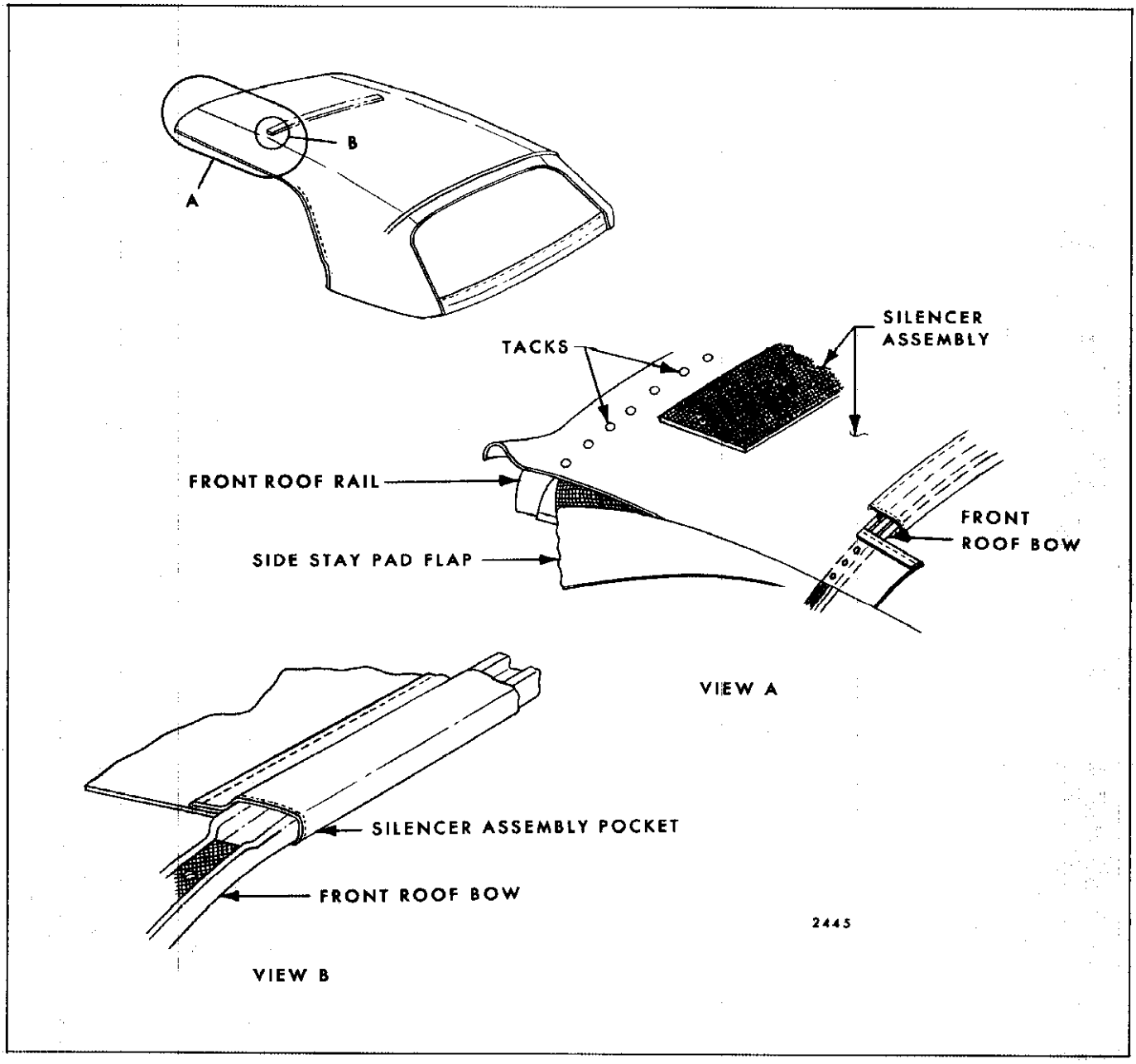


Fig. 13-58 — Folding Top Silencer Assembly

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 taunt, 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 important 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.

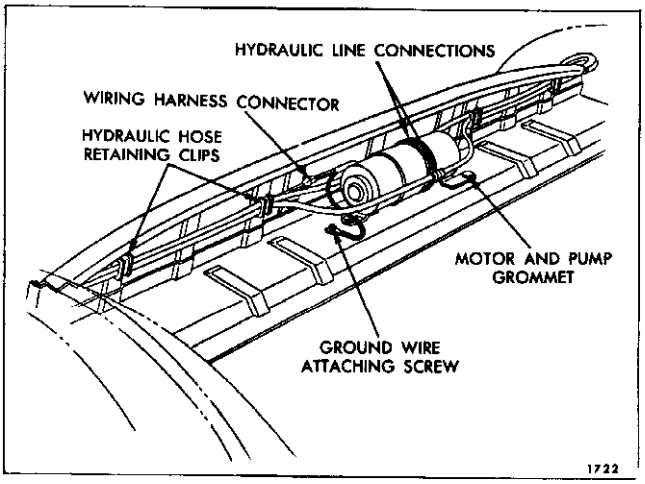


Fig. 13-59 — Motor And Pump Assembly

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.

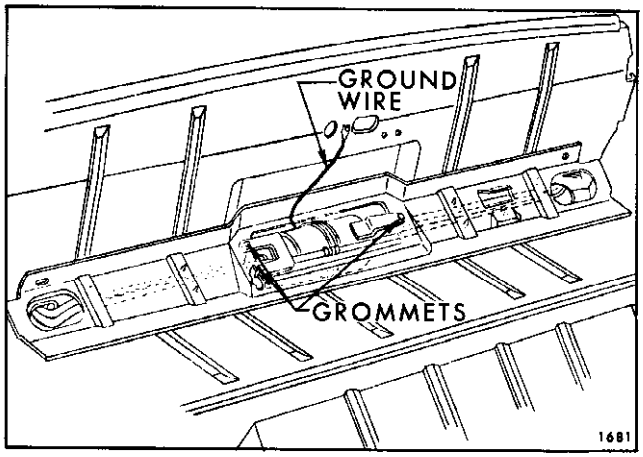


Fig. 13-60 — Hydro-Lectric Motor And Pump Assembly

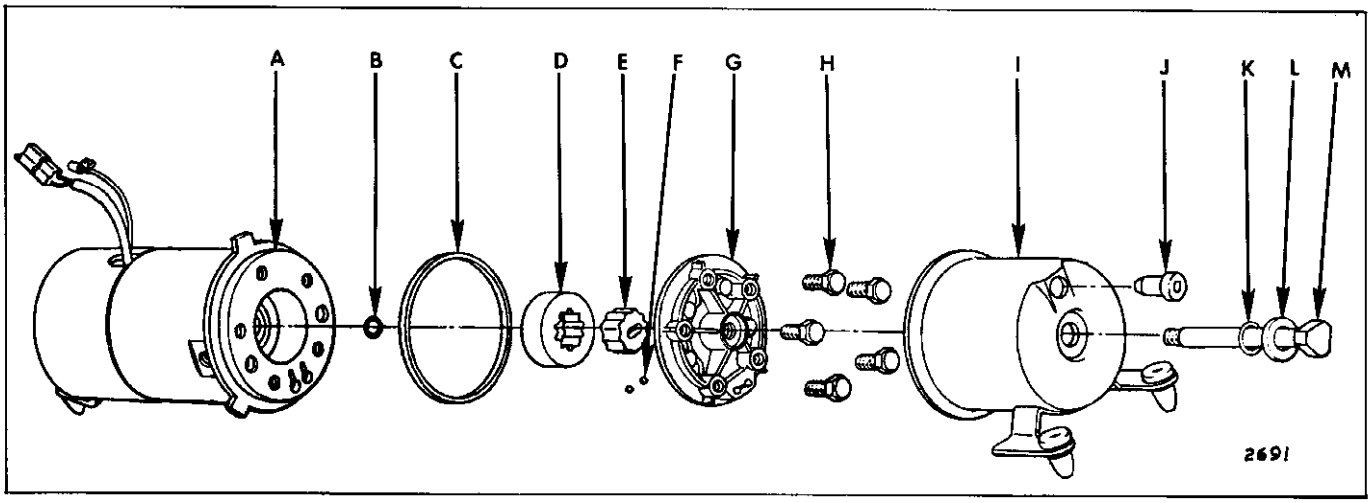


Fig. 13-61 — Hydro-Lectric Motor And Pump Disassembled

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.

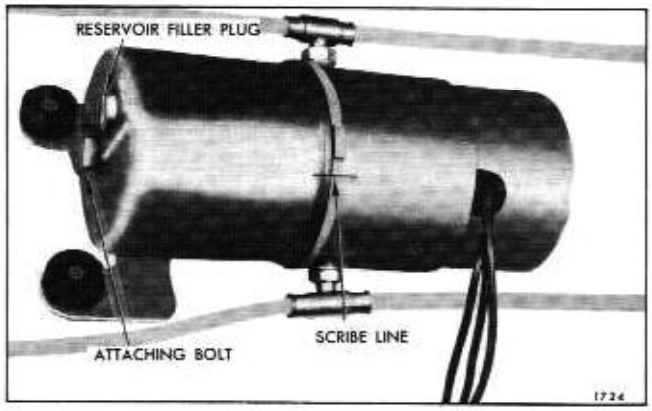


Fig. 13-62 — Hydro-Lectric Motor And Pump Assembly

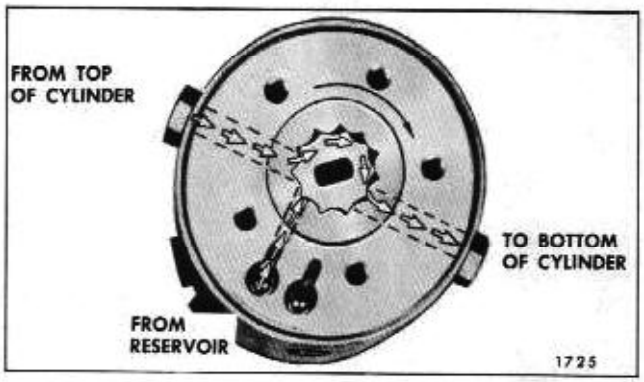


Fig. 13-63 — Operation Of Pump To Raise Top

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 know 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

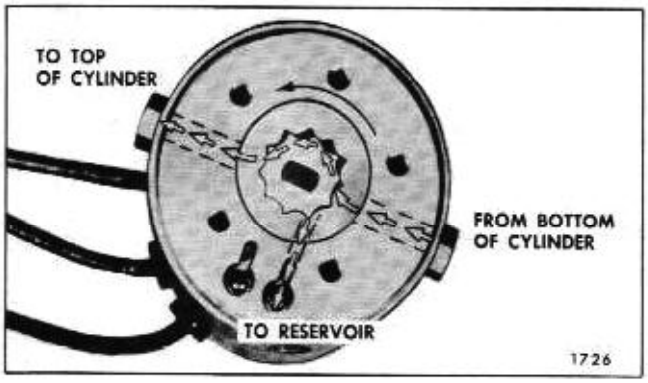


Fig. 13-64—Operation Of Pump To Lower Top

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.

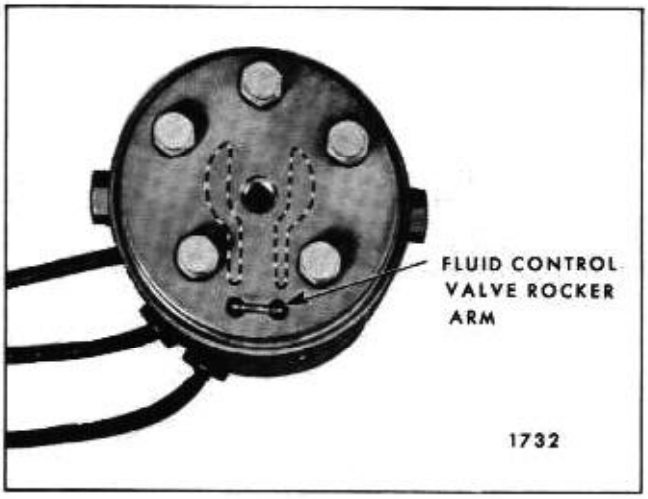


Fig. 13-65—Pump Cover Plate

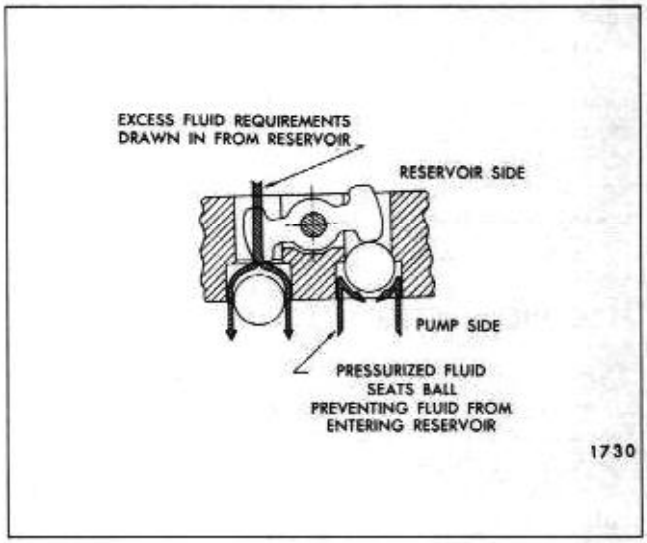


Fig. 13-66—Fluid Control Valve

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

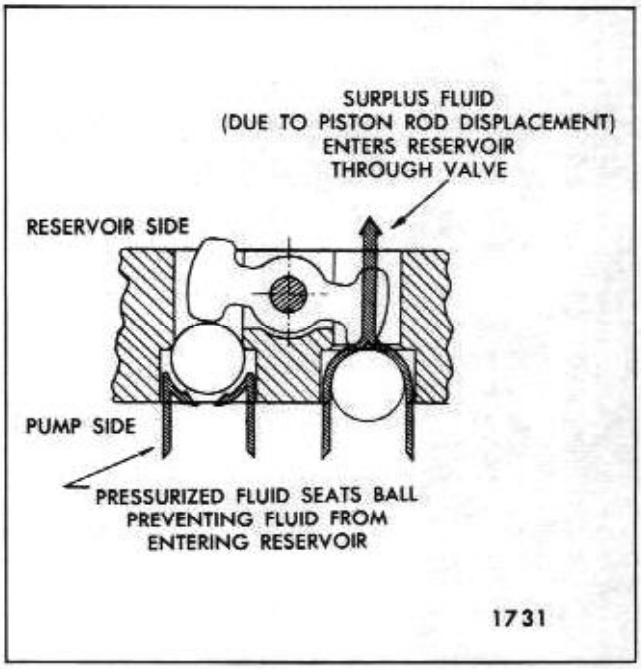


Fig. 13-67—Fluid Control Valve

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.

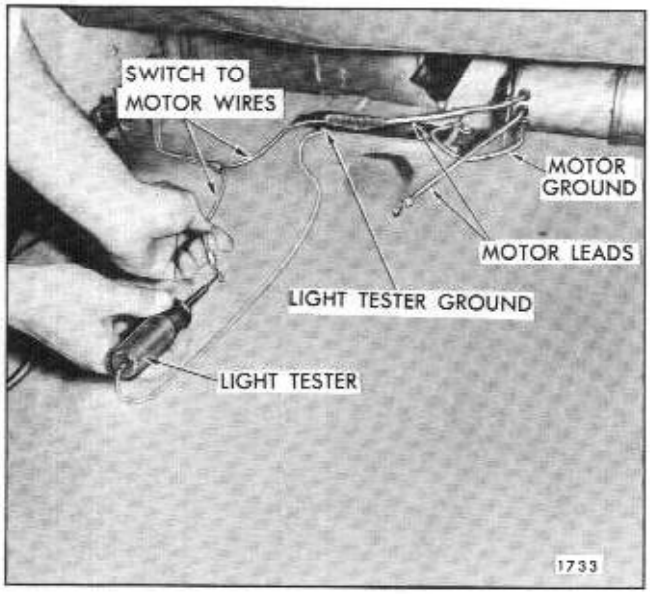


Fig. 13-68—Checking Motor Wiring

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.

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.

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".

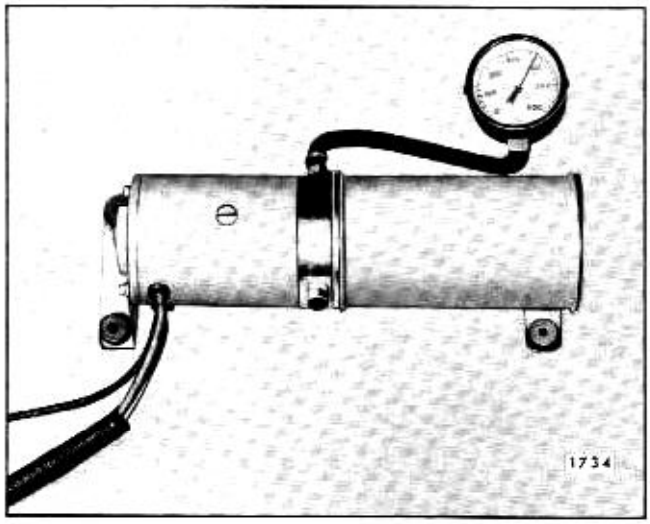


Fig. 13-69 — Checking Pump Pressure

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.

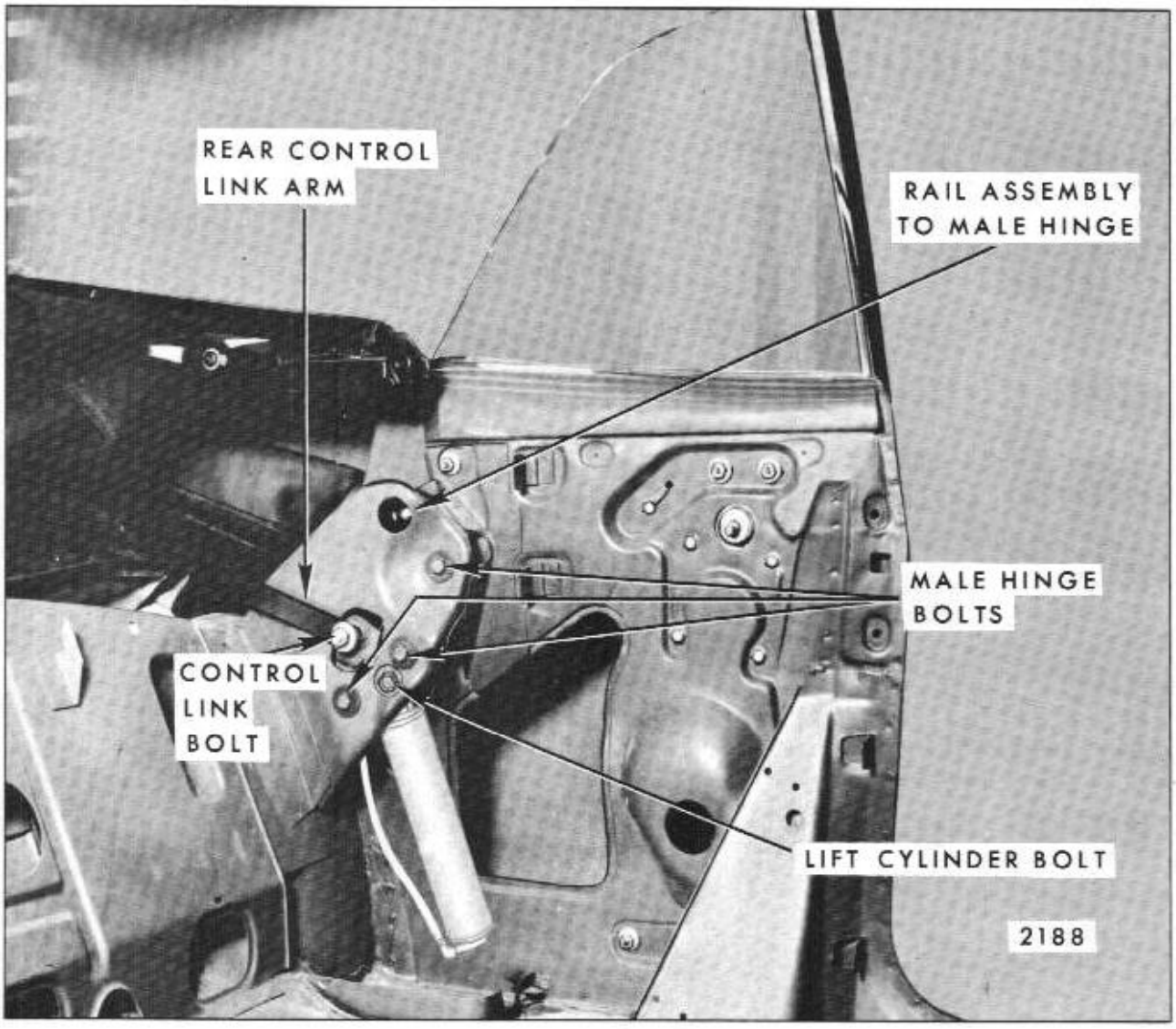


Fig. 13-70—"A" Body Hydraulic Lift Cylinder Attachment

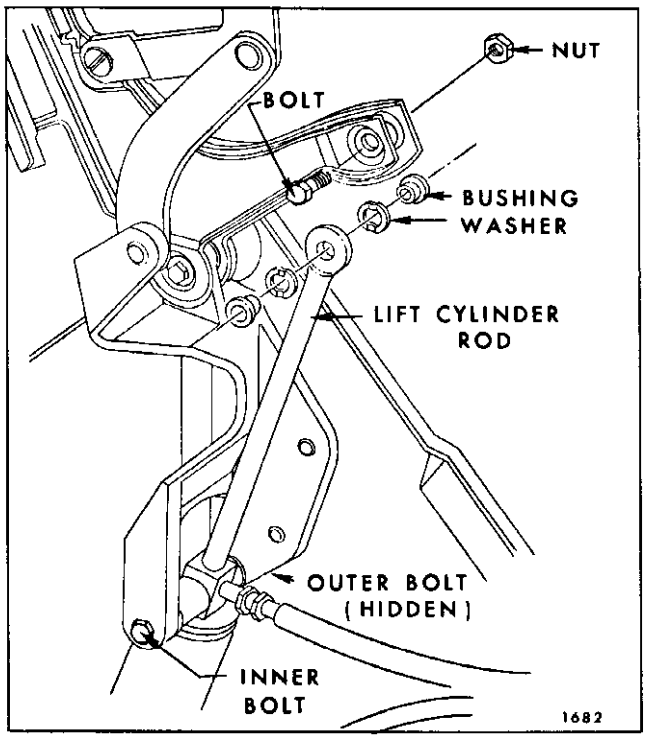


Fig. 13-71 —"B and C" Body Hydraulic Lift Cylinder Attachment

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.

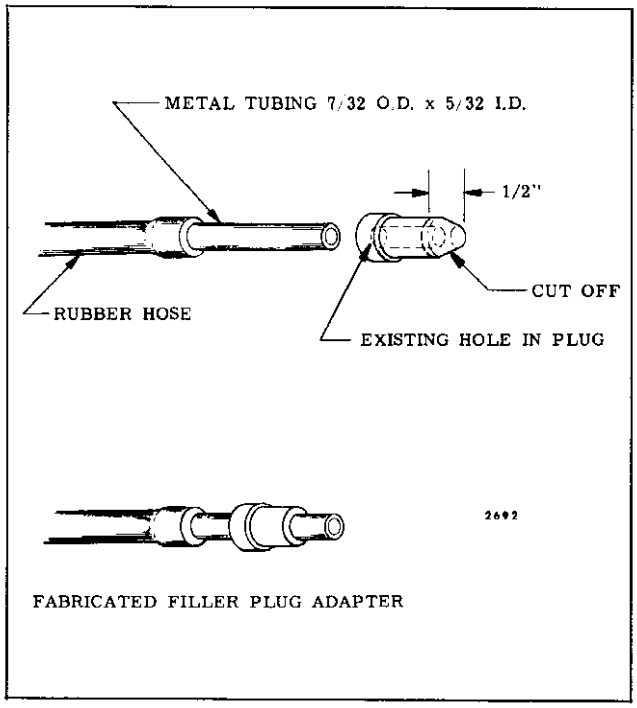


Fig. 13-72 —Reservoir Filler Plug Adapter

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-LECTRIC 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 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.

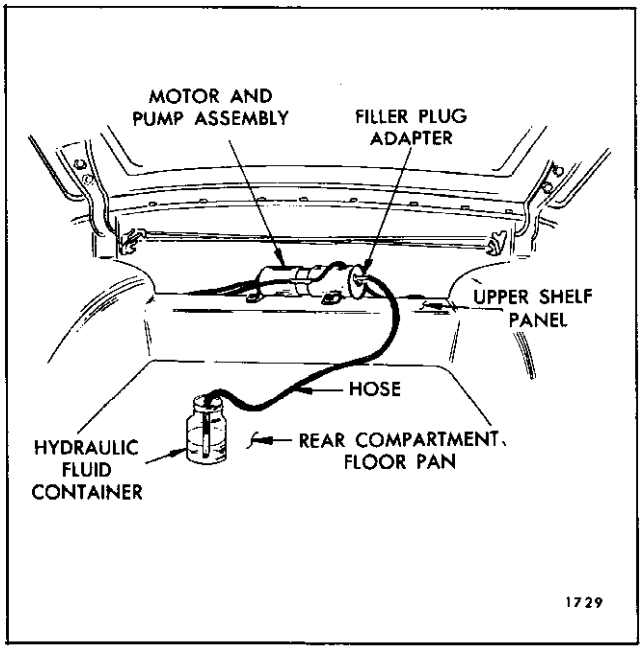


Fig. 13-73 — Filling Reservoir

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.

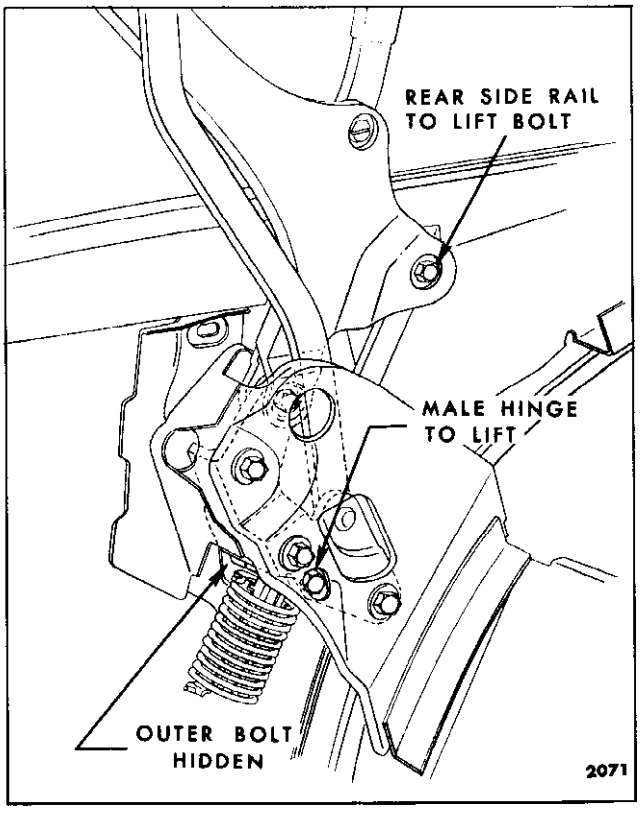


Fig. 13-74 — "A" Body Manual Lift Assembly

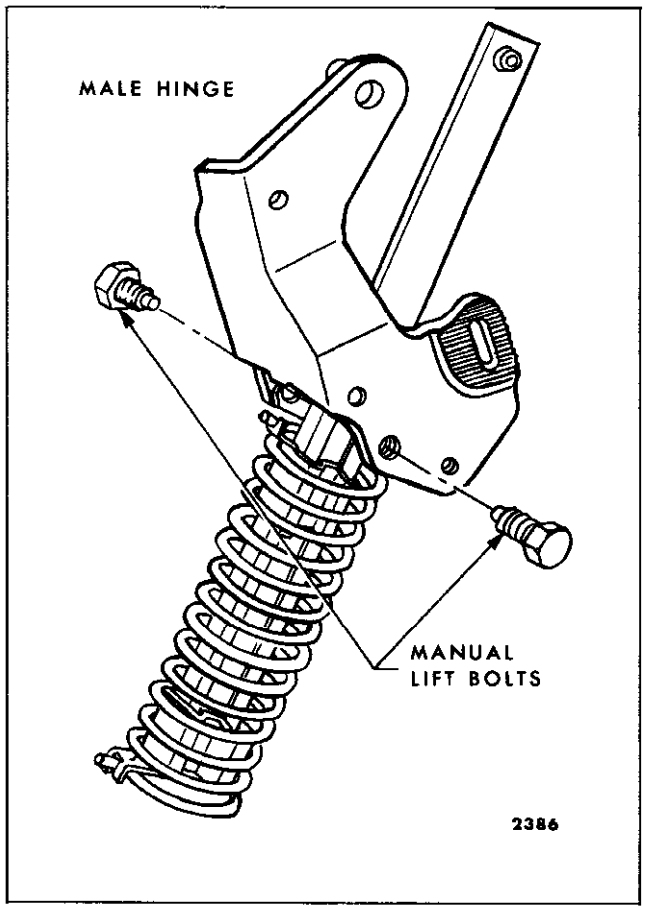


Fig. 13-75 — Manual Lift Attachment

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.

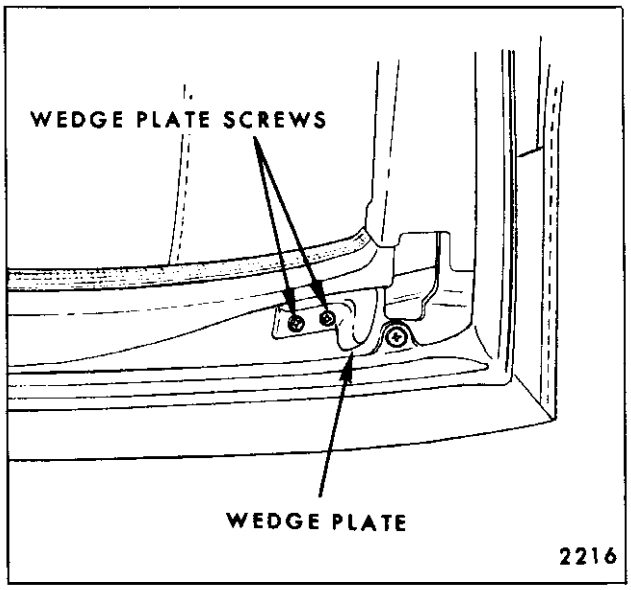


Fig. 13-76—Front Roof Rail Wedge Plate

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 our 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,

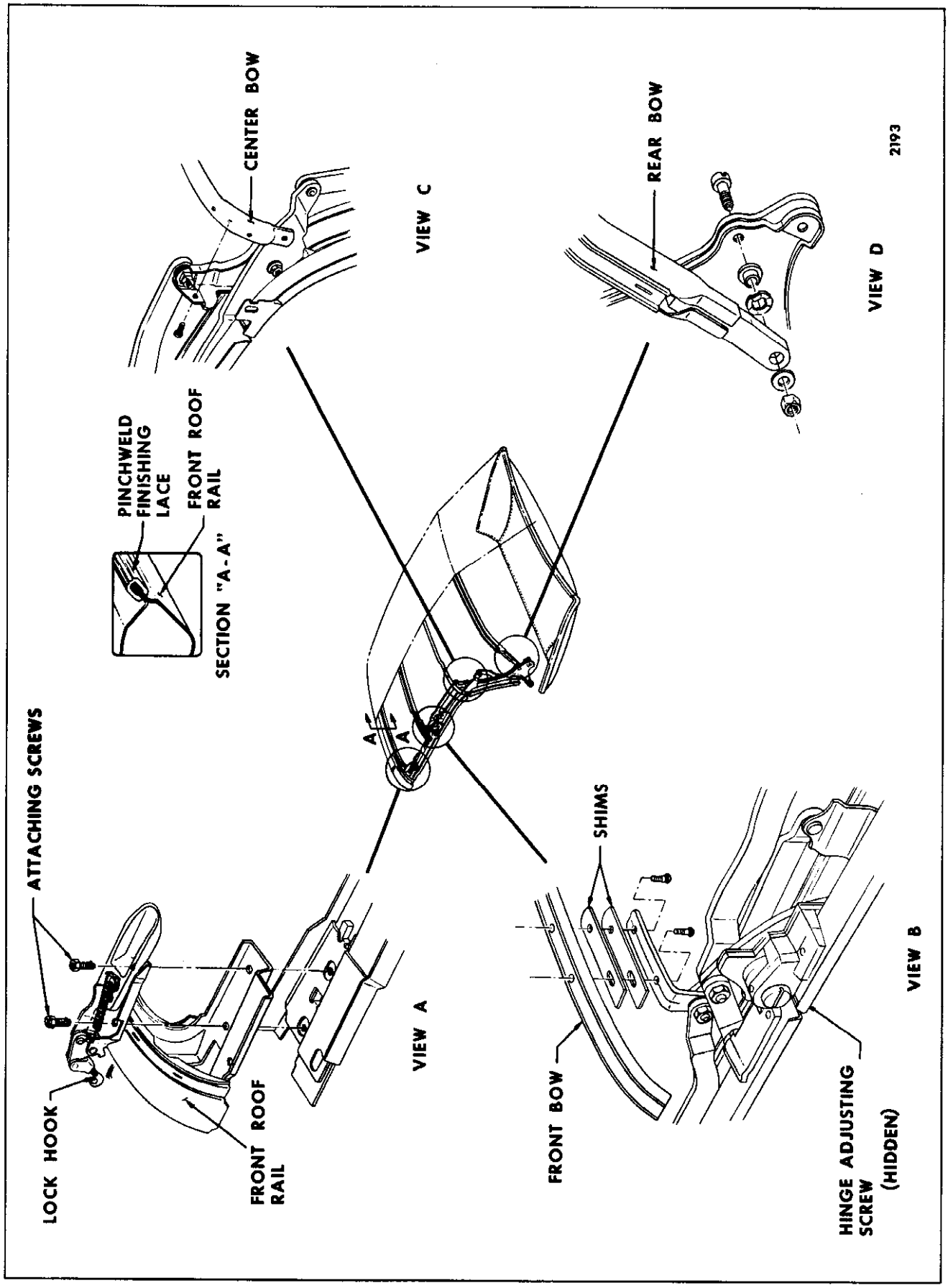


Fig. 13-77 — "A" Body Folding Top Adjustments

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.

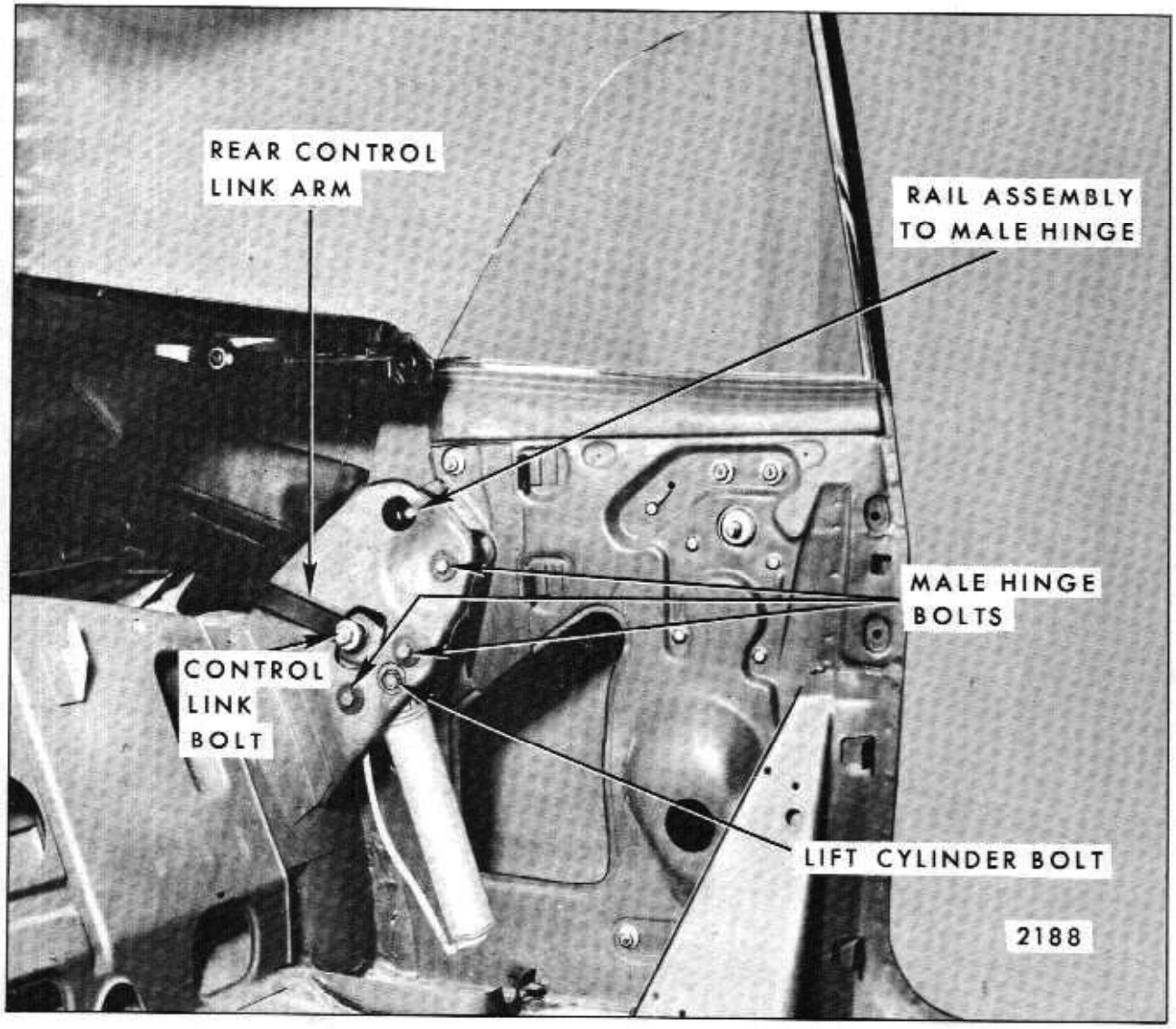


Fig. 13-78—"A" Body Convertible Top Linkage Attachments

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.

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 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").

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.	1. Lock hook improperly adjusted.	Adjust lock hook counterclockwise. (See View "A" in Fig. 13-77).
	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. 13-77).
B. Top does not lock tight enough to windshield header.	1. Lock hook improperly adjusted.	Adjust lock hook clockwise. (See View "A" in Fig. 13-77).
	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. 13-77).
	2. Male hinge assembly misaligned.	Adjust male hinge assembly rearward. (Fig. 13-78).
D. Top does not travel forward far enough.	1. Front roof rail misaligned.	Adjust front roof rail forward. (See View "A" in Fig. 13-77).
	2. Male hinge assembly misaligned.	Adjust male hinge assembly forward. (Fig. 13-78).
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. 13-78).
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. 13-78).
G. Side roof rail rear weatherstrip too tight against top of rear quarter window.	1. Male hinge misaligned.	Adjust male hinge upward. (Fig. 13-78).
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. 13-78).
I. Sag at front to center side roof rail joint.	1. Control link misaligned.	Adjust control link downward. (Fig. 13-78).
	2. Center side roof rail hinge adjusting screw improperly adjusted.	Adjust screw counterclockwise. (See View "B" in Fig. 13-77).

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 17-1/2" ± 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 17-1/2" ± 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.	Adjust rear quarter trim stick on side affected.
	2. Top material improperly installed to center or rear quarter trim stick.	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.

*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).

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).

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

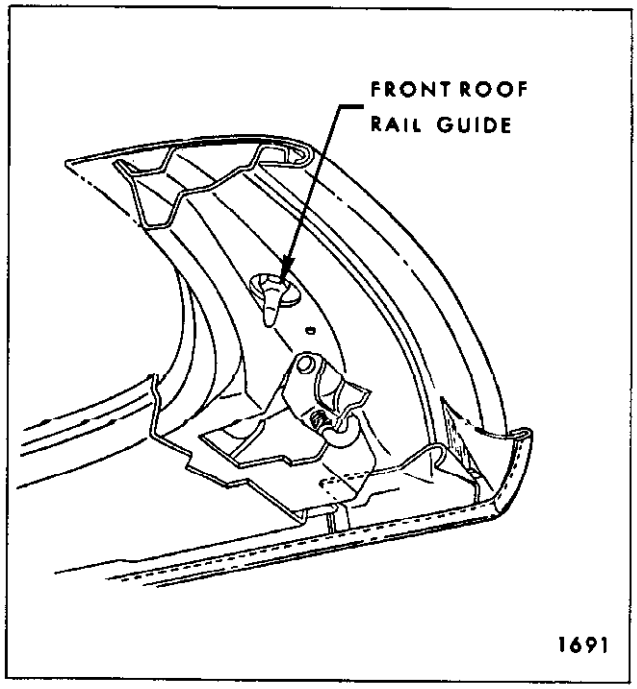


Fig. 13-79 — Guide Adjustment

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 hook on the lock assembly may be adjusted as follows:

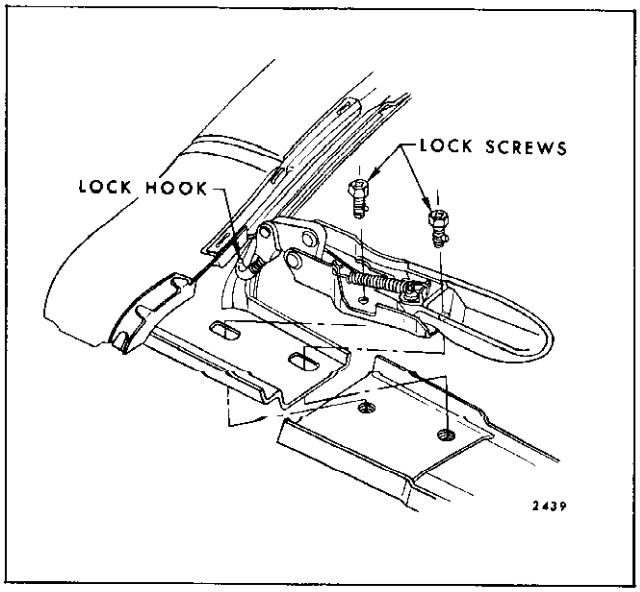


Fig. 13-80 — Lock Attachment

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.

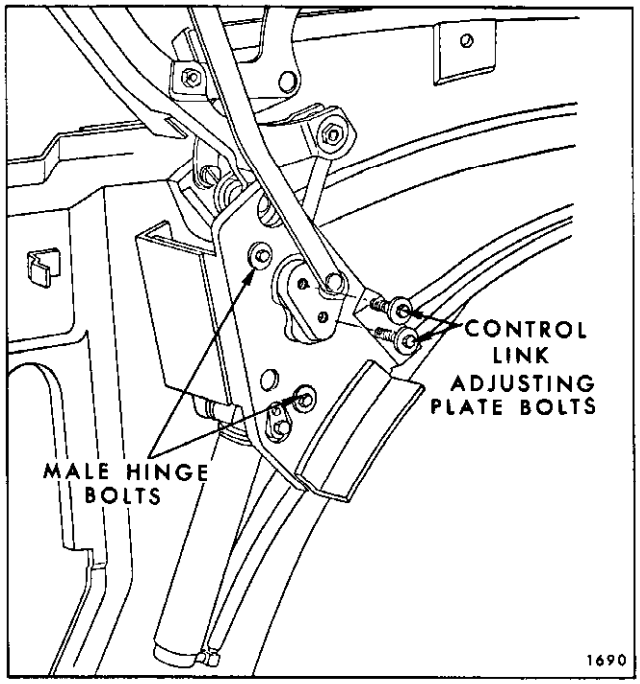


Fig. 13-81 — Male Hinge Attachment

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 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).

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.	Adjust control link adjusting plate downward (Fig. 13-81).
	2. Center side roof rail hinge adjusting screw improperly adjusted.	Adjust screw counterclockwise (Fig. 13-82).
J. Front and center side roof rails bow upward at hinge joint.	1. Control link adjusting plate misaligned.	Adjust control link adjusting plate upward (Fig. 13-81).
	2. Center side roof rail hinge adjusting screw improperly adjusted.	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.	Adjust control link plate rearward or forward as required (Fig. 13-81).
	2. Misaligned folding top dust boot female fastener.	Where possible, align female with male fastener.
	3. Rear seat back assembly is too far forward.	Relocate rear seat back panel rearward until dimension between upper rear edge of rear seat back to forward edge of pinchweld finishing molding is 21-11/16" ± 1/16". The dimension is measured at approximate centerline of body.
	4. Excessive build-up of padding in side roof rail stay pads.	Repair side stay pads as required.

TROUBLE SHOOTING CHART (CONT'D.)

CONDITION	APPARENT CAUSE	CORRECTION
L. Folding top dust boot fits too loosely.	1. Improper stack height due to misaligned control link adjusting plate.	Adjust control link plate forward (Fig. 13-81).
	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 pinch-weld finishing molding is 21-11/16" ± 1/16". The dimension is measured at approximate centerline of body.
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 (Fig. 13-82).
	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.
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 (Fig. 13-82).
O. Top material has wrinkles or draws.	1. Rear quarter trim stick improperly adjusted.	Adjust rear quarter trim stick on side affected.
	2. Top material improperly installed to center of rear quarter trim stick.	Retack top material as required.
P. Wind whistles or waterleak along front roof rail.	1. Misaligned front roof rail front weatherstrip.	Retack front weatherstrip to front roof rail.
	2. Front roof rail contour does not conform to windshield header.	Contour of front roof rail may be changed slightly by reforming rail.

*When no shims are required or when installing only one shim, use attaching screw part #4413016 (1/4 - 20 x 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 x 3/4" oval head with external tooth lock washer, type "T-T" tapping screw, chrome finish) or equivalent.

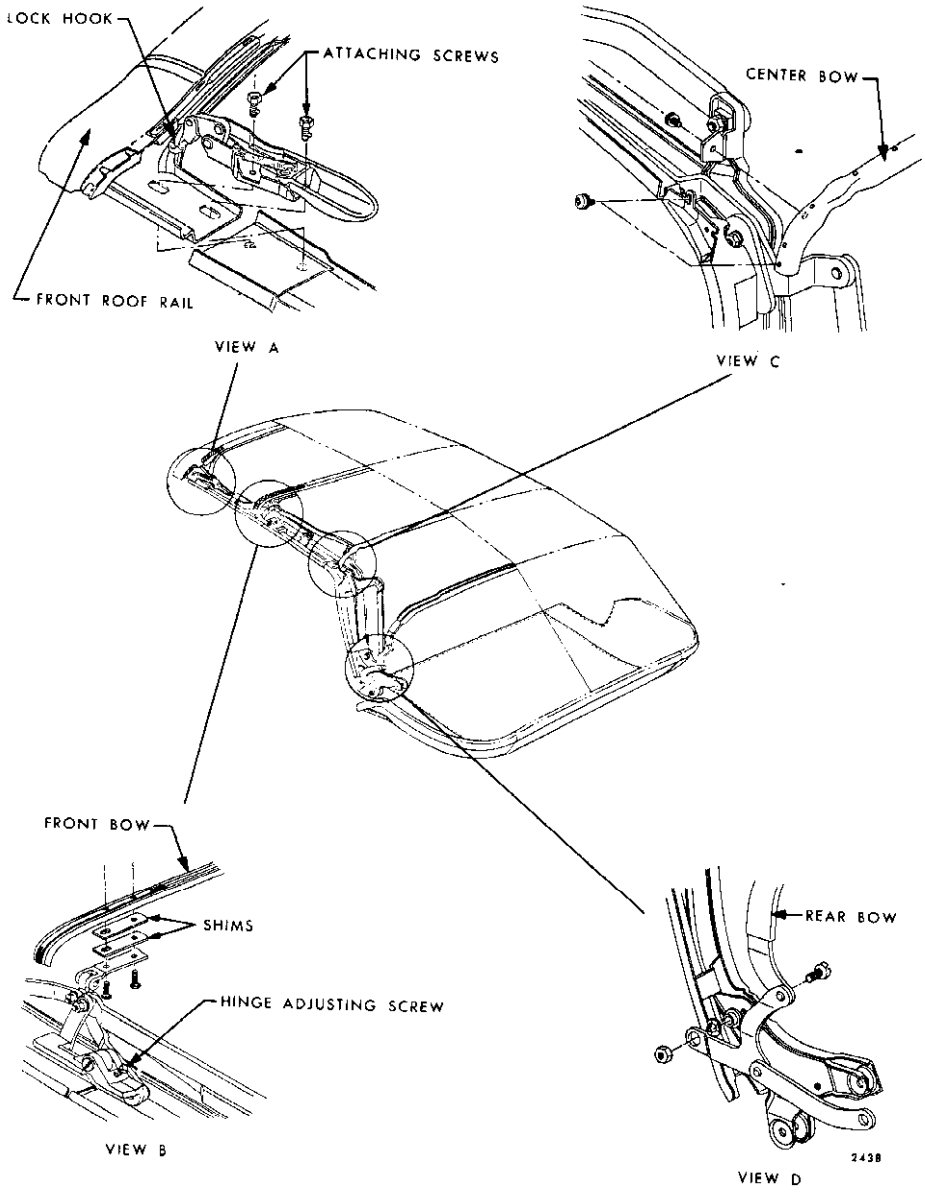


Fig. 13-82—"B and C" Body Folding Top Adjustments

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).

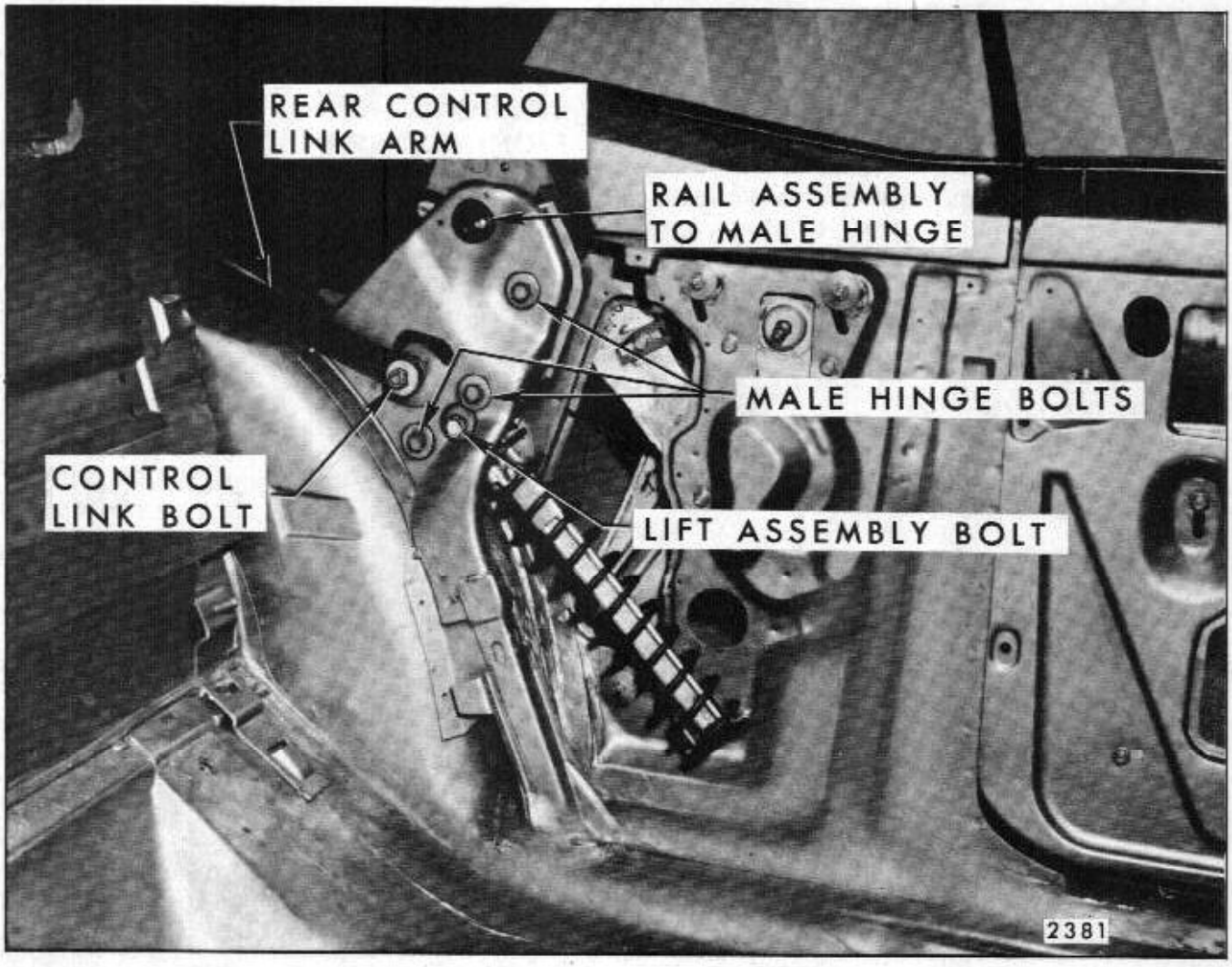


Fig. 13-83—"F" Body Convertible Top Linkage Attachments

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 weahterstrip.	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 of 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.	Adjust control link downward. (Fig. 13-83).
	2. Center side roof rail hinge adjusting screw improperly adjusted.	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.	Adjust control link upward. (Fig. 13-83).
	2. Center side roof rail hinge adjusting screw improperly adjusted.	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.	Rotate male hinge forward or rearward as required. (Fig. 13-83).
	2. Excessive build-up of padding in side roof rail stay pads.	Repair side stay pads as required.
	3. On manual tops, due to improperly adjusted catch clips.	Adjust catch clips downward as required.

TROUBLE SHOOTING CHART (CONT'D.)

CONDITION	APPARENT CAUSE	CORRECTION
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. 13-83).
	2. 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. 13-84).
	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.
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. 13-84).
O. Top material has wrinkles or draws.	1. Rear quarter trim stick improperly adjusted.	Adjust rear quarter trim stick on side affected.
	2. Top material improperly installed to center or rear quarter trim stick.	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.

*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).

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).

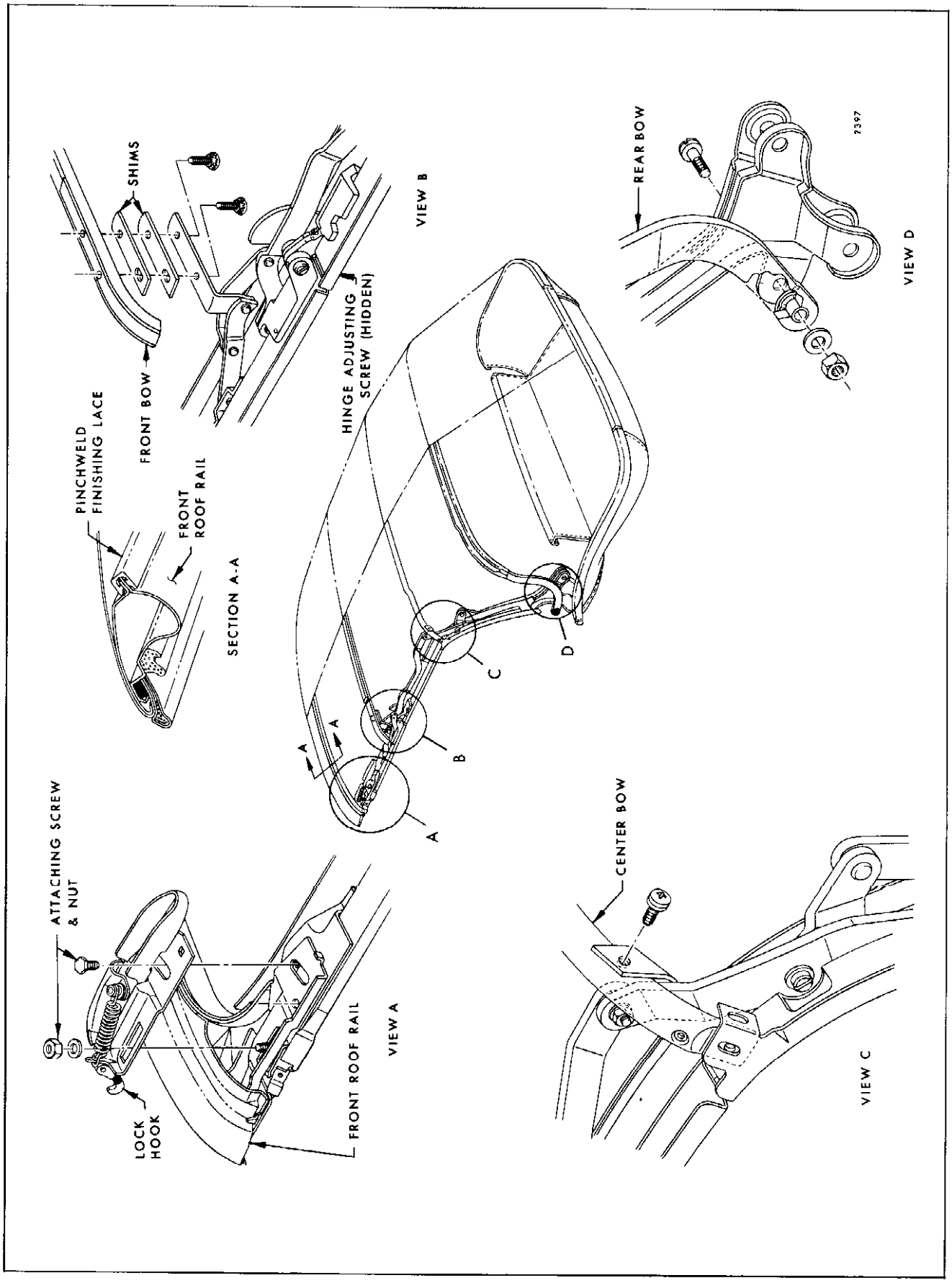


Fig. 13-84—"F" Body Folding Top Adjustments

SECTION 14

DOOR, QUARTER AND SHELF TRIM

INDEX

Subject	Page
Introduction	14-1
Door Pull Handles	14-1
Door Arm Rests	14-2
Inside Handles	14-2
Door Trim Assemblies	
a. "B-C-E" Styles	14-4
b. "A-F" Styles	14-6
c. "X" Styles	14-8
d. "Z" Styles	14-9
Rear Quarter Trim	14-9
Rear Quarter Window Regulator Handle	14-9
Rear Quarter Arm Rest	14-10
Rear Quarter Trim Assemblies	
a. "A-B-C" Two-Door Styles (Hang-On Type)	14-12
b. "A-X-Z" Two-Door Styles (Insert Type)	14-14
c. "F" Styles	14-15
d. "E" Styles	14-15
e. "A-80" Styles	14-16
f. "A-B & "C" Body "69 and 39" Styles	14-17
g. "Z-39" Styles	14-17
Rear Quarter Trim Panel (Left Side) - "B" Station Wagon Styles	14-18
Spare Tire Cover Panel - "B" Station Wagon Styles	14-18
Rear Quarter Wheelhouse Cover Panel (Right Side) - "B" Station Wagon Styles	14-19
Rear Quarter Front Trim Panel - "A" Station Wagon Styles	14-20
Spare Tire Cover Panel - "A" Station Wagon Styles	14-20
Wheelhouse Trim Cover Panel (Right Side) - "A" Station Wagon Styles	14-20
Rear Quarter Rear Trim Panel - All Station Wagon Styles Except 13435 and 23335 Styles	14-21
Wheelhouse Trim Cover Assembly (Left Side) - All "A" Station Wagon Styles Except 23335	14-21
Rear Quarter Rear Trim Panel (Left Side) - 13435 and 23335 Styles	14-22
Rear Quarter Rear Trim Panel - Chevy II Station Wagon Styles	14-23
Rear Quarter Front Trim Panel - Chevy II Station Wagon Styles	14-24
Rear Quarter Wheelhouse Trim Cover - Chevy II Station Wagon Styles	14-24
Compartment Shelf Trim Assembly - All Except "E" Styles	14-25
Compartment Shelf Center Finishing Panel - Oldsmobile and Buick "E" Styles	14-26
Compartment Shelf Side Finishing Panels - Oldsmobile and Buick "E" Styles	14-26
Compartment Shelf Side and Center Trim Panels - Cadillac "E" Styles	14-27

INTRODUCTION

This section of the manual contains the service operations that are necessary for the removal and installation of door, rear quarter and compartment shelf trim assemblies.

Body series or style references in the procedures are explained under "General Information" in Section I of this manual.

DOOR TRIM

DOOR PULL HANDLES

All door pull handles are secured to the door with exposed screws which are inserted through the handle hinges or handle escutcheons into the door inner panel. These screws must be removed prior to door trim pad removal. On all styles except Pontiac, Buick 48400 and 49487 standard, the handles are additionally retained to the door trim from the outboard side of the door trim assembly, which necessitates the removal of the trim assembly in order to remove the handle. On Pontiac, Buick 48400 and 49487 standard styles equipped with door pull handles, the handle can be removed from the trim assembly by the removal of exposed screws from the inside of the car.

Figures 14-1 and 14-2 illustrate typical pull handle removal on all styles except Pontiac, Buick 48400 and 49487 standard. Figure 14-3 illustrates typical pull handle removal on these styles.

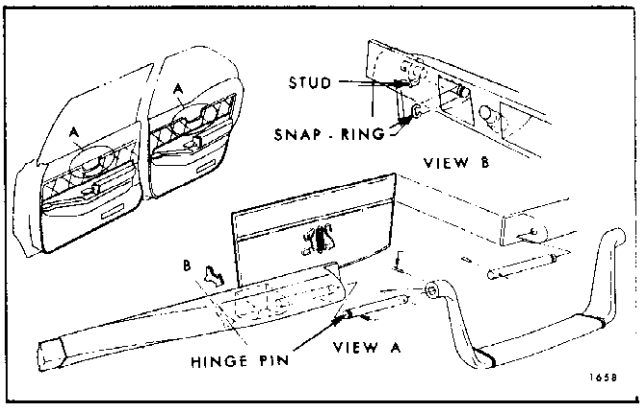


Fig. 14-1—Door Pull Handle Assembly - 38669 Styles

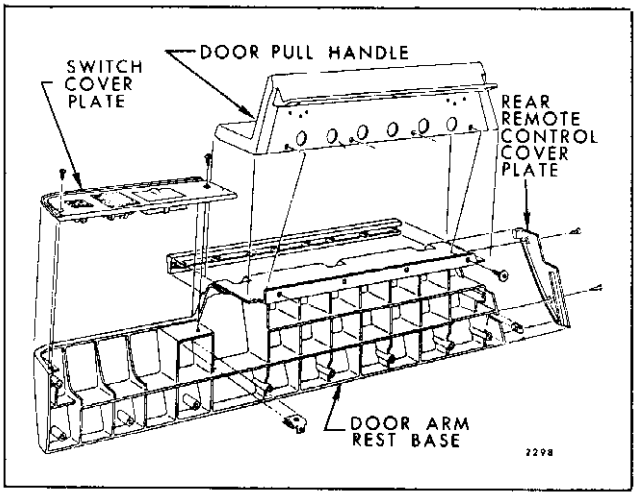


Fig. 14-2—Door Arm Rest and Pull Handle - 49487 Style with Custom Trim Shown

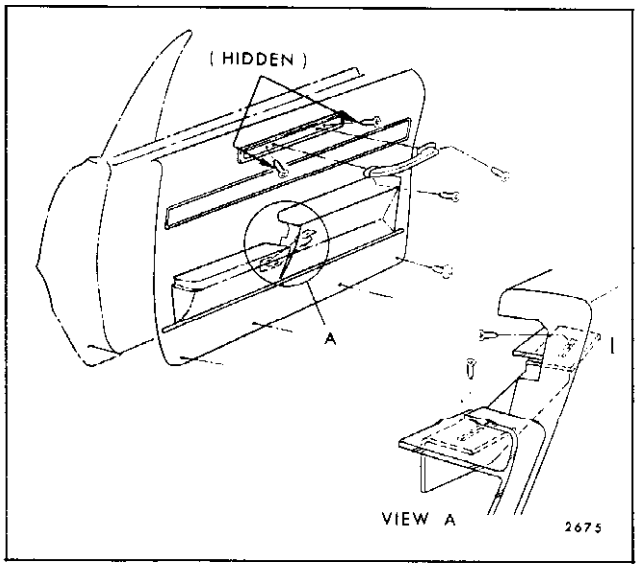


Fig. 14-3—Door Trim Pad and Pull Handle Retention - Buick 48400 Series Shown

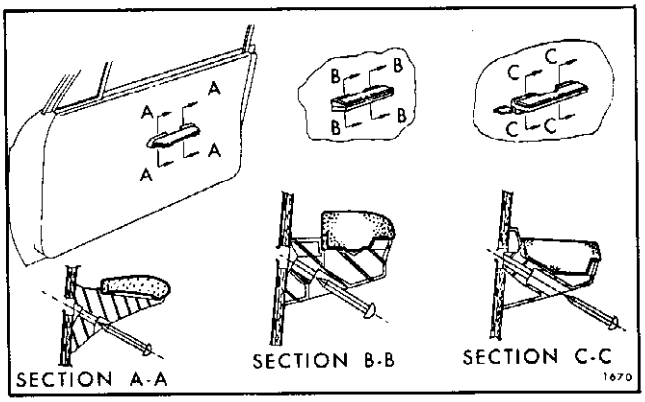


Fig. 14-4—Typical Applied-Type Door Arm Rests

DOOR ARM RESTS

There are three basic types of arm rests; those which are applied to the door after trim pad installation, such as shown in Figure 14-4, and those which are assembled to the trim pad prior to trim pad installation as shown in Figure 14-5. The third type which appears on the 12600 Series only, is an integral part of the door trim pad and is not serviced as a separate item (Figure 14-6).

Figure 14-2 illustrates the typical arm rest assembly and pull handle build-up which appears on the 49487 style equipped with custom trim and the 69347 style. Retention of these assemblies to trim pad is similar to that shown in Figure 14-7.

INSIDE HANDLES

To remove manually operated ventilator and door window inside handles, and door lock remote control handles which are not partially covered by the door arm rest, proceed as follows:

1. Depress door trim assembly sufficiently to permit insertion of tool J-7797 between handle and bearing plate (Fig. 14-8).

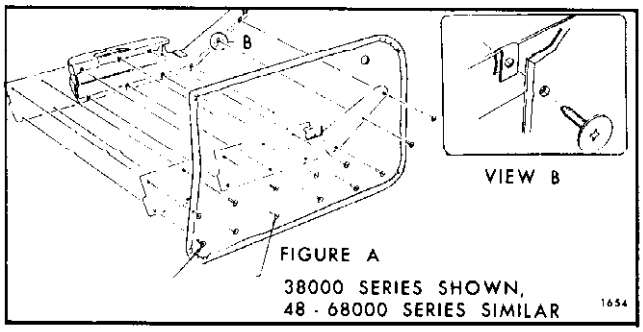


Fig. 14-5—Arm Rest to Door Trim Pad Installation

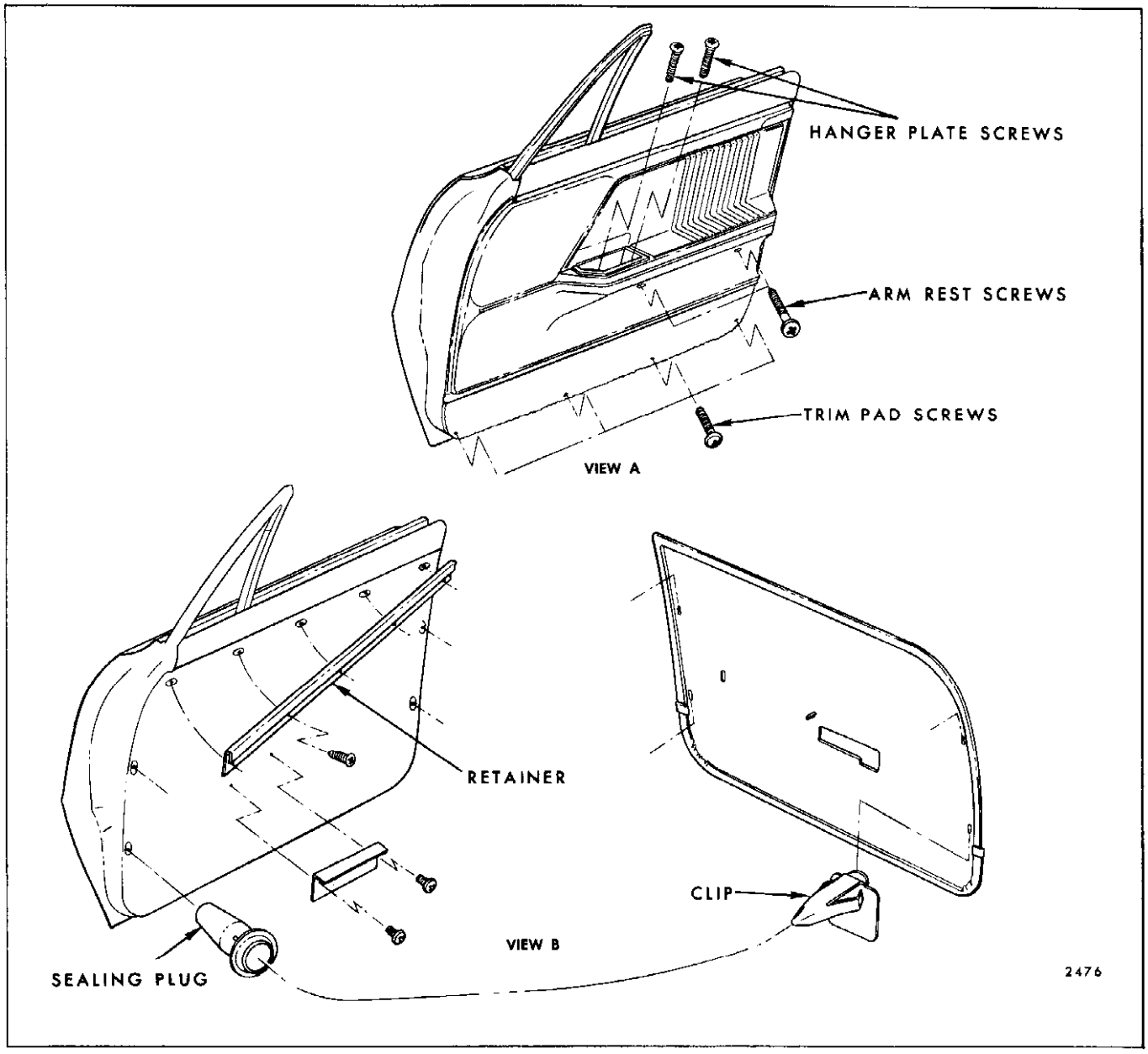


Fig. 14-6—Door Trim Assembly - "F" Body 12600 Series

2. Push tool to disengage handle retaining spring from spindle and remove bearing plate and handle from door.

3. To install, engage retaining spring on handle and position handle to door at same angle as opposite side door handle; then, press handle until spring engages spindle.

To remove "paddle" type door handles, proceed as follows:

1. On styles with "applied" type door arm rests as shown in Figure 14-4, Section "C-C", remove arm rest as previously described. Then, remove screw securing handle to remote control spindle and remove handle.

2. On all styles, except 12600, with arm rests that are a component part of the door trim assembly as shown in Figure 14-5, it is necessary to remove remote control cover plate (Fig. 14-9 and view "A", Fig. 14-3) to gain access to remote handle screw. On 12600 Styles, remote handle can be removed with a hex-head wrench and is accessible with all trim intact (Cover Plate is not utilized on 12600 Styles).

NOTE: On styles with dual remote control handles, remove cover plate to gain access to

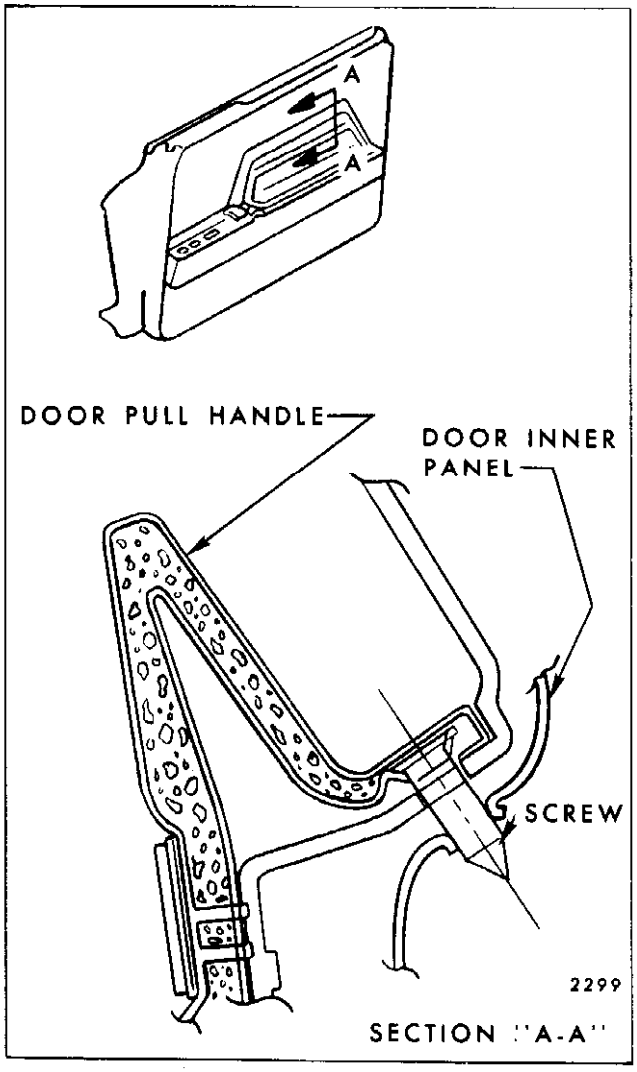


Fig. 14-7—Door Pull Handle Retention - 49487 Style with Custom Trim Shown

front handle and remote control cover plate at rear for access to rear handle (Fig. 14-2).

DOOR TRIM ASSEMBLIES
All "B-C & E" Styles

The door trim assembly is secured to the door by the trim support return flange which hangs over the door inner panel across the top, and by a combination of retaining nails and screws down the sides and across the bottom.

Removal and Installation

1. Remove all door inside handles as previously described.

2. Remove inside locking rod knob.

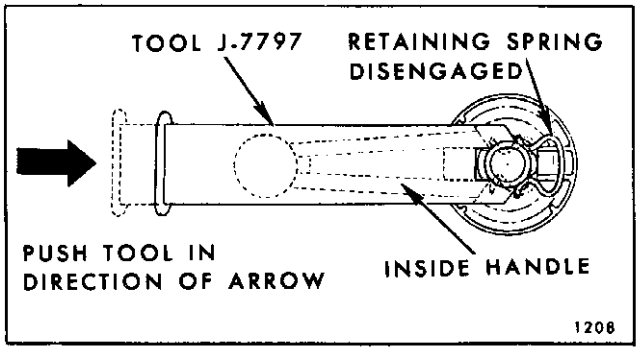


Fig. 14-8—Door Inside Handle Removal

3. On styles with door pull handles, remove screws inserted through handle into door inner panel. On some styles, removal of screws removes handle. On other styles, handle will still be retained to trim pad. Refer to "Door Pull Handles" for specific types of retention.

   NOTE: On Buick 48400 Series, 2 screws behind pull handle must be removed after pull handle removal and prior to trim pad removal. (Fig. 14-3)

4. On styles with switch plate located in arm rest as shown in Figure 14-10, remove exposed screws and disconnect switches from wire harness connectors.

5. Remove all exposed screws present under switch plate cover and/or directly under remote control spindle. These screws secure the trim pad to the door hanger plate. (Figure 14-9 show typical hanger plate attachment.)

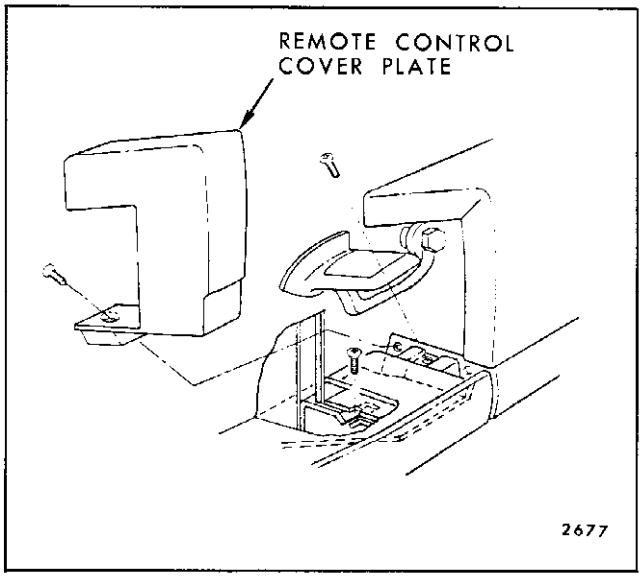


Fig. 14-9—Arm Rest to Hanger Plate Attachments

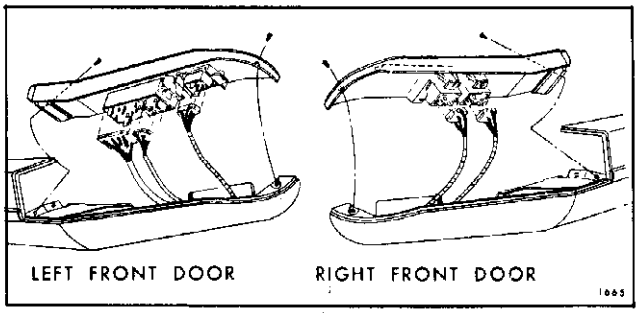


Fig. 14-10—Front Door Arm Rest Switch Cover Assembly - Olds. Style Shown, Others Typical

6. On styles equipped with arm rest cup, remove screws from cup (38457 and 69 Styles).

7. On all Cadillac Styles, remove door courtesy lamp lens and disconnect lamp from wiring harness connector and remove screw behind lens. This screw is inserted through door trim pad into door inner panel. (Fig. 14-11)

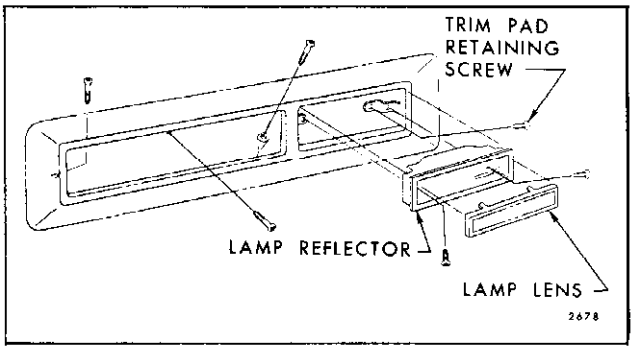


Fig. 14-11—Door Trim Courtesy Lamp - Cadillac "E" Body (Other Cadillacs Similar)

8. Remove all screws present, down sides and along bottom of door trim pad.

9. Starting at a lower corner, insert tool J-6335 between door inner panel and trim assembly. Working upward, carefully disengage retaining nails from plastic cups inserted in door inner panel (Fig. 14-12).

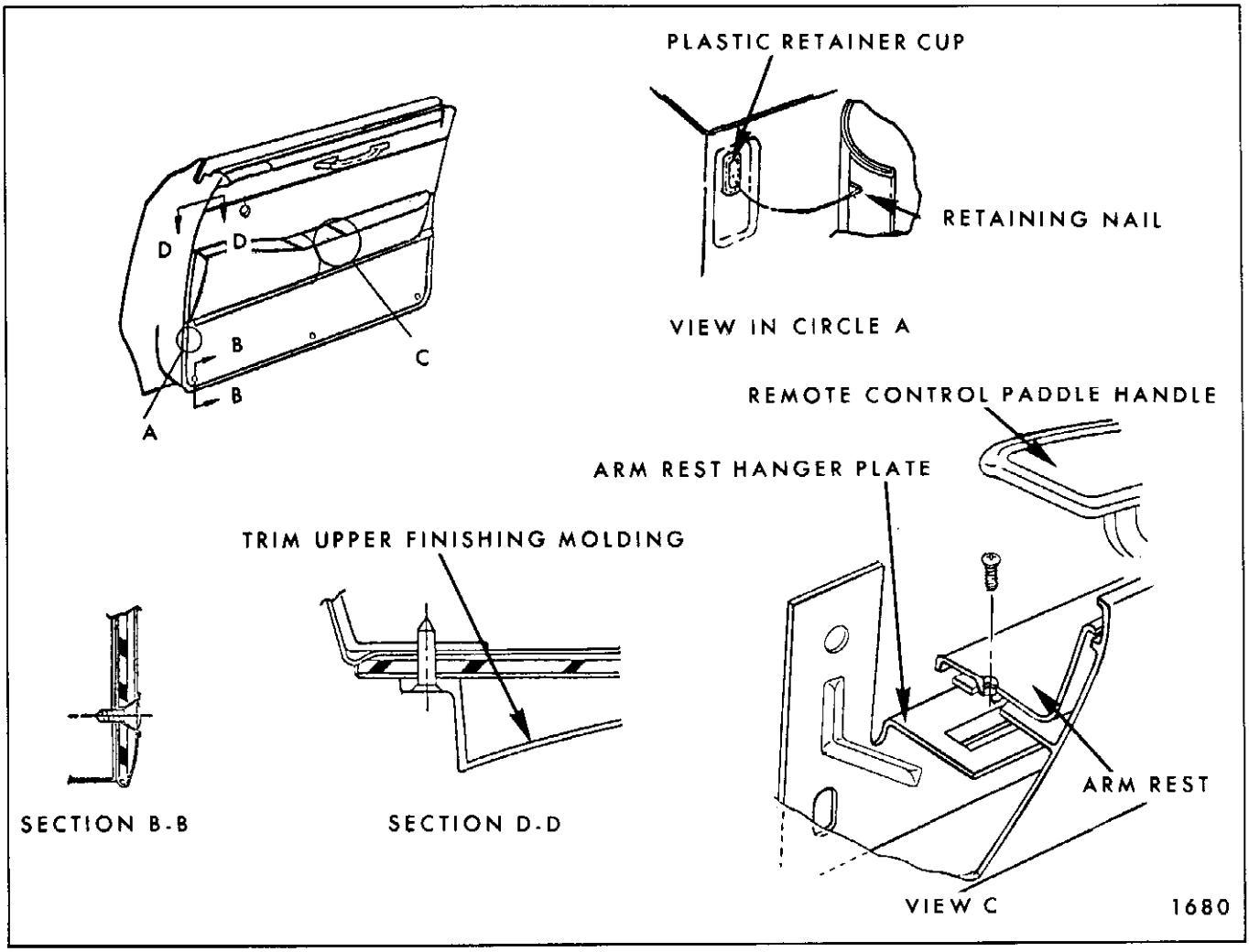


Fig. 14-12—Door Trim Pad Removal

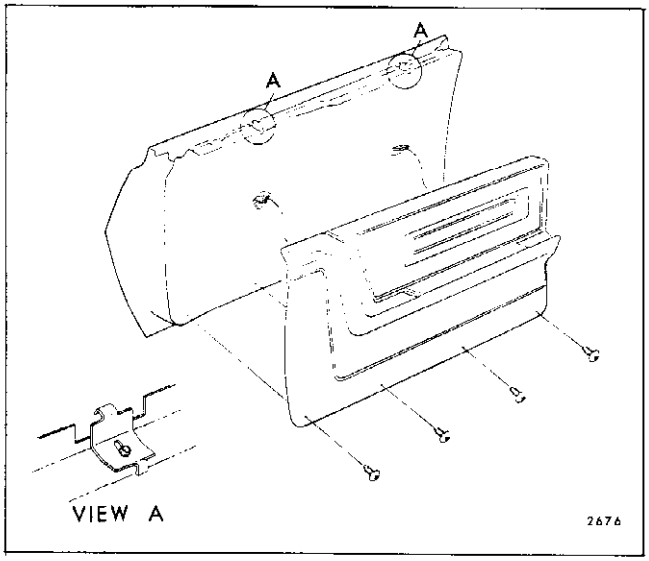


Fig. 14-13—Door Trim Pad Assembly - Cadillac "E" Body Shown

NOTE: Use care not to damage inner panel water deflector.

10. Lift trim assembly upward to disengage it from door inner panel and remove trim assembly.

NOTE: On styles equipped with vacuum door locks and electric window switches located on trim pad, disconnect harness or vacuum hoses at switch on selector valve.

11. To install, reverse removal procedure.

NOTE: On all "E" bodies and 26657 Style, door trim assembly can be adjusted "in" or "out" by repositioning trim pad retaining plates. (View A, Fig. 14-13)

DOOR TRIM ASSEMBLIES
All "A & F" Styles

There are two types of door trim pads utilized on all "A & F" bodies. On certain "A" and all "F"

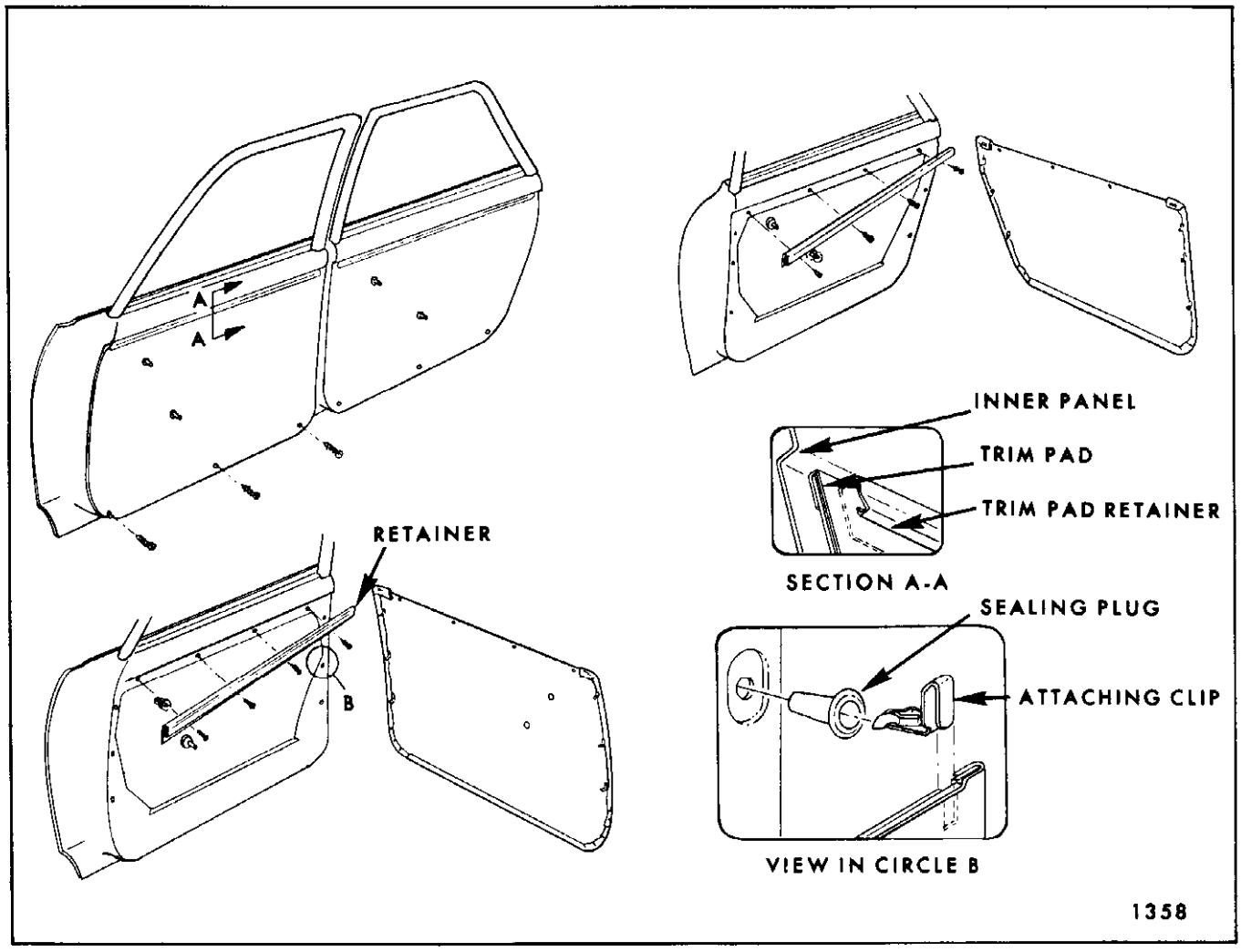


Fig. 14-14—Door Trim Pad Removal

styles the front and rear door trim pad is secured to the door inner panel by trim pad retainers at top, retaining clips along both sides and screws at the bottom. Trim pad retainers are attached to the door inner panel by screws. The retaining clips (along sides) are pressed into plastic retainers or cups which fit into slots in the door inner panel (Fig. 14-14).

On other "A" styles the hang-on door trim pad is used. This trim pad is further secured by attaching screws along the bottom edge and by retaining nails inserted into plastic retaining cups located in the door inner panel.

Removal and Installation

1. Remove door inside handles.

2. a. On all styles except 12600, remove arm rest assembly.

   b. On 12600 styles, remove 2 exposed screws inserted through arm rest assembly into door inner panel. Arm rest assembly cannot be removed as it is an integral part of the door trim pad (Fig. 14-6).

3. On 12600 Series only, remove screws beneath remote control spindle which secure arm rest to door hanger plate (Fig. 14-6).

4. On all styles, at bottom door, remove screws securing trim assembly to door inner panel.

5. On styles utilizing hang-on type door trim pad, proceed as follows:

   a. With a clean rubber mallet, tap along side of trim pad to help free nails from retainers.

   b. Starting at bottom of trim pad, carefully insert tool J-6335, or a suitable flat-bladed

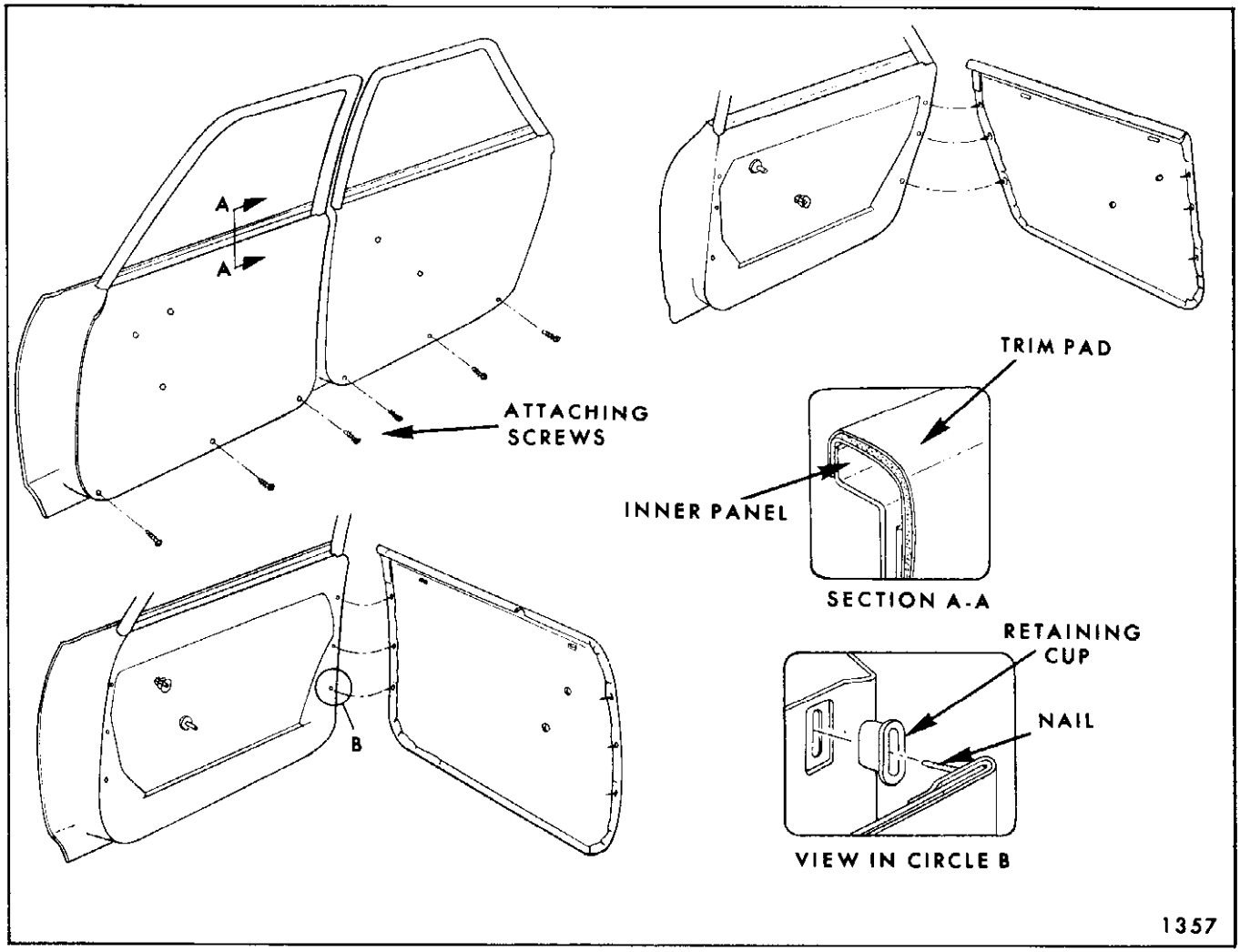


Fig. 14-15—Hang-On Door Trim Pads

tool, between door trim assembly and door inner panel at retaining nail locations and disengage nails from retainers. Remove door trim pad from door (See Fig. 14-15).

6. On other styles proceed as follows:

   a. Carefully insert tool J-6335, or a suitable flat-bladed tool, between door trim assembly and door inner panel at retaining clip locations and disengage clips from retaining plugs (See Fig. 14-14 and View "B" Fig. 14-6).

      NOTE: Broken or damaged retaining clips should be replaced.

   b. Pull top edge of trim pad down slightly to disengage it from the trim pad retainer and remove trim pad from door.

      NOTE: On styles equipped with electric window switches located on trim pad, disconnect harness from switch.

7. On all styles, to install, reverse removal procedure. Exercise care not to disturb inner panel water deflector.

   CAUTION: Retaining nails must not pierce back of plastic retainers as waterleaks may develop. For this reason, it is important that PROPER LENGTH repair tab nails (1/2") are used when replacing broken trim retaining nails.

   NOTE: If plastic retainers are loose and will not remain engaged in door inner panel, install a 1/2" x 3/4" piece of cloth-backed waterproof body tape over retaining hole in inner panel. Make two slits in tape to form an "X" pattern. Check retainer for a snug fit and if still loose, repeat above operation by installing a second piece of tape over the existing repair. This same procedure can be used to repair waterleaks which develop around perimeter of retainer.

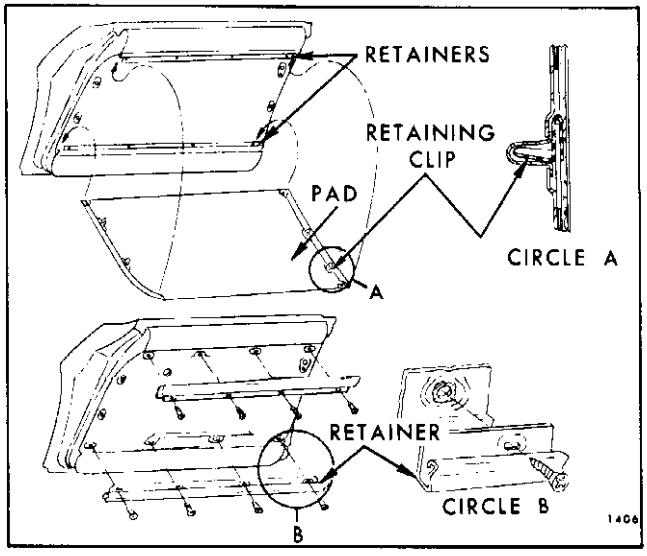


Fig. 14-16—Door Trim Pad Removal

DOOR TRIM ASSEMBLIES
All "X" Styles

Both the front and rear door trim assemblies are secured to the door inner panel by trim pad retainers at top and bottom of trim pad and by retaining clips along both sides. The retainers are secured to the door inner panel by screws. The retaining clips are pressed into plastic retainers or cups which fit into slots in the door inner panel.

Removal and Installation

1. Remove door inside handles, arm rest assembly and remote control release button.

   NOTE: Remote control release button appears on front door only, and requires a hex wrench for removal.

2. Carefully insert tool J-6335, or a suitable flat-bladed tool, between door trim assembly and door inner panel at retaining clip location and disengage clips from retaining plugs (See Fig. 14-16).

   NOTE: Broken or damaged retaining clips should be replaced.

3. Pull top edge of trim down and slightly inboard to disengage it from the top retainer and then lift trim pad upwards to disengage it from the bottom retainer and remove assembly from door.

   CAUTION: Exercise care not to buckle trim pad.

4. To install, reverse removal procedure.

   NOTE: Exercise care not to disturb inner panel water deflector.

5. If plastic retaining plugs are loose and will not remain engaged in door inner panel, install a 1/2 x 3/4" piece of cloth-backed waterproof body tape over retaining plug hole and door inner panel (See Fig. 14-16). Make two slits in tape to form an "X" pattern. Check retainer for a snug fit and, if still loose, repeat

above operation by installing a second piece of tape over the existing repair. This same procedure can be used to repair waterleaks which develop around perimeter of retainer.

DOOR TRIM ASSEMBLIES
All "Z" Styles

Both front and rear door trim pads are retained by clips across the top and down the sides and by screws across the bottom. The clips are attached to the reverse side of the trim pad and are installed into plastic sealing plugs inserted in piercings in the door inner panel. The screws are installed from the exposed side of the trim pad and are readily accessible for removal.

Removal and Installation

1. Apply masking tape as protective covering to door inner panel painted surfaces adjacent to top and front edges of trim pad.
2. Remove door inside handles and door arm rest as previously described.
3. Carefully insert tool J-6335, or an equivalent flat-bladed tool, between door trim assembly and door inner panel at retaining clip locations and disengage clips from plastic sealing plugs. (Fig. 14-17).
4. Remove screws from across bottom and remove trim pad from door.
5. To install, reverse removal procedure.

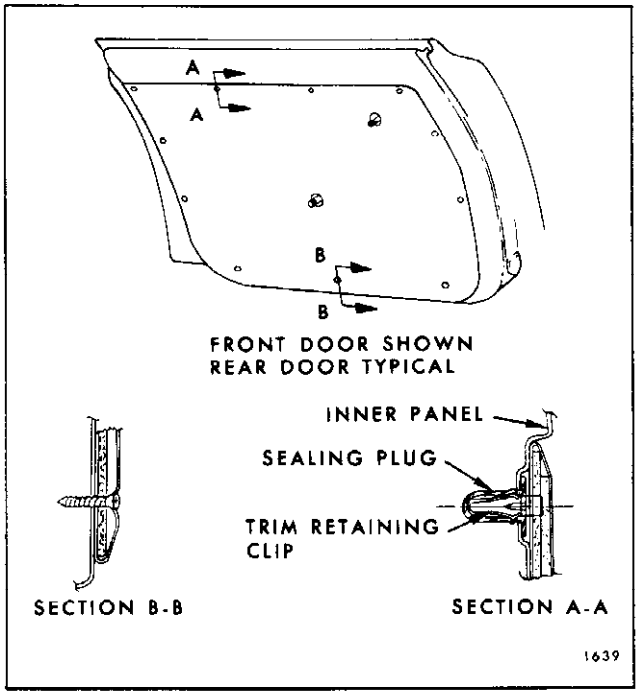


Fig. 14-17—Door Trim Pad Retention

REAR QUARTER TRIM

There are two methods used to retain rear quarter trim assemblies. The most common method is to hang the trim assembly on the quarter inner panel at the beltline. This type of retention is referred to as "hang-on" trim.

The other method is to use trim finishing moldings as retainers either at the top of the trim assembly or both the top and bottom. This type of retention is referred to as "insert" type trim.

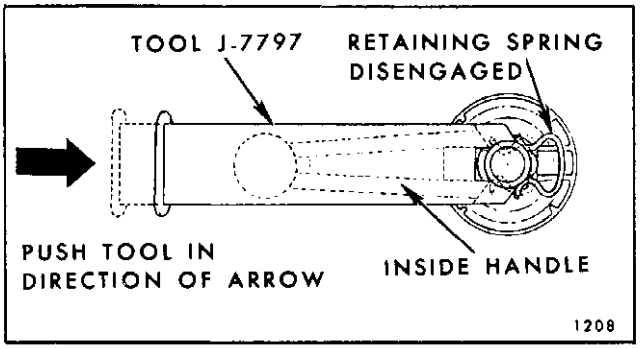


Fig. 14-18—Quarter Window Inside Handle Removal

In addition to being supported by the top of the inner panel, the "hang-on" type trim assembly is retained down the front edge by nails or retaining clips.

Insert type trim is retained along the front edge by adhesive which bonds the trim to the outboard face of the body lock pillar pinchweld flange.

REAR QUARTER WINDOW REGULATOR HANDLE

Removal and Installation

1. Depress quarter trim assembly sufficiently to permit insertion of tool J-7797 between handle and bearing plate (Fig. 14-18).

2. Push tool to disengage handle spring from spindle and remove bearing plate and handle from quarter trim.

3. To install, engage retaining spring on handle and position handle at same angle as opposite side quarter window handle; then press handle until spring engages spindle.

REAR QUARTER ARM REST

There are three types of arm rests utilized on all body types:

A. Applied arm rests which are retained by two screws inserted through the arm rest base into the quarter inner panel (Fig. 14-19).

B. Floor mounted arm rests which are retained by screws inserted through the arm rest assembly into prescribed brackets (Fig. 14-20).

NOTE: When this type of arm rest is utilized on convertible styles (except "F" Bodies) it is removed as an assembly with the folding top compartment side trim panel (Fig. 14-21). On "F" Body convertibles, the arm rest is removed with the folding top compartment side trim panel and quarter trim pad as an assembly.

C. Arm rests which are an integral part of the quarter trim and are removed as an assembly, appear on all Cadillac "E" Bodies and on certain "F" Body styles.

Removal and Installation

1. On styles equipped with applied arm rest, remove two screws in arm rest base and remove arm rest from trim pad.

2. On styles equipped with floor mounted arm rest, perform the following:

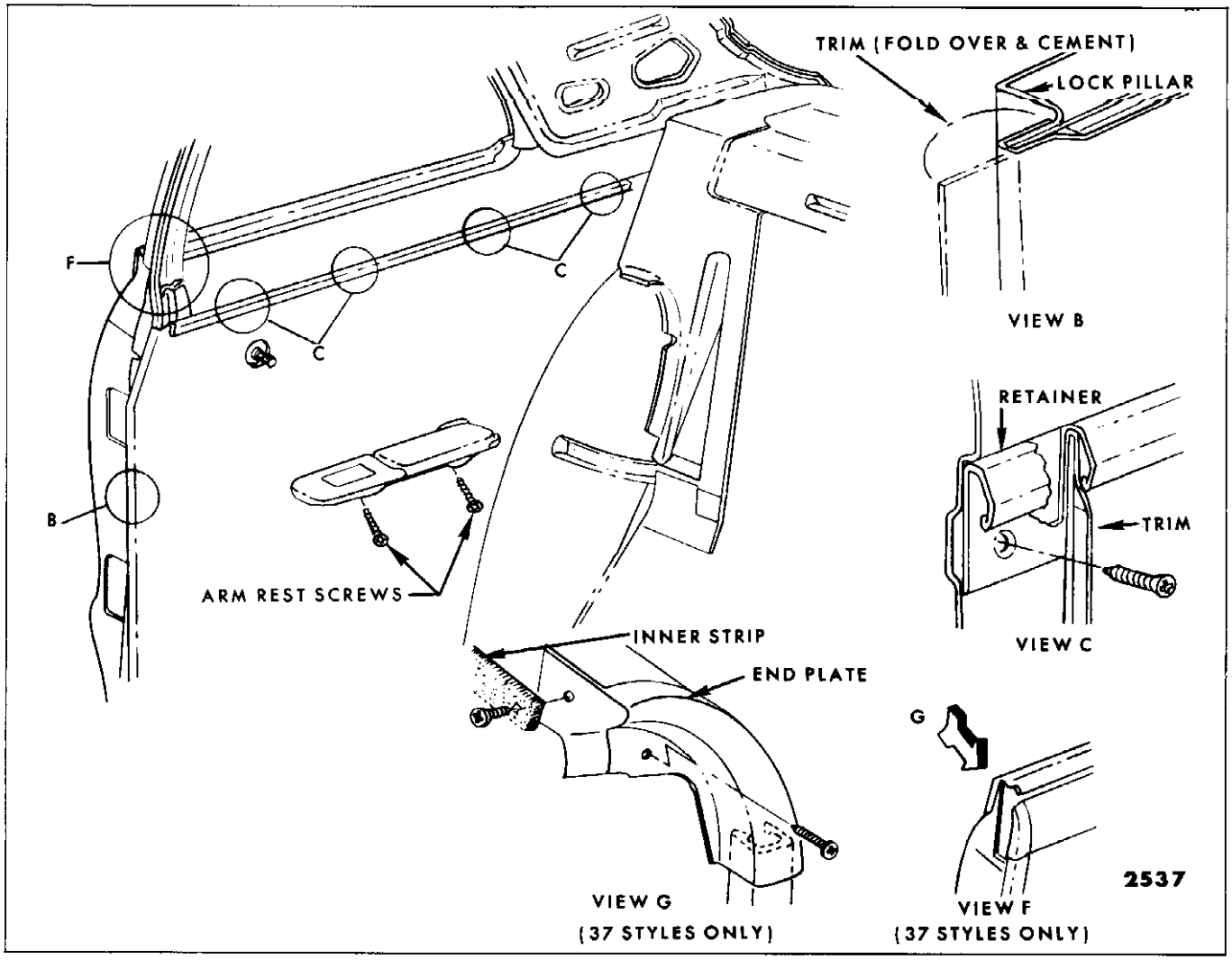


Fig. 14-19—Rear Quarter Trim Assembly (Insert Type)

a. Remove rear seat back and cushion assemblies as described under "Rear Seats".

b. On "C" Body "47" Styles equipped with shoulder straps, remove shoulder strap buckle retainer as described in "Seat Belt" Section.

c. On convertibles styles, remove exposed screws securing front and rear of folding top compartment side trim panel (Fig. 14-21).

d. On styles equipped with seat back to rear quarter inner panel filler panel, remove attaching screws and remove filler panel (except "F" Bodies). On "F" bodies filler panel is removed with trim pad and arm rest as an assembly. (Fig. 14-20 and 14-22 illustrate typical attachment).

e. On all styles remove all arm rest attaching screws present at front, rear and bottom of arm rest assembly.

f. On styles equipped with rear quarter lamp assemblies, disconnect lamp as shown in Fig. 14-23.

g. On styles with other electrical devices in arm rest assembly, carefully detach arm rest from rear quarter inner panel sufficiently to disconnect wire harness connectors. Figures 14-24 and 14-25 are indicative of electrical installation in rear quarter arm rests. Lift arm rest in an upward, inboard movement and remove assembly from rear quarter inner panel (except "E" & "F" Bodies).

NOTE: On convertible styles (except "F" Bodies), folding top compartment side panel and arm rest are removed as an assembly. As a bench operation, the arm rest assembly can be removed from the folding top compartment side trim assembly by removing screws installed on reverse side.

NOTE: On all Cadillac "E" Bodies and certain "F" Body styles, the arm rest is an integral part of the quarter trim assembly and must be removed as an assembly with the quarter trim. In addition, the rear seat to quarter inner panel filler panel or folding top compartment side panel is also removed as part of the quarter trim assembly on "F" Body styles.

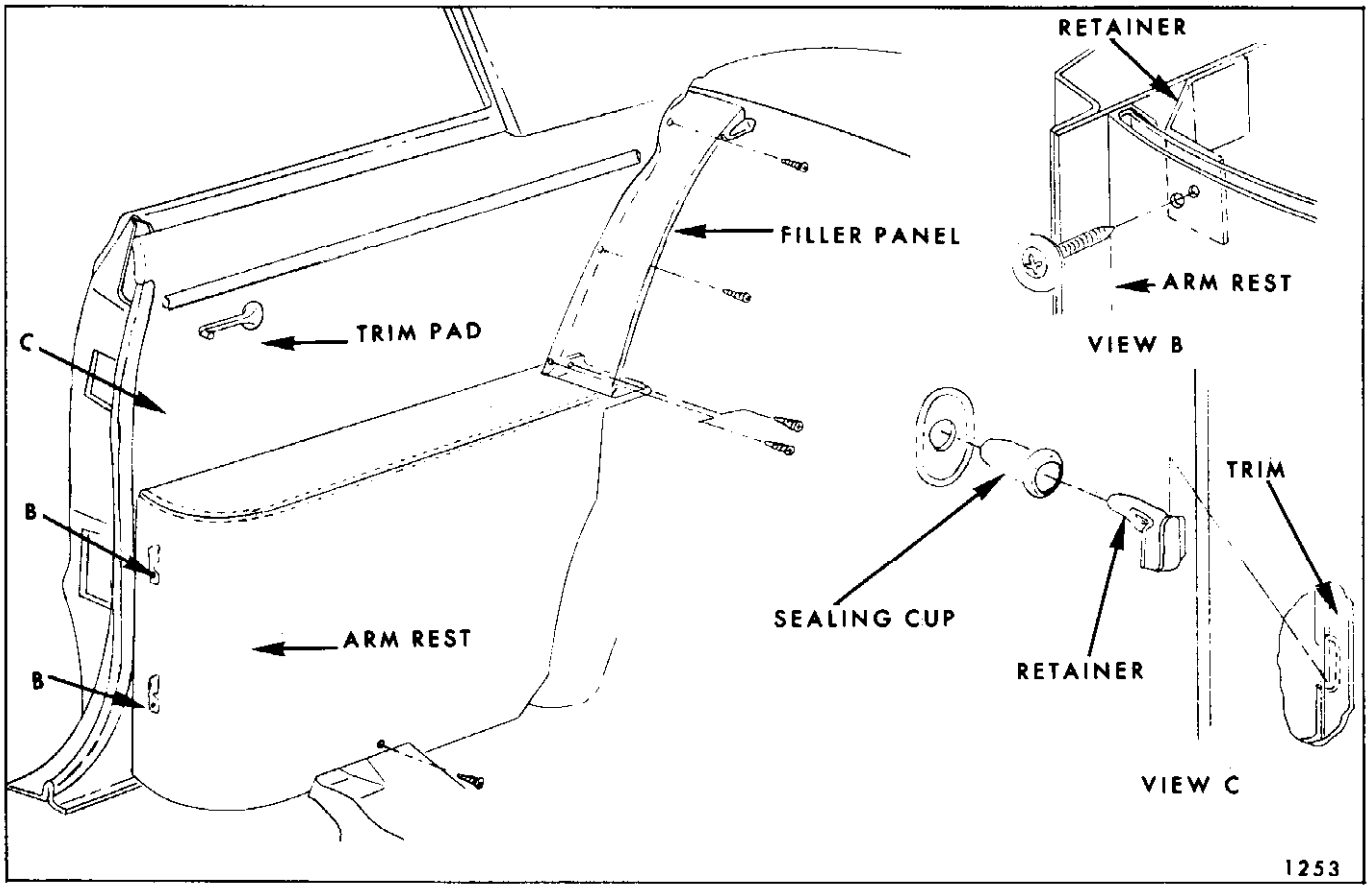


Fig. 14-20—Rear Quarter Trim Assembly (Insert Type) with Floor Mounted Arm Rest

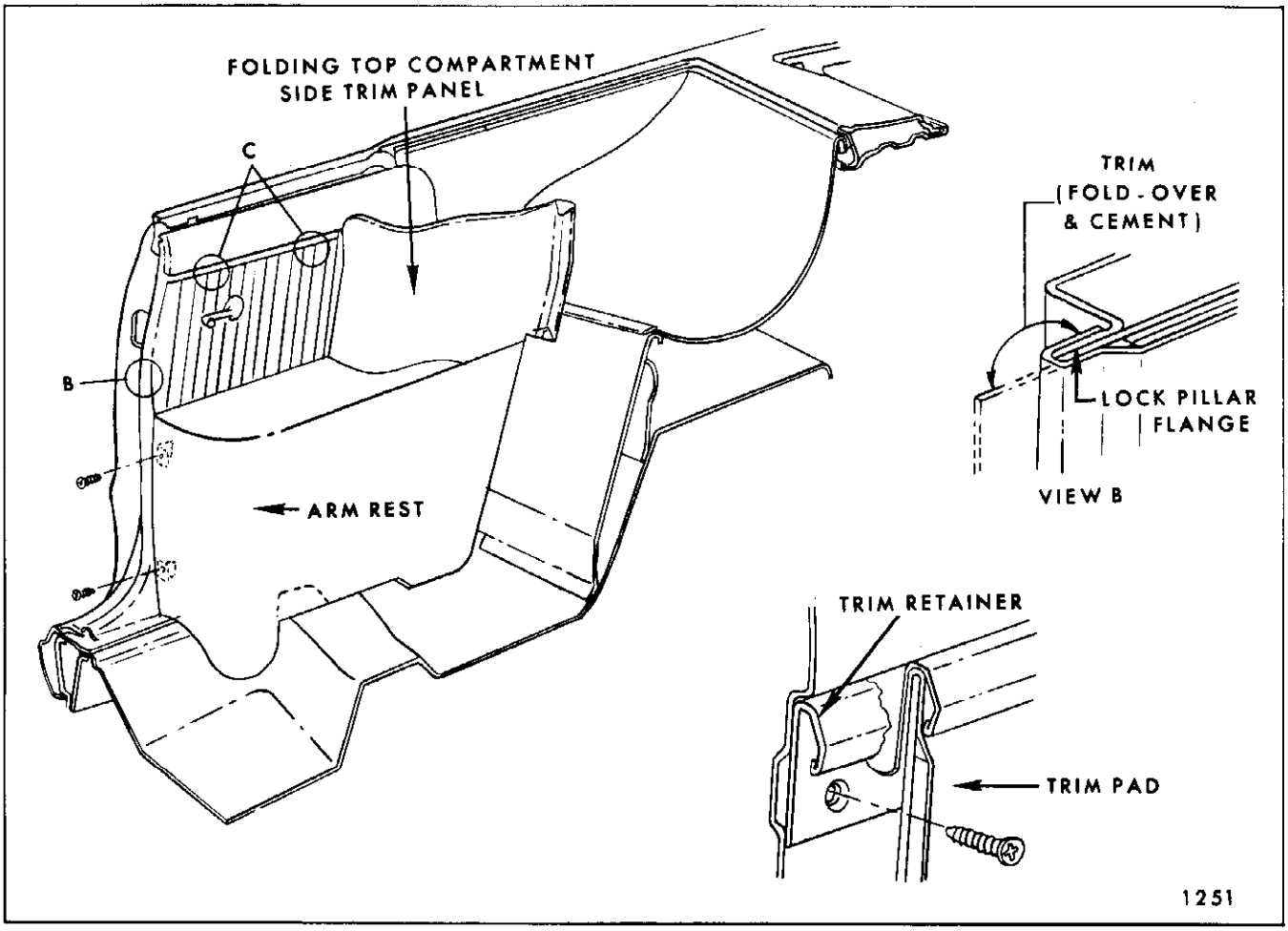


Fig. 14-21—Rear Quarter Trim Assembly - Convertible Styles

3. To install, reverse removal procedure.

REAR QUARTER TRIM ASSEMBLY (HANG-ON TYPE)—"A, B & C" Bodies (2-Door Styles)

1. Remove rear seat back and cushion assemblies as described under "Rear Seats".

2. Remove window regulator handle and shoulder strap buckle retainer if so equipped.

3. Remove arm rest as previously described.

4. Remove screw at rear upper corner of trim pad on all convertible styles.

5. a. On "A" bodies, remove front door sill plate and disengage rear body lock pillar finishing strip. With a screwdriver, or other suitable flat-bladed tool, disengage trim assembly retaining clips from sealing plugs along leading edge of rear body lock pillar (Fig. 14-20).

   Lift trim assembly upward to disengage top of trim from top of rear quarter inner panel.

   NOTE: On styles equipped with electric window regulators, disconnect wire harness connector from switch on trim assembly.

   b. On "B & C" body styles use trim panel removing tool (J-6335) or equivalent to carefully pry trim assembly retaining nails from tacking strip; then lift trim assembly upward to disengage from retainers at top of rear quarter inner panel and remove assembly from body.

6. To install rear quarter trim assembly, reverse removal procedure.

   NOTE: Trim pad nailing strip replacement tabs, or trim pad retaining clips and corresponding sealing plugs are available as service parts.

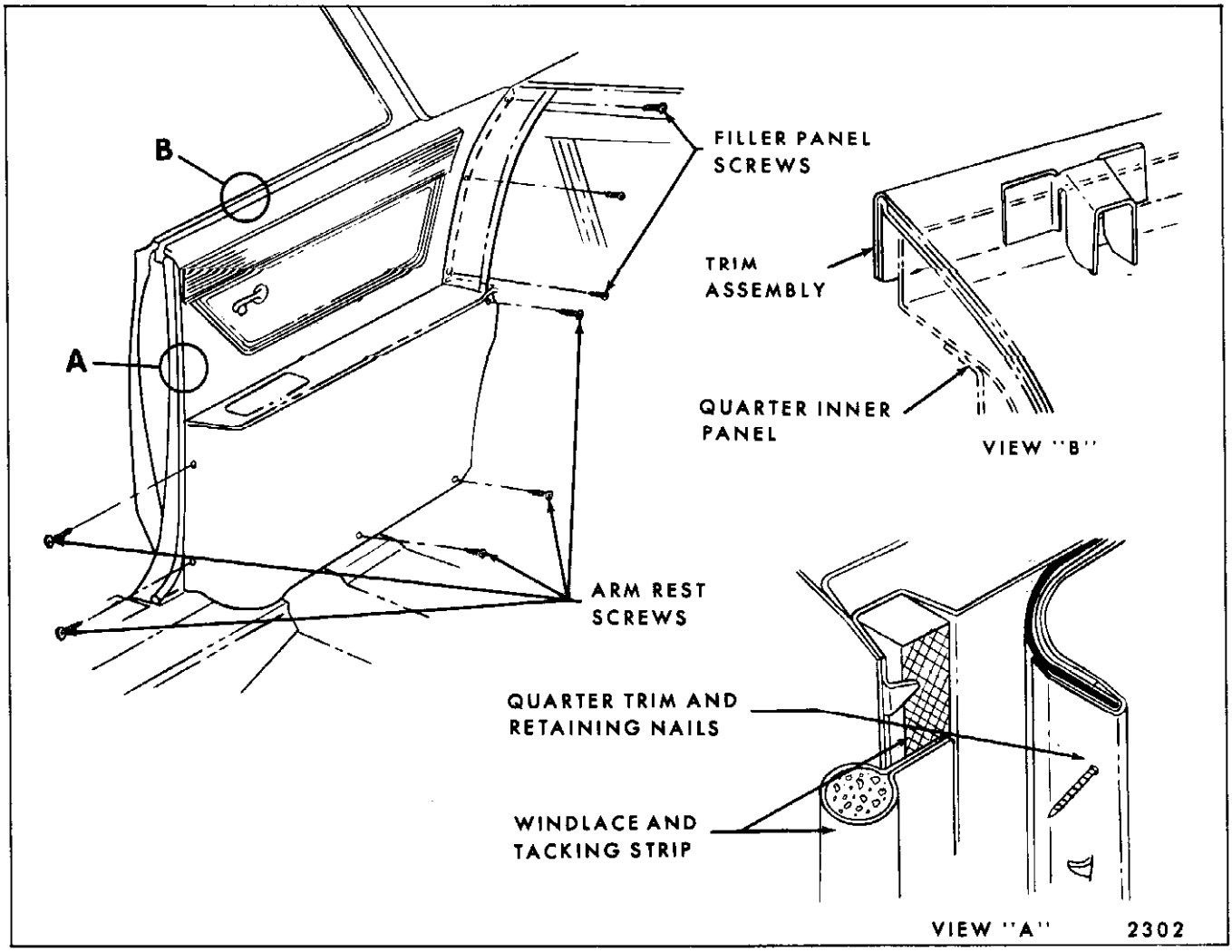


Fig. 14-22—Rear Quarter Trim Assembly (Hang-On Type)

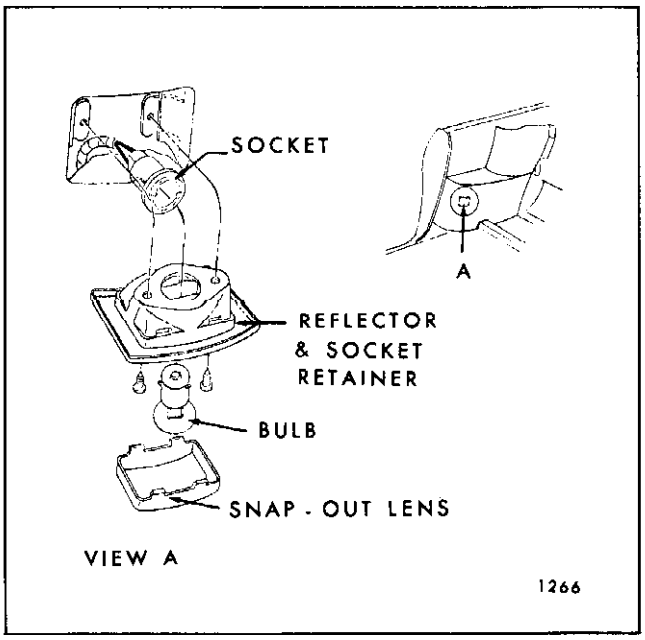


Fig. 14-23—Rear Quarter Arm Rest Courtesy Lamp

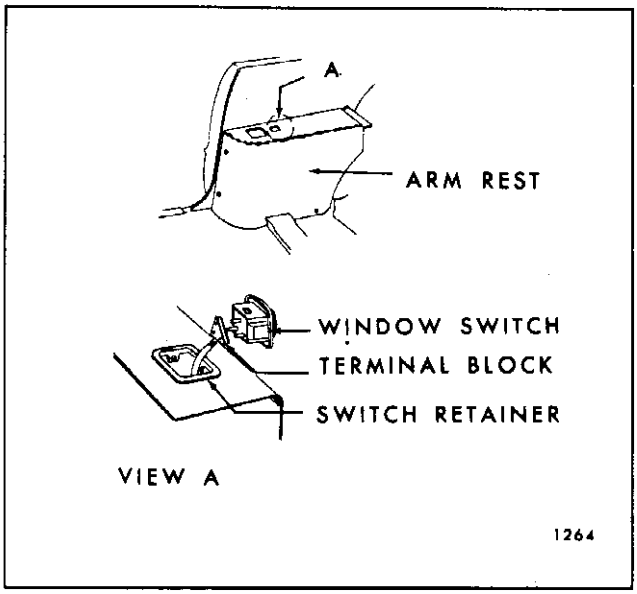


Fig. 14-24—Rear Quarter Arm Rest Window Switch

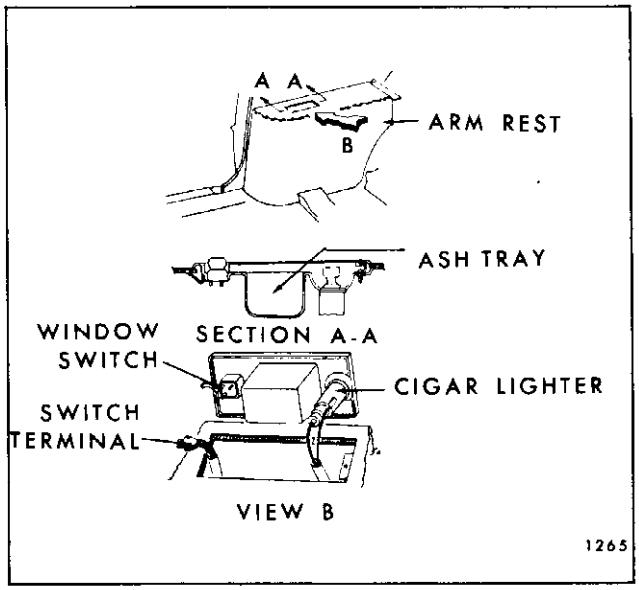


Fig. 14-25—Rear Quarter Arm Rest Ash Tray and Cigar Lighter

REAR QUARTER TRIM ASSEMBLY (INSERT TYPE)—"A, X & Z" Bodies (2-Door Styles)

Removal and Installation

1. Remove window regulator handle and shoulder strap buckle retainer if so equipped.
2. Remove rear seat back and cushion assemblies as described in "Rear Seats".
3. Remove arm rest as previously described.
4. Remove door sill plate and lock pillar finishing cap and disengage pinchweld finishing strip along rear body lock pillar.
5. Remove all screws present along bottom of trim pad.
6. On "Z" body styles only, remove 2 screws securing ash tray housing to quarter inner panel.
7. On all styles, carefully detach front cemented edge of trim material from body lock pillar pinchweld flange. Carefully bend or bow trim inboard to sufficiently disengage upper edge of trim from under finishing molding retainer (Fig. 14-19, View "C"). In addition, "X" Body style trim must be disengaged along bottom from lower finishing molding retainer.
8. Carefully pivot trim assembly forward; then, break cement bond along pinchweld flange of

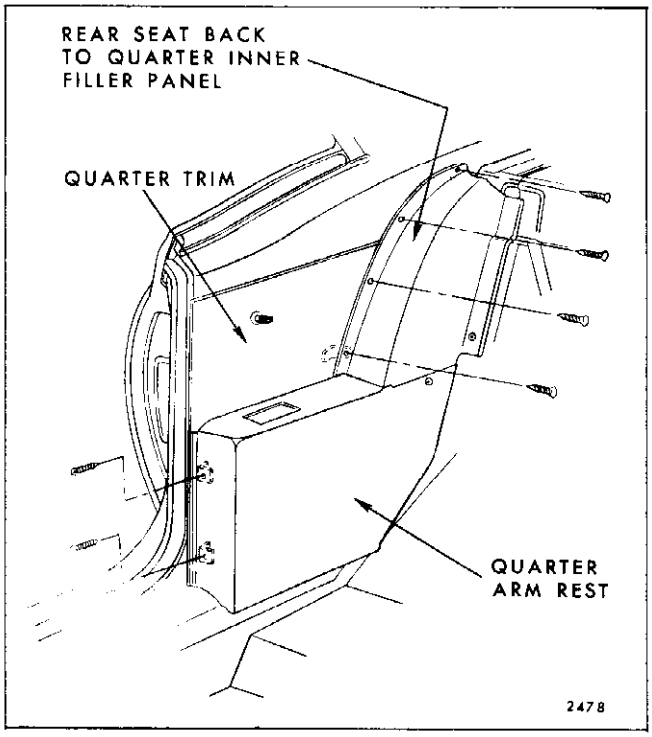


Fig. 14-26—Quarter Trim Assembly - "F-37" Styles Only

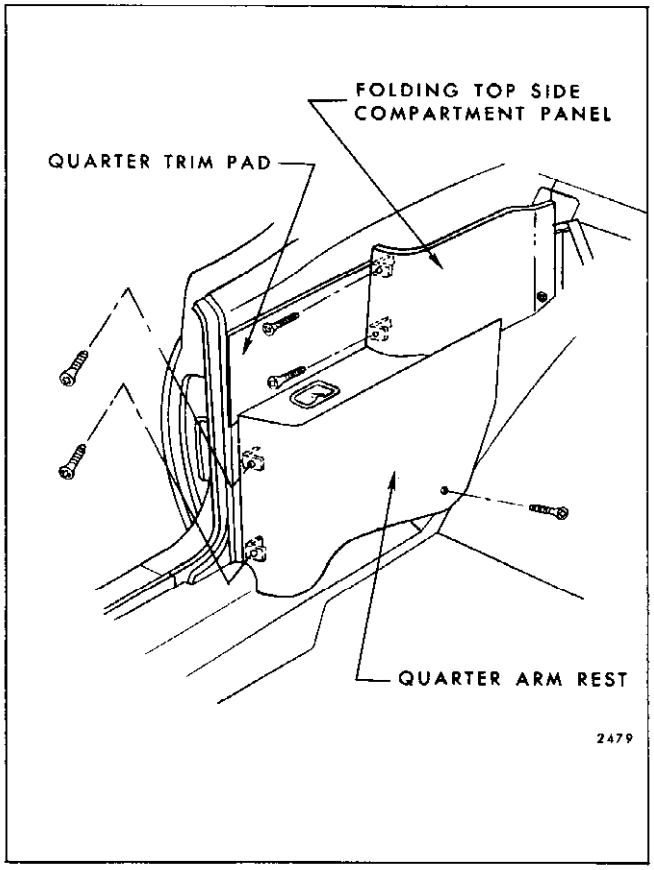


Fig. 14-27—Quarter Trim Assembly - "F-67" Styles Only

rear body lock pillar and remove assembly from body.

NOTE: If trim assembly incorporates electric window switch, disconnect wire harness connector from window switch.

The finishing molding retainer (Fig. 14-19, View "C") is retained by screws and can be removed at this point, where required.

9. To install, reverse removal procedure. Prior to installation of pinchweld finishing strip, recement forward edge of trim to pinchweld flange (Fig. 14-19, View "B").

REAR QUARTER TRIM ASSEMBLY— All "F" Bodies

Removal and Installation

NOTE: On styles equipped with shoulder straps, the shoulder strap buckle retainer on quarter trim must be removed.

1. On styles equipped with arm rests proceed as follows:

   a. Remove quarter window regulator handle.

   b. Lower folding rear seat back.

   c. Remove screws securing seat back panel to quarter inner panel filler panel on "37" styles and screws securing folding top compartment side trim panel on "67" styles (Fig. 14-26 and 14-27).

   d. Remove screws securing arm rest assembly (Fig. 14-26 and 14-27).

   e. Remove body lock pillar pinchweld finishing lace.

   f. Carefully detach front cemented edge of trim material from body lock pillar pinchweld flange.

   g. Carefully bend or bow trim pad inboard sufficiently to disengage upper edge of trim from under finishing molding retainer and remove trim pad, arm rest and folding top side compartment panel or rear seat back to quarter inner panel filler panel as an assembly. On styles equipped with electrical devices, disconnect electrical leads.

   NOTE: As a bench operation the arm rest and/or filler panel or folding top compartment side panel can be removed by removing screws from the reverse side.

2. On styles without arm rests, proceed as follows:

   a. Remove rear seat back and cushion assembly.

   b. Remove quarter window inside regulator handle.

   c. Remove body lock pillar finishing lace.

   d. Carefully detach front cemented edge of trim from body lock pillar pinchweld flange.

   e. Carefully bend or bow trim pad inboard sufficiently to disengage upper edge of trim from under finishing molding retainer and remove trim pad.

3. To install, reverse removal procedure. Prior to installation of pinchweld finishing lace, recement forward edge of trim to pinchweld flange.

REAR QUARTER TRIM— All "E" Bodies

Removal and Installation

1. Remove rear seat back and cushion assemblies as described under "Rear Seats".

2. Remove quarter window regulator handle, and shoulder strap buckle retainer if so equipped.

3. Remove seat back to quarter inner panel filler panel on "39487" style only (Fig. 14-28).

4. Remove screw securing compartment finishing side molding to quarter trim (Cadillac Style only, Fig. 14-30).

5. Remove arm rest attaching screws (Fig. 14-28, 14-29 and 14-30). On Oldsmobile and Buick styles only, carefully remove arm rest from quarter trim and detach all electrical equipment present.

6. Remove quarter trim attaching screws (Fig. 14-28, 14-29 and 14-30).

   NOTE: On Cadillac styles it is necessary to open quarter window to gain access to attaching screw from outside of body at beltline (Fig. 14-30).

7. On Buick and Oldsmobile only, pry trim assembly retaining nails from tacking strip along body lock pillar using trim panel removing tool (J-6335) (Fig. 14-28 and 14-29).

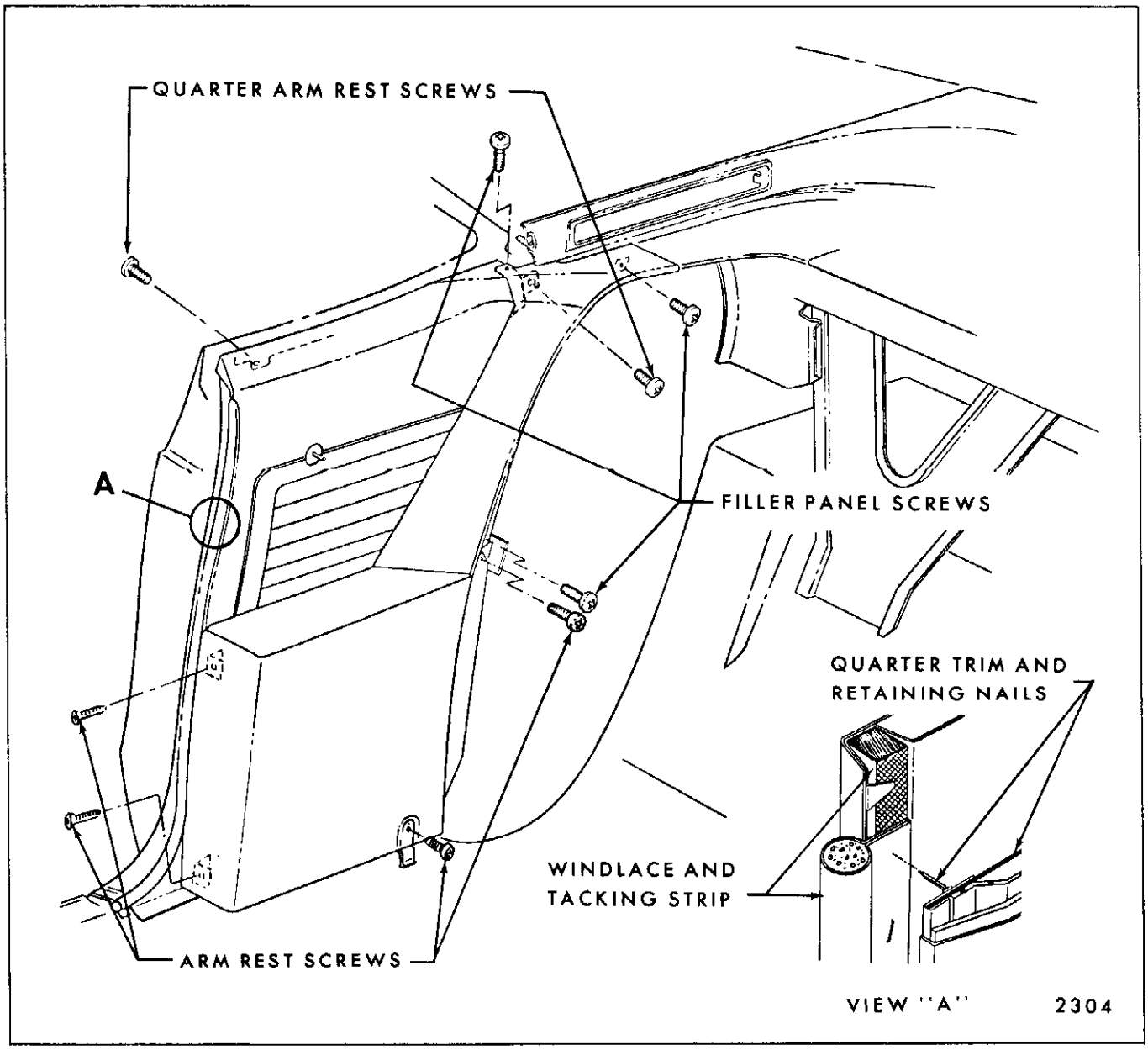


Fig. 14-28 — Rear Quarter Trim Assembly - "E" Body 39487 Style

8. On Buick and Oldsmobile styles, lift trim assembly upward to disengage from retainer at top of quarter inner panel and remove from body. On Cadillac styles trim must also be pulled forward. If trim assembly incorporates an electrical switch, disconnect wire harness from switch in trim assembly.

   NOTE: On Cadillac styles, the arm rest and quarter trim is removed as an assembly. The arm rest is an integral part of the quarter trim and is not serviced separately.

9. To install rear quarter trim assembly or rear quarter arm rest, reverse removal procedure.

   NOTE: Trim assembly nailing strip replacement tabs are available as a service part.

REAR QUARTER TRIM— "A" Body 80 Styles

Removal and Installation

1. Remove seat cushion and seat back assemblies.

2. Detach rear body lock pillar pinchweld finishing strip (see section "B-B" in Fig. 14-31) and remove front door sill plate.

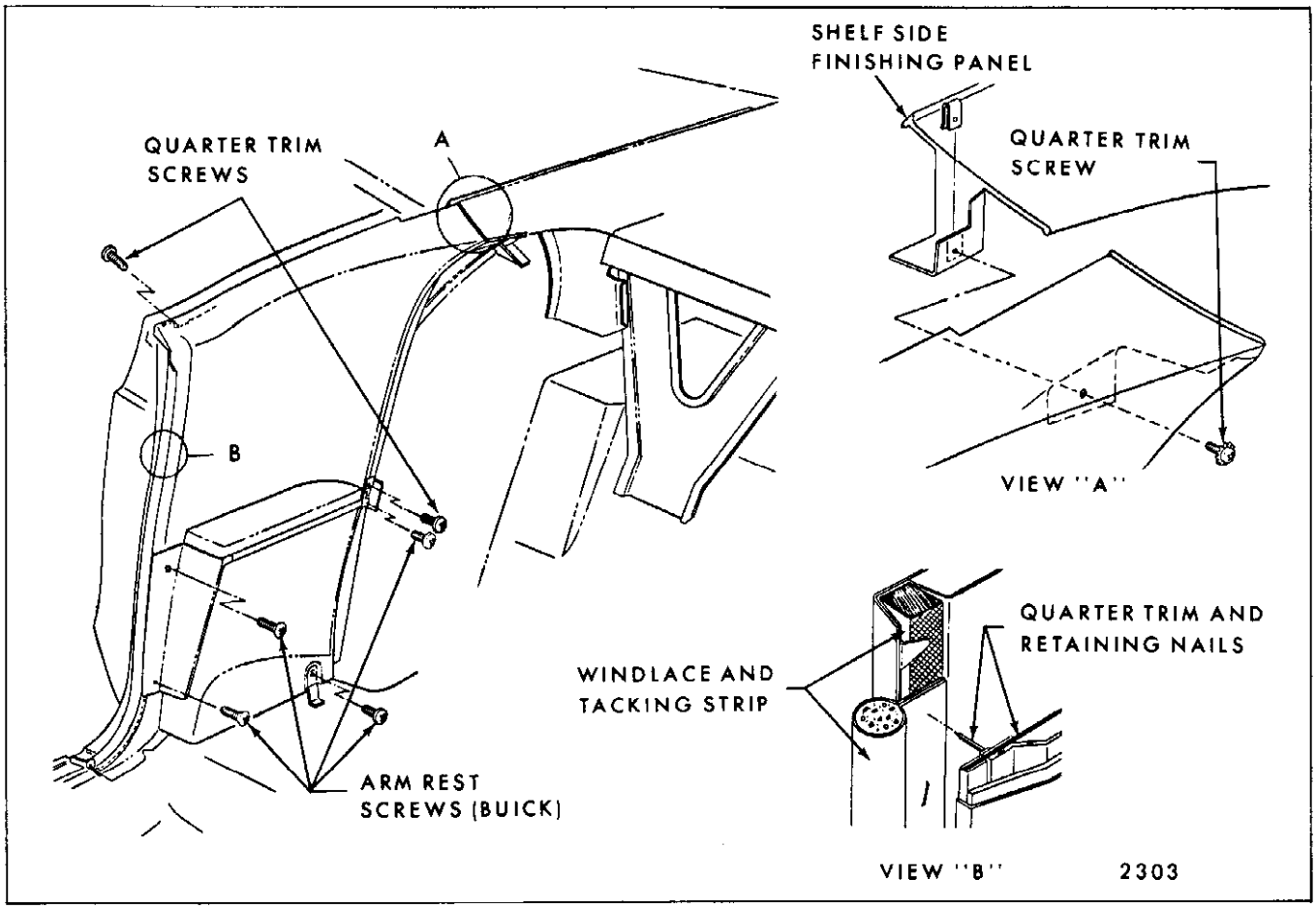


Fig. 14-29—Rear Quarter Arm Rest and Trim Assembly -"E" Body

3. Remove screws securing rear quarter trim to body panel and remove assembly from body (see Fig. 14-31).

4. To install, reverse removal procedure.

REAR QUARTER LOWER TRIM— All "A, B & C" Body "69 and 39" Styles

Removal and Installation

1. Remove rear seat back and cushion assemblies.

2. Remove rear roof rail garnish moldings or rear body lock pillar pinchweld finishing lace.

3. Remove upper quarter trim finishing panel.

4. On "B & C" body styles, proceed as follows:

   a. With tool J-6335 or other suitable flat-bladed tool, pry trim assembly retaining nails from tacking strip (Fig. 14-32).

   b. Lift assembly upward to disengage from retainer at top of rear quarter inner panel and remove trim assembly.

5. On "A" body styles, with putty knife or other suitable flat-bladed tool, detach trim assembly at cemented areas indicated in Fig. 14-33 and remove trim assembly.

6. On all styles, to install, reverse removal procedure.

REAR QUARTER COVER TRIM— All "Z" Body 39 Styles

Removal and Installation

1. Remove rear seat back and cushion assembly.

2. Remove rear door sill plate.

3. Remove rear body lock pillar pinchweld finishing lace.

4. Remove screw at rear of quarter lower trim.

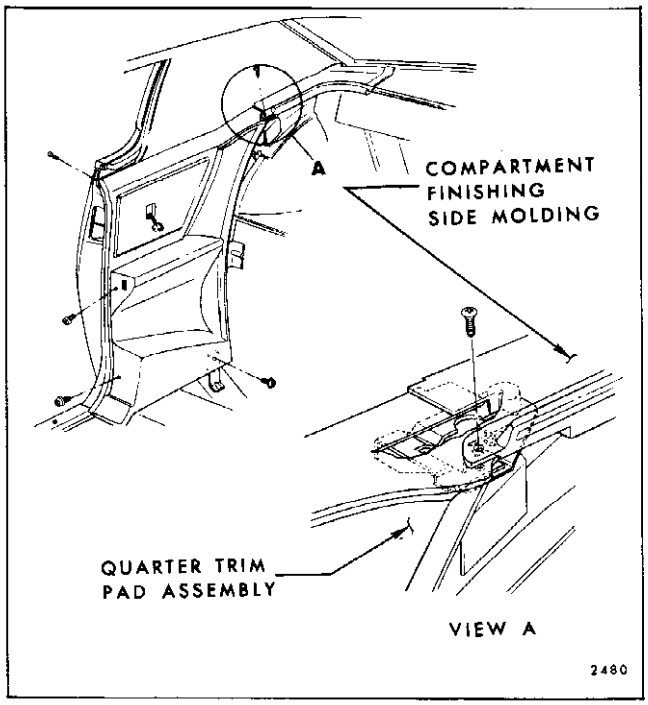


Fig. 14-30—Quarter Trim Assembly - Cadillac "E" Styles

5. Carefully bend or bow trim sufficiently to disengage upper edge of trim from under headliner trim retainer and remove trim.

6. To install, reverse removal procedure.

REAR QUARTER INNER TRIM PANEL (LEFT SIDE)—"B" Body Station Wagon Styles

Removal and Installation

1. Remove rear quarter stationary window front and lower garnish moldings.

2. Remove all screws securing trim panel to rear quarter inner panel (Fig. 14-34).

3. With a suitable flat-bladed tool, carefully disengage trim retainers from rear quarter inner panel along leading edge of rear body lock pillar (on front edge of rear quarter front trim assembly) (Fig. 14-34).

4. Lift assembly upward slightly to disengage from rear quarter inner panel and remove assembly from body. On styles equipped with courtesy lamp disconnect feed wire from switch and lamp (Fig. 14-34).

NOTE: The rear quarter front trim assembly can be removed at this point, as a bench operation, by breaking cement bond between trim and metal panel of rear quarter inner trim panel assembly. The rear quarter front trim is a sub-assembly of the rear quarter inner trim panel; left and right sides.

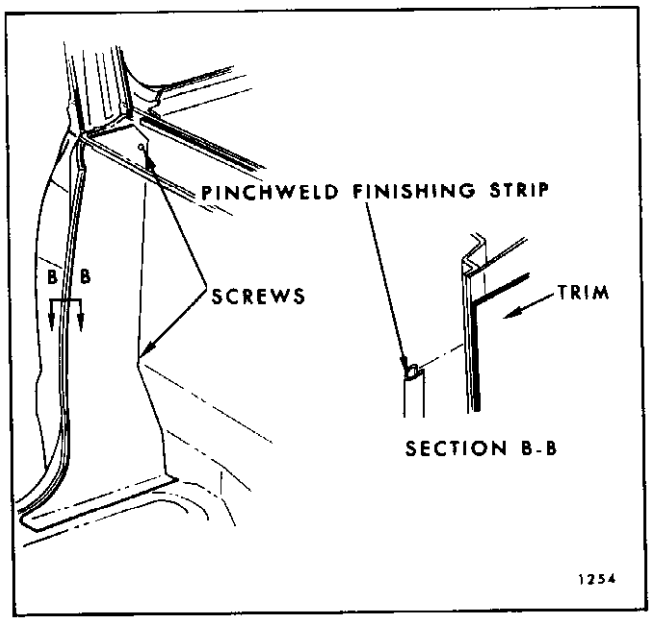


Fig. 14-31—Rear Quarter Trim Assembly - "A-80" Styles

6. To install, reverse removal procedure.

SPARE TIRE COVER PANEL—"B" Body Station Wagon Styles

The spare tire cover panel is secured to a retainer

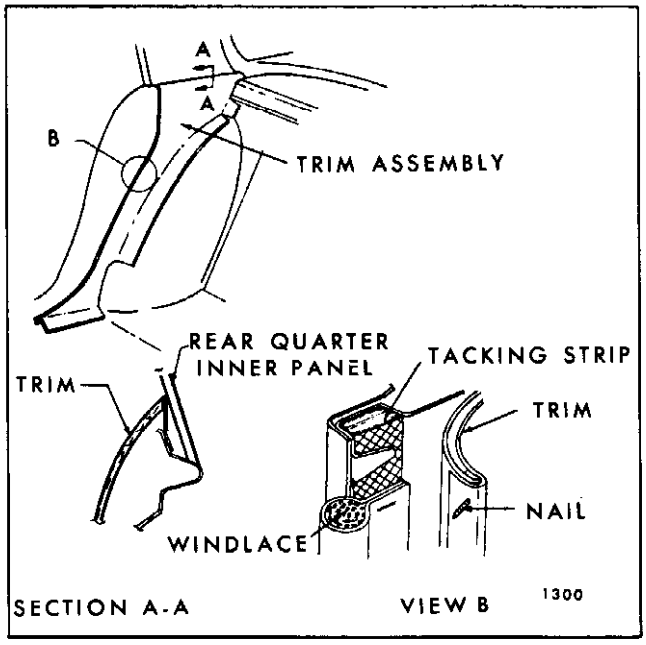


Fig. 14-32—Rear Quarter Lower Trim Assembly - "B & C" Body "39 and 69" Styles

at the belt line by a folding catch type handle. To remove the panel, disengage the catch and lift the panel upward. To install, reverse removal procedure.

The handle can be adjusted "in" or "out" to increase or decrease closing effort. To adjust, loosen the handle attaching screws; position the handle as desired and tighten the screws.

REAR QUARTER WHEELHOUSE COVER PANEL (RIGHT SIDE)— "B" Body Station Wagon Styles

Removal and Installation

1. Remove spare tire cover.
2. Remove rear quarter stationary window front and lower garnish moldings.
3. Remove all screws securing trim panel to rear quarter inner panel (Fig. 14-35).
4. With a suitable flat-bladed tool, carefully disengage trim retainers from rear quarter inner panel along leading edge of rear body lock pillar (on front edge of rear quarter front trim assembly). (Fig. 14-35).
5. Remove spare tire cover support.
6. Lift assembly upward slightly to disengage from rear quarter inner panel and remove assembly from body.
7. To install, reverse removal procedure.

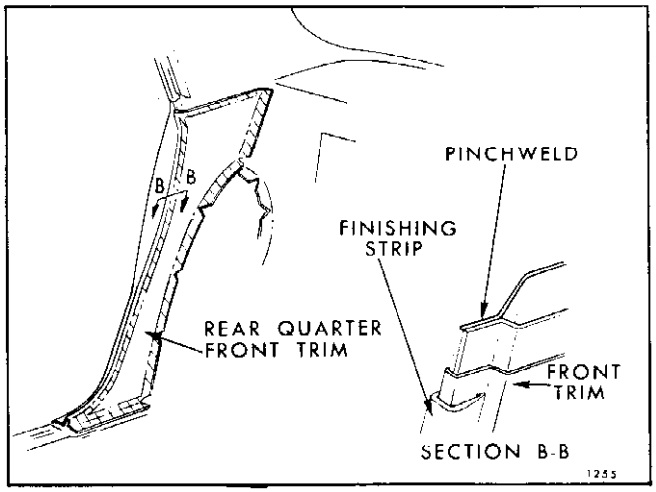


Fig. 14-33—Rear Quarter Trim Assembly

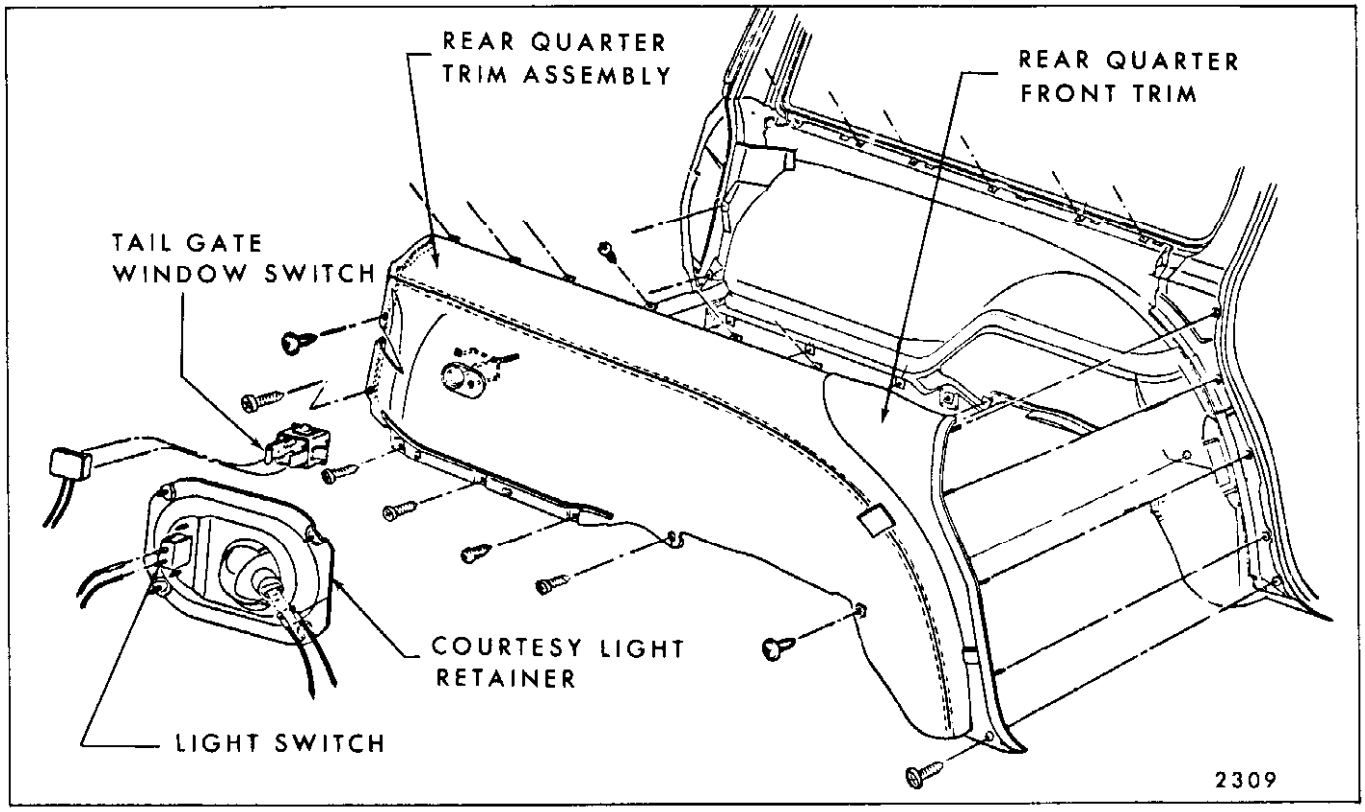


Fig. 14-34—Rear Quarter Trim Panel Left Side - "B" Station Wagons

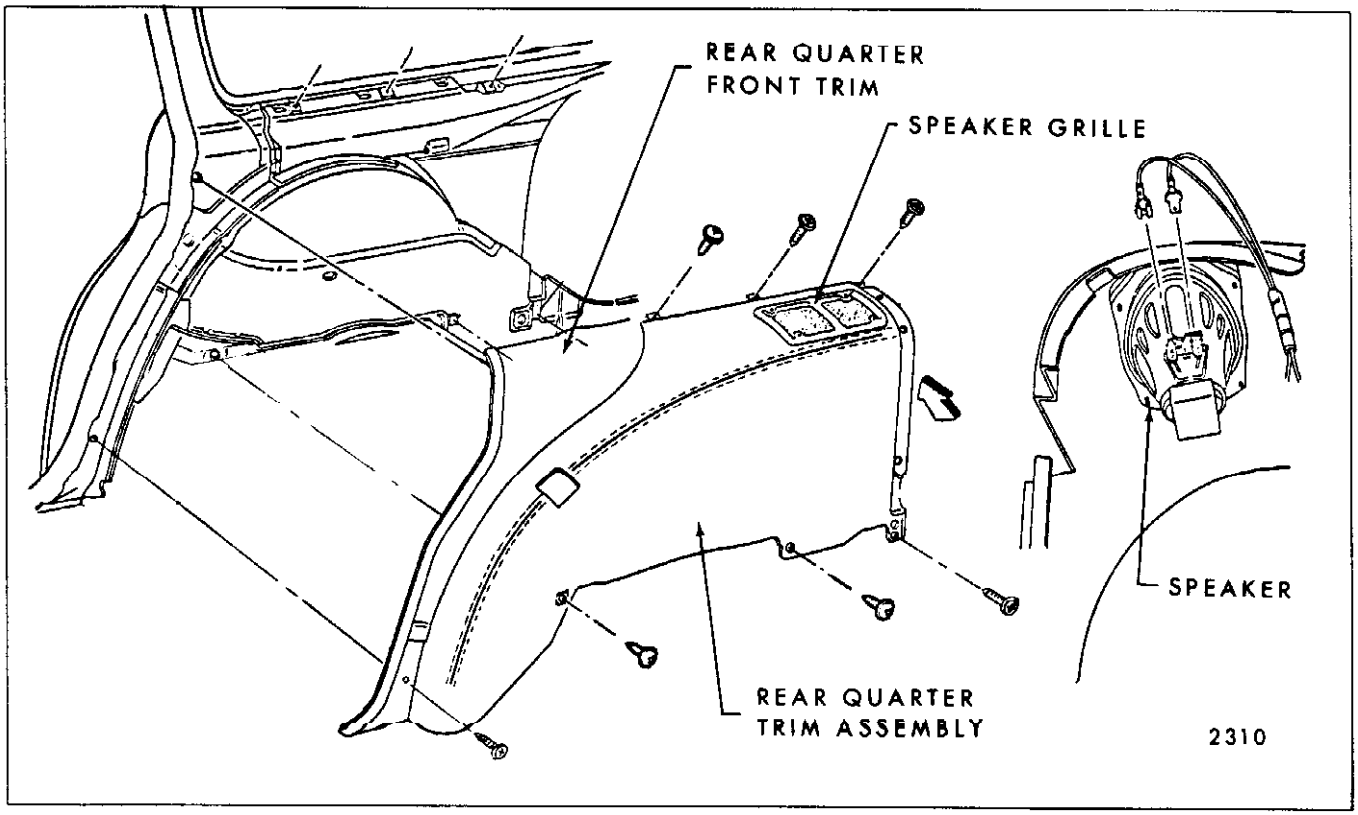


Fig. 14-35—Rear Quarrer Trim Panel Right Side - "B" Station Wagons

REAR QUARTER FRONT TRIM PANEL (RIGHT OR LEFT SIDE)— "A" Body Station Wagons

Removal and Installation

1. Disengage pinchweld finishing strip along rear body lock pillar and remove rear door sill plate.

2. Remove exposed screw at lower end of trim panel (see Fig. 14-36 and 14-37).

3. With a flat-bladed tool, disengage trim retaining clips from quarter inner panel (see view "B" in Fig. 14-36).

4. Carefully swing rear edge of trim assembly forward to break cement bond at body lock pillar and remove rear quarter front trim panel from body.

5. To install, reverse removal procedure. Prior to installation of pinchweld finishing strip, cement forward edge of trim assembly to outboard surface of body lock pillar pinchweld flange (see View "C" in Fig. 14-37).

SPARE TIRE COVER PANEL— "A" Body Station Wagon Styles

Removal and Installation

The spare tire cover panel is retained at belt line by a screwed-on garnish molding and at the load floor level by a folding (catch-type) handle. To remove cover, open catch handle and swing bottom edge of assembly upward to disengage upper edge from beneath garnish molding (see Fig. 14-36). To install, reverse removal procedure.

WHEELHOUSE TRIM COVER PANEL (RIGHT SIDE)—All "A" Body Station Wagon Styles

Removal and Installation

1. Remove rear quarter front trim panel and spare tire cover panel.

2. Remove second folding seat back catch and bumper assembly from wheelhouse.

3. Remove all trim attaching screws at front, rear and bottom of wheelhouse trim cover (See Fig. 14-36).

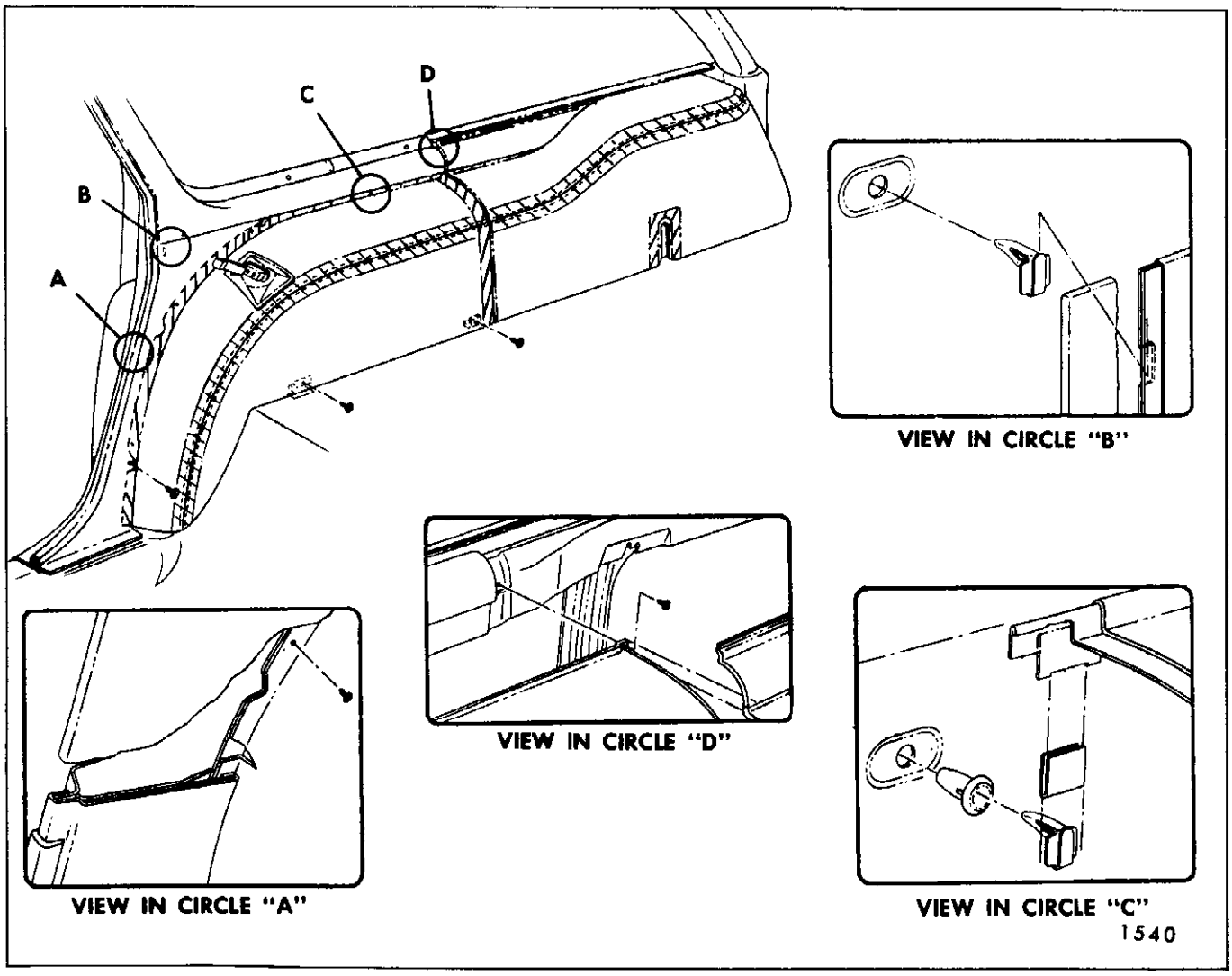


Fig. 14-36—Rear Quarter Trim Panel, Right Side - "A" Station Wagons

4. With a putty knife, or other suitable flat-bladed tool, disengage trim retaining clips from sealing plugs along top of wheelhouse cover panel and remove panel from body (see View "C", in Fig. 14-36).

   NOTE: The trim retaining clips and corresponding plastic sealing plugs are available as service parts.

5. To install, reverse removal procedure.

REAR QUARTER REAR TRIM PANEL—All Station Wagon Styles Except 13435 and 23335 Styles (LEFT SIDE)

Removal and Installation

1. On "35" styles, remove exposed screw at bottom center of panel (see View "B" in Fig. 14-37).

2. Working from front to rear (with a flat-bladed tool) disengage trim retaining clips from plastic sealing plugs along upper edge of rear quarter rear trim panel (see View "A" in Fig. 14-37).

3. With an upward movement, remove panel from body.

4. To install, reverse removal procedure.

WHEELHOUSE TRIM COVER ASSEMBLY (LEFT SIDE)—All "A" Station Wagon Styles Except 23335 Styles

Removal and Installation

1. Remove rear quarter front and rear trim panel assemblies and second folding seat back bumper assembly.

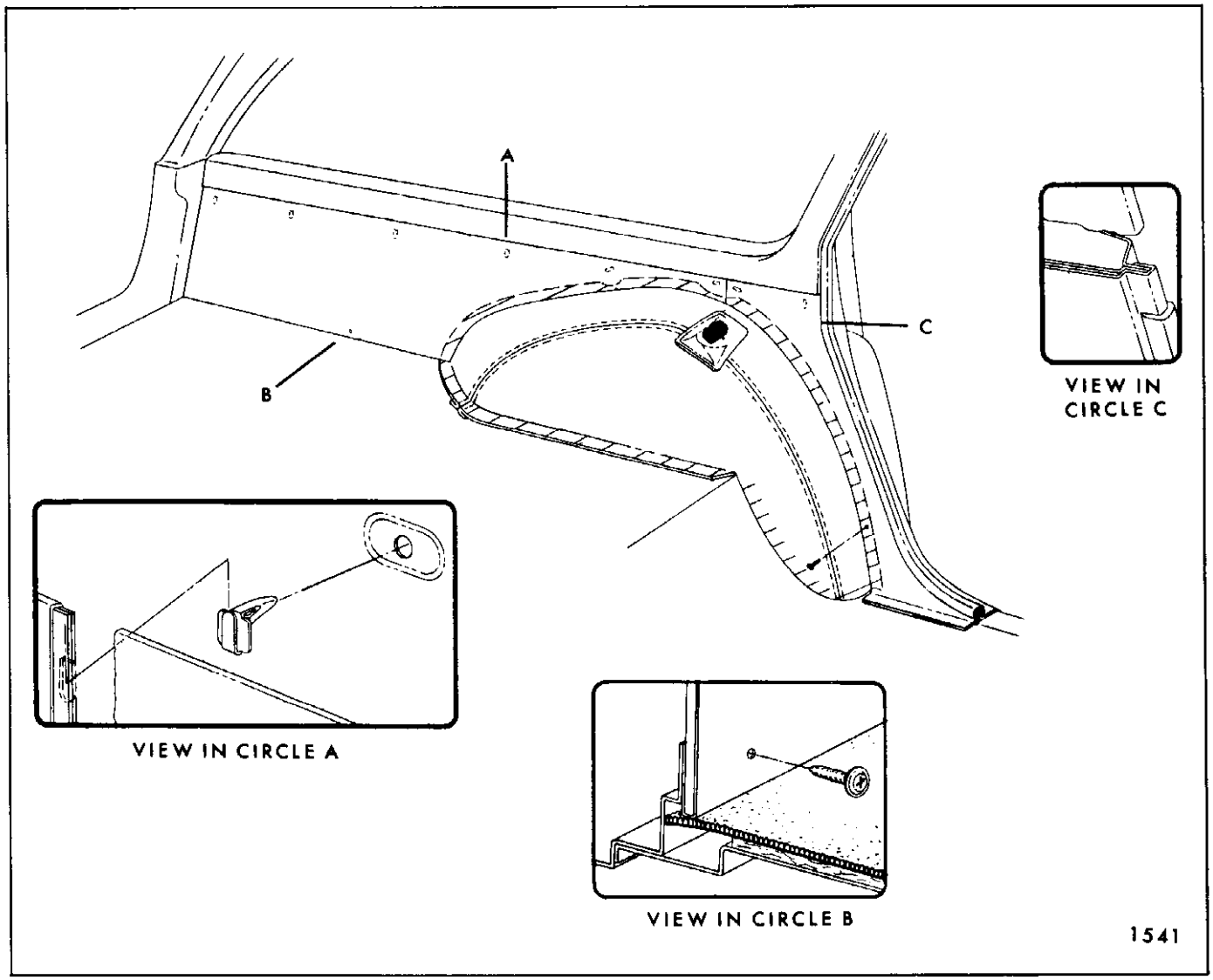


Fig. 14-37—Rear Quarter Trim Panel, Left Side - "A" Station Wagons

2. On "35" styles, fold back rubber mat from wheelhouse. On "55 and 65" styles, remove compartment side filler panel as described in the "Seat" section of the body service manual.

3. Beginning at outer edges and working toward center, carefully break cement bond between wheelhouse and trim cover and remove cover.

4. To install, reverse removal procedure. Prior to installation, clean off old cement from wheelhouse to assure a smooth cementing surface. Install cover in position and scribe line inside of folding seat back bumper cut-out to guide installation when adhesive is applied. Remove cover and apply trim adhesive over wheelhouse surfaces contacted by trim cover (Do not cover scribe lines). With trim cover "inside-out", align bumper cut-out with scribe lines on wheelhouse. Apply cover to wheelhouse working from center of cover towards outer edges.

REAR QUARTER REAR TRIM PANEL (LEFT SIDE)—Chevrolet 13435 and Pontiac 23335 Styles

The rear quarter rear trim panel on these styles (left side) is constructed to a textured metal finish and extends to include the wheelhouse; all in a single panel.

Removal and Installation

1. Remove rear quarter front trim panel and second folding seat back bumper assembly from wheelhouse.

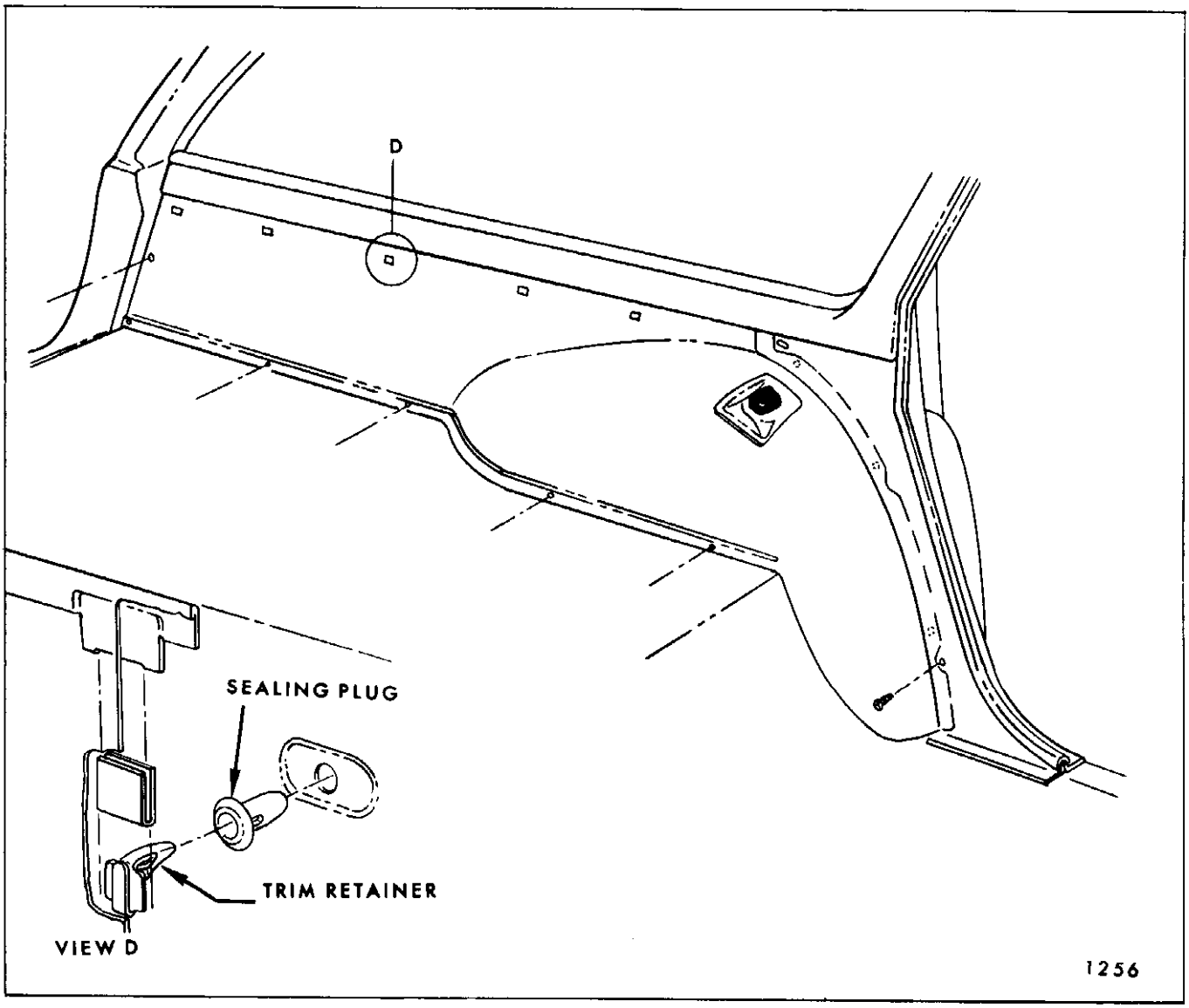


Fig. 14-38—Rear Quarter Trim Panel, Left Side - Pontiac 23335 Style

2. Remove all screws at front, rear and bottom of rear trim panel (see Fig. 14-38).

3. Working from front to rear (with a flat bladed tool), disengage trim retaining clips from plastic sealing plugs and remove trim assembly from body (see View "D" in Fig. 14-38).

   NOTE: The trim retaining clips and corresponding plastic sealing plugs are available as service parts.

4. To install, reverse removal procedure.

REAR QUARTER REAR TRIM PANEL— Chevy II Station Wagons

Removal and Installation

1. Remove rear quarter belt finishing moldings (front molding only right side). Disengage pinchweld finishing strip from rear body lower lock pillar pinchweld flange. Carefully break cement bond between overlapping edge of trim assembly and pinchweld flange.

2. Remove screws at front and rear of rear trim panel and remove trim panel from body.

   NOTE: On styles with electric tail gate dropping window, remove screws securing window switch in left rear trim panel and disconnect switch from feed wire connector before removing trim panel from body.

3. To install, reverse removal procedure. Prior to installation, apply trim cement to pinchweld flange surface contacted by overlapping forward edge of trim assembly to assure good retention.

REAR QUARTER FRONT TRIM PANEL—Chevy II Station Wagons

Removal and Installation

1. Remove front screw on rear quarter rear trim panel. Disengage pinchweld finishing strip from rear body lower lock pillar pinchweld flange. Remove rear door sill plate extension.
2. Carefully break cement bond between overlapping edge of front trim panel and pinchweld flange. Remove front trim panel attaching screws and remove trim panel from body.
3. To install, reverse removal procedure. Prior to installation, apply trim cement to pinchweld flange surface contacted by overlapping edge of trim assembly to assure good retention.

REAR QUARTER WHEELHOUSE TRIM COVER—Chevy II Station Wagons

Removal and Installation

1. Remove second folding seat back filler panel. Remove the rear quarter front and rear trim panels.
2. Remove screws securing second folding seat back retainer and support and remove retainer and support from wheelhouse.
3. Carefully break cement bond between wheelhouse trim cover and wheelhouse panel and remove trim cover from body.
4. To install, reverse removal procedure. Prior to installing wheelhouse trim cover, apply neoprene type weatherstrip adhesive, 2" wide, completely around inside perimeter of wheelhouse trim cover. Also, apply weatherstrip adhesive to area around cut-out for second seat back support on wheelhouse. Position trim assembly to wheelhouse and apply, working material down and outwards to remove wrinkles. Install previously removed parts.

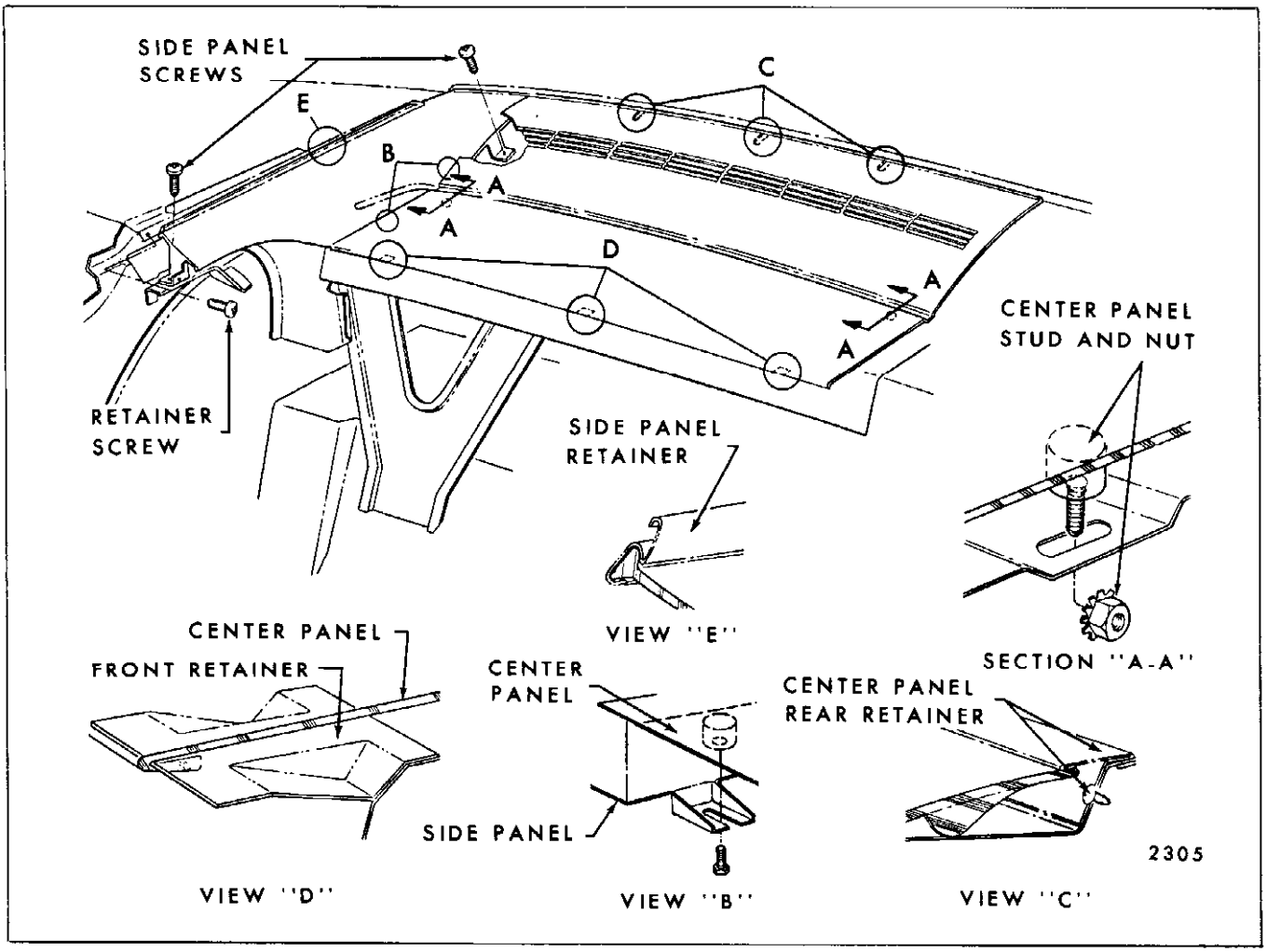


Fig. 14-39—Typical "E" Style Compartment Shelf Trim (Buick "E" Body Shown)

COMPARTMENT SHELF TRIM

COMPARTMENT SHELF TRIM ASSEMBLY— All Styles Except "E" Series

Removal and Installation

1. Remove rear seat cushion and rear seat back assembly.
2. Remove rear quarter upper trim as described under "Door and Rear Quarter Trim".
3. Loosen back window lower garnish molding.
4. Carefully break cement bond at compartment shelf trim panel valance to front of metal shelf panel.
5. Remove compartment shelf trim panel by lifting up front edge approximately 45° and pulling forward.
6. To install, position trim assembly to shelf panel by inserting rear edge of trim assembly under garnish molding or feature strip. Push trim assembly rearward, align center notch with center depression in metal shelf panel.

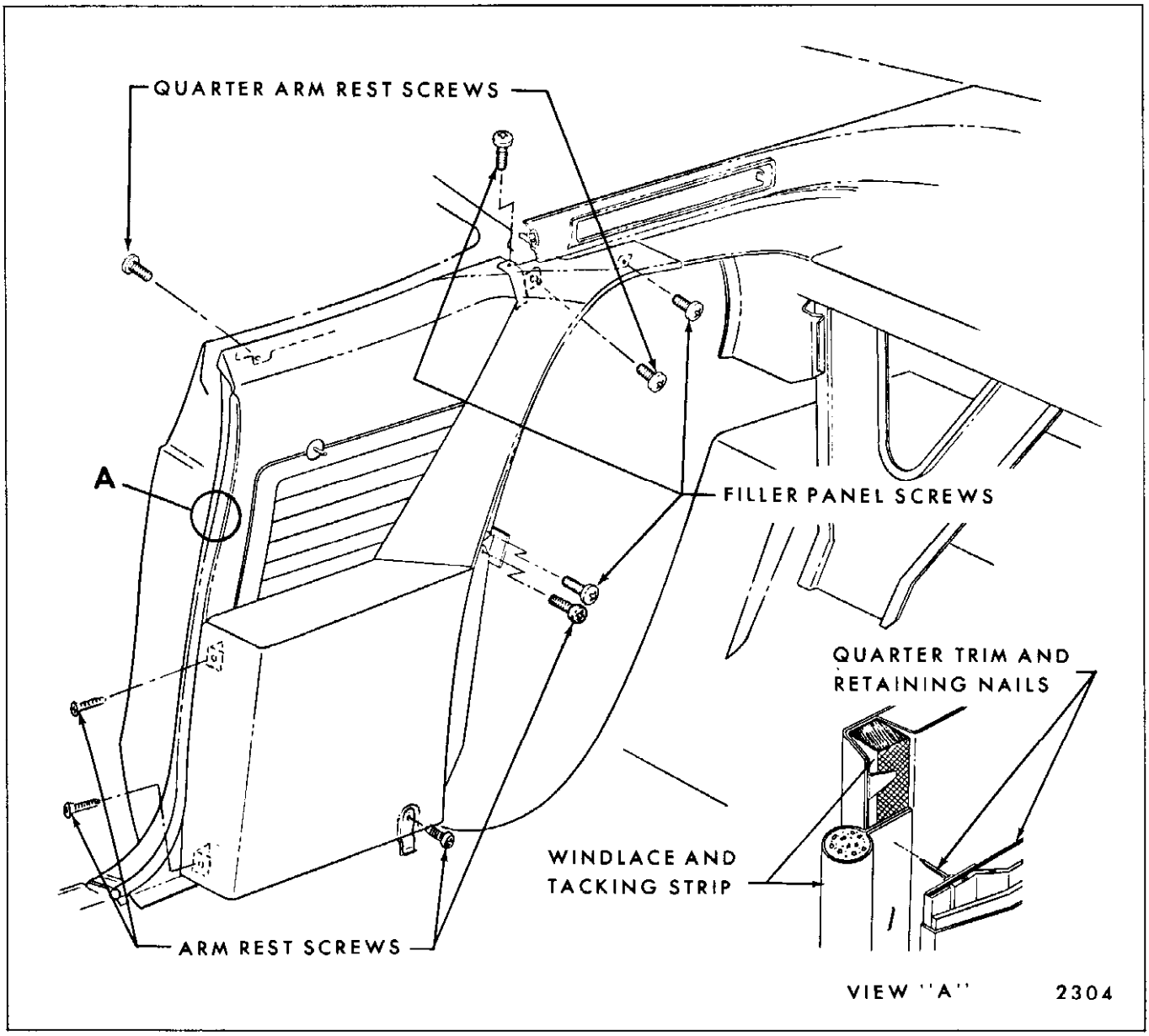


Fig. 14-40—Shelf Trim Removal - "E" Body 39487 Style

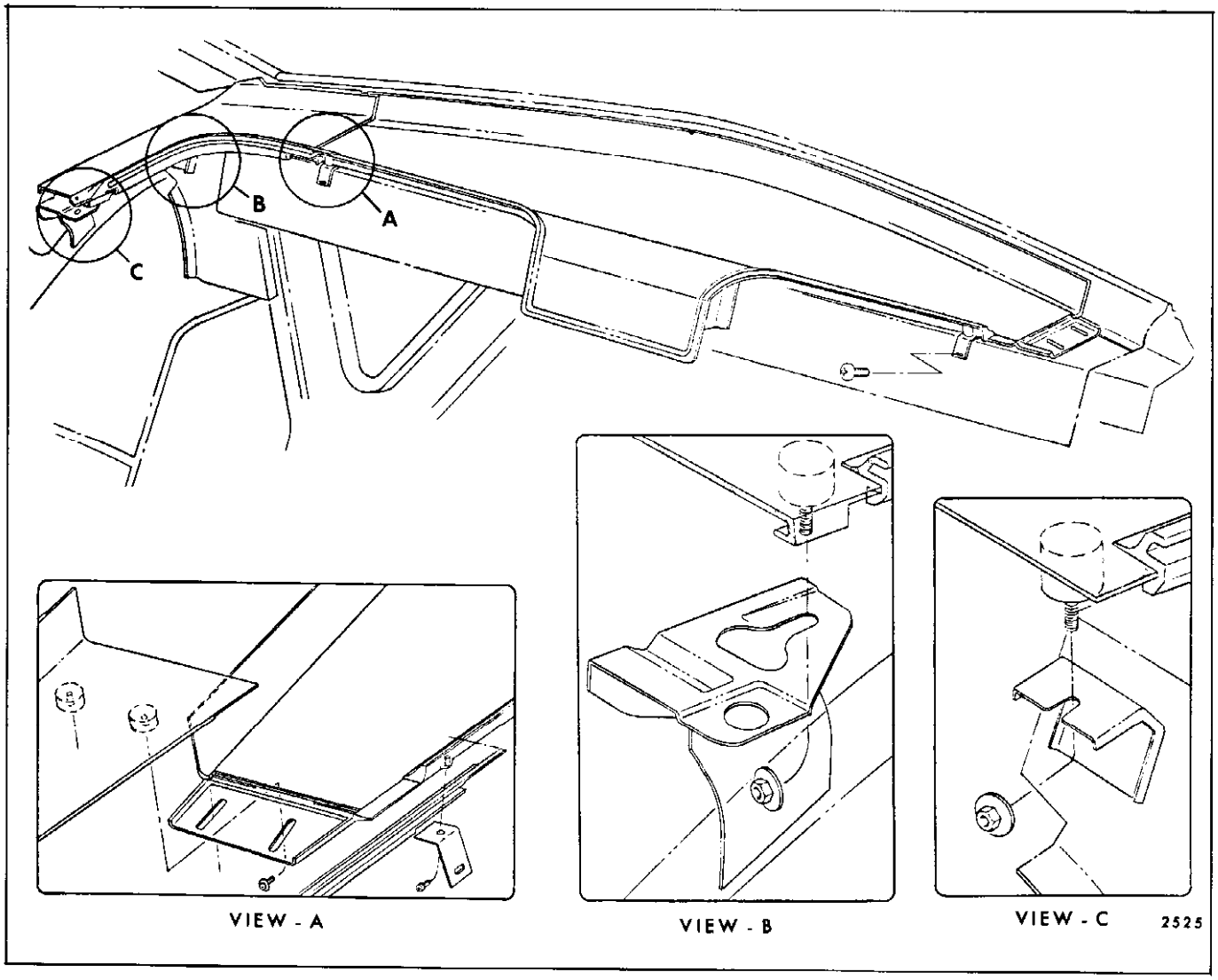


Fig. 14-41—Compartment Shelf Trim Panel - Cadillac "E" Styles

7. Re-cement compartment shelf trim assembly valance to front of metal shelf panel using non-staining vinyl trim adhesive.

8. To install, reverse removal procedure.

COMPARTMENT SHELF CENTER FINISHING PANEL—Oldsmobile and Buick "E" Styles

Removal and Installation

1. Remove rear seat cushion and seat back assemblies as described under "Rear Seats".

2. From inside rear compartment, remove compartment shelf center finishing panel attaching nuts at locations shown in Section "A-A" in Figure 14-39.

3. From inside body, pull center finishing panel forward sufficiently to disengage both front and rear edge of center finishing panel from retainers (see View "B", Fig. 14-39); then, lift panel upward and remove from shelf panel.

4. To install, reverse removal procedure.

COMPARTMENT SHELF SIDE FINISHING PANELS—Oldsmobile and Buick "E" Styles

1. Remove compartment shelf center finishing panel.

2. a. On 39487 style, remove seat back filler panel attaching screw (Fig. 14-40).

   b. On 39687 and 49487 styles, remove rear

quarter trim assembly, as previously described.

3. Remove compartment shelf side finishing panel attaching screws (Fig. 14-39) and remove side finishing panel. On Oldsmobile styles, disconnect courtesy lamp feed wire.

4. To install, reverse removal procedure.

COMPARTMENT SHELF SIDE AND CENTER TRIM PANELS— Cadillac "E" Styles

The compartment shelf trim assembly consists of four individual panels joined together with screws to form a single unit. It is necessary to remove the assembly to service the individual sections. The assembly is retained with integral studs and nuts at five locations. Additional retention is obtained using bend-over metal tabs on the center trim section.

Removal and Installation

1. Remove rear seat cushion and rear seat back assemblies as described under "Rear Seats".

2. Remove rear quarter trim assembly as described under "Door and Rear Quarter Trim".

3. Remove back window lower garnish molding and back window lower corner escutcheons.

4. Remove rear compartment side panel attaching screws (View "A", Fig. 14-41). Loosen compartment shelf to metal foundation nuts as indicated in View "C", Fig. 14-41. Remove center section attaching nuts (View "A & B", Fig. 14-42 and View "B", Fig. 14-41).

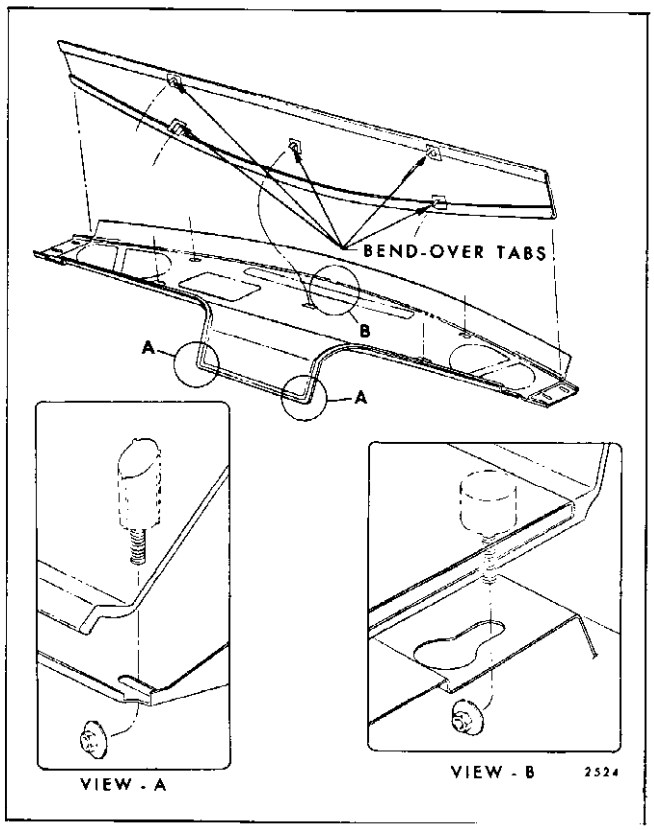


Fig. 14-42—Compartment Shelf Center Trim Panel - Cadillac "E" Styles

5. To remove compartment shelf trim panel from shelf panel, pull panel forward and straight out.

6. To remove the center trim panel, bend metal tabs (Fig. 14-42) to straight down position and detach from center base panel.

7. To install, reverse removal procedure.

SECTION 15

SEATS

INDEX

Subject	Page
INTRODUCTION	15-2
STANDARD FRONT SEATS	
Front Seats - Full Width	15-3
Front Seat Assembly - Manually Operated	15-3
Description	15-3
Seat Assembly	15-3
Adjuster Assembly	15-3
Front Seat Assembly - Power Operated (2, 4 and 6-Way)	15-4
Description	15-4
Seat Assembly	15-5
Adjuster Assembly	15-6
Two-Way Seat Adjuster Components - "C" Body	15-6
Electric Motor	15-6
Horizontal Gearnut	15-7
Horizontal Jackscrew	15-7
Plastic Slides	15-7
Four-Way Seat Adjuster Components - "A" Body	15-7
Electric Motor	15-7
Vertical Gearnut	15-8
Horizontal Actuator	15-9
Jackscrew	15-10
Horizontal and Vertical Drive Cables	15-11
Transmission	15-11
Disassembly and Assembly of Transmission	15-11
Four-Way Seat Adjuster Components - Buick "B, C & E" Body	15-12
Electric Motor	15-12
Vertical Gearnut	15-12
Horizontal Actuator	15-13
Horizontal and Vertical Drive Cables	15-13
Transmission	15-13
Disassembly and Assembly of Transmission	
Six-Way Seat Adjuster Components - "B, C & E" Body	15-14
Electric Motor	15-14
Horizontal Actuator	15-14
Front Vertical Gearnut	15-15
Rear Vertical Gearnut	15-15
Lower Channel and Plastic Slides	15-16
Upper Channel	15-16
Horizontal and Vertical Drive Cables	15-16
Transmission	15-16
Disassembly and Assembly of Transmission	15-17
Front Seat Back	15-17
Seat Back Assembly - Four Door with Standard Seat	15-17
Seat Back Assembly (Right or Left) - Two Door with Standard Seat	15-18
Seat Back Assembly - "A-39" Styles with Arm Rest	15-18
Seat Back Lock - "A, B & Z"	15-19
Seat Back Lock - "C & E"	15-19
Seat Back Headrest - Full Width Seat	15-21
Front Seat Center Arm Rest	15-21
Arm Rest and Curtain - Standard Full Width Seat Back	15-21
Arm Rest and Support - Standard Full Width Seat Back	15-21
Arm Rest and Curtain - Notch Down and Strato Seat Back	15-21
Arm Rest Assembly - Notch Down and Strato Seat Back	15-22
Arm Rest Support - Notch Down and Strato Seat Back	15-22
Foot Rest Assembly - Cadillac 68169 Styles	15-22
STRATO FRONT SEATS	
Strato Full-Width, Strato Bucket and Standard Bucket Seats	15-23
Description	15-23
Strato Full Width Seat Assembly	15-23
Manually Operated Bucket Assembly	15-24
Power Operated 2 or 4-Way Bucket Assembly	15-24
Passenger Front Bucket Seat Back Stop Cable or Spring	15-25
Front Back Assembly - Standard Bucket	15-25
Front Back Lock - Standard Bucket	15-26
Strato Back Assembly - Full Width (Except 16639)	15-26
Strato Back Assembly - Full Width (16639)	15-27
Strato Back Panel - Four Door Styles	15-27
Strato Back Panel - Two Door Styles	15-28
Strato Back Headrest	15-28
Strato Back Headrest Support Guide Tube	15-28
Strato Back Headrest Supports	15-29
Strato Back Assembly (Exc. "F & Z" and Reclining Back)	15-29
Strato Back Lock - Two Door Styles	15-29
Reclining Front Seat Back	15-30
Description	15-30
Seat Back Assembly	15-32
Seat Back Positioning Unit	15-32
Seat Back Lock and Striker	15-32
Seat Back Lock Control Support	15-33
Seat Back Lock Control Assembly	15-33
Manually Operated Bucket Seat Adjuster	15-33
Power Operated Horizontal Adjuster	15-34
Power Operated Four-Way Adjuster	15-34
Power Operated Four-Way Adjuster Components	15-34
Motor and Transmission Drive Belt and Pulleys	15-35
Motor Assembly	15-35
Transmission Assembly and Drive Cables	15-36
Disassembly and Assembly of Transmission	15-36
Adjuster Vertical Gearnut	15-36
Adjuster Jackscrew	15-36
Adjuster Horizontal Actuator	15-36
Torque Tube Assembly	15-37
REAR SEAT	
Rear Seat Cushion	15-37
Rear Seat Back - (Except "F & Z")	15-37
Folding Seat Back - "F"	15-38
Folding Rear Seat Back - Corvair	15-38

Subject	Page
Folding Rear Seat Back Assembly	15-38
Folding Rear Seat Back Linkage	15-38
Folding Rear Seat Back Filler Panel	15-38
Rear Seat Back Center Arm Rest and Curtain	15-39
Rear Seat Back Center Arm Rest Hanger Plate and Linkage	15-39
STATION WAGON REAR SEATS	
Station Wagon Folding Rear Seats and Floor Panels - "B" Body	15-39
Description	15-39
Rear Floor to Tail Gate Filler Panel Assembly 25-26000 Series	15-39
Compartment Pan Side Filler Panel	15-40
Luggage Compartment Front and Rear Panel Assemblies - Two Seat Styles	15-41
Luggage Compartment Rear Panel - Two Seat Styles	15-41
Luggage Compartment Front and Rear Panel Hinge	15-41
Folding Third Seat Cushion - Three Seat Styles	15-42
Folding Third Seat Cushion, Panel and Support - Three Seat Styles	15-42
Folding Third Seat Back Trim - Three Seat Styles	15-42
Folding Third Seat Back Panel - Three Seat Styles	15-42
Compartment Floor Panel (At Kick-Up)	15-43
Rear Floor Filler Panel	
Second Seat Cushion (Full Width or Split Seat)	15-43
Second Seat Back Trim (Full Width or Split Seat)	15-43
Second Seat Back Trim, Panel and Linkage (Full Width or Split Seat)	15-44
Second Seat Back Linkage (Full Width Both Sides, Split Seat-Outer Only)	15-44
Second Seat Split Back Inner Linkage	15-45
Luggage Compartment Lock Cylinder - 15-16000 Styles	15-45
Luggage Compartment Lock - 15-16000 Styles	15-45
Station Wagon Folding Rear Seats and Floor Panels - "A" Body Except "65" Styles	15-46
Description	15-46
Rear Compartment Floor Covering - Styles with Rubber Mat	15-46
Rear Compartment Floor Panel Covering - Styles with Vinyl Mat	15-46
Rear Compartment Floor Panel Covering - Styles with Floor Carpet	15-46
Rear Seat Cushion - Two Seat Styles	15-46

Subject	Page
Rear Seat Back Trim and Spring - Two Seat Styles	15-47
Rear Compartment Floor Panel (At Kick-Up) - Two Seat Styles	15-47
Rear Seat Back and Panel - Two Seat Styles	15-47
Rear Floor Filler Panel - Two Seat Styles	15-47
Folding Second Seat Back Lock ("A, B & X" Except 55 & 65)	15-48
Station Wagon Folding Rear Seats and Floor Panels - "A" Body "55 and 65" Styles	15-48
Description	15-48
Second Seat Assembly - Right or Left - "65" Styles	15-49
Second Seat Cushion - Right or Left - "65" Styles	15-50
Second Seat Back Trim and Spring - Right or Left - "65" Styles	15-50
Second Seat Front Floor Pan Linkage - Right or Left - "65" Styles	15-51
Second Seat Rear Floor Pan Linkage - Right or Left - "65" Styles	15-51
Second Seat Side Inner Linkage - Right or Left - "65" Styles	15-51
Second Seat Side Outer Linkage - Right or Left - "65" Styles	15-52
Second Seat Back Lock - Right or Left - "65" Styles	15-52
Second Seat Back Panel and Filler - Right or Left - "65" Styles	15-52
Third Seat and Floor Panel - "65" Styles	15-53
Third Seat Cushion Trim - "65" Styles	15-53
Third Seat Back Trim or Seat Back Panel - "65" Styles	15-54
Luggage Compartment Cover Panel and Filler Panel - "65" Styles	15-54
SEAT BELTS AND SHOULDER STRAPS	
Front and Rear Seat Belts	15-54
General Information	15-54
Standard Floor Mounts with Plastic Cover	15-55
Retractor Type Floor Mount	15-55
Rear Seat and Station Wagon Full Width Second Seat	15-55
Station Wagon Third Seat (Facing Forward)	15-55
Station Wagon Third Seat (Facing Rearward)	15-55
Station Wagon Split Second Seat	15-55
Seat Belt Bail Type Retractor	15-55
Shoulder Strap - Front Seat	15-55
General Information	15-55
Roof Anchorage (Closed Styles)	15-59
Quarter Anchorage (Convertibles)	15-60
Floor Anchorage	15-60
Buckle Retainer	15-60

INTRODUCTION

In addition to the standard full width seats, the "Strato" full width and bucket seats are available on all styles except "F" and "Z" body styles. Standard seat back head rests are available for driver and passenger side on most standard full width seats. The "Strato" head rest is also available on both the drivers and passengers side of "Strato" seats. A reclining seat back with head rest is available on the passengers side only on some body styles.

NOTE: All two door style front seats feature a seat back lock on both the drivers and passengers seat back. On "A, B, F, X and Z" styles with standard seats, the seat back lock is actuated by a control lever located at the lower rear outer side of the seat back. On the "C and E" style standard seats and on all "Strato" seats the seat back lock is actuated by a control button located at the upper outer side of the seat back.

STANDARD FRONT SEATS

FRONT SEAT ASSEMBLY— Manually Operated—Full Width

DESCRIPTION

The conventional full width manually operated seat assembly incorporates manually operated seat adjusters to provide fore and aft movement of the seat. When the lever at the left seat adjust is moved forward (rearward on "F" body styles), the seat adjusters unlock, permitting horizontal travel of the seat. When the seat is in the desired position and the locking lever is released the seat is locked. All seat adjusters are secured to the floor pan by nuts installed on floor pan anchor plate studs or bolts installed into anchor nuts in the floor pan (See Figures 15-1 and 15-2).

SEAT ASSEMBLY

Removal and Installation

1. Remove both driver and passenger inner seat belt floor pan attaching bolt.
2. Remove door sill plates and turn back floor mat or carpeting, where necessary, to expose seat adjuster-to-floor pan attaching nuts or bolts.
3. Operate seat to full forward position.
4. At rear of adjusters, remove adjuster-to-floor pan rear attaching nuts or bolts (Fig. 15-1 and Fig. 15-2).
5. Operate seat to full rearward position. Remove adjuster-to-floor pan front attaching bolts. On styles with seat back cigar lighter tilt seat assembly rearward sufficiently to disconnect lighter feed wire. With aid of a helper, remove seat assembly from body.
6. To install seat assembly, reverse removal procedure. Where seat adjuster-to-floor pan spacers were present reinstall spacers in same position. Check operation of seat assembly to full limits of travel.

ADJUSTER ASSEMBLY

Removal and Installation

1. Remove front seat assembly with adjusters attached, as previously described, and place upside down on a clean protected surface.
2. Remove seat adjuster assist spring from adjuster to be removed (Fig. 15-3).
3. Squeeze hooked end of seat adjuster locking wire together and slide retaining spring back over hump in locking wire and remove locking wire from adjuster.
4. Remove adjuster-to-seat bottom frame front and rear attaching bolts (Fig. 15-3) and remove seat adjuster from seat.
6. To install, reverse removal procedure. If left adjuster is being replaced, install new adjuster control knob. Use rubber mallet to tap new knob on control lever.

NOTE: The right and left seat adjuster sliding mechanism should be in same relative position when attaching adjuster to seat bottom frame.

After installing adjusters to seat frame, check operation of adjusters. If adjusters do not lock or unlock satisfactorily when control handle on left adjuster is operated, disengage locking wire retainer from hole in seat bottom frame and engage retainer in one of adjacent holes to obtain proper tension in wire. (Fig. 15-3).

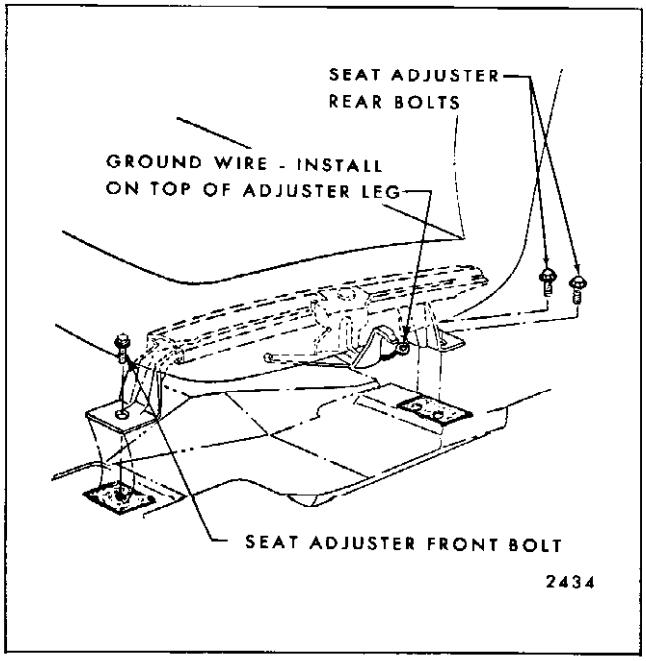


Fig. 15-1 — Seat Adjuster Floor Pan Attachment - "A, F, X & Z" Full Width Seat

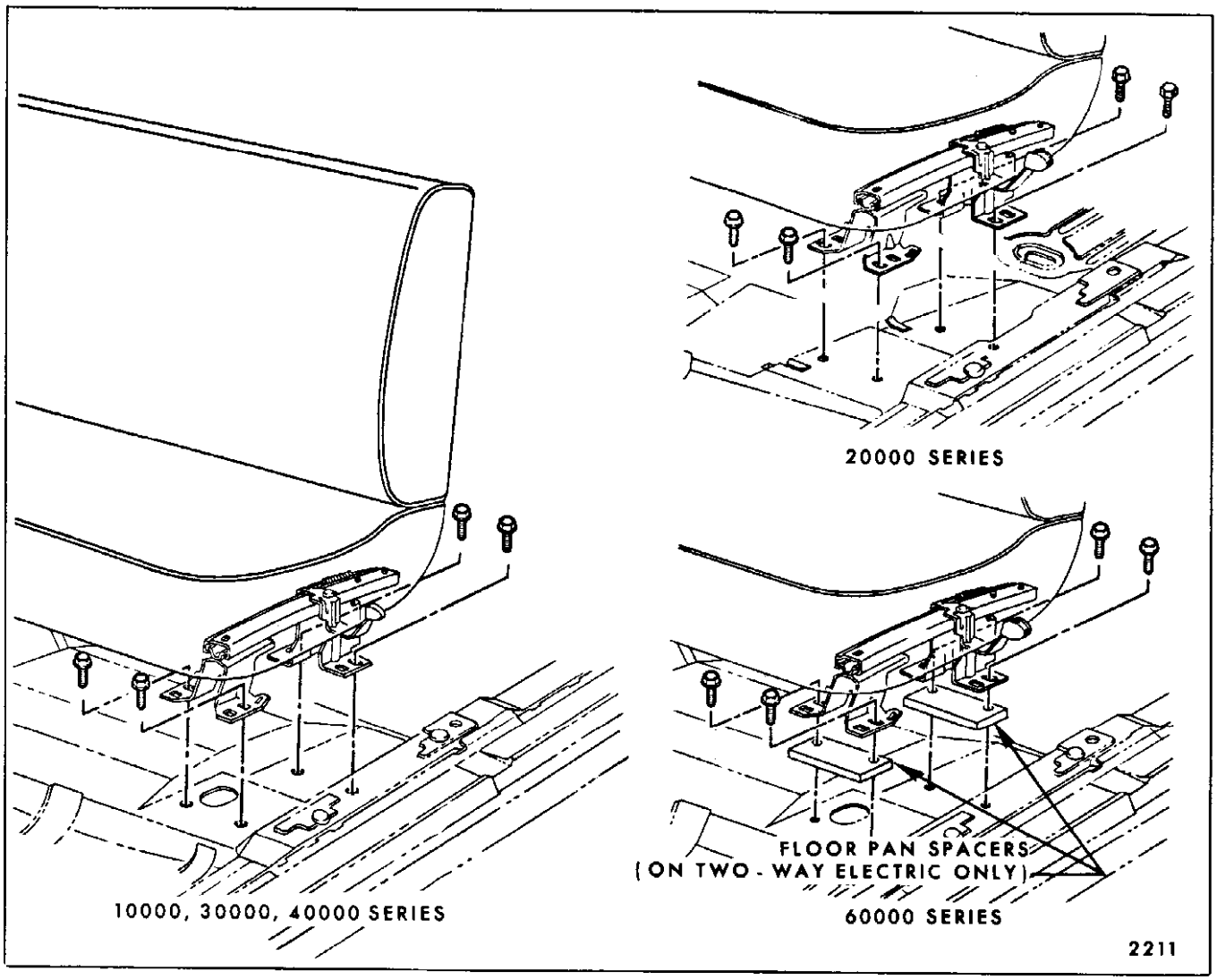


Fig. 15-2 — Seat Adjuster Floor Pan Attachment - "B & C" Full Width Seat

FRONT SEAT ASSEMBLY—Power Operated Two, Four or Six-Way Full Width Seat

DESCRIPTION

The seat adjusters are actuated by a 12 volt, reversible, shunt wound motor with a built in circuit breaker. The motor is energized by a toggle-type control switch installed in the left seat side panel or in the left door arm rest.

On four-way and six-way power operated seats the seat operating mechanism incorporates a transmission assembly which incorporates solenoids and drive cables to the seat adjusters. On the four-way seat one solenoid controls the horizontal movement of the seat while the second solenoid controls the vertical movement of the seat. On the six-way seat one solenoid controls the vertical movement of the front of the seat, the second solenoid controls the horizontal movement of the seat and the third solenoid controls the vertical movement of the rear of the seat. When the control switch is actuated, the motor and one of the solenoids are energized simultaneously. Then the solenoid plunger engages with the driving gear dog. The driving gear rotates the drive cables and operates both adjusters. When the adjusters reach their limit of travel, the drive cables stop their rotating action and torque is absorbed by the rubber coupler connecting the motor and transmission. When the control switch is released, a return spring returns the solenoid plunger to its original position disengageing it from the driving gear dog.

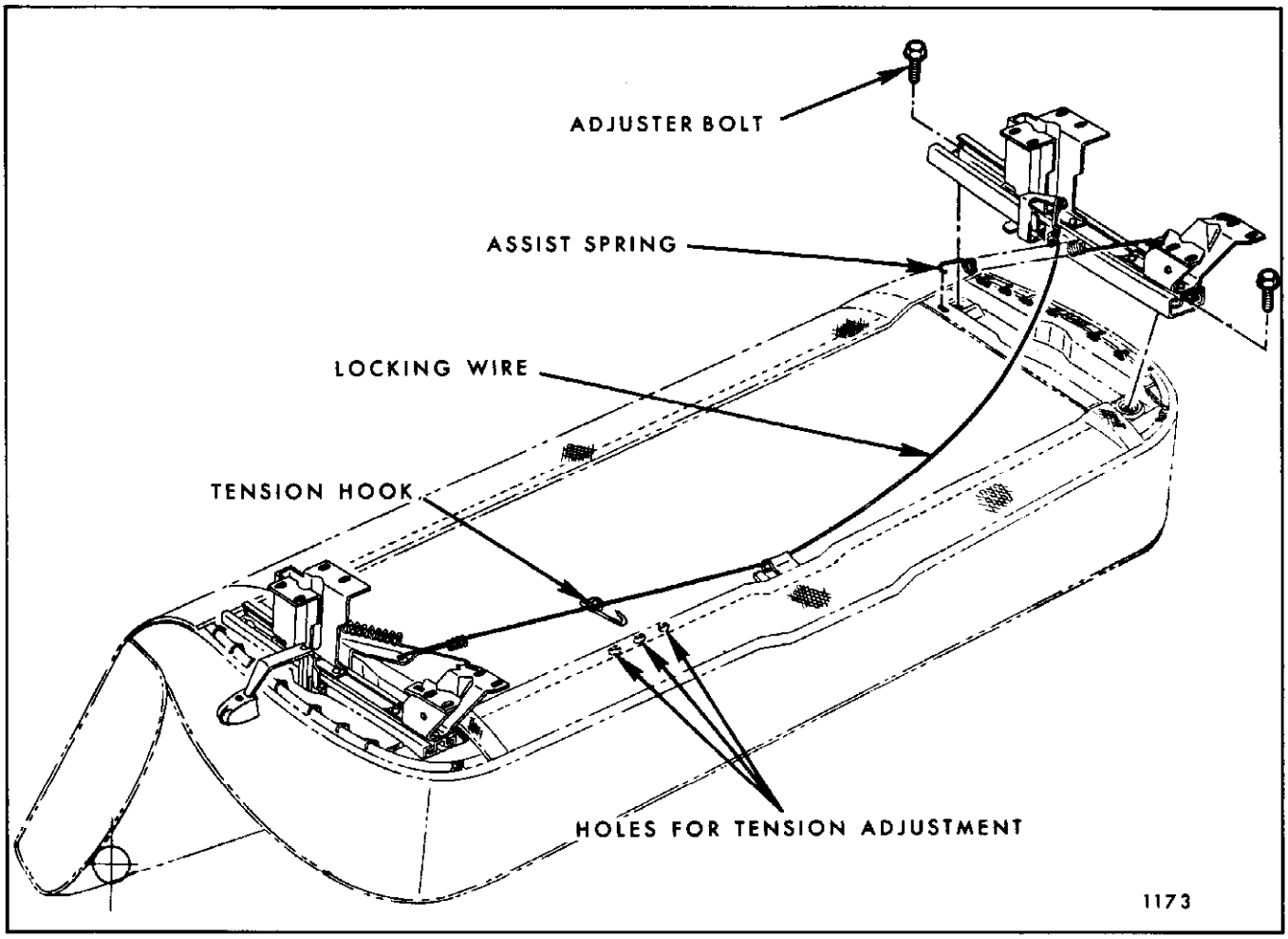


Fig. 15-3—Manually Operated Seat Adjuster Installation - "B & C" Shown "A, F, X & Z" Typical

SEAT ASSEMBLY

Removal and Installation

1. Operate seat to full forward position. On four-way or six-way power seats operate seat to full up position.

2. Remove both driver and passenger inner seat belt floor pan attaching bolt. Remove seat cushion side panels where present. Where seat adjuster track covers are present carefully pry out track cover snap in retainers with a flat-bladed tool and remove track covers.

3. Where necessary, remove sill plates and turn back floor mat or carpeting to expose seat adjuster-to-floor pan attaching nuts or bolts.

4. Remove seat adjuster-to-floor pan rear attaching bolts (Fig. 15-1 or 15-2); then operate seat assembly to full rearward position.

5. Operate seat to full rearward position. Remove adjuster-to-floor pan front attaching bolts (Fig. 15-2). Tilt seat assembly rearward sufficiently to disconnect seat harness feed connector and detach harness from clip on floor pan. On styles with seat back cigar lighter, seat back courtesy lamps or seat back vanity lamp disconnect electrical feed wire or wires. With aid of a helper remove seat assembly from body.

6. To install seat assembly, reverse removal procedure. Where seat adjuster-to-floor pan spacers were present reinstall spacers in same position. Make sure ground wire is securely attached under left seat adjuster-to-floor pan rear attaching bolt. Check for proper operation of seat adjusters to limits of travel.

   IMPORTANT: When installing seat assembly in body, seat adjusters should be parallel and "in phase" with each other. In the event the adjusters are "out of phase" (this is, one adjuster reaches its maximum horizontal or vertical travel in a given direction before the other adjuster), proceed as follows:

a. Horizontal Travel - Operate seat control switch until one adjuster reaches full forward position. Detach horizontal drive cable from adjuster which has reached full forward position. Operate seat forward until other adjuster reaches full forward position; then, connect horizontal drive cable and check horizontal travel of seat.

b. Front or Rear Vertical Travel - Operate seat control switch until one adjuster has reached the fully raised position at both front and rear vertical travel limits. Disconnect both front and rear vertical drive cables from adjuster which has reached the fully raised position. Operate seat control switch until other adjuster reaches the fully raised position at both front and rear vertical travel limits; then, connect previously removed front and rear vertical drive cables. Check vertical travel by operating adjusters through one or two complete cycles. The above operation may be repeated on an "as required" basis if adjusters do not appear to be "in phase" after test cycle.

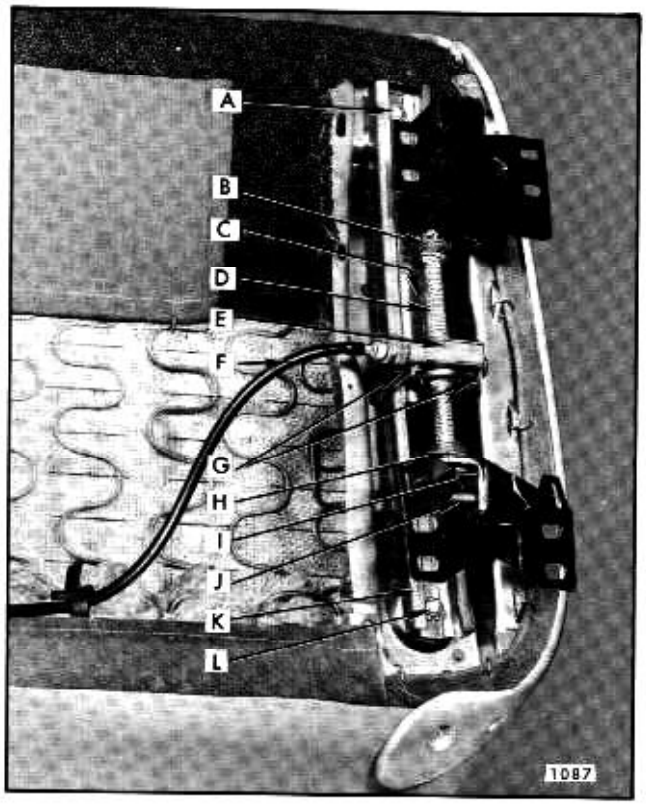


Fig. 15-4—Horizontal Power Adjuster - "C & E" Styles

A. Adjuster Attaching Bolt
B. Rear Stop
C. Adjuster Lower Channel
D. Jackscrew
E. Gearnut
F. Drive Cable
G. Shoulder Bolts
H. Front Stop
I. Stop Bracket
J. Cross Pin
K. Adjuster Upper Channel
L. Adjuster Attaching Bolt

ADJUSTER ASSEMBLY

Removal and Installation

1. Operate seat to a midway horizontal position; on four-way and six-way seats also operate seat to fully raised position.

2. Remove front seat assembly with adjusters attached, as previously described, and place upside down on a clean protected surface.

3. Detach power drive cables from gear nuts of adjuster to be removed (Fig. 15-4, 15-5, 15-6 and 15-7).

4. Remove adjuster-to-seat bottom frame front and rear attaching bolts and remove adjuster from seat assembly (Fig. 15-4, 15-5, 15-6 and 15-7).

5. To install seat adjuster assembly, reverse removal procedure. On seats with adjuster track covers, make sure track cover supports are installed between adjuster and seat frame (Fig. 15-5, 15-6 and 15-7). Check operation of seat adjusters and make sure adjusters are "in phase" before installing assembly into body (See Step 6 under "Front Seat Assembly - Removal and Installation").

TWO-WAY SEAT ADJUSTER MAJOR COMPONENTS—"C" Body Full Width Seats

The following service procedures cover replacement of the major component parts of the power operated two-way seat adjusters used on "C" body full width seats.

ELECTRIC MOTOR—"C" Body

Removal and Installation

1. Remove front seat assembly as previously described and place upside down on a clean protected surface.

2. Disconnect both power drive cables from actuator motor.

3. Remove screws that secure actuator motor support bracket to seat bottom frame and

remove actuator motor with attached support bracket from seat assembly.

4. Disconnect feed wire harness from actuator motor.

5. Remove screws seucring motor to motor support bracket.

6. To install, reverse removal procedure. Check for proper seat operation to extreme limit of fore and aft travel.

HORIZONTAL GEARNUT ASSEMBLY—"C" Body

Removal and Installation

1. Remove front seat assembly with attached adjusters and place upside down on a clean, protected surface.

2. Detach power drive cable from gearnut to be removed.

3. Using a "clutch" type screwdriver or other suitable tool, remove two shoulder bolts securing gearnut to upper slide portion of seat adjuster (Fig. 15-4).

4. Rotate jackscrew assembly upward sufficiently to gain access to cotter pin at rear of jackscrew assembly.

5. Remove cotter pin, washer and rubber bumper from rear end of jackscrew; then, remove gearnut from jackscrew.

6. To install, reverse removal procedure. Prior to installing seat assembly in body, be sure adjusters are "in phase". See step 6 under "Front Seat Assembly - Removal and Installation".

HORIZONTAL JACKSCREW—"C" Body

Removal and Installation

1. Remove front seat assembly with attached adjusters and place upside down on a clean, protected surface.

2. Detach power drive cable from gearnut and jackscrew assembly to be removed.

3. Using a suitable tool (preferably a "clutch" type screwdriver) remove two shoulder bolts securing gearnut to upper slide portion of seat adjuster assembly (Fig. 15-4).

4. Remove retainer that secures stop bracket crosspin to adjuster front pedestal and remove crosspin (Fig. 15-4).

5. Remove jackscrew assembly from seat adjuster.

6. To install, reverse removal procedure.

NOTE: When replacing jackscrew assembly with new part, remove nut, washers, rubber bumper and stop bracket with inserted rubber grommet from front end of jackscrew, as well as gearnut and washers, rubber bumper and cotter pin from rear end of jackscrew and transfer to new jackscrew assembly.

PLASTIC SLIDES—"C" Body

Removal and Installation

1. Remove front seat adjuster to be serviced from front seat assembly. (See: Front Seat Adjuster - Two-Way Electric - Removal and Installation procedures).

2. Using a suitable tool (preferably a "clutch" type screwdriver), remove two shoulder bolts securing gearnut to upper channel of seat adjuster assembly (Fig. 15-4).

3. Slide lower track and support base portion of seat adjuster, with attached jackscrew and gearnut, forward until it disengages from upper channel assembly. The four plastic slides may now be disengaged from positioning slots on lower track.

4. To install, reverse removal procedure making sure that groove in plastic slide slips onto lower track with thinner section of slide protruding above surface of track.

FOUR-WAY SEAT ADJUSTER MAJOR COMPONENTS—"A" Body Full Width Seats

The following service procedures cover replacement of the major component parts of the power operated four-way seat adjusters used on the "A" body full width seats.

ELECTRIC MOTOR—"A" Body

Removal and Installation

1. Remove front seat assembly as previously described and place upside down on a clean protected surface.

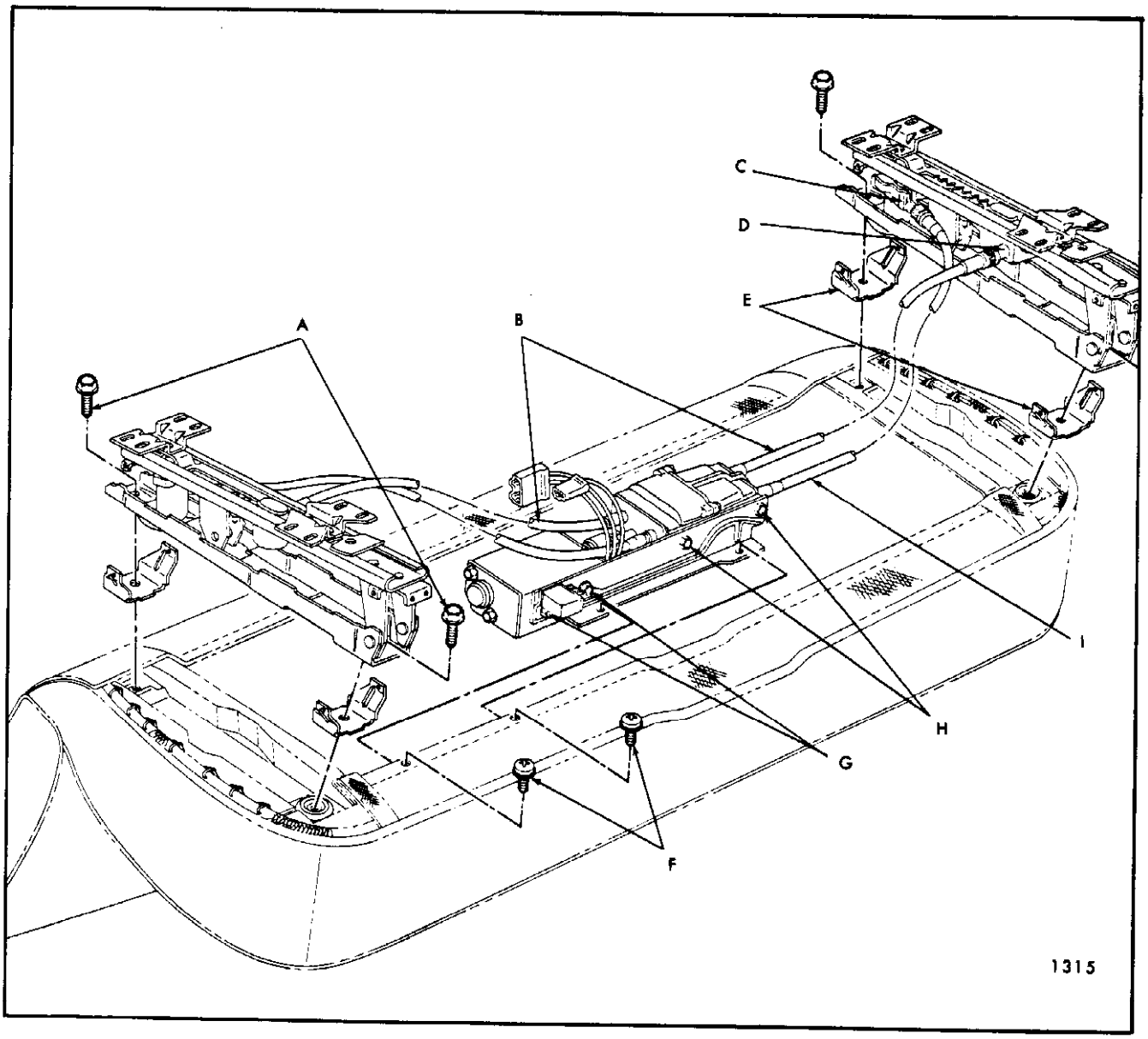


Fig. 15-5—Front Seat Assembly - Four-Way Tilt - Buick "B, C & E" Styles

A. Adjuster-to-Seat Attaching Bolts
B. Horizontal Cables - Black
C. Vertical Gearnut
D. Horizontal
E. Track Cover Supports
F. Motor and Transmission Support Attaching Screws
G. Motor Attaching Screws
H. Transmission Attaching Screws
I. Rear Vertical Cables - Blue

2. Disconnect wire harness from motor relay assembly.

3. Remove screws securing motor and transmission support to seat bottom frame. (Fig. 15-6).

4. Remove motor-to-motor support attaching screws and remove motor assembly from support.

5. To install, reverse removal procedure making sure rubber coupler is properly engaged at both motor and transmission ends. Check operation of seat to full limits of travel.

VERTICAL GEARNUT—"A" Body

Removal and Installation

1. Operate seat assembly to fully raised and midway position.

2. Remove front seat assembly from body as

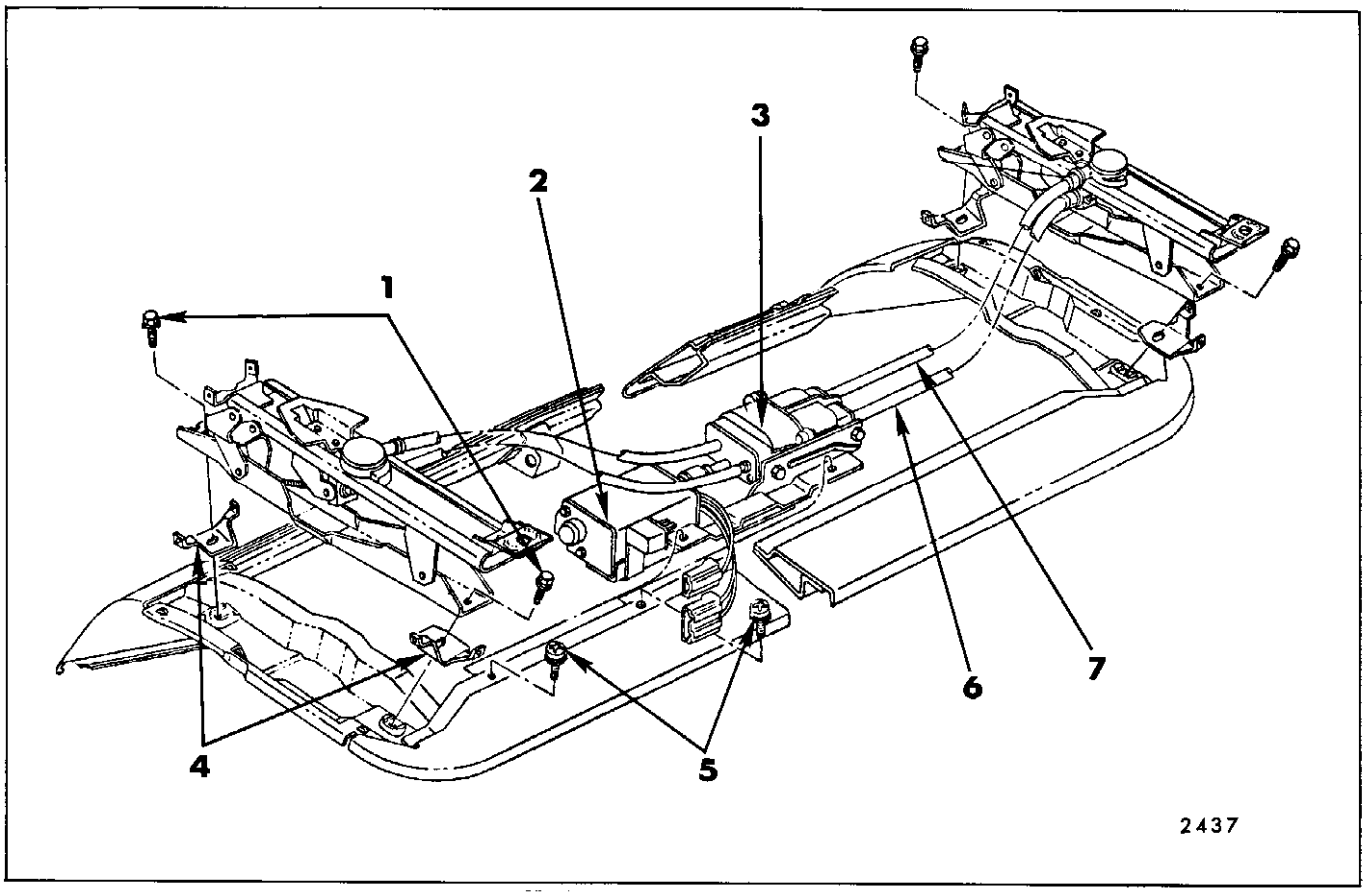


Fig. 15-6—Front Seat Assembly - Four-Way Tilt - "A" Styles

1. Adjuster to Seat Frame Attaching Bolts
2. Motor Assembly
3. Transmission Assembly
4. Track Cover Supports
5. Motor and Transmission Support Attaching Screws
6. Vertical Cable (Yellow)
7. Horizontal Cable (Black)

previously described and place upside down on a clean protected surface.

3. Detach vertical gearnut drive cable from other adjuster.

4. Using a clutch type screwdriver or other suitable tool, remove shoulder screws securing linkage to vertical gearnut being replaced (Fig. 15-8).

5. If right adjuster gearnut is being replaced, at front of jackscrew, remove double nut that acts as a jackscrew "down" stop.

6. Using a portable power source to energize the motor, actuate vertical gearnut until gearnut is disengaged from jackscrew.

NOTE: It may be necessary to manually raise or lower upper rear portion of adjuster to gain clearance for removal of gearnut.

7. Disconnect drive cable from gearnut.

8. To install, reverse removal procedure.

NOTE: Check operation of seat adjusters and make sure adjusters are "in phase". See step 6 under "Front Seat Assembly - Removal and Installation".

HORIZONTAL ACTUATOR—"A" Body

Removal and Installation

1. Remove adjuster vertical gearnut as previously described.

2. Disconnect drive cable from horizontal actuator.

3. Remove screws securing horizontal actuator assembly to adjuster lower track; then remove actuator from adjuster assembly (Fig. 15-8).

4. To install, reverse removal procedure.

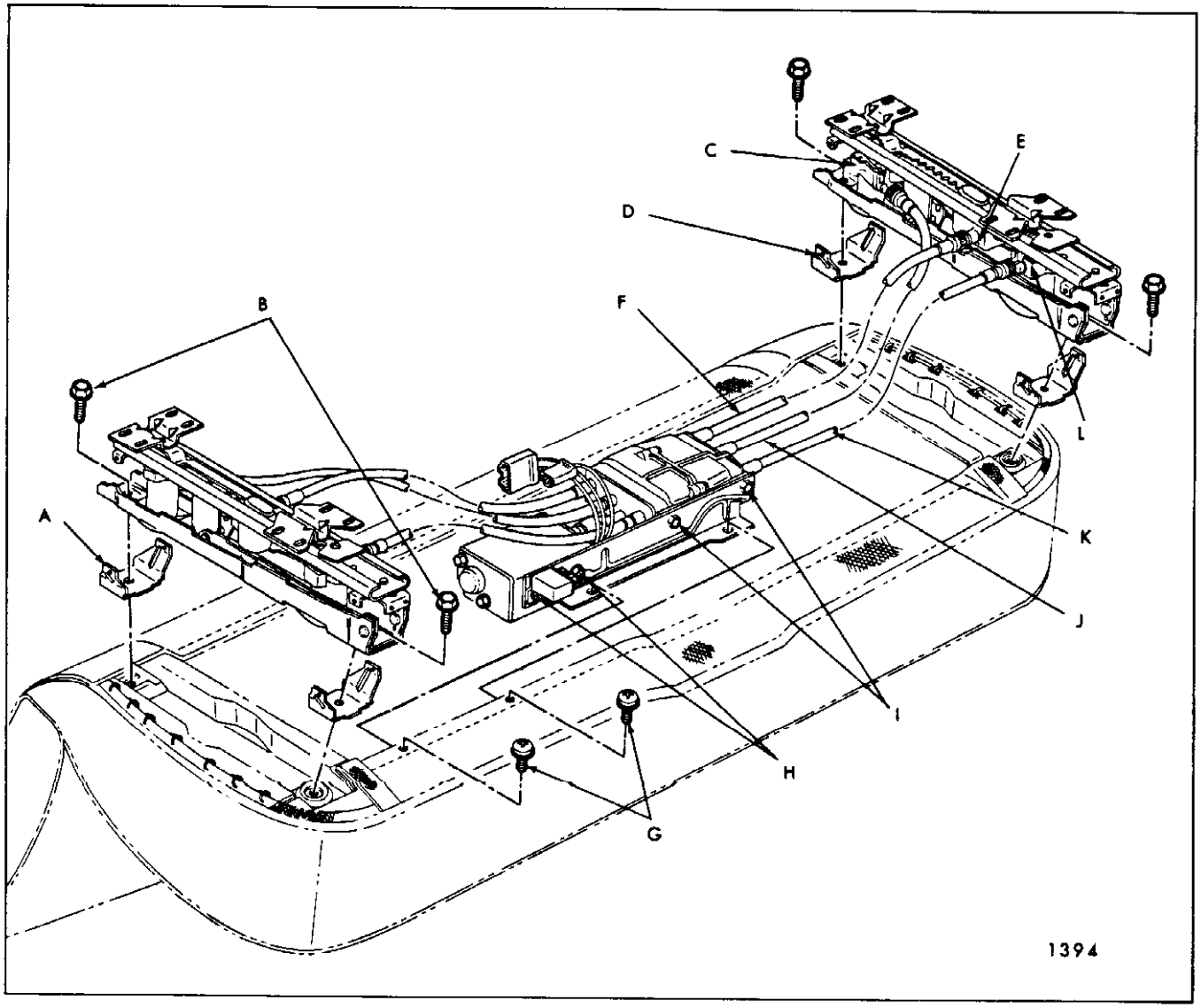


Fig. 15-7—Front Seat Assembly - Six-Way - "B & C" Styles

A. Track Cover Support
B. Adjuster-to-Seat Attaching Screws
C. Rear Vertical Gearnut
D. Track Cover Support
E. Horizontal Actuator
F. Horizontal Cables - Black
G. Motor and Transmission Support Attaching Screws
H. Motor Attaching Screws
I. Transmission Attaching Screws
J. Rear Vertical Cables - Blue
K. Front Vertical Cables - Yellow
L. Front Vertical Gearnut

NOTE: When installing horizontal actuator, adjust actuator so that drive gear is fully engaged with teeth on lower channel. When horizontal actuator attaching screws are tightened, there should be no free motion between upper and lower channels. Readjust actuator "as required" until all free motion between channels has been removed. Check operation of seat adjusters and make sure adjusters are "in phase". See step 6 under "Front Seat Assembly - Removal and Installation".

JACKSCREW—"A" Body

Removal and Installation

1. Remove adjuster vertical gearnut as previously described.

2. Remove seat adjuster-to-seat bottom frame front and rear attaching bolts on side affected (Fig. 15-6).

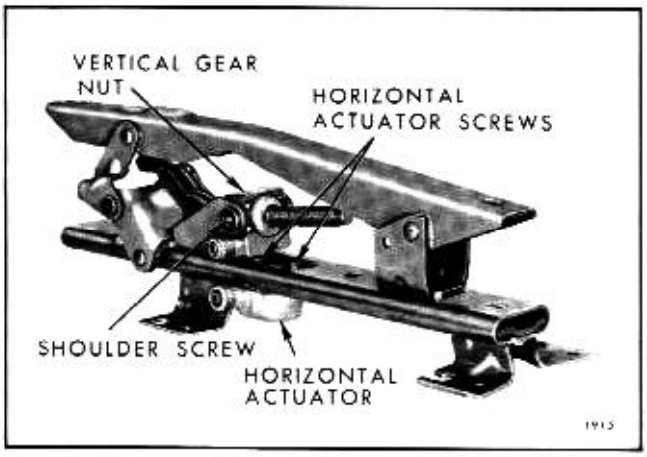


Fig. 15-8 — Four-Way Seat Adjuster - "A" Styles

3. As a bench operation, remove jackscrew-to-adjuster linkage attaching rivet and remove jackscrew from adjuster assembly (Fig. 15-9).

   NOTE: It may be necessary to manually raise or lower upper rear portion of adjuster to gain access to jackscrew attaching rivet.

4. To install, reverse removal procedure. Check operation of seat adjusters and make sure adjusters are "in phase". See step 6 under "Front Seat Assembly - Removal and Installation".

HORIZONTAL AND VERTICAL DRIVE CABLES— "A" Body

Removal and Installation

1. Remove front seat assembly from body with attached adjusters, motor and transmission and place upside down on a clean protected surface.

2. Detach both horizontal and vertical cables from seat adjuster.

3. Remove screws securing horizontal and vertical cable end plate on side of transmission from which cables are being removed and remove cables from seat assembly (Fig. 15-6).

4. Disengage cable to be replaced from end plate.

5. To install cables, reverse removal procedure. Check operation of seat to full limits of travel.

TRANSMISSION—"A" Body

Removal and Installation

1. Remove front seat assembly from body with attached adjusters, motor and transmission and place upside down on a clean protected surface.

2. Disconnect wire harness connecter from transmission.

3. Remove screws securing horizontal and vertical cable end plate on both sides of transmission and detach cables from transmission.

4. Remove transmission to support attaching bolts; then, disengage transmission from rubber coupler and remove transmission from seat assembly.

5. To install, reverse removal procedure.

DISASSEMBLY AND ASSEMBLY OF TRANSMISSION

1. Remove front seat adjuster transmission from seat assembly.

2. Remove screws securing gear and solenoid housings together: then, carefully separate housings and remove component parts of transmission assembly (Fig. 15-10).

3. To assemble transmission, reverse removal procedure.

   IMPORTANT: Prior to or during installation, lubricate frictional surfaces of driving gear thrust washer, gears, dog washers, shaft and solenoid plungers with "Lubriplate" (630AAW) or equivalent.

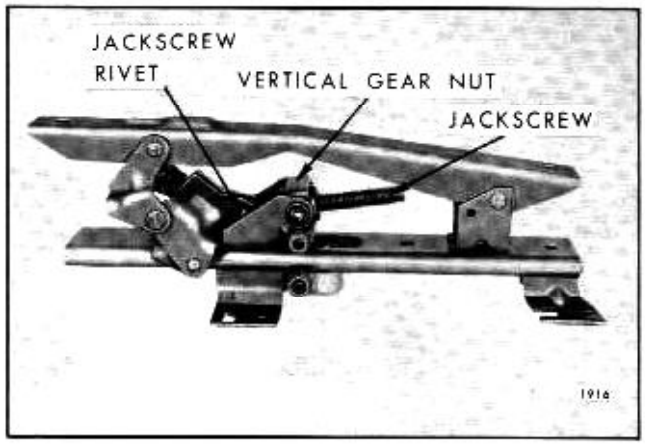


Fig. 15-9 — Four-Way Seat Adjuster - "A" Styles

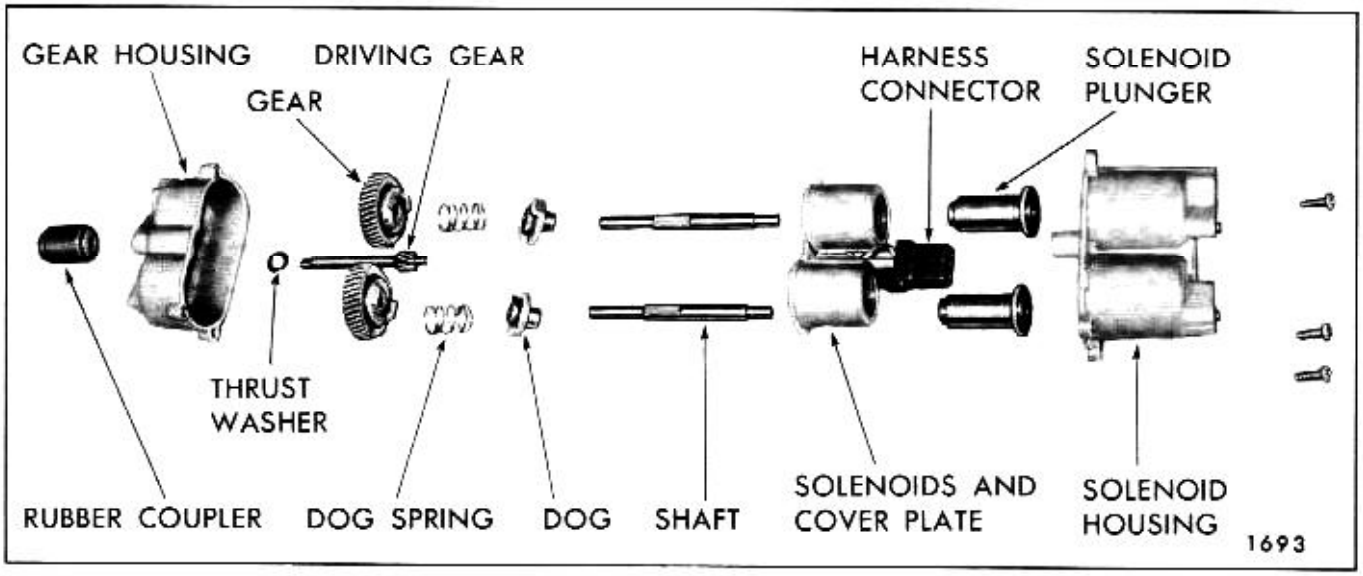


Fig. 15-10 — Four-Way Seat Adjuster Transmission

FOUR-WAY SEAT ADJUSTER MAJOR COMPONENTS—Buick "B-C & E" Full Width Four-Way Power Seat

The following service procedures cover replacement of the major component parts of the power operated four-way seat adjusters used on the Buick "B-C & E" body full width seats.

ELECTRIC MOTOR—Buick "B-C & E" Body

Removal and Installation

1. Remove front seat assembly, and place upside down on a clean protected surface.
2. Disconnect wire harness from motor relay assembly.
3. Remove screws securing motor and transmission support to seat bottom frame (Fig. 15-5).
4. Remove motor-to-support attaching screws and remove motor assembly from support.
5. To install, reverse removal procedure making sure rubber coupler is properly engaged at both motor and transmission ends. Check that seat harness is properly secured to seat. Check operation of seat to full limits of travel.

VERTICAL GEARNUT—Buick "B-C & E" Body

Removal and Installation

1. Operate seat to rearward position; then, remove front seat assembly and seat adjuster.
2. Remove vertical gearnut attaching nut at adjuster upper track (Fig. 15-11). Lift rear of channel upward and remove gearnut tension spring and washer (15-12).
3. Lay adjuster on its side and remove screws securing vertical gearnut to adjuster lower track; then, remove gearnut from adjuster (Fig. 15-11).
4. To install, reverse removal procedure.

NOTE: Check operation of seat adjusters and make sure adjusters are "in phase". See step 6 under "Front Seat Assembly - Removal and Installation".

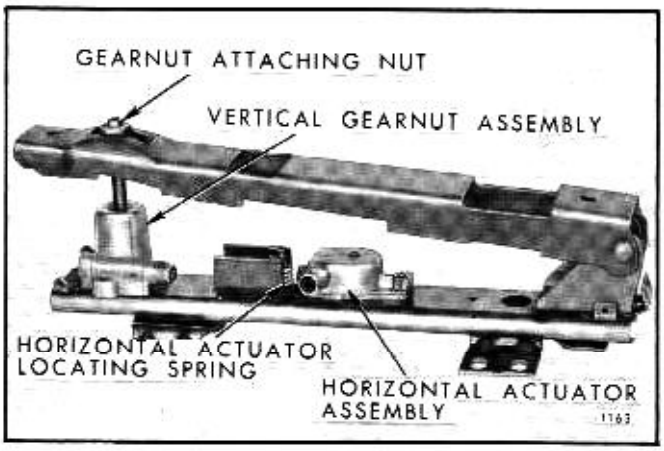


Fig. 15-11 — Four-Way Seat Adjuster - Buick "B-C & E" Styles

HORIZONTAL ACTUATOR—
Buick "B-C & E" Body

Removal and Installation

1. Remove front seat assembly and place upside down on a clean protected surface.

2. Disconnect drive cable from horizontal actuator (Fig. 15-5).

3. Remove screws securing horizontal actuator assembly to adjuster lower track; then, remove actuator from adjuster assembly (Fig. 15-12).

   NOTE: It may be necessary to manually actuate the horizontal actuator to gain access to attaching screws.

4. To install, reverse removal procedure. Make sure horizontal actuator locating spring is properly positioned (Fig. 15-11 and 15-12).

   NOTE: When installing horizontal actuator, adjust actuator so that drive gear is fully engaged with teeth on lower channel. When horizontal actuator attaching screws are tightened, there should be no free motion between upper and lower channels. Readjust actuator "as required" until all free motion between channels has been removed. Check operation of seat adjusters and make sure adjusters are "in phase". See step 6 under "Front Seat Assembly - Removal and Installation".

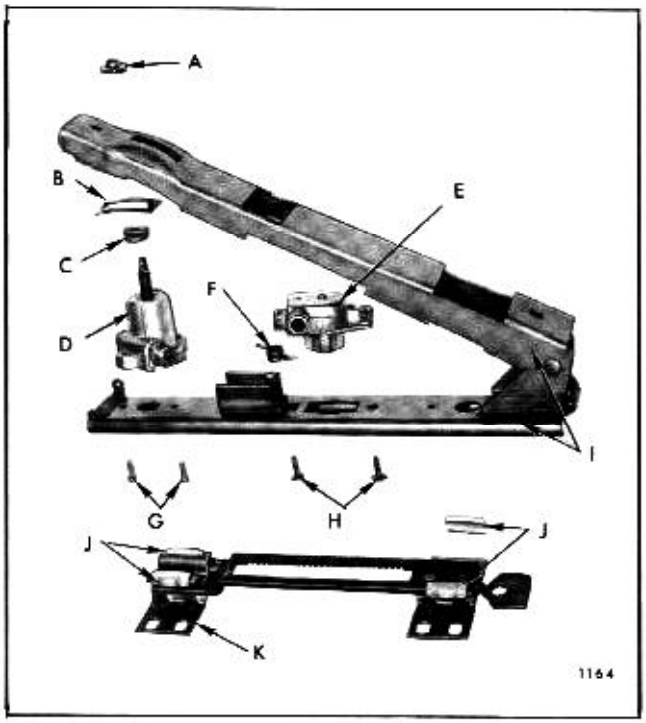


Fig. 15-12—Four-Way Seat Adjuster Components - Buick "B-C & E" Styles

A. Gearnut to Upper Attaching Nut
B. Gearnut Tension Spring
C. Gearnut Washer
D. Vertical Gearnut Assembly
E. Horizontal Actuator Assembly
F. Locating Spring
G. Vertical Gearnut Screws
H. Horizontal Actuator Screws
I. Upper Channel Assembly
J. Plastic Shoes
K. Lower Channel

HORIZONTAL AND VERTICAL DRIVE CABLES—
Buick "B-C & E" Body

Removal and Installation

1. Remove front seat assembly, as previously described, and place upside down on a clean protected surface.

2. Detach both horizontal and vertical cables from seat adjuster (See Fig. 15-5).

3. Remove screws securing horizontal and vertical cable end plate on side of transmission from which cables are being removed and remove cables from seat assembly.

4. Disengage cable to be replaced from end plate.

5. To install cables, reverse removal procedure. Check operation of seat to full limits of travel.

TRANSMISSION—
Buick "B-C & E" Body

Removal and Installation

1. Remove front seat assembly, from body and place upside down on a clean protected surface.

2. Disconnect wire harness connector from transmission.

3. Remove screws securing horizontal and vertical cable end plate on both sides of transmission and detach cables from transmission.

4. Remove transmission to support attaching bolts; then, disengage transmission from rubber coupler and remove transmission from seat assembly.

5. To install, reverse removal procedure.

DISASSEMBLY AND ASSEMBLY OF TRANSMISSION

1. Remove front seat adjuster transmission from seat assembly.

2. Remove screws securing gear and solenoid housings together; then, carefully separate housings and remove component parts of transmission assembly (Fig. 15-10).

3. To assemble transmission, reverse removal procedure.

IMPORTANT: Prior to or during installation, lubricate frictional surfaces of driving gear thrust washer, gears, dog washers, shaft and solenoid plungers with "Lubriplate" (630AAW) or equivalent.

SIX-WAY SEAT ADJUSTER MAJOR COMPONENTS—"B-C & E" Body
Full Width Seats

The following service procedures cover replacement of the major component parts of the power operated six-way seat adjusters used on the "B, C and E" body full width seats.

ELECTRIC MOTOR—"B-C & E" Body

Removal and Installation

1. Remove front seat assembly, as previously described, and place upside down on a clean protected surface.

2. Disconnect motor feed wires from motor control relay.

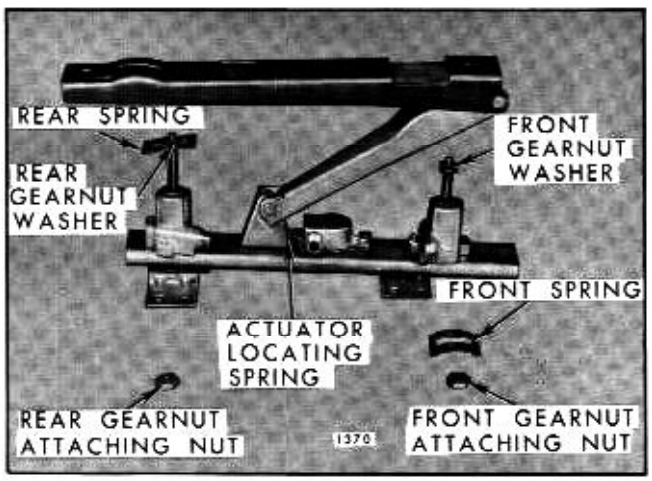


Fig. 15-13—Six-Way Seat Adjuster - "B & C" Styles

3. Remove motor support-to-seat frame attaching bolts.

4. Remove motor-to-support attaching bolts; then move motor assembly outboard (away from transmission) sufficiently to disengage motor from rubber coupling.

5. To install, reverse removal procedure making sure rubber coupling is properly engaged at both motor and transmission. Check that seat harness is properly secured to seat. Check operation of seat to full limits of travel.

HORIZONTAL ACTUATOR—"B-C & E" Body

Removal and Installation

1. Remove seat assembly from body as previously described and place upside down on a clean protected surface.

NOTE: Horizontal Actuator is easily accessible with seat in mid-way or approximate center position.

2. Detach three power drive cables from adjuster to be removed.

3. Remove screws securing seat adjuster to seat bottom frame and remove adjuster from seat assembly.

4. At top of adjuster, remove front and rear vertical gearnut attaching nuts (Fig. 15-13).

5. Remove front vertical gearnut spring (Fig. 15-13).

6. Lift upward on adjuster upper track; then remove rear vertical gearnug spring (Fig. 15-13).

7. Lay adjuster on its side; then remove screws securing horizontal actuator to adjuster upper channel assembly and remove actuator from adjuster.

IMPORTANT: Horizontal acutator is under tension from spring shown in Figure 15-13. When installing actuator, be sure actuator locating spring is properly engaged with actuator assembly.

8. To install, reverse removal procedure. When installing horizontal actuator, be sure actuator drive gear is full engaged with teeth on lower channel. With tension spring properly installed and actuator attaching screws tight, there should be no free motion between upper and

lower adjuster channels. Re-adjust actuator "as required" until all free motion between channels has been removed. Be sure seat adjusters are "in phase", before installing seat assembly into body. (See step 6 under "Front Seat Assembly - Removal and Installation").

FRONT VERTICAL GEARNUT—"B-C & E" Body

Removal and Installation

1. Operate seat to either full forward or full rearward position.
2. Remove front seat assembly from body as previously described and place upside down on a clean protected surface.
3. Detach three power drive cables from adjuster to be removed.
4. Remove screws securing seat adjuster to seat bottom frame and remove adjuster from seat assembly.
5. At top of adjuster, remove front vertical gearnut attaching nut.
6. Remove front vertical gearnut spring (Fig. 15-13).
7. Lay adjuster on its side and remove front vertical gearnut attaching screws (Fig. 15-14); then remove gearnut from adjuster.
8. If front vertical gearnut is being replaced with a new part, transfer gearnut washer to new gearnut assembly (Fig. 15-13).
9. To install, reverse removal procedure. Be sure adjusters are "in phase" before installing seat assembly into body. (See step 6 under "Front Seat Assembly - Removal and Installation").

REAR VERTICAL GEARNUT—"B-C & E" Body

Removal and Installation

1. Operate seat to full forward position.
2. Remove front seat assembly from body as previously described and place upside down on a clean protected surface.
3. Detach three power drive cables from adjuster to be removed.
4. Remove screws securing seat adjuster to seat bottom frame and remove adjuster from seat assembly.
5. At top of adjuster, remove rear vertical gearnut attaching nut (Fig. 15-13).
6. Lift rear of channel upward and remove rear vertical gearnut spring (Fig. 15-13).
7. Lay adjuster on its side and remove rear vertical gearnut attaching screws; then remove gearnut from adjuster (Fig. 15-14).
8. If rear vertical gearnut is being replaced with a new part, transfer gearnut washer to new gearnut assembly (Fig. 15-13).
9. To install, reverse removal procedure. Be sure rear gearnut spring is properly engaged under adjuster upper channel before tightening rear gearnut upper attaching nut. In addition, be sure adjusters are "in phase" prior to installing seat assembly into body. (See step 6 under "Front Seat Assembly - Removal and Installation").

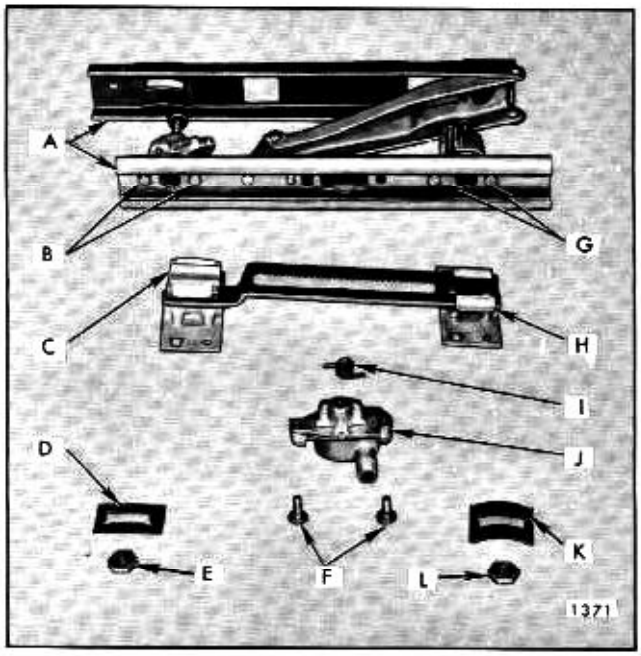


Fig. 15-14 — Six-Way Seat Adjuster Components - "B & C" Styles

A. Upper Channel Assembly
B. Rear Vertical Gearnut Attaching Screws
C. Lower Channel
D. Rear Spring
E. Rear Gearnut Attaching Nut
F. Actuator Attaching Screws
G. Front Vertical Gearnut Attaching Screws
H. Plastic Shoe
I. Actuator Locating Spring
J. Horizontal Actuator
K. Front Spring
L. Front Gearnut Attaching Screw

LOWER CHANNEL AND PLASTIC SLIDES—"B-C & E" Body

Removal and Installation

1. Remove horizontal actuator as previously described.
2. Slide seat adjuster lower channel from upper channel until lower channel is completely disengaged from upper channel. Remove plastic slides from lower channel.
3. If lower channel is being replaced with a new part, transfer plastic slides to new part (Fig. 15-14).
4. Apply "Lubriplate" (630AAW) or equivalent to track portion of upper channel, plastic slides and teeth on lower channel.
5. To install, reverse removal procedure. Be sure adjusters are "in phase" before installing seat assembly into body. (See step 6 under "Front Seat Assembly - Removal and Installation").

UPPER CHANNEL—"B-C & E" Body

Removal and Installation

1. Remove seat assembly from body and place upside down on a clean protected surface.
2. Detach three power drive cables from adjuster to be removed.
3. Remove screws securing seat adjuster to seat bottom frame and remove adjuster from seat assembly.
4. Remove horizontal actuator from upper channel as previously described.
5. Slide lower channel until it is completely disengaged from upper channel; then transfer lower channel to new upper channel.

   NOTE: Be sure sliding surfaces of upper and lower channels are properly lubricated with "Lubriplate" (630AAW) or equivalent.

6. Transfer front and rear gearnuts to new upper channel (Fig. 15-14).
7. Install horizontal actuator and actuator locating spring to new upper channel.
8. Install adjuster to seat bottom frame; then check all operations of adjusters. Be sure adjusters are "in phase" prior to installing seat assembly into body. (See step 6 under "Front Seat Assembly - Removal and Installation").
9. Install seat assembly into body. Operate seat through several complete cycles to insure proper operation.

HORIZONTAL AND VERTICAL DRIVE CABLES—"B-C & E" Body

Removal and Installation

1. Remove front seat assembly from body with attached adjusters, motor and transmission and place upside down on a clean protected surface.
2. Detach both horizontal and vertical cables from seat adjuster.
3. Remove screws securing horizontal and vertical cable end plate on side of transmission from which cables are being removed and remove cables from seat assembly; then disengage cables from end plate.
4. To install horizontal and vertical cables, reverse removal procedure. Make sure colored drive cables are installed to proper gearnuts and horizontal actuator as shown in Figure 15-7.

TRANSMISSION—"B-C & E" Body

Removal and Installation

1. Remove front seat assembly from body with attached adjusters, motor and transmission and place upside down on a clean protected surface.
2. Disconnect wire harness connector from transmission.
3. Remove screws securing horizontal and vertical cable end plate on both sides of transmission and detach cables from transmission.
4. Remove transmission to support attaching bolts; then disengage transmission from motor drive coupling and remove transmission from seat assembly.
5. To install, reverse removal procedure. Make sure seat harness is properly secured to seat.

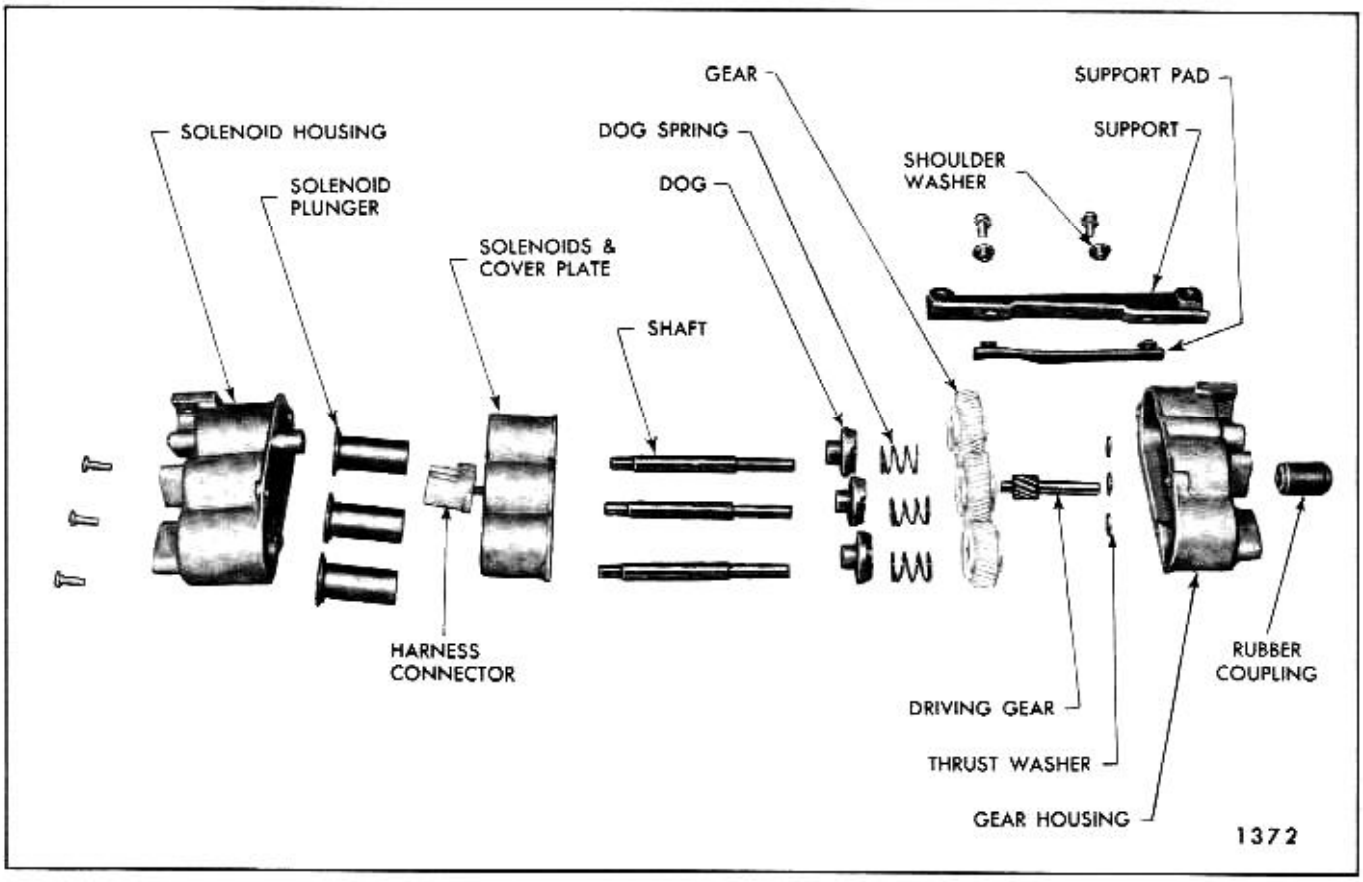


Fig. 15-15—Six-Way Seat Adjuster Transmission - "B & C" Style

DISASSEMBLY AND ASSEMBLY OF TRANSMISSION

1. Remove front seat adjuster transmission from seat assembly.

2. Remove screws securing gear housing to the solenoid housing; then, carefully separate housings and remove component parts of transmission assembly (Fig. 15-15).

3. To assemble transmission, reverse removal procedure.

   IMPORTANT: Prior to or during installation, lubricate frictional surfaces of driving gear, thrust washer, large gears, dog washers, gear shafts and solenoid plungers with "Lubriplate" (630AAW) or equivalent.

FRONT SEAT BACK

SEAT BACK ASSEMBLY—Four Door Style with Standard Full Width Seat

Removal and Installation

1. Remove front seat assembly from body and place it upside down on a clean protected surface. Remove seat side panels, where present.

2. Remove hog rings securing lower edge of seat back trim to seat cushion springs.

3. On "A-X & Z" body full width front seats, raise lower edge of seat back trim, detach cardboard breakover foundation and bend out tabs on seat back frame securing seat cushion springs (Fig. 15-16). Disengage springs from tabs.

4. At each end of seat, remove hog rings securing lower edge of seat back trim to seat bottom frame. Raise or turn back seat back trim to expose bolts securing seat back frame to seat cushion frame (Fig. 15-17). Where seat back lighter or courtesy light is present disconnect wire from seat cushion frame.

5. Place seat assembly in upright position. Then with a helper, holding seat back assembly, remove seat back attaching bolts on each side of seat and remove seat back assembly.

6. To install seat back assembly, reverse removal procedure.

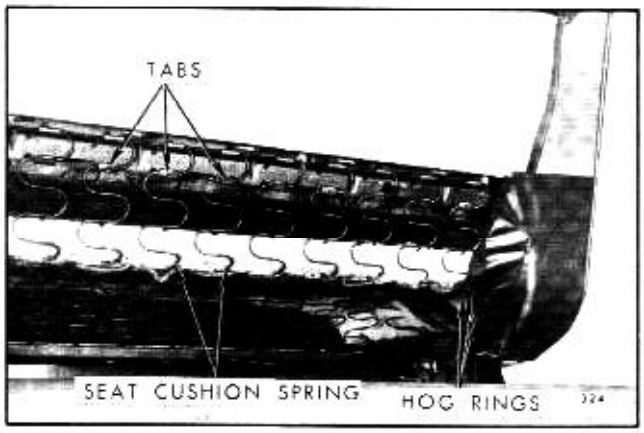


Fig. 15-16 — Seat Cushion-to-Back Spring Attachment

SEAT BACK ASSEMBLY—(Right or Left)—Two Door Style with Standard Full Width Seat

Removal and Installation

1. a. On seat with seat cushion side panel, remove side panel and detach seat cushion trim sufficiently to expose outer hinge pin and retainer.

   b. On seats with outer hinge arm cover, remove screw securing cover and remove cover.

2. Using a flat bladed tool carefully remove retainer securing seat back outer arm to hinge pin.

3. Carefully disengage seat back outer arm from hinge pin; then, tilt seat back forward and upward to disengage seat back inner arm from hinge pin and remove seat back from body.

4. To install seat back assembly, reverse removal procedure making sure washers are installed over hinge pins prior to installing seat back. If outer retainer is damaged, install new retainer.

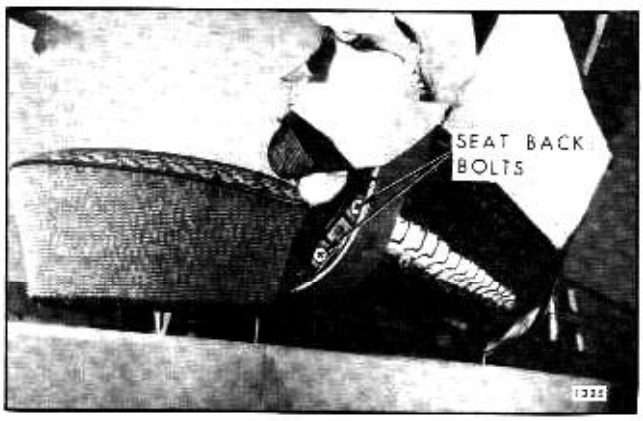


Fig. 15-17 — Seat Back Attachment

FRONT SEAT BACK ASSEMBLY (RIGHT OR LEFT)—"A" Body "39" Style Full Width Seat with Center Arm Rest

Removal and Installation

1. Remove front seat assembly from body and place upside down on a clean protected surface. Remove seat cushion side panels.

2. Remove hog rings securing lower edge of seat cushion trim bottom facing to seat cushion springs and frame (Fig. 15-18).

3. Remove outer hinge arm cover (Fig. 15-18); then, using a flat bladed tool carefully remove retainer securing seat back outer arm to hinge pin (Fig. 15-18).

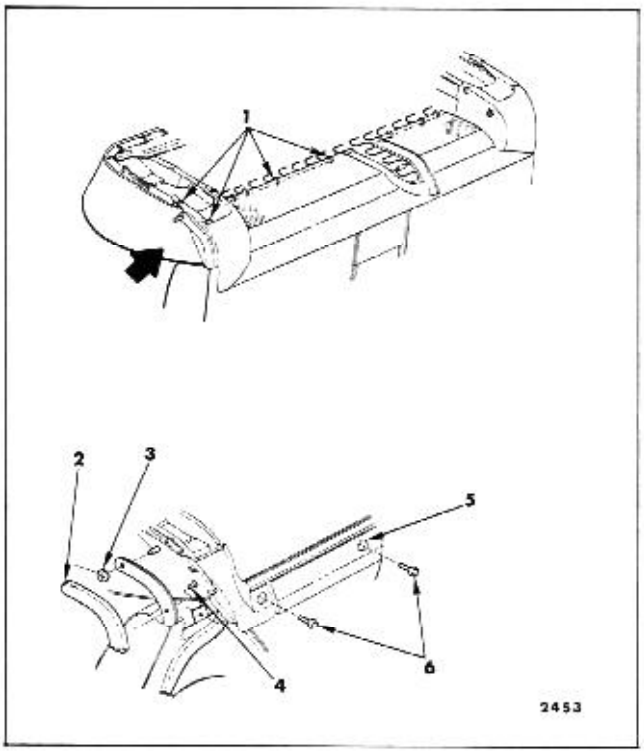


Fig. 15-18 — Seat Back Removal (Right or Left) 23739, 33839 and 44439 Styles

1. Hog Rings Securing Seat Cushion Trim Bottom Facing
2. Seat Back Outer Arm Cover
3. Seat Back Outer Arm Retainer
4. Seat Back Outer Arm Cover Fastener
5. Seat Back Attaching Bolt Access Hole
6. Seat Back Frame to Seat Cushion Frame Attaching Bolts

4. Turn back seat back trim to expose seat back attaching bolt access holes; then, through access holes remove seat back frame to seat cushion frame attaching bolts (Fig. 15-18).

5. Turn seat assembly right side up. Carefully disengage seat back outer arm from hinge pin; then, tilt seat back forward and upward to disengage seat back inner arm from hinge pin (Fig. 15-18) and remove seat back from body.

6. To install seat back assembly, reverse removal procedure. If seat back outer arm retainer is damaged, install new retainer.

FRONT SEAT BACK LOCK (RIGHT OR LEFT)—"A, B, X and Z" Body Two-Door Styles with Standard Full Width Seats

Removal and Installation

1. Remove front seat back assembly from front seat assembly, as previously described.

2. Remove front seat back outer side panel and side panel lower support, where present.

3. Remove seat back lock handle knob, lock handle escutcheon and lock handle (Fig. 15-19).

4. Remove hog rings securing seat back front and rear trim facings at bottom of seat back; then, turn up trim sufficiently to gain access to lock attaching bolts (Fig. 15-19).

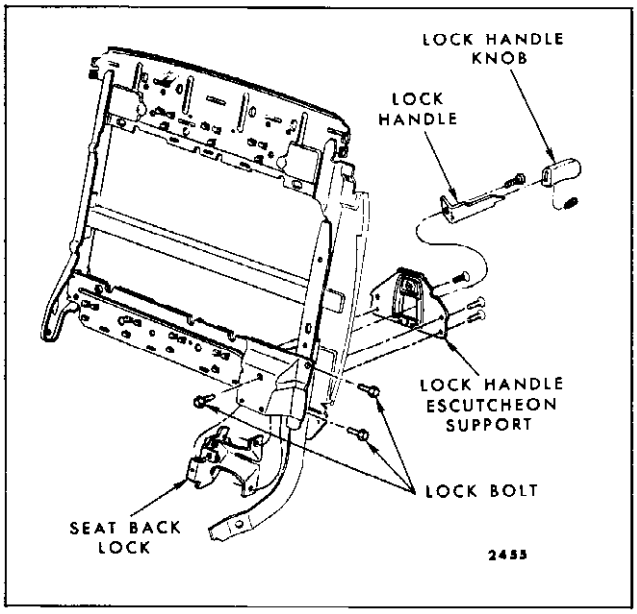


Fig. 15-19—Front Seat Back Lock - "A, B & X" Two-Door Styles, Standard Full Width Seat

5. Remove seat back lock attaching bolts (Fig. 15-19); then, remove lock assembly from bottom of seat back.

6. To install, reverse removal procedure. Check for proper operation of seat back lock.

FRONT SEAT BACK LOCK, LOCK CONTROL AND LOCK ROD—"C & E" Body Two-Door Styles with Standard Full Width Seat

Removal and Installation

1. Remove front seat back assembly, as previously described.

2. On styles with seat back panel, remove seat back lock push button escutcheon and remove lock push button and ferrule; then, remove seat back panel (See Fig. 15-20). On styles with

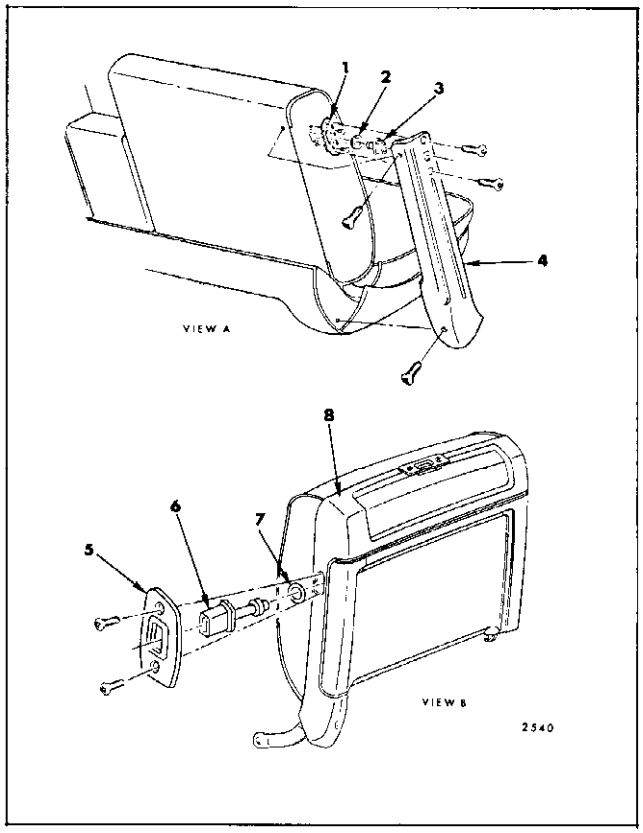


Fig. 15-20—Seat Back Lock Removal - "C & E" Body Standard Seat

View "A" - Typical of Styles with Seat Back Side Panels

1. Trim Retainer
2. Ferrule
3. Push Button
4. Side Panel

View "B" - Typical of Styles with Seat Back Panel

5. Escutcheon
6. Push Button
7. Ferrule
8. Seat Back Panel

seat side panel, remove seat side panel; then, remove lock push button and ferrule (Fig. 15-20).

3. Remove seat back outer panel. Remove hog rings securing seat back panel or seat back trim panel along bottom and sides of seat. If removing lock, turn up seat back trim sufficiently to gain access to lock attaching bolts. If removing lock control or rod turn up trim to gain access to lock control bolts (See Figure 15-21).

4. a. To remove seat back lock, disengage lock rod clip at lock (Fig. 15-21) and detach rod from lock. Remove lock attaching bolts (Fig. 15-21) and remove lock from bottom of seat back.

   b. To remove seat back lock control, disengage lock rod clip at control (Fig. 15-21) and detach lock rod from control. Remove lock control attaching bolts (Fig. 15-21) and remove lock control from seat back.

   c. To remove lock rod, disengage lock rod clip at lock and at control (Fig. 15-21), detach lock rod from control and lock and remove lock rod from seat back.

5. To install seat back lock, lock control or lock rod, reverse removal procedure. Make certain lock rod and clips are properly engaged and locked at lock lever and lock control lever. Check for proper operation of seat back lock.

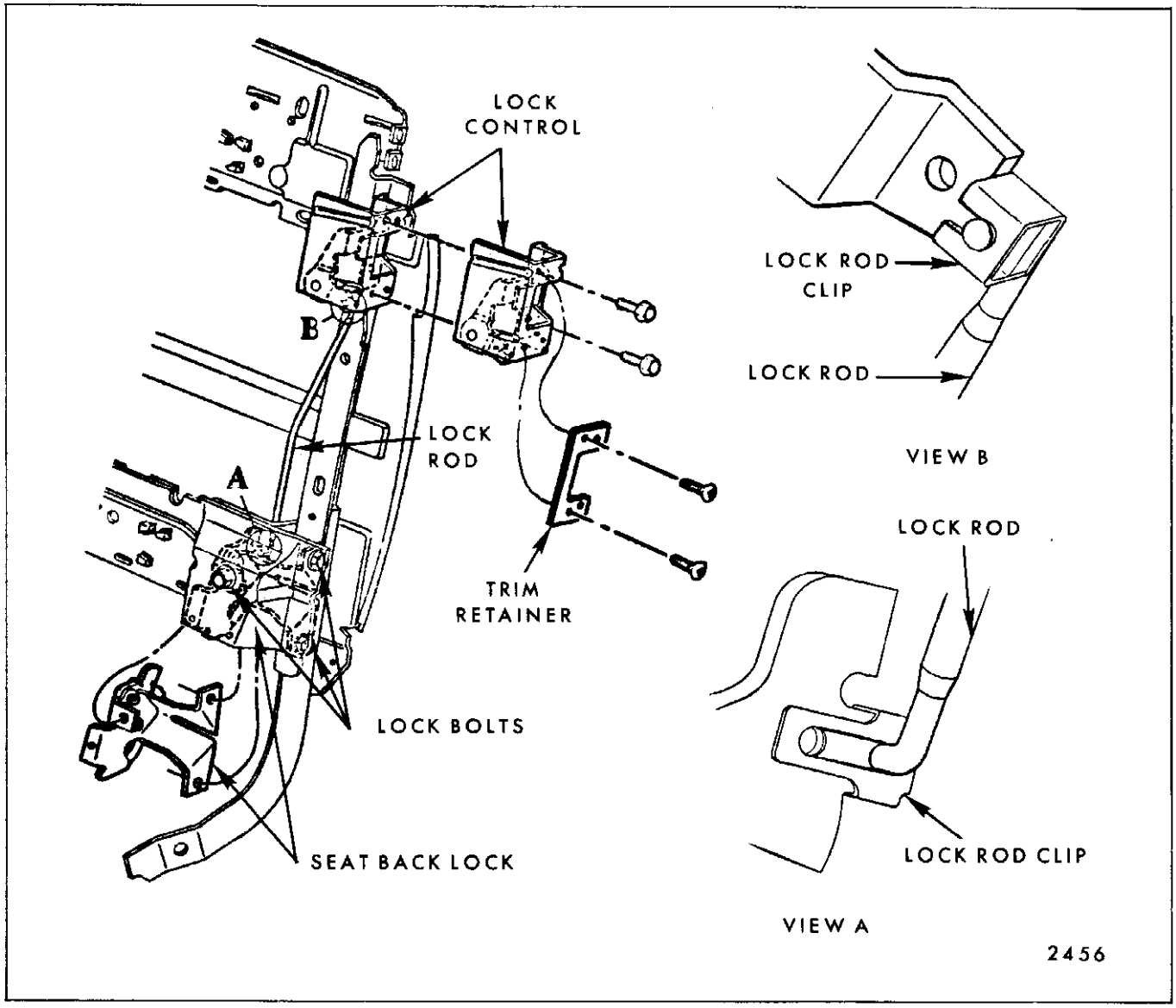


Fig. 15-21 — Front Seat Back Lock - "C & E" Body Two-Door Styles, Standard Full Width Seat

SEAT BACK HEAD REST—Standard Full Width Seat (Drivers or Passengers Side)

The standard full width seat back headrest is secured by a support which is screwed or welded to the seat back frame. The support incorporates a detent spring which allows the headrest to be raised or lowered to three different height positions. The headrest can be removed from the seat back for storage by pulling the headrest to the full up position; then move headrest towards right side of seat, pull headrest up and remove from seat back. To remove and install the headrest support, the seat back trim must be removed and the support-to-seat back frame screws removed.

NOTE: On styles where the support is welded to the seat back frame, the welds must be cut to remove the support.

FRONT SEAT CENTER ARM REST ARM REST AND CURTAIN ASSEMBLY—Front Seat with Standard Full Width Seat Back

Removal and Installation

1. Place center arm rest in down position.

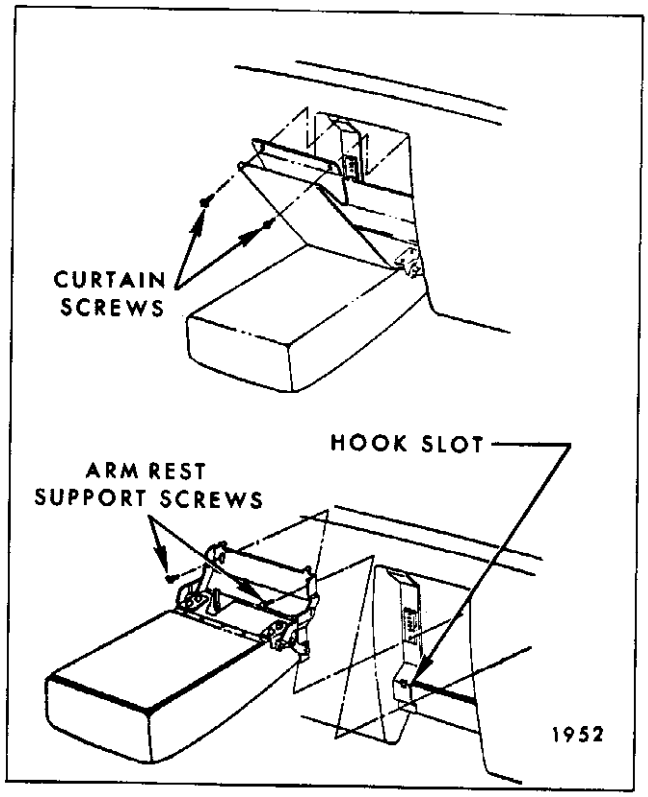


Fig. 15-22—Front Seat Center Arm Rest (Full Width Seat Back)

2. At top of arm rest curtain, remove two screws securing curtain to seat back frame (Fig. 15-22) and pull curtain forward to expose screws securing arm rest to support linkage (Fig. 15-22).

3. Remove arm rest-to-support linkage screws (Fig. 15-22) and remove arm rest and curtain from seat.

4. To install, reverse removal procedure.

ARM REST AND SUPPORT ASSEMBLY—Front Seat with Standard Full Width Seat Back

Removal and Installation

1. Place center arm rest in down position.

2. At top of arm rest curtain, remove two screws securing curtain to seat back frame (Fig. 15-22).

3. Remove two screws securing arm rest to supports on seat back (Fig. 15-22); then, carefully lift arm rest and linkage upward to disengage hooks of arm rest from slots in supports and remove assembly from seat.

4. To install, reverse removal procedure. Prior to installing curtain screws check alignment and operation of arm rest.

FRONT SEAT CENTER ARM REST AND CURTAIN ASSEMBLY—Front Seat with Notch Down Seat Back and Strato Front Seat

Removal and Installation

1. Lower arm rest to approximately 2 inches short of full down position.

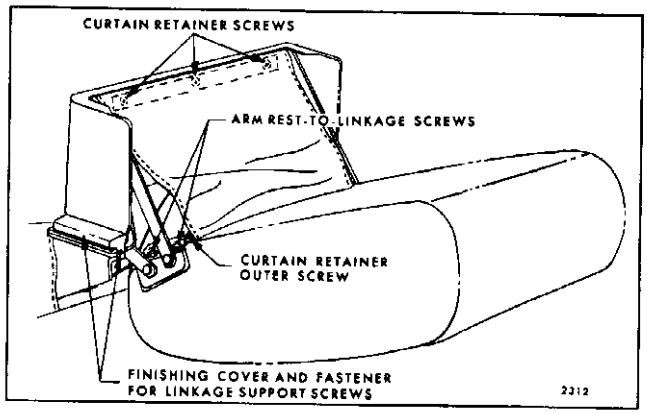


Fig. 15-23—Front Seat Center Arm Rest (Notch Down Seat Back)

2. Carefully pull curtain back sufficiently to remove screws securing center arm rest to support linkage and loosen outer screws securing curtain retainer to arm rest (Fig. 15-23).

3. Remove screw finishing covers (Fig. 15-23). Disengage arm rest from support linkage and turn arm rest upside down on trim panel finishing cover with curtain attached. Remove three screws securing curtain retainer to trim panel finishing cover (Fig. 15-23); then remove arm rest and curtain from seat.

4. To install, reverse removal procedure.

FRONT SEAT CENTER ARM REST ASSEMBLY—Front Seat with Notch Down Seat Back and Strato Front Seat

Removal and Installation

1. Place arm rest in up position.

2. Working between arm rest and seat back, remove fastener at both sides of arm rest securing front end of screw finishing covers (Fig. 15-23).

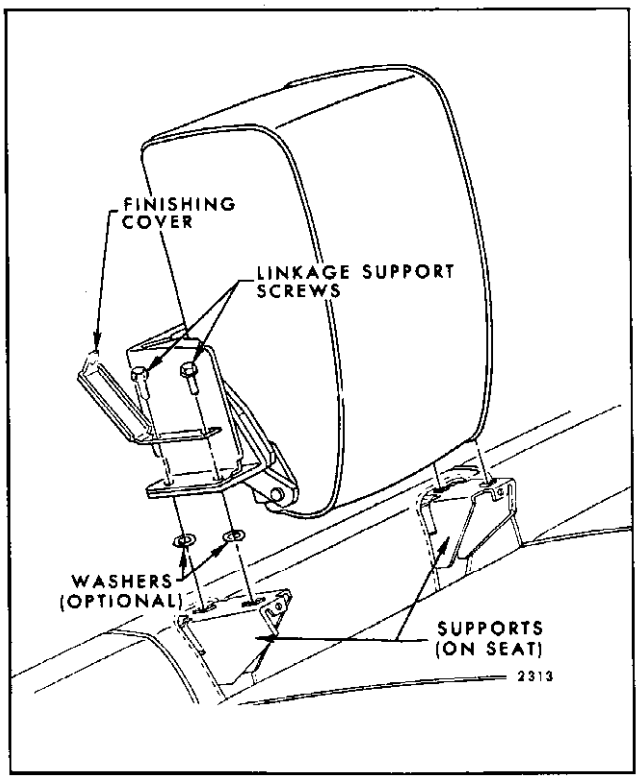


Fig. 15-24—Front Seat Center Arm Rest Support (Notch Down Seat Back)

3. Working at rear of seat, push one seat back to full forward position. Carefully pull up front of screw finishing cover sufficiently to expost arm rest support attaching screws; then remove screws (Fig. 15-24). Repeat this operation on opposite side of arm rest; then carefully remove arm rest assembly, including trim panel finsihing cover, from seat.

   NOTE: If washers are present between arm rest support and supports on seat (Fig. 15-24), note location and number of washers used to facilitate installation in same position. Washer(s) are used to align arm rest to front seat back(s).

4. To install, reverse removal procedure. Prior to bending down screw finishing covers check alignment and operation of arm rest. Where necessary to align arm rest with seat back(s) install washer(s), as required, between arm rest support and supports on seat (See Fig. 15-24).

FRONT SEAT CENTER ARM REST SUPPORT—Front Seat with Notch Down Seat Back and Strato Front Seat

Removal and Installation

1. Remove center arm rest assembly.

2. Remove screws securing arm rest to support (Fig. 15-23); then, remove support from arm rest, finishing cover and curtain.

3. To install, reverse removal procedure. Prior to bending down support screw finishing covers check alignment and operation of arm rest. Where necessary to align arm rest with seat back(s), install washer(s), as required, between arm rest support and supports on seat (See Fig. 15-24).

FOOT REST ASSEMBLY—Cadillac 68169 Style

The folding foot rest assemblies shown in Fig. 15-25 are secured to the seat back by hinges. To remove foot rest assembly, remove hinge-to-seat back attaching screws from both sides of foot rest (Fig. 15-25) and remove foot rest assembly from seat back. To remove trimmed foot rest board remove hinge-to-board attaching screws (Fig. 15-25) and remove hinges from foot rest board. To install, reverse removal procedure. When installing foot rest hinge-to-seat back attaching screws, install machine thread screws to upper attaching hole at each hinge.

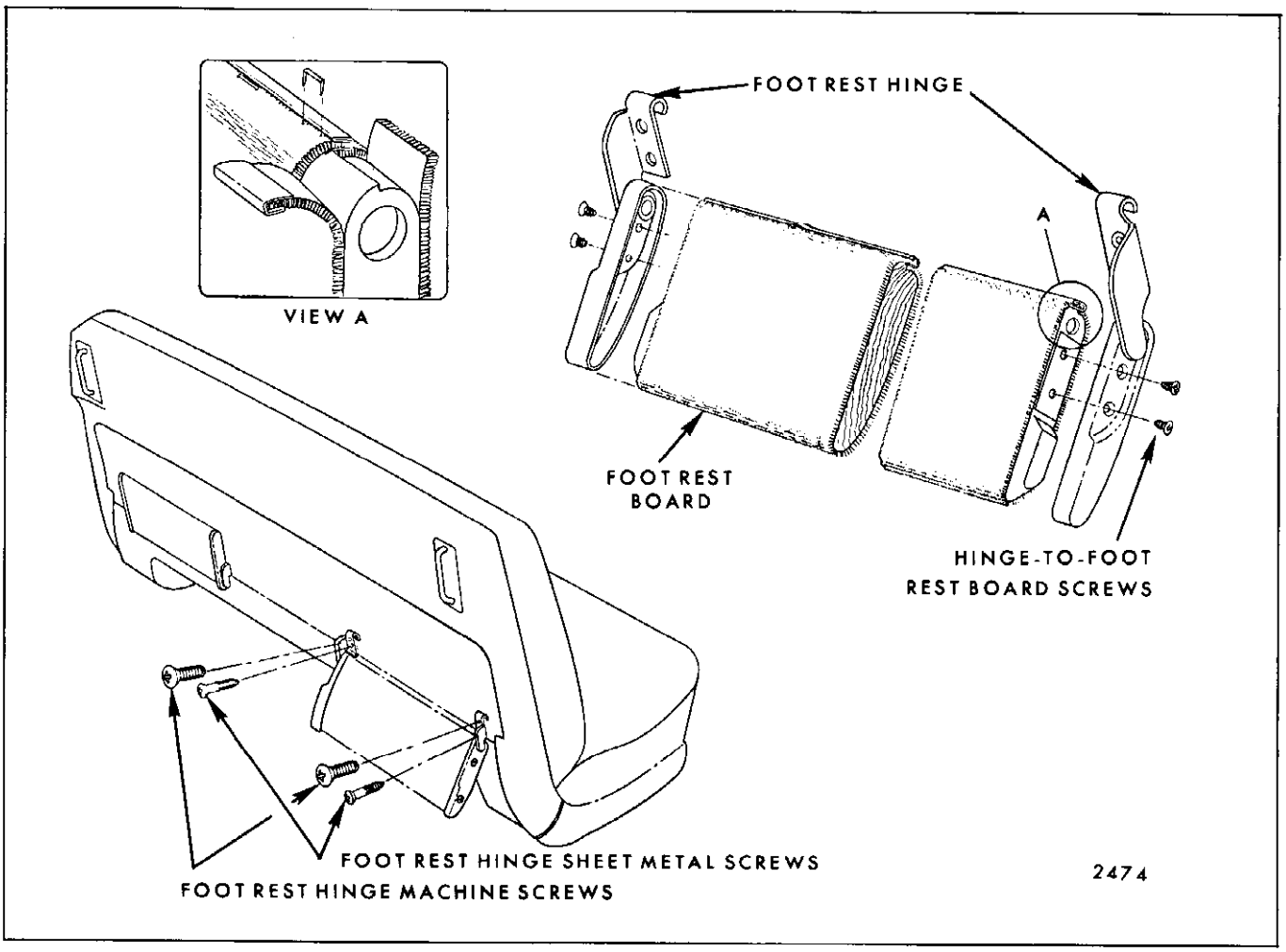


Fig. 15-25—Foot Rest Installation - Cadillac 68169 Styles

STRATO FRONT SEATS

STRATO FULL-WIDTH, STRATO BUCKET AND STANDARD BUCKET SEATS

DESCRIPTION

Strato seats are available on Chevrolet "A, B and X", Pontiac, Oldsmobile, Buick and Cadillac Styles. Chevrolet "F and Z" body styles have a standard bucket seat. All two-door style strato full-width or bucket seats and standard bucket seats incorporate seat back locks on both the drivers and passengers seat back. On Chevrolet "F and Z" standard bucket seats the seat back lock is actuated by a control lever located at lower outboard corner on the rear of the front seat back. On the standard strato seats (two-door styles) the seat back lock is actuated by a control button located at the upper outer side of the seat back.

Optional adjustable head rest are available on all strato seats. On Pontiac, Oldsmobile, Buick and Cadillac styles, a reclining seat back is available on the passengers side. The reclining seat back is operated by a control lever located at the right side of the seat cushion. When the control lever is pulled upward the seat back can be reclined to any desired position up to approximately 30° from normal position. The head rest, which is available on all strato seat backs can be adjusted to four vertical positions and can be completely removed from the seat back.

STRATO FULL-WIDTH FRONT SEAT ASSEMBLY

Removal and Installation

The removal and installation procedures for the strato full width seat assembly, seat adjuster and

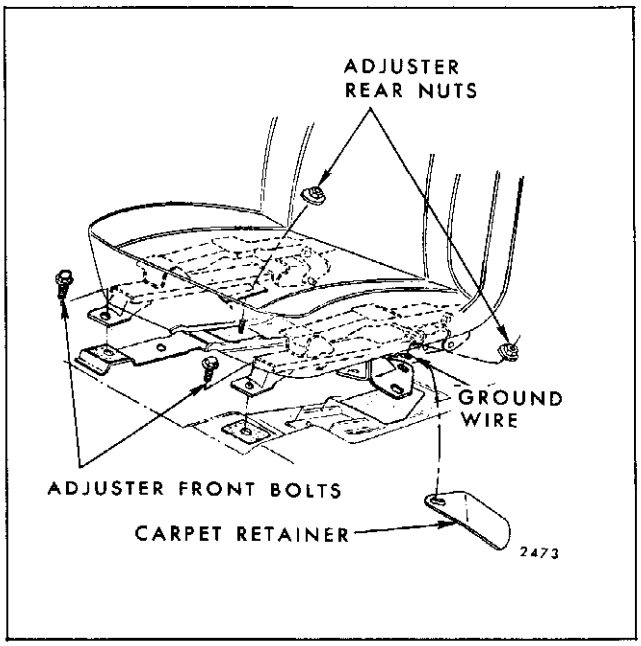


Fig. 15-26—Bucket Seat Floor Pan Attachment - "A, F, X & Z" Styles

seat adjuster components are the same as for the standard full width front seat assembly - Refer to the appropriate section under "Standard Seats".

MANUALLY OPERATED BUCKET SEAT ASSEMBLY

Removal and Installation

1. Operate seat to full rearward position.
2. Turn back floor carpeting sufficiently to expose seat adjuster-to-floor pan attaching nuts or bolts (Fig. 15-26 and 15-27).
3. Operate seat to full rearward position. Remove adjuster-to-floor pan front attaching bolts (Fig. 15-26 and 15-27). Operate seat to full forward position. Remove adjuster-to-floor pan rear attaching bolts and remove seat assembly from body.
4. To install, reverse removal procedure. Check operation of seat adjusters to full limits of travel.

POWER OPERATED HORIZONTAL OR FOUR-WAY BUCKET SEAT ASSEMBLY

The two-way and four-way (tilt) seat adjusters are actuated by a 12 volt, reversible shunt wound motor with a built-in circuit breaker.

The four-way seat adjuster operating mechanism incorporates a transmission assembly which includes two solenoids and two drive cables leading to the seat adjusters. One solenoid controls the vertical movement of the seat while the other solenoid controls the horizontal movement of the seat. When the control switch is actuated, the motor drives the transmission by means of a belt and one of the transmission solenoids are energized simultaneously. The solenoid plunger then engages with the drive cables and operates both adjusters. When the adjusters reach their limit of travel, the drive cables stop their rotating action and torque is absorbed by the rubber belt connecting the motor and transmission. When the switch contacts are opened, a return spring returns the solenoid plunger to its original position disengaging it from the driving gear dog.

Removal and Installation

1. Operate seat to full forward position. On four-way power seats operate seat to full up position. Remove seat cushion side panels, where present. Where seat adjuster track covers are present, carefully pry out track cover snap-on retainers with a flat-bladed tool and remove track covers.
2. Where necessary, remove sill plates and turn back floor carpeting to expose seat adjuster-to-floor pan attaching nuts and bolts.

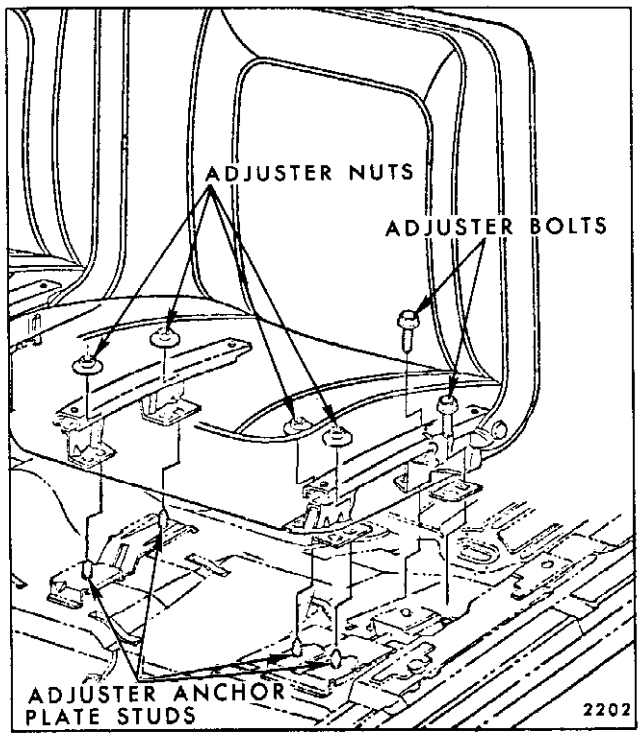


Fig. 15-27—Manually Operated Bucket Seat Pan Attachment - "B & C" Styles

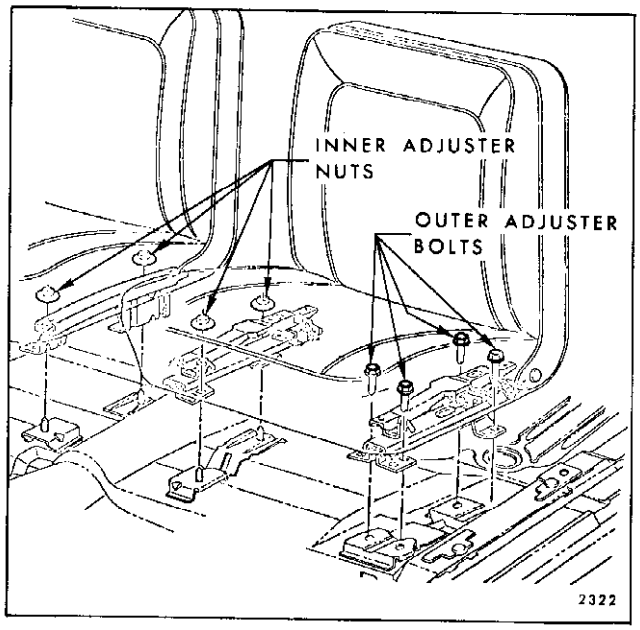


Fig. 15-28—Four-Way Bucket Seat Floor Pan Attachment - "B & C" Styles

3. Remove seat adjuster-to-floor pan rear attaching bolts (Figs. 15-26 and 15-28).

4. Operate seat to full rearward position. Remove seat adjuster-to-floor pan front attaching bolts (Fig. 15-26 and 15-28). Tilt seat rearward sufficiently to disconnect seat harness feed connector and detach harness from clip on floor pan; then remove seat assembly from body.

5. To install, reverse removal procedure. Make sure ground wire is secured under adjuster inboard rear attaching nut or bolt. Check operation of seat adjusters to full limits of travel. On "A" Body Styles make sure floor carpet is properly positioned around rear supports of adjuster prior to installing carpet retainer on adjuster stud and adjuster rear attaching nuts.

PASSENGERS FRONT BUCKET SEAT BACK STOP CABLE OR SPRING—"F" Body Styles

Removal and Installation

1. Using a flat bladed tool inserted between passengers seat back outer hinge arm cover and hinge arm, carefully disengage upper portion of cover from fastener and remove cover from outer hinge arm (Fig. 15-29).

2. At outer side of passengers bucket seat cushion, remove screw securing seat back stop cable and trim protector washer to seat cushion frame (Fig. 15-29).

3. Remove bolt securing seat back stop cable and spring to seat back outer hinge arm (Fig. 15-29) and remove cable and spring from seat.

4. To install seat back stop cable or spring, reverse removal procedure. Make certain spring is engaged with stop cable and seat back hinge arm, as shown in Fig. 15-29).

FRONT BUCKET SEAT BACK ASSEMBLY (RIGHT OR LEFT)—Standard Bucket Seat—"F and Z" Styles

Removal and Installation

1. Remove front seat assembly as previously described.

2. Using a flat bladed tool inserted between seat back hinge arm and hinge arm cover, carefully disengage upper portion of cover from fastener and remove cover from both inner and outer hinge arms (See Fig. 15-29). If removing passengers seat back on "F" Styles remove screw securing seat back stop cable and trim protector washer to seat cushion frame (Fig. 15-29).

3. Carefully disengage and remove retainer securing both inner and outer hinge arms to seat cushion hinge pins (Fig. 15-29).

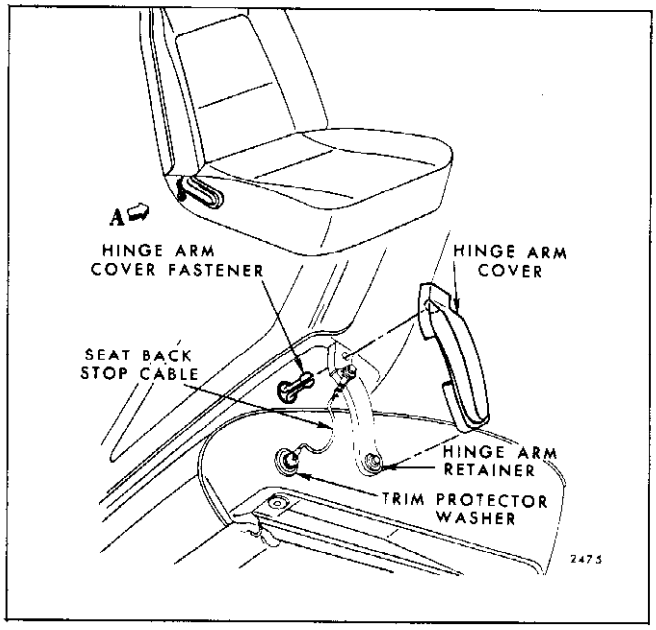


Fig. 15-29—Seat Back and Cable Stop

4. Pull seat back hinge arms outward sufficiently to disengage hinge arm from hinge pin and remove seat back from seat cushion.

5. To install, reverse removal procedure.

FRONT SEAT BACK LOCK (RIGHT OR LEFT)— "F and Z" Body Standard Bucket Seats

Removal and Installation

1. Remove front seat back assembly, as previously described.

2. Remove seat back lock handle knob, lock handle escutcheon and lock handle (See Fig. 15-30).

3. Remove seat back panel and detach seat back trim outer side facing sufficiently to gain access to lock attaching bolts (Fig. 15-30).

4. Remove seat back lock attaching bolts (Fig. 15-30) and remove seat back lock from seat back.

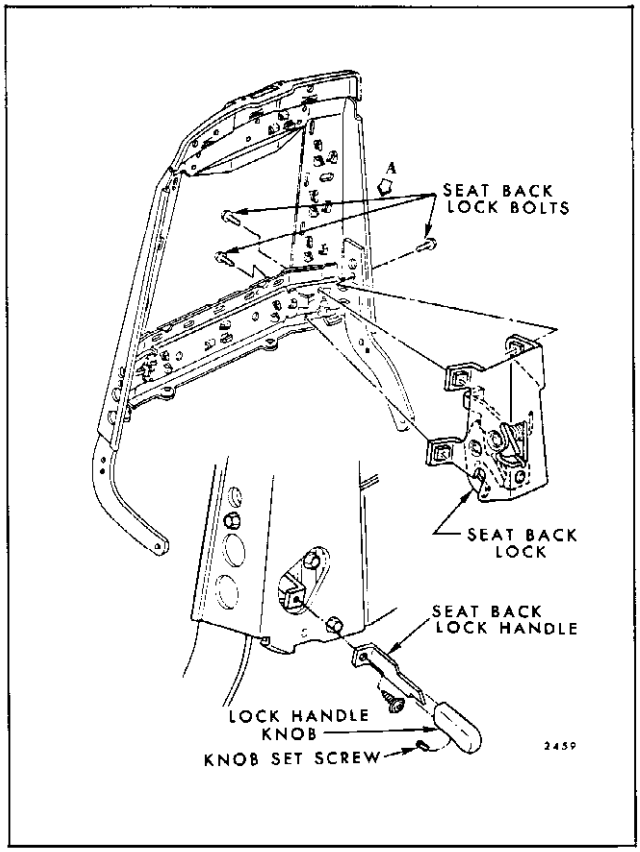


Fig. 15-30 — Seat Back Lock - "F & Z" Bucket Seat

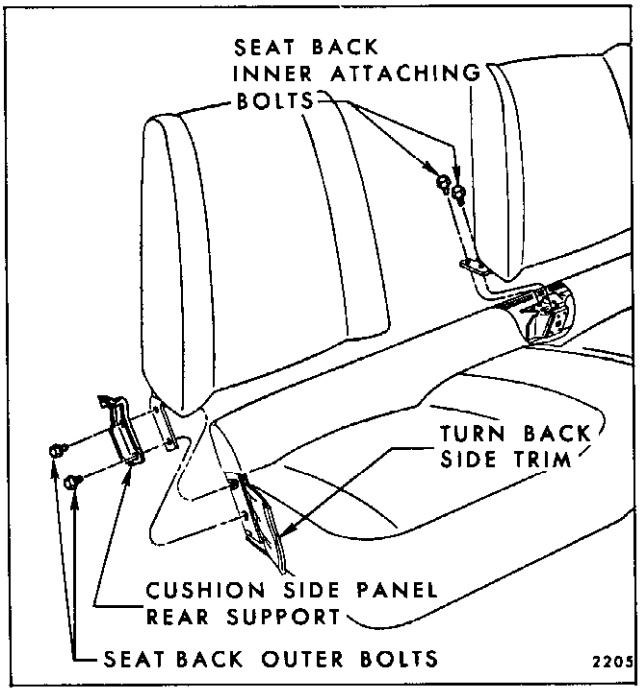


Fig. 15-31 — Strato Full Width Seat Back Attachment

5. To install, reverse removal procedure. Check for proper operation of seat back lock.

"STRATO" FRONT SEAT BACK ASSEMBLY (RIGHT OR LEFT)—Full Width Seat— All Styles Except 16639 Style

Removal and Installation

1. Remove front seat assembly as described under, "Full Width Front Seat Assembly - Removal and Installation".

2. At side of seat from which seat back is being removed, remove hog rings securing cushion side trim at rear of seat and fold trim forward sufficiently to expose two seat back outer attaching bolts (Fig. 15-31).

3. At inboard side of seat back, remove screw securing inner attaching bolt cover plate and remove cover plate.

4. Remove seat back inner attaching bolts; then, remove outer attaching bolts and remove seat back assembly from seat.

5. To install seat back assembly, reverse removal procedure. Make certain seat side panel support (Fig. 15-31) is secured under seat back outer attaching bolts.

"STRATO" FRONT SEAT BACK ASSEMBLY (RIGHT OR LEFT)—Full Width Seat—16639 Style

Removal and Installation

1. Remove seat assembly from body, as previously described, and place seat right side up on a clean surface.

2. Remove seat side panel on side from which seat back is being removed. Remove hog rings securing seat cushion trim side facing at rear of seat and turn side facing forward sufficiently to expose seat back outer arm attaching bolts (Fig. 15-31).

3. Using a suitable hooked end tool between seat back and seat cushion, at location "A", remove retaining ring locking seat back at inner hinge (see View "A", Fig. 15-32).

4. Remove seat back outer arm attaching bolts (Fig. 15-31).

5. Carefully tilt seat back forward. Remove inner hinge bolt cover plate. Remove inner hinge bolts (Fig. 15-32) and carefully remove seat back from seat assembly.

6. To install, reverse removal procedure.

   NOTE: It is important that removal procedure is reversed step by step when installing seat back assembly.

STRATO FRONT SEAT BACK PANEL—Four-Door Styles with Non-Folding Seat Back

Removal and Installation

1. Remove front seat assembly and front seat back assembly as previously described.

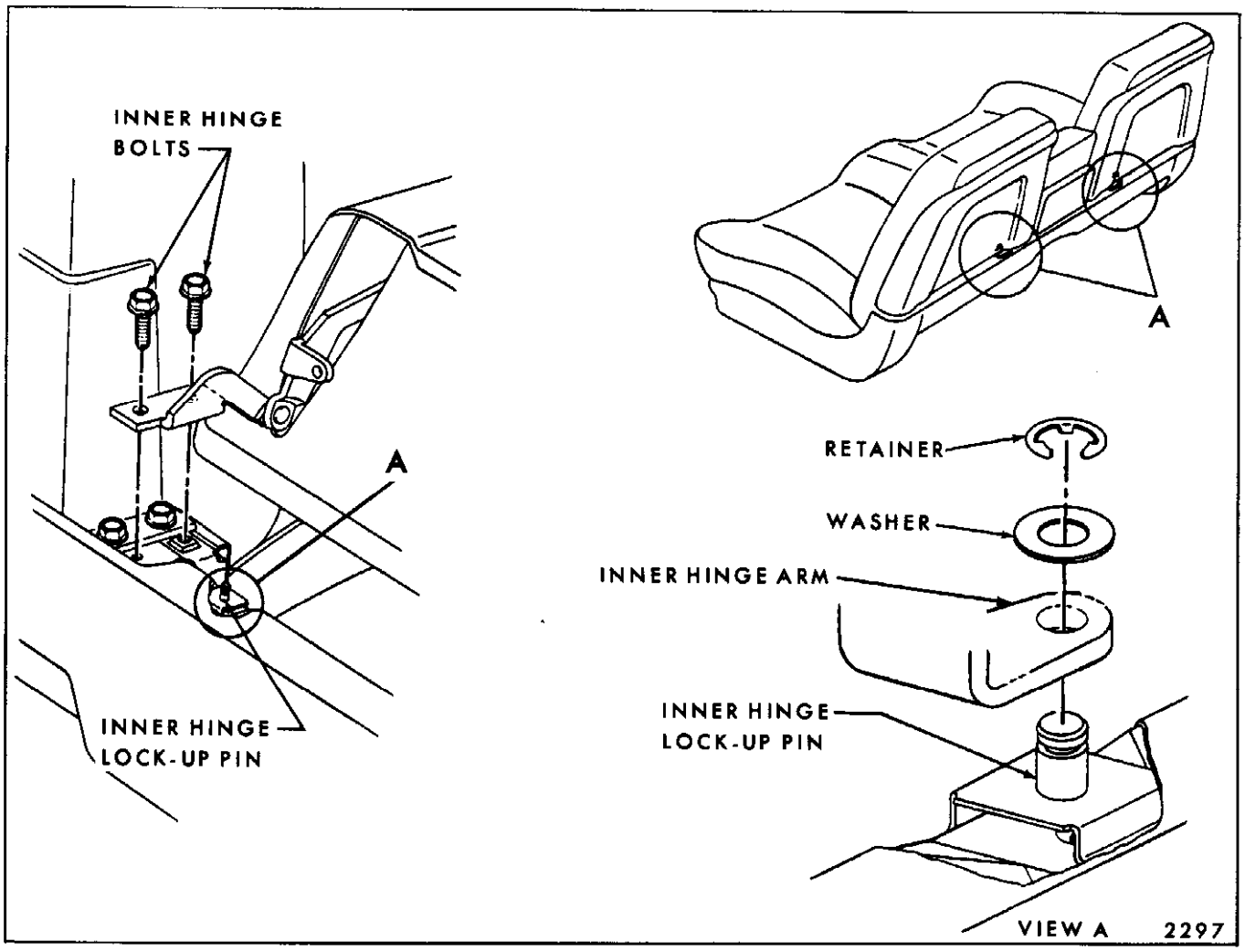


Fig. 15-32—Strato Full Width Seat Back Attachment - Chevrolet 16639 Style

2. Remove two screws securing bottom of seat back panel to seat back frame (Fig. 15-33).

3. Pull bottom of seat back panel outward and lift panel upward to disengage panel from upper retainers; then, remove panel from seat back.

4. To install seat back panel, reverse removal procedure. Check for proper operation of seat back lock.

STRATO FRONT SEAT BACK PANEL— Two-Door Styles with Folding Seat Back

Removal and Installation

1. Remove seat back lock push button escutcheon attaching screws and remove push button escutcheon, push button and ferrule (Fig. 15-34).

2. If seat back is equipped with head rest, depress retaining springs and remove head rest from seat back.

3. Tilt seat back forward and remove two screws securing bottom of seat back panel to seat back frame (See Fig. 15-33).

4. Pull bottom of seat back panel outward and lift panel upward to disengage panel from upper retainers; then, remove panel from seat back.

5. To install seat back panel, reverse removal procedure.

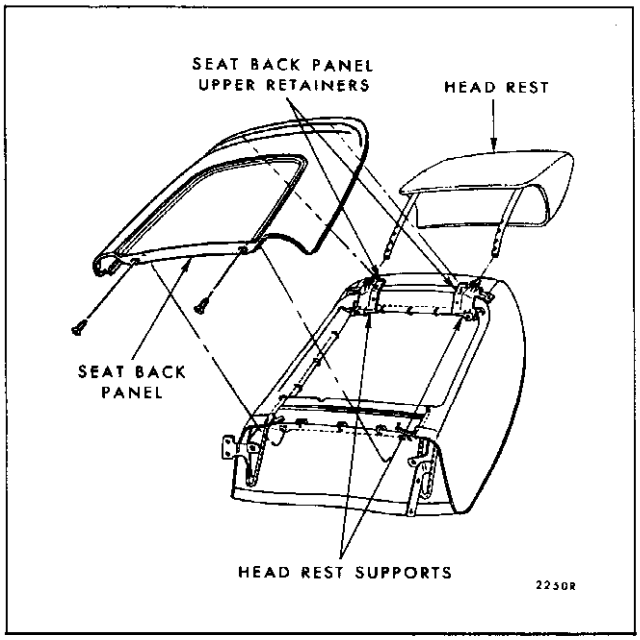


Fig. 15-33—Strato Seat Back Panel and Headrest

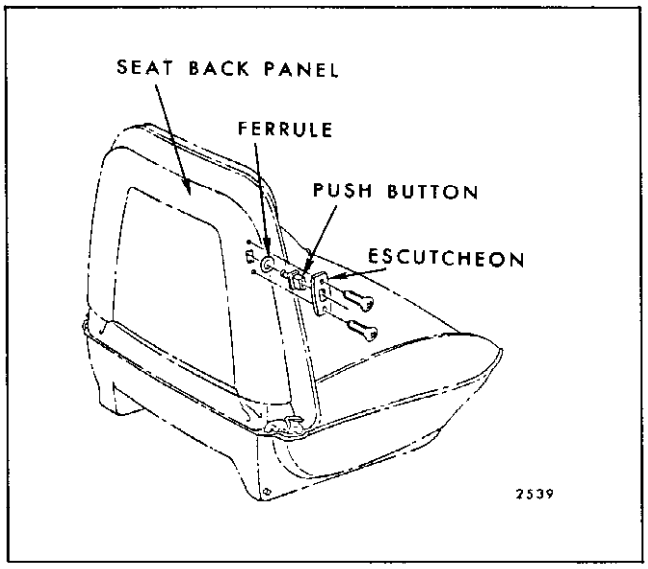


Fig. 15-34—Strato Seat Back Lock Push Button

STRATO SEAT BACK HEADREST

Description

All reclining seat backs are equipped with a headrest which is adjustable to four different positions. The Strato headrest is also available as an option on all Strato design seats on either the drivers or passengers seat back. When desired, the headrest can be removed from the seat back by depressing the retaining spring at each headrest support finishing escutcheon (See Fig. 15-35) and pulling each side of headrest up past the locked position.

STRATO SEAT BACK HEADREST SUPPORT GUIDE TUBE

Removal and Installation

1. Remove headrest assembly from seat back.

2. Remove support finishing escutcheon screw and remove escutcheon (Fig. 15-35).

3. Carefully pull plastic support guide tube out of support. If guide tube hangs up on detent spring insert a screwdriver into guide and depress detent spring sufficiently to remove guide tube.

4. To install support guide tube reverse removal procedure. Make certain lower end of plastic guide is inserted into hole in bottom of support and that cut out in guide for detent spring is

facing rearward (Fig. 15-35). Check for proper operation of headrest.

STRATO SEAT BACK HEADREST SUPPORTS

Removal and Installation

1. Remove headrest assembly from seat back.
2. Remove seat back panel, as previously described.
3. Remove headrest support finishing escutcheon screw and remove escutcheon (Fig. 15-35).
4. Remove four remaining support attaching screws (Fig. 15-35), and remove support from seat back. Where required, remove support guide from support.
5. To install headrest support, reverse removal procedure. Make certain lower end of plastic guide is inserted into hole in bottom of support and that cut out in guide for detent spring is facing rearward (Fig. 15-35). Prior to tightening support attaching screws, install headrest into supports and align support(s) with headrest arm(s); then, tighten support screws.
6. Check for proper operation of headrest.

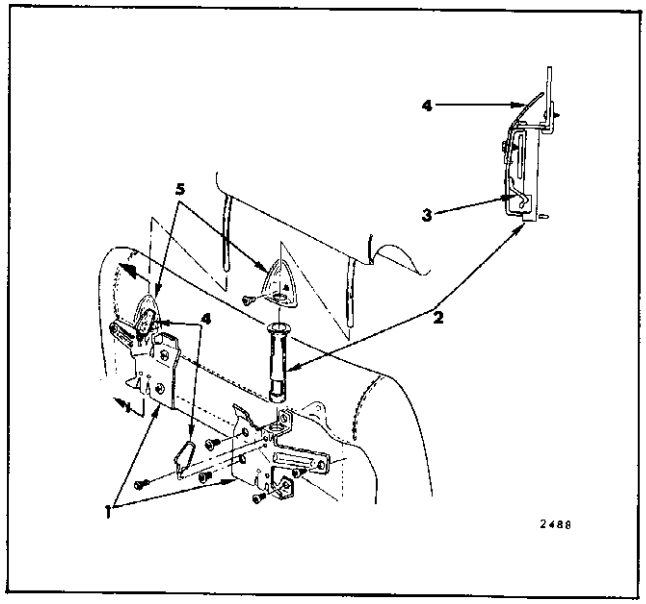


Fig. 15-35 — Strato Seat Back Headrest Supports

1. Headrest Supports
2. Plastic Guide Tube
3. Detent Sprint
4. Retaining Spring
5. Finishing Escutcheon

STRATO BUCKET SEAT BACK ASSEMBLY— All Except "F and Z" Body Styles and Strato Reclining Seat Back

Removal and Installation

1. Remove seat assembly from body, as previously described and place on a clean protected surface.
2. With seat side panels removed, remove hog rings securing seat cushion trim at rear of seat and along bottom of seat and turn back trim sufficiently to expose seat back hinge-to-seat cushion frame attaching bolts (Fig. 15-36).
3. Remove seat back hinge-to-seat cushion frame attaching bolts (Fig. 15-36) from both sides of seat and remove seat back assembly from seat cushion.
4. To install seat back assembly, reverse removal procedure. Check for proper operation of seat back lock.

STRATO FRONT SEAT BACK LOCK, LOCK CONTROL AND LOCK ROD— (Two-Door Style Full Width Strato Seat and Strato Bucket Seats Except Reclining Strato Seat Backs)

Removal and Installation

1. Remove front seat assembly and front seat back assembly, as previously described. Remove seat back panel as previously described.
2. Remove hog rings securing seat back trim to seat back side bar; then, turn back trim sufficiently to gain access to seat back lock and lock striker attaching bolts (Fig. 15-37).
3. a. To remove seat back lock, disengage lock rod clip at lock (Fig. 15-37) and detach rod from lock. Remove bolts securing seat back lock to seat back outer hinge (Fig. 15-37) and remove lock from seat.

   b. To remove seat back lock control, disengage lock rod clip at control (Fig. 15-37) and detach lock rod from control. Remove lock control attaching bolts (Fig. 15-37) and remove lock control from seat back.

   c. To remove seat back lock rod, disengage lock rod clip at lock and at control (Fig. 15-37), detach lock rod from control and lock and remove from seat back.

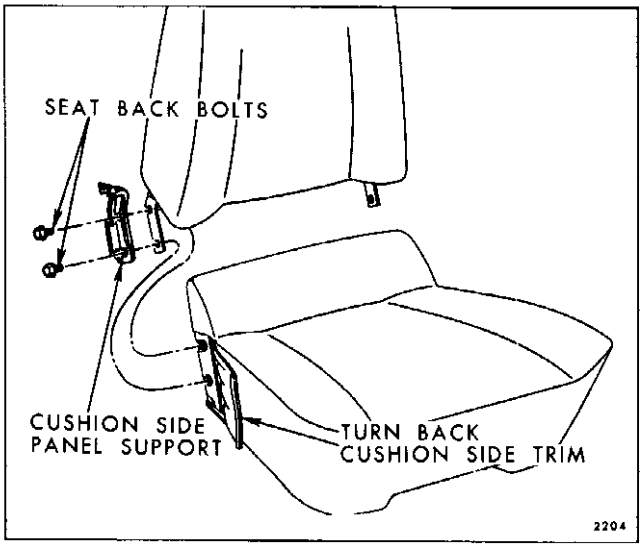


Fig. 15-36 — Bucket Seat Back Removal (Without Reclining Seat Back) - All Except Corvair

4. To install seat back lock, lock control or lock rod, reverse removal procedure. Make certain lock rod and clips are properly engaged and locked at lock lever and lock control lever. Check for proper operation of seat back lock.

RECLINING FRONT SEAT BACK

DESCRIPTION

The reclining seat back which is available on the passenger seat of the Strato design front seats can be reclined approximately 30 degrees from the normal seat back position. The reclining unit is a friction operating mechanism and is actuated by a control handle and cable at the right side of the seat.

When the control handle is pulled upward the control cable unlocks the reclining positioning unit in the seat back allowing the seat back to be reclined, by means of rearward pressure on the seat back, to a maximum of approximately 30 degrees or until the control handle is released. When the control handle is released the reclining positioning unit is locked and will not allow the seat back to be reclined further. When the control handle is pulled up and there is no rearward pressure on the seat back, the assist spring in the reclining positioning

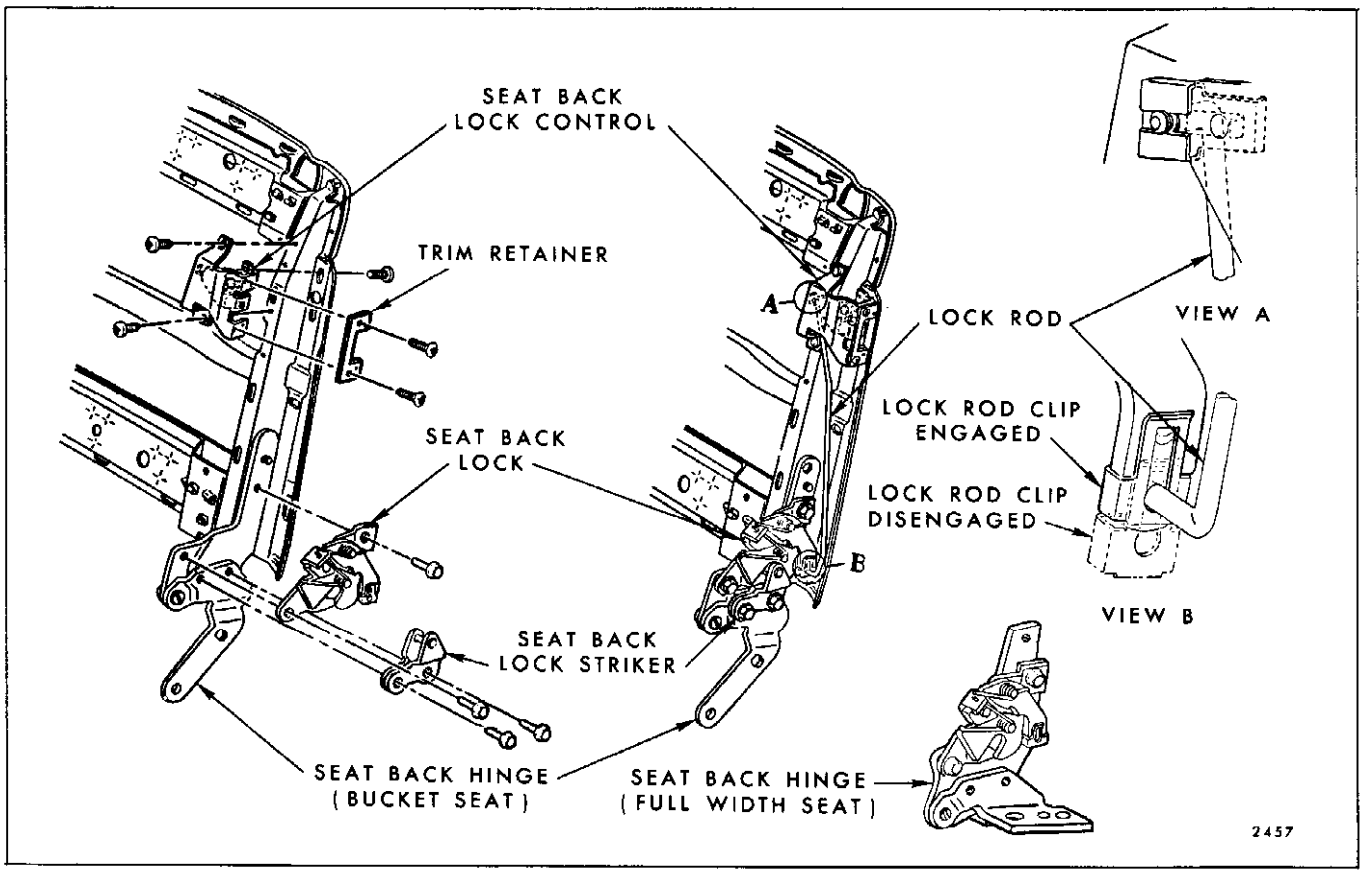


Fig. 15-37 — Seat Back Lock, Lock Control and Lock Rod - Strato Full Width and Bucket Seats

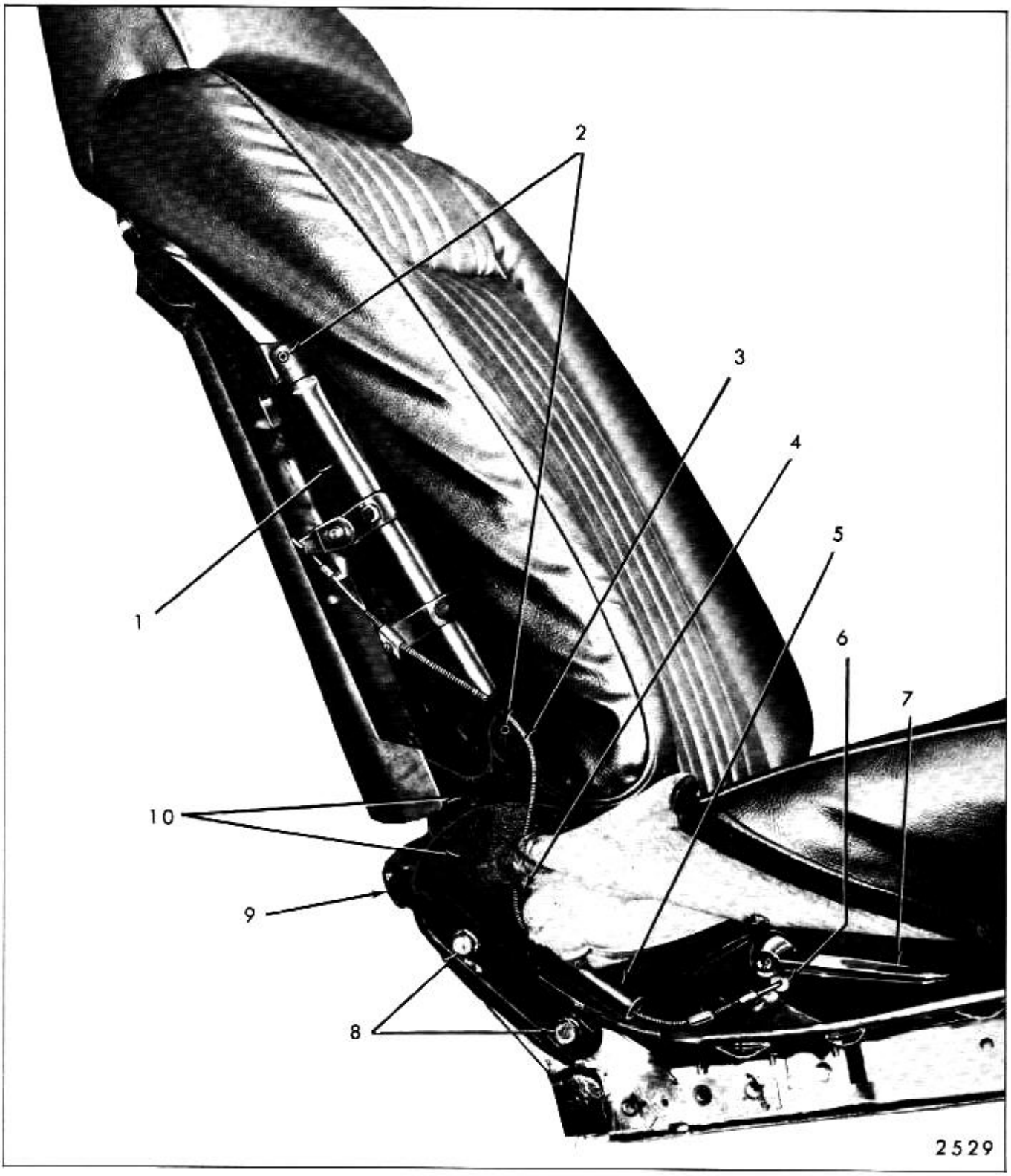


Fig. 15-38—Reclining Seat Back and Positioning Unit

1. Reclining Positioning Unit
2. Positioning Unit Attaching Roll Pins
3. Positioning Unit Control Cable
4. Control Cable Grommet in Cushion Trim
5. Control Cable Guide
6. Handle Control Lever
7. Control Handle
8. Seat Back Hinge Attaching Bolts
9. Seat Cushion Side Panel Rear Support
10. Seat Back Hinge

unit will return the seat to the normal position or to a position at which the handle is released. The friction mechanism of the positioning unit will allow the seat back to be moved forward to the normal position with approximately four pounds manual forward push at the top of the seat back. This "dress-up" feature allows the driver or passenger to return a reclined seat back to its normal position without having to operate the control handle.

RECLINING SEAT BACK ASSEMBLY

Removal and Installation

1. Remove seat assembly from body, as previously described, and place on a clean protected surface.

2. On right side of seat with seat side panel removed, remove hog rings securing cushion trim at rear of seat and along bottom of seat and turn back trim sufficiently to expose seat back attaching bolts and reclining control cable attachment at handle control lever (Fig. 15-38).

3. Detach reclining positioning unit control cable from handle control lever; then pull control cable through cable guide and through grommet in cushion trim (Fig. 15-38).

4. a. On reclining bucket seat remove hog rings securing cushion side trim facing on inboard side of seat and turn trim forward sufficiently to expose seat back attaching bolts. Then remove seat back attaching bolts from both sides of seat and remove seat back assembly from seat.

   b. On reclining full width seat, remove screw at inboard side of seat back securing seat back attaching bolt cover plate and remove cover plate. Remove seat back inner attaching bolts then, remove seat back outer attaching bolts and remove seat back assembly from seat.

5. To install seat back assembly, reverse removal procedure. Make certain side panel support (Fig. 15-38) is secured under seat back outer attaching bolts.

RECLINING SEAT BACK POSITIONING UNIT

Removal and Installation

1. Remove seat assembly from body, as previously described, and place on a clean protected surface.

2. On right side of seat with seat cushion side panel removed, removed hog rings securing cushion trim at rear of seat and along bottom of seat and turn back trim sufficiently to expose reclining control cable attachment at handle control lever (Fig. 15-38).

3. Remove seat back panel as described under "Strato Front Seat Back Panel - Removal and Installation".

4. Remove hog rings securing right side of seat back trim to seat back frame and turn trim forward sufficiently to expose positioning unit (Fig. 15-38).

5. Detach reclining positioning unit control cable from handle control lever; then pull control cable through cable guide and through grommet in cushion trim (Fig. 15-38).

6. Using a suitable size drift punch carefully drive out roll pins securing positioning unit to support on seat back frame and to seat back hinge (Fig. 15-38); then remove positioning unit from seat back.

   IMPORTANT: If roll pins do not drive out easily use a suitable back up to prevent possible damage or breakage of the positioning unit or mounting brackets.

RECLINING SEAT BACK LOCK STRIKER, AND SEAT BACK LOCK— Strato Full-Width or Bucket Seat

Removal and Installation

1. Remove front seat assembly, reclining seat back and seat back panel, as previously described.

2. At seat back inner hinge assembly remove hog rings and detach seat back trim sufficiently to gain access to seat back lock and lock striker attaching bolts (Fig. 15-39).

3. Remove seat back lock striker attaching bolts (Fig. 15-39) and remove striker.

4. Disengage clip securing lock rod to lock (Fig. 15-39) and detach rod from lock.

5. Remove lock-to-hinge attaching bolts (Fig. 15-39) and remove lock assembly from seat back hinge.

6. To install seat back lock assembly, reverse removal procedure. Make certain lock rod and clip are properly engaged at lock lever. Check for proper operation of seat back lock.

RECLINING SEAT BACK LOCK CONTROL SUPPORT—Strato Full-Width or Bucket Seat

Removal and Installation

1. Remove front seat assembly, reclining seat back and seat back panel, as previously described.
2. At right side of seat back remove hog rings and detach seat back trim sufficiently to gain access to seat back lock control support (Fig. 15-39).
3. Remove control support attaching screws (Fig. 15-39) and remove support.
4. To install lock control support, reverse removal procedure. Check for proper operation of seat back lock.

RECLINING SEAT BACK LOCK CONTROL ASSEMBLY—Strato Full-Width or Bucket Seat

Removal and Installation

1. Remove front seat assembly, reclining seat back and seat back panel, as previously described.

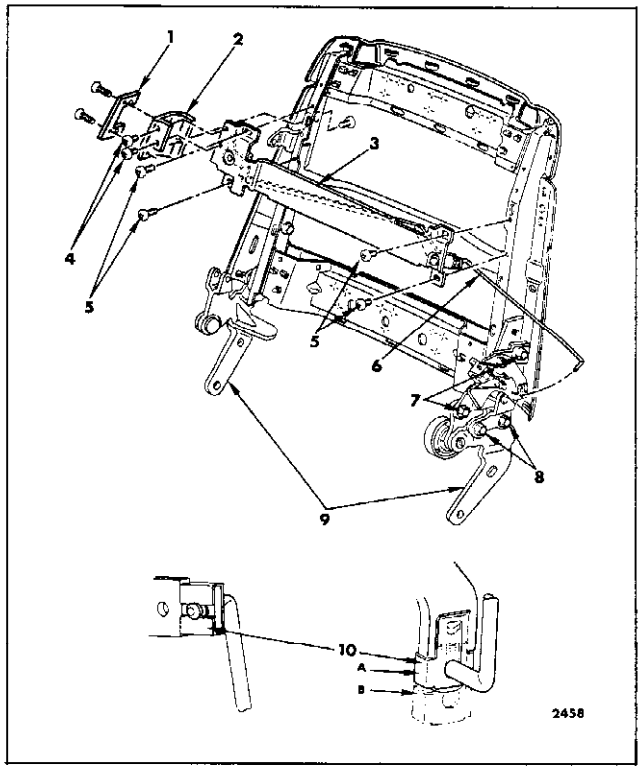


Fig. 15-39—Strato Reclining Seat Back Lock

1. Trim Retainer
2. Control Support
3. Control Assembly
4. Control Support Screws
5. Control Screws
6. Lock Rod
7. Seat Back Lock Bolts
8. Seat Back Lock Striker Bolts
9. Reclining Seat Back Hinges
10. Lock Rod Clip -
    a. Engaged Position
    b. Disengaged Position

2. Remove hog rings securing seat back trim cover and padding to seat back frame and remove seat back trim cover and padding.
3. Disengage clip securing lock rod to control assembly (Fig. 15-39) and detach rod from control assembly.
4. Remove control support and control assembly attaching screws (Fig. 15-39); then, remove control assembly from seat back.
5. To install, reverse removal procedure. Prior to installing seat assembly in body check for proper operation of seat back lock.

MANUALLY OPERATED BUCKET SEAT ADJUSTER

Removal and Installation

1. Remove bucket seat assembly, as previously described, and place seat upside down on a protected surface.
2. If replacing inboard adjuster, remove assist spring (Fig. 15-40).
3. Operate adjuster so that both front and rear adjuster-to-seat frame attaching bolts (Fig.

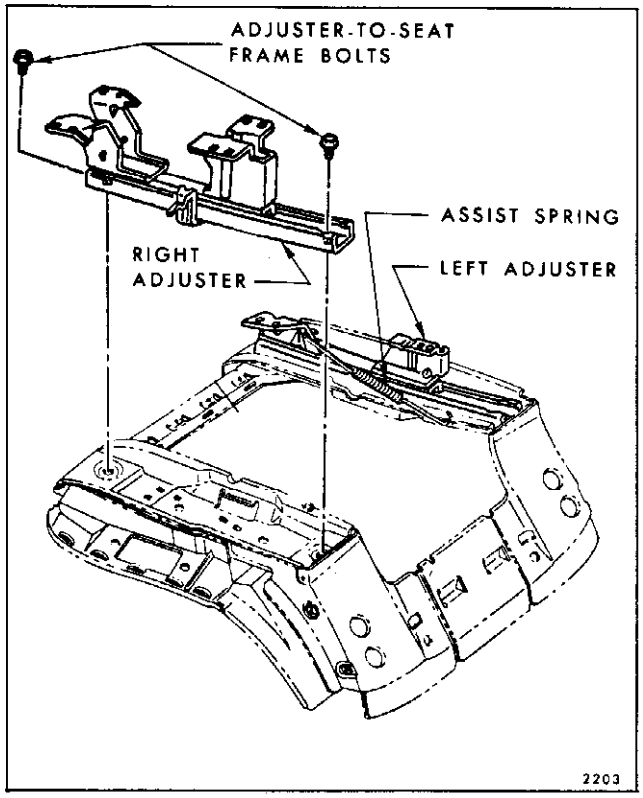


Fig. 15-40—Manual Bucket Seat Adjuster Removal

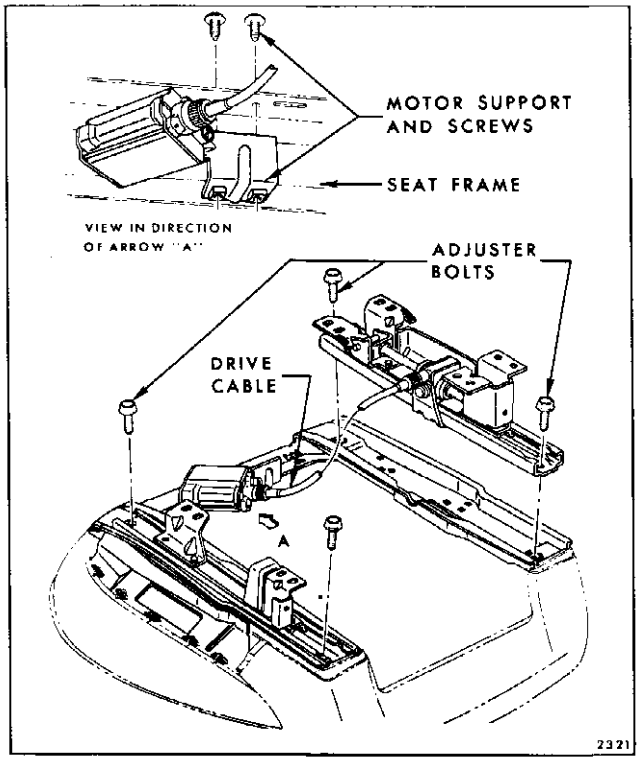


Fig. 15-41 — Power Horizontal Bucket Seat Adjuster Removal

15-40) are accessible; then, remove attaching bolts and remove adjuster from seat assembly.

4. To install, reverse removal procedure. If left adjuster is being replaced, install new adjuster control knob. Use rubber mallet to tap new knob on control lever.

POWER OPERATED HORIZONTAL BUCKET SEAT ADJUSTER

Removal and Installation

1. Operate seat to a midway horizontal position. Remove bucket seat assembly, as previously described, and place seat upside down on a clean protected surface.

2. Disconnect power drive cable from adjuster gearnut (Fig. 15-41).

3. Remove adjuster-to-seat bottom frame front and rear attaching bolts (Fig. 15-41) and remove adjuster from seat assembly.

4. To install, reverse removal procedure. Where spacers were installed between seat adjuster and floor pan or seat adjuster and seat frame make certain spacers are reinstalled. Check for proper operation of seat to full limits of travel.

POWER OPERATED FOUR-WAY BUCKET SEAT ADJUSTER

Removal and Installation

1. Operate seat assembly to fully raised and midway horizontal positions.

2. Remove front seat assembly from body with attached adjusters, motor and transmission, as previously described, and place upside down on a clean protected surface.

3. If outboard adjuster is being removed, disconnect bolt, horizontal and vertical drive cables from vertical gearnut and horizontal actuator (Fig. 15-42).

4. Remove nuts securing motor and transmission support to adjuster being removed (Fig. 15-43).

5. Remove adjuster-to-seat bottom frame front and rear attaching bolts securing adjuster to be removed (Fig. 15-42).

6. Carefully disengage adjuster from support, and torque tube; then, remove adjuster from seat.

7. To install power operated four-way bucket seat adjuster assembly, reverse removal procedure. Check for proper operation of seat adjusters to limits of travel.

POWER OPERATED FOUR-WAY BUCKET SEAT ADJUSTER MAJOR COMPONENTS

The following service procedures cover replacement of the major component parts of the power

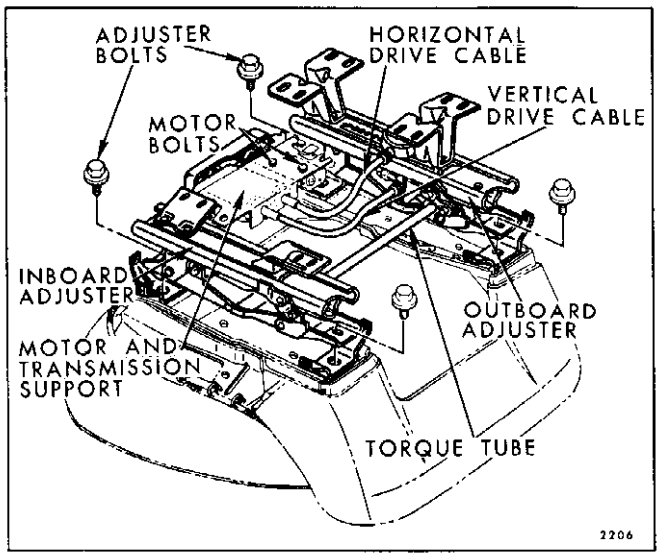


Fig. 15-42 — Four-Way Bucket Seat Assembly

operated four-way seat adjuster, used on bucket seats.

MOTOR AND TRANSMISSION DRIVE BELT AND PULLEYS

Removal and Installation

1. At front of seat remove motor and transmission drive belt cover attaching screws (Fig. 15-43) and remove cover.

2. Remove drive belt (Fig. 15-43) from both motor and transmission drive pulleys. Pulleys may be removed from either motor or transmission by pulling pulleys off their respective shaft.

3. To install drive belt, reverse removal procedure. Check for proper operation of seats to full limits of travel.

MOTOR ASSEMBLY

Removal and Installation

1. If motor can be operated, operate seat assembly to full "up" position. Disconnect wire harness connector from motor relay.

2. Remove motor-to-transmission drive belt cover and drive belt, as previously described.

3. From under motor and transmission support

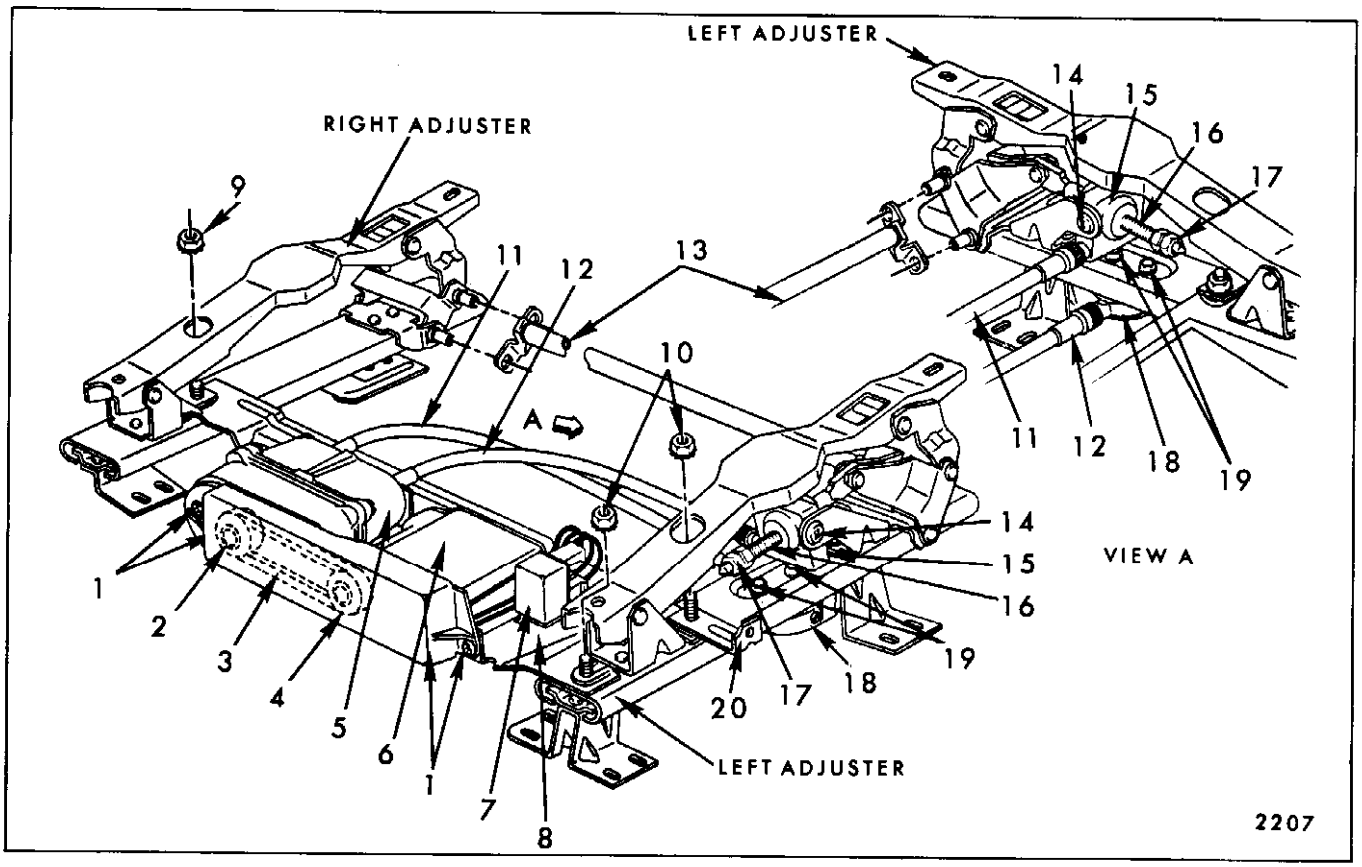


Fig. 15-43 —Four-Way Bucket Seat Adjusters

1. Motor and Transmission Drive Belt Cover and Attaching Screws
2. Transmission Drive Pulley
3. Transmission and Motor Drive Belt
4. Motor Drive Pulley
5. Transmission Assembly
6. Electric Motor Assembly
7. Electric Motor Relay
8. Motor and Transmission Support
9. Motor and Transmission Support-to-Right Adjuster Attaching Nut
10. Motor and Transmission Support-to-Left Adjuster Attaching Nuts
11. Adjuster Horizontal Drive Cable
12. Adjuster Vertical Drive Cable
13. Adjuster Torque Tube
14. Adjuster Vertical Gearnut Shoulder Screw
15. Adjuster Vertical Gearnut Assembly
16. Adjuster Vertical Jackscrew
17. Adjuster Vertical Jackscrew Stop Nuts
18. Adjuster Horizontal Actuator Assembly
19. Adjuster Horizontal Actuator Attaching Screws
20. Seat Side Panel Support

remove two cap screws securing motor to motor-and-transmission support and remove motor assembly from under seat.

4. To install, reverse removal procedure. Check for proper operation of seat to full limits of travel.

TRANSMISSION ASSEMBLY AND HORIZONTAL AND VERTICAL DRIVE CABLES

Removal and Installation

1. Remove front seat assembly from body with attached adjusters, motor and transmission, as previously described, and place upside down on a protected surface.

2. Disconnect wire harness connector from transmission.

3. Remove motor and transmission drive belt cover and remove drive belt (Fig. 15-43).

4. Remove two screws securing transmission assembly to motor and transmission support; then, move transmission forward to disengage from drive cables and remove transmission from seat.

   NOTE: To remove horizontal or vertical drive cables detach drive cable from adjuster and remove cable.

DISASSEMBLY AND ASSEMBLY OF TRANSMISSION

1. Remove front seat adjuster transmission from seat assembly.

2. Remove screws securing gear and solenoid housings together; then, carefully separate housings and remove component parts of transmission assembly.

3. To assemble transmission, reverse removal procedure.

   IMPORTANT: Prior to or during installation, lubricate frictional surfaces of driving gear thrust washer, gears, dog washers, shaft and solenoid plungers with "Lubriplate" (630AAW) or equivalent.

4. To install transmission assembly, reverse removal procedure. Make certain drive cables are properly engaged in transmission and properly retained in cut out notches of motor and transmission support prior to installing transmission attaching screws.

5. Check for proper operation of seat to full limits of travel.

ADJUSTER VERTICAL GEARNUT

Removal and Installation

1. Operate seat assembly to fully raised and midway horizontal position.

2. Remove front seat assembly from body and place upside down on a clean protected surface.

3. Using a clutch type screwdriver or other suitable tool, remove shoulder screws securing linkage to vertical gearnut (Fig. 15-43).

4. Remove jackscrew "down" stop from jackscrew (Fig. 15-43).

5. Using a portable power source to energize the motor, actuate vertical gearnut until gearnut is disengaged from jackscrew.

   NOTE: It may be necessary to manually raise or lower upper rear portion of adjuster to gain clearance for removal of gearnut.

6. Disconnect drive cable from gearnut.

7. To install, reverse removal procedure. Check seat adjusters for proper operation.

ADJUSTER JACKSCREW

Removal and Installation

1. Remove adjuster gearnut as previously described.

2. Remove seat adjuster-to-seat bottom frame front and rear attaching bolts.

3. As a bench operation, remove jackscrew-to-adjuster linkage attaching rivet and remove jackscrew from adjuster assembly (Fig. 15-43).

   NOTE: It may be necessary to manually raise or lower upper rear portion of adjuster to gain access to jackscrew attaching rivet.

4. To install, reverse removal procedure. Use new rivet to attach jackscrew-to-adjuster linkage. Check seat adjusters for proper operation.

ADJUSTER HORIZONTAL ACTUATOR ASSEMBLY

Removal and Installation

1. Remove front seat assembly from body as

previously described and place upside down on a clean protected surface.

2. Using a clutch type screwdriver or other suitable tool, remove shoulder screws securing linkage to vertical gearnut (Fig. 15-43).

3. Using a portable power source, actuate vertical gearnut until gearnut is against "down" stop on jackscrew assembly.

4. Disconnect drive cable from horizontal actuator assembly.

5. Remove screws securing horizontal actuator assembly to adjuster lower track; then remove actuator from adjuster assembly (Fig. 15-43).

6. To install, reverse removal procedure.

NOTE: When installing horizontal actuator, adjust actuator so that drive gear is fully engaged with teeth on lower channel. When horizontal actuator attaching screws are tightened, there should be no free motion between upper and lower channels. Re-adjust actuator "as required" until all free motion between channels has been removed. Check seat adjusters for proper operation.

TORQUE TUBE ASSEMBLY

Removal and Installation

1. Remove inboard seat adjuster assembly, as previously described.

2. Disengage torque tube from outboard adjuster (Fig. 15-42 and 15-43) and remove torque tube assembly.

3. To install torque tube assembly, reverse removal procedure. Check for proper operation of seat to full limits of travel.

REAR SEAT

REAR SEAT CUSHION—All Styles

Removal

1. Push lower forward edge of cushion rearward and pull cushion upward until wire protrusions on seat bottom frame disengage from floor pan retainers at each side of seat.

   NOTE: On "E" Body Styles lift up front of seat cushion sharply to disengage cushion from pan retainers.

2. Pull cushion forward and carefully remove from body.

Installation

1. Carefully lift cushion into body using caution not to damage adjacent trim.

2. Position rear edge of cushion under rear seat back assembly.

3. Center wire protrusions on seat bottom with retainers on or in floor pan.

   IMPORTANT: If seat bottom frame protrusions are not properly centered in relation to retainers on floor pan, proper engagement and placement of cushion will be extremely difficult.

4. Push forward edge of cushion rearward and downward until protrusions are properly engaged behind retainers on floor pan.

REAR SEAT BACK ASSEMBLY— All Styles Except "F and Z" Body With Folding Rear Seat Back

Removal and Installation

1. Remove rear seat cushion assembly.

2. At bottom of seat back bend out tabs and where present, remove screws securing the lower portion of the seat back to floor panel. On convertible styles, remove screw from rear side of seat back panel support securing upper corners of seat back to panel.

   NOTE: If screws are used to secure center of rear side to seat back panel it will be necessary to remove screws from inside rear compartment.

3. Pull seat back assembly out at the bottom until seat back clears body tabs; then, on all styles except "E" Styles raise seat back upward until disengaged from hangers on the seat back panel support. On "E" Styles push seat back downward until wire protrusions at top of seat back are disengaged from slots in seat back panel support.

4. Remove seat back assembly from body.

5. To install, reverse removal procedure, making certain that all attaching body tabs and hangers have industrial body tape applied to them to act as an anti-squeak.

FOLDING REAR SEAT BACK—"F" Body Styles

Removal and Installation

1. Remove rear seat cushion and lower folding rear seat back.

2. At both right and left seat back link remove stud nut securing seat back link to anchor plate on floor pan (Fig. 15-44).

3. Lift seat back assembly upward to disengage tab of link from slot in anchor plate (Fig. 15-44), and remove seat back assembly from body.

4. To install folding seat back assembly, reverse removal procedure.

FOLDING REAR SEAT BACK AND FILLER PANEL—Corvair

FOLDING REAR SEAT BACK ASSEMBLY

Removal and Installation

1. Remove rear seat back cushion, as previously described.

2. Lower folding seat back; then, remove three screws from both sides of seat back securing seat back to folding linkage.

3. Carefully disengage seat back from linkage and remove folding seat back from body.

4. To install, reverse removal procedure.

FOLDING REAR SEAT BACK LINKAGE

Removal and Installation

1. Remove rear seat cushion and folding seat back, as previously described.

2. Mark position of linkage on floor pan. Remove bolts securing folding seat back linkage to floor pan and remove linkage.

3. To install, reverse removal procedure. Align linkage on floor pan with previously made alignment marks.

REAR FOLDING SEAT BACK FILLER PANEL—10039 Style

Removal and Installation

1. Remove rear seat cushion, as previously described; then lower folding seat back.

2. Lift up seat back filler panel sufficiently to gain access to attaching screws and prop panel in this position.

   NOTE: Prop should be wide enough to bear against hinge and hold hinge in position during removal of hinge attaching screws.

3. Remove filler panel hinge attaching screws; then remove prop and remove filler panel.

4. To install, reverse removal procedure.

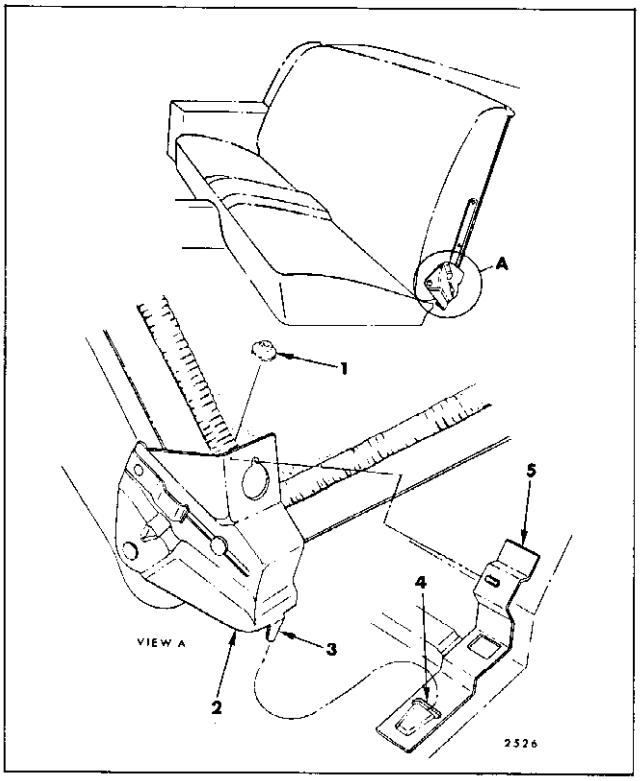


Fig. 15-44—Folding Rear Seat Back Assembly - "F" Body Styles

1. Link-to-Anchor Plate Stud Nut
2. Folding Seat Back Link
3. Link Tab
4. Anchor Plate Slot
5. Folding Seat Back Link Anchor Plate (on floor pan)

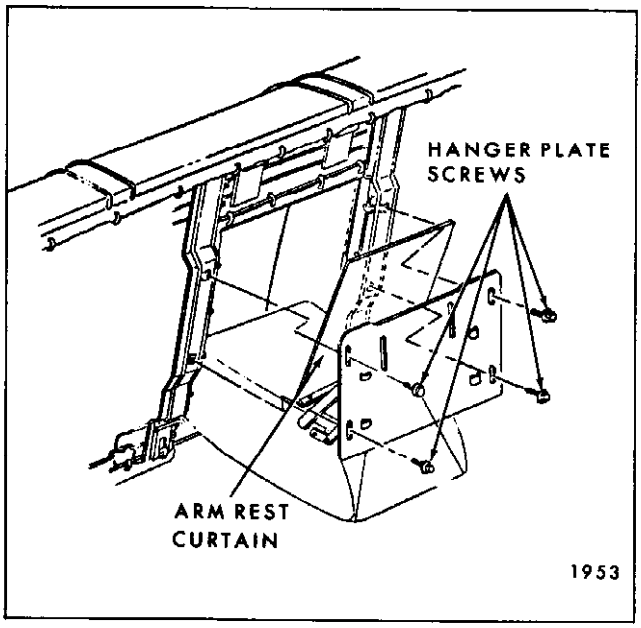


Fig. 15-45—Rear Seat Back Arm Rest and Hanger Plate

REAR SEAT BACK CENTER ARM REST AND CURTAIN

Removal and Installation

1. Lower rear seat back arm rest. On all styles except 68069 carefully pull upper portion of arm rest curtain out of slot in hanger plate and fold curtain forward. On 68069 Style fold arm rest flipper forward.

2. Remove four screws securing arm rest to hanger plate linkage then, remove arm rest from seat back.

3. To install, reverse removal procedure.

REAR SEAT BACK CENTER ARM REST HANGER PLATE AND LINKAGE

Removal and Installation

1. Remove rear seat back center arm rest; then, remove two screws securing arm rest hanger plate to body seat back support brace. Remove rear seat back.

2. On back side of rear seat back, remove four screws securing arm rest hanger plate to seat back supports; then, carefully remove arm rest and hanger plate assembly from seat back (Fig. 15-45).

3. To install, reverse removal procedure. Prior to tightening hanger plate screws move arm rest assembly upward until top is snug against top of opening in seat back.

STATION WAGON REAR SEATS

STATION WAGON FOLDING REAR SEATS AND FLOOR PANELS—"B" Body (Chevrolet 15-16000 Series and Pontiac 25-26000 Series)

DESCRIPTION

The following views are typical of the station wagon folding seats and rear compartment floor panels. These illustrations identify the component panels of the rear compartment area and their relationship.

All station wagon full width second seats incorporate a seat back lock located on the upper right side of the seat back. On split second seat option, a seat back lock is located at the upper outer side of each seat back.

Figure 15-46 is typical of 15000 and 16000 two-seat station wagons.

Figure 15-47 is typical of 15000 and 16000 three-seat station wagons with split second seat option.

Figure 15-48 is typical of 25000 and 26000 two-seat station wagons.

Figure 15-49 is typical of 25000 three-seat station wagons with split second seat option.

REAR FLOOR TO TAIL GATE FILLER PANEL ASSEMBLY 25-26000 SERIES

Removal and Installation

1. Lower tail gate assembly.
2. Lift up rear edge of filler panel assembly sufficiently to expose attaching screws along forward edge of panel.

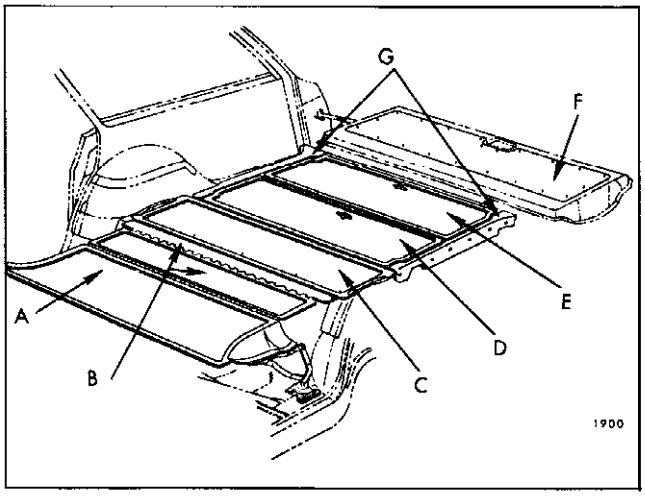


Fig. 15-46 — Folding Seat and Floor Panels
Chevrolet "B-35" Styles

A. Second Seat Back Panel
B. Rear Floor Filler Panel
C. Compartment Floor Panel
D. Luggage Compartment Front Panel
E. Luggage Compartment Rear Panel
F. Tail Gate Inner Cover Panel
G. Compartment Pan Side Filler Panels

3. Remove filler panel attaching screws and remove panel assembly from body opening.

4. To install, reverse removal procedure.

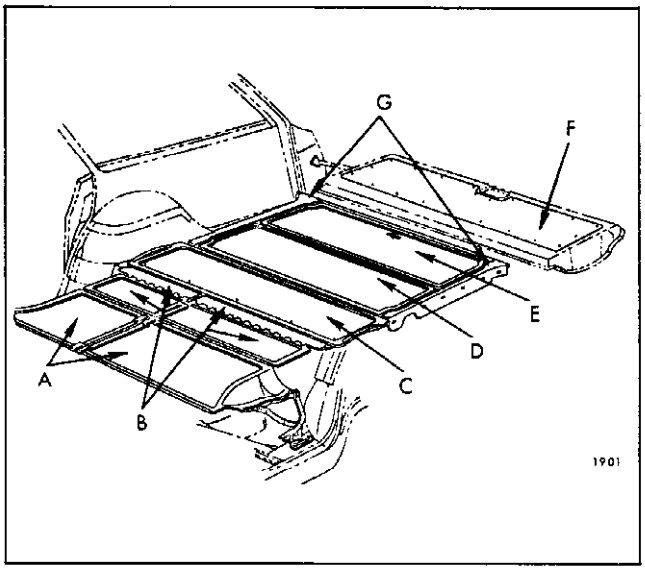


Fig. 15-47 — Folding Seats and Floor Panels
Chevrolet "B-45" Styles

A. Second Seat Back Panels (Split Option)
B. Rear Floor Filler Panels
C. Compartment Floor Panel (at Kick-Up)
D. Third Seat Back Panel
E. Third Seat Cushion Panel
F. Tail Gate Inner Cover Panel
G. Compartment Pan Side Filler Panels

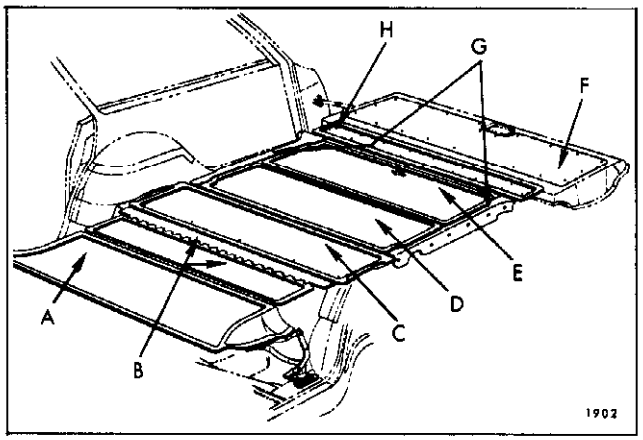


Fig. 15-48 — Folding Seat and Floor Panels
Pontiac "B-35" Styles

A. Second Seat Back Panel
B. Rear Floor Filler Panel
C. Compartment Floor Panel (at Kick-Up)
D. Luggage Compartment
E. Luggage Compartment Rear Panel
F. Tail Gate Inner Cover Panel
G. Compartment Pan Side Filler Panels
H. Rear Floor-to-Tail Gate Panel

COMPARTMENT PAN SIDE FILLER PANEL (RIGHT OR LEFT SIDE) All Styles

Removal and Installation

1. On "35" Styles, use handle and fold rear luggage compartment panel forward until it is resting entirely on front luggage compartment panel (Fig. 15-50).

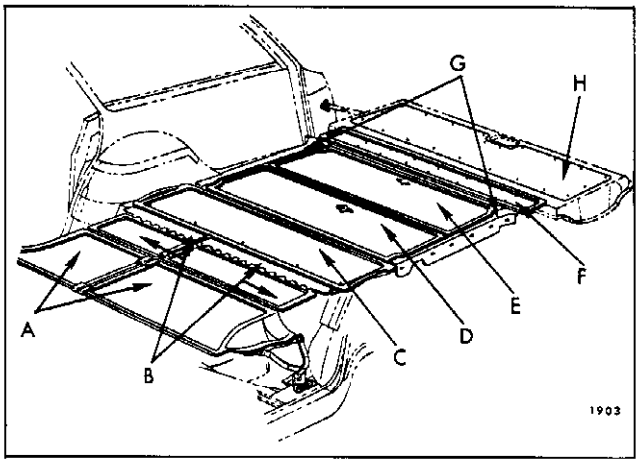


Fig. 15-49 — Folding Seats and Floor Panels
Pontiac "B-45"

A. Second Seat Back Panels (Split Option)
B. Rear Floor Filler Panels
C. Compartment Floor Panel (at Kick-Up)
D. Third Seat Back Panel
E. Third Seat Cushion Panel
F. Rear Floor-to-Tail Gate Panel
G. Compartment Pan Side Filler Panels
H. Tail Gate Inner Cover Panel

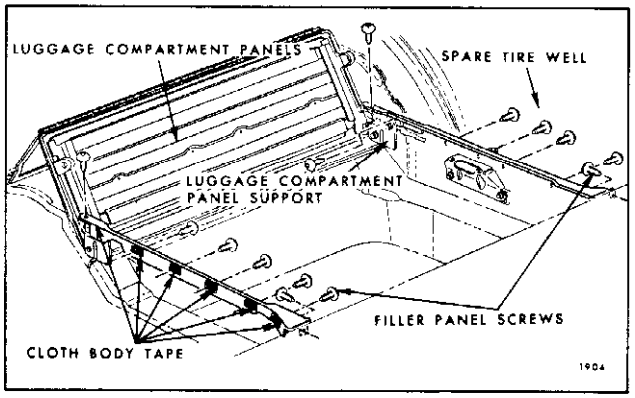


Fig. 15-50 — Rear Compartment Pan Side Filler Panels

2. On "45" Styles, raise folding 3rd seat back assembly to up position; then raise 3rd seat bottom cushion assembly to up or "sitting" position.

3. For right floor side panel, remove spare tire cover panel.

4. On left side, remove screw which secures floor side panel to panel support.

5. Along inboard and outboard side facing of right and/or left panel, remove screws which secure panel to panel supports (Fig. 15-50) and remove panel(s) from body.

6. To install, reverse removal procedure. If installing new filler panel, apply cloth body tape over all screw attaching holes. (See Fig. 15-50).

LUGGAGE COMPARTMENT FRONT AND REAR PANEL ASSEMBLIES—Two-Seat Styles

Removal and Installation

1. Using handle, fold rear luggage compartment panel forward until it is resting entirely on front luggage compartment panel.

2. Fold combined front and rear luggage compartment panels to "up" or half open position. (See Fig. 15-50).

3. Remove bolt (Fig. 15-51) at both sides of front panel securing front and rear panel assemblies to supports; then remove assembly from body.

4. To install, reverse removal procedure. Make sure bushing and spring washer are properly installed (Fig. 15-51).

NOTE: When replacing front luggage compartment panel with new part, transfer rear luggage compartment panel with attached hinge to new part.

LUGGAGE COMPARTMENT REAR PANEL ASSEMBLY—Two-Seat Styles

Removal and Installation

1. Using handle, fold rear luggage compartment panel forward until it is resting entirely on front luggage compartment panel.

2. Remove screws securing hinge assembly to rear luggage compartment panel and remove panel assembly from body.

3. To install, reverse removal procedure.

LUGGAGE COMPARTMENT FRONT AND REAR PANEL HINGE ASSEMBLY— Two-Seat Styles

Removal and Installation

1. Using handle, fold rear luggage compartment panel forward until it is resting entirely on front luggage compartment panel.

2. Remove screws securing hinge assembly to both front and rear panels and remove hinge from body.

3. To install, reverse removal procedure.

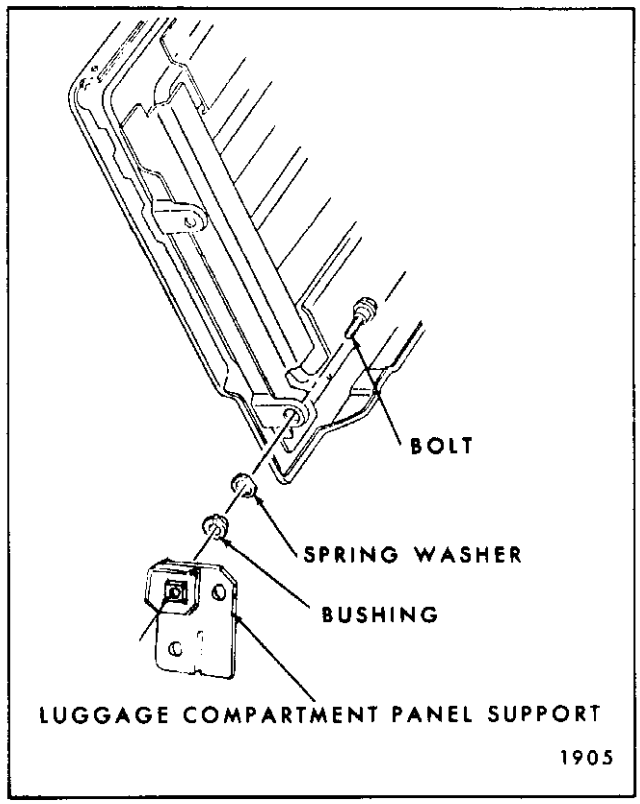


Fig. 15-51 — Luggage Compartment Panel Attachment to Body

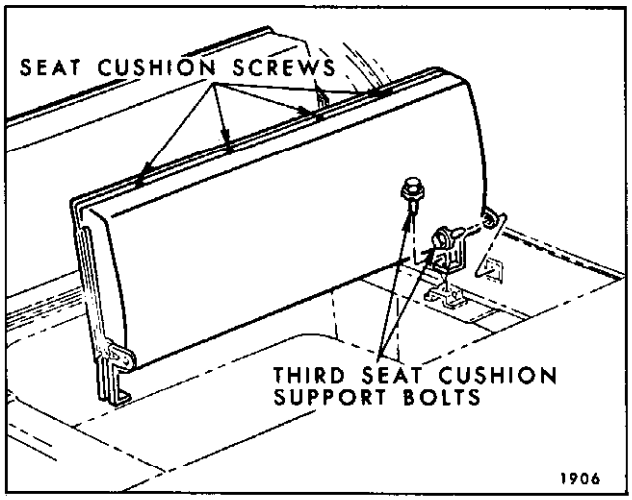


Fig. 15-52—Folding Third Seat Cushion

FOLDING THIRD SEAT CUSHION—Three-Seat Styles

Removal and Installation

1. Lift third seat cushion to a half raised position or approximately vertical to floor pan (Fig. 15-52).

2. Remove four seat cushion screws from rearward edge of cushion (Fig. 15-52).

3. Pull rear edge of cushion away from flange of cushion panel then lift cushion upward to disengage cushion border wire from four tabs on panel. Remove cushion from body and place on a clean protected surface.

4. To install, reverse removal procedure. Make sure cushion border wire is engaged with all four panel tabs prior to installing cushion attaching screws.

FOLDING THIRD SEAT CUSHION, PANEL ASSEMBLY AND SUPPORT—Three-Seat Styles

Removal and Installation

1. Lift third seat cushion to a half raised position or approximately vertical to floor pan. (See Fig. 15-52).

2. Remove two bolts at each side of seat securing supports to body (Fig. 15-52); then, remove seat cushion, panel assembly and supports from body and place on a clean protected surface.

   To remove support, remove cushion from panel assembly; then remove bolt securing support to cushion (Fig. 15-53).

3. To install, reverse removal procedure. If support was removed from seat cushion panel, make sure bushing and spring washer are properly installed. (See Fig. 15-53)

FOLDING THIRD SEAT BACK TRIM ASSEMBLY—Three-Seat Styles

Removal and Installation

1. Raise third seat back assembly - leave cushion assembly in down position.

2. Remove four screws securing lower edge of seat back trim to seat back panel. (See Fig. 15-54).

3. Pull lower edge of seat back trim slightly rearward; then, lift trim assembly upward to disengage trim border wire from four tabs on upper portion of panel. Remove trim assembly from body and place on a clean protected surface.

4. To install, reverse removal procedure. Make sure seat back trim border wire is engaged with all four panel tabs at upper portion of panel prior to installing seat back trim attaching screws.

FOLDING THIRD SEAT BACK PANEL ASSEMBLY—Three-Seat Styles

Removal and Installation

1. Remove third seat back trim assembly.

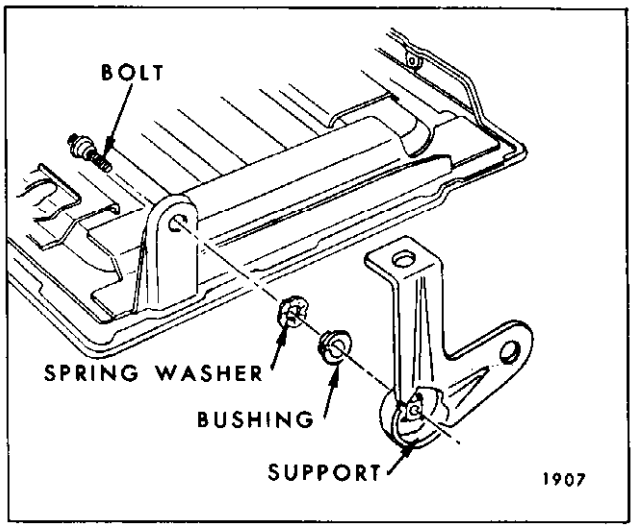


Fig. 15-53—Third Seat Cushion Panel and Support

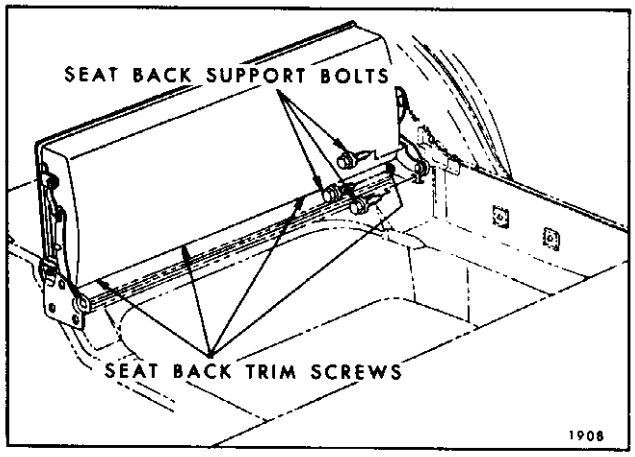


Fig. 15-54—Folding Third Seat Back

2. At both sides of third seat back panel remove seat back linkage bolt (Fig. 15-55) and bolt securing seat back panel to support (Fig. 15-55); then remove seat back panel assembly from body.

3. To install, reverse removal procedure.

COMPARTMENT FLOOR PANEL ASSEMBLY (AT KICK-UP)—All Styles

Removal and Installation

1. On "45" Styles, remove folding 3rd seat back assembly as previously described.

2. On "35" Styles, remove luggage compartment front and rear panel assemblies (complete) as previously described.

3. Directly under rear edge of compartment floor panel remove four screws securing panel to floor pan.

4. At front of compartment floor panel remove five screws securing panel to floor pan; then, remove compartment floor panel from body.

5. To install, reverse removal procedure.

REAR FLOOR FILLER PANEL—All Styles

Removal and Installation

1. Remove compartment floor panel assembly (at kick-up) as previously described.

2. Along rear edge of filler panel, remove screws which secure panel to floor pan.

3. Fold filler panel forward sufficiently to remove screws which secure panel to folding 2nd seat back assembly and remove filler panel from body.

4. To install, reverse removal procedure.

SECOND SEAT CUSHION (FULL WIDTH OR SPLIT SEAT)—All Styles

Removal and Installation

1. Lift up front edge of folding rear seat cushion assembly to disengage seat bottom frame from slots in rear seat support on floor pan; then, remove cushion assembly from body and place on a clean protected surface.

2. To install, reverse removal procedure. Make certain that seat cushion frame is fully engaged in supports on floor pan.

FOLDING SECOND SEAT BACK TRIM ASSEMBLY (FULL WIDTH OR SPLIT SEAT)—All Styles

Removal and Installation

1. Raise folding second seat back and remove second seat cushion.

2. On underside of second seat back panel, remove screws securing seat back trim assembly to seat back panel.

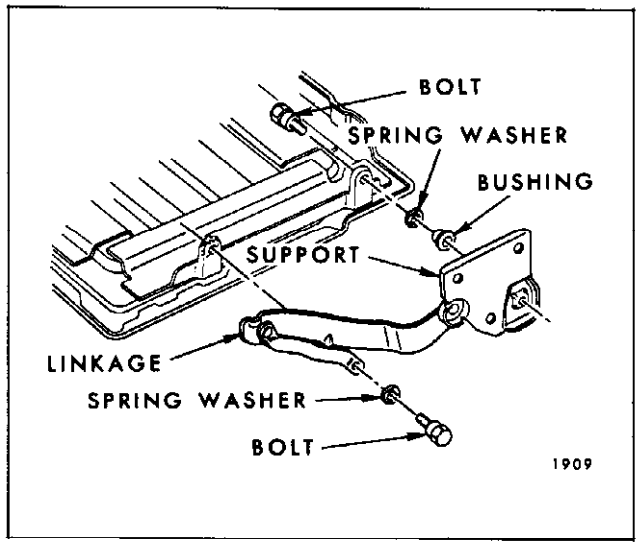


Fig. 15-55—Third Seat Back Panel and Linkage

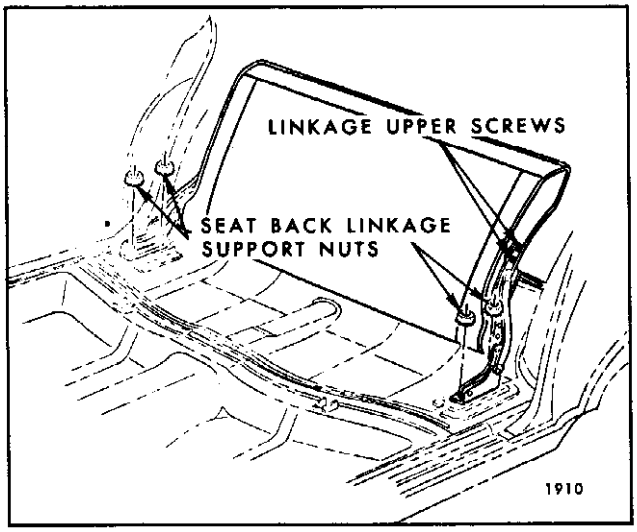


Fig. 15-56—Folding Second Seat Back Supports (Full Width Seat)

NOTE: Do not remove screws securing rear floor filler panel hinge to second seat back panel.

3. Pull lower edge of seat back trim slightly forward; then lift trim assembly upward to disengage trim border wire from tabs on upper portion of panel. Remove trim assembly from body and place on a clean protected surface.

4. To install, reverse removal procedure. Make sure seat back trim border wire is engaged with panel tabs at upper portion of seat back panel prior to installing seat back trim attaching screws.

FOLDING SECOND SEAT BACK TRIM, PANEL AND LINKAGE ASSEMBLY (FULL WIDTH OR SPLIT SEAT)—All Styles

Removal and Installation

1. Raise folding second seat back and remove second seat cushion.

2. On underside of folding second seat back remove screws securing rear floor filler panel hinge to seat back panel.

   NOTE: Do not remove screws securing seat back trim assembly to seat back panel.

3. Mark position of folding second seat back linkage supports on floor pan. Remove nuts from both sides of seat back securing linkage supports to floor pan (See Figure 15-56), full width seat (Fig. 15-57) for split seat.

   Lift seat back assembly with attached linkage from body and place on a clean protected surface.

4. To remove linkage from folding second seat back remove linkage-to-seat back panel attaching bolts and remove linkage - See (Fig. 15-58 for full width seat) (Fig. 15-59 for split seat).

5. To install, reverse removal procedure. If linkage was removed from split seat back, make sure bushings and spring washers are properly installed prior to installing linkage attaching bolts. (See Fig. 15-59).

FOLDING SECOND SEAT BACK LINKAGE ASSEMBLY (FULL WIDTH SEAT—Right or Left Side Split Seat—Outer Linkage Only)

If both right and left linkage assemblies are to be removed on full width second seat remove second seat back trim, panel and linkage assembly and remove linkage from seat back panel as described under "Folding Second Seat Back Trim, Panel and Linkage Assembly - Removal and Installation".

If one linkage assembly (right or left side) is to be removed proceed as follows:

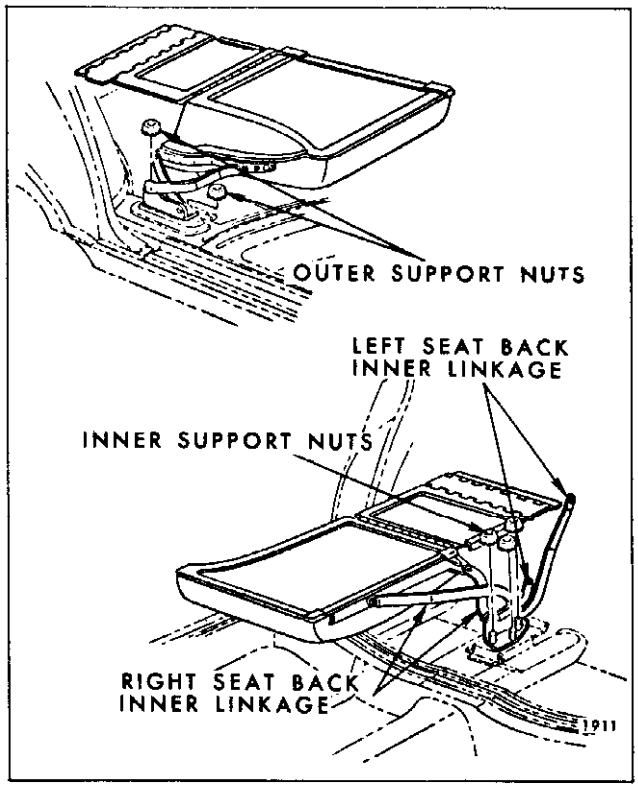


Fig. 15-57—Folding Second Seat Back Supports and Linkages (Split Seat)

Removal and Installation

1. Remove second seat cushion.
2. Move folding second seat back forward just sufficiently to remove two lower linkage-to-seat back panel attaching screws. (See Fig. 15-58).
3. Carefully return seat back to full up position; then, place a support under seat back assembly to support seat back in this position.
4. Remove two upper linkage-to-seat back panel attaching screws. (See Fig. 15-58).
5. Remove nuts securing linkage support to floor pan (See Fig. 15-56); then carefully remove linkage assembly from seat back and floor pan.
6. To install, reverse removal procedure.

FOLDING SECOND SPLIT SEAT BACK INNER LINKAGE ASSEMBLY

Removal and Installation

1. Remove left second seat cushion and place left seat back in full up position. Place a support under right side of left seat back to support seat back in this position.
2. Place right seat back in partially down position (resting on seat cushion).
3. Remove nuts securing inner linkage assembly to floor pan (See Fig. 15-57).

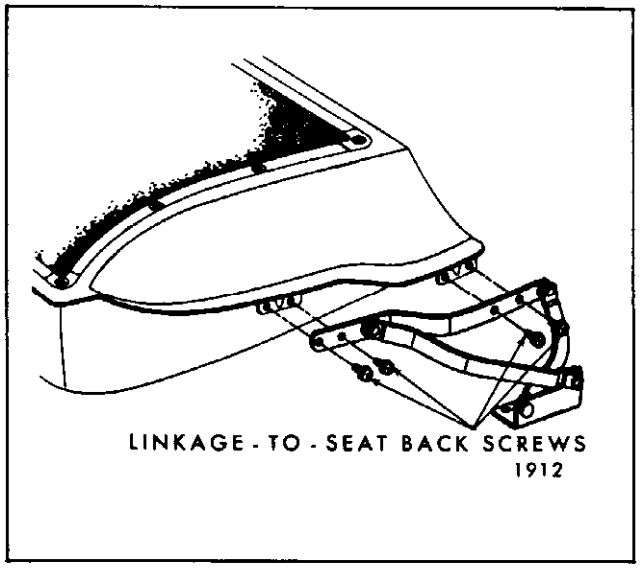


Fig. 15-58—Folding Second Seat Back Supports and Linkage (Full Width Seats)

4. Remove inner linkage-to-seat back bolts from both right and left seats (See Fig. 15-59); then carefully disengage inner linkage from seat backs and floor pan studs and remove linkage assembly.
5. To install, reverse removal procedure. Make sure bushings and spring washers are properly installed prior to installing linkage attaching bolts to both right and left seat back panels. (See Fig. 15-59).

LUGGAGE COMPARTMENT LOCK CYLINDER (OPTIONAL EQUIPMENT)— 15-16000 Two-Seat Styles

Removal and Installation

1. Open luggage compartment rear panel.
2. On underside of luggage compartment rear panel remove catch retainer and catch from lock cylinder case (Fig. 15-60); then turn lock cylinder with key until cylinder can be removed from case.
3. To install, reverse removal procedure.

LUGGAGE COMPARTMENT LOCK (OPTIONAL EQUIPMENT)— 15-16000 Two-Seat Styles

Removal and Installation

1. Open luggage compartment rear panel.
2. On underside of luggage compartment rear panel, remove catch retainer and catch (Fig. 15-60).
3. Remove lock cylinder case retainer screw and retainer (Fig. 15-60); then, remove lock cylinder and case, gasket and escutcheon from panel (Fig. 15-60).

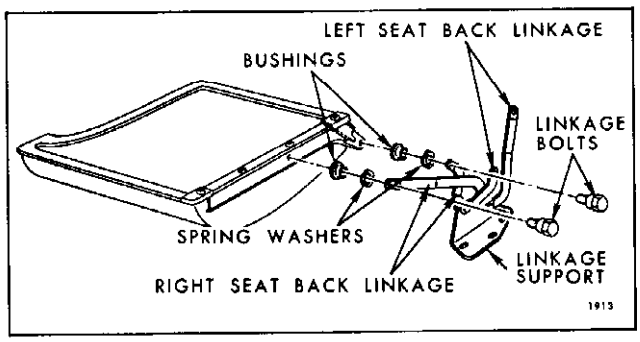


Fig. 15-59—Folding Second Seat Back Inner Linkage and Support

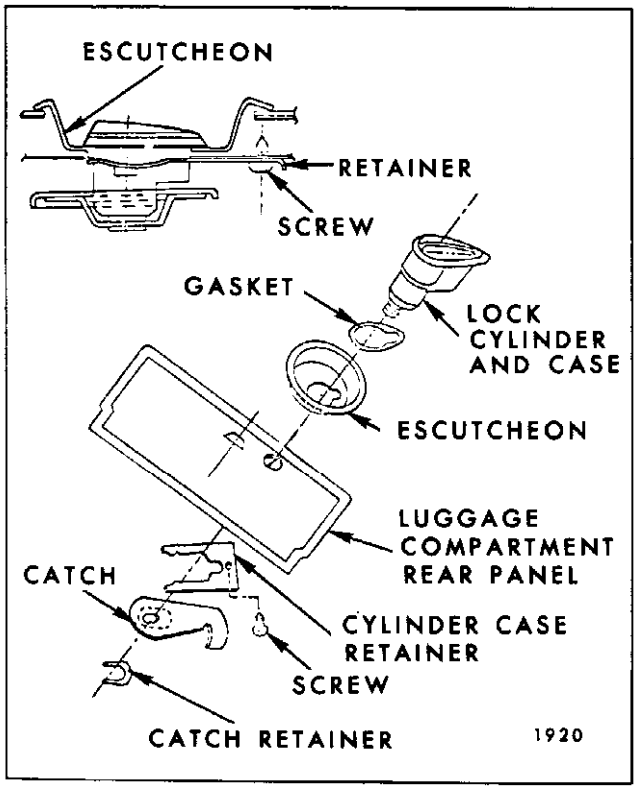


Fig. 15-60 — Luggage Compartment Lock Chevrolet "B" Styles

4. To install, reverse removal procedure.

STATION WAGON FOLDING SEATS AND FLOOR PANELS—"A" Body Except "65" Styles

DESCRIPTION

Figures 15-61 and 15-62 are typical of two-seat station wagon folding full second seat and rear compartment floor panels. The illustration identifies component parts, their relationship and various attaching points.

REAR COMPARTMENT FLOOR PANEL COVERING—Styles with Rubber Mat

The rear compartment floor panel covering consists of a one-piece rubber mat with a pad backing. The rubber mat is installed loose with sides inserted under rear quarter trim and wheelhouse trim assemblies.

REAR COMPARTMENT FLOOR PANEL COVERING—Styles with Vinyl Mat

The rear compartment floor panel covering consists of a one-piece vinyl mat with a pad backing.

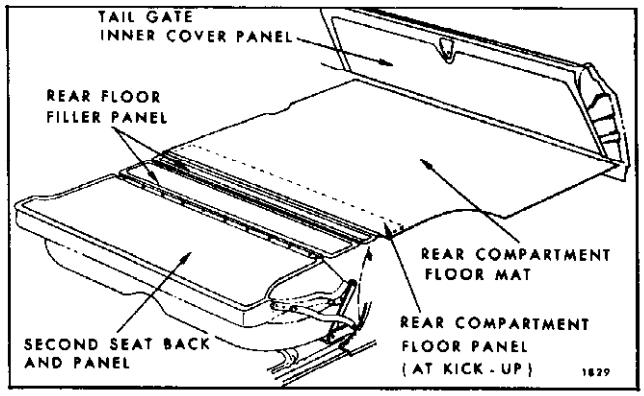


Fig. 15-61 — Folding Second Seat and Rear Floor Panel Covers

The vinyl mat is installed loose with sides inserted under the rear quarter trim and wheelhouse trim assemblies. The 23535 Style incorporates metal skid strips which are tabbed to the vinyl mat.

REAR COMPARTMENT FLOOR PANEL COVERING—Styles with Floor Carpet

A one-piece rear compartment floor panel carpet with a pad backing is available as an option. The carpet is retained at the front and rear edges by finishing moldings which are secured to the floor panel by screws. (See Fig. 15-62). The sides of the carpet are inserted under the rear quarter trim and wheelhouse trim assemblies.

REAR SEAT CUSHION ASSEMBLY—Two-Seat Styles

Removal and Installation

1. Lift up front edge of cushion assembly to disengage protrusions on seat bottom frame from

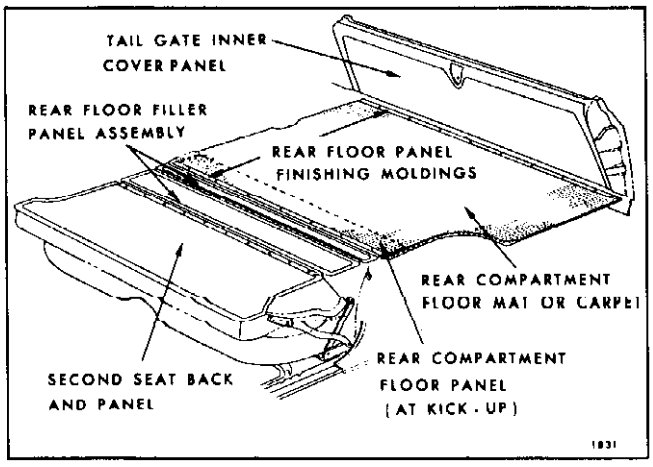


Fig. 15-62 — Folding Second Seat and Rear Floor Panel Covering

slots in seat cushion support and remove cushion assembly.

2. To install, reverse removal procedure. Make certain protrusions on seat bottom frame are fully engaged in slots in seat cushion support.

FOLDING REAR SEAT BACK TRIM AND SPRING ASSEMBLY—Two-Seat Styles

Removal and Installation

1. Remove second seat cushion.

2. With folding second seat back in up position, remove screws along bottom edge of seat back trim. Lift trim and spring assembly to disengage retainers at top from slots in seat back panel; then, remove seat back trim and spring assembly from seat back panel.

3. To install, reverse removal procedure.

REAR COMPARTMENT FLOOR PANEL (AT KICK-UP)—Two-Seat Styles

Removal and Installation

1. Turn back front edge of rear compartment floor panel covering and remove eight hex-head rear compartment floor panel attaching screws. On styles with carpet, remove front finishing molding prior to turning back carpet.

2. To install, reverse removal procedure.

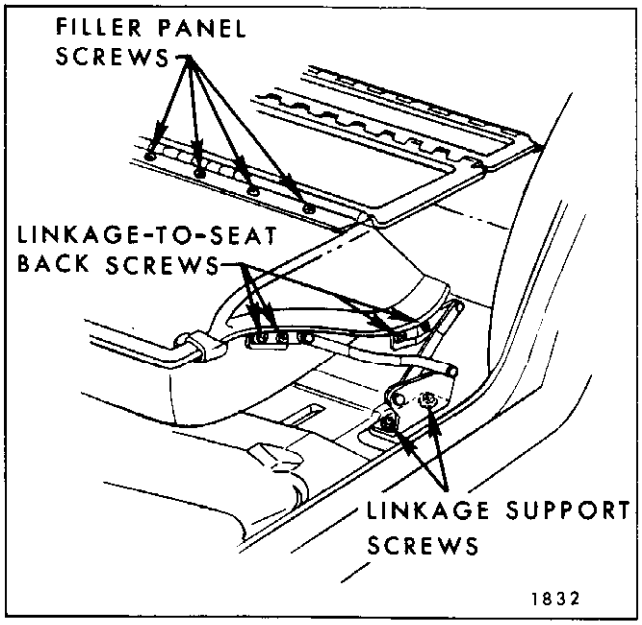


Fig. 15-63—Folding Second Seat Back Linkage and Filler Panel

FOLDING REAR SEAT BACK AND PANEL ASSEMBLY—Two-Seat Styles

Removal and Installation

1. With second seat back in down position, remove screws securing rear floor filler panel to second seat back panel and detach filler panel from seat back.

2. On both sides of seat back, remove screws securing seat back to folding linkage (Fig. 15-63) and remove seat back and panel assembly from body. See Fig. 15-64 for center linkage attachments on split second seat.

3. To install, reverse removal procedure.

REAR FLOOR FILLER PANEL ASSEMBLY

Removal and Installation

1. Remove rear compartment floor panel (at kick-up) as previously described.

2. Remove filler panel front and rear attaching screws and remove filler panel assembly.

3. To install, reverse removal procedure.

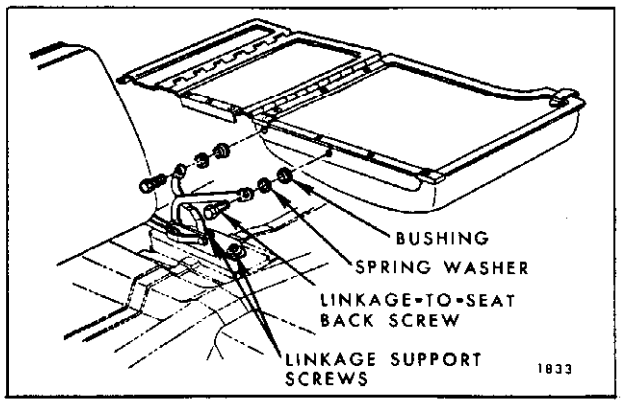


Fig. 15-64—Split Second Seat Center Linkage

FOLDING SECOND SEAT BACK LOCK (FULL WIDTH OR SPLIT SEAT)—All "A, B & X" Styles (Except A-55 and 65 Styles)

DESCRIPTION

The station wagon full width folding second seat incorporates a seat back lock located on the upper right side of the seat back. On split second seat option a seat back lock is located at the upper outer side of each seat back. The folding second seats can be folded down by actuating the lock handle forward and pulling the seat back down.

FOLDING SECOND SEAT BACK LOCK (FULL WIDTH OR SPLIT SEAT)—All "A, B & X" Styles (Except A-55 Styles with Split Second Seat Option and "65" Styles)

Removal and Installation

1. Remove folding second seat back trim and spring assembly, as previously described.
2. Remove seat back lock handle attaching screw (Fig. 15-65) and remove lock handle.
3. Remove seat back lock attaching screws (Fig. 15-65) and remove seat back lock from seat back panel.

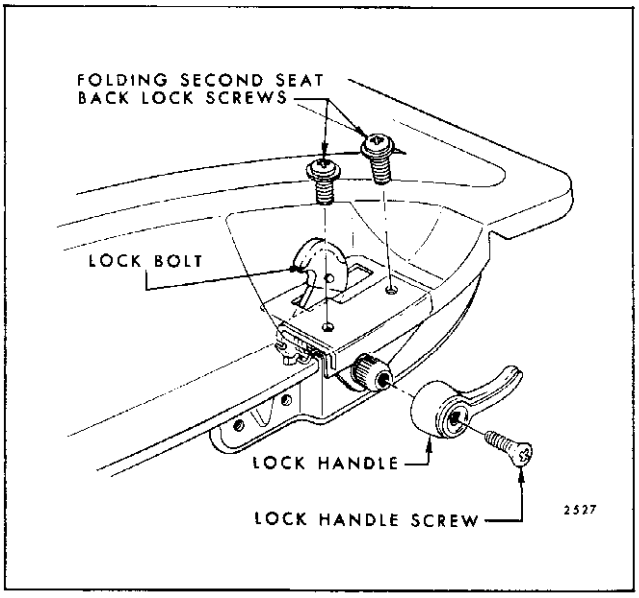


Fig. 15-65—Folding Second Seat Back Lock Installation All "A & B" Station Wagons (except "A-65" Styles)

4. To install seat back lock assembly, reverse removal procedure. A small amount of lock adjustment is available to obtain proper engagement of lock bolt with lock striker on wheelhouse as shown in Fig. 15-66.

STATION WAGON FOLDING SEATS AND FLOOR PANELS—"A" Body "55 (Split Second Seat Option) and 65" Styles

DESCRIPTION

The "55" Style Skylight station wagons have a full width folding second seat on which the seat back folds flush with the floor panels. A luggage compartment is provided under the luggage compartment floor panel. Fig. 15-67 identifies the major load floor panels on the "55" Style station wagon.

A split folding second seat - 1/3 (left side), 2/3 (right side) is available as an option on the "55" Style Skylight station wagon.

The service procedures for the "55" Style station wagon folding second seat are the same as for the "35" Style station wagon folding second seat.

The "65" Style station wagons have a full folding split second seat - 1/3 (right side), 2/3 (left side).

Both sections of the folding second seat are hinged to the floor pan and can be folded forward to provide entrance room into the third seat area. Also

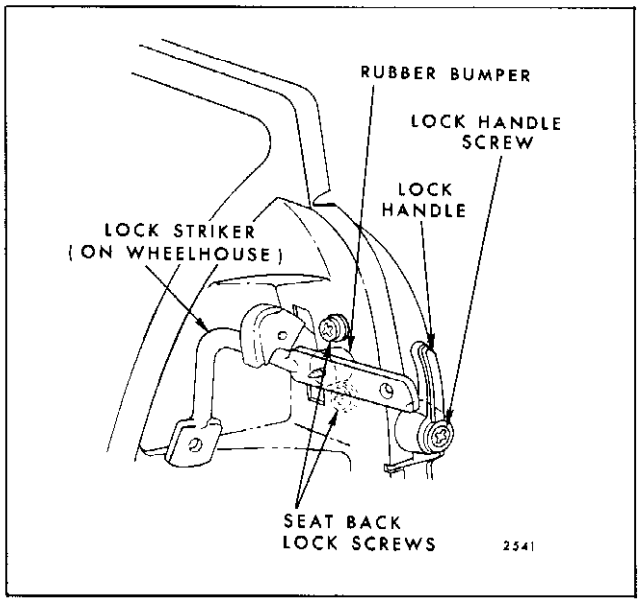


Fig. 15-66—Folding Second Seat Back Lock & Striker - All "A, B & X" Station Wagons (Except "A-65" Styles)

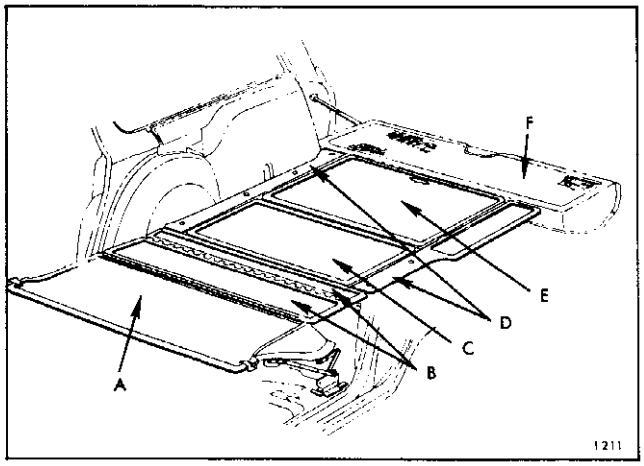


Fig. 15-67—Folding Seat and Rear Compartment Floor Panels "A-55" Style Station Wagon

A. Folding Second Seat Back Panel
B. Rear Floor Filler Panel Assembly
C. Rear Compartment Floor Panel
D. Rear Compartment Side Pan Cover Panel - Right and Left
E. Luggage Compartment Cover Panel
F. Tail Gate Inner Cover Panel

both sections of the folding second seat back can be folded flush with the floor panels. A seat back lock located at the outer linkage of both right and left folding second seat backs, locks the seat backs in the up position and must be released to fold the seats.

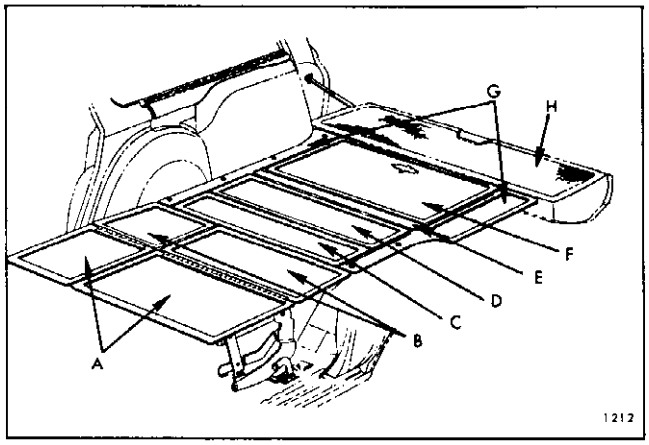


Fig. 15-68—Folding Seats and Rear Compartment Floor Panels "A-65" Style Station Wagon

A. Folding Second Seat Back Panel - Left and Right
B. Rear Floor Filler Panel - Left and Right
C. Rear Floor Filler (at Kick-Up) Panel
D. Folding Third Seat Back Panel Assembly
E. Luggage Compartment Filler Panel
F. Luggage Compartment Cover Panel
G. Compartment Side Pan Cover Panel - Right and Left
H. Tail Gate Inner Cover Panel

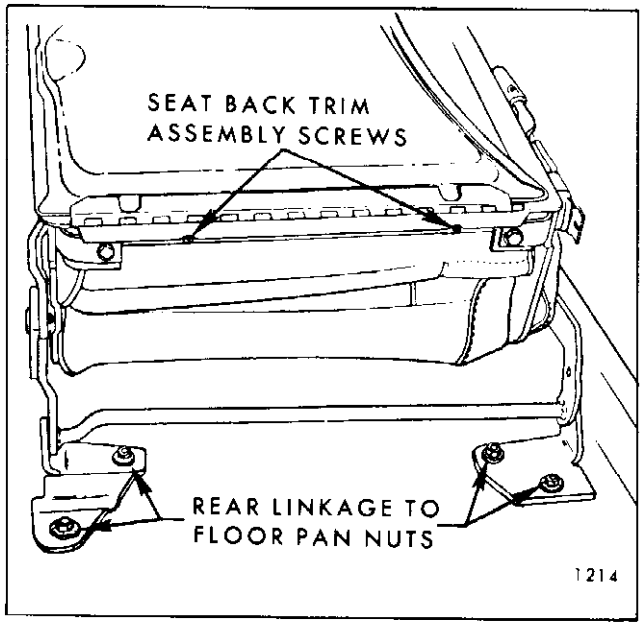


Fig. 15-69—Folding Second Seat Rear Linkage

The full 3/4 width folding third seat is provided with an over-center lock on the right side linkage.

The lock handle is depressed to lock the seat in the up position and pulled forward to release the lock and allow the seat to be folded.

Figure 15-68 identifies the major load floor panels on the "65" Style Skylight station wagon.

FOLDING SECOND SEAT ASSEMBLY— Right or Left Seat—"65" Styles

Removal and Installation

1. Remove rear door sill plate and turn back floor carpeting sufficiently to gain access to nuts

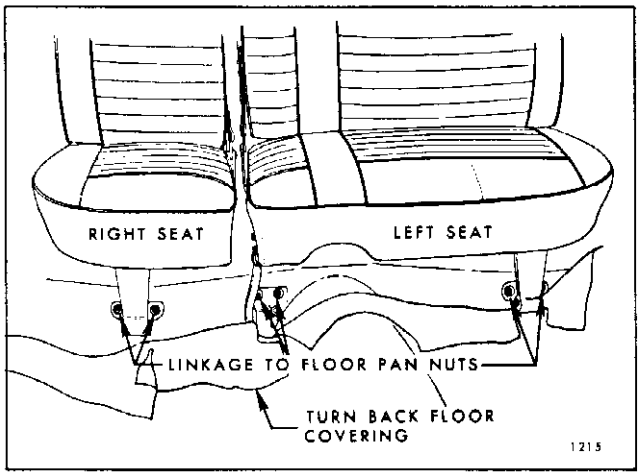


Fig. 15-70—Folding Second Seat Front Linkage

securing folding seat front and rear linkage to floor pan (Fig. 15-69 and 15-70).

2. Mark position of seat front and rear linkage supports on floor pan to facilitate installation of seat in same position.
3. Remove nut and washer assemblies securing front and rear linkage to floor pan (Fig. 15-69 and 15-70); then, remove seat assembly from body.
4. To install seat assembly, reverse removal procedure. Align linkage floor pan supports with previously made marks prior to tightening nuts.

FOLDING SECOND SEAT CUSHION ASSEMBLY—Right or Left Side—"65" Styles

Removal and Installation

1. Remove folding second seat assembly from car, as previously described and place on a clean surface.
2. Remove hog rings and detach outboard rear portion of trim sufficiently to remove three screws securing seat outer link to cushion frame (Fig. 15-71).
3. Remove three screws securing seat inner link to cushion frame (Fig. 15-72); then remove seat cushion and frame assembly from linkage. If required, remove cushion front and rear floor pan linkage.
4. To install, reverse removal procedure.

FOLDING SECOND SEAT BACK TRIM AND SPRING ASSEMBLY—Right or Left Seat—"65" Styles

Removal and Installation

1. Fold second seat back forward.

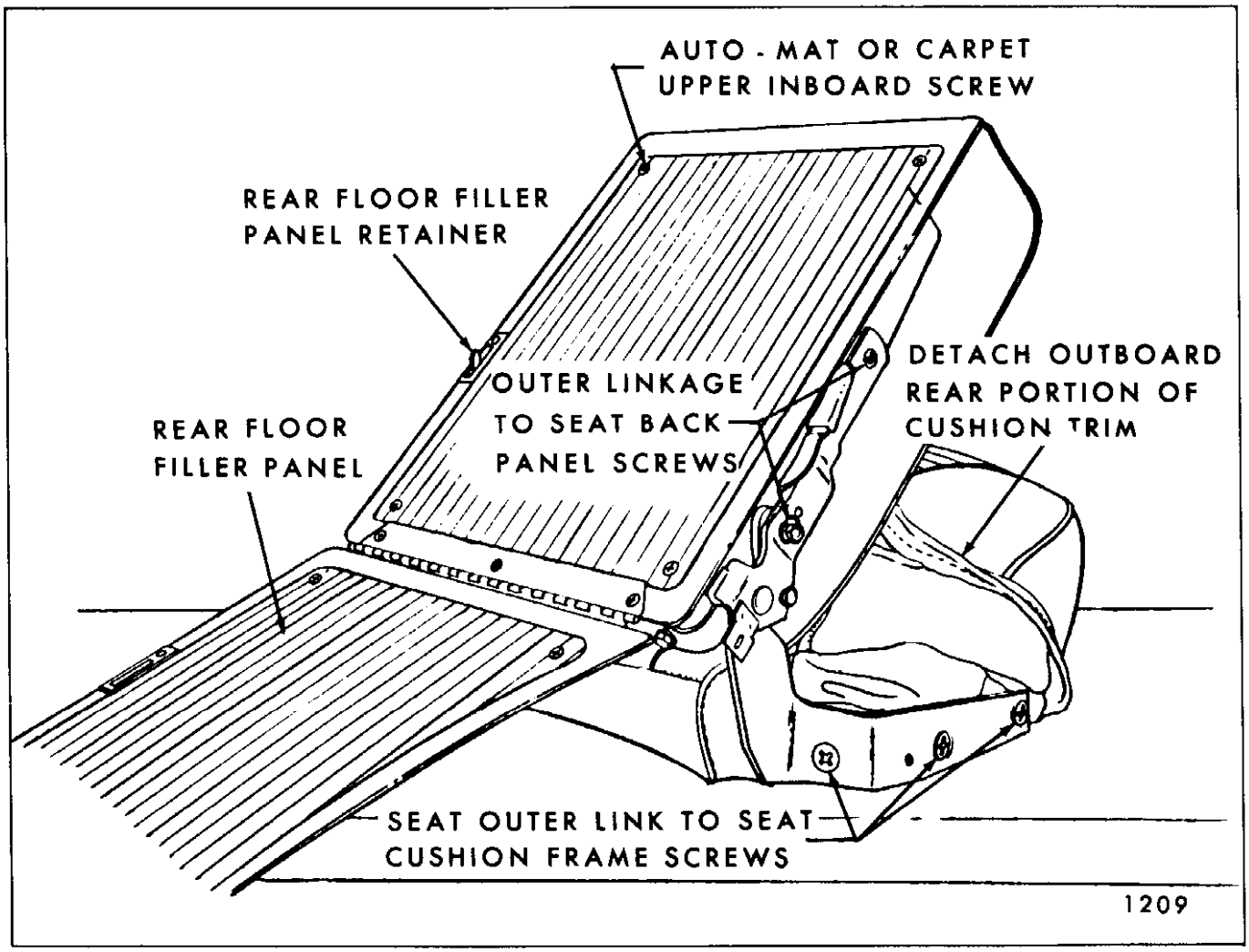


Fig. 15-71 —Folding Second Seat Outer Linkage

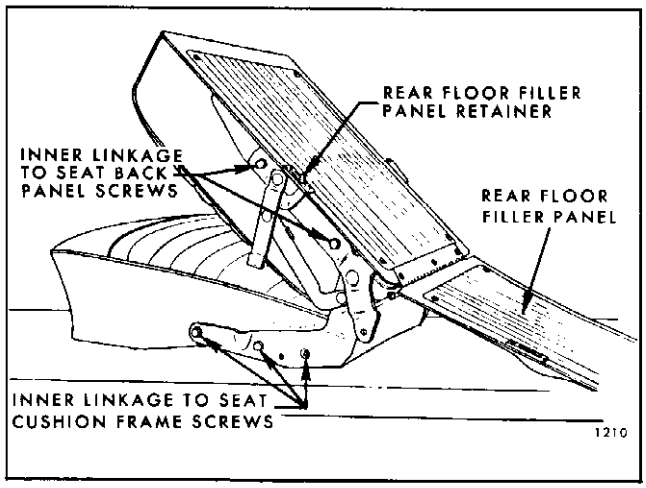


Fig. 15-72—Folding Second Seat Inner Linkage

2. Remove seat back trim assembly attaching screws. (see Fig. 15-69).
3. Raise seat back; then, pull seat back trim assembly upward to disengage wire loops at top of seat back trim from slots in seat back panel.

   NOTE: If seat back trim does not readily disengage from seat back panel, fold rear floor filler panel down and remove upper inboard screw securing automat or carpet (Fig. 15-71). Then remove seat back trim assembly.
4. To install seat back trim assembly, reverse removal procedure.

FOLDING SECOND SEAT FRONT FLOOR PAN LINKAGE—Right or Left Seat—"65" Styles

Removal and Installation

1. Place seat in an up position. Turn back floor carpet sufficiently to gain access to front linkage floor pan attaching nuts.
2. Mark location of front linkage support on floor pan to facilitate installation in same position. Support front of seat. Remove bolts securing linkage to seat and nuts securing linkage to floor pan studs (see Fig. 15-70); then, remove front linkage.
3. To install, reverse removal procedure making sure linkage support on floor pan is aligned with previously made alignment mark.

FOLDING SECOND SEAT REAR FLOOR PAN LINKAGE—Right or Left Seat—"65" Styles

Removal and Installation

1. Remove folding second seat assembly from car as previously described and place on a clean surface.
2. Remove screws securing rear floor pan linkage to each side of seat cushion frame (Fig. 15-73); then, remove linkage assembly from seat.
3. To install, reverse removal procedure. Inserts in Figure 15-73 show relationship of linkage, bushings and attaching screws.

FOLDING SECOND SEAT SIDE INNER LINKAGE—Right or Left Seat—"65" Styles

Removal and Installation

1. Remove folding second seat assembly from car as previously described and place on a clean surface.
2. Remove floor pan rear linkage-to-seat inner linkage attaching screws (Fig. 15-73).
3. Remove seat inner linkage-to-seat back panel and seat cushion frame attaching screws (see Fig. 15-72); then, disengage and remove side linkage from seat.
4. To install, reverse removal procedure. Make sure rear floor filler panel retainer is inserted through slot in seat back panel prior to installing inner linkage-to-seat back panel attaching screws.

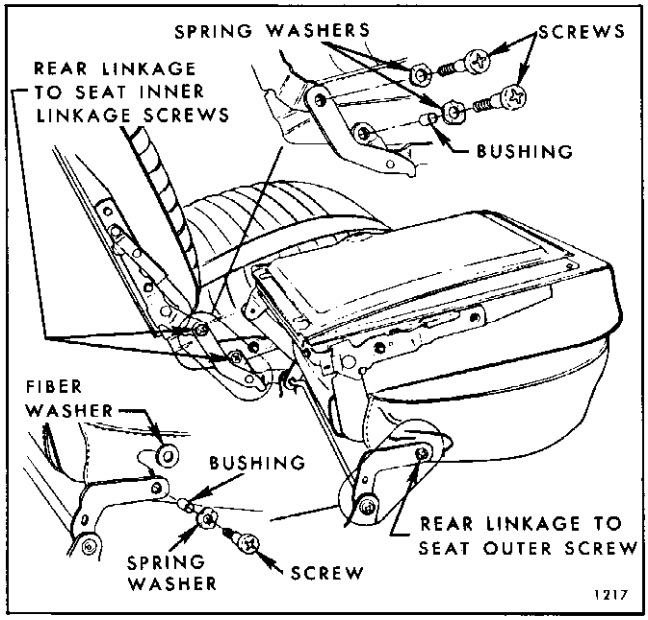


Fig. 15-73—Floor Pan Rear Linkage

FOLDING SECOND SEAT SIDE OUTER LINKAGE—Right or Left Seat—"65" Styles

Removal and Installation

1. Remove folding second seat assembly from car as previously described and place on a clean surface.

2. Remove outer linkage cover. Remove screw securing seat rear floor pan linkage to seat outer attaching screw (Fig. 15-73).

3. Remove hog rings and detach rear portion of trim sufficiently to remove three screws securing outer linkage to seat cushion frame. (See Fig. 15-71).

4. Remove outer linkage-to-seat back panel attaching screws (see Fig. 15-71); then, remove linkage and seat back catch from seat.

5. To install, reverse removal procedure. Install seat back lock and spring as described under "Folding Second Seat Back Lock - Removal and Installation".

FOLDING SECOND SEAT BACK LOCK—Right or Left Seat—"65" Styles

Removal

1. Remove seat back trim assembly, as previously described. Remove outer linkage cover.

2. Remove outer linkage-to-seat back panel attaching screws (See Fig. 15-71).

3. Remove lock handle, spring and bushing from linkage.

Installation

1. Position bushing and spring on lock handle.

2. Install lock handle, bushing and spring into position between seat back panel and outer linkage making sure end of spring is engaged in hole in outer link (Fig. 15-74).

3. Install lock handle attaching screw; then, install outer linkage to seat back panel attaching screws (Fig. 15-71).

4. Install seat back trim assembly and outer linkage cover.

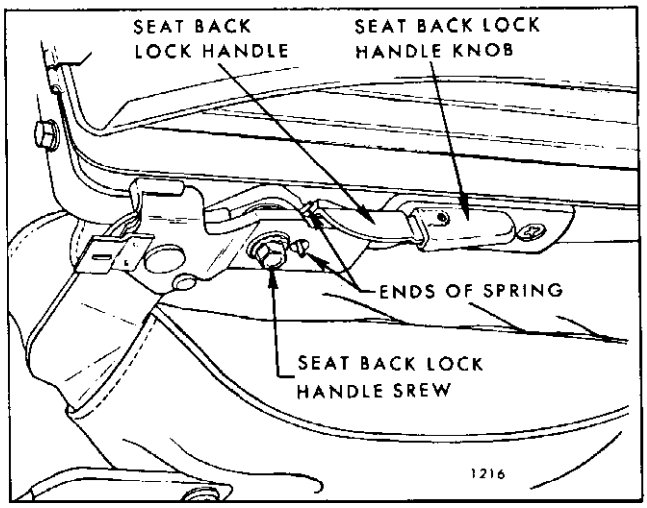


Fig. 15-74—Seat Back Lock

FOLDING SECOND SEAT BACK PANEL AND FILLER PANEL—Right or Left Seat—"65" Styles

Removal and Installation

1. Remove seat back trim assembly, as previously described. Remove outer linkage cover.

2. Remove outer and inner linkage to seat back attaching screws (Fig. 15-75). Remove seat back lock handle, spring and bushing from between outer linkage and seat back panel; then, remove seat back panel and rear floor filler panel from linkage.

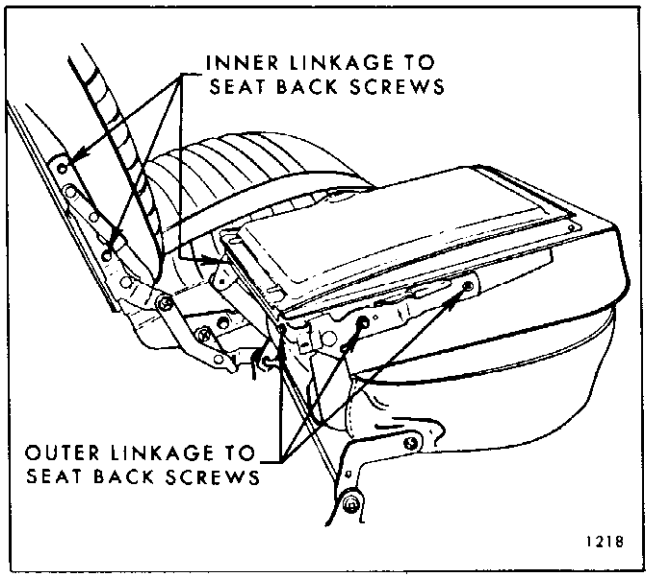


Fig. 15-75—Seat Inner and Outer Linkage

3. To install, reverse removal procedure. To install seat back lock refer to "Folding Second Seat Back Lock - Installation".

FOLDING THIRD SEAT AND FLOOR PANEL ASSEMBLY—"65" Styles

Removal and Installation

1. Raise folding third seat. Remove rear compartment left side panel. (See Fig. 15-68).
2. Remove seat back linkage-to-compartment side pan attaching bolt (Fig. 15-76) at both right and left sides of seat.
3. At left side of seat remove seat back hinge pin retainer (Fig. 15-76).
4. Carefully move seat back assembly to the left sufficiently to disengage right seat back hinge pin from hinge pin retainer; then, remove folding third seat assembly from body and place on a clean surface.
5. To install folding third seat and floor panel assembly, reverse removal procedure. Make sure a seat back hinge pin bushing is installed over both hinge pins. Also install flat washer between seat back linkage and compartment side pan and spring washer between linkage and bolt head (Fig. 15-76).

FOLDING THIRD SEAT CUSHION TRIM ASSEMBLY—"65" Styles

1. Raise folding third seat. Raise front of third seat cushion and prop in up position.

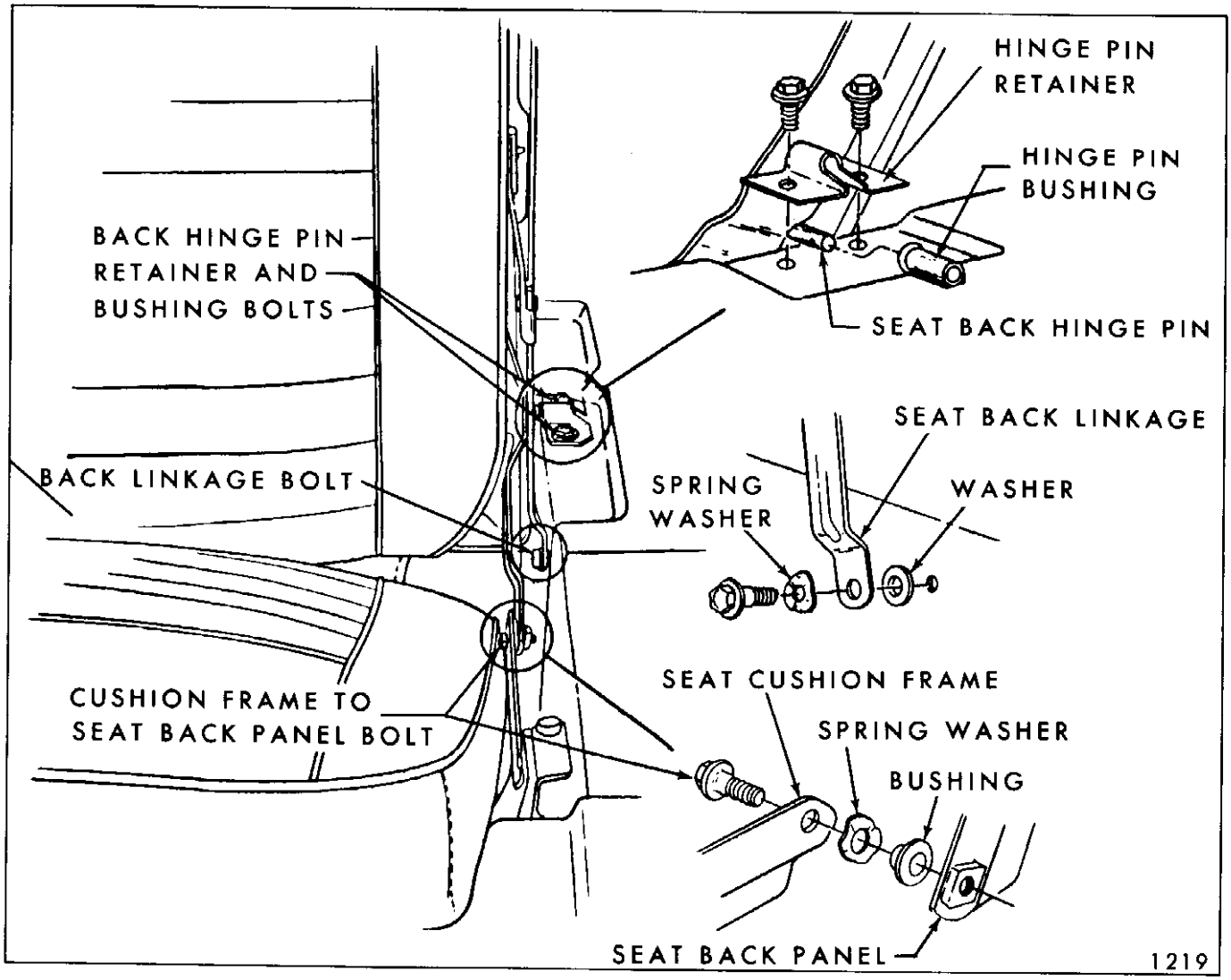


Fig. 15-76—Folding Third Seat

2. Remove hog rings securing seat back trim flap to bottom of seat cushion (Fig. 15-77).

3. Remove seat cushion frame-to-seat back panel attaching bolt (Fig. 15-76) from both sides of seat; then, remove seat cushion assembly and place on a clean surface.

4. As a bench operation remove hex-head screws securing seat cushion trim to seat cushion frame (Fig. 15-77) and three screws securing rear edge of seat cushion trim to seat cushion frame; then, remove cushion trim assembly from cushion frame.

5. To install, reverse removal procedure. When installing seat cushion frame-to-seat back frame attaching bolts install bolt bushing and spring washer, as shown in insert of Figure 15-76.

FOLDING THIRD SEAT BACK TRIM ASSEMBLY OR SEAT BACK PANEL ASSEMBLY—"65" Styles

Removal and Installation

1. Remove folding third seat and floor panel assembly, as previously described, and place on a clean surface.

2. Remove hog rings securing seat back trim flap to bottom of seat cushion (Fig. 15-77).

3. To remove seat back trim assembly remove seat back trim-to-seat back panel attaching screws (Fig. 15-77); then, lift trim assembly upward to disengage wire loops on seat back trim from slots in seat back panel and remove trim assembly.

4. To remove seat back panel assembly, remove seat cushion frame-to-seat back panel attaching bolt (Fig. 15-76); then, remove seat back panel with attached rear floor filler (at kick-up) panel from seat cushion.

5. To install, reverse removal procedure. Refer to inserts in Figure 15-76 for correct installation of linkage bolts, bushings and spring washers.

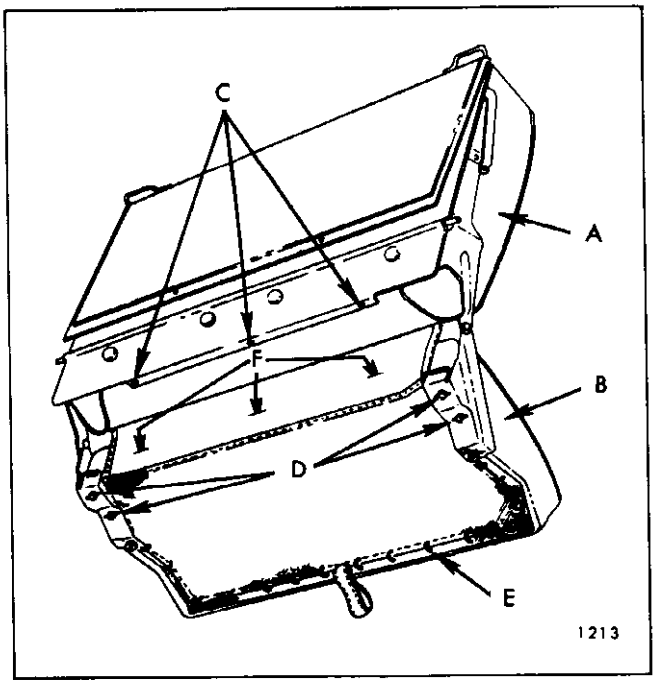


Fig. 15-77—Folding Third Seat Assembly

A. Third Seat Back
B. Third Seat Cushion
C. Seat Back Trim to Seat Back Panel Attaching Screws
D. Cushion Trim to Cushion Frame Attaching Screws
E. Hog Rings Securing Seat Back Trim Flap
F. Location of Cushion Trim to Cushion Frame Attaching Screws (Under Trim Flap)

LUGGAGE COMPARTMENT COVER PANEL AND FILLER PANEL—"65" Styles

Removal and Installation

1. Raise luggage compartment cover panel and support cover panel in up position.

2. Remove five hex-head screws securing cover panel to cross bar; then remove luggage compartment cover panel and filler panel.

3. To install, reverse removal procedure.

SEAT BELTS AND SHOULDER STRAPS

FRONT AND REAR SEAT BELTS— All Styles

GENERAL INFORMATION

Front and rear seat belts are provided on all styles. 1/2 inch - 13 UNC - 2N bolts are specified for all floor anchorages. Proper care of seat belts will provide added security to driver and passengers.

NOTE: THE FOLLOWING PRECAUTIONS SHOULD BE OBSERVED.

1. Keep sharp edges and damaging objects away from belts.

2. Use caution not to bend or damage any portion of the belt buckle or latch.

3. Do not bleach or re-dye belt webbing (clean with a mild soap solution and water).

4. When installing seat belt anchor bolt, start bolt by hand to assure that bolt is threaded straight.

5. Tighten anchor bolts to specified torque - 24 to 45 ft. lbs.

   IMPORTANT: Specified 1/2 inch - 13 UNC - 2N bolts MUST be used for floor anchorages.

Removal and Installation

The locations and types of seat belt to floor pan attachments used on 1967 styles are shown in Figures 15-78, 15-79, 15-80 and 15-81.

To remove seat belts, remove seat belt outer and inner floor anchor bolts as described and illustrated for type floor mount being removed - to remove full width seat inner belt(s) from seat, remove plastic trim protector at rear of seat and carefully pull floor anchor end of belt through seat. To install seat belts, reverse removal procedure. Tighten floor anchor bolts 24 to 45 ft. lbs.

STANDARD FLOOR MOUNTS WITH PLASTIC COVER

Slide belt webbing through plastic cover sufficiently to gain access to anchor bolt as shown in Figures 15-79, 15-80 and 15-81.

RETRACTOR TYPE FLOOR MOUNT

With belt fully extended, insert screwdriver through belt opening in cover, as shown in Figure 15-79, apply just enough outward pressure to inside of cover adjacent to metal tabs to disengage cover from tabs. Lift up cover to expose seat belt retractor anchor bolt.

REAR SEAT AND STATION WAGON FULL WIDTH SECOND SEAT

Remove rear seat cushion to gain access to seat belt anchor bolts (Figure 15-78).

STATION WAGON THIRD SEAT (FACING FORWARD)

Raise third seat back. Lift up front of third seat cushion sufficiently to gain access to seat belt anchor bolts (Fig. 15-78).

STATION WAGON THIRD SEAT (FACING REARWARD)

Raise third seat back. Leave third seat cushion in down position to allow access to seat belt anchor bolts (Fig. 15-78).

STATION WAGON SPLIT SECOND SEAT

Fold split second seat forward to gain access to seat belt anchor bolts.

SEAT BELT BAIL TYPE RETRACTOR

As an option, seat belts are available with bail type seat belt retractors on the outboard belt only.

Removal

1. Extend outboard seat belt to full length.

2. Insert a piece of stiff wire such as a paper clip in slot in roller drum to maintain spring tension of retractor (See Fig. 15-82).

   IMPORTANT: Keep wire in slot until retractor is reinstalled. In the event that spring tension is lost, drum on retractor can be turned 8 revolutions by hand to regain spring tension.

3. Using a flat-bladed tool pry open tabs that secure belt webbing on drum and remove retractor from belt (See Fig. 15-82).

Installation

1. With seat belt fully extended, insert belt under tabs on retractor (tabs of retractor should be on inboard side of belt webbing and bail pointing forward) and position retractor at center of belt webbing.

2. Using pliers, lightly bend down tabs to secure retractor in correct position on belt webbing.

3. Remove wire from slot in drum (when installing a new retractor, remove retaining clip on retractor drum to release spring tension) and allow belt to roll up on retractor.

FRONT SEAT SHOULDER STRAPS

GENERAL INFORMATION

Front seat shoulder straps are available for both drivers and passengers seat on all styles.

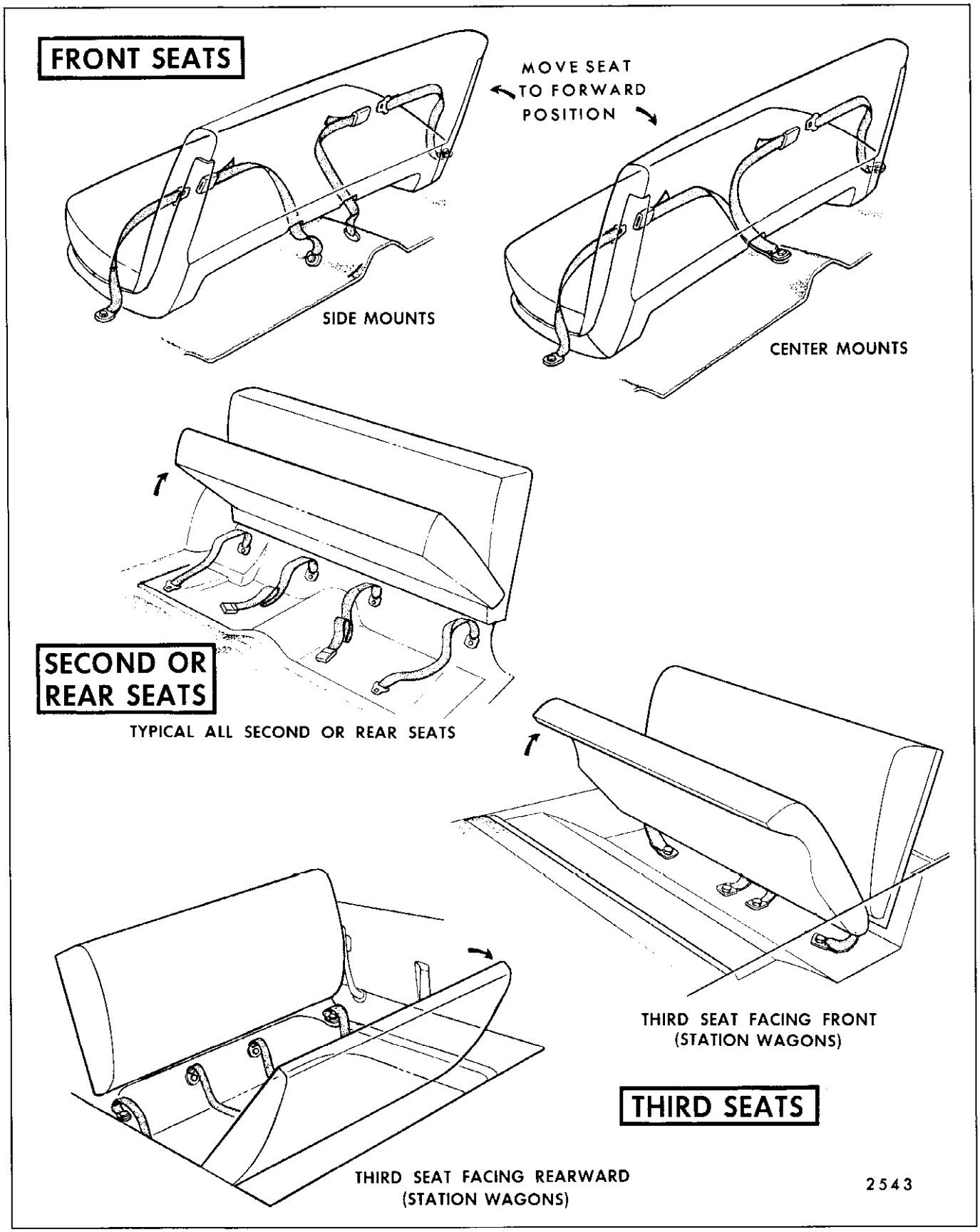
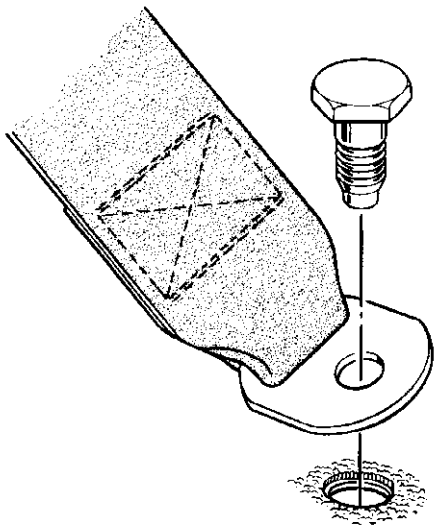
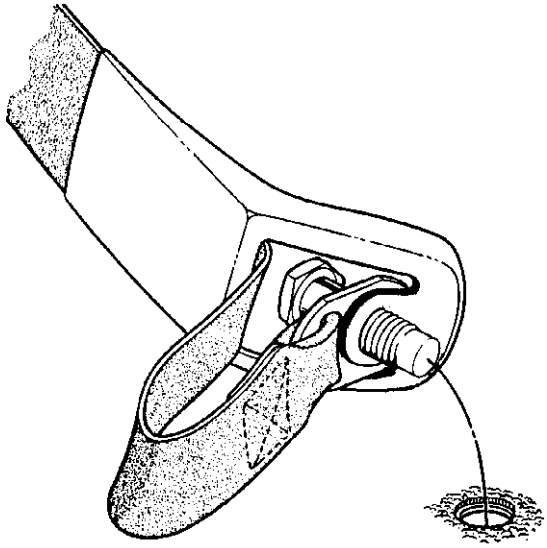


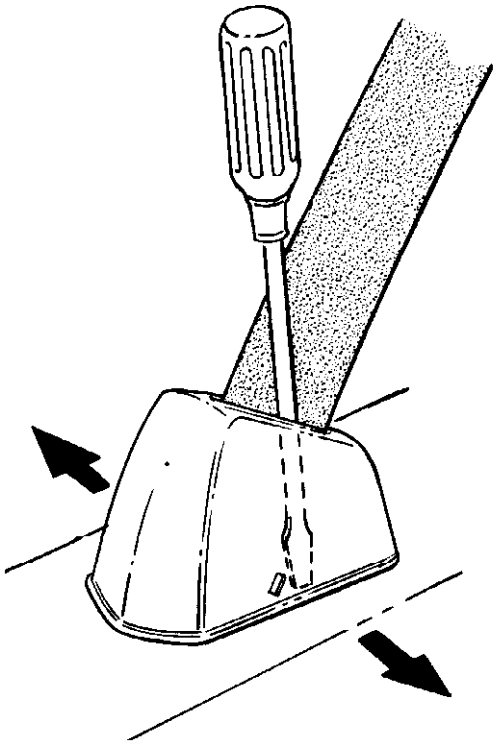
Fig. 15-78—Seat Belts - Full Width Front and Rear Seats

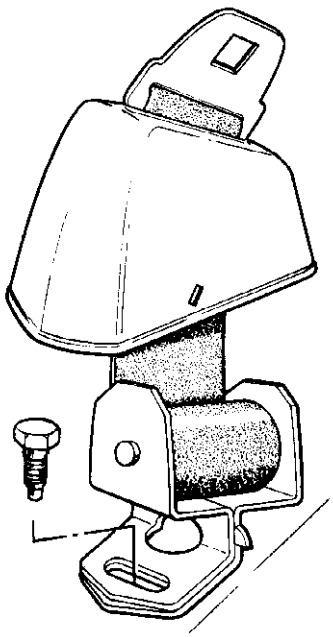


STANDARD FLOOR MOUNT



STANDARD FLOOR MOUNT
(WITH PLASTIC COVER)





RETRACTOR TYPE
FLOOR MOUNT

2544

Fig. 15-79—Seat Belt Outboard Floor Mount

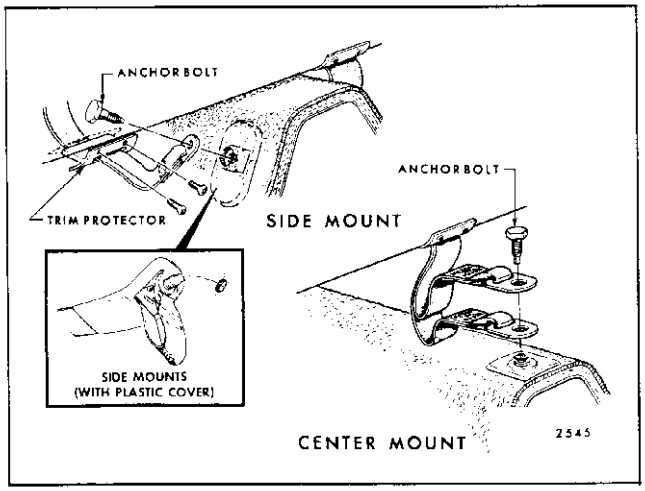


Fig. 15-80 — Seat Belt Inner Floor Mount Anchorage

Built in roof and floor anchorage provisions are provided in all 1967 body styles. To locate roof anchorage provisions for an original shoulder strap installation, refer to locating dimensions supplied in the service package installation instruction sheets.

NOTE: Shoulder straps not in use must be anchored by inserting buckle into retainer to prevent buckle end from lashing about.

Proper care of shoulder straps will provide added security to driver and front passenger.

The following precautions must be observed.

1. Keep sharp edges and damaging objects away from shoulder straps.
2. Use caution not to bend or damage any portion of the shoulder strap buckle or latch.

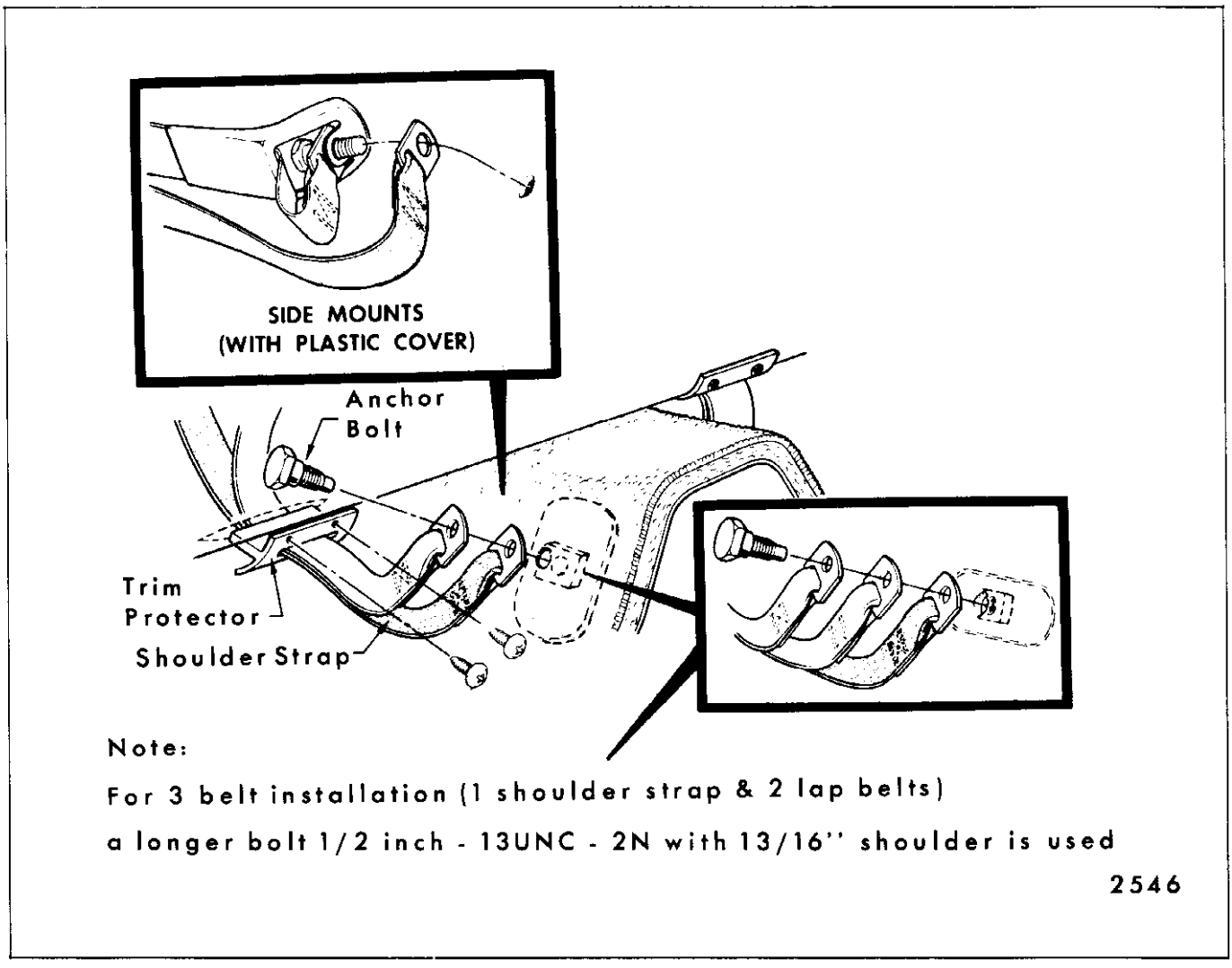


Fig. 15-81 — Inner Seat Belt Floor Side Mount Anchorage for Three Belt Installation (One Shoulder Strap and Two Lap Belts)

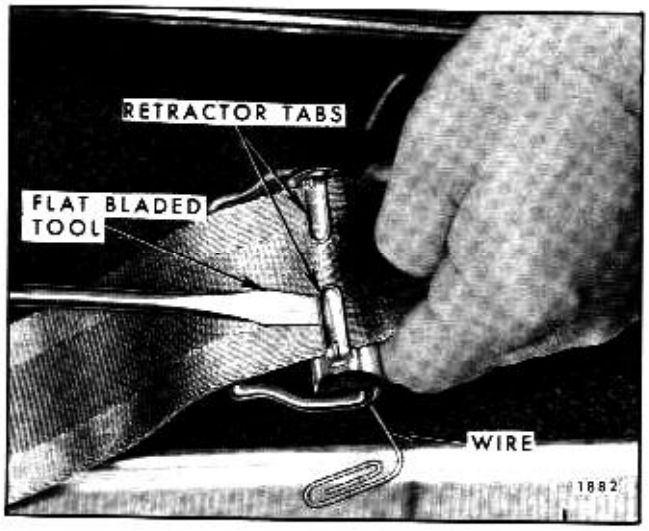


Fig. 15-82—Removal of Bail Type Retractor from Seat Belt

3. Do not bleach or re-dye webbing (clean with a mild soap solution and water).

4. When installing shoulder strap anchor bolt, start bolt by hand to assure that bolt is threaded straight.

5. Tighten anchor bolts to specified torque - 24 to 45 ft. lbs.

IMPORTANT: Specified 1/2 inch - 13 UNC - 2N bolts MUST be used for floor anchorages.

Removal and Installation

ROOF ANCHORAGE—CLOSED STYLES

Carefully remove plastic trim cap. Remove roof anchor screws (Fig. 15-84) and remove shoulder strap and mounting plate.

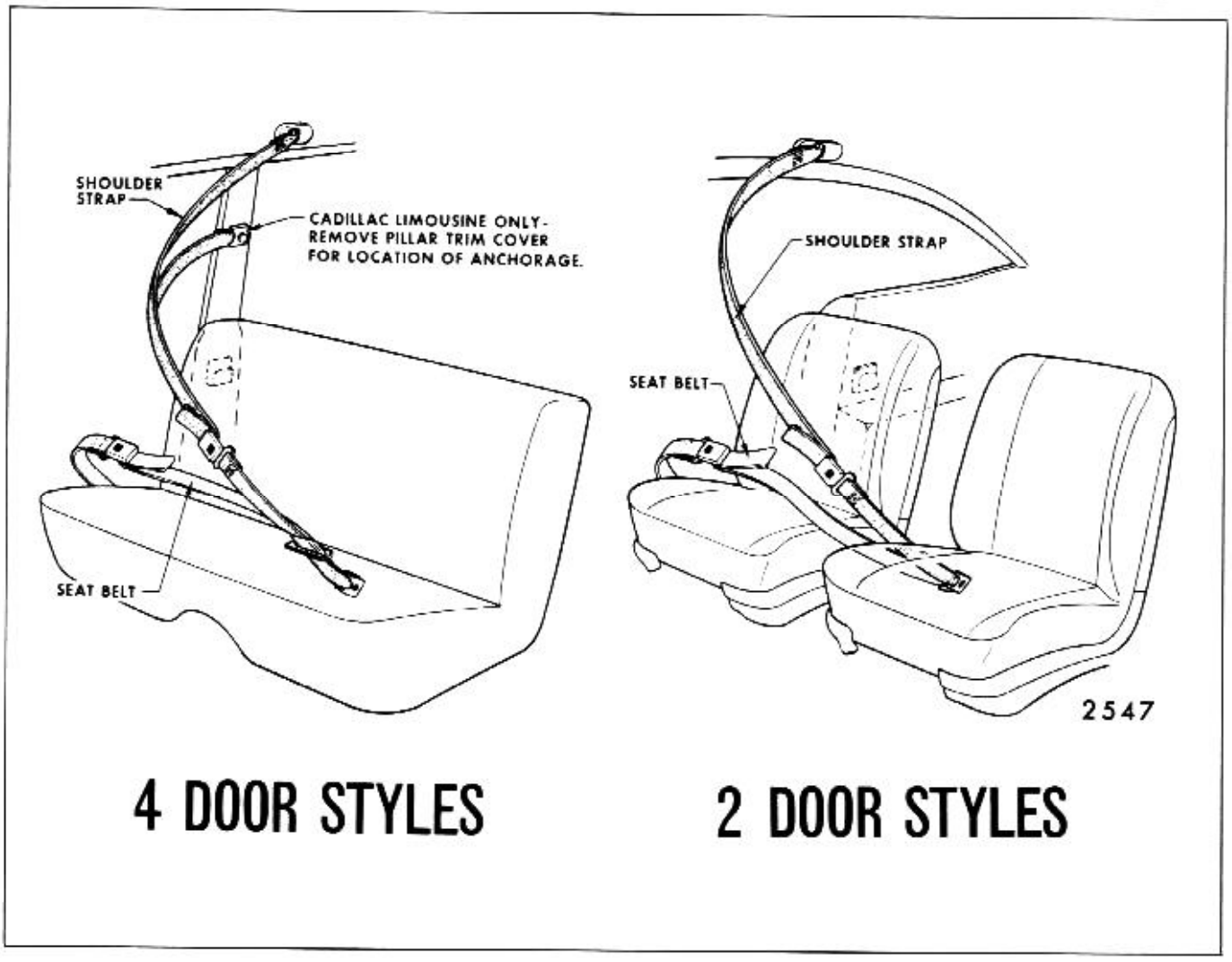


Fig. 15-83—Typical Shoulder Strap Installation

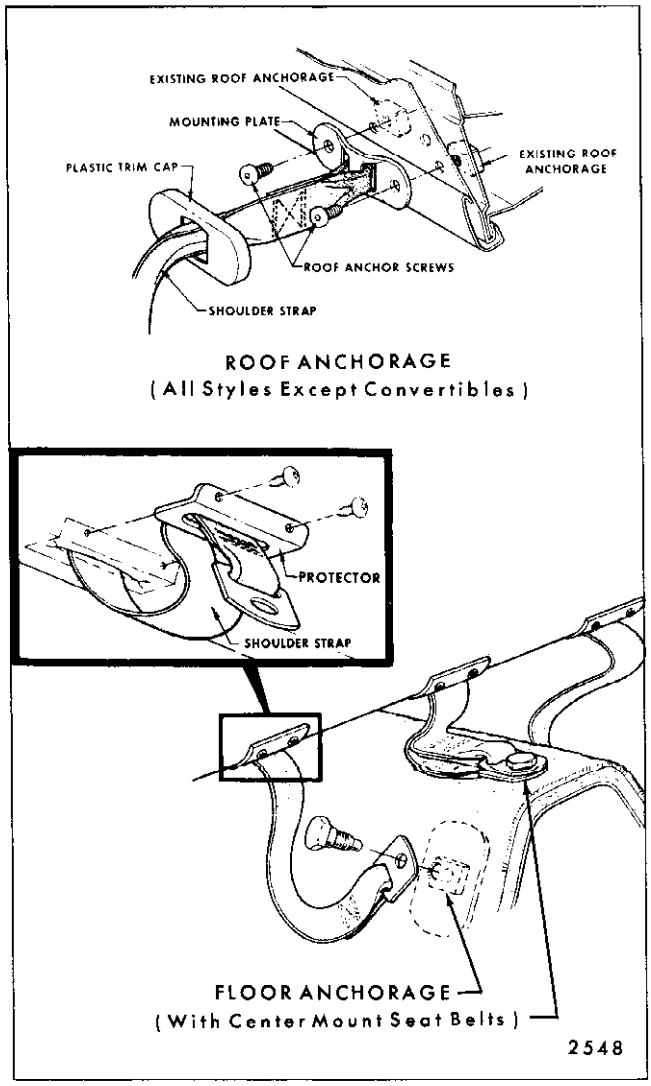


Fig. 15-84—Shoulder Strap Roof Anchorage (All Styles except Convertible) and Floor Anchorage (All Styles)

REAR QUARTER ANCHORAGE—Convertible Styles

Remove folding top compartment side trim upper panel attaching screws. Remove convertible top male hinge upper attaching bolt securing shoulder strap anchor plate. (See Fig. 15-85). Carefully pull compartment side trim upper panel away from rear quarter trim sufficiently to remove shoulder strap and protective sleeve from between panels. To install reverse removal procedure. Check that protective sleeve is properly positioned between quarter and side trim panel.

FLOOR PAN ANCHORAGE—All Styles (See Fig. 15-84)

Remove anchor bolt securing shoulder harness floor pan anchor plate (See Fig. 15-84 for styles with center mount seat belts) (See Fig. 15-81 for styles with side mount seat belts).

SHOULDER STRAP BUCKLE RETAINER—All Styles

To properly locate shoulder strap buckle retainers for an original shoulder strap installation refer to locating dimensions supplied in the service package installation instruction sheets.

NOTE: Shoulder straps not in use must be anchored by inserting buckle into retainer to prevent buckle end from lashing about.

Removal and Installation

Carefully insert a small straight screw driver into joint of retainer and open retainer to gain access to retainer attaching screws (See Fig. 15-86). Remove retainer attaching screws (Fig. 15-86) and remove retainer. To install, reverse removal procedure.

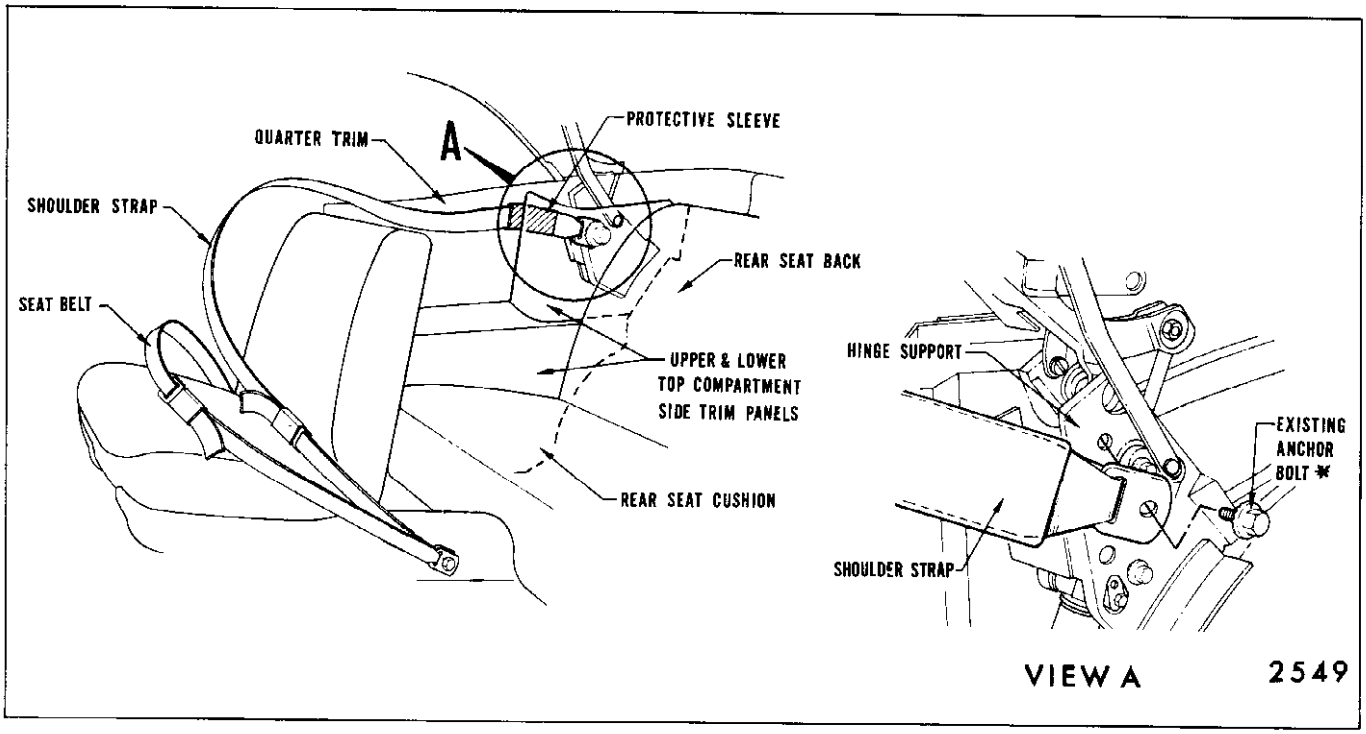


Fig. 15-85 — Shoulder Strap Rear Quarter Anchorage (Convertible Styles Only) *Existing Male Hinge Upper Bolt

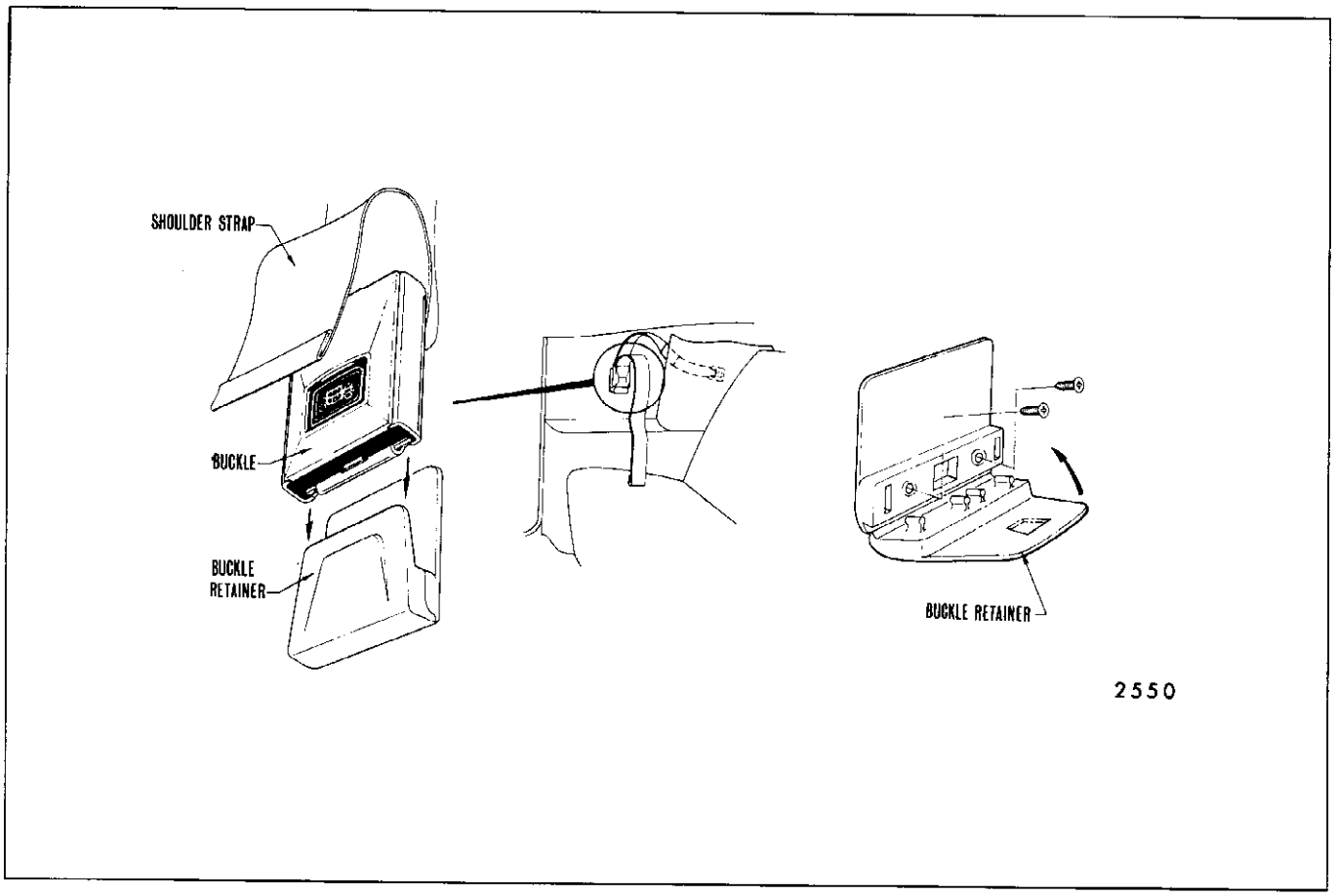


Fig. 15-86 — Shoulder Strap Buckle Retainer

POWER SEATS

HORIZONTAL SEATS

Description

The seat adjusters for the bench-type and bucket-type seat are actuated by a 12 volt series-wound motor located near the front left side of the seat bottom frame, and are energized through a control switch installed in the seat side panel or in the door arm rest. For typical wiring installations see Figure 16-61 for bucket-type seats and Figures 16-62 and 16-63 for bench-type seats.

For circuit diagrams see Figures 16-64 and 16-65.

The horizontal seat circuit is protected by a circuit breaker (refer to Electrical Introduction for specific location).

Oldsmobile styles only - In addition to the circuit breaker a relay is used in the circuit which prevents the operation of the seat until the ignition switch is turned "on".

The trouble diagnosis chart will help locate typical problems which may occur.

Trouble Shooting of Horizontal Seat Circuit

CONDITION	CAUSE	CORRECTION
The seat motor does not operate in either the forward or rearward direction.	a. Open or short circuit in feed harness.	a. Connect one test light lead to feed terminal of switch block and ground other tester lead to body metal. If tester does not light, there is an open or short circuit between switch and power source.
	b. Inoperative motor.	b. Check operation of seat control switch with jumper wire. See "Checking Door Window Control" for similar operation.

CONDITION	CAUSE	CORRECTION
The seat motor does not operate in either the forward or rearward direction. (Cont'd.)	b. Inoperative Motor. (Cont'd.)	c. Check circuit from control switch to motor for short or open circuit and check ground wire attachment at adjuster.
		d. Check operation of motor with #12 gauge jumper wire. Connect one end of jumper wire to power source and the other end to one of the seat motor terminals. Motor should operate. Perform same check at the other motor terminal. If motor does not operate, repair or replace motor as required.
The seat motor operates in only one direction.	a. Defective switch.	a. Check operation of seat control switch with jumper wire.
	b. Open or short circuit in motor feed wires.	b. Check circuit from control switch to motor for short or open circuit.
	c. Defective seat motor.	c. Check operation of motor with #12 gauge jumper wire. Connect one end of jumper wire to power source and the other end to one of the seat motor terminals. Motor should operate. Perform same check at the other motor terminal. If motor does not operate, repair or replace motor as required.

FOUR-WAY TILT SEAT

Description

The seat adjusters for the bench type and bucket type seats are actuated by a 12 volt, reversible, shunt-wound motor with a built-in circuit breaker. See Figures 16-66 and 16-67 for the bench seat installation and Figure 16-68 for the bucket seat installation.

The seat motor is energized by a toggle-type control switch installed in the left seat side panel. On 48467 style, the control switch is installed in the left front door arm rest.

The four way seat circuit is protected by a circuit breaker (refer to Electrical Introduction for specific location).

Oldsmobile styles only - In addition to the circuit

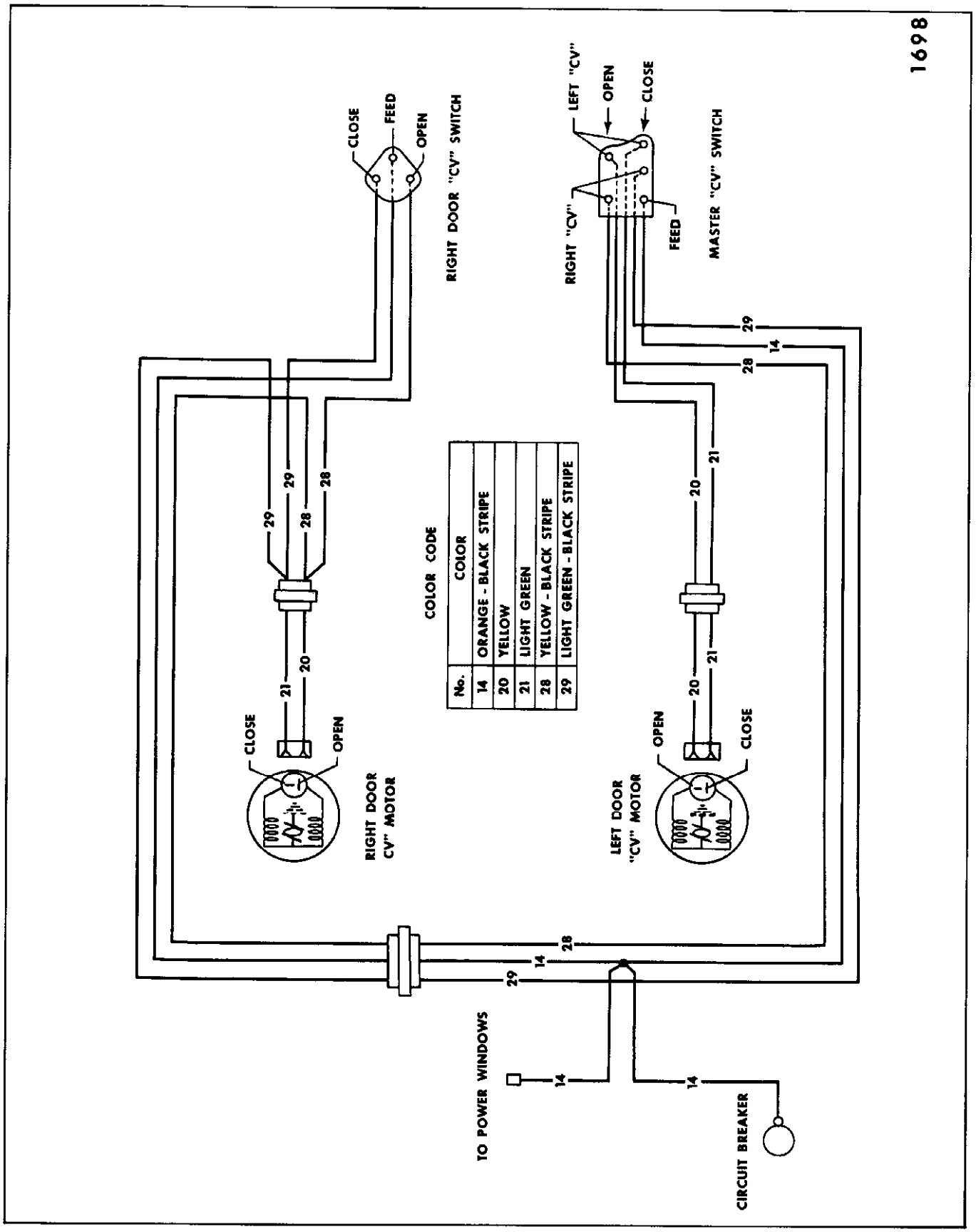


Fig. 16-39—Power Ventilator Circuit Diagram - Pontiac Style Shown

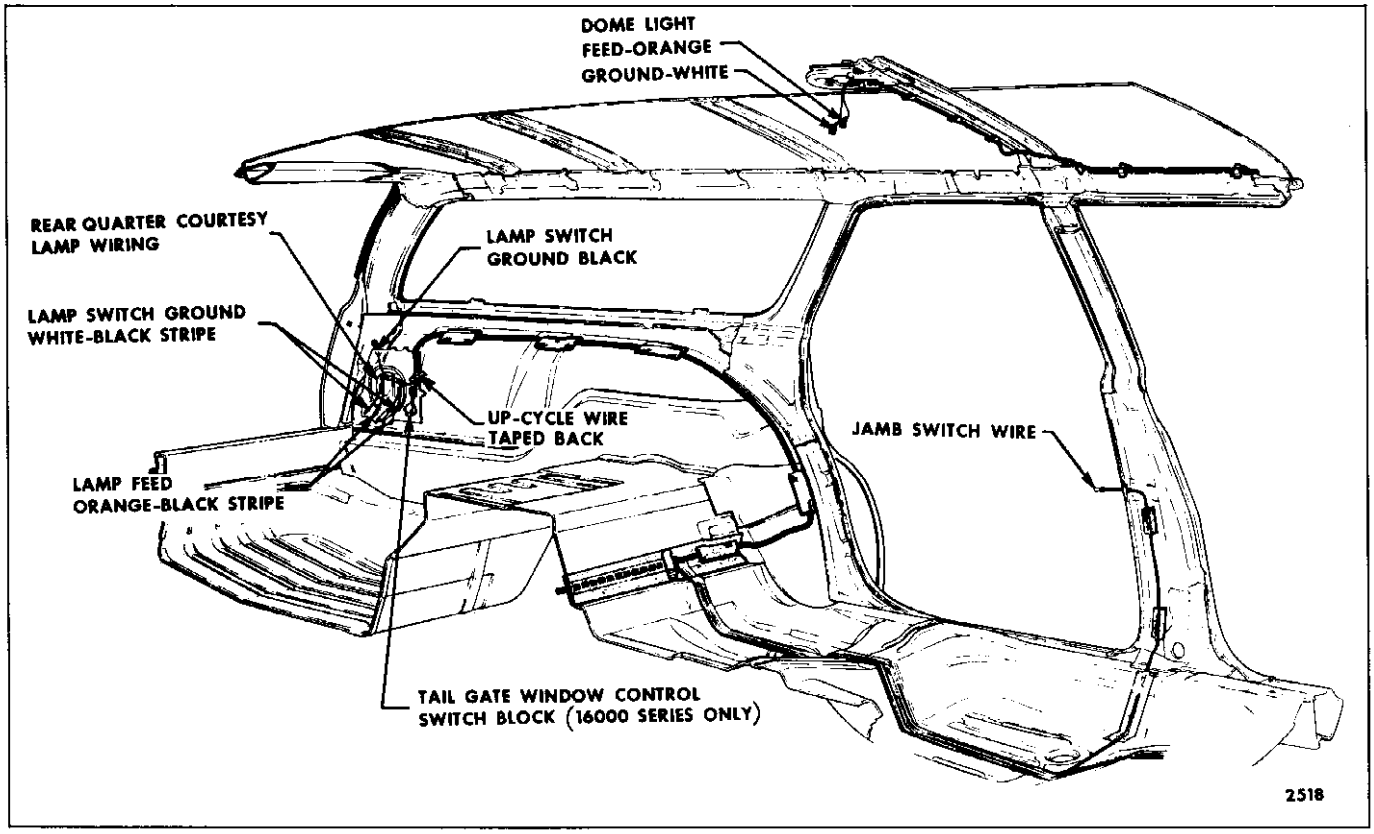


Fig. 16-40 — Left Side Wiring - Chevrolet and Pontiac "B" Bodies

breaker a relay is used in the circuit which prevents the operation of the seat until the ignition switch is turned "on".

The seat adjuster operating mechanism incorporates a transmission assembly which includes two solenoids and four drive cables on bench type seats and two drive cables on bucket seats, leading to the seat adjusters. One solenoid controls the rear vertical movement of the seat while the other solenoid controls the horizontal movement of the seat. When the control switch is actuated, the motor and one of the solenoids are energized simultaneously. Then the solenoid plunger causes the shaft dog to engage with the large gear dog.

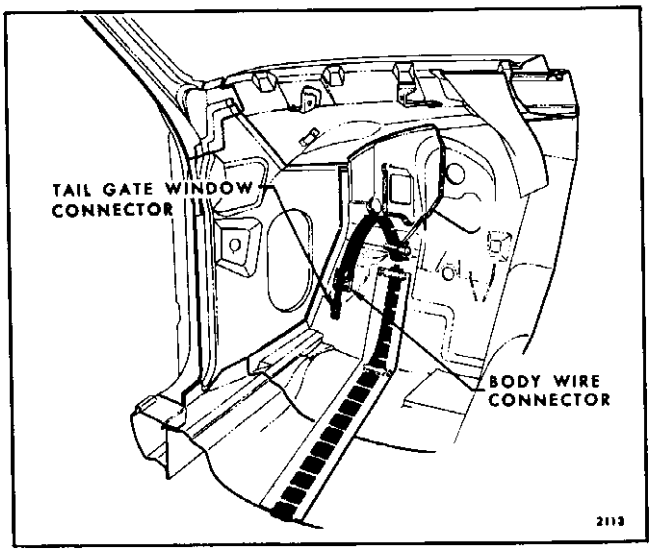


Fig. 16-41 — Front End Wiring - All "A" Bodies

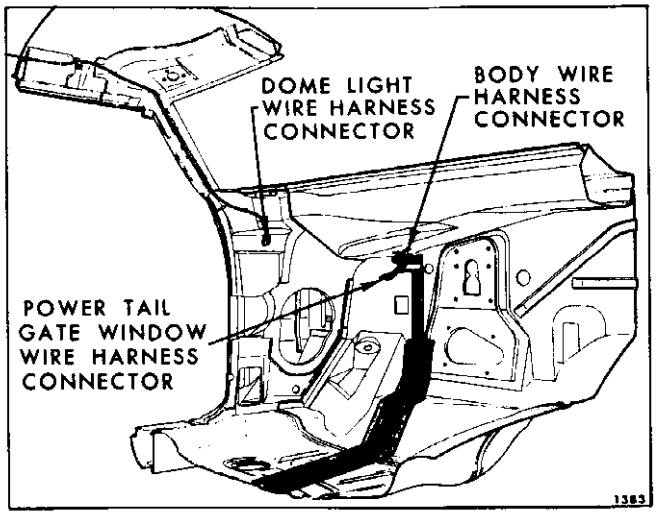


Fig. 16-42 — Front End Wiring - Chevrolet, "B" Body

Power is then transmitted through the transmission shaft on bench seats and through the pulleys on bucket seats, which in turn drives the actuator cables. When the adjusters reach their limit of travel, the drive cables stop their rotating action and torque is absorbed by the rubber coupler connecting the motor and transmission on bench seats. On bucket seats torque is absorbed through the belt on the pulley. When the control switch lever is released the switch contacts open, a spring returns the shaft dog and solenoid plunger to their original position disengaging the shaft dog from the large gear dog. See "Seat Section" for exploded view of transmission.

Checking Procedure

It may be necessary to use only one or all of the procedures outlined to locate an electrical failure in the circuit. If the location of the failure is evident follow only the steps required to check the affected wire or component. If the location of the failure is not evident, follow the procedures as outlined. Before performing any extensive check procedures, check the seat adjuster drive cables for proper attachment. In addition, study the seat circuit diagrams to become familiar with the seat circuit. (See Figs. 16-69 and 16-70).

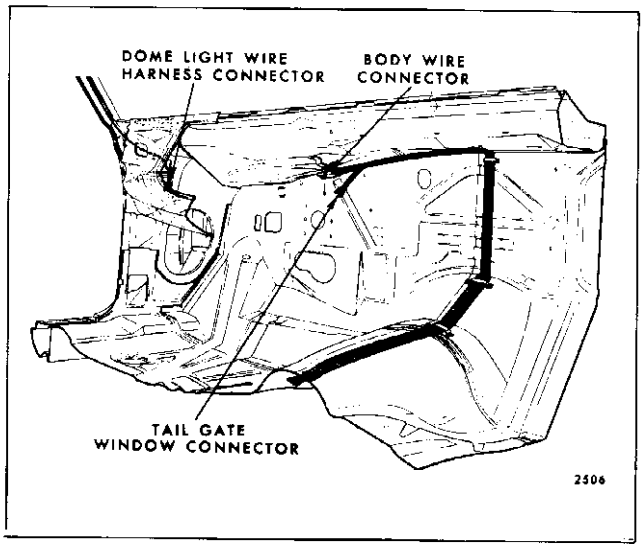


Fig. 16-43—Front End Wiring - Pontiac "B" Styles

a. Checking for Current at Circuit Breaker

1. Connect one test light lead to battery side of circuit breaker. If tester does not light, there is no current at battery side of circuit breaker.

2. To check circuit breaker, disconnect switch feed wire from breaker, and with a test light

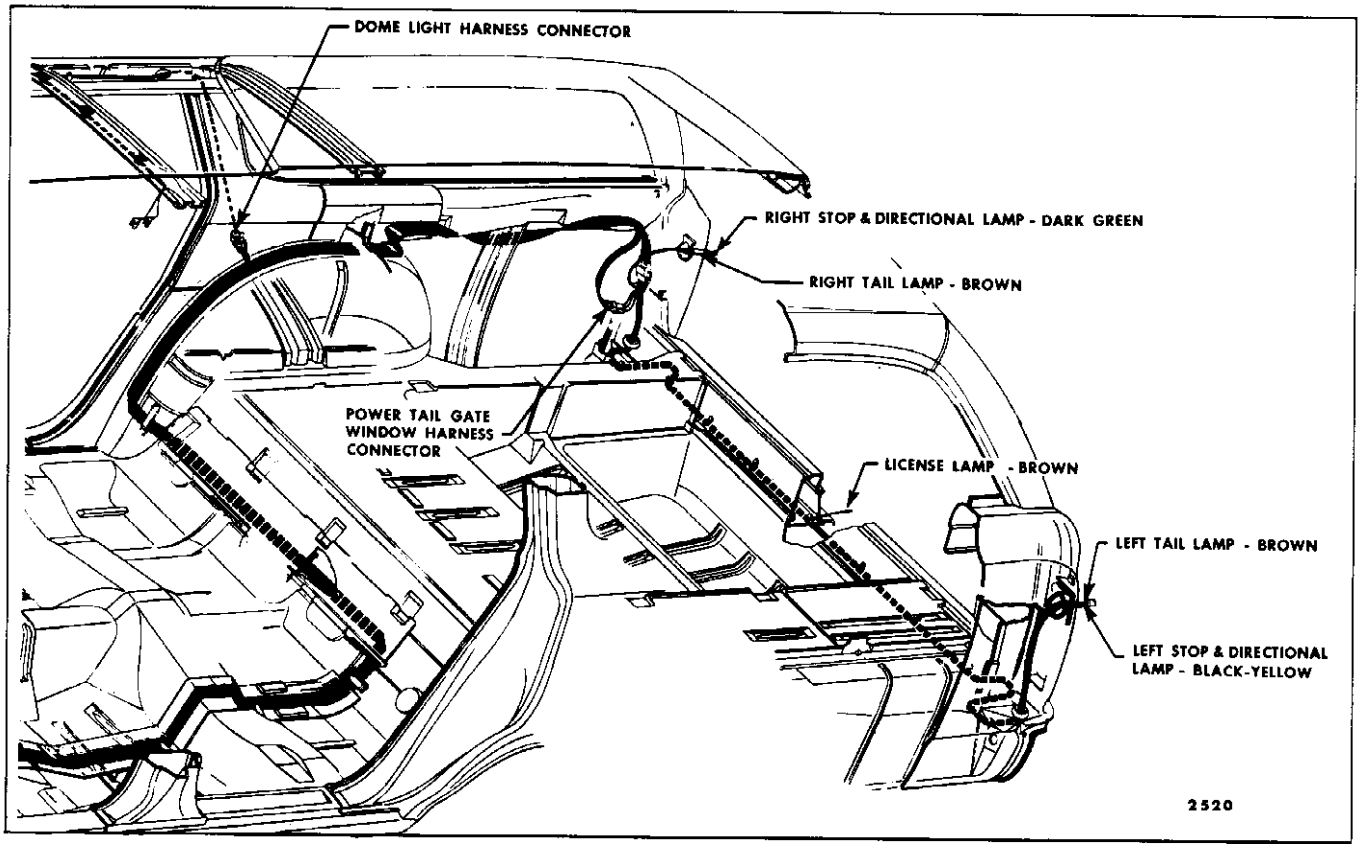


Fig. 16-44—Right Side and Rear End Wiring - Chevrolet "A" Styles

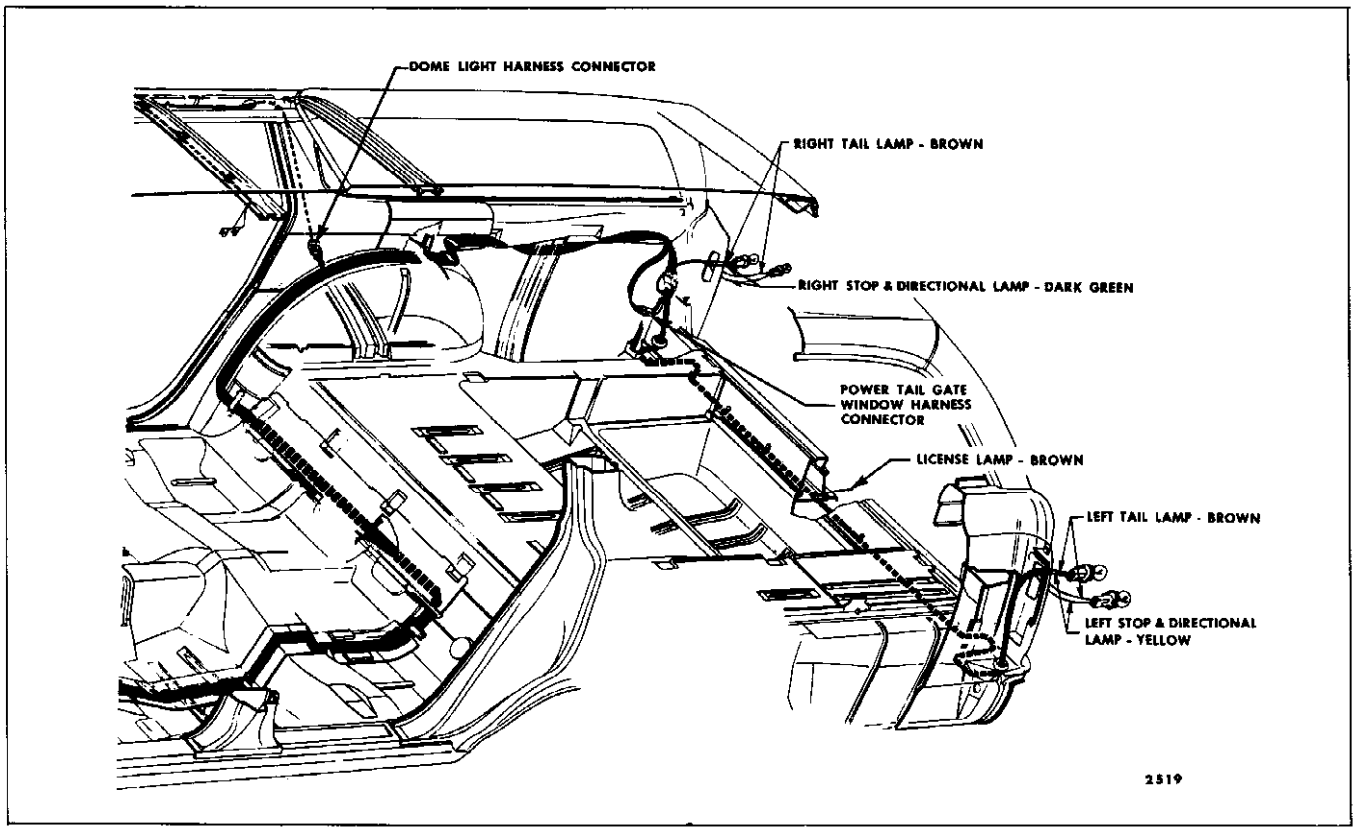


Fig. 16-45—Right Side and Rear End Wiring - Pontiac and Oldsmobile "A" Body

check for current at switch side of circuit breaker. If tester does not light, there is no current flowing through circuit breaker.

b. Checking the Ignition Relay Assembly—Oldsmobile "B & E" Styles Only

1. With test light check for current at circuit

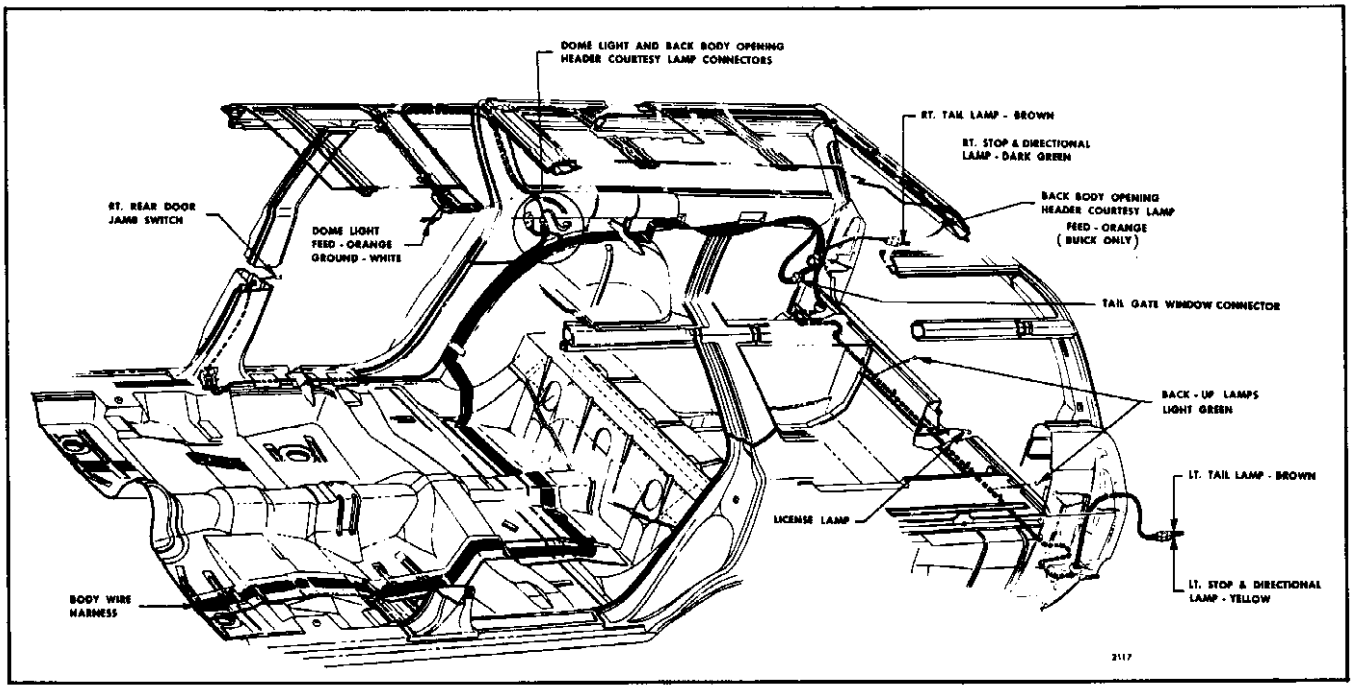


Fig. 16-46—Right Side and Rear Wiring - Buick "A" Body 55-65 Styles

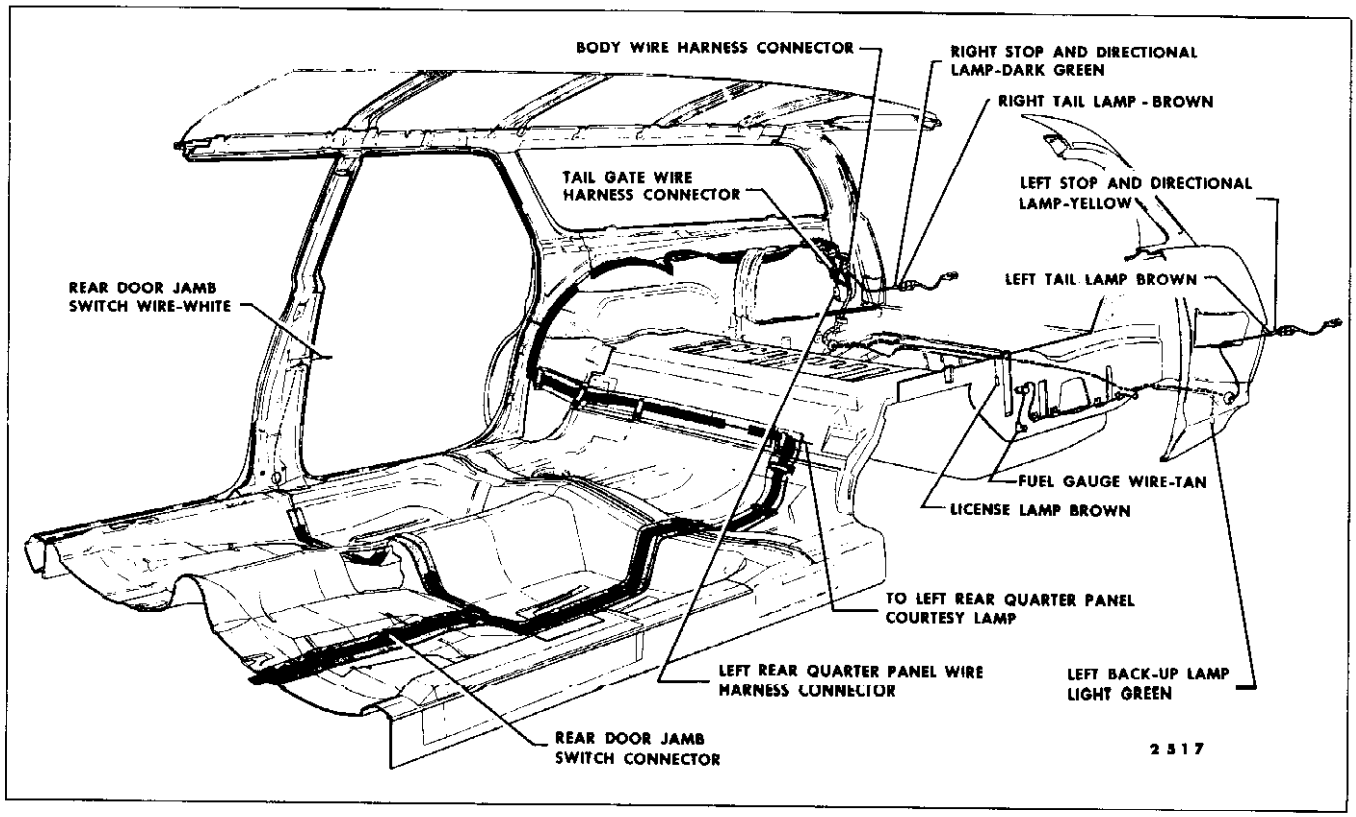


Fig. 16-47—Right Side and Rear End Wiring - Chevrolet "B" Body

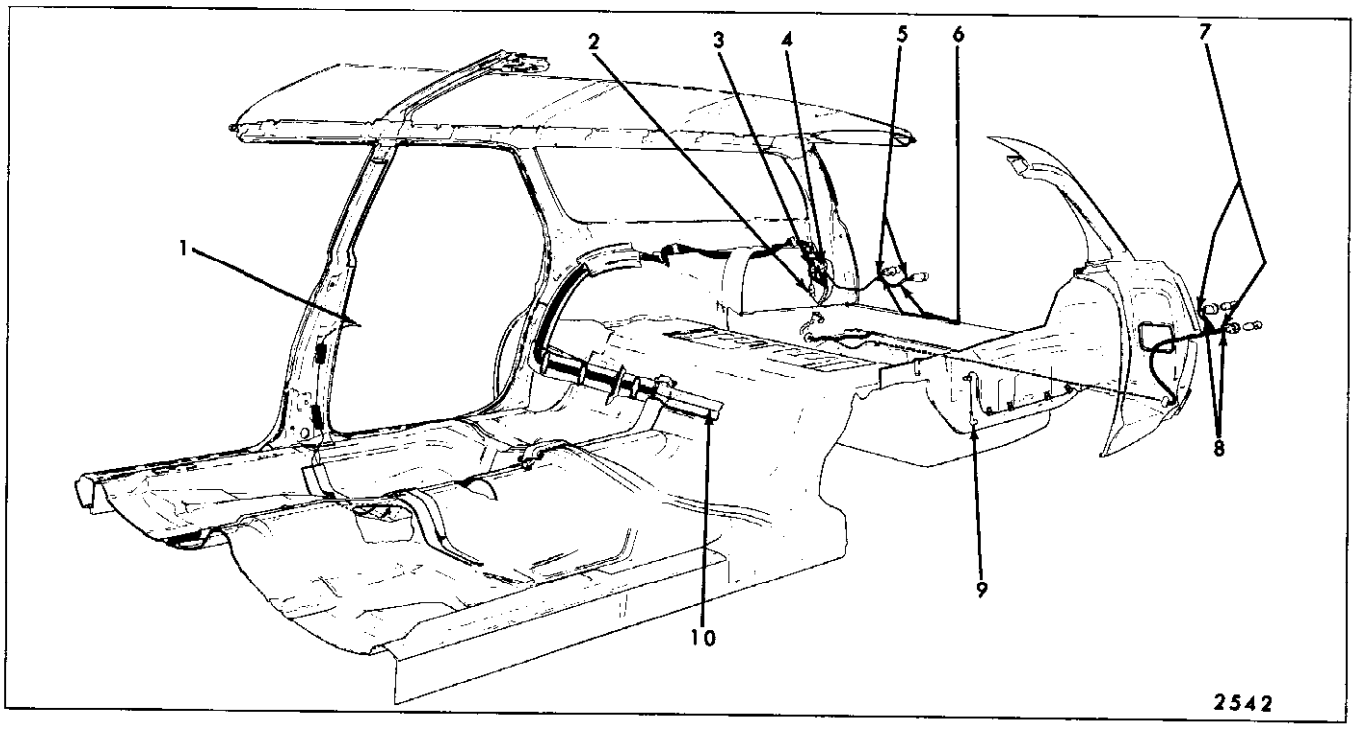


Fig. 16-48—Right Side and Rear End Wiring - Pontiac "B" Bodies

1. Rear Door Jamb Switch Wire
2. Quarter Panel Courtesy Lamp Connector
3. Tailgate Window Harness Connector
4. Body Wire Harness Connector
5. Right Tail Lamp (Brown)
6. Right Stop and Directional Lamp (Dark Green)
7. Left Tail Lamp (Brown)
8. Left Stop and Directional Lamp (Yellow)
9. Gas Gauge Wire
10. Wire to Quarter Courtesy Lamp

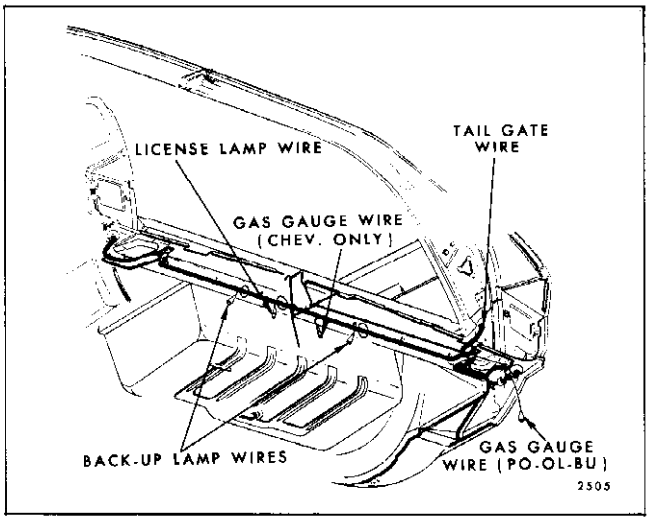


Fig. 16-49—Rear Cross Bar Wiring - All "A" Body

breaker side of relay. If tester does not light, there is a short or open circuit between circuit breaker and relay assembly.

2. Turn ignition switch on and with a test light check for current at output side of relay. If tester does not light, the relay is defective or there is a short or open circuit between ignition switch and relay assembly. Check wires before replacing relay.

NOTE: Oldsmobile "B & E" Styles Only - Ignition switch must be on for performing the remainder of checking procedure.

c. Checking Feed Circuit Continuity at Relay on Seat Motor—All Styles

1. Disengage three-way connector body from the seat motor relay.

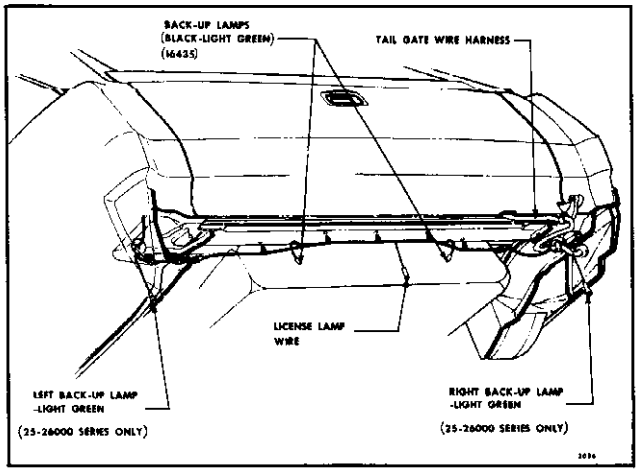


Fig. 16-50—Rear Cross Bar Wiring - Chevrolet, Pontiac "B" Bodies

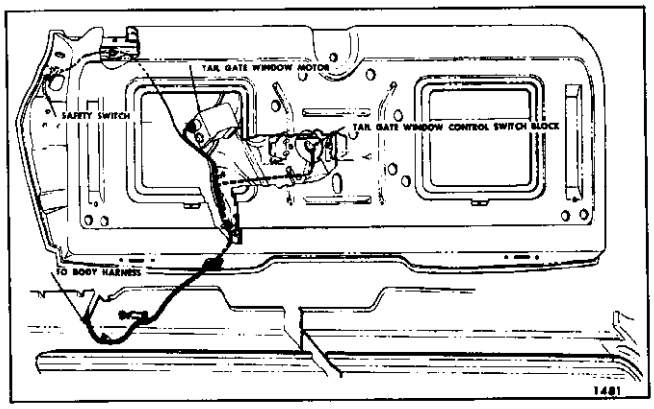


Fig. 16-51—Tail Gate Wiring - All "A" Bodies

2. Insert one test light lead into the relay power feed connector slot on the harness, and ground other tester lead.

3. If tester does not light, there is no current at end of feed wire. Failure is caused by an open or short circuit in feed circuit.

d. Checking for Current at Seat Control Switch

1. Connect one test light lead to feed terminal of switch block and ground other test light lead to body metal.

2. If tester does not light, there is no current at switch block. Failure is caused by an open or short circuit between switch block and power source.

e. Checking the Seat Control Switch

In the following operations which specify the seat control switch to be actuated, a switch that has

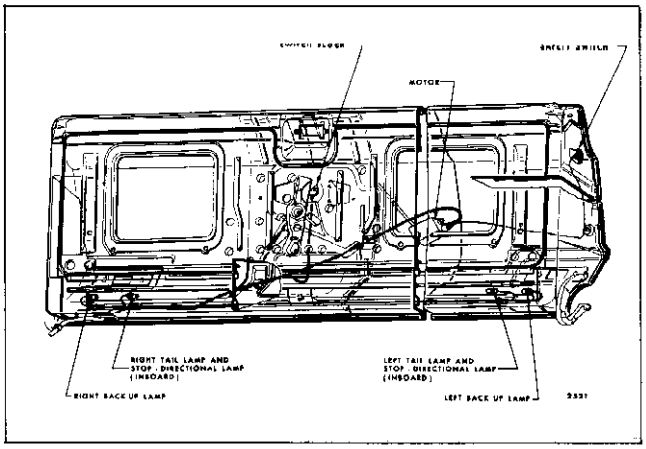


Fig. 16-52—Tail Gate Wiring - Chevrolet "B" Body

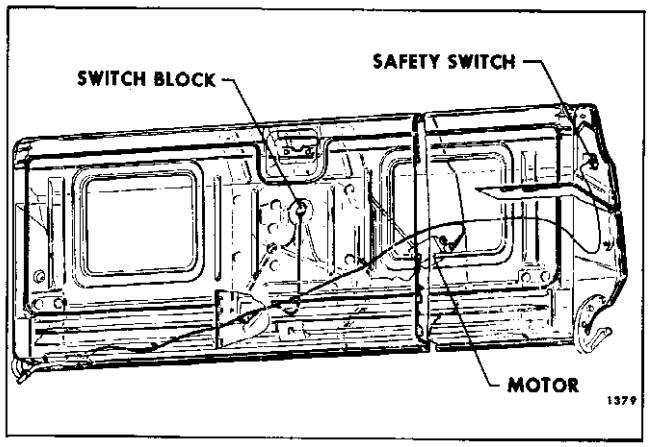


Fig. 16-53—Tail Gate Wiring - Pontiac "B" Body

been checked for proper operation may be connected to the switch block. If a switch is not available, a three-way jumper wire can be made to perform the switch function. The method of making the jumper wire and the switch locations to be connected to obtain a specific movement of the seat are shown in Figures 16-71 and 16-72. If a jumper wire is used, number the locations on the switch block as indicated in the illustration.

NOTE: To make jumper wire, obtain two pieces of #12 gauge wire, each 4 1/2" long. Join one end of each wire as shown in diagram. The joined end can be inserted in the feed location in the switch block; one of the remaining ends can be inserted into one of the solenoid locations.

1. Obtain switch or jumper wire and connect to switch block.

2. Operate switch if used. If adjusters operate with switch or jumper wire, but did not operate with original switch, the original switch is defective or connector block was not sufficiently engaged.

   IMPORTANT: To obtain a seat movement using a three-way jumper wire at the switch block, the switch feed location, one of the motor field wire locations and one of the solenoid locations have to be connected simultaneously.

   The switch locations to be connected to obtain a specific seat movement are outlined as follows:

   (a) To raise seat, place jumper wire in locations A, B and E.

   (b) To lower seat, place jumper wire in locations A, D and E.

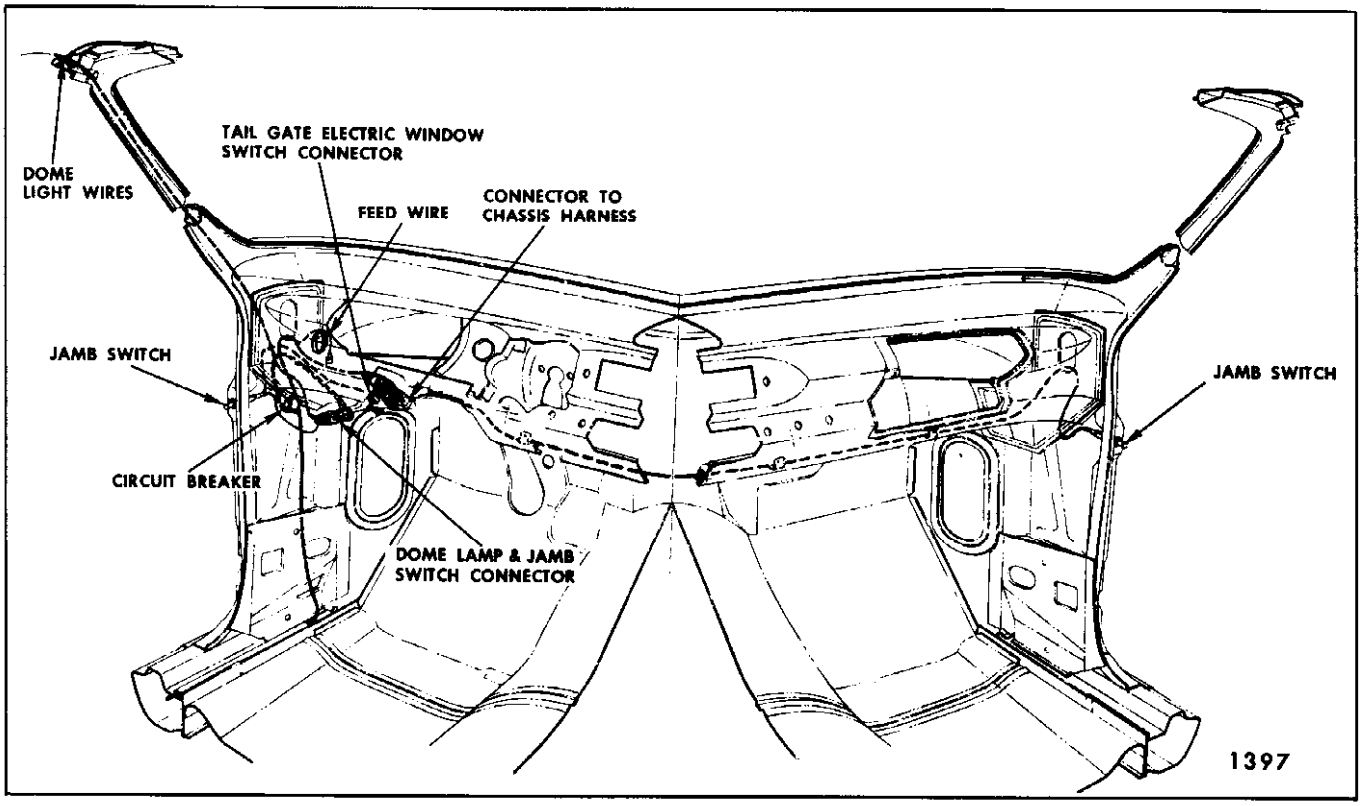


Fig. 16-54—Front End Wiring - Chevrolet "X" Bodies

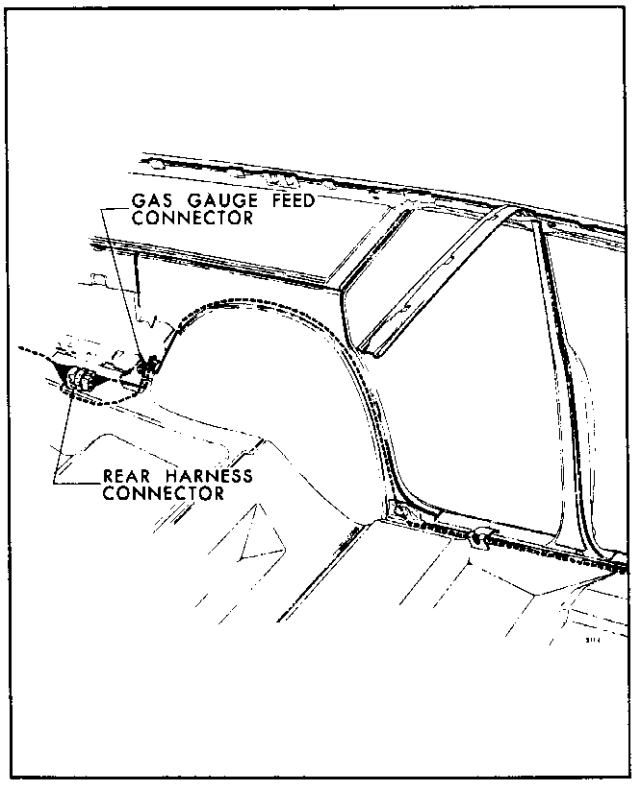


Fig. 16-55—Left Side Wiring - Chevrolet "X" Bodies

(c) To operate seat forward, place jumper wire in locations A, C and D.

(d) To operate seat rearward, place jumper wire in locations A, B and C.

f. Checking Wires Between Control Switch and Motor Relay

1. Disengage three-wire harness connector from relay at motor.

2. Insert one test light lead into the motor field

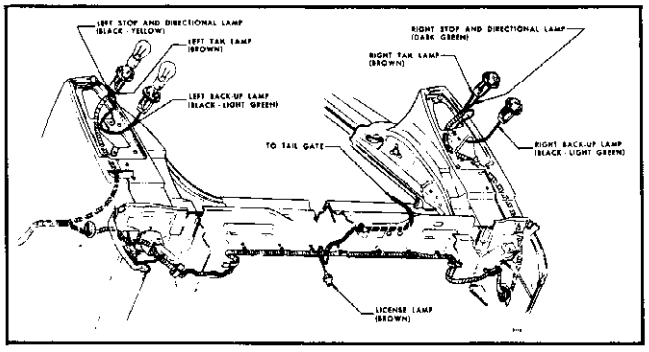


Fig. 16-56—Rear Cross Bar Wiring - Chevrolet "X" Bodies

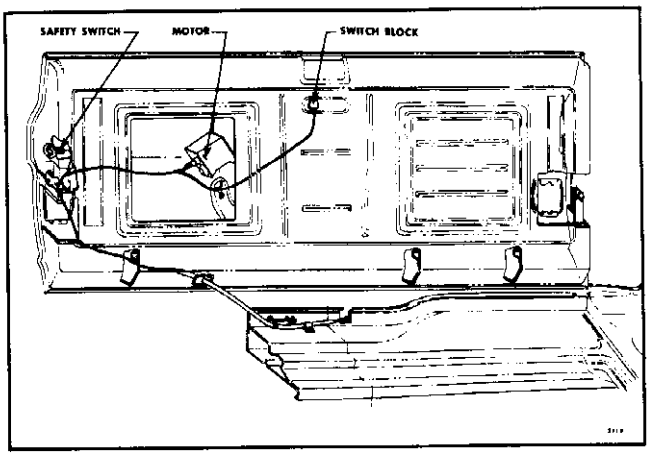


Fig. 16-57—Tail Gate Wiring - Chevrolet "X" Bodies

connector slot on harness and ground other lead.

3. Actuate seat switch to energize field wire being tested.

4. If tester does not light, there is no current at end of wire. Failure is caused by an open or short circuit between end of wire and switch. Check other motor field wire in the same manner.

g. Checking the Relay Assembly

1. Disconnect three leads from relay assembly. These are the wires leading from the motor to the relay.

2. Connect one end of a jumper wire to one of the motor field feed studs on the relay and ground the other end of the jumper wire.

3. Connect one test light lead to motor armature feed stud on relay and ground other tester lead.

4. With jumper wire, energize the field stud which is not grounded.

CAUTION: Do not energize grounded side. If tester does not light, the relay is defective.

h. Checking the Motor Assembly

1. Disconnect motor field feed wires from motor.

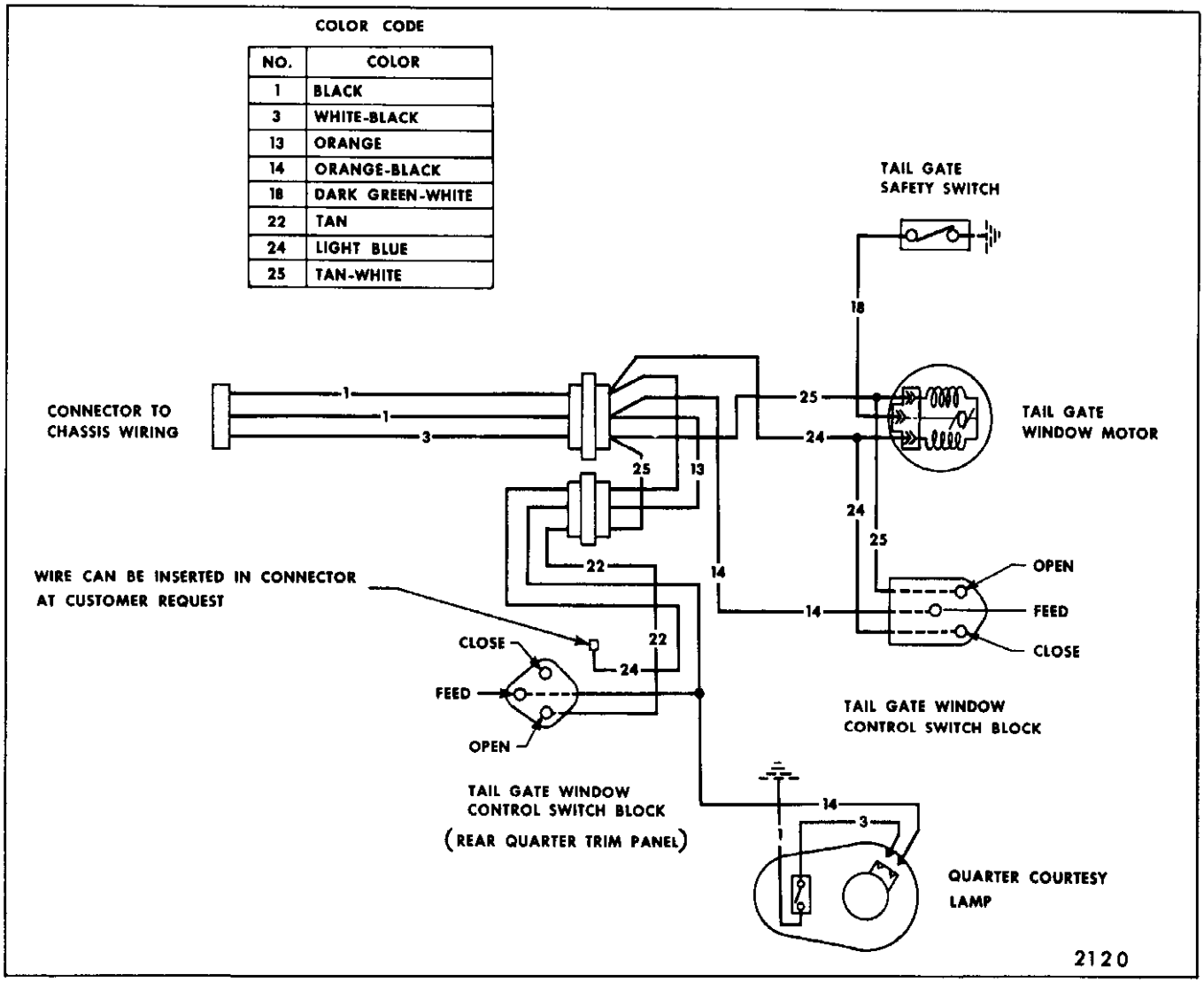


Fig. 16-58—Power Tail Gate Circuit - Chevrolet "B" 45 Styles

2. Connect one end of a #12 gauge jumper wire to battery positive pole and other end to one of the motor field and the armature wires.

3. If motor does not operate, motor is defective. Check the remaining motor field wire in the same manner.

i. Checking Wires Between Switch and Solenoids

1. Disconnect harness connector from transmission assembly.

2. Connect one test light lead to one terminal of power feed and ground other test light lead to body metal.

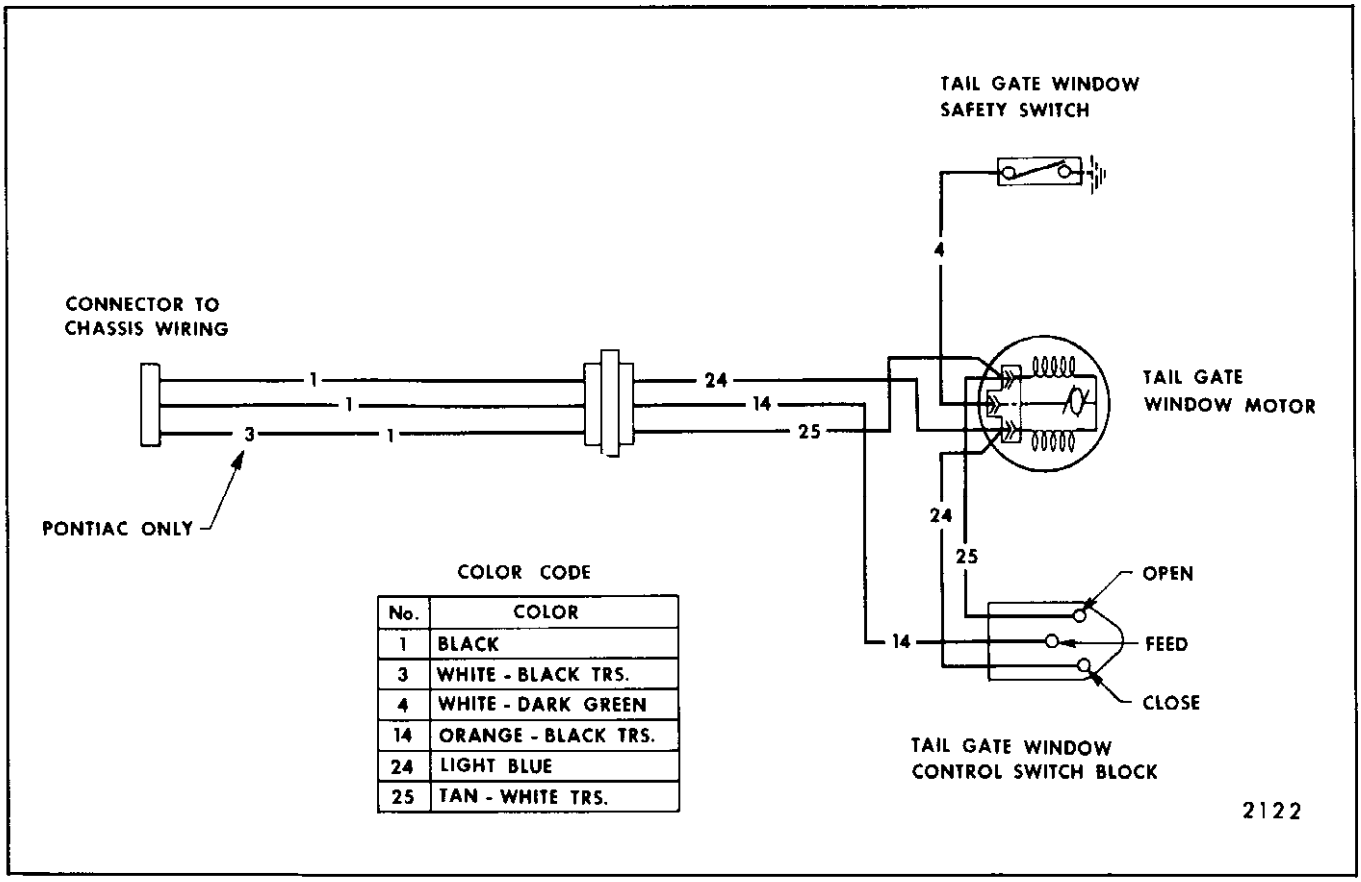
3. Operate switch to wire being tested. If tester does not light, there is no current at the end of harness wire. Failure is caused by an open or short circuit between end of wire and switch or defective switch.

4. Check other wire in same manner.

NOTE: One wire in connector is a blank. Check wiring diagram for colors of wires actually used.

j. Checking the Solenoid

1. Check solenoid ground strap attachment for proper ground.



COLOR CODE

No.	COLOR
1	BLACK
3	WHITE - BLACK TRS.
4	WHITE - DARK GREEN
14	ORANGE - BLACK TRS.
24	LIGHT BLUE
25	TAN - WHITE TRS.

Fig. 16-59—Power Tail Gate Window Circuit - All "A & B" 35-55 and 65 Styles

2. Connect one end of a #12 gauge jumper wire to the battery positive pole and the other end to the lead of the solenoid being checked.

CAUTION: To prevent damaging the solenoid, do not energize solenoid for more than one minute.

3. Operate switch, actuate adjuster motor and solenoid being checked.

4. If adjusters do not operate and there is no mechanical failure of the adjusters, the solenoid is defective.

NOTE: If solenoid is functioning properly, a "click" may be heard when solenoid plunger operates.

k. Trouble Shooting

CONDITION	CAUSE	CORRECTION
1. Seat adjuster motor does not operate.	a. Short or open circuit between power source or switch and motor.	a. Check circuit from power source and switch to motor to locate failure.
	b. Defective motor relay.	b. Replace relay.

CONDITION	CAUSE	CORRECTION
1. Seat adjuster motor does not operate. (Cont'd.)	c. Defective motor.	c. Check Motor. If defective repair or replace as required.
	d. Defective switch.	d. Replace switch.
	e. Defective circuit breaker.	e. Replace circuit breaker.
2. Seat adjuster motor operates in both directions but seat adjusters are not actuated.	a. Short or open circuit between switch and affected solenoid.	a. Check circuit from switch to solenoid to locate failure.
	b. Defective solenoid.	b. Check solenoid. If defective, repair or replace as required.
	c. Defective switch.	c. Replace switch.
3. Seat Adjuster motor operates in one direction only, seat moves down and forward, but does not move up and rearward.	a. Short or open circuit between one of the motor relay wires and seat control switch.	a. Check circuit between affected motor relay wire and seat switch.
	b. Defective field coil in motor.	b. Check motor. If defective repair or replace as required.
	c. Defective switch.	c. Replace switch.

SIX-WAY TILT SEATS

Description

The seat adjuster for the standard and "STRATO" type 6-way seats are actuated by a 12-volt motor installed at the left side of the seat assembly (see Figs. 16-73 and 16-74). The motor is energized by a three buttom-type control switch located in the left seat side panel.

On some "C-69" Styles, the control switch is installed in the left front door arm rest.

The power seat circuit is protected by a circuit breaker (refer to Electrical Introduction for location).

Oldsmobile Styles Only - In addition to the circuit breaker a relay is used in the circuit which prevents the operation of the seat until the ignition switch is turned "on".

The electrical portion of the six way seat operates as follows:

When the control switch is actuated, current flows

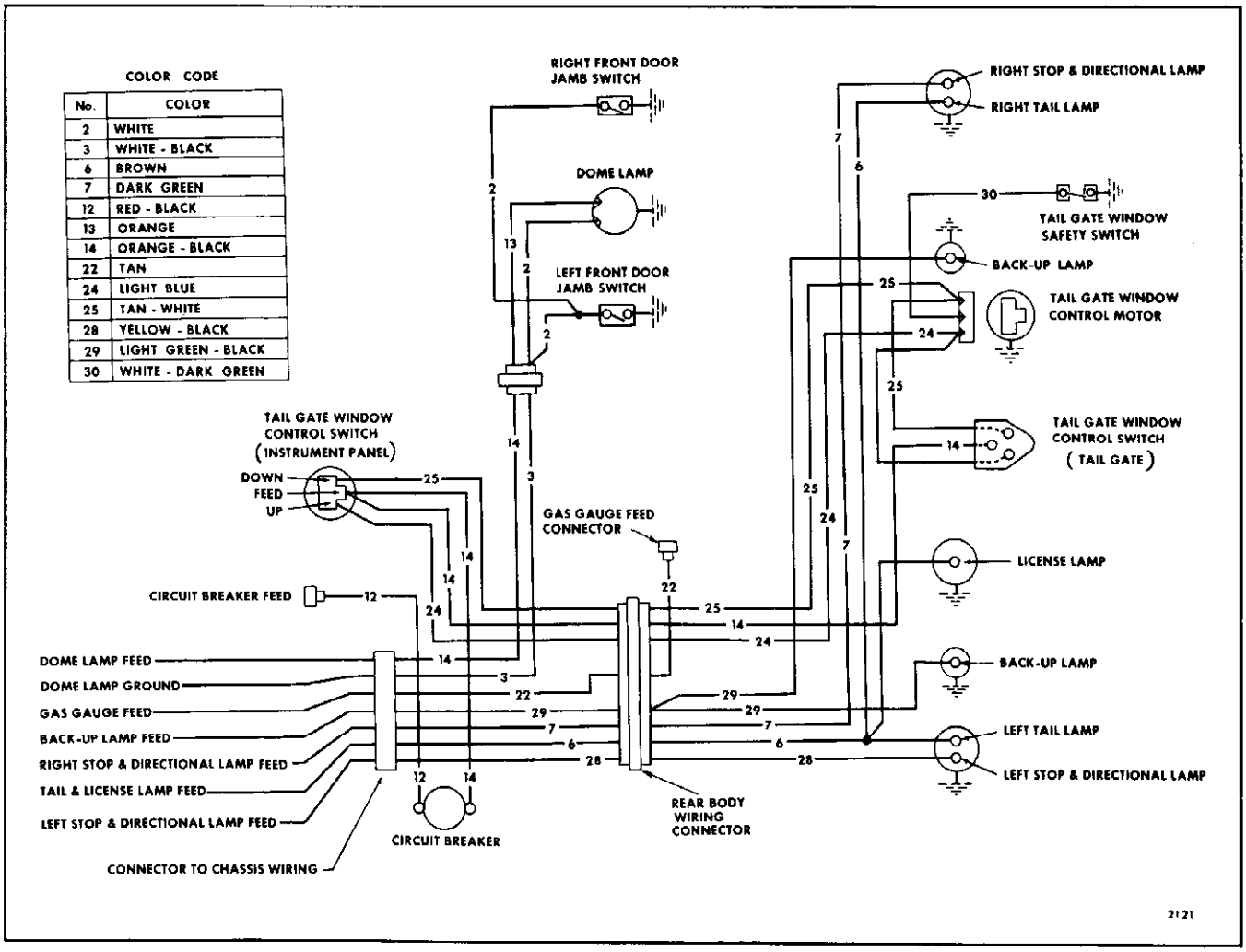


Fig. 16-60—Power Tail Gate Window Circuit - Chevrolet "X" Bodies

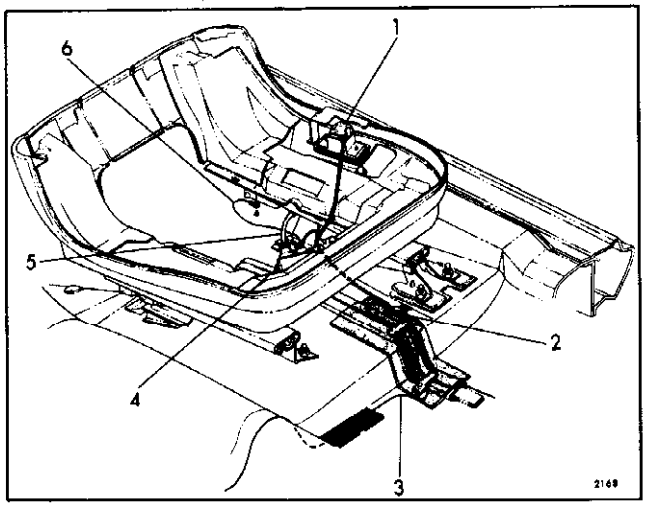


Fig. 16-61—Horizontal Bucket Seat Wiring

1. Control Switch
2. Feed Harness Connector
3. Feed Wire to Passenger Seat
4. Motor
5. Control Cable
6. Ground Wire

to the transmission solenoid which controls the desired seat movement. The energizing of the solenoid coil results in the solenoid plunger dog engaging the gear mechanism to rotate the control cable. The same switch action which energized the solenoid produces a current flow through the motor control relay to one of the motor field coils. The current flows through the relay, closes the contacts between the relay power source and the armature motor lead wire, and results in the operation of the seat motor. When the control switch lever is released, the switch contacts open, a spring returns the shaft dog and solenoid plunger to their original position disengaging them from the gear dog.

Circuit Checking Procedures

It may be necessary to use only one or all of the procedures outlined to locate an electrical failure

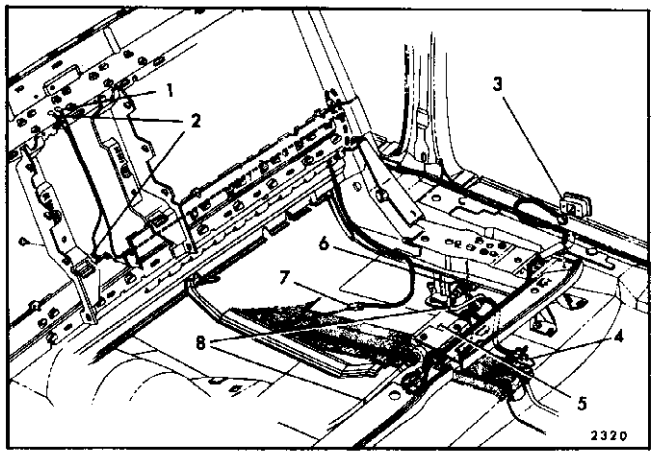


Fig. 16-62 — Horizontal Bench Seat Wiring

1. Front Seat Back Switch Feed - White
2. Front Seat Back Switch Ground - Black
3. Control Switch
4. Harness Feed Connector
5. Motor
6. Ground Wire
7. Front Seat Back Courtesy Lamp Feed Connector (Cadillac Only)
8. Horizontal Control Cable

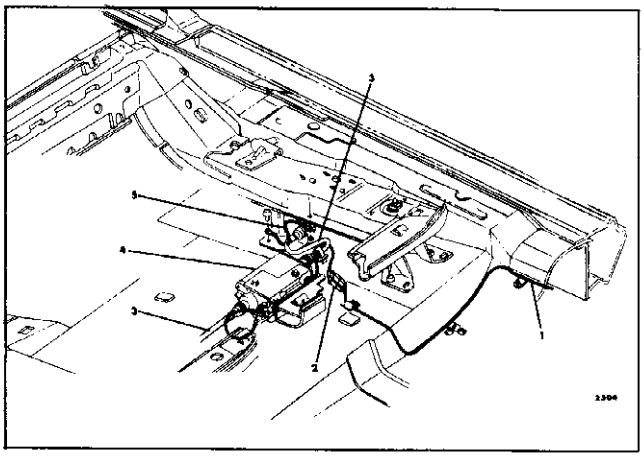


Fig. 16-63 — Horizontal Bench Seat Wiring - Buick and Oldsmobile "C" Body

1. Wiring to Door Arm Rest Switch
2. Feed Harness Connector
3. Control Cable
4. Seat Motor
5. Ground Wire

in the circuit. If the location of the failure is evident, follow only the steps required to check the affected wire or component. If the location of the failure is not evident, follow the procedure as outlined. Before performing any extensive check procedures, check the seat adjuster drive cables for proper attachment. In addition, study the seat circuit diagrams to become familiar with the seat circuit. See Figures 16-75, 16-76 and 16-77.

a. Checking Feed Circuit Continuity at Circuit Breaker

1. Connect one test light lead to battery side of

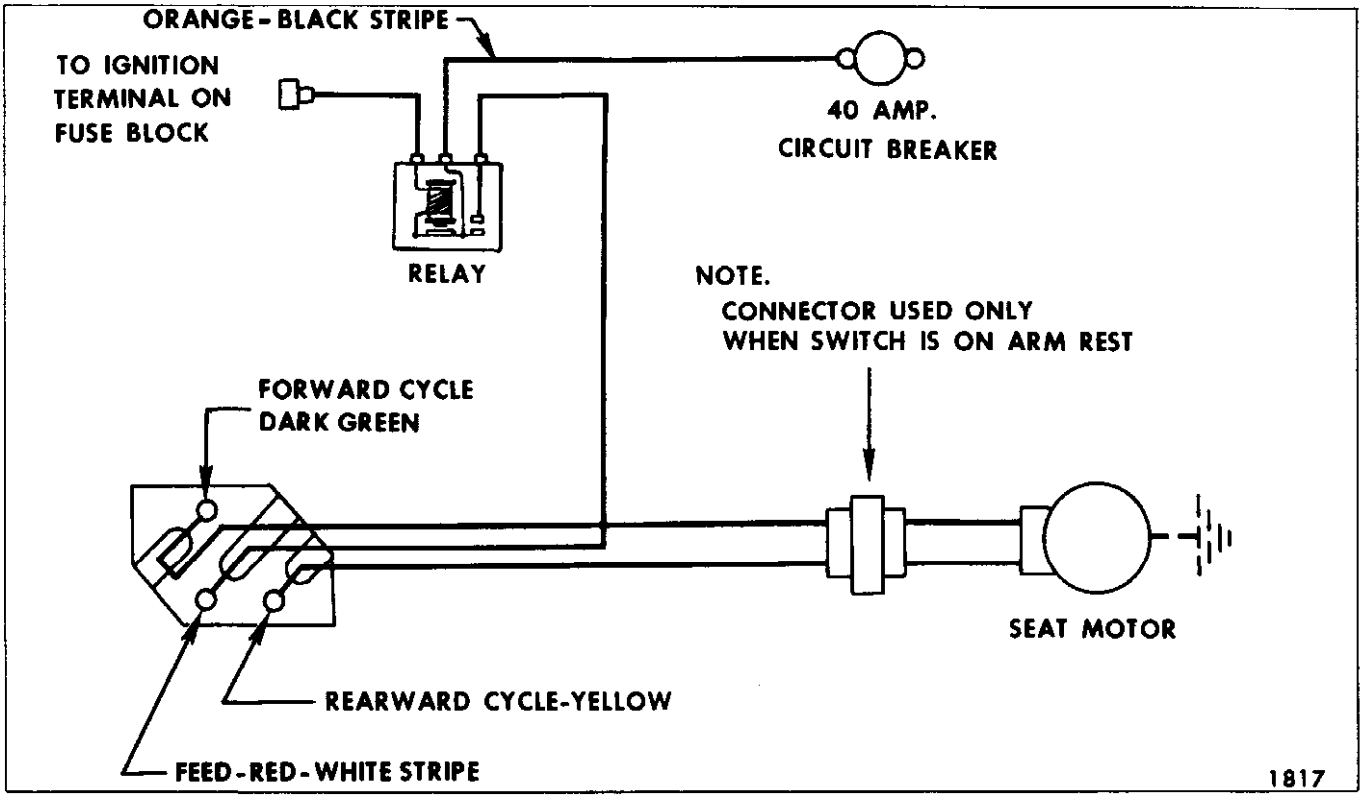


Fig. 16-64 — Horizontal Seat Circuit - Oldsmobile Styles

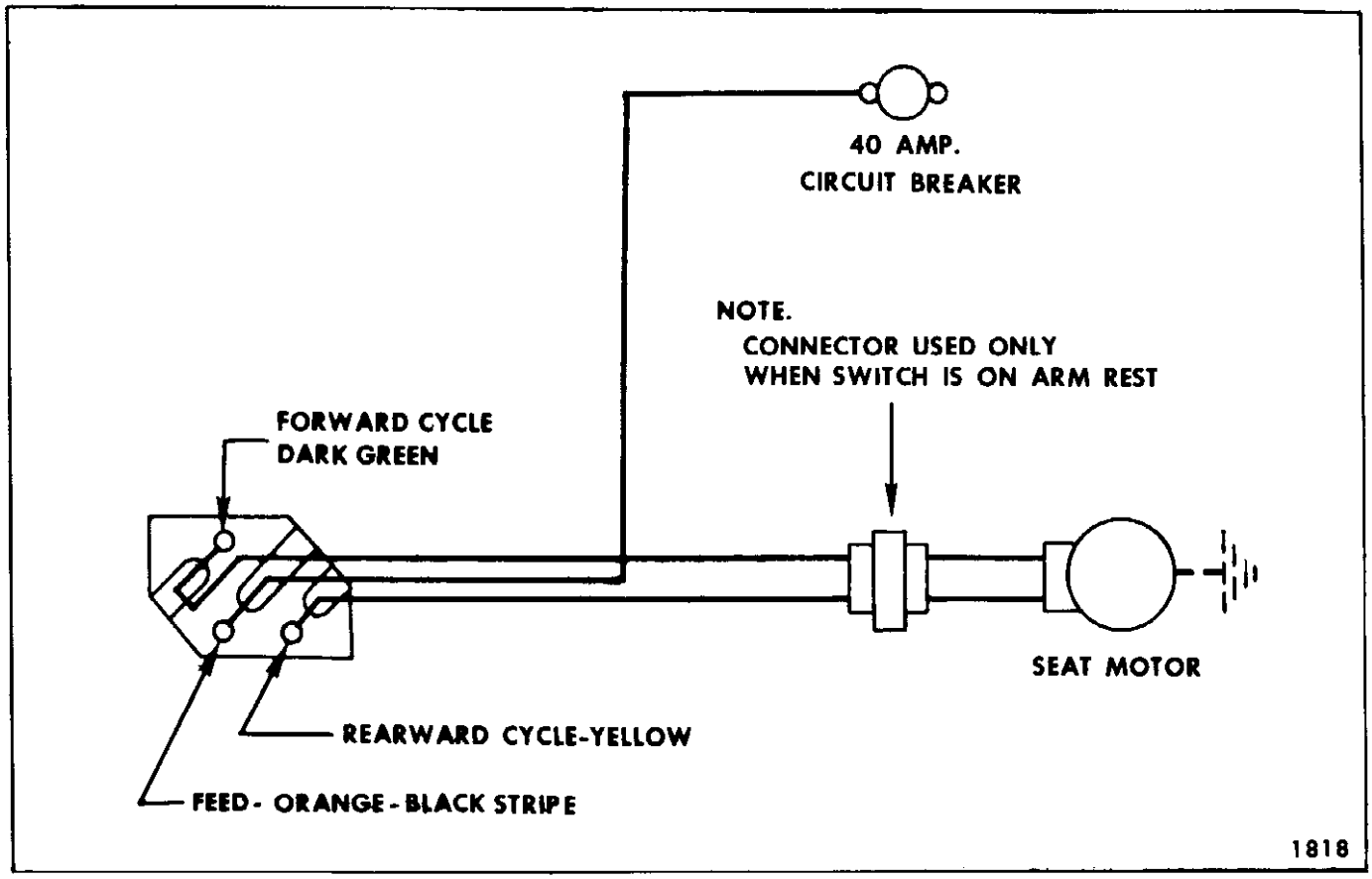


Fig. 16-65 — Horizontal Seat Circuit - Buick, Cadillac Styles

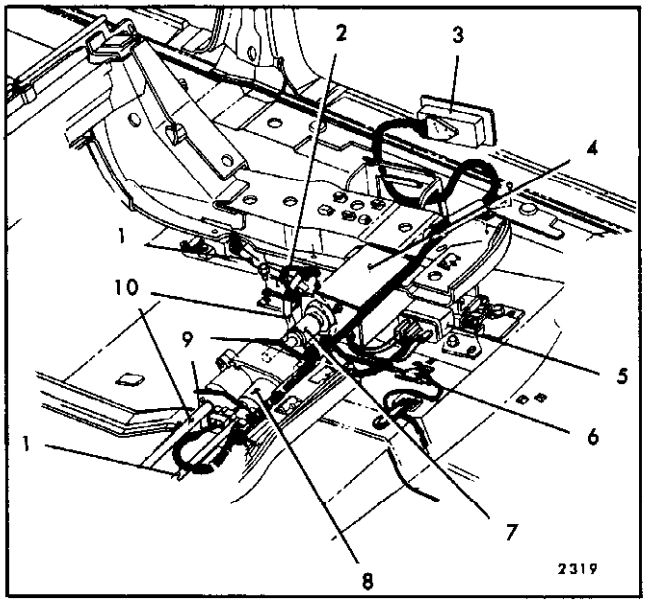


Fig. 16-66 — Four-Way Bench Seat Wiring - "B & C" Body Styles

1. Vertical Control Cable (Yellow)
2. Ground Wire
3. Control Switch
4. Motor
5. Motor Control Relay
6. Harness Feed Connector
7. Rubber Coupler
8. Transmission Assembly
9. Transmission End Plates
10. Horizontal Control Cable (Black)

circuit breaker and ground other lead. If tester does not light, there is an open or short circuit in feed circuit to breaker.

2. To check circuit breaker, disconnect the output feed wire (the wire opposite the power source feed to the breaker) from the breaker and with test light check terminal from which the wire was disconnected. If tester does not light, circuit breaker is inoperative. Buick and Cadillac Styles - Check feed circuit continuity at fuse block.

b. Checking Relay Assembly at Shroud— Oldsmobile Styles

1. With test light check relay feed (orange-black stripe). If tester does not light, there is an open or short circuit between relay and circuit breaker.

2. Turn ignition switch on and with test light check output terminal of relay (red-white stripe). If tester does not light, the relay is

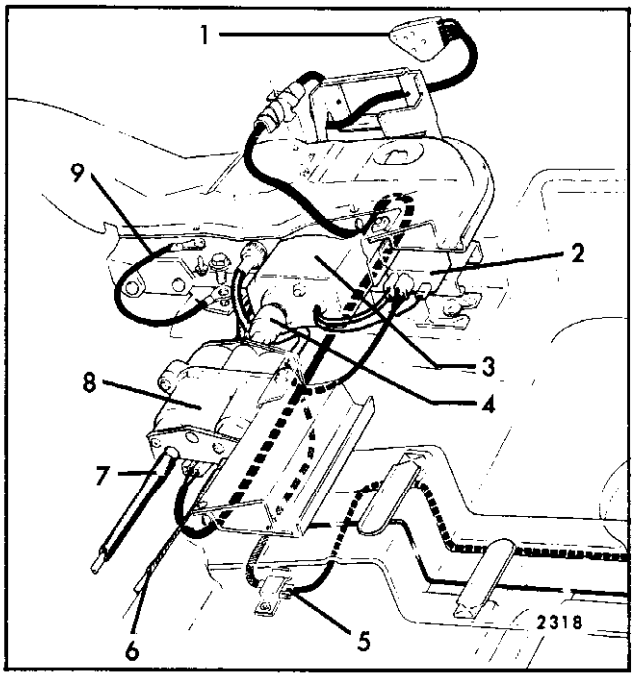


Fig. 16-67 — Four-Way Bench Seat Wiring - "A" Body Styles

1. Control Switch Block
2. Motor Control Relay
3. Motor
4. Rubber Coupler
5. Harness Feed Connector
6. Vertical Drive Cable (Yellow)
7. Horizontal Drive Cable (Black)
8. Transmission Assembly
9. Seat Ground Wire

inoperative or there is a short or open circuit between ignition switch (pink) and relay assembly. (Check fuse at dash panel).

c. Check Feed Circuit Continuity at Seat Control Switch

1. Connect one test light lead to feed terminal of switch block and ground other test lead to body metal.

2. If tester does not light, there is an open or short circuit between switch and power source.

d. Checking the Seat Control Switch

NOTE: In the following operations which specify the seat control switch to be actuated, a switch that has been checked for proper operation may be connected to the switch block. If a switch is not available, a three-way jumper wire can be made to perform the switch function. The jumper

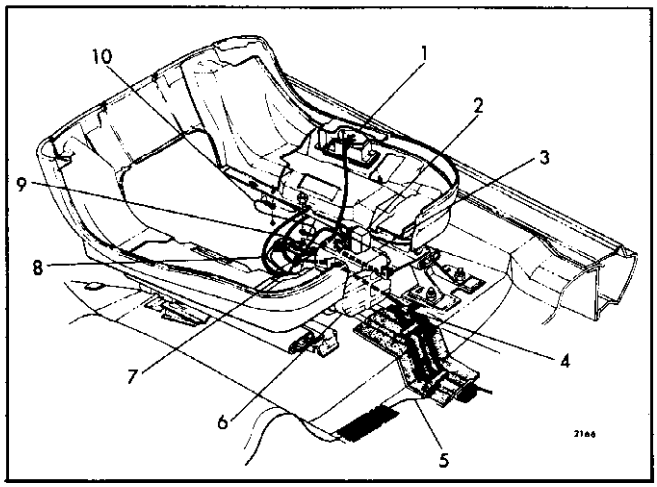


Fig. 16-68 — Four-Way "Strato" Bucket Seat Wiring - All Styles

1. Control Switch
2. Motor Control Relay
3. Motor
4. Harness Feed Connector
5. Feed to Passenger Seat
6. Pulley Cover Plate
7. Transmission and Solenoid Assembly
8. Vertical Control Cable (Orange)
9. Horizontal Control Cable (Black)
10. Ground Wire

wire and the switch locations to be connected to obtain a specific movement of the seat are shown in Figures 16-78 - Oldsmobile styles with switch in seat side panel; 16-79 - Oldsmobile styles with switch in arm rest; 16-80 - Chevrolet, Pontiac, Buick and Cadillac styles. If a jumper wire is used, letter the locations on the switch block as indicated in the illustration. Details outlining the making and use of the jumper wire follow the checking procedure.

1. Obtain switch or jumper wire and connect to switch block.

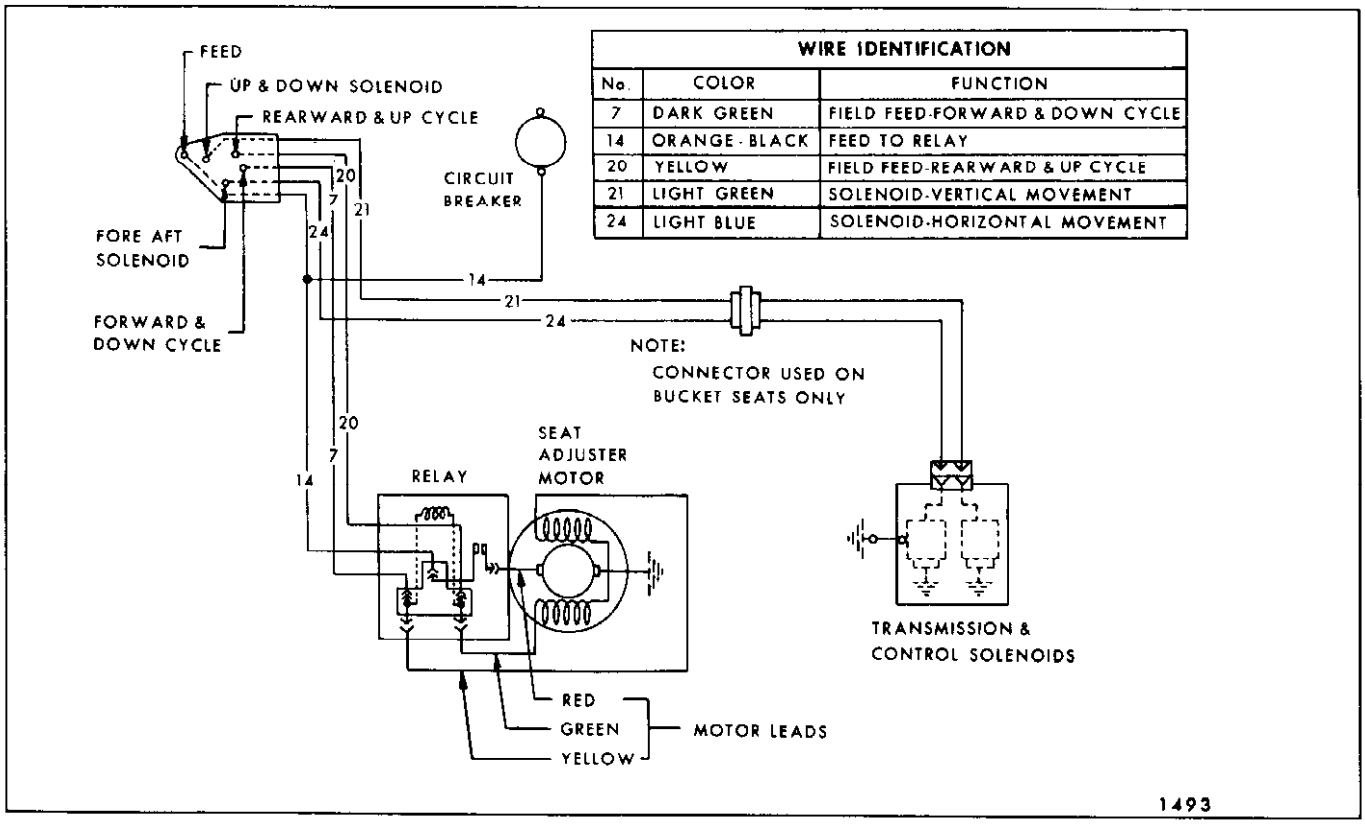
2. Operate switch. If adjusters operate with new switch or jumper wire, but did not operate with original switch, the original switch is defective.

3. Check all six movements of seat adjuster.

e. Checking Feed Circuit Continuity at Relay on Seat Motor

1. Disengage 3-wire connector body from the seat motor relay terminal.

2. Insert one test light lead into the relay power



WIRE IDENTIFICATION		
No.	COLOR	FUNCTION
7	DARK GREEN	FIELD FEED-FORWARD & DOWN CYCLE
14	ORANGE - BLACK	FEED TO RELAY
20	YELLOW	FIELD FEED-REARWARD & UP CYCLE
21	LIGHT GREEN	SOLENOID-VERTICAL MOVEMENT
24	LIGHT BLUE	SOLENOID-HORIZONTAL MOVEMENT

Fig. 16-69—Four-Way Seat Circuit - All Styles except Oldsmobile "B & E" Styles

feed connector slot on the harness, and ground the other test light lead.

3. If tester does not light, there is no current at end of feed wire. Failure is caused by an open or short in feed circuit.

f. Checking Wires Between Control Switch and Motor Relay

1. Disengage 3-wire harness connector from relay at motor.

2. Insert one test light lead into the motor field connector slot on harness and ground the other lead.

3. Actuate seat switch to energize field wire being tested.

4. If tester does not light, there is no current at end of wire. Failure is caused by an open or short circuit between end of wire and switch. Check other motor field wire in the same manner.

g. Checking the Relay Assembly

1. Disconnect three motor leads from relay assembly. These are the wires leading from the motor to the relay.

2. Connect one end of a jumper wire to one of the motor field feed studs on the relay and ground the other end of the jumper wire.

3. Connect one end of test light to motor armature feed stud on relay and ground other tester lead.

4. With a jumper wire, energize the field stud which is not grounded. If tester does not light the relay is defective.

h. Checking the Motor Assembly

1. Disconnect the motor armature feed lead and one of the motor field feeds from the relay assembly.

2. With a jumper wire, energize the armature

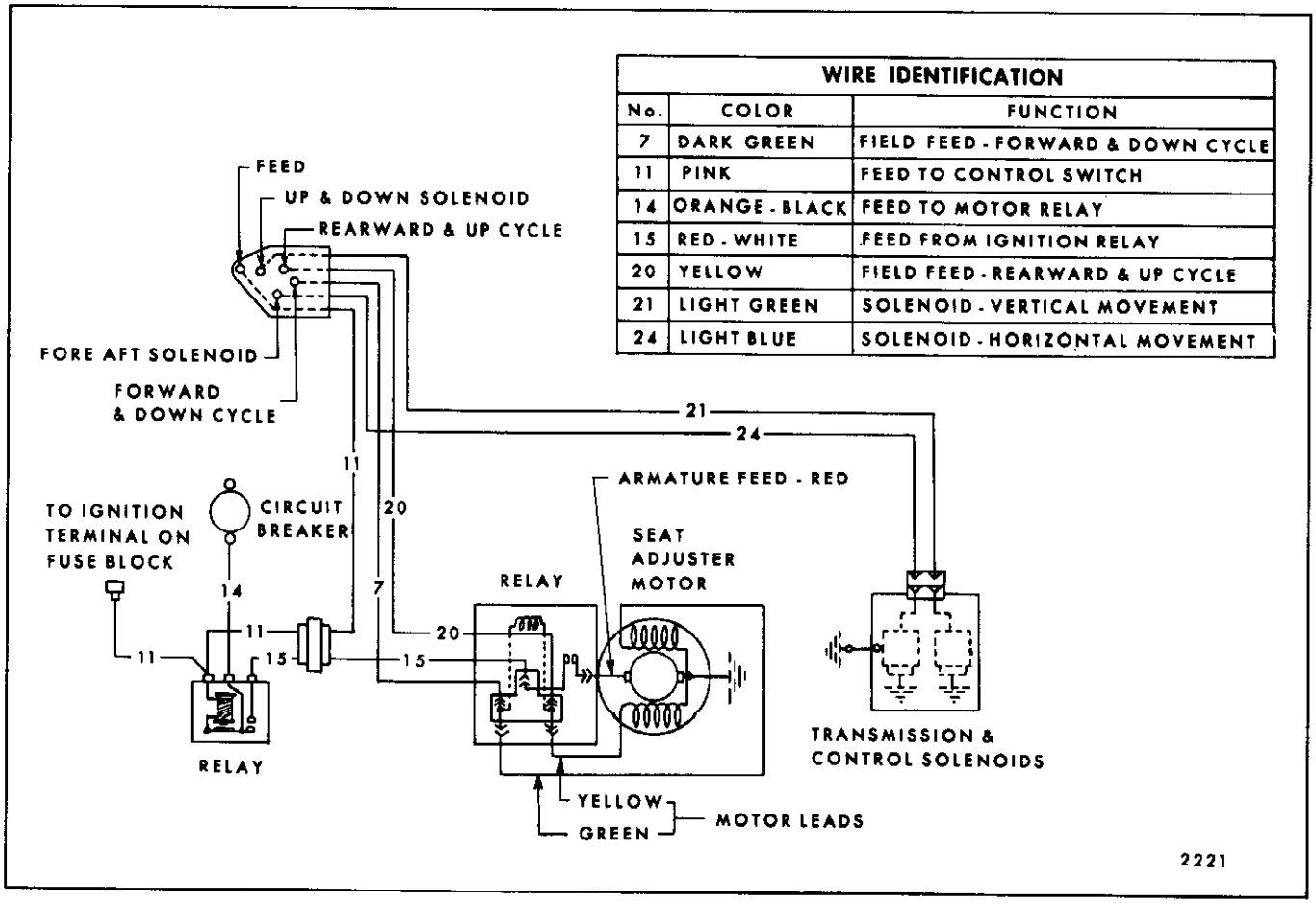


Fig. 16-70—Four-Way Seat Circuit - Oldsmobile "B & E" Styles

feed and one of the field feeds.

3. If motor does not operate, it is defective. Check the other motor field feed in the same manner.

i. Checking the Wire Between the Solenoid and Switch

1. Disengage harness connector from transmission.

2. Connect one test light lead to end of harness wire being tested and ground other lead.

3. Operate switch to energize wire being tested. If tester does not light, there is no current at end of wire. Failure is caused by an open or short circuit between end of wire and switch.

j. Checking the Solenoid

1. Check solenoid ground strap attachment for proper ground.

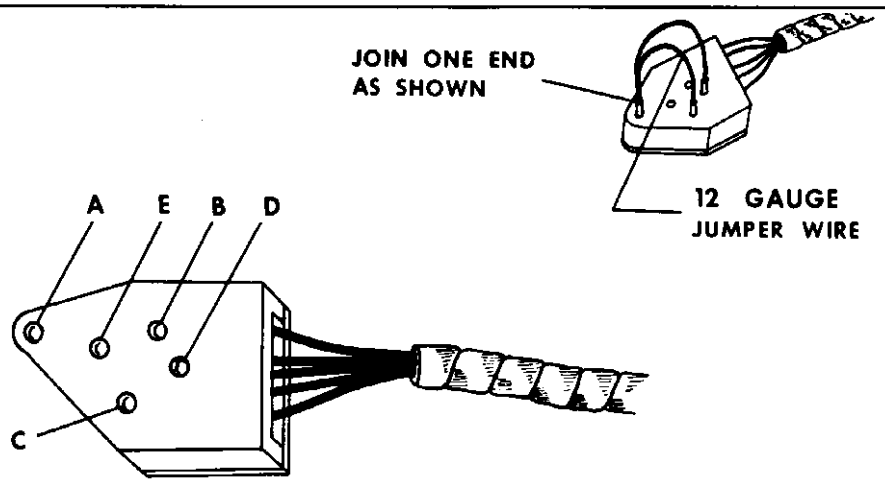
2. Energize solenoid being checked with jumper wire.

NOTE: If solenoid is functioning, a "click" should be heard when solenoid plunger operates "in" and "out".

CAUTION: To prevent damaging the solenoid, do not energize solenoid for more than one minute.

3. With solenoid energized, actuate seat control switch to energize adjuster motor.

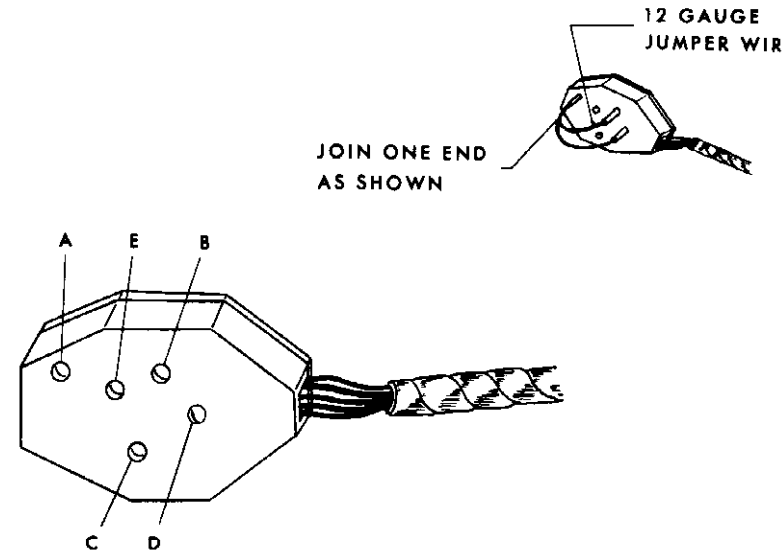
4. If adjusters do not operate, and there is no



LOCATION	WIRE COLOR	FUNCTION
A	ORANGE - BLACK	SWITCH FEED
B	YELLOW	FIELD FEED-REARWARD & UP CYCLE
C	LIGHT BLUE	SOLENOID-HORIZONTAL MOVEMENT
D	DARK GREEN	FIELD FEED-FORWARD & DOWN CYCLE
E	LIGHT GREEN	SOLENOID-VERTICAL MOVEMENT

1849

Fig. 16-71 —Four-Way Seat Switch Block - All Styles Except Oldsmobile "B & E"



LOCATION	WIRE COLOR	FUNCTION
A	PINK	SWITCH FEED
B	YELLOW	FIELD FEED—REARWARD & UP CYCLE
C	LIGHT BLUE	SOLENOID—HORIZONTAL MOVEMENT
D	DARK GREEN	FIELD FEED—FORWARD & DOWN CYCLE
E	LIGHT GREEN	SOLENOID—VERTICAL MOVEMENT

1850

Fig. 16-72 —Four-Way Seat Switch Block - Oldsmobile "B & E" Styles

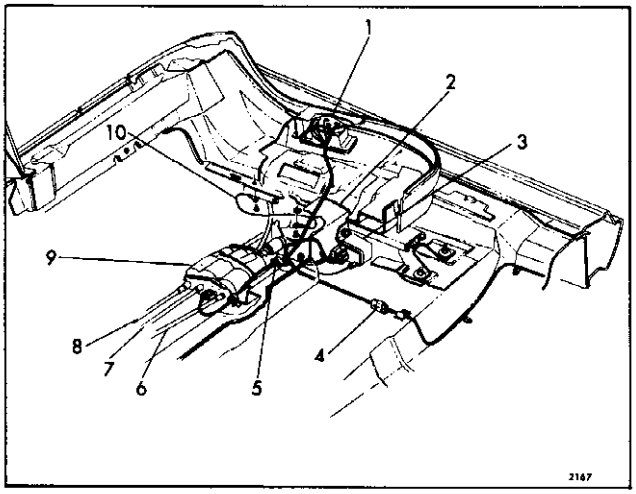


Fig. 16-73 — Six-Way "Strato" Seat

1. Control Switch
2. Motor
3. Motor Control Relay
4. Harness Feed Connector
5. Rubber Coupler
6. Front Vertical Control Cable (Yellow)
7. Rear Vertical Control Cable (Blue)
8. Horizontal Control Cable (Black)
9. Transmission and Solenoid Assembly
10. Ground Wire

mechanical failure in the seat unit, the solenoid is defective.

Three-Way Jumper Wire for Checking Seat Switch

To make jumper wire, obtain two pieces of #12 gauge wire, each 4 1/2" long, join one end of each wire as shown in Figure 16-80. The joined end can be inserted in the feed location in the switch block; one of the remaining ends can be inserted into one of the field locations in the switch block; the other end can be inserted into one of the solenoid locations.

IMPORTANT: To obtain a seat movement using a 3-way jumper wire at the switch block, the switch feed location, one of the motor field wire locations and one of the solenoid locations must be connected simultaneously.

On Bodies with Switch in Seat Side Panel:

1. To raise front edge of seat, place jumper in locations, A, F and E.
2. To lower front edge of seat, place jumper in locations A, C and E.
3. To raise rear edge of seat, place jumper in locations A, F and D.

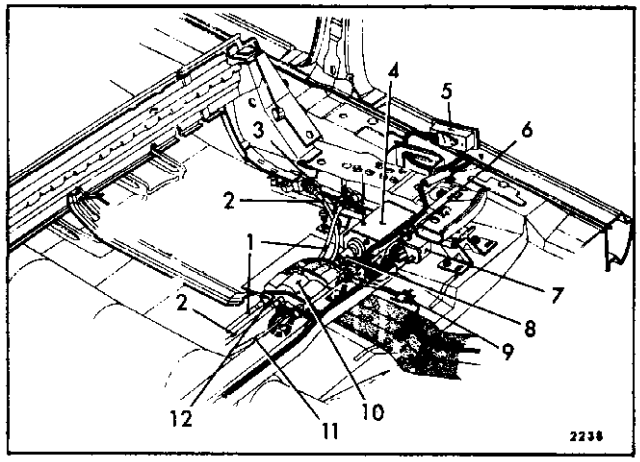


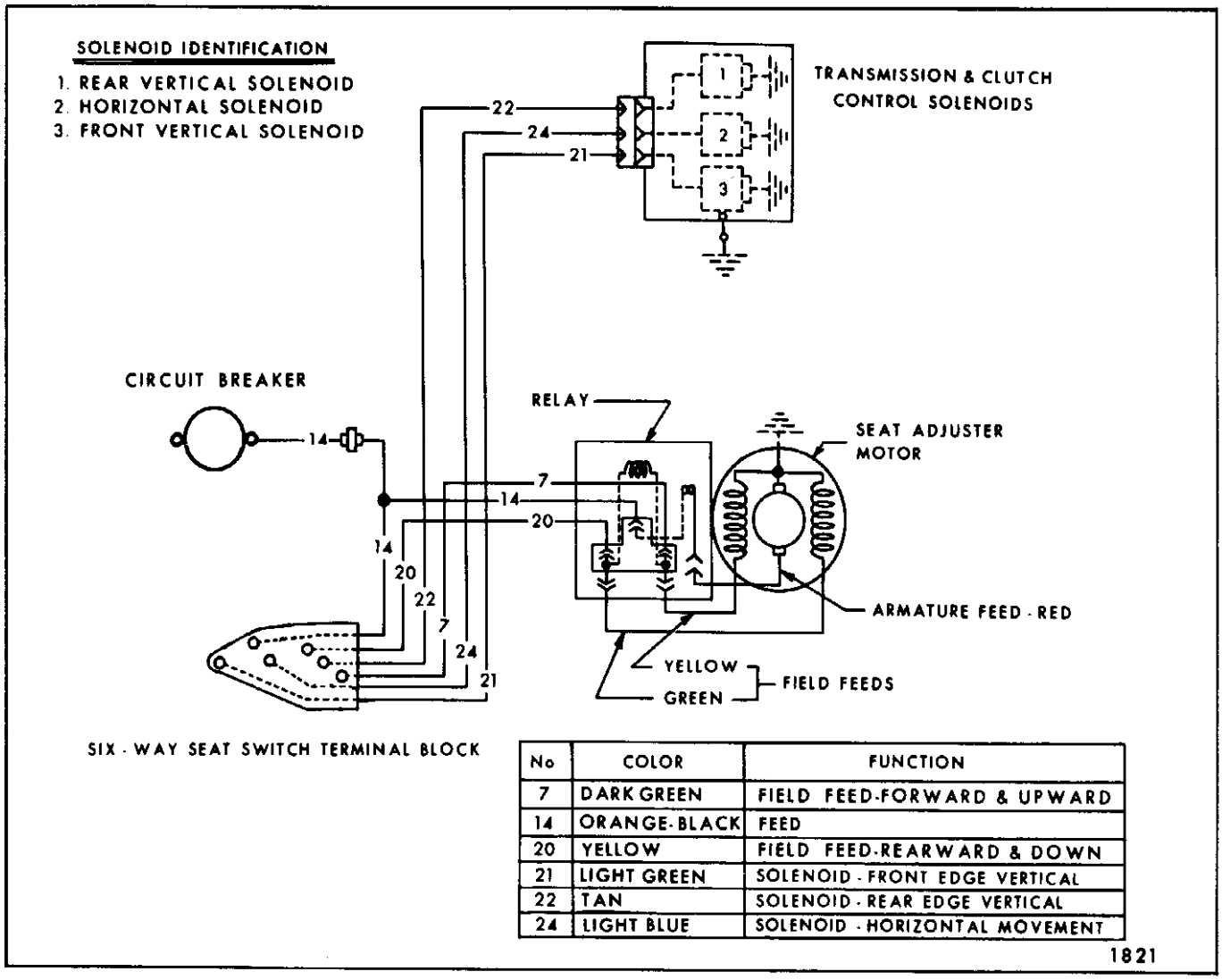
Fig. 16-74 — Six-Way Standard Bench Seat

1. Horizontal Control Cable (Black)
2. Rear Vertical Control Cable (Blue)
3. Ground Wire
4. Motor
5. Control Switch
6. Front Vertical Control Cable (Yellow)
7. Motor Control Relay
8. Rubber Coupler
9. Harness Feed Connector
10. Transmission and Solenoid Assembly
11. Front Vertical Control Cable (Yellow)
12. Transmission End Plate

4. To lower rear edge of seat, place jumper in locations A, C and D.
5. To move seat forward, place jumper in locations A-B and F.
6. To move seat rearward, place jumper in locations A-C and B.

On Bodies with Switch in Arm Rest:

1. To raise front edge of seat, place jumper in locations A-C and E.
2. To lower front edge of seat, place jumper in locations A-F and E.
3. To raise rear edge of seat, place jumper in locations A-C and D.
4. To lower rear edge of seat, place jumper in locations A-F and D.
5. To move seat forward place jumper in locations A-C and B.
6. To move seat rearward, place jumper in locations A-F and B.



No	COLOR	FUNCTION
7	DARK GREEN	FIELD FEED-FORWARD & UPWARD
14	ORANGE-BLACK	FEED
20	YELLOW	FIELD FEED-REARWARD & DOWN
21	LIGHT GREEN	SOLENOID - FRONT EDGE VERTICAL
22	TAN	SOLENOID - REAR EDGE VERTICAL
24	LIGHT BLUE	SOLENOID - HORIZONTAL MOVEMENT

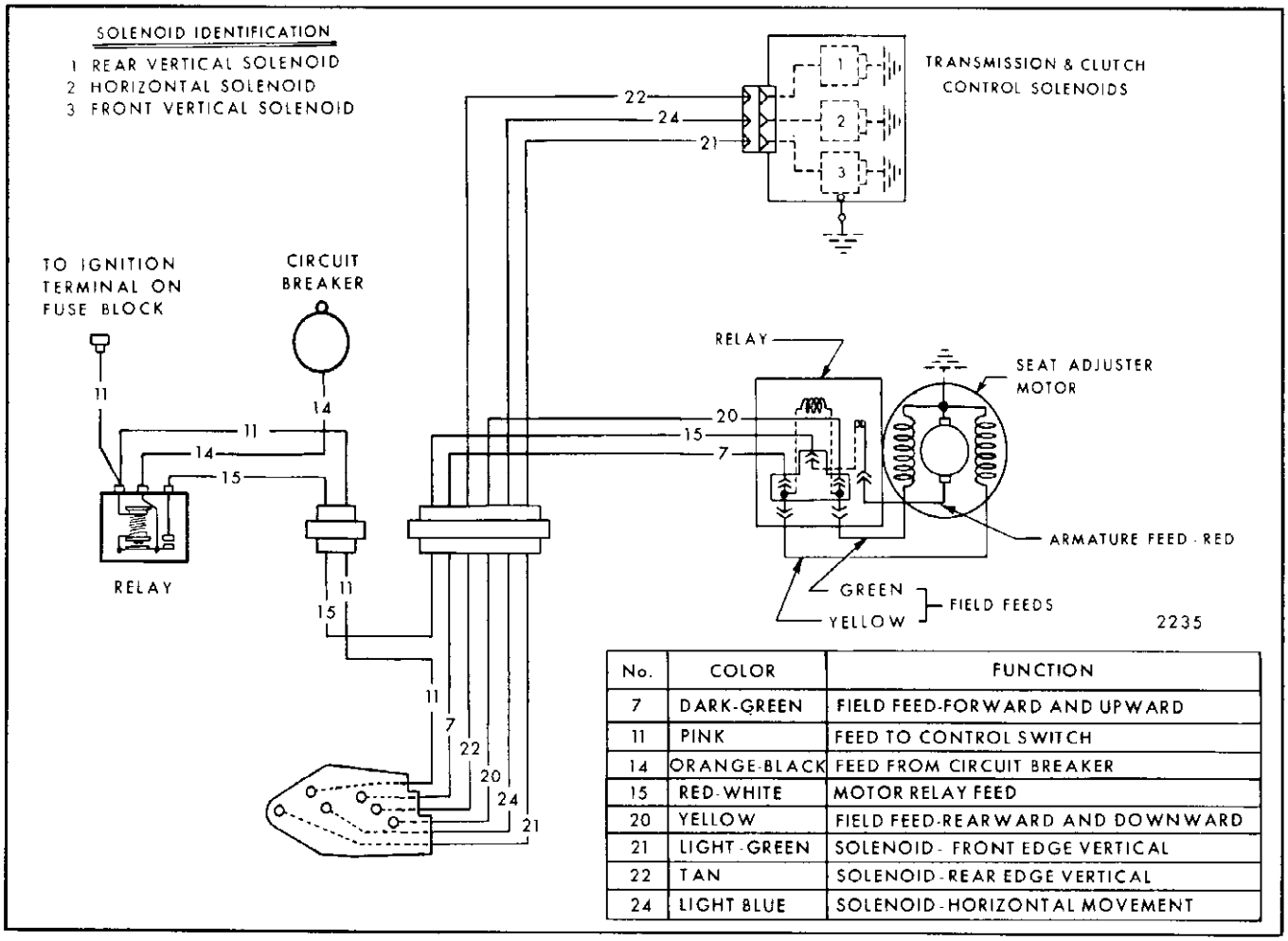
Fig. 16-75—Six-Way Seat Circuit - All Except Oldsmobile Styles

Trouble Shooting

CONDITION	CAUSE	CORRECTION
Seat adjuster motor does not operate.	a. Short or open circuit between power source or switch and motor.	a. Check circuit from power source and switch to motor to locate failure.
	b. Defective motor.	b. Check ignition switch circuit through relay at left shroud - Oldsmobile styles only.
		c. Check motor. If defective, repair or replace as required.

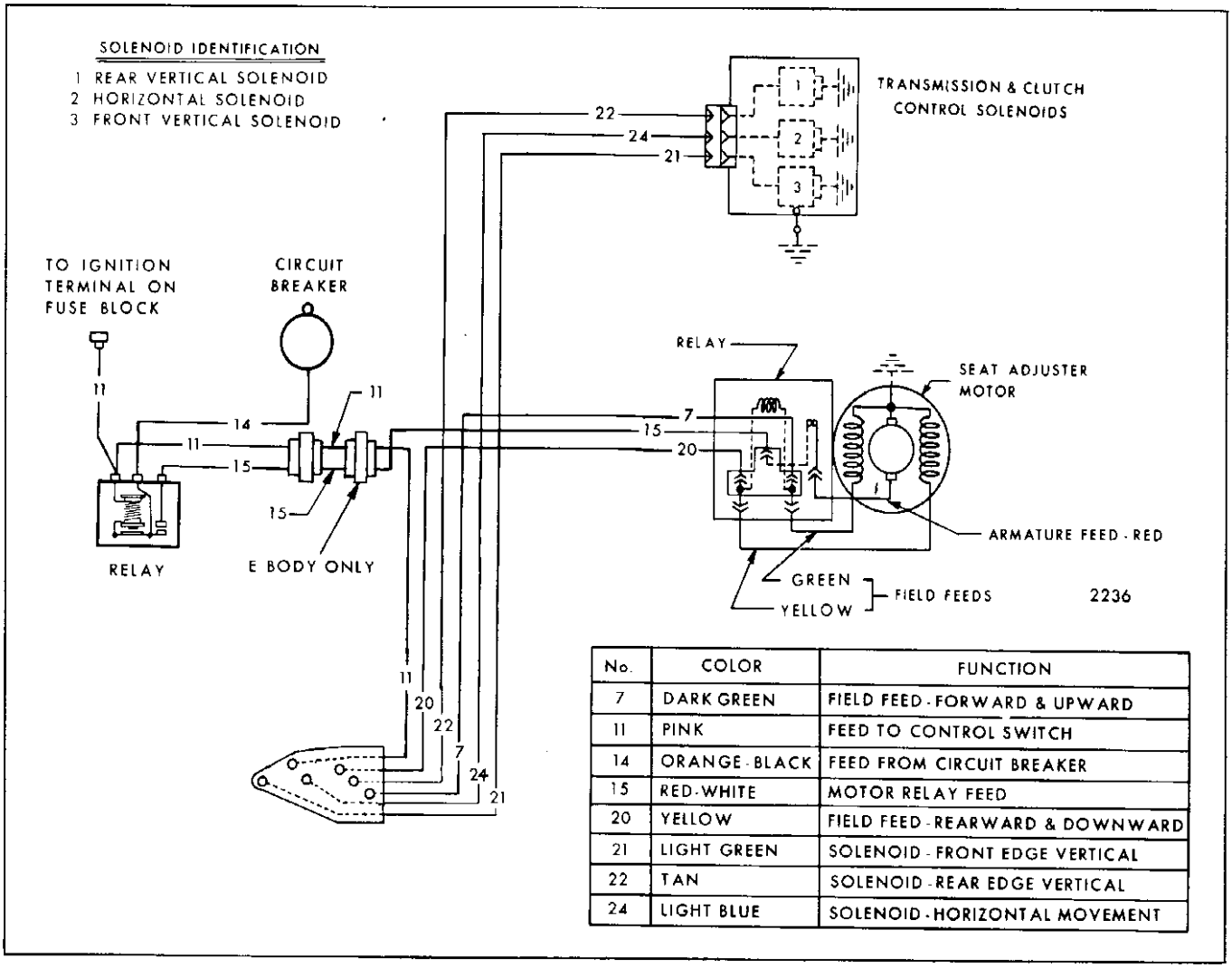
Trouble Shooting

CONDITION	CAUSE	CORRECTION
Seat adjuster motor operates, but seat adjusters are not actuated.	a. Short or open circuit between switch and affected solenoid.	a. Check circuit from switch to solenoid to locate failure.
or Seat adjuster motor operates, front edge of seat moves up and down and seat moves forward and rearward. The rear edge of seat cannot be operated.	b. Defective solenoid.	b. Check solenoid. If defective, repair or replace as required.
Seat adjuster motor operates and seat adjusters move front and rear edge of seat up and forward but will not move the seat down and rearward.	a. Short or open circuit between one of the motor field wires and seat control switch.	a. Check circuit between affected motor field wire and seat switch.
or Seat adjuster motor operates and seat adjusters move front and rear of seat down and rearward, but will not move the seat up and forward.	b. Defective field coil in motor.	b. Check motor. If defective, repair or replace as required.



No.	COLOR	FUNCTION
7	DARK-GREEN	FIELD FEED-FORWARD AND UPWARD
11	PINK	FEED TO CONTROL SWITCH
14	ORANGE-BLACK	FEED FROM CIRCUIT BREAKER
15	RED-WHITE	MOTOR RELAY FEED
20	YELLOW	FIELD FEED-REARWARD AND DOWNWARD
21	LIGHT-GREEN	SOLENOID - FRONT EDGE VERTICAL
22	TAN	SOLENOID-REAR EDGE VERTICAL
24	LIGHT BLUE	SOLENOID-HORIZONTAL MOVEMENT

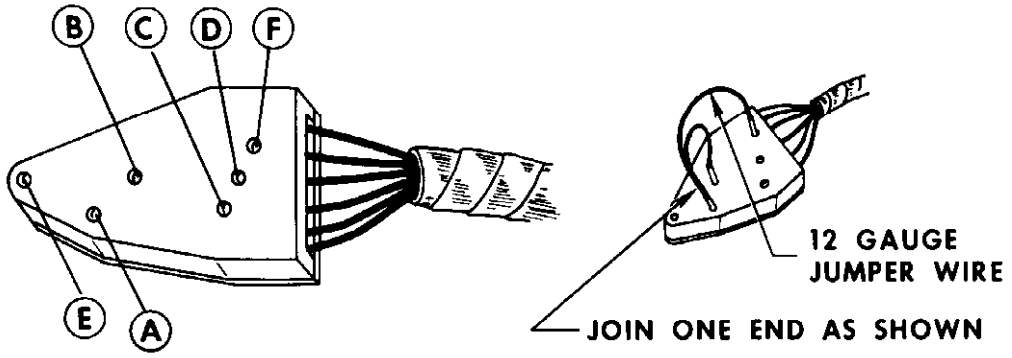
Fig. 16-76—Six-Way Seat Circuit - Switch in Arm Rest - Oldsmobile Styles



No.	COLOR	FUNCTION
7	DARK GREEN	FIELD FEED - FORWARD & UPWARD
11	PINK	FEED TO CONTROL SWITCH
14	ORANGE - BLACK	FEED FROM CIRCUIT BREAKER
15	RED - WHITE	MOTOR RELAY FEED
20	YELLOW	FIELD FEED - REARWARD & DOWNWARD
21	LIGHT GREEN	SOLENOID - FRONT EDGE VERTICAL
22	TAN	SOLENOID - REAR EDGE VERTICAL
24	LIGHT BLUE	SOLENOID - HORIZONTAL MOVEMENT

Fig. 16-77 — Six-Way Seat Circuit - Switch in Seat Side Panel - Oldsmobile Styles

SIX-WAY SEAT CONTROL SWITCH BLOCK

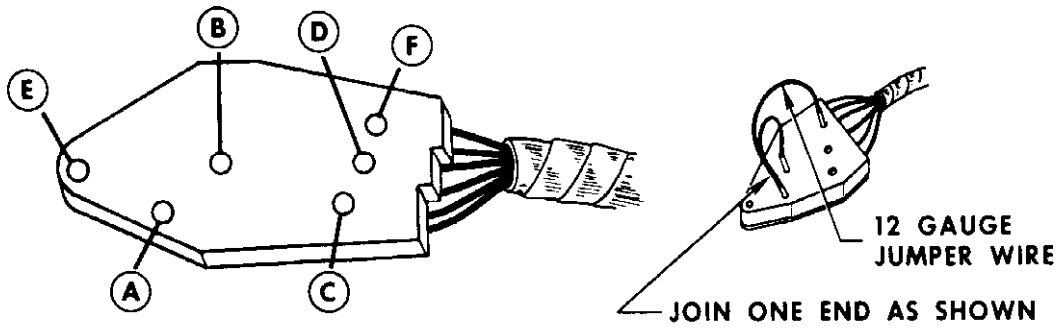


LOCATION	WIRE COLOR	FUNCTION
A	PINK	SWITCH FEED
B	LIGHT BLUE	SOLENOID-HORIZONTAL MOVEMENT
C	YELLOW	FIELD FEED-REARWARD & DOWN CYCLE
E	TAN	SOLENOID-REAR EDGE VERTICAL CYCLE
F	LIGHT GREEN	SOLENOID-FRONT EDGE VERTICAL CYCLE
D	DARK GREEN	FIELD FEED-FORWARD & UP CYCLE

1826

Fig. 16-78—Six-Way Seat Switch Block - Switch in Seat Side Panel - Oldsmobile

SIX-WAY SEAT CONTROL SWITCH BLOCK

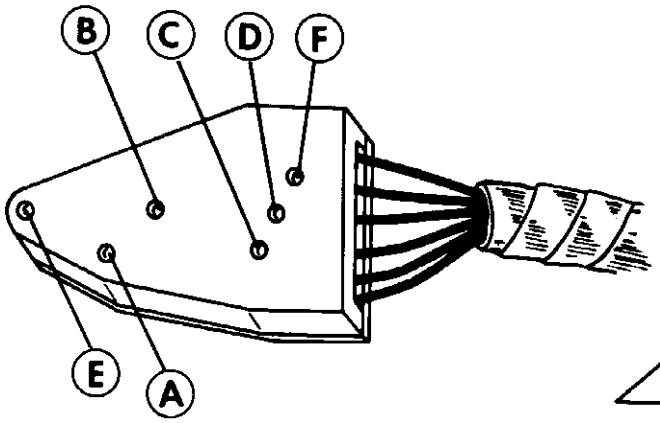


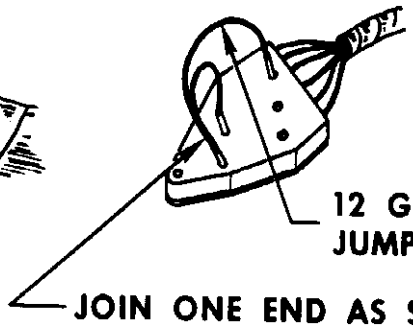
LOCATION	WIRE COLOR	FUNCTION
A	PINK	SWITCH FEED
B	LIGHT BLUE	SOLENOID-HORIZONTAL MOVEMENT
C	DARK GREEN	FIELD FEED-FORWARD & UP CYCLE
D	TAN	SOLENOID-REAR EDGE VERTICAL CYCLE
E	LIGHT GREEN	SOLENOID-FRONT EDGE VERTICAL CYCLE
F	YELLOW	FIELD FEED-REARWARD & DOWN CYCLE

1827

Fig. 16-79—Six-Way Seat Switch Block - Switch in Arm Rest - Oldsmobile

SIX-WAY SEAT CONTROL SWITCH BLOCK





LOCATION	WIRE COLOR	FUNCTION
A	ORANGE-BLACK	SWITCH FEED
B	LIGHT BLUE	SOLENOID-HORIZONTAL MOVEMENT
C	YELLOW *	FIELD FEED-REARWARD & DOWN CYCLE
D	TAN	SOLENOID-REAR EDGE VERTICAL CYCLE
E	LIGHT GREEN	SOLENOID-FRONT EDGE VERTICAL CYCLE
F	DARK GREEN *	FIELD FEED-FORWARD & UP CYCLE

* ON STYLES WITH SWITCH IN ARM REST-
DARK GREEN CONTROLS FORWARD & UP CYCLE
YELLOW FIELD CONTROLS REARWARD & DOWN CYCLE

1825

Fig. 16-80—Six-Way Seat Switch Block - All Styles Except Oldsmobile

TAIL LAMPS

DESCRIPTION

Various methods are employed to remove and install the components of tail lamp assemblies. The following charts (Figs. 16-81, 16-82, 16-83, 16-84 and 16-85) will provide a quick reference for performing the three basic service operations for each Car Division (Bulb Replacement, Lens Replacement and Housing Replacement).

SEALING

Caution should be exercised to prevent waterleaks at the tail lamp area when sealing surfaces are disturbed. Damaged gaskets should be replaced. If new gaskets are not installed, the use of sealer (body caulking compound or equivalent) is recommended at critical areas and where the old gaskets have taken a set.

The recommended torque for attaching nuts to zinc die cast studs on tail lamp housings and rear fender extensions is 46 to 72 inch pounds. If additional tightening of casting to panel is required, a maximum of 90 inch pounds of torque may be used without stripping the nut.

TAIL LAMP BULB USAGE CHART

Trade No.	Candle Power	Use
1155	4	Tail Lamp
1156	32	Back-Up Lamp
1157	32 and 4	Combination Tail, Stop and Directional

TAIL LAMP OPERATION—CHEVROLET

OPERATION	METHOD	BODY TYPE					
		A	A-35	B	B 35-45	F	X
Bulb Replacement	Remove Lens (Outside)		X		X		X
	Remove Socket (Inside Rear Compartment)	X		X		X	
Lens Replacement	Remove Retaining Screws (Outside)		X		X		X
	Remove Housing and Disassemble	X		X		X	
Housing Replacement	Remove From Outside (Retaining Nuts in Rear Compartment	X View C		X View D		X	
	Remove From Inside						
	Remove From Outside (Retaining Bolts Under Lens)		X View A		X View B		X
	Lower Rear Bumper						

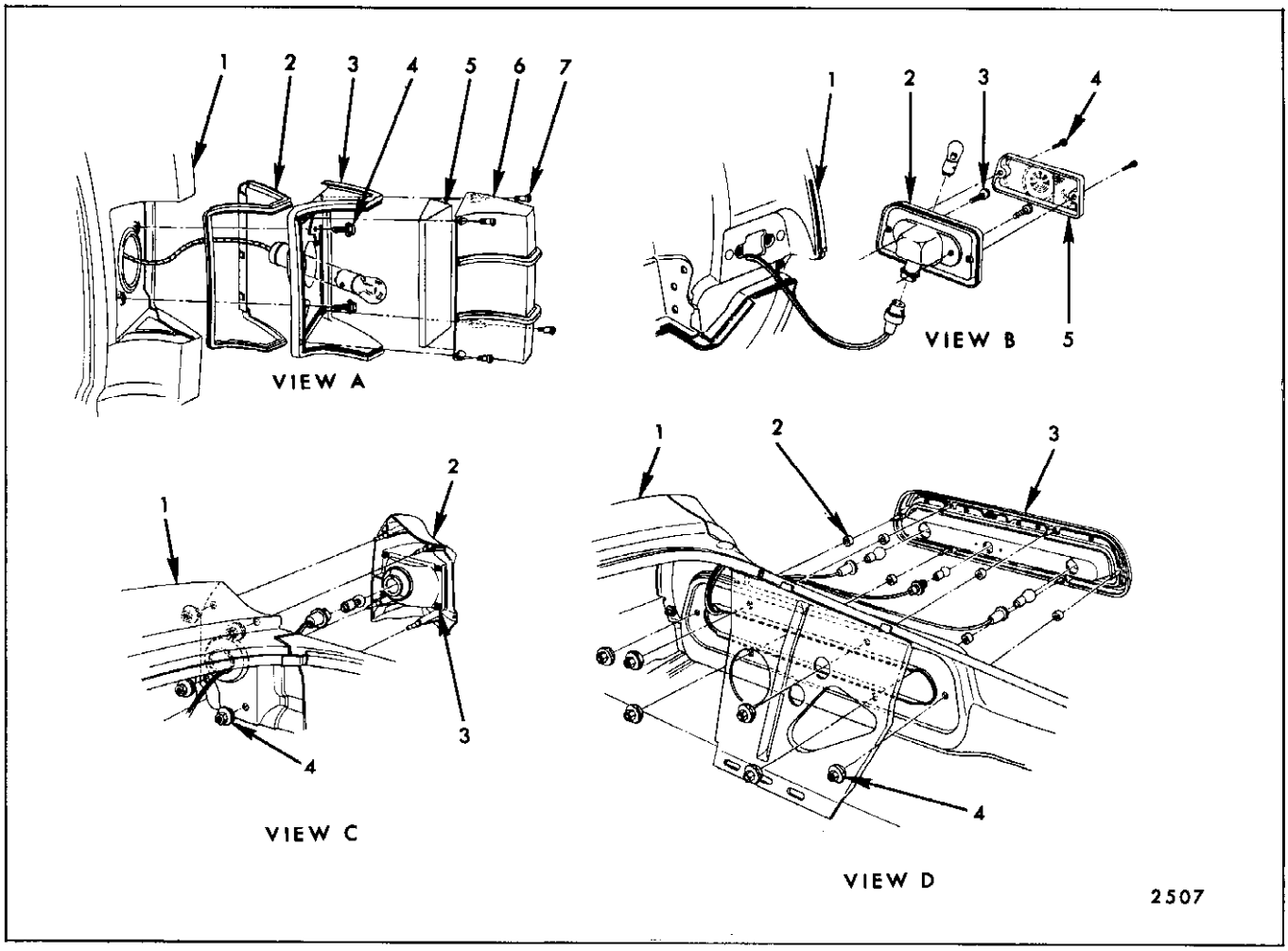


Fig. 16-81 —Chevrolet Tail Lamp Installations

View "A"
1. Quarter Panel
2. Lamp Opening Gasket
3. Lamp Housing
4. Lamp Housing Screw
5. Inner Lens
6. Outer Lens
7. Lens Screw

View "B"
1. Quarter Panel
2. Lamp Housing
3. Lamp Housing Screw
4. Lens Screw
5. Lens

View "C"
1. Quarter Panel
2. Quarter Extension and Lamp Assembly
3. Panel Bezel Nut
4. Quarter Extension Nut

View "D"
1. Quarter Panel
2. Lamp Housing Washer
3. Lamp Housing
4. Lamp Housing Nut

TAIL LAMP OPERATION—PONTIAC

OPERATION	METHOD	BODY TYPE						
		A 2300	A 2400	A 35	B 2500	B 26200	B 26600	B 35-45
Bulb Replacement	Remove Lens (Outside)			X				X
	Remove Socket (Inside Rear Compartment)	X	X		X	X	X	
	Remove Retaining Screws (Outside)			X				X
Lens Replacement	Remove Housing and Disassemble	X	X		X Remove Housing Studs	X	X	
	Remove From Outside (Retaining Nuts in Rear Compartment)	X	X	X View B	X	X View C		
Housing	Remove From Inside						X View D	
	Remove From Outside (Retaining Bolts Under Lens)							X View A
	Lower Rear Bumper							

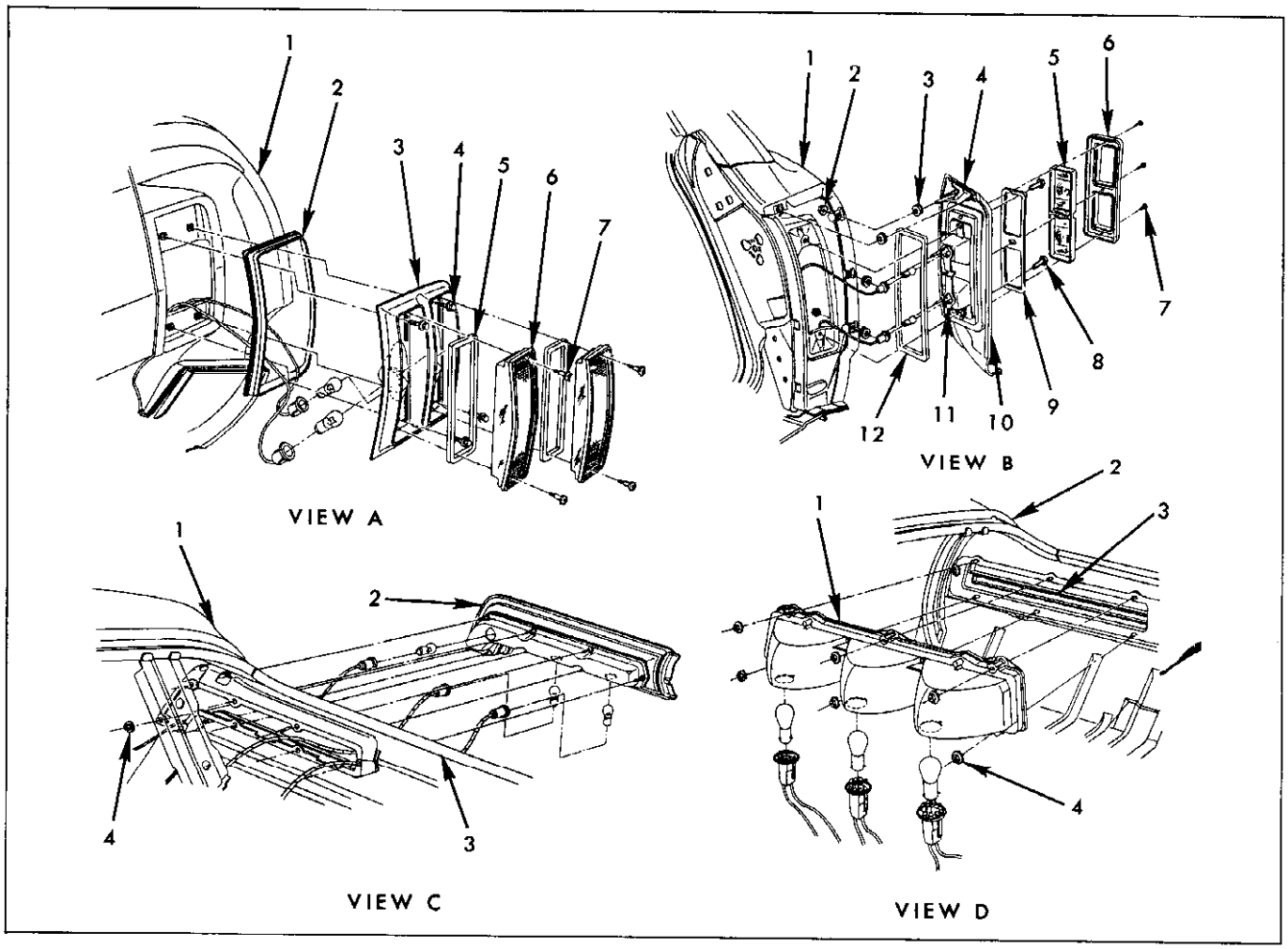


Fig. 16-82—Pontiac Tail Lamp Installations

View "A"
1. Quarter Panel
2. Lamp Opening Gasket
3. Lamp Housing
4. Lamp Housing Screw
5. Lens Gasket
6. Lens
7. Lens Screw

View "B"
1. Quarter Panel
2. Quarter Extension Nut
3. Quarter Extension Washer
4. Quarter Extension
5. Lens
6. Bezel
7. Bezel and Lens Screw
8. Quarter Extension Screw
9. Lens Gasket
10. Quarter Extension Inner Gasket
11. Quarter Extension Outer Gasket
12. Tail Lamp Opening Gasket

View "C"
1. Quarter Pancl
2. Lamp Housing
3. Rear End Panel
4. Lamp Housing Nut

View "D"
1. Lamp Housing
2. Quarter Panel
3. Rear End Panel Molding
4. Lamp Housing Nut

TAIL LAMP OPERATIONS—OLDSMOBILE

OPERATION	METHOD	BODY TYPE				
		A	A 35-55	B	C	E
Bulb Replacement	Remove Lens Outside		X			
	Remove Socket (Inside Rear Compartment)	X		X	X	X
Lens Replacement	Remove Retaining Screws (Outside)		X			
	Remove Housing and Disassemble	X		X	X	X
Housing Replacement	Remove From Outside (Retaining Nuts in Rear Compartment	X		X	X View C	
	Remove From Inside					X View B
	Remove From Outside (Retaining Bolts Under Lens)		X View A			
	Lower Rear Bumper			X	X	

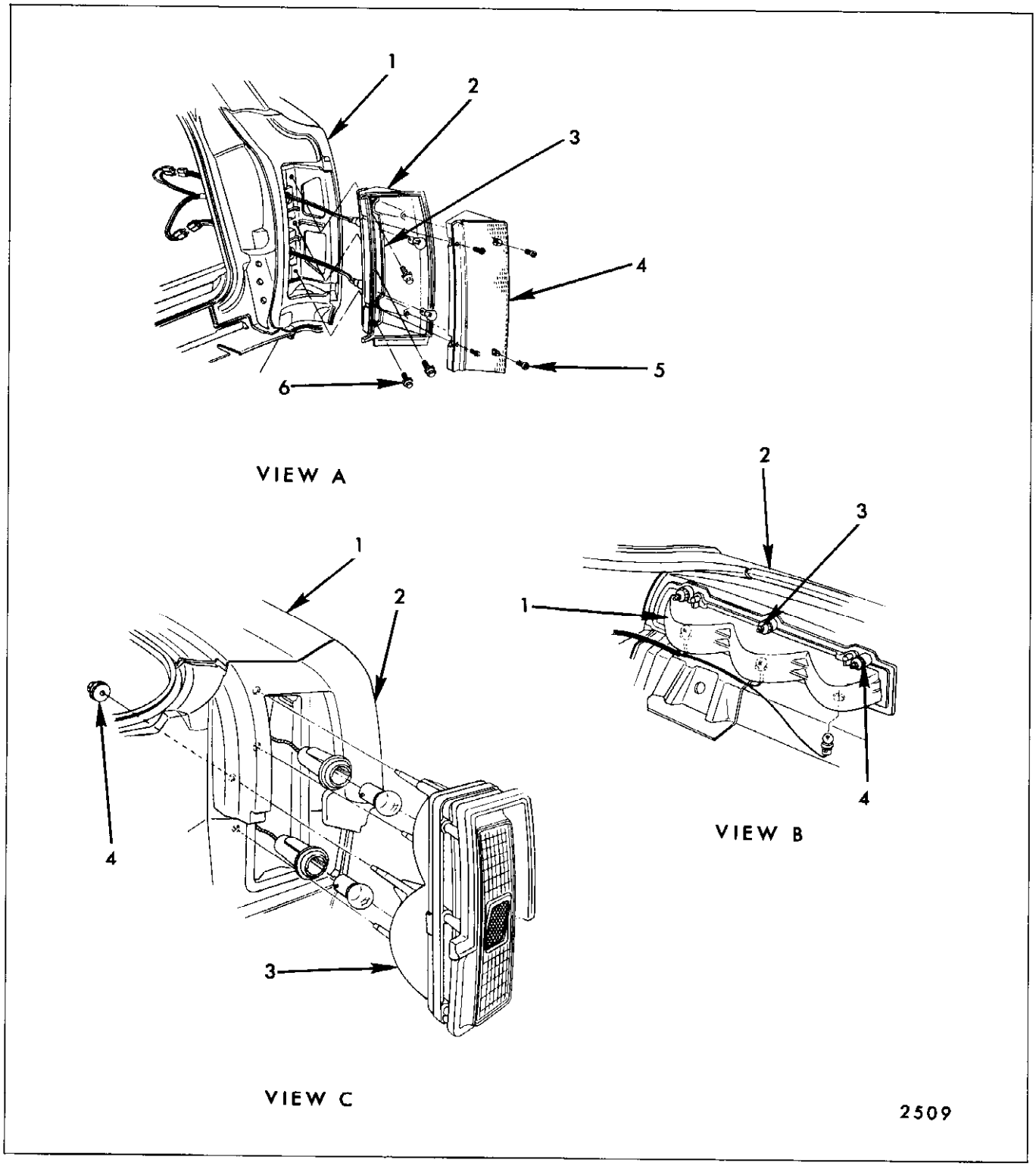


Fig. 16-83—Oldsmobile Tail Lamp Installation

View "A"
1. Quarter Panel
2. Lamp Housing
3. Lens Gasket
4. Lens
5. Lens Screw
6. Housing Screw

View "B"
1. Lamp Housing
2. Rear End Panel
3. Housing Nut
4. Rear End Panel Molding Stud

View "C"
1. Quarter Panel
2. Quarter Extension
3. Lamp Housing
4. Housing Nut

TAIL LAMP OPERATIONS—BUICK

OPERATION	METHOD	BODY TYPE				
		A	A 35-55	B	C	E
Bulb Replacement	Remove Lens (Outside)		X			
	Remove Socket (Inside Rear Compartment)	X		X	X	X
Lens Replacement	Remove Retaining Screws (Outside)		X			
	Remove Housing and Disassemble	X		X	X	X
Housing Replacement	Remove From Outside (Retaining Nuts In Rear Compartment)	X		X	X View C	X View B
	Remove From Inside					
	Remove From Outside (Retaining Bolts Under Lens)		X View A			
	Lower Rear Bumper			X	X	

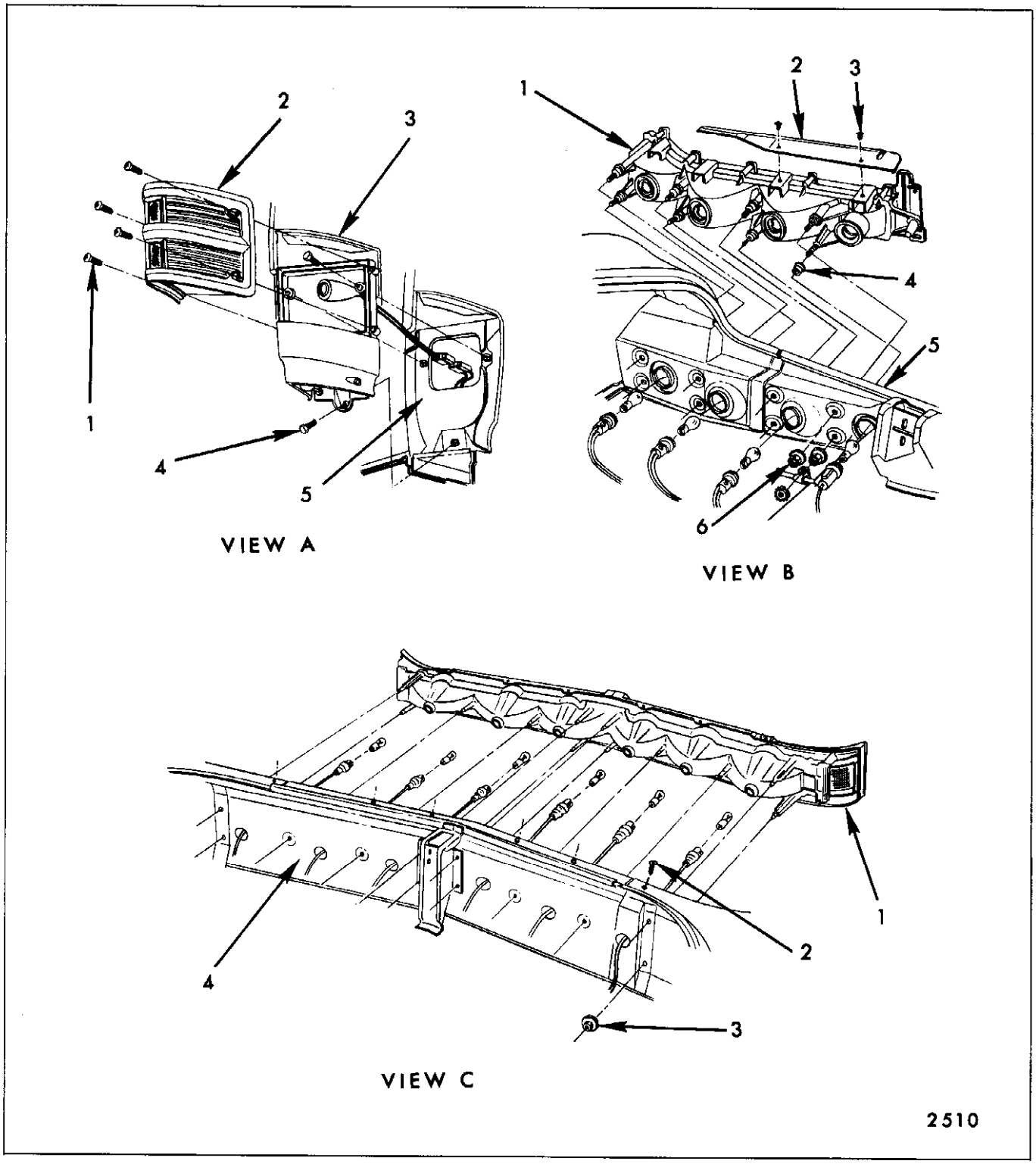


Fig. 16-84 — Buick Tail Lamp Installation

View "A"
1. Lens Screw
2. Lens and Bezel Assembly
3. Lamp Housing
4. Lamp Housing Screw
5. Quarter Panel

View "B"
1. Lamp Housing
2. Lamp Cover
3. Lamp Cover Screw
4. Spacer
5. Rear End Panel
6. Lamp Housing Nut

View "C"
1. Rear End Molding and Lamp Housing Assembly
2. Molding Screw
3. Lamp Housing Nut
4. Rear End Inner Panel

TAIL LAMP OPERATIONS—CADILLAC "E"

OPERATIONS	METHOD	BODY TYPE
Bulb Replacement	Remove Lens (Outside)	
	Remove Socket (Inside Rear Compartment)	X
Lens Replacement	Remove Retaining Screws (Outside)	
	Remove Housing and Disassemble	X
Housing Replacement	Remove From Outside (Retaining Nuts in Rear Compartment)	X
	Remove From Inside	
	Remove From Outside (Retaining Bolts Under Lens)	
	Lower Rear Bumper	

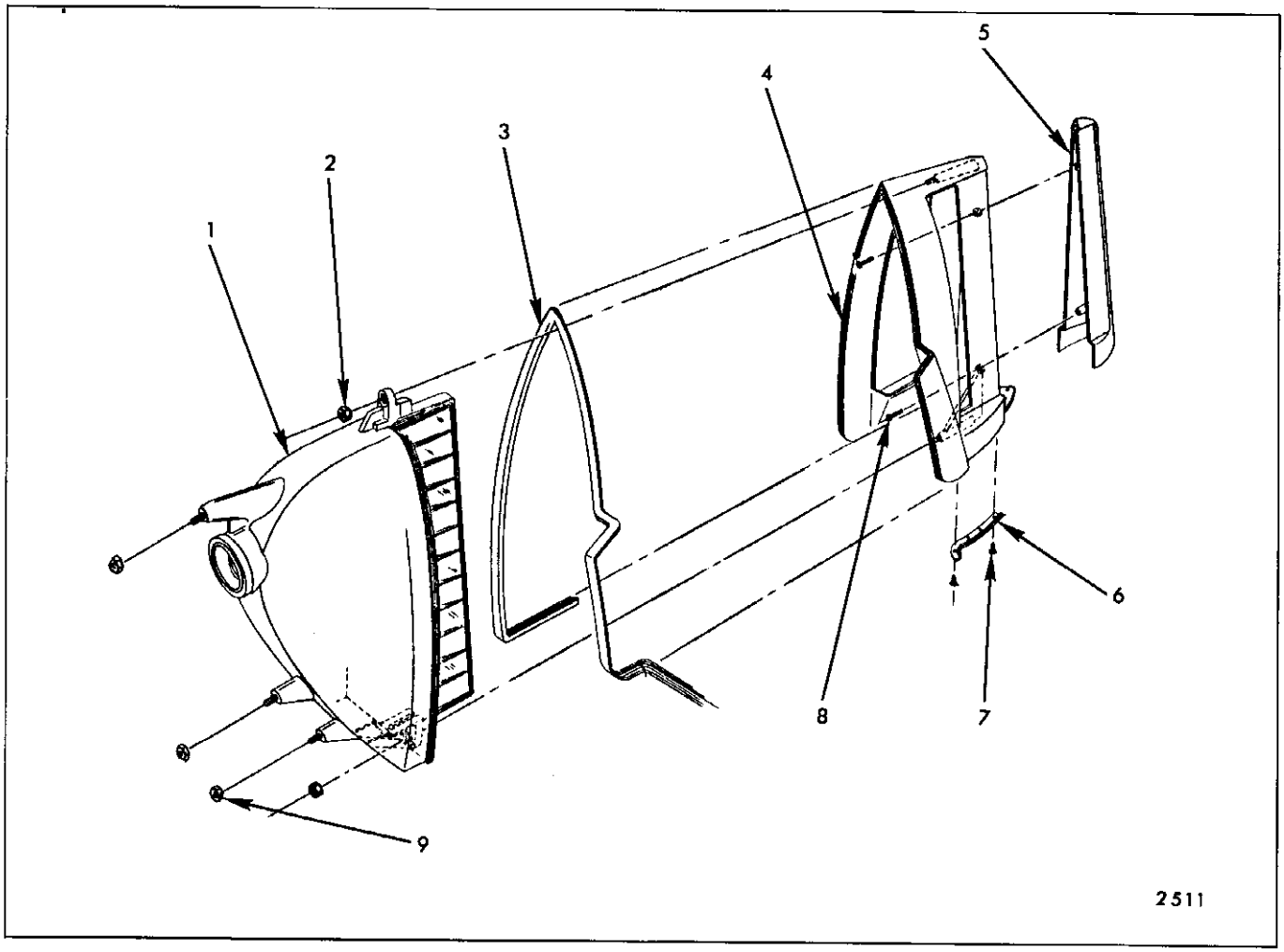


Fig. 16-85—Cadillac "E" Tail Lamp Installation

1. Lamp Housing
2. Lamp Extension Nut
3. Lamp Extension Gasket
4. Lamp Extension
5. Lamp End Cap
6. Rear of Rear Fender Molding at Tail Lamp
7. Molding Screw
8. Lamp End Cap Screw
9. Lamp Housing Nut

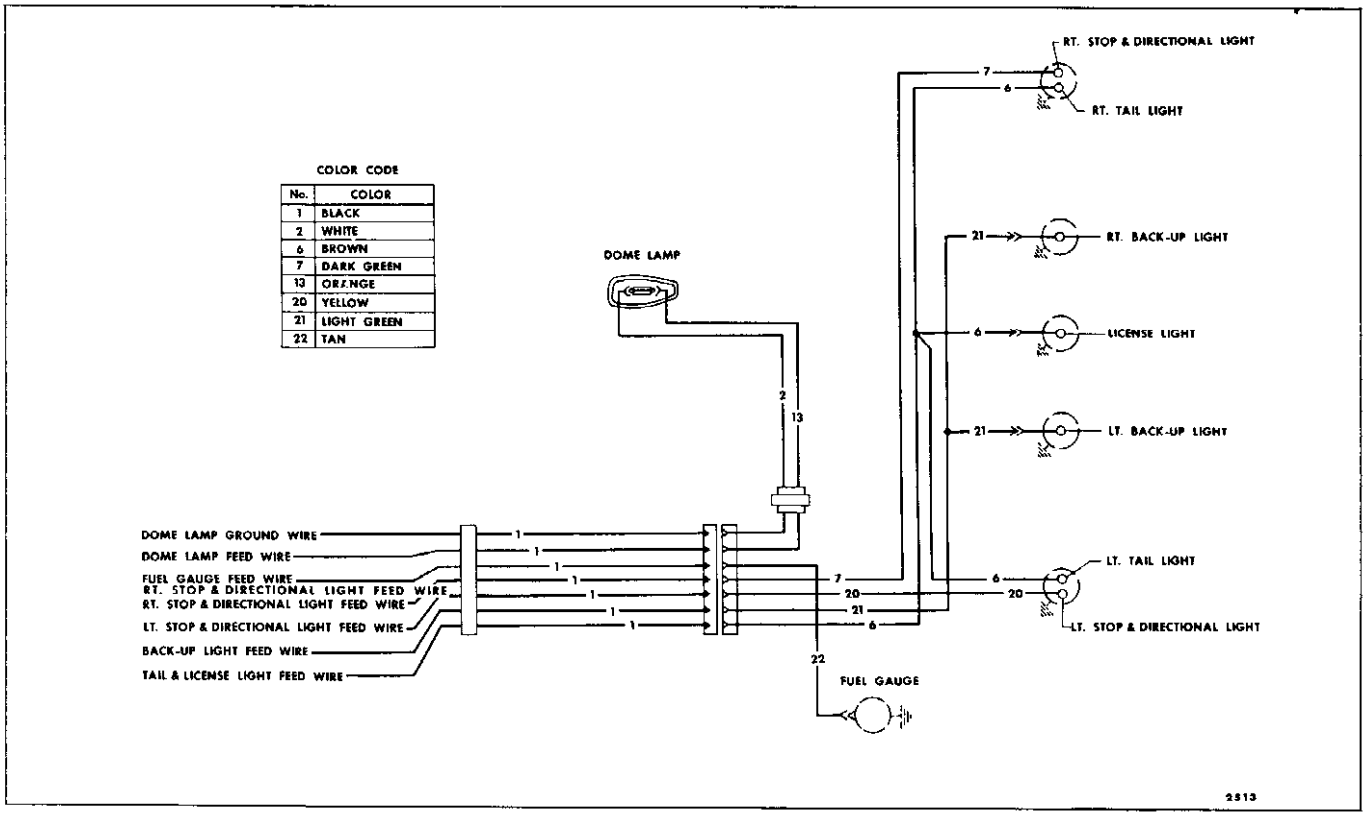


Fig. 16-86—Body Wiring Circuit Diagram - Chevrolet "A" Body

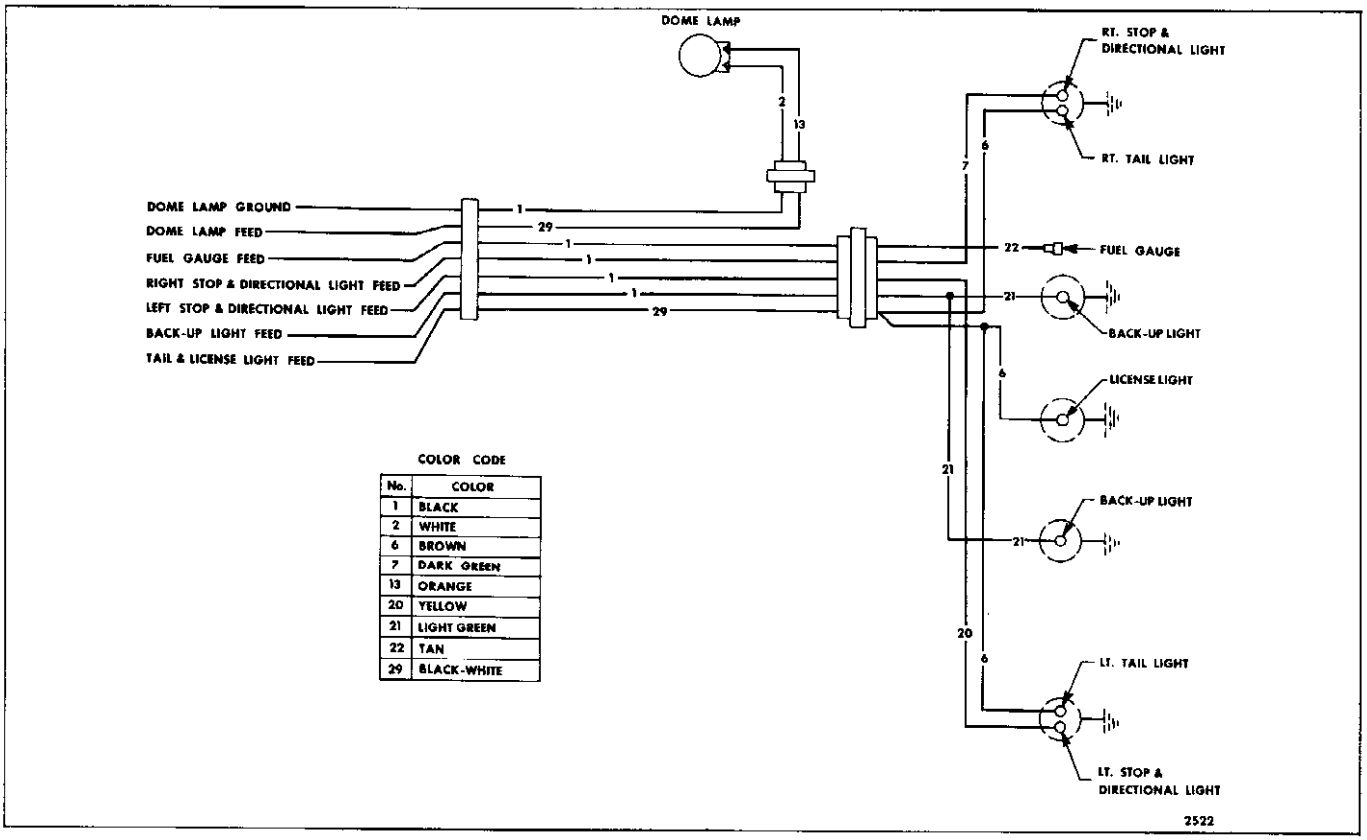


Fig. 16-87—Body Wiring Circuit Diagram - Chevrolet "A-35" Style

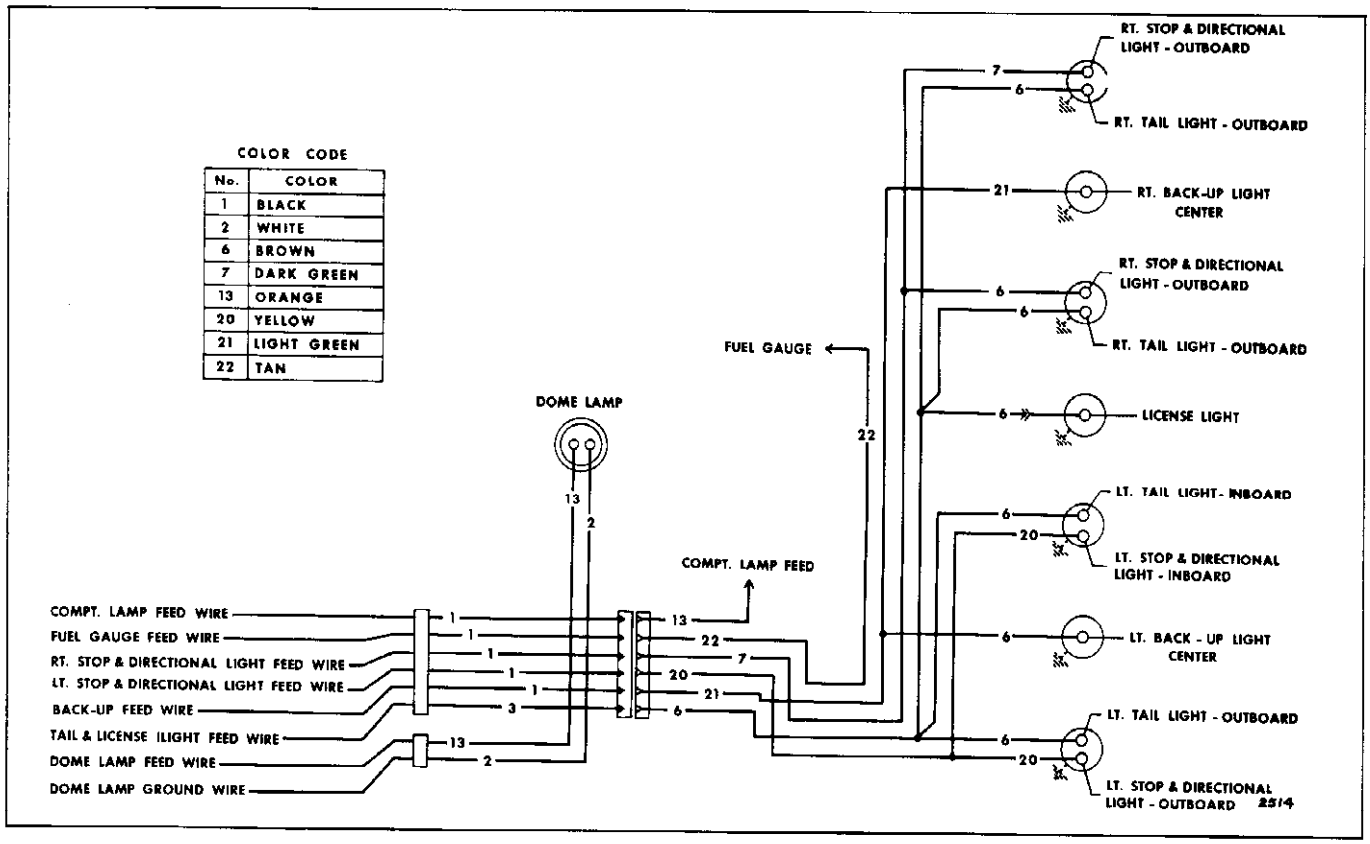


Fig. 16-88 — Body Wiring Circuit Diagram - Chevrolet "B" Styles

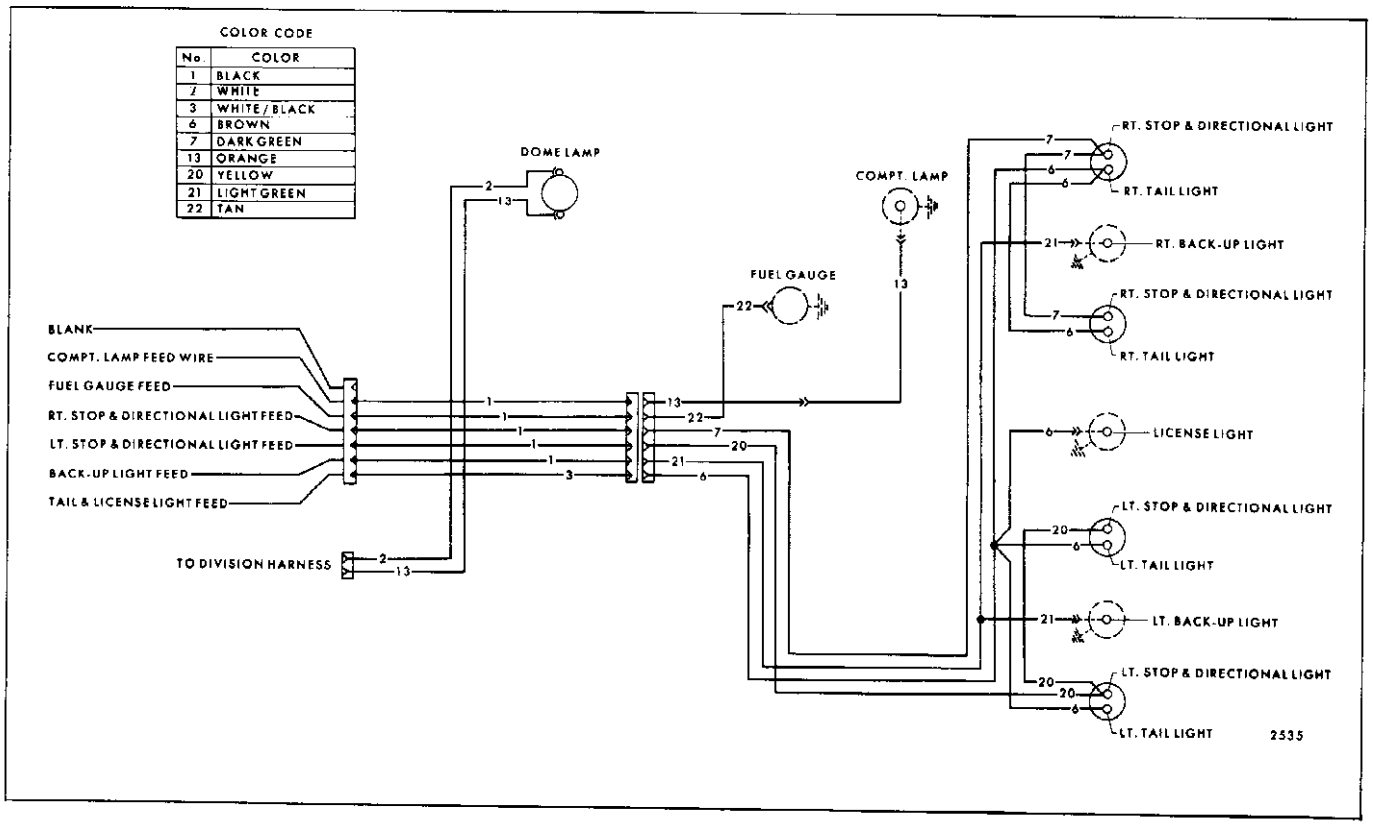


Fig. 16-89 — Body Wiring Circuit Diagram - Pontiac "B" Styles

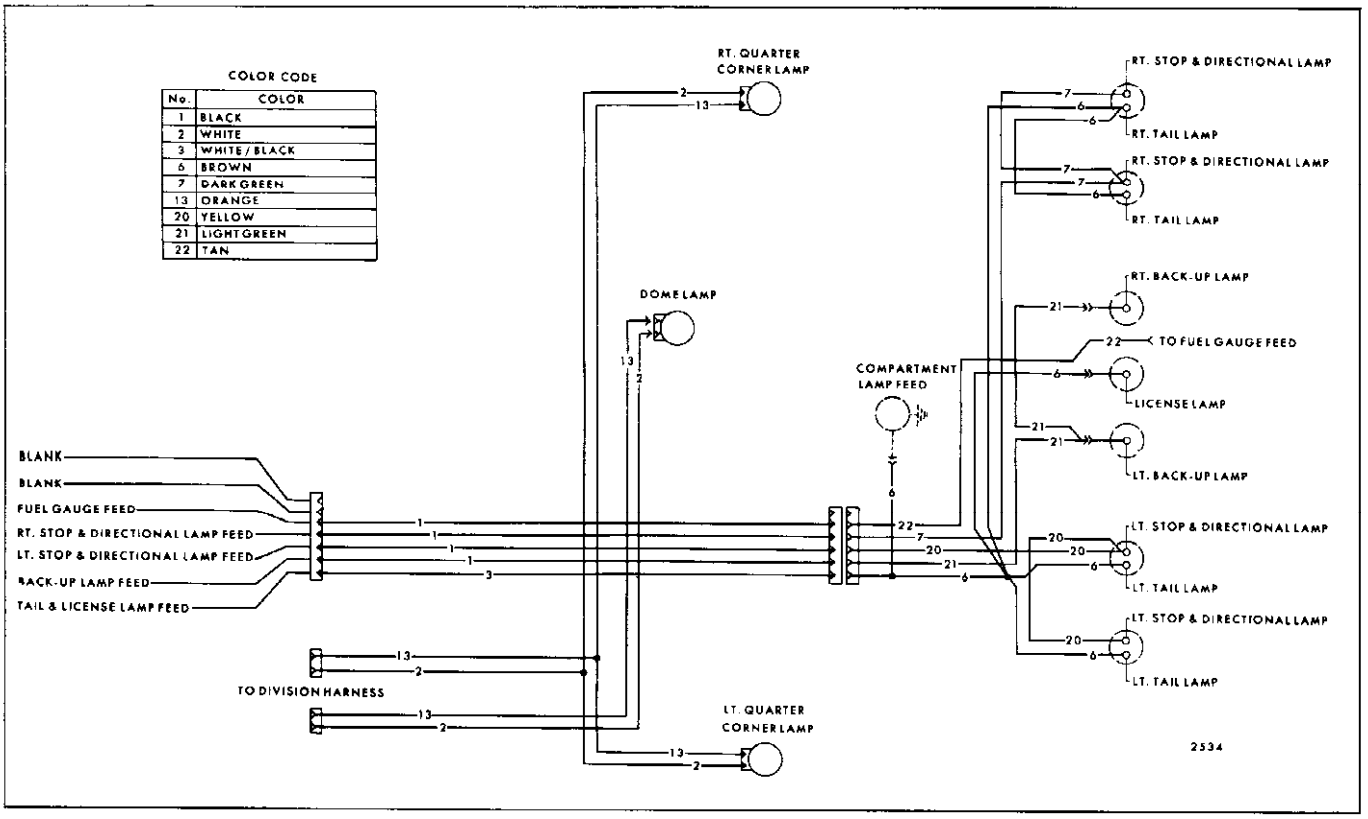


Fig. 16-90 — Body Wiring Circuit Diagram - Oldsmobile "B" Styles

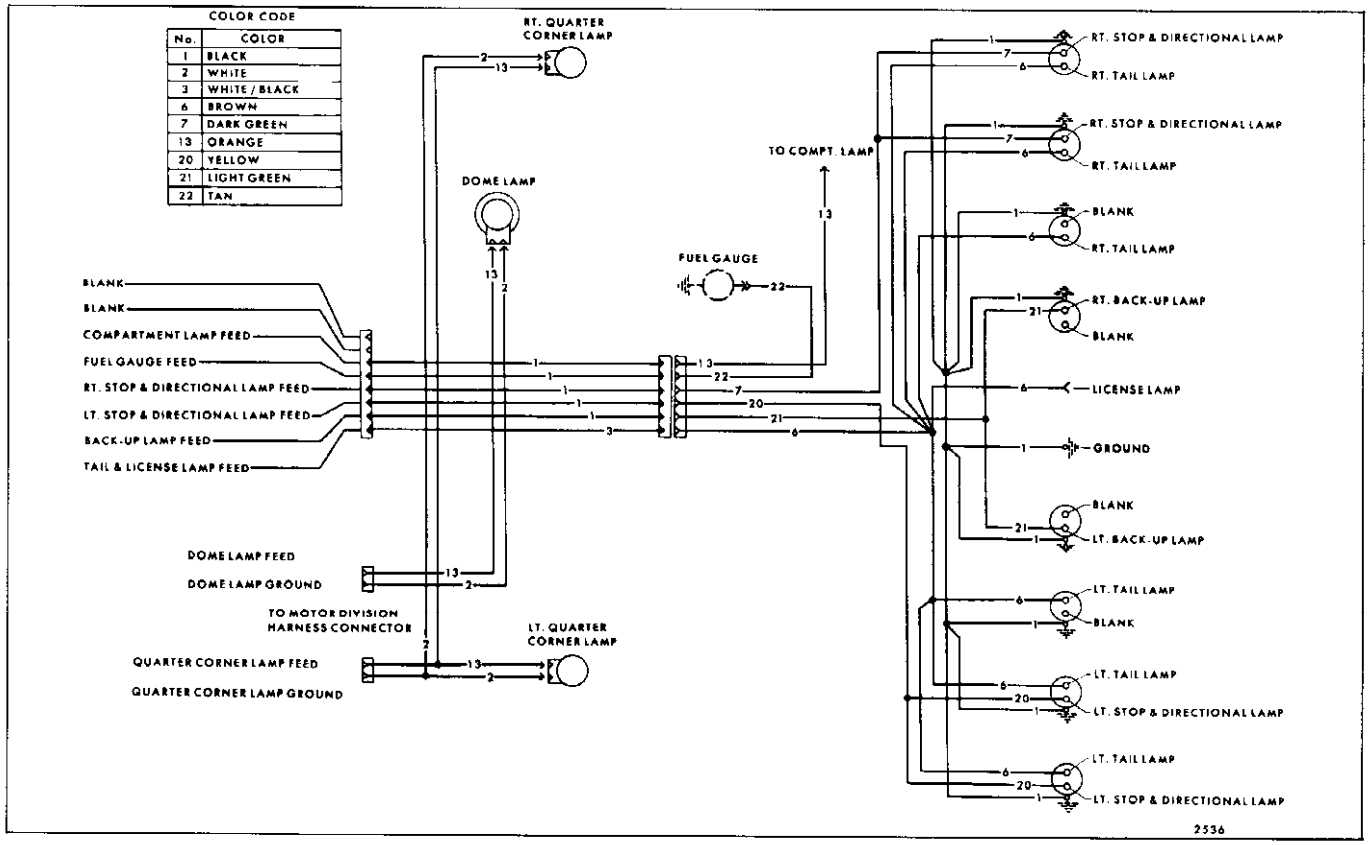


Fig. 16-91 — Body Wiring Circuit Diagram - Buick "B" Styles

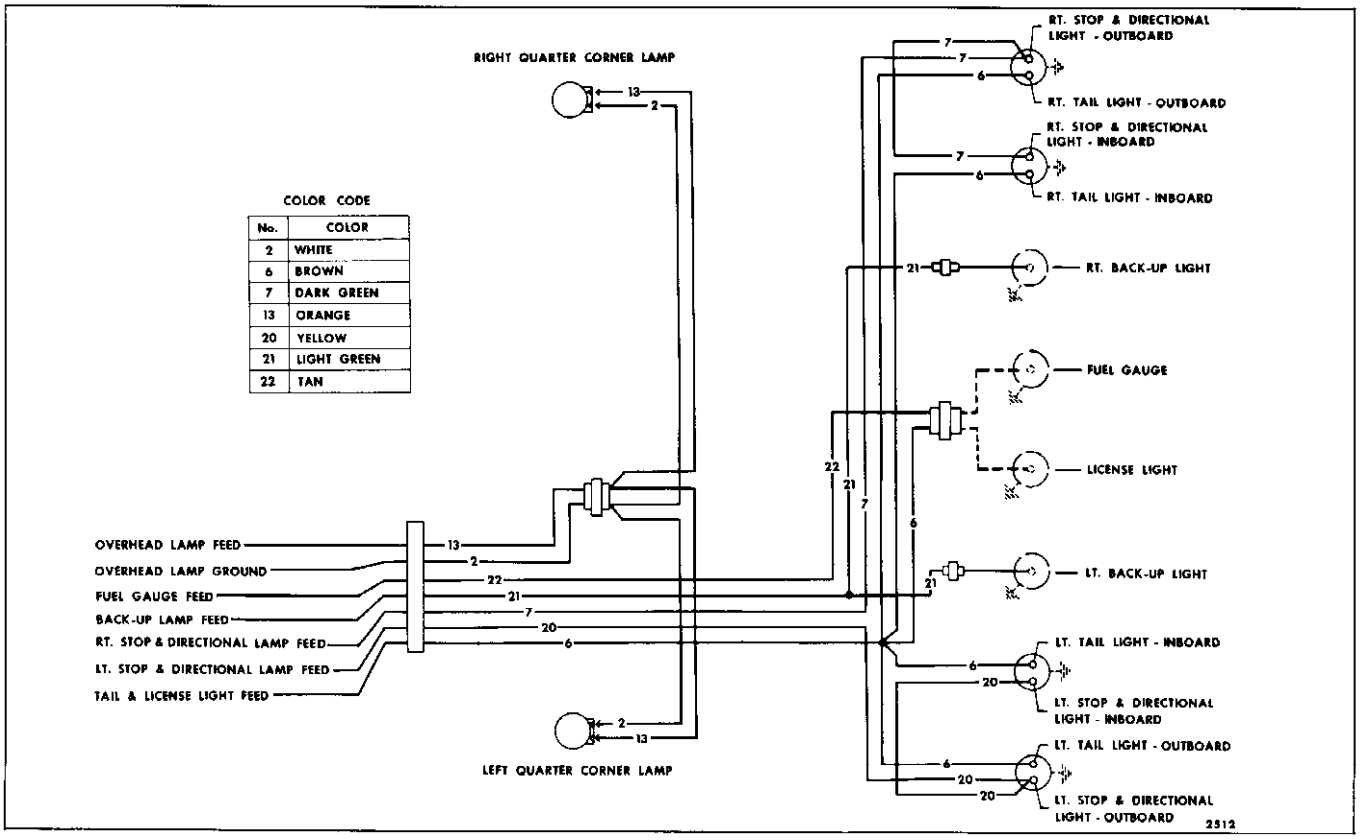


Fig. 16-92 — Body Wiring Circuit Diagram - Chevrolet "F" Styles

SECTION 17

EXTERIOR MOLDINGS

INDEX

SUBJECT	PAGE
Description	17-1
General Precautions	17-1
Sealing Operation	17-1
Tools and Care	17-3
Chevrolet Styles	
"A" Body	17-5
"B" Body	17-16
"F" Body	17-27
"X" Body	17-29
"Z" Body	17-35
Pontiac Styles	
"A" Body	17-39
"B" Body	17-49
Oldsmobile Styles	
"A" Body	17-63
"B-C" Body	17-74
"E" Body	17-85
Buick Styles	
"A" Body	17-87
"B-C" Body	17-98
"E" Body	17-106
Cadillac Styles	
"C" Body	17-109
"D" Body	17-116
"E" Body	17-119

DESCRIPTION

The exterior moldings are secured to the body by any one or a combination of the following attachments (Fig. 17-1).

a. Attaching screws

b. Bolt and clip assemblies with attaching nuts.

c. Integral studs with attaching nuts.

d. "Bath-tub" type snap-on clips.

e. "W-base" type snap-in clips.

f. Weld-on studs and clips.

g. Snap-in studs to pre-installed retainers.

h. Spring (self retained).

i. Snap-in type studs and clips (clip is an integral part of the stud).

Before using the molding charts the following information will be helpful when installing or removing exterior moldings.

1. Screw locations - the exact location for each screw is not shown or mentioned, but when hidden, the general location is indicated by naming the molding or other part which conceals the screw and therefore must be removed to gain access to the screw.

2. When a molding is overlapped the overlapping molding is indicated in the "Engages with other molding" column and must be removed first.

To use the molding charts, use the following procedure:

1. Locate the illustration of the body. The illustrations are separated by car line and body type.

2. Note the number of the molding to be removed.

3. Turn to the molding chart for that particular car line and body type and locate the number noted in step two (2).

GENERAL PRECAUTIONS

When removing or installing any body exterior molding certain precautions should be exercised.

1. Adjacent finishes should be protected with masking tape to prevent damage to finish.

2. Proper tools and care should be employed to guard against molding damage.

SEALING OPERATION

Although detailed sealing operations for each

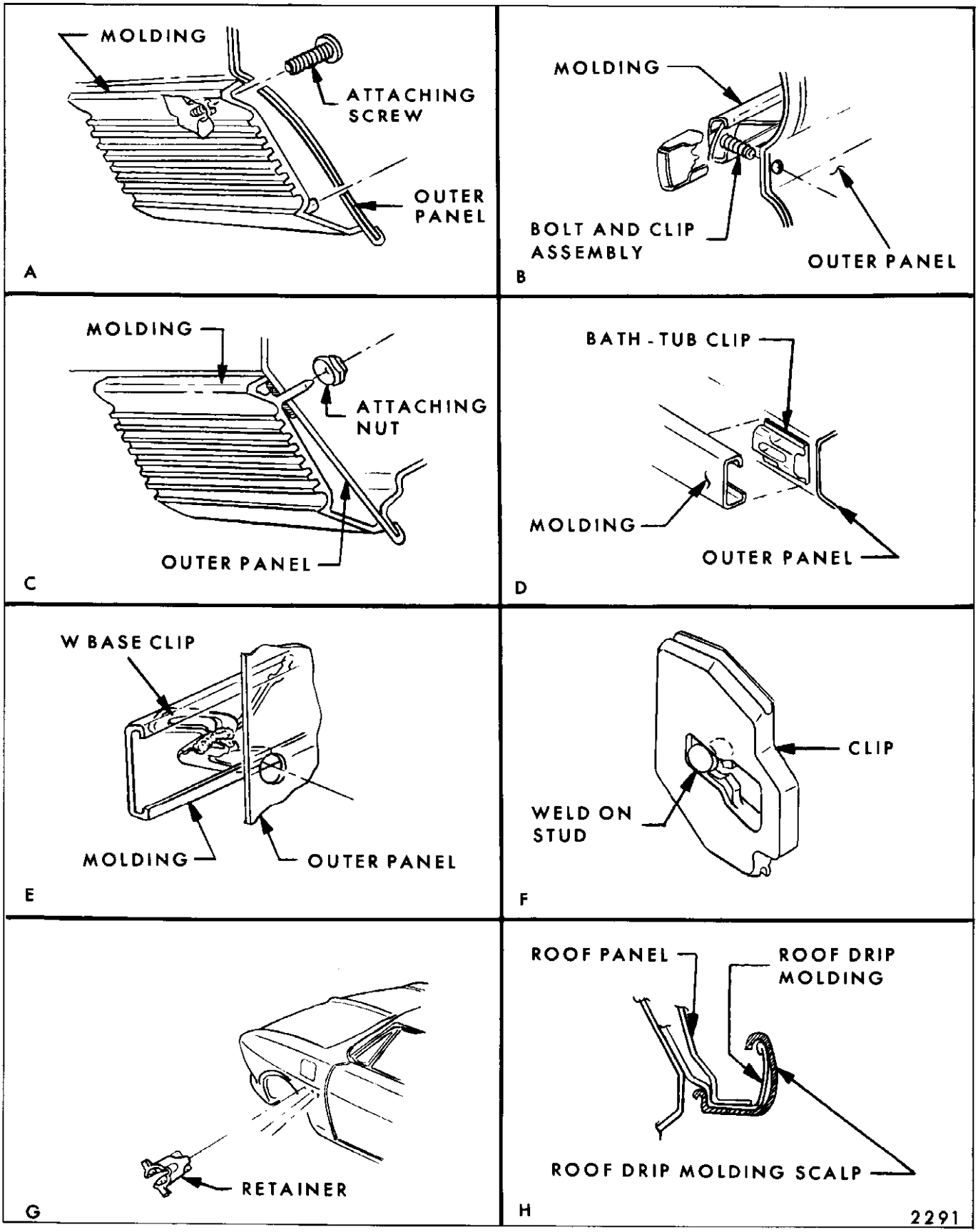


Fig. 17-1—Exterior Molding Attachments

individual molding are not described on the "Molding Removal Chart" the following information is given to permit a satisfactory sealing operation.

Medium-bodied sealer or body caulking compound are the sealers most frequently used to provide a watertight seal or for anti-rattle measures.

Holes in body panels for screws, bolts, or clips that would permit water to enter the interior of the body should be sealed with body caulking compound or presealed screws, nuts or clips.

Drip moldings require a 1/4" bead of medium-bodied sealer along the full length of the inner attaching surface. Door window scalps and center pillar scalps require a 1/8" x 1/4" x 1/4" bead of caulking compound at 5" intervals for anti-rattle purposes. Pinchwelds require medium-bodied sealer on both sides when pinchweld clips are used. The exception is the rear quarter pinchweld on convertible styles which requires waterproof tape over the entire pinchweld, prior to clip installation.

TOOLS AND CARE

The following groups of moldings are listed with the name or description of the tool which is suitable for molding removal.

Roof Drip Scalps - pointed hook tool.

Door Window Scalps - thin flat-bladed tool (putty knife).

Reveal moldings around adhesive caulked glass installations are retained by clips which are attached to the body opening by weld-on studs or screws. On all styles, a projection on the clip engages the reveal molding flange, retaining the molding between clip and body metal. To disengage a molding from retaining clips, use appropriate tool (see Chart) as shown in Figure 17-2.

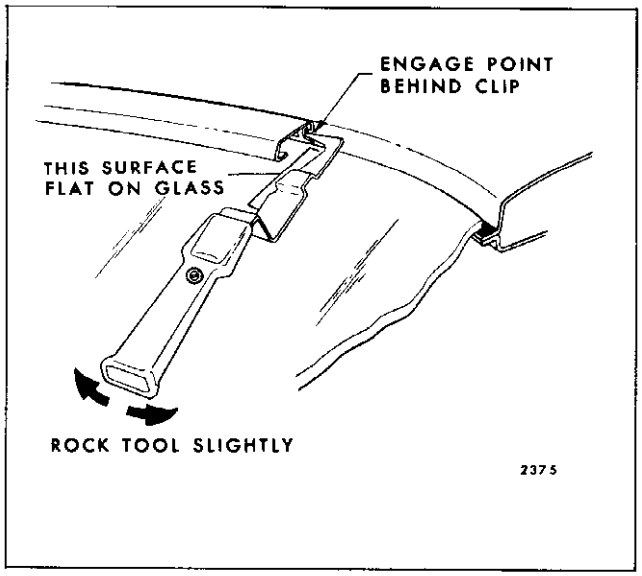


Fig. 17-2—Usage of Reveal Molding Removal Tool (Handle J-21544-1 and Reveal Molding Remover J-21549-5 Shown. Others Similar)

If it is necessary to replace a damaged "bath-tub" molding clip, use the following procedure for removal and installation:

1. Insert sharp edge of flat-bladed tool, such as a putty knife, under edge of clip and hammer tool until base of clip is cut approximately half-way through (Fig. 17-3) then disengage clip from hole.

   NOTE: In some cases, it may be necessary to cut clip at opposite end of base also.

2. Special tool J-21214 is required when installing metal bath-tub type clips.

3. No special tool is needed to install a new plastic bath-tub type clip.

Series	Windshield	Back Window	Quarter Window	Sky Light Window
All GM Except Chevy II	J 21549-1 J 21549-5 J 21549-6	J 21549-1 J 21549-3 J 21549-5 J 21549-6	J 21549-1 J 21549-3 J 21549-5 J 21549-6	J 21549-1 J 21549-5 J 21549-6
Chevy II	None	J 21549-1 J 21549-5 J 21549-6	None	None

Tool	DESCRIPTION
J 21549-1	Handle
J 21549-3	Reveal Molding Remover (angle blade) (Use with J 21549-1)
J 21549-5	Reveal Molding Remover (Rt.) (Use with J 21549-1)
J 21549-6	Reveal Molding Remover (Lt.) (Use with J 21549-1)

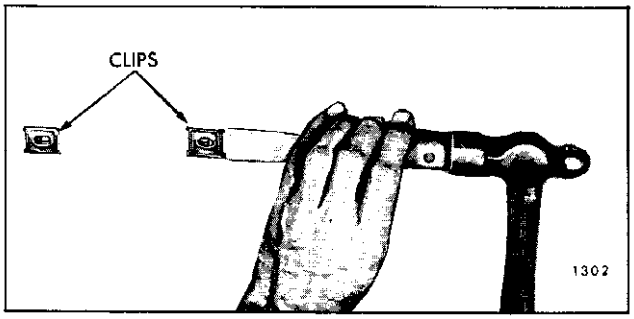


Fig. 17-3—Removal of Bath-Tub Type Molding Clip

If a weld stud on a panel becomes damaged or broken off use the following procedure:

1. Drill a small hole in the panel adjacent to where original weld on stud was installed.
2. Insert a self sealing screw through original clip and into outer panel.

METHODS OF MOLDING RETENTION

PONTIAC "A" BODIES - 23000 AND 24000 SERIES
FIGURES 17-40 THROUGH 17-49

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
1	Windshield Reveal Upper	All			X				
2	Windshield Reveal Side	All			X			Windshield Reveal Upper	
3	Windshield Reveal Lower	All			X			Windshield Reveal Side	
4	Windshield Pillar Finishing	07,17,39,67	X						Windshield Pillar Weatherstrip and Weatherstrip Retainer
5	Windshield Header Center	67	X					Windshield Header Side	Rear View Mirror Support
6	Windshield Header Side	67	X					Windshield Reveal Upper and Sides	Sunshade Support. Windshield Pillar Weatherstrip and Weatherstrip Retainer
7	Roof Drip Molding Front Scalp	39		X				Roof Drip Molding Scalp Escutcheon	
8	Roof Drip Molding Scalp Escutcheon	39		X					
9	Roof Drip Molding Rear Scalp	39		X				Roof Drip Molding Scalp Escutcheon	
10	Roof Drip Molding Scalp	07, 17		X					
11	Front Door Window Frame Front Scalp	07,35,69		X					
12	Front Door Window Frame Upper Scalp	07,35,69		X				Front Door Window Frame Front Scalp	
13	Front Door Window Frame Rear Scalp	07,35,69		X				Front Door Window Frame Upper Scalp	
14	Front Door Window Belt Reveal	07,17,39, 67,69	X						Front Door Window Glass Lower Stop
15	Center Pillar Scalp	35,69	X						

METHODS OF MOLDING RETENTION

PONTIAC "A" BODIES - 23000 AND 24000 SERIES
FIGURES 17-40 THROUGH 17-49

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
16	Rear Door Window Frame Front Scalp	35,69		X				Rear Door Window Frame Upper Scalp	
17	Rear Door Window Frame Upper Scalp	35,69		X				Rear Door Window Frame Rear Scalp	
18	Rear Door Window Frame Rear Scalp	35		X					
19	Rear Door Window Belt Reveal	39,69	X						Rear Door Window Glass Lower Stops
20	Rear Quarter Window Reveal Front	07			X			Rear Quarter Window Reveal Upper	
21	Rear Quarter Window Reveal Upper	07	X						
22	Rear Quarter Window Belt Reveal	07,17,67	X						Rear Quarter Window Glass Lower Stops
23	Rear Quarter Belt Reveal	39,69 (Optional)			X		X		
24	Rear Quarter Belt Reveal Corner Escutcheon	39 (Optional)	X					Rear Quarter Belt Reveal. Back Window Reveal Lower and Side	
25	Rear Quarter Belt Outer Reveal	07,17 (Optional)			X		X		
26	Rear Quarter Belt Inner Reveal	07,17 (Optional)			X		X	Rear Quarter Belt Outer Reveal	
27	Rear Quarter Pinchweld Finishing	67	X		X			Rear Quarter Window Belt Reveal	Rear Quarter and Rear End Trim Sticks
28	Rear Quarter Window Reveal Upper Corner Escutcheon	35			X				Loosen Rear Quarter Window Reveal Upper and Lower at Corner
29	Rear Quarter Window Reveal Upper	35			X			Rear Quarter Window Reveal Upper and Lower Corner Escutcheon	

METHODS OF MOLDING RETENTION

PONTIAC "A" BODIES - 23000 AND 24000 SERIES
FIGURES 17-40 THROUGH 17-49

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
30	Rear Quarter Window Reveal Lower	35			X			Rear Quarter Window Reveal Upper and Lower Corner Escutcheon	
31	Rear Quarter Window Reveal Lower Corner Escutcheon	35			X				Loosen Rear Quarter Window Reveal Upper and Lower at Corner
32	Front Door Outer Panel	24200	X		X				
33	Front Door Outer Panel Transfer Finishing Upper	23935	X		X				
34	Front Door Outer Panel Transfer Finishing Lower	23935	X		X				
35	Rear Door Outer Panel Transfer Finishing Upper	23935	X		X				
36	Rear Door Outer Panel Transfer Finishing Lower	23935	X		X				
37	Rear Quarter Outer Panel Transfer Finishing Upper - Rt. Side	23935			X				
38	Rear Quarter Outer Panel Transfer Finishing Upper Front - Lt. Side	23935			X				
39	Gas Tank Filler Door Transfer Finishing	23935	X						
40	Rear Quarter Outer Panel Transfer Finishing Upper Rear - Lt. Side	23935			X				
41	Rear Quarter Outer Panel Transfer Finishing Rear Vertical	23935	X		X			Rear Quarter Outer Panel Transfer Finishing Upper Rear	

METHODS OF MOLDING RETENTION

PONTIAC "A" BODIES - 23000 AND 24000 SERIES
FIGURES 17-40 THROUGH 17-49

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
42	Rear Quarter Outer Panel Transfer Finishing Lower Front	23935			X				
43	Rear Quarter Outer Panel Transfer Finishing Lower Rear	23935			X			Rear Quarter Outer Panel Transfer Finishing Lower Front	
44	Rear Quarter Outer Panel Transfer Finishing Front	23935	X						
45	Rear Quarter Outer Panel Transfer Finishing Rear	23935	X						
46	Rear Wheel Opening	23700,24200	X						
47	Rear of Rear Wheel Opening	23500,23700, 24200	X		X				
48	Rear Quarter Outer Panel Nameplate	23700,24200					X		
49	Rear Quarter Outer Panel Louver Horizontal	23300					X		Quarter Trim Left Side, Spare Tire Cover Right Side (35 Style Only)
50	Roof Panel Louver	23739					X		Upper Quarter Trim Finishing Panel
51	Rear Quarter Outer Panel Louver Front Vertical	23707-17-67					X		Rear Quarter Trim Pad
52	Rear of Rear Quarter Outer Panel	All (Except 35)	X				X		
53	Rear Compartment Lid Outer Panel	All (Except 35)	X						
54	Rear Compartment Lid Outer Panel Name Plate	23700,24200					X		

METHODS OF MOLDING RETENTION

PONTIAC "A" BODIES - 23000 AND 24000 SERIES
FIGURES 17-40 THROUGH 17-49

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
55	Rear End Panel Name Plate	23300,23500 23700 (Except 35)					X		
56	Back Window Reveal Upper	07,17,69			X				
		39			X			Back Window Reveal Side	
57	Back Window Reveal Side	39			X				
58	Back Window Reveal Lower	07,17,69			X			Back Window Reveal Upper	
		39			X				
59	Back Window Reveal Lower Corner Escutcheon	39	X					Back Window Reveal Lower and Side	
60	Back Body Opening Upper Reveal	35	X					Back Body Opening Side Reveal	Tailgate Window Glass Run Channel
61	Back Body Opening Side Reveal	35	X						Back Body Opening Pinchweld Finishing Lace
62	Tailgate Window Lower Reveal	35	X			X			
63	Tailgate Outer Panel Belt	35					X		Tailgate Window and Regulator
64	Tailgate Outer Panel Name Plate	35					X		Tailgate Trim Assembly
65	Tailgate Outer Panel Transfer Finishing Upper	23935				X	X		Tailgate Trim Assembly
66	Tailgate Outer Panel Transfer Finishing Side	23935					X	Tailgate Outer Panel Transfer Finishing Upper and Lower	Tailgate Trim Assembly
67	Tailgate Outer Panel Transfer Finishing Lower	23935				X	X		Tailgate Trim Assembly

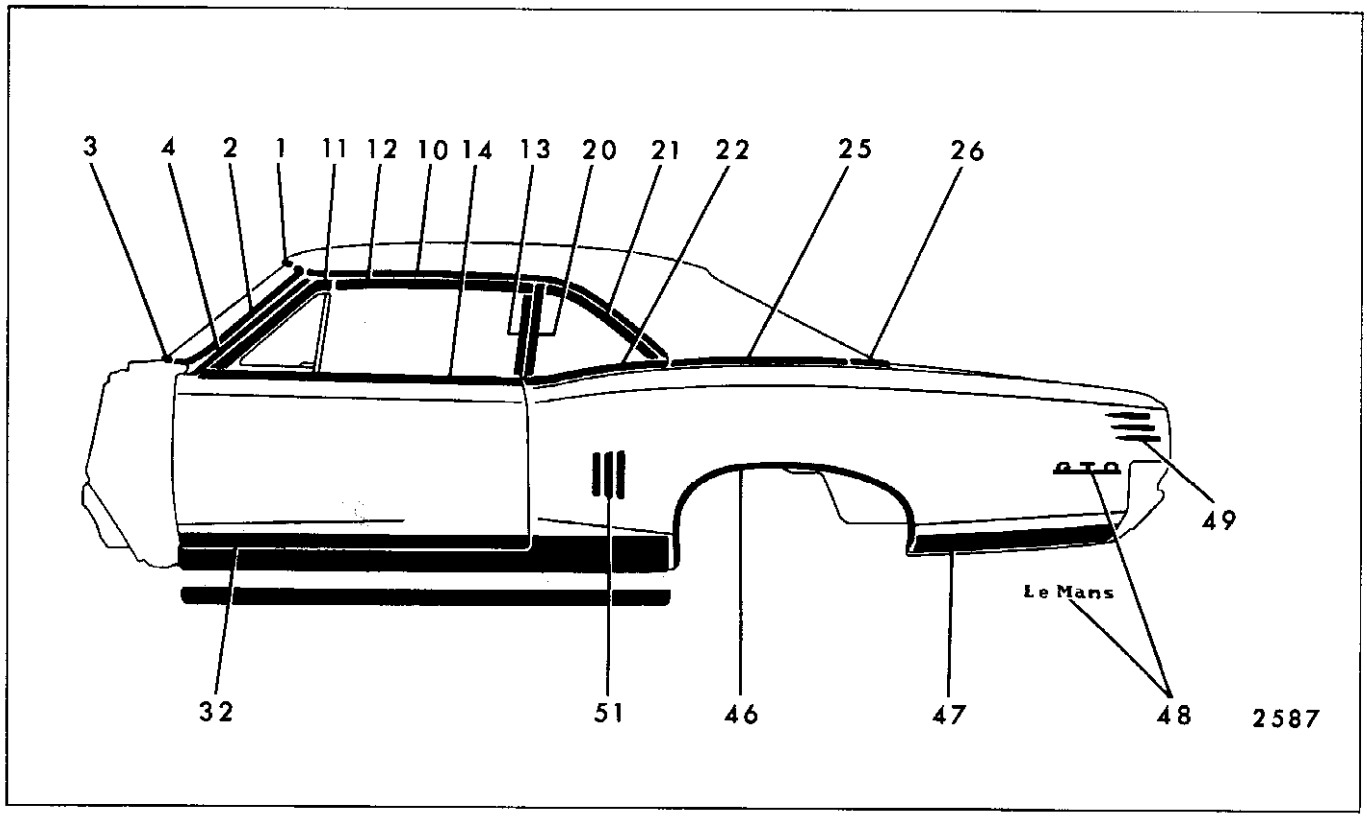


Fig. 17-40—Pontiac "A-07" Styles

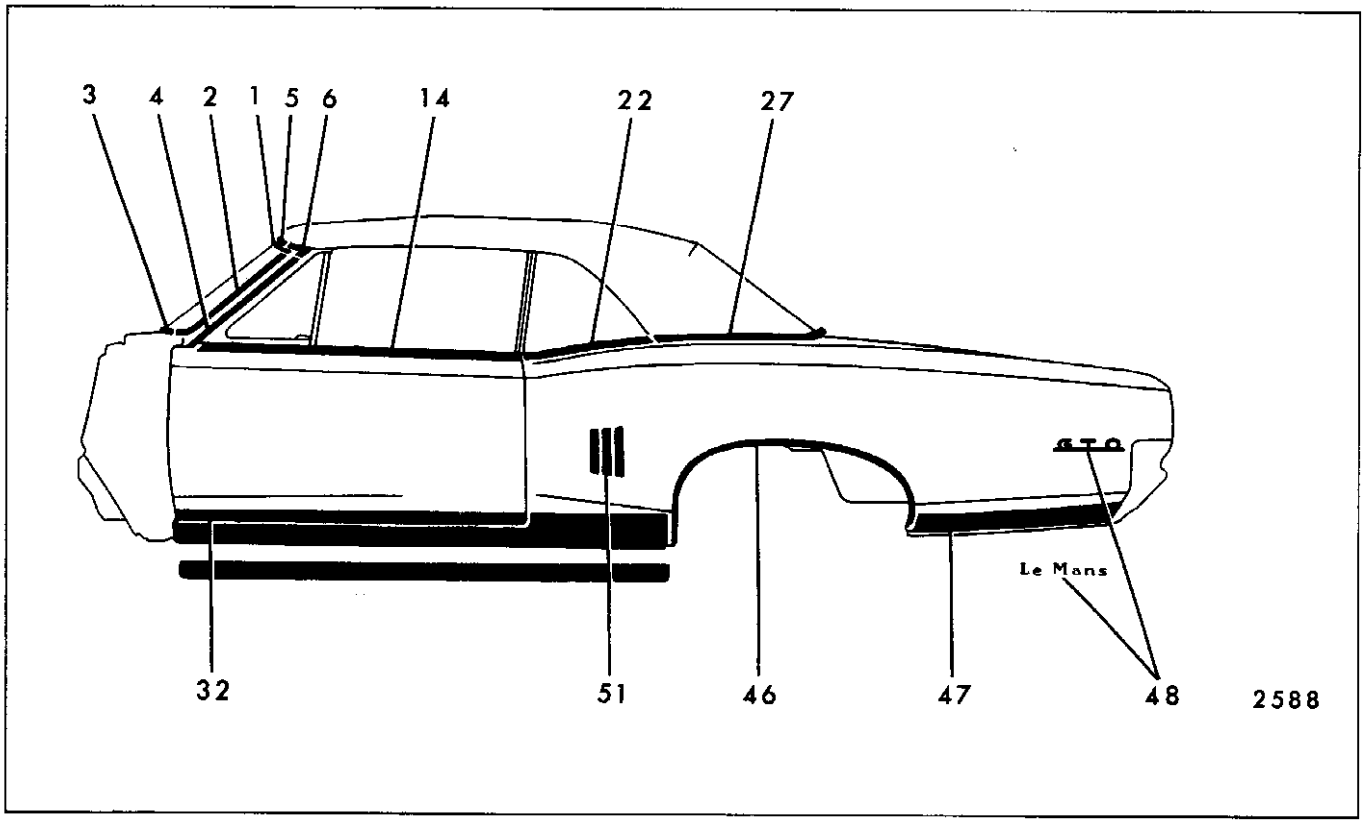


Fig. 17-41—Pontiac "A-67" Styles

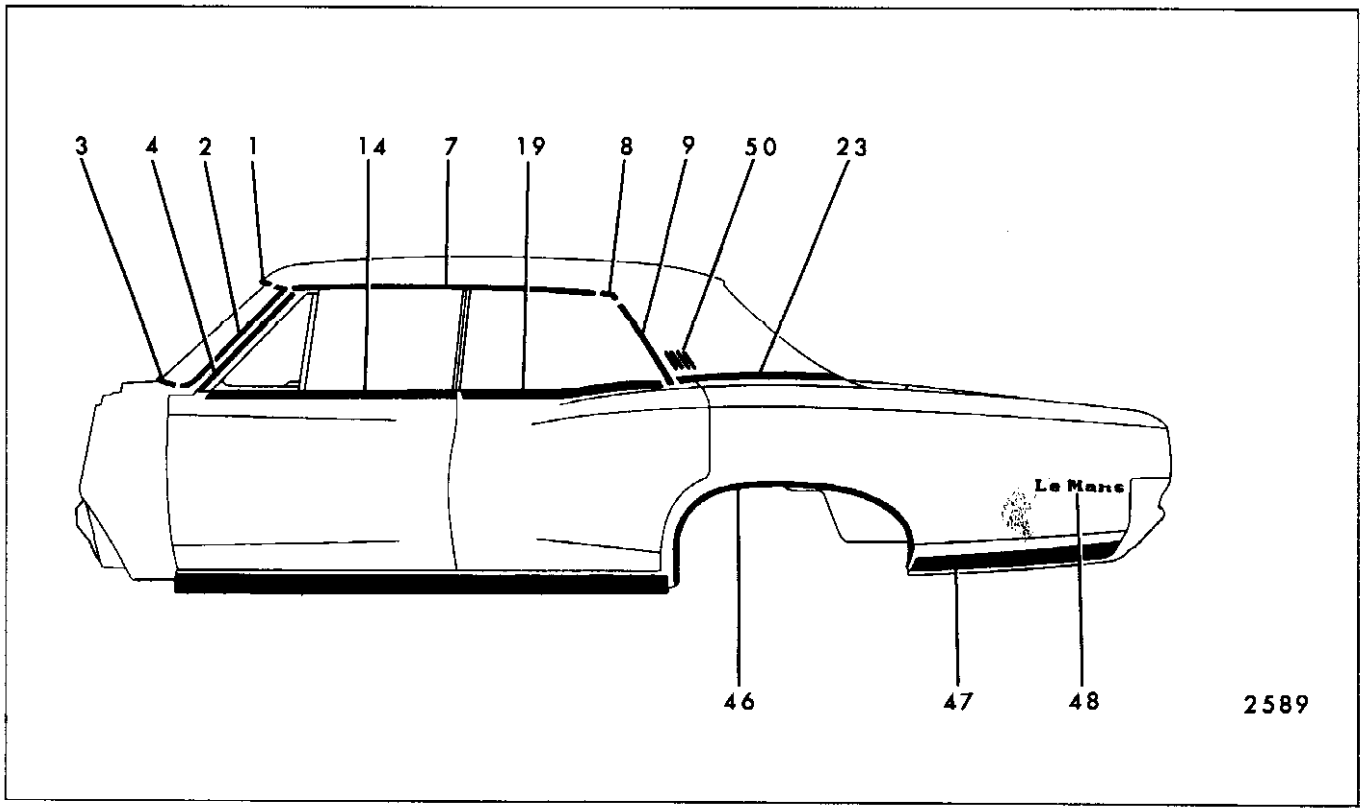


Fig. 17-42—Pontiac "A-39" Styles

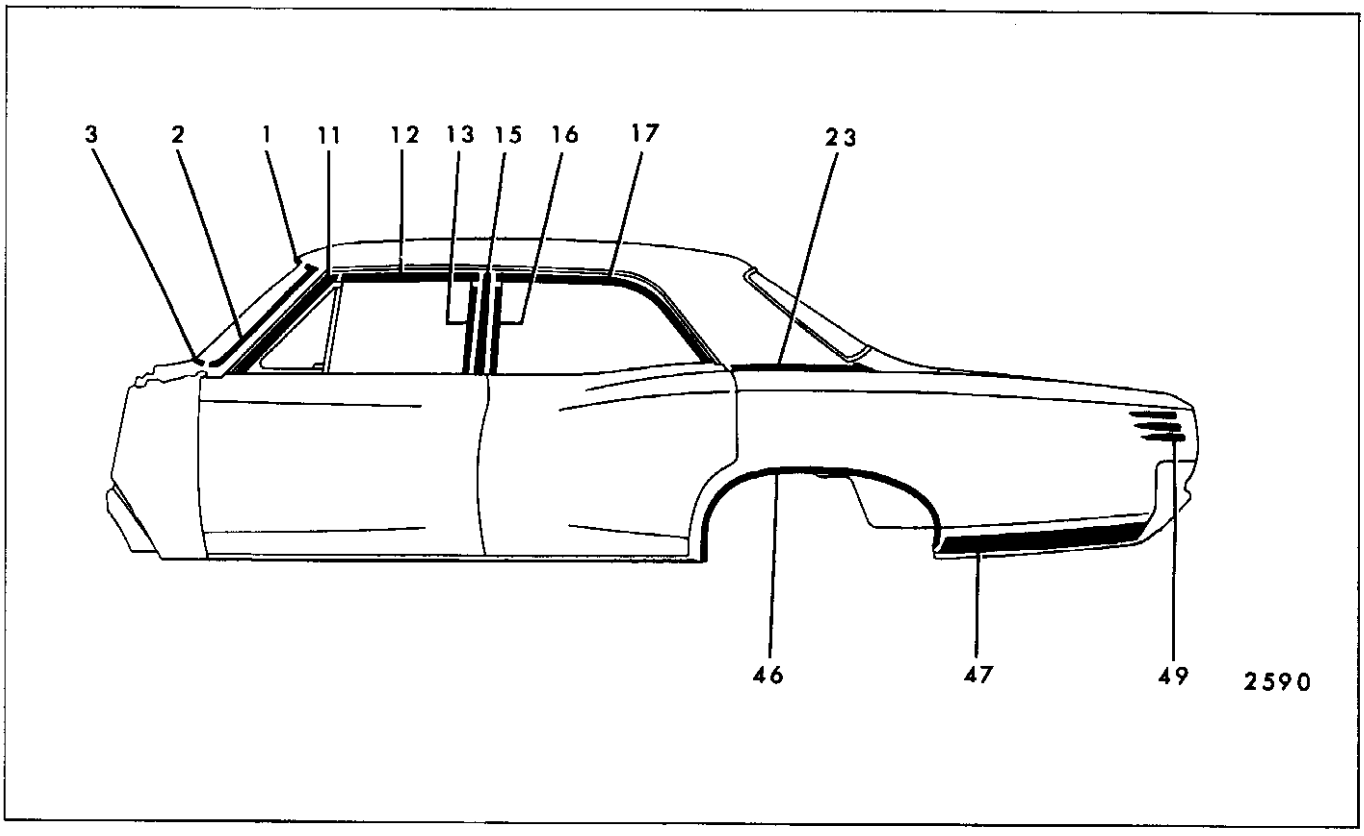


Fig. 17-43—Pontiac "A-69" Styles

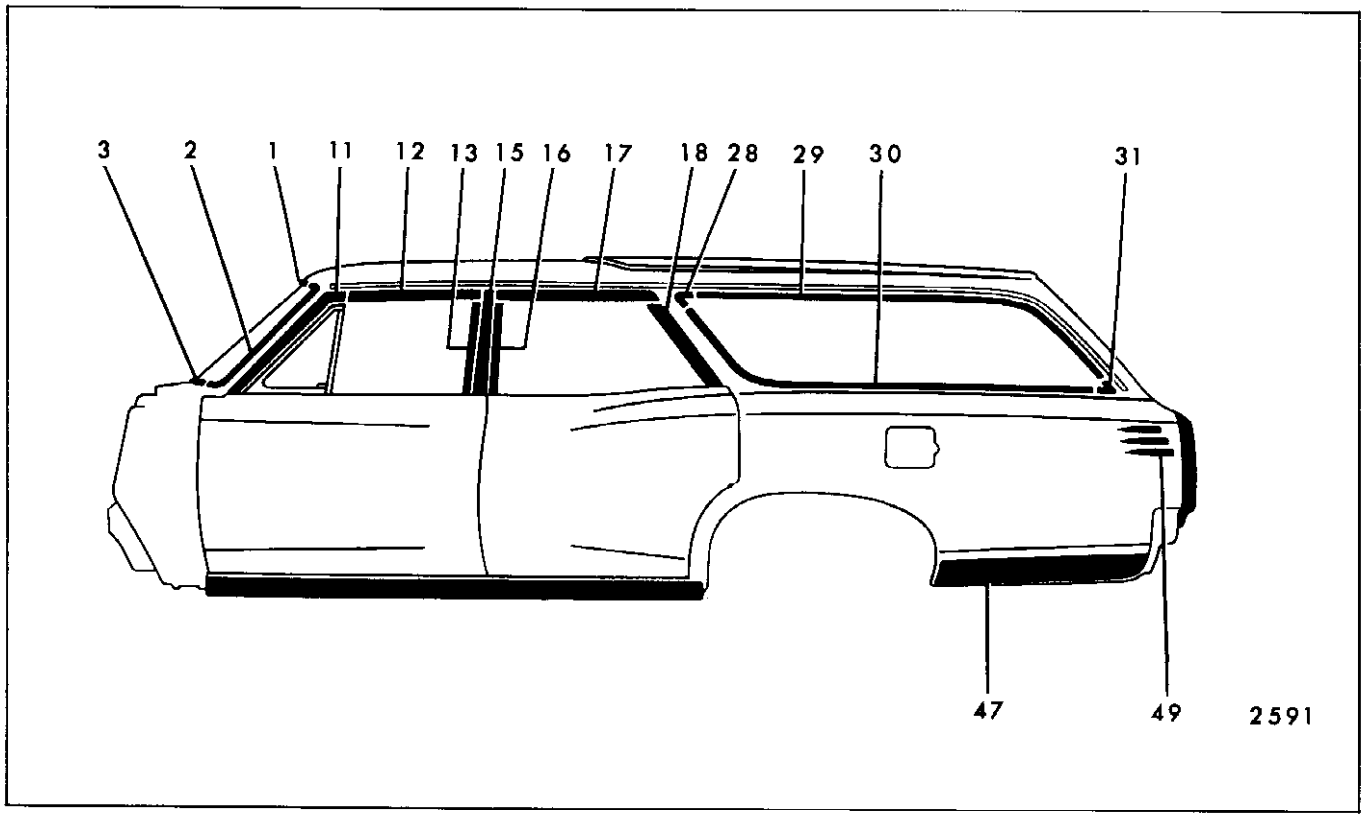


Fig. 17-44—Pontiac "A-35" Styles (Less Wood Grain)

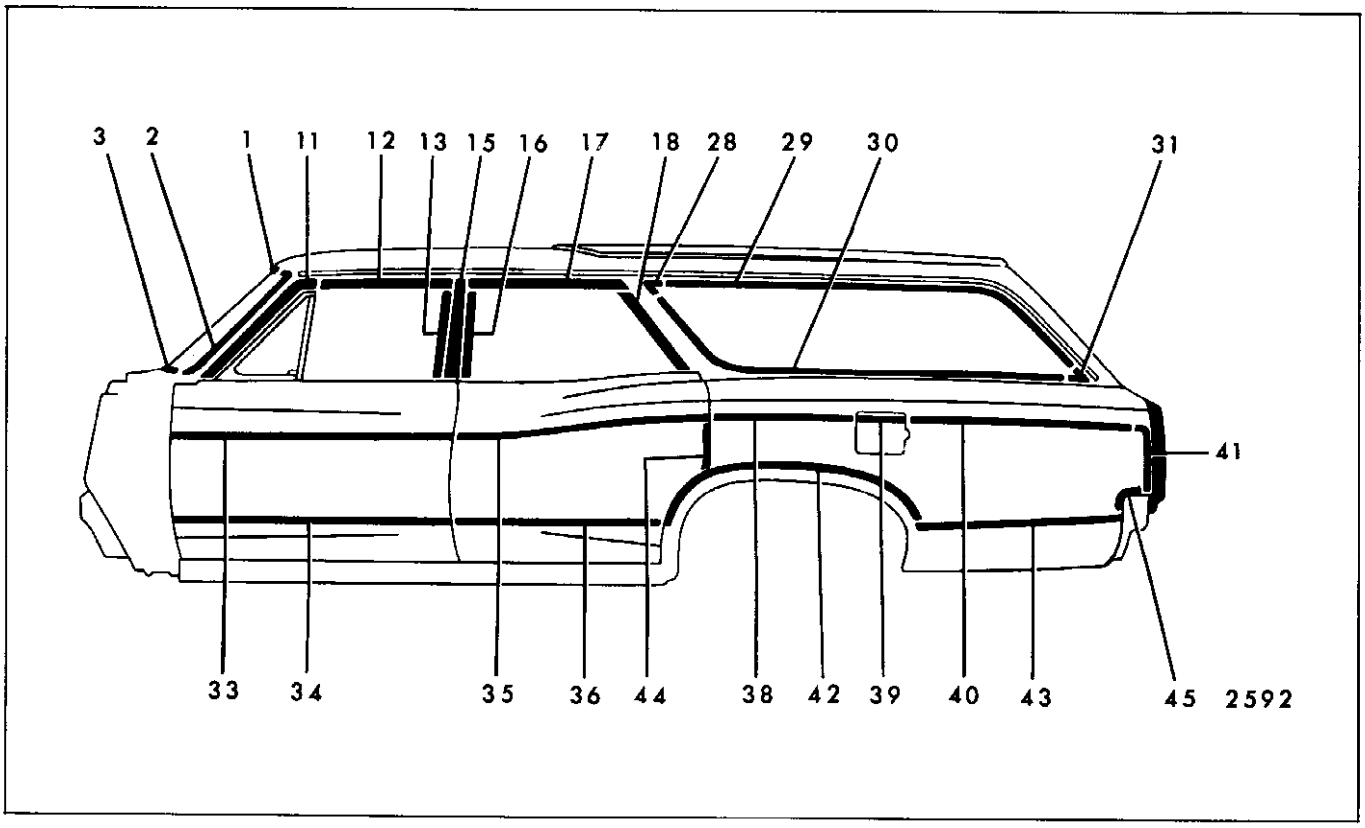


Fig. 17-45—Pontiac 23935 Style

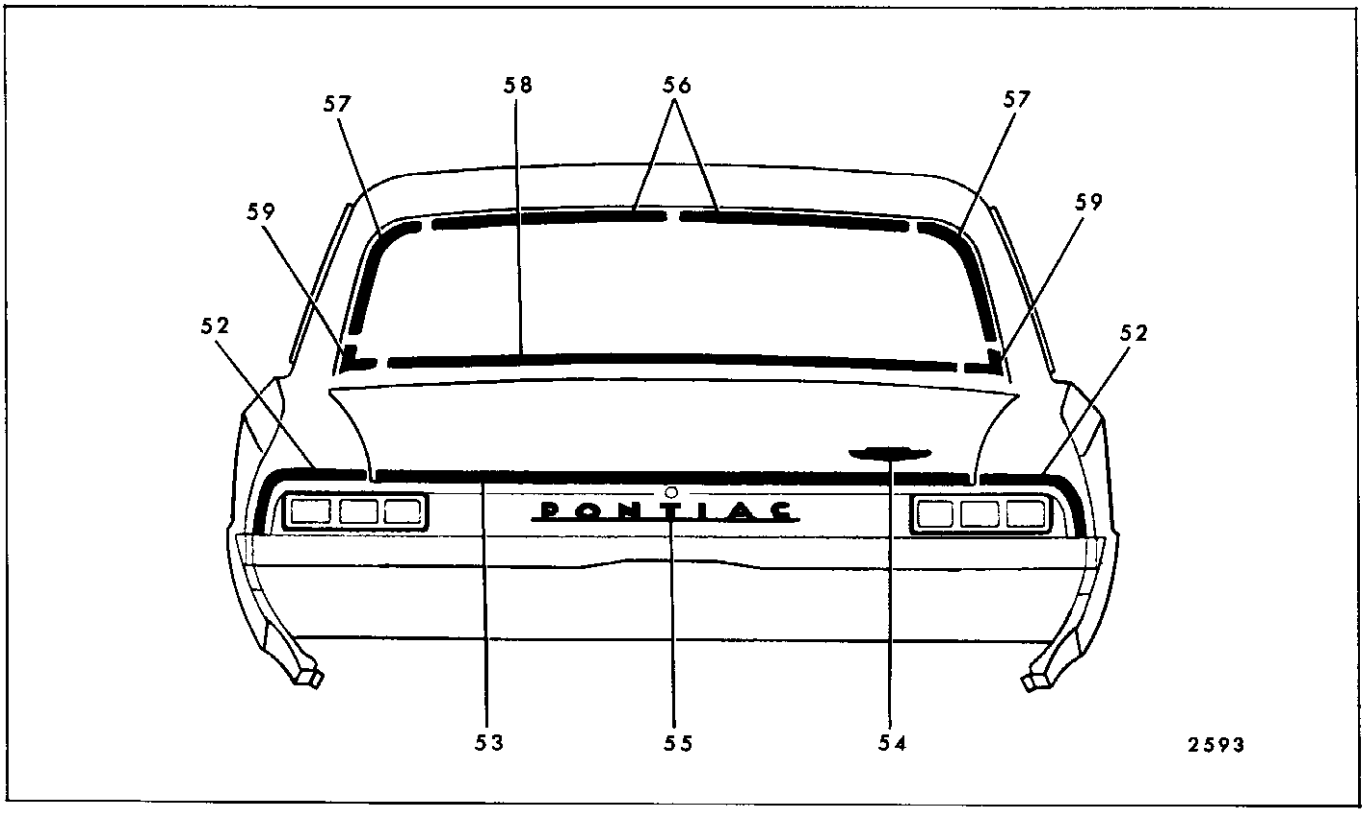


Fig. 17-46—Pontiac 23300-23500-23700 Styles (Except 35 Styles)

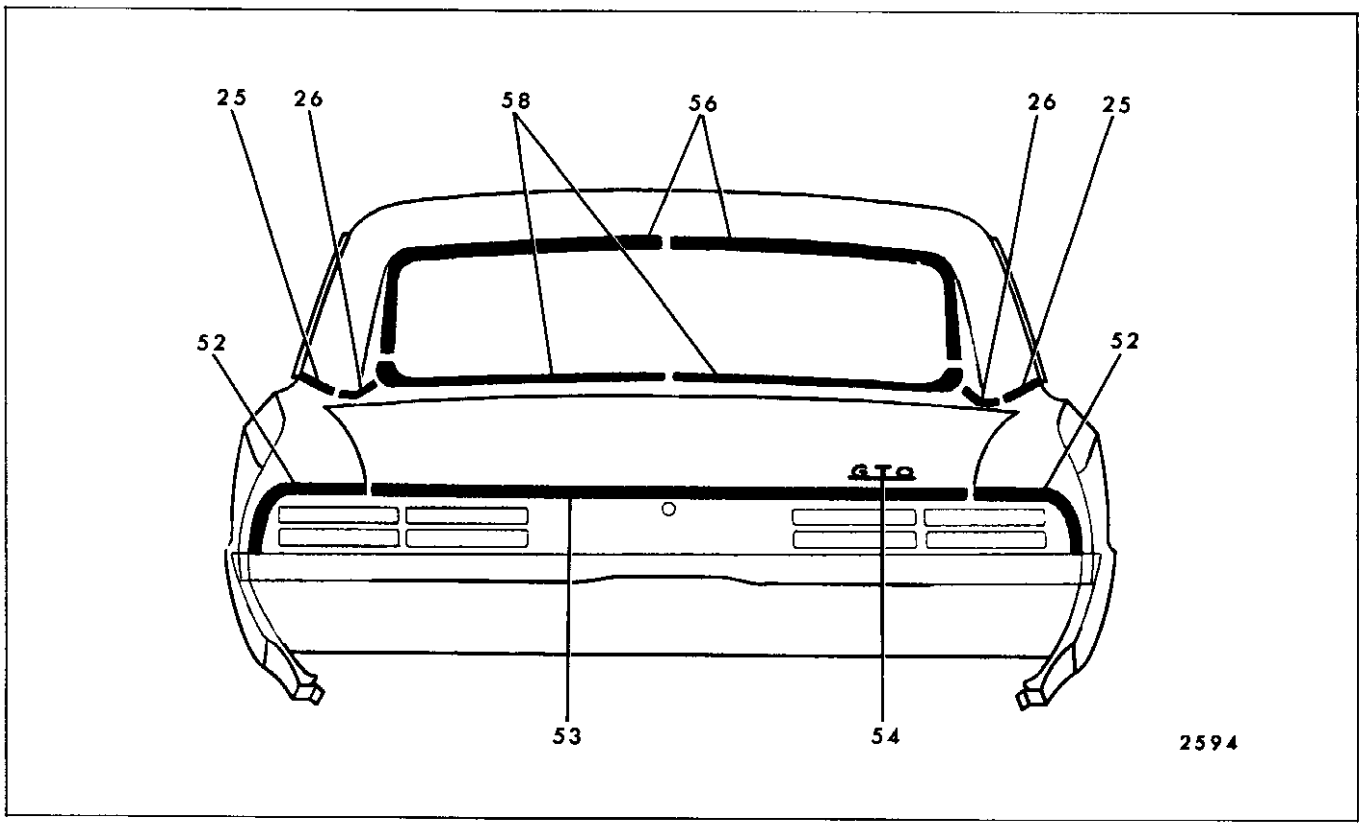


Fig. 17-47—Pontiac 24200 Styles

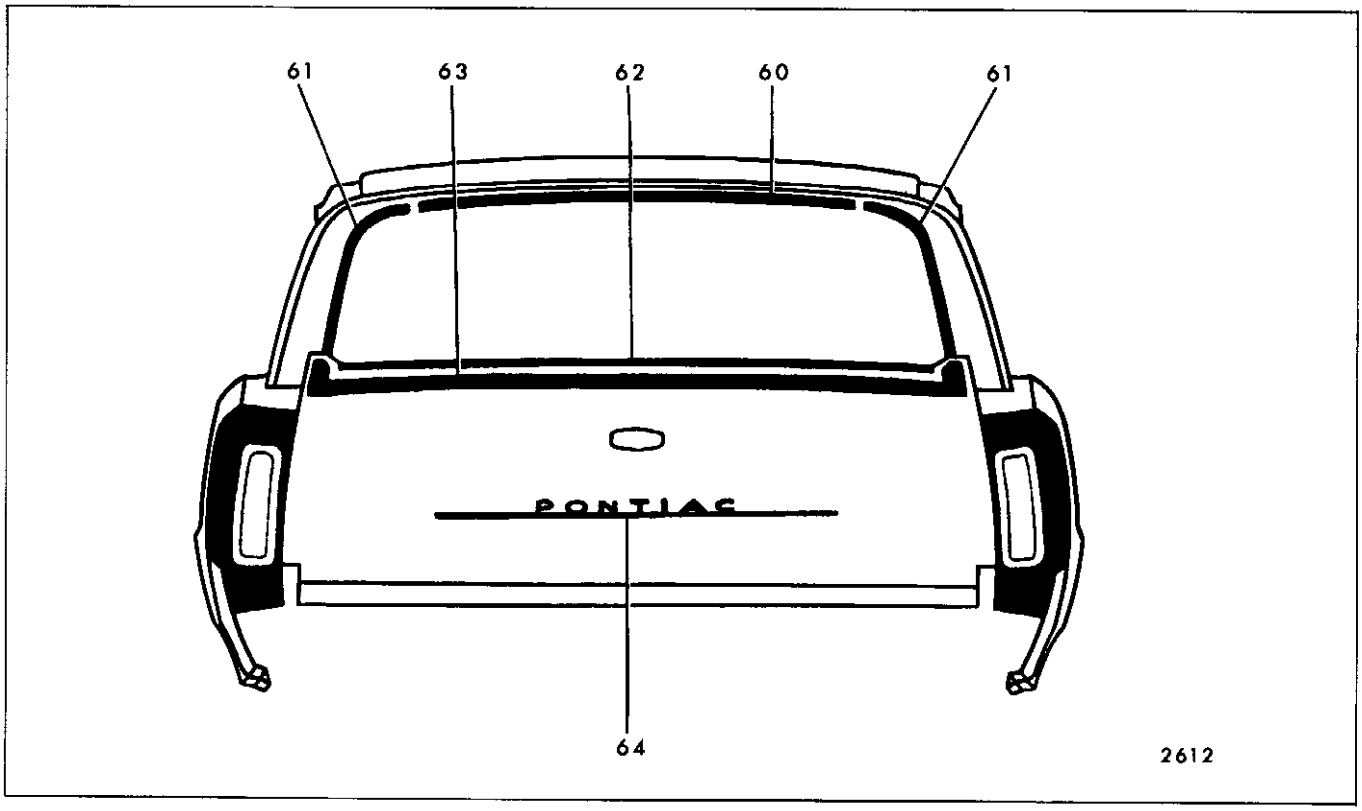


Fig. 17-48—Pontiac "A-35" Styles (Less Wood Grain)

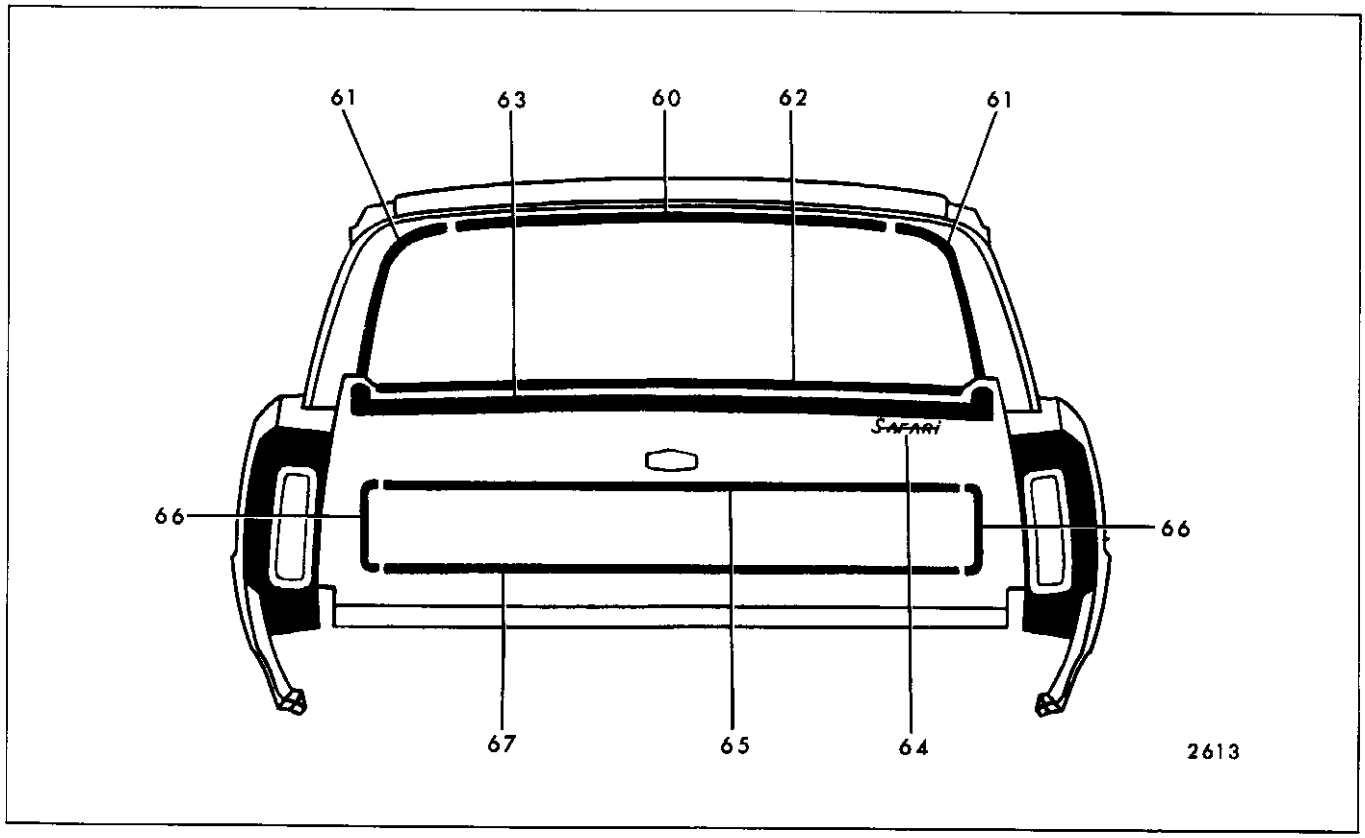


Fig. 17-49—Pontiac 23935 Styles

METHODS OF MOLDING RETENTION

PONTIAC "B" BODIES - 25000 AND 26000 SERIES
FIGURES 17-50 THROUGH 17-66

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
1	Windshield Reveal Upper	All			X			Windshield Reveal Side	
2	Windshield Reveal Side	All			X				
3	Windshield Reveal Lower	All	X						Cowl Air Intake Grille
4	Windshield Pillar Drip	All (Except 67)	X						Windshield Pillar Weatherstrip and Weatherstrip Retainer
5	Windshield Pillar Finishing	67	X					Windshield Side Reveal	Windshield Pillar Weatherstrip and Weatherstrip Retainer
6	Windshield Header	67	X					Windshield Reveal Upper and Sides Windshield Pillar Finishing	Rear View Mirror Support Sunshade Support
7	Roof Drip Molding Scalp	39,69,87		X				Windshield Pillar Drip	
8	Roof Drip Molding Scalp Front	35,45,57		X				Windshield Pillar Drip	
9	Roof Drip Molding Scalp Rear	35,45,57		X				Roof Drip Molding Scalp Front	
10	Roof Panel Name Plate	26239-87					X		Headlining Rear Quarter Trim
11	Front Door Window Frame Front Scalp	11,35,45,69		X					
12	Front Door Window Frame Upper Scalp	11,35,45,69		X				Front Door Window Frame Front Scalp	
13	Front Door Window Frame Rear Scalp	11,35,45,69		X				Front Door Window Frame Upper Scalp	
14	Front Door Window Belt Reveal (at Vent)	All (Except 26657)	X						Front Door Vent Assembly

METHODS OF MOLDING RETENTION

PONTIAC "B" BODIES - 25000 AND 26000 SERIES
FIGURES 17-50 THROUGH 17-66

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
15	Front Door Window Belt Reveal	26600	X					Front Door Window Belt Reveal (at Vent) (67 Style Only)	Rubber Bumper on Door Glass Lower Stop
16	Rear Door Window Frame Front Scalp	35,45,69		X				Rear Door Window Frame Upper Scalp	
17	Rear Door Window Frame Upper Scalp	35,45,69		X				Rear Door Window Frame Rear Scalp	
18	Rear Door Window Frame Rear Scalp	35,45		X					
19	Rear Quarter Window Reveal Upper	11	X						
20	Rear Quarter Window Reveal Front	11			X			Rear Quarter Window Reveal Upper	
21	Rear Quarter Window Belt Reveal	26600	X						Rear Quarter Window Glass Lower Stop
22	Rear Quarter Belt Reveal Front	57,87			X		X	Rear End Belt Reveal	
23	Rear End Belt Reveal	57,87			X		X		
24	Rear Quarter Belt Reveal	11,39,69			X	X			
25	Rear Quarter Pinch-weld Finishing Molding	67	X		X				
26	Rear Quarter Window Reveal Upper	35,45			X			Rear Quarter Window Reveal Lower	
27	Rear Quarter Window Reveal Lower	35,45			X			Rear Quarter Window Reveal Lower Escutcheon	
28	Rear Quarter Window Reveal Lower Escutcheon	35,45			X			Loosen Rear Quarter Window Reveal Upper and Lower	
29	Front Door Outer Panel	All (Except 25635-45)	X		X				

METHODS OF MOLDING RETENTION

PONTIAC "B" BODIES - 25000 AND 26000 SERIES
FIGURES 17-50 THROUGH 17-66

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
30	Rear Door Outer Panel	All (Except 25635-45)	X		X				
31	Rear Quarter Outer Panel	25200 25600 (Except 25635-45)				X	X		
32	Front of Rear Wheel Opening	26200	X		X				
33	Rear of Rear Wheel Opening	25635-45 26200 26600	X		X				
34	Rear of Rear Quarter Outer Panel	All (Except 35,45)	X				X		
		26245				X			
35	Rear Compartment Lid Outer Panel Emblem and/or Name Plate	All					X		
36	Rear End Panel Name Plate	All					X		
37	Rear Quarter Outer Panel Emblem and/or Name Plate	All					X		Quarter Trim on 26245 Styles
38	Front Door Outer Panel Transfer Finishing Upper	25635-45	X			X		Front Door Outer Panel Upper Insert	
39	Front Door Outer Panel Upper Insert	25635-45	X		X				
40	Front Door Outer Panel Transfer Finishing Lower	25635-45	X						
41	Rear Door Outer Panel Transfer Finishing Upper	25635-45	X			X		Rear Door Outer Panel Upper Insert	
42	Rear Door Outer Panel Upper Insert	25635-45	X		X				
43	Rear Door Outer Panel Transfer Finishing Lower	25635-45	X						

METHODS OF MOLDING RETENTION

PONTIAC "B" BODIES - 25000 AND 26000 SERIES
FIGURES 17-50 THROUGH 17-66

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
44	Rear Quarter Outer Panel Transfer Finishing	25635-45	X			X		Rear Quarter Outer Panel Insert	
45	Rear Quarter Outer Panel Insert	25635-45			X				
46	Rear Quarter Outer Panel Transfer Finishing Front	25635-45	X						
47	Rear Quarter Outer Panel Transfer Finishing Rear	25635-45	X						Loosen Rear Bumper
48	Back Window Reveal Upper	All (Except 35,45,67)			X			Back Window Reveal Side	
49	Back Window Reveal Side	All (Except 35,45,67)			X			Back Window Reveal Lower	
50	Back Window Reveal Lower	All (Except 35,45,67)			X			Back Window Reveal Side	
51	Back Body Opening Reveal Upper	35,45	X					Back Body Opening Reveal Side	Tailgate Glass Run Channel
52	Back Body Opening Reveal Side	35,45	X					Back Body Opening Reveal Upper	
53	Tailgate Window Reveal	35,45	X			X			
54	Tailgate Outer Panel Belt Reveal (Optional)	35,45	X			X			
55	Tailgate Outer Panel Emblem and/or Name Plate	35,45					X		Tailgate Trim Assembly
56	Tailgate Outer Panel Lower	25235-45	X				X		Tailgate Trim Assembly
		25635-45	X						
		26245	X			X			
57	Back Body Pillar Belt Reveal (Optional)	35,45	X			X			

METHODS OF MOLDING RETENTION

PONTIAC "B" BODIES - 25000 AND 26000 SERIES
FIGURES 17-50 THROUGH 17-66

Key	Molding Name	Series or Styles	Screws	Spring (Self-Retained)	Snap-On Clips or Retainers On Panel	Snap-On Clips On Molding	Studs With Attaching Nuts	Engages With Other Moldings	Remove Hardware Or Trim
58	Tailgate Outer Panel Transfer Finishing	25635-45	X			X		Tailgate Outer Panel Insert	
59	Tailgate Outer Panel Insert	25635-45			X				
60	Rear End Panel Lower	25600					X	Rear End Panel Lower Molding Escutcheon	
61	Rear End Panel Upper	25200,25600					X		
62	Rear End Panel	26200					X		
		26600					X	Rear of Rear Quarter Outer Panel	
63	Rear End Panel Lower Molding Escutcheon	25600		X					

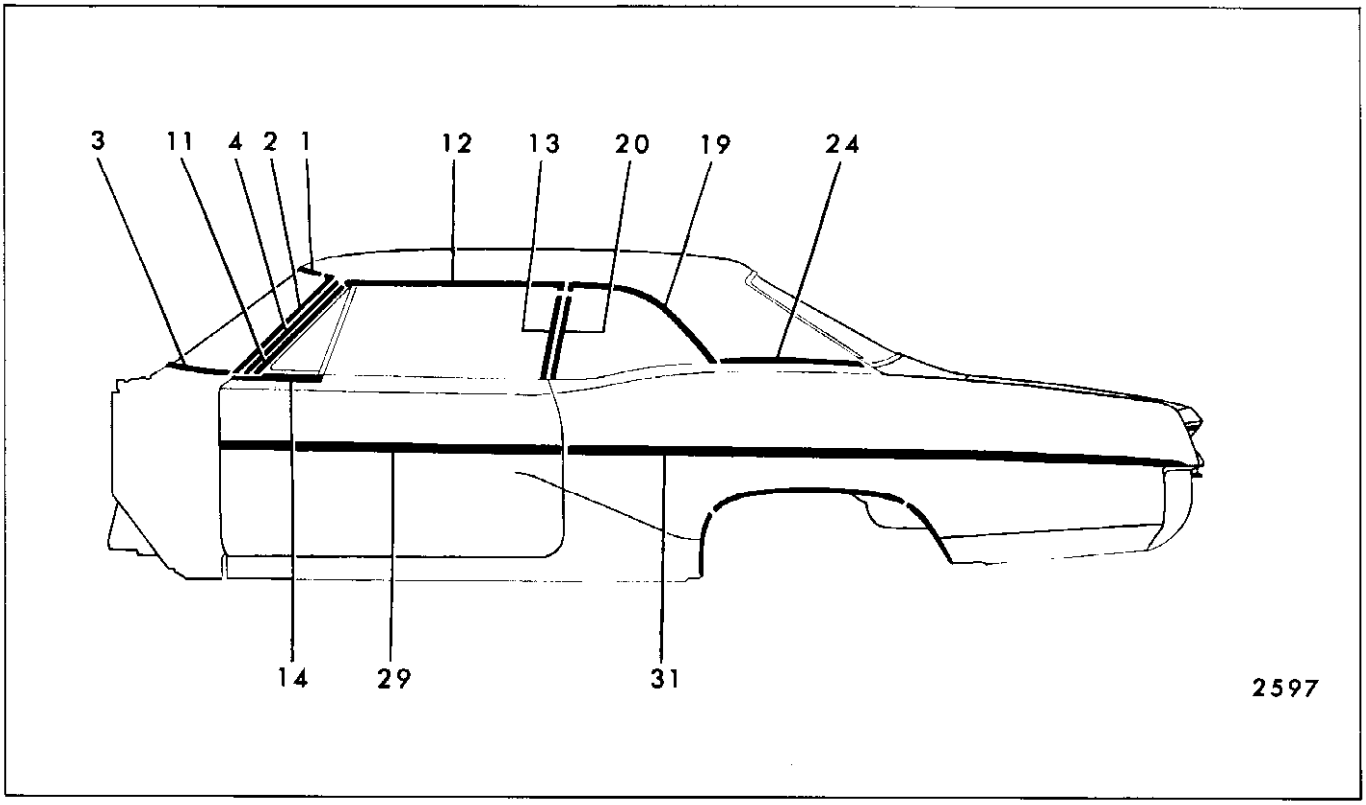


Fig. 17-50—Pontiac "B-11" Styles

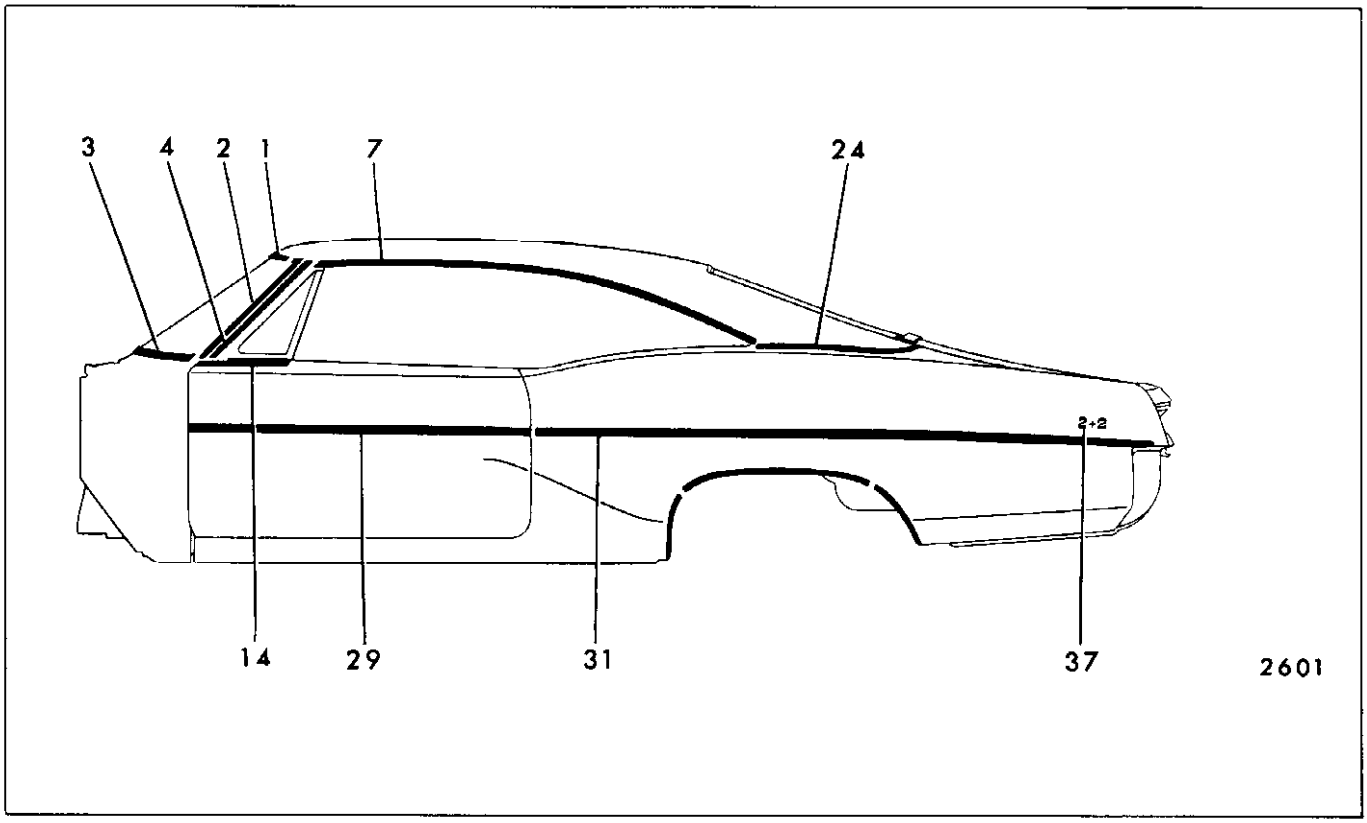


Fig. 17-51—Pontiac 25287-25687 Styles

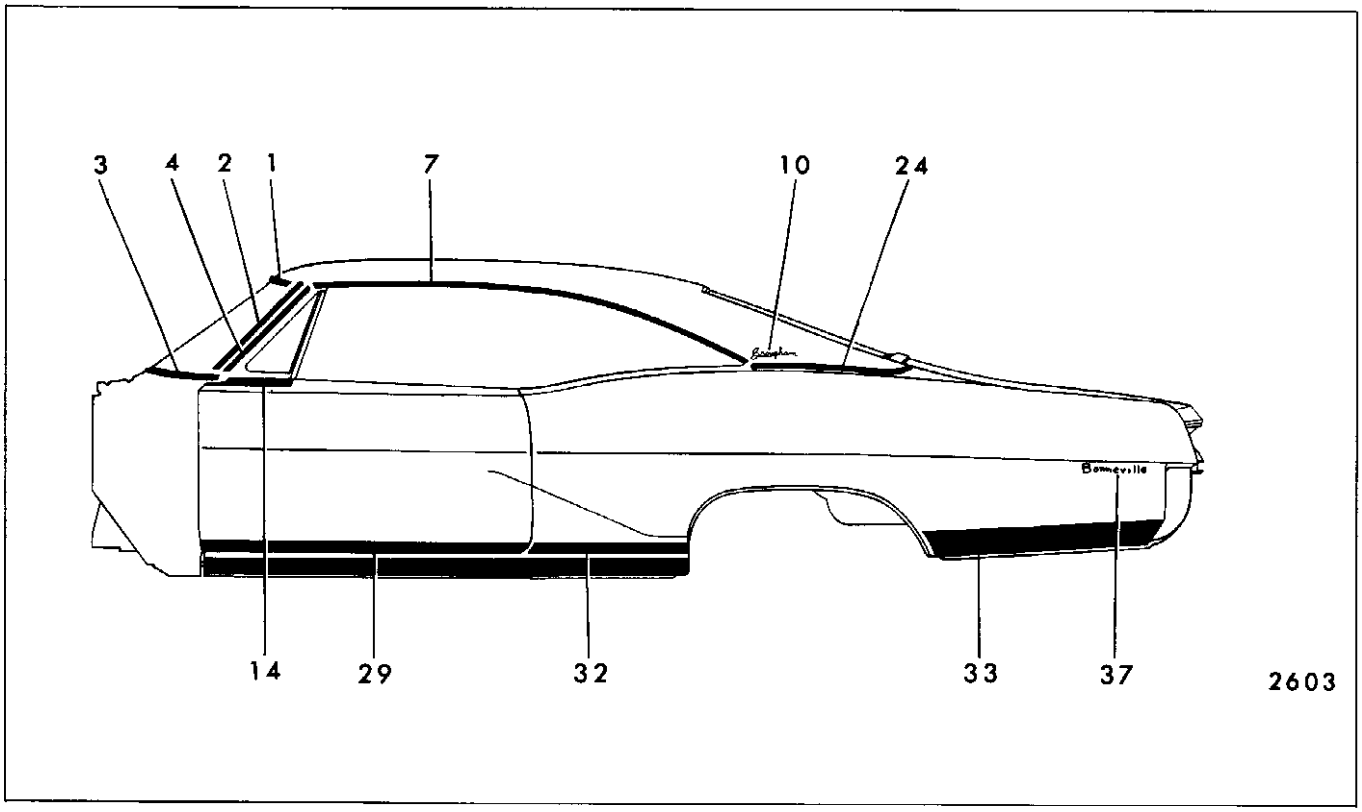


Fig. 17-52—Pontiac 26287 Styles

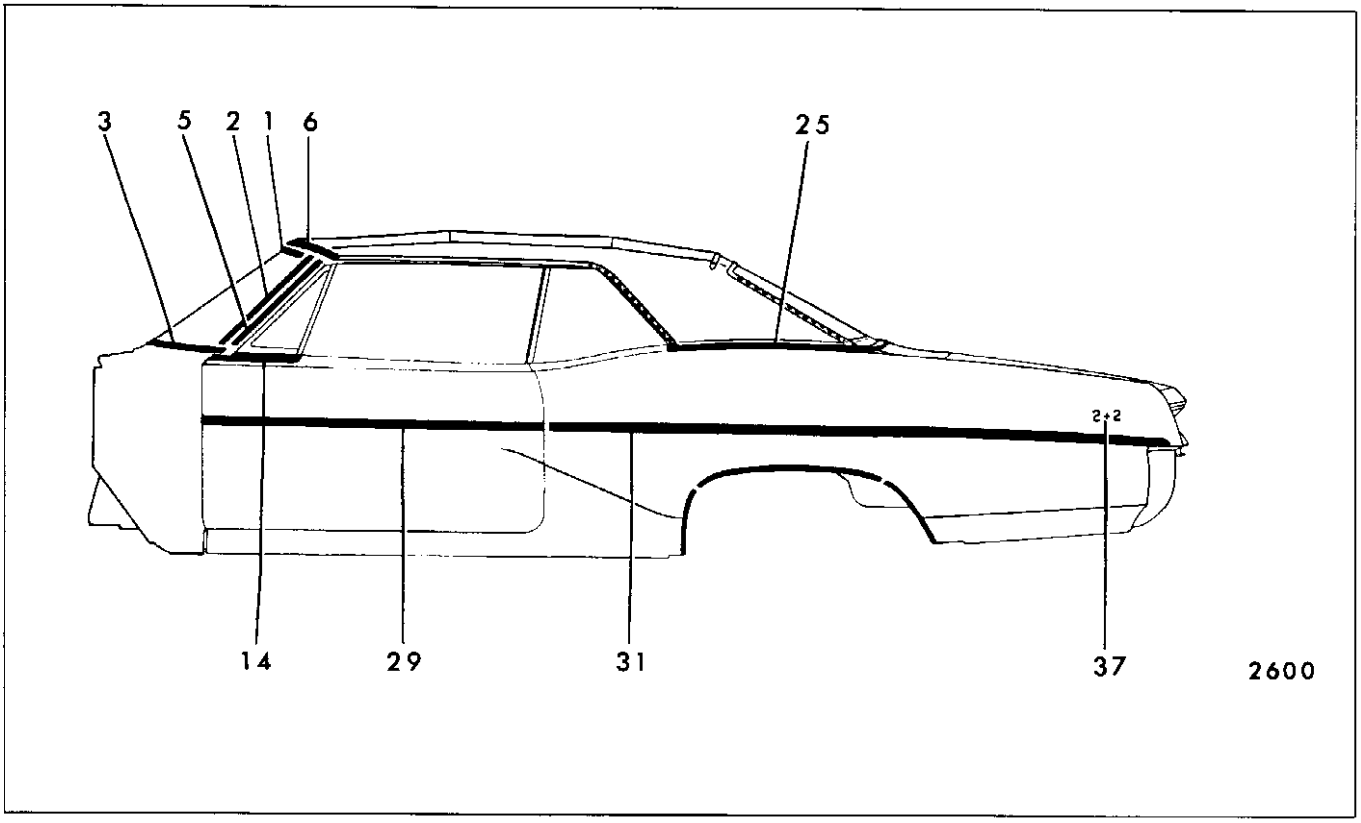


Fig. 17-53—Pontiac 25267 Styles

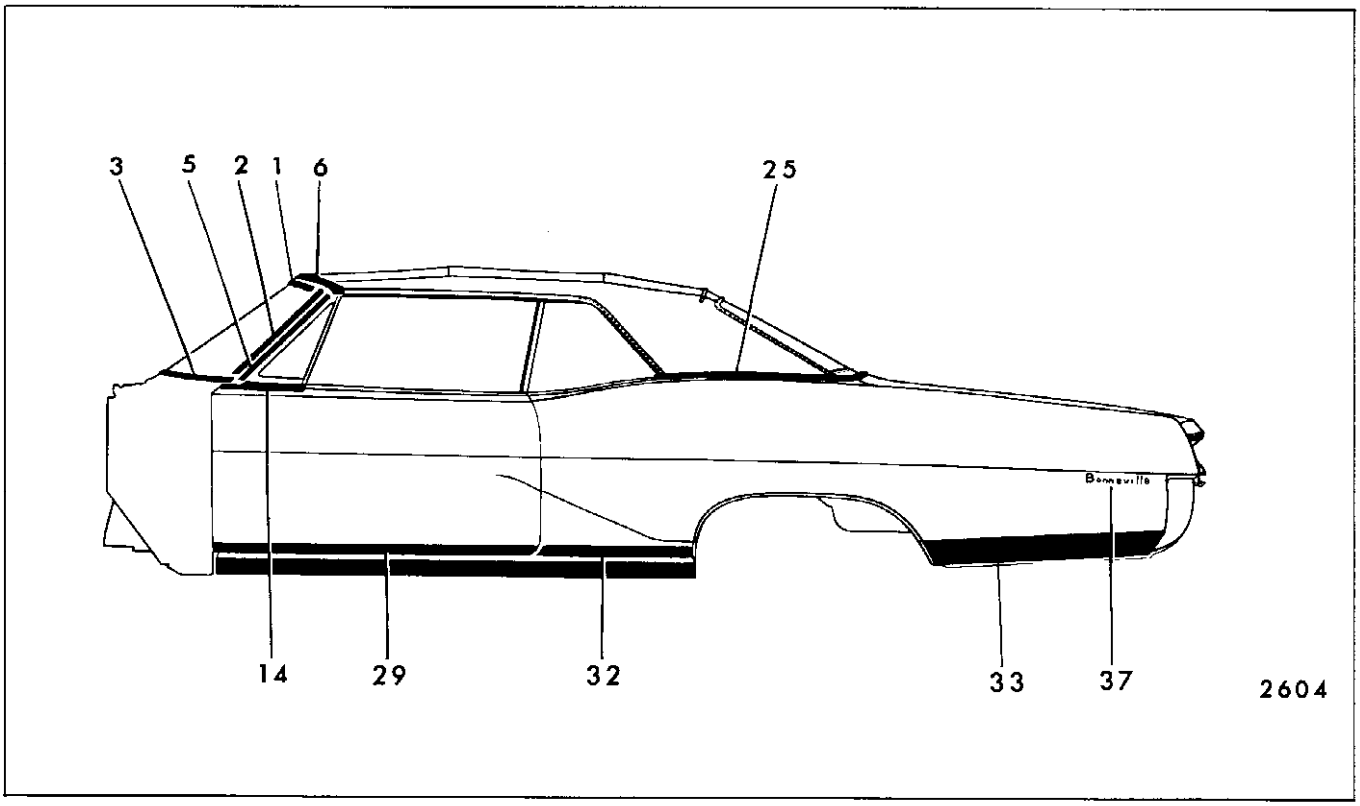


Fig. 17-54—Pontiac 26267 Styles

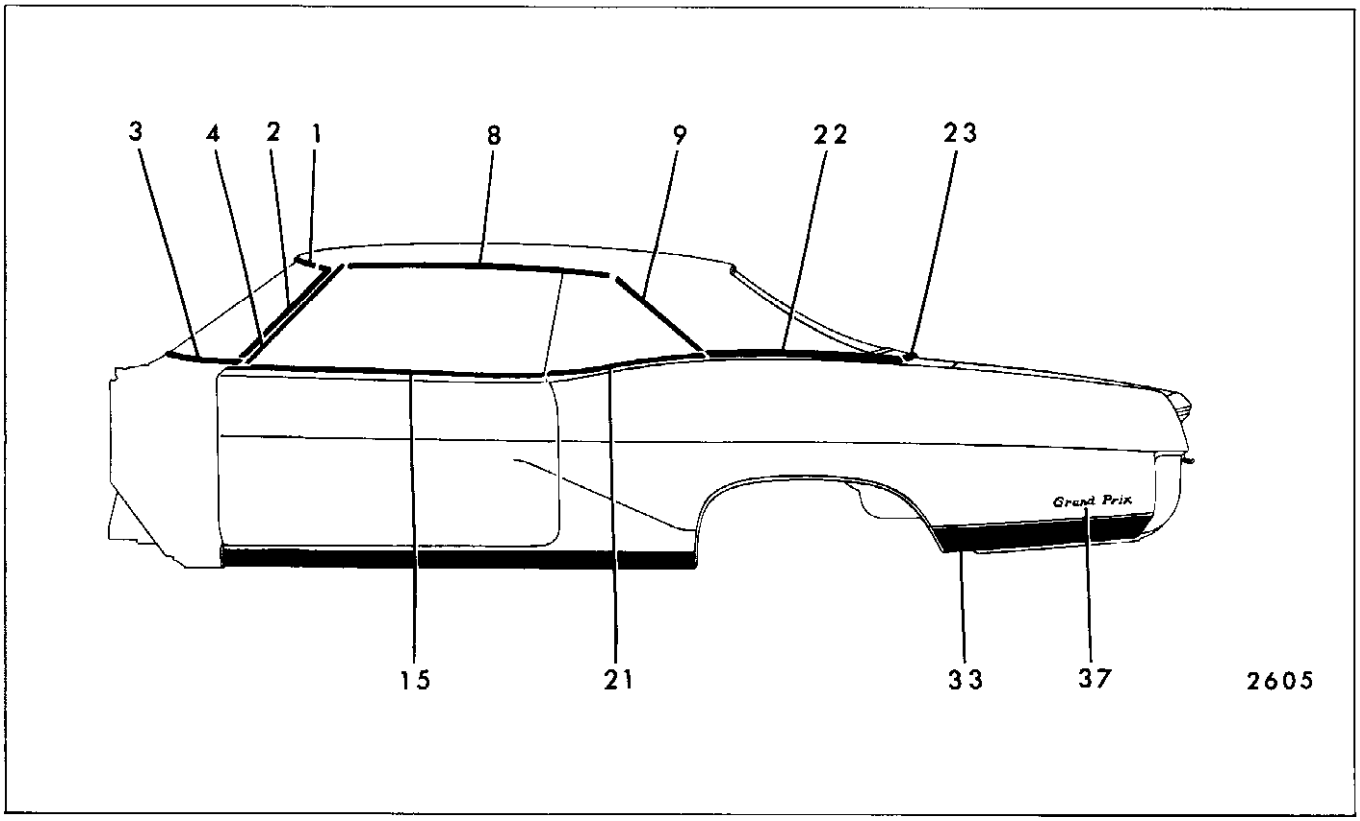


Fig. 17-55—Pontiac 26657 Styles

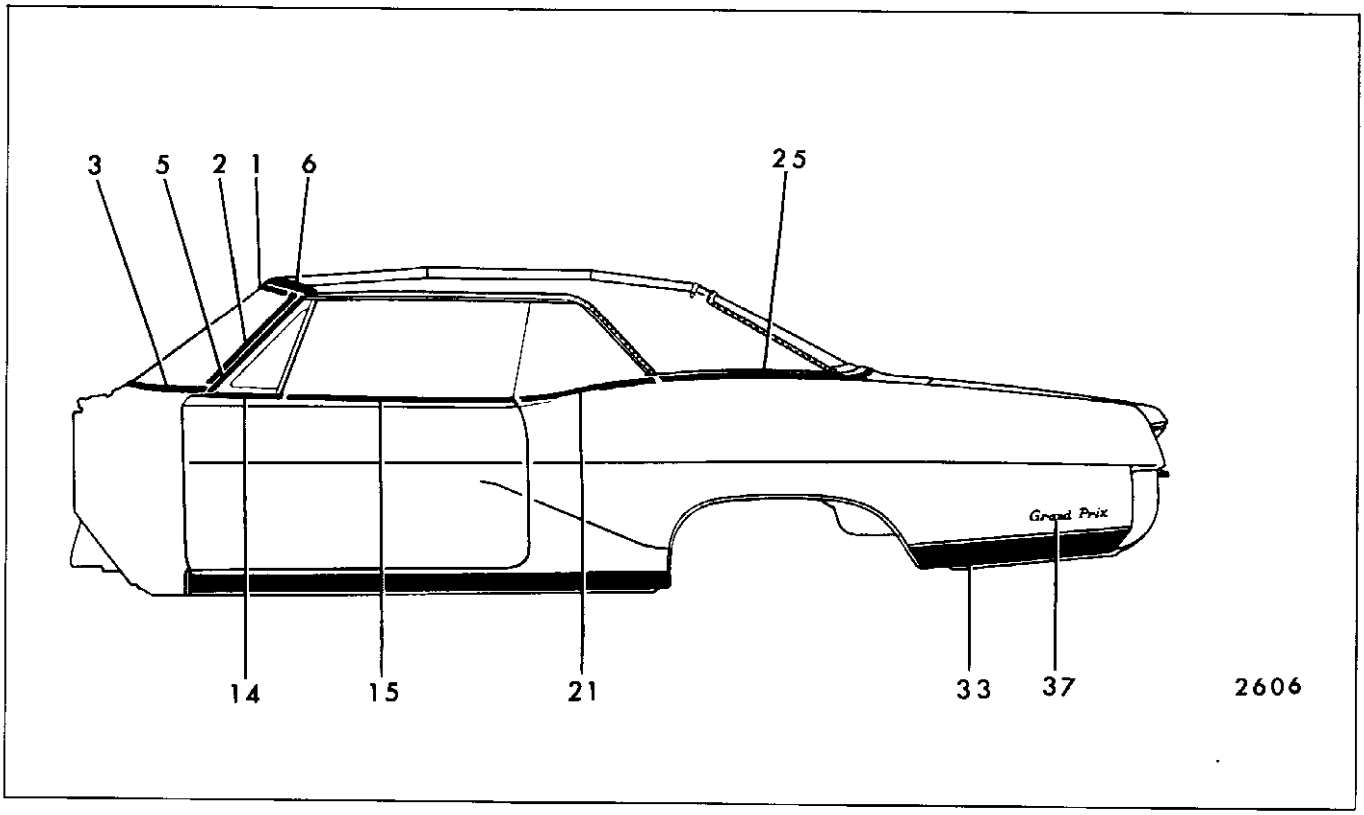


Fig. 17-56—Pontiac 26667 Styles

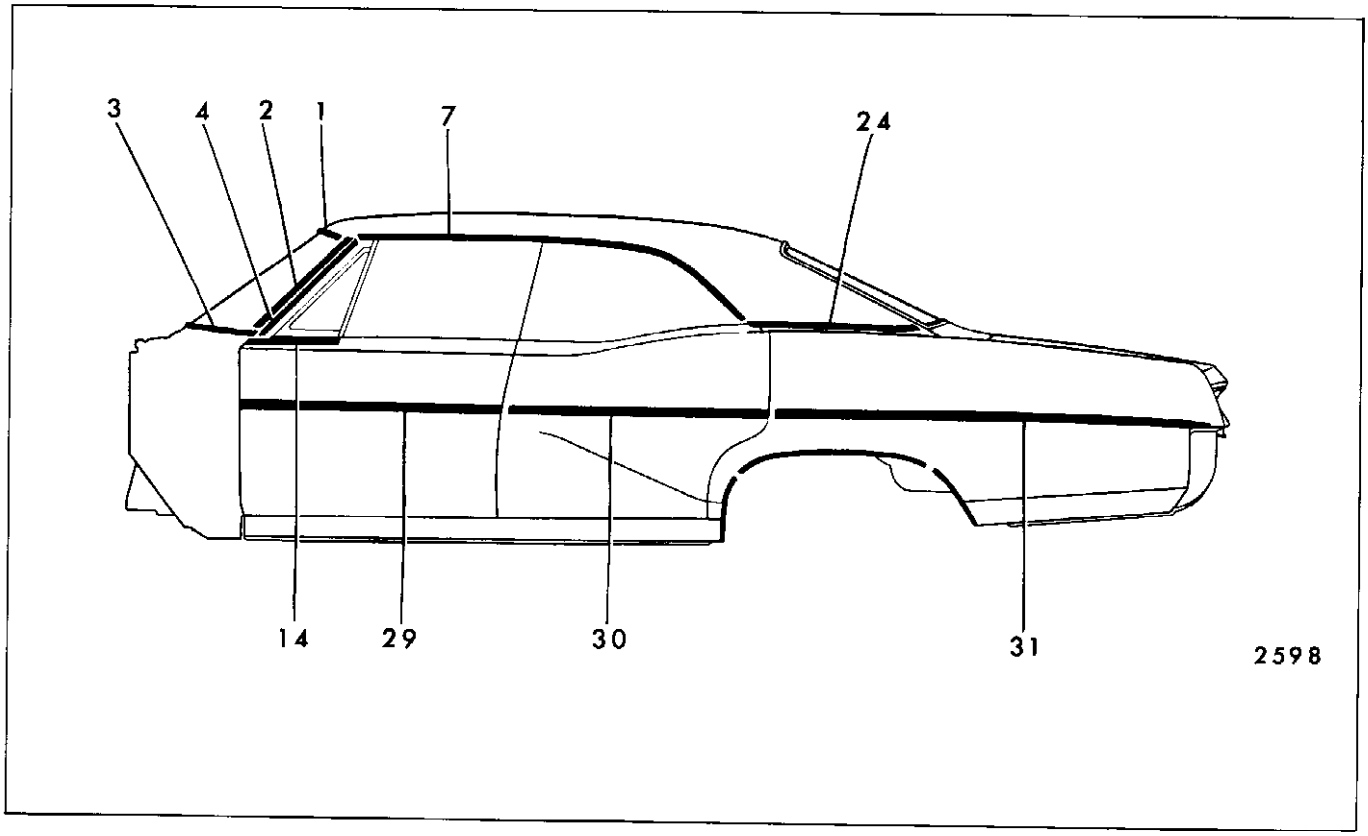


Fig. 17-57—Pontiac 25239-25639 Styles

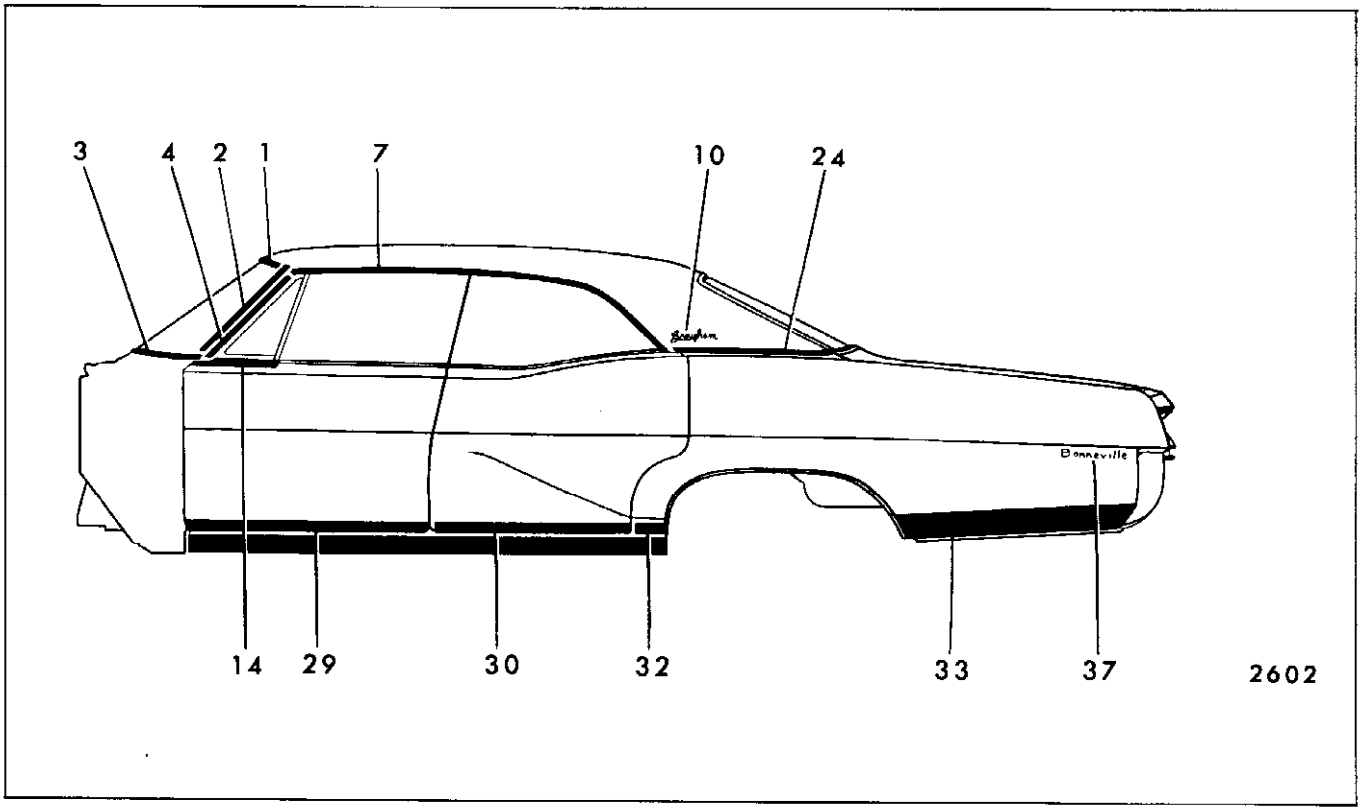


Fig. 17-58—Pontiac 26239 Styles

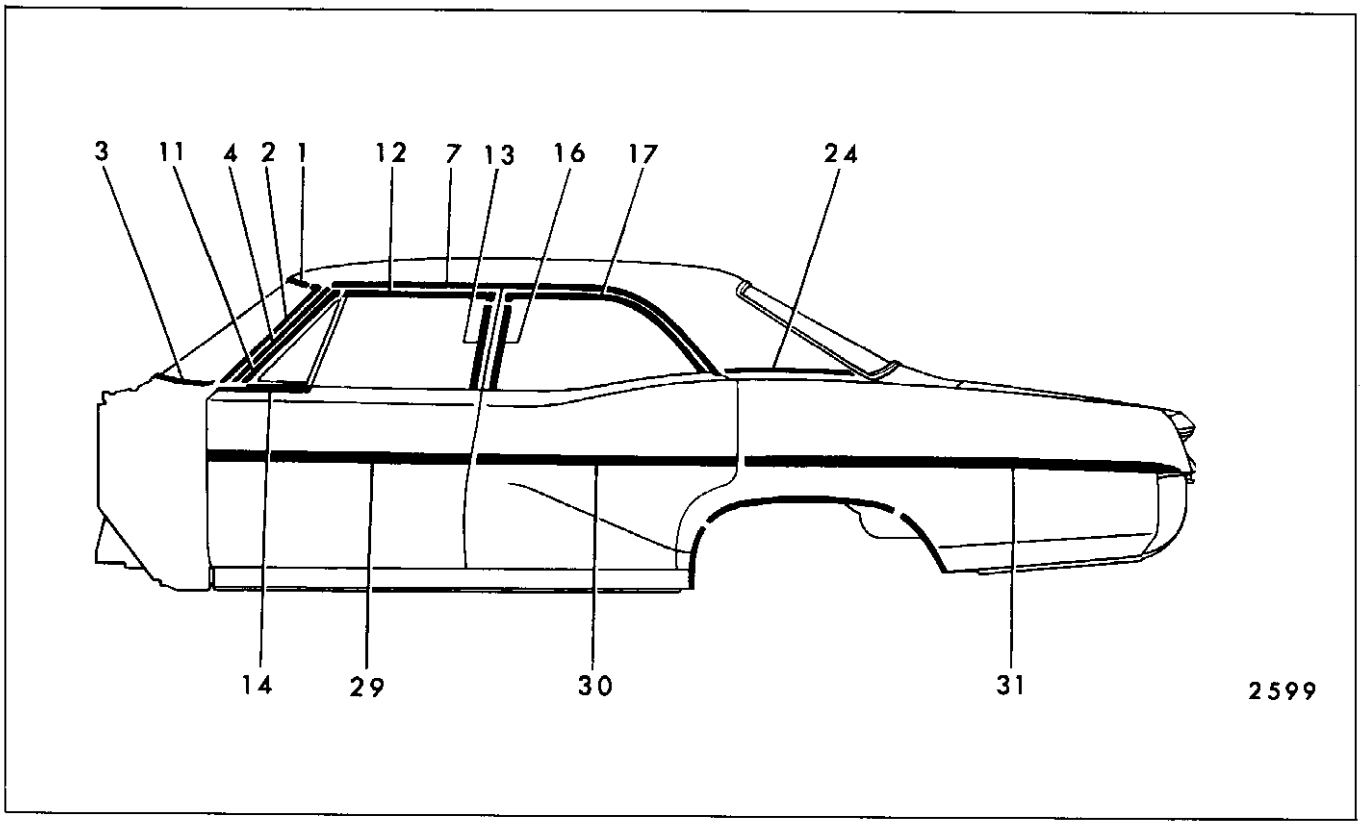


Fig. 17-59—Pontiac "B-69" Styles

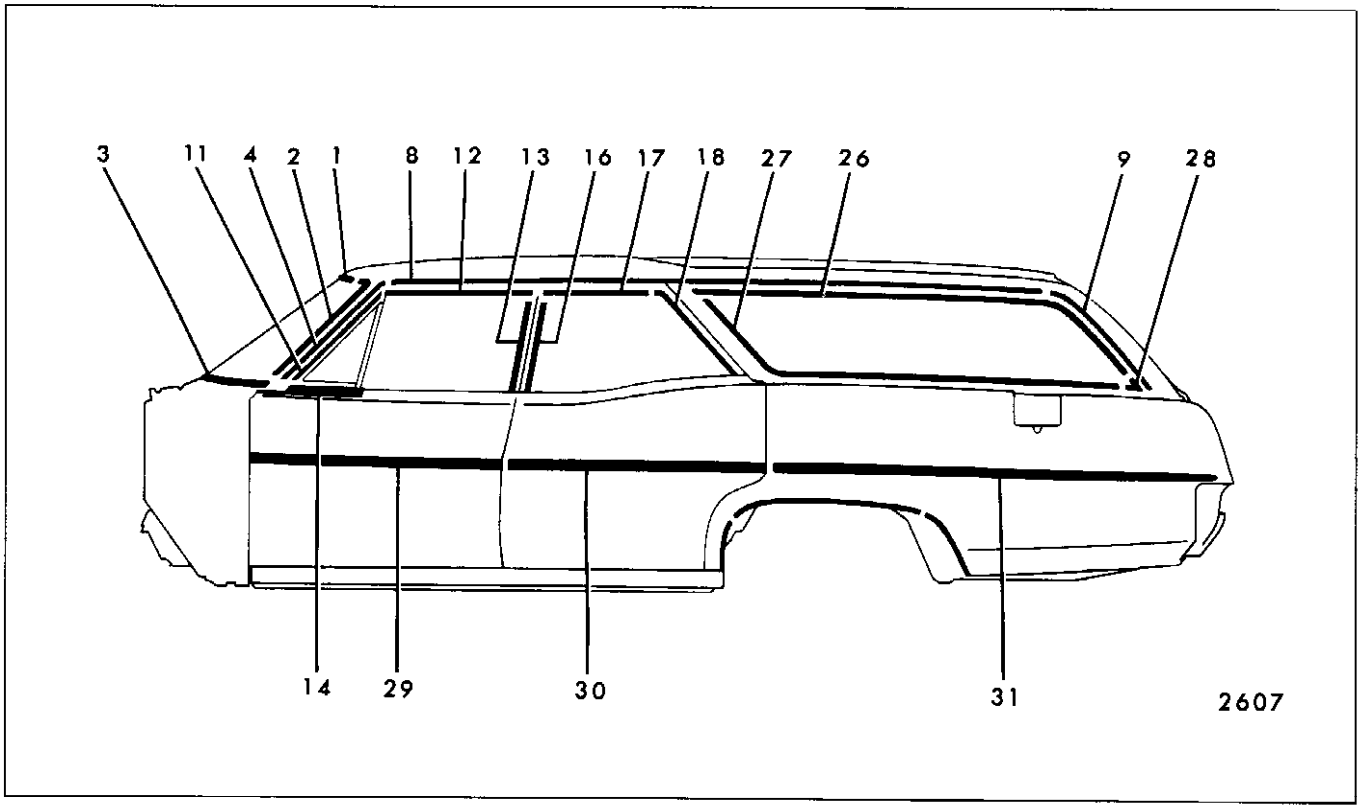


Fig. 17-60—Pontiac 25235-45 Styles

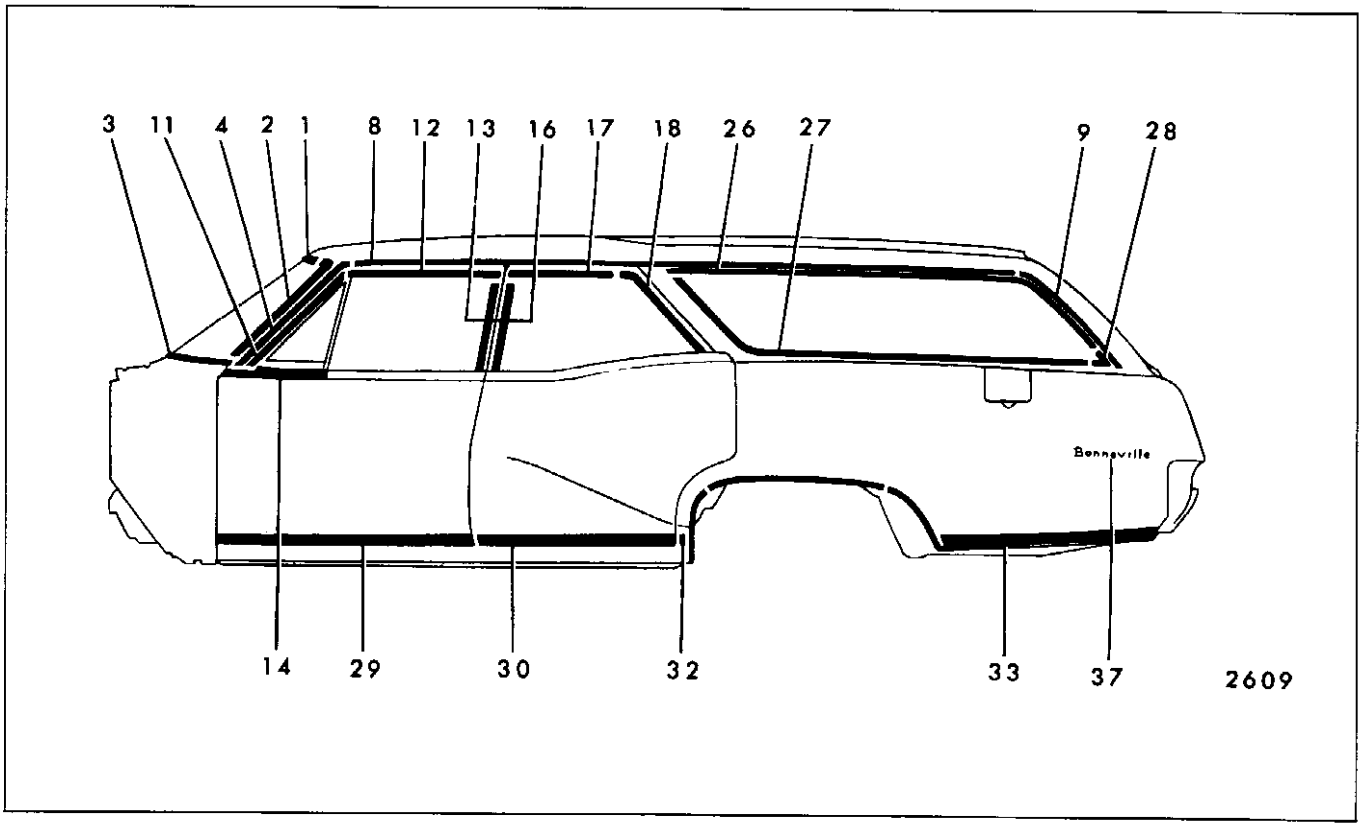


Fig. 17-61—Pontiac 26245 Styles

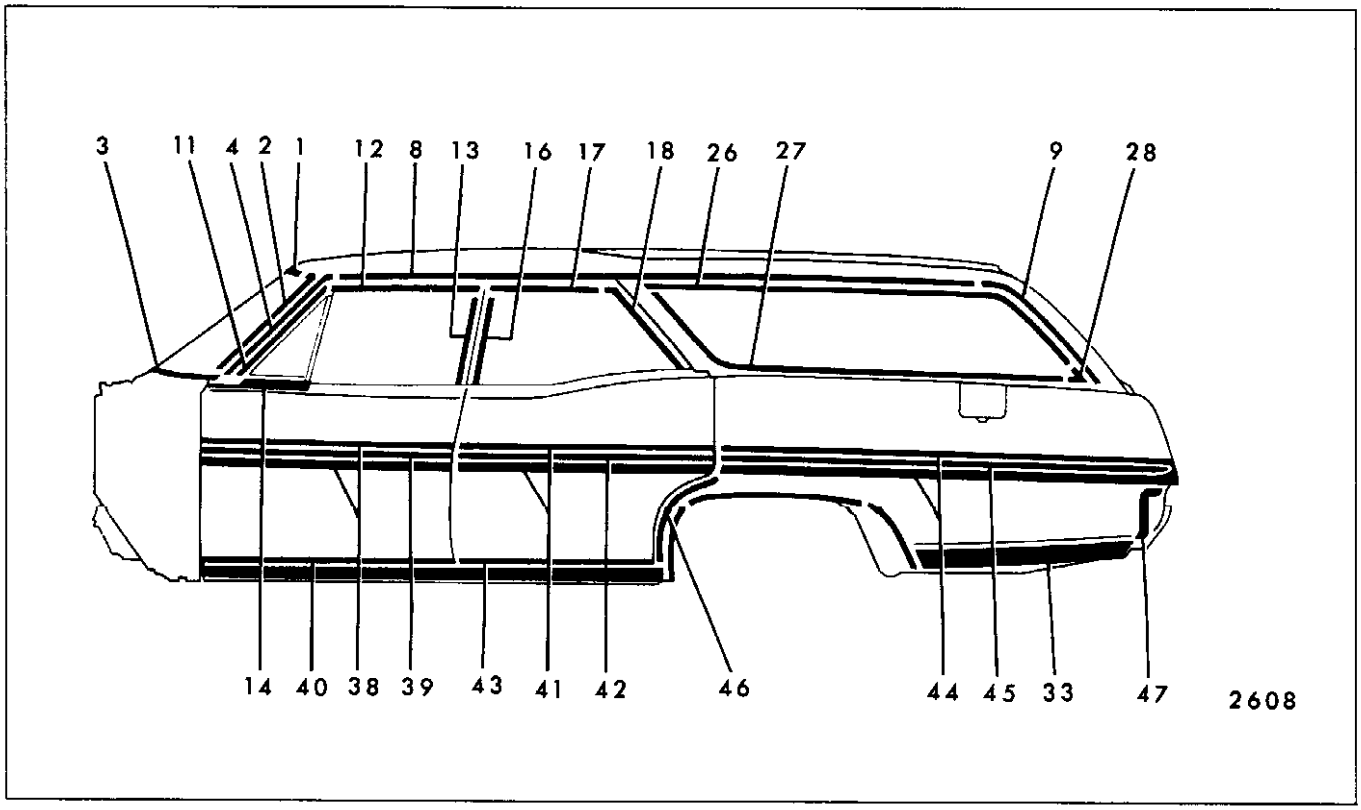


Fig. 17-62—Pontiac 25635-45 Styles

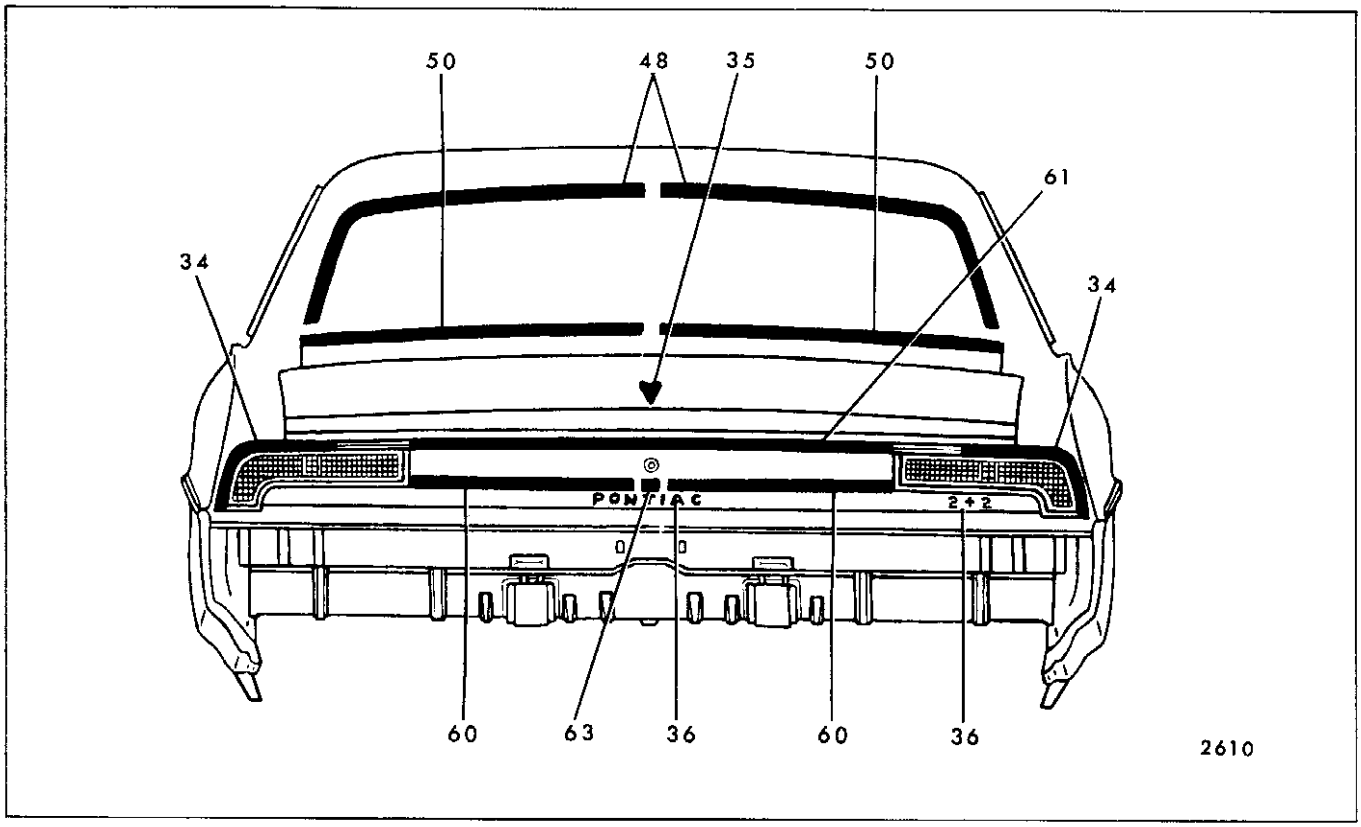


Fig. 17-63—Pontiac 25200-25600 Styles (Except 35-45 Styles)

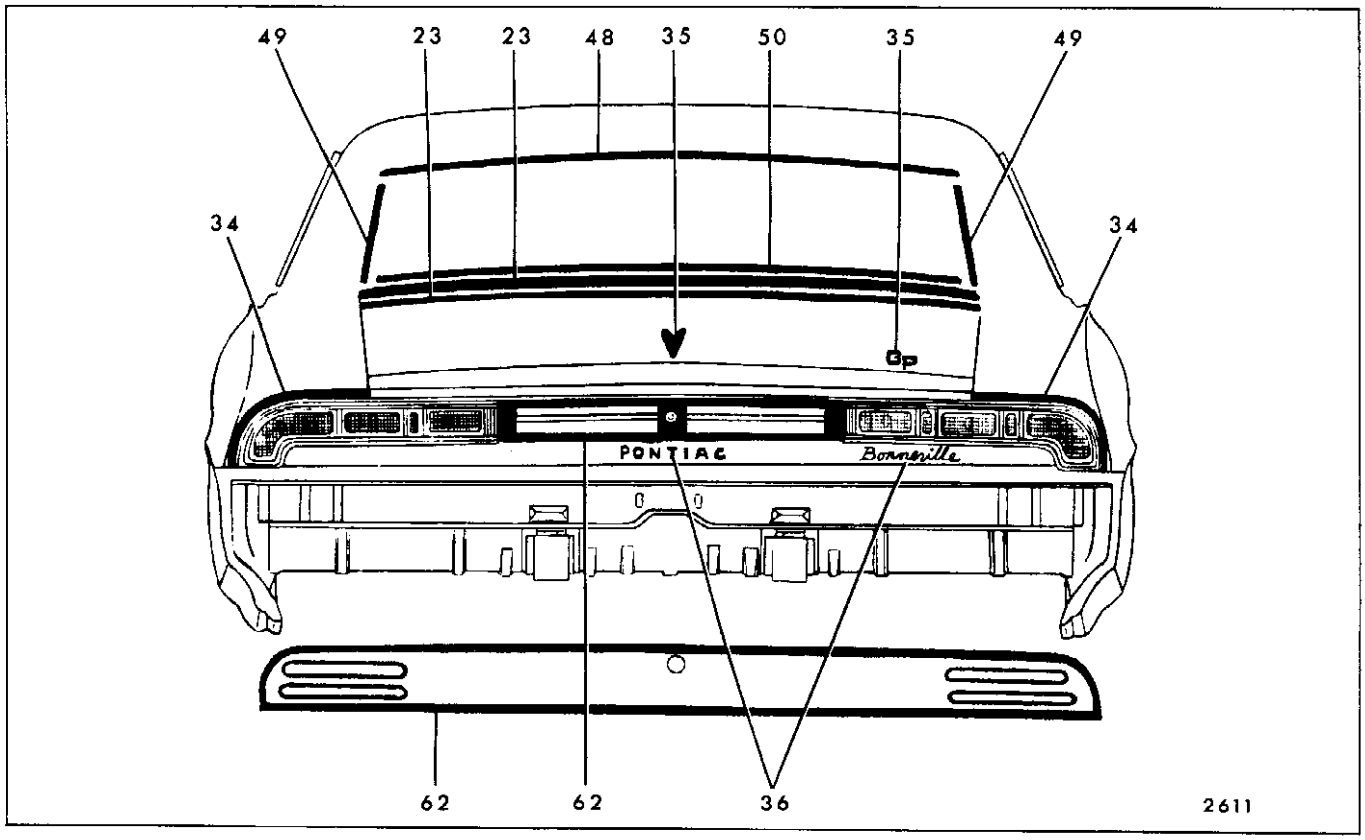


Fig. 17-64—Pontiac 26200-26600 Styles (Except 45 Styles)

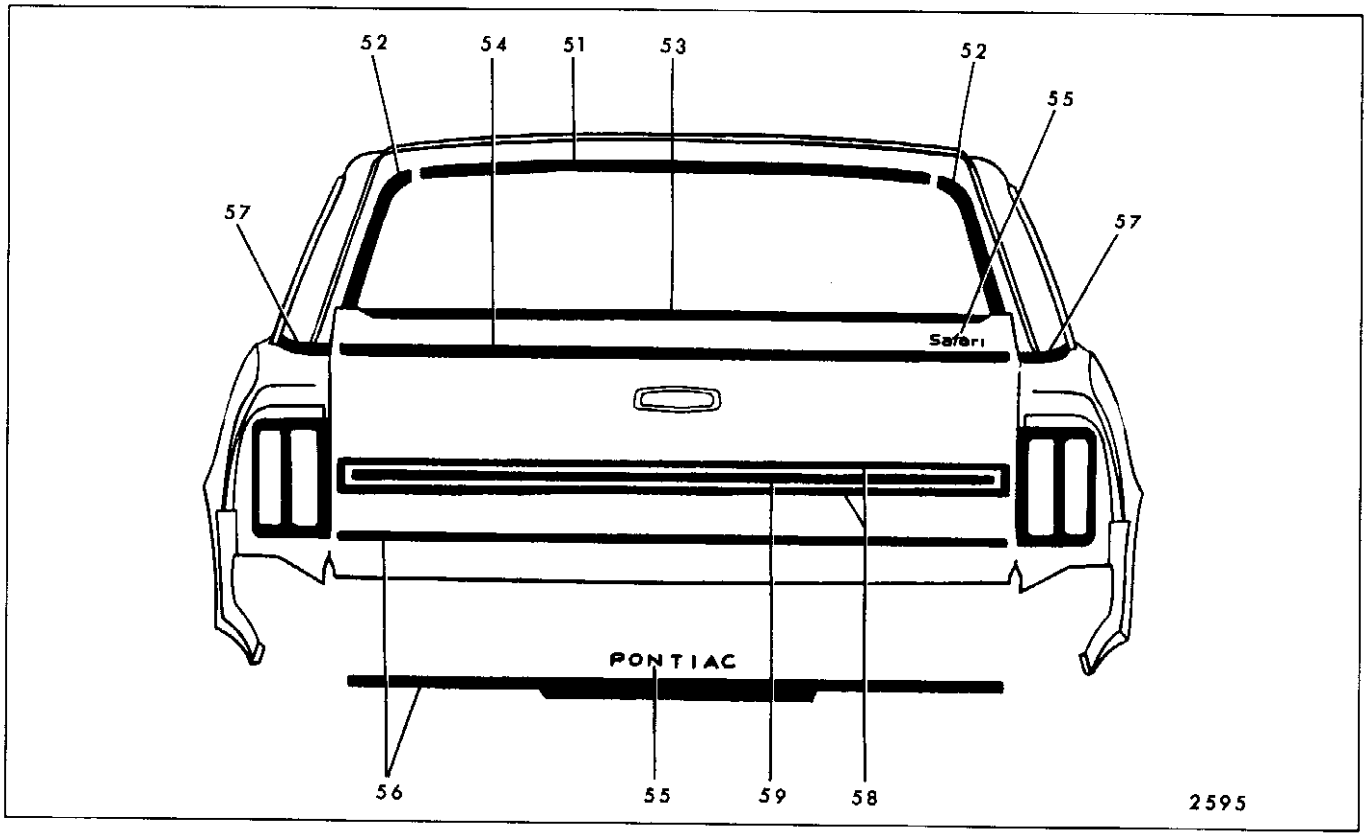


Fig. 17-65—Pontiac 25235-45-25635-45 Styles

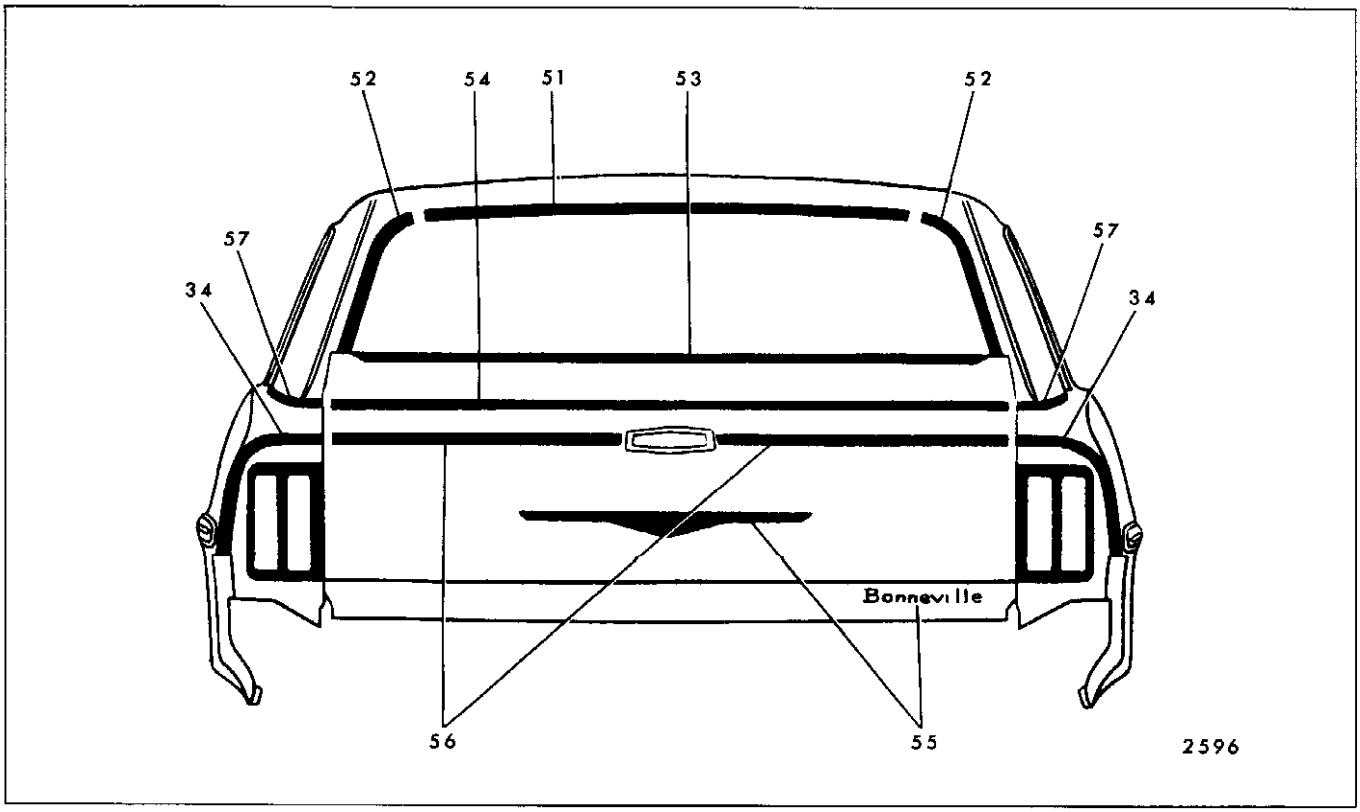


Fig. 17-66—Pontiac 26245 Styles

Subject	Page No.
A	
Access Hole Covers - Tail Gate Inner Panel	9-2
Actuator - 68069 & 68169 Styles - Rear Door Lock Vacuum	6-96
Actuator, Horizontal - Power Operated Four-Way Adjuster - Strato Front Seat	15-36
Actuator, Horizontal - Standard Front Seats - "A" Body - Four-Way	15-9
Actuator, Horizontal - Standard Front Seats - "B, C & E" Body - Four-Way	15-13
Actuator, Horizontal - Standard Front Seat - "B, C & E" Body - Six-Way	15-14
Actuator, Lock Vacuum - Front Doors	6-39
Actuator, Vacuum Door Lock - Front Doors	6-79
Adhesive Caulking	4-1
Adjuster Assembly - Manually Operated - Standard Front Seats	15-3
Adjuster Assembly - Power Operated - Standard Front Seats	15-3
Adjuster Jackscrew - Power Operated Four-Way - Front Strato Seat	15-36
Adjuster, Manually Operated Bucket Seat - Front Strato	15-31
Adjuster Mechanism Lubrication - Front Seat	2-6
Anchorage (Closed Styles), Roof - Shoulder Straps	15-59
Anchorage, Floor - Shoulder Straps	15-60
Anchorage, Quarter (Convertibles) - Shoulder Straps	15-60
Arm Rest - Rear Quarter	14-10
Arm Rests - Door	14-2
Arm Rest and Curtain - Notch Down and Strato Seat Back - Standard Front Seat	15-21
Arm Rest and Curtain - Standard Full Width Seat Back - Standard Front Seat	15-21
Arm Rest (Center) and Curtain, Rear Seat Back	15-39
Arm Rest and Support - Standard Full Width Seat Back - Standard Front Seat	15-21
Arm Rest Assembly - Notch Down and Strato Seat Back - Standard Front Seat	15-22
Arm Rest, Center - Standard Front Seat	15-21
Arm Rest Hanger Plate (Center) and Linkage, Rear Seat Back	15-39
Arm Rest Support - Notch Down and Strato Seat Back - Standard Front Seat	15-22
Auxiliary Sealing Strip - Front and Rear Door Bottom	6-3
B	
Back Assembly, Folding Rear Seat	15-38
Back Assembly, Seat - "A-39" Styles with Arm Rest - Standard Front Seat	15-18
Back Assembly, Seat - Four Door with Standard Front Seat	15-17
Back Assembly, Seat (Left or Right) - Two Door with Standard Front Seat	15-18
Back Assembly - Standard Front Bucket	15-25
Back Assembly, Strato - Full Width (16639 Styles) - Front Seat	15-27
Back Assembly, Strato - Full Width (Except 16639) - Front Seat	15-26
Back Curtain Assembly - Complete	13-20
Back Headrest - Full Width - Standard Front Seat	15-21
Back Headrest, Strato - Front Seat	15-28

Subject	Page No.
Back Headrest Supports, Strato - Front Seat	15-29
Back Headrest Support Guide Tube, Strato - Front Seat	15-28
Back Lock - Standard Front Bucket	15-26
Back Lock and Striker - Reclining Front Strato Seat	15-32
Back Lock Control Assembly - Reclining Front Strato Seat	15-33
Back Lock Control Support - Reclining Front Strato Seat	15-33
Back Lock, Seat - "C & E" - Standard Front Seat	15-19
Back Lock, Seat - "A, B & Z" - Standard Front Seat	15-19
Back Lock, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Style	15-52
Back Trim and Spring, Rear Seat - Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-47
Back Trim and Spring, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-50
Back Trim, Folding Third Seat - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Back Trim or Seat Back Panel, Third Seat - Station Wagon Folding Rear Seat - "A-65" Styles	15-54
Back Panel and Filler, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Back Panel or Back Trim, Third Seat - Station Wagon Folding Rear Seat - "A-65" Styles	15-54
Back Panel, Folding Third Seat - Three Seat Styles - Station Wagon Rear Seats - "B" Body	15-42
Back Panel, Strato - Two Door Styles	15-28
Back Panel, Strato - Four Door Styles - Front Seat	15-27
Back Window, Adhesive Caulking	4-15
Bail Type Retractor, Seat Belt	15-55
Belts, Seat - Front and Rear	15-54
Bolt Lubrication - Rotary and Fork - Door Lock	2-1
Body Ventilation Description - All Except 26657 and "E" Body	5-1
Body Ventilation Description - 26657 and "E" Body Styles	5-5
Bucket Assembly, Manually Operated - Front Seat	15-24
Bucket Seat Adjuster, Manually Operated - Front Strato	15-33
Bucket Seat Back Stop Cable or Spring, Passenger Front	15-25
Buckle Retainer - Shoulder Straps	15-60

C

Subject	Page No.
Cams and Guides Lubrication - Rear Quarter Window Regulator	2-4
Cams and Guides Lubrication - Window Regulator - Styles with Upper Frames	2-2
Cam and Regulator Lubrication - Tail Gate Window (Station Wagon)	2-5
Cam, Inner Panel - All Except "X" Styles - Rear Door	6-96
Cam, Inner Panel - Front Doors	6-36
Casting, Ventilator - "X-37" Styles - Front Doors	6-44
Catch Clips - Folding Top - Manually Operated Tops	13-36

Subject	Page No.
Center and Side Trim Panels - Compartment Shelf - Cadillac "E" Styles	14-27
Center Arm Rest - Standard Front Seat	15-21
Center Arm Rest and Curtain, Rear Seat Back	15-39
Center Arm Rest Hanger Plate and Linkage, Rear Seat Back	15-39
Center Finishing Panel - Compartment Shelf - Oldsmobile and Buick "E" Styles	14-26
Center Pillar Weatherstrips - "C-69" Styles - Front and Rear Doors	6-14
Channel Cam, Lower Sash - All Except "X" Styles - Rear Door Window	6-96
Clips, Spring - Front and Rear Doors	6-6
Cloth and Vinyl Coated Headlining - All Styles	11-1
Compartment Door - Instrument Panel - All Except "E" and Cadillac "C"	5-5
Compartment Door Lubrication - Instrument Panel	2-1
Compartment Floor Panel (At Kick-Up) - Station Wagon Rear Seats - "B" Body	15-43
Compartment Front and Rear Panel Hinge, Luggage - Station Wagon Rear Seat - "B" Body	15-41
Compartment Hinge and Torque Rod Lubrication - Rear	2-5
Compartment Lid - Front - Corvair	5-8
Compartment Lid Lock Lubrication - Rear	2-5
Compartment Lubrication - Front Lid Lock	2-2
Compartment Pan Side Filler Panel - Station Wagon Rear Seat - "B" Body	15-40
Compartment Rear Panel, Luggage - Two Seat Styles - Station Wagon Rear Seat - "B" Body	15-41
Compartment Shelf Center Finishing Panel - Oldsmobile and Buick "E" Styles	14-26
Compartment Shelf Side and Center Trim Panels - Cadillac "E" Styles	14-27
Compartment Shelf Side Finishing Panels - Oldsmobile and Buick "E" Styles	14-26
Compartment Shelf Trim Assembly - All Except "E" Styles	14-25
Control Assembly - Reclining Front Strato - Seat Back Lock	15-33
Control, Lock Remote - Front Doors	6-36
Control Support - Reclining Front Strato Seat Back Lock	15-33
Convertible Top Linkage Lubrication	2-6
Cover - Instrument Panel - Chevrolet	5-7
Cover Panel - Spare Tire - "B" Station Wagon Styles	14-18
Cover Panel and Filler Panel, Luggage Compartment - Station Wagon Folding Rear Seat - "A-65" Styles	15-54
Cover - Tail Gate Inner Panel	9-1
Curtain and Arm Rest - Notch Down and Strato Seat Back - Standard Front Seat	15-21
Curtain and Arm Rest - Standard Full Width Seat Back - Standard Front Seat	15-21
Curtain and Center Arm Rest, Rear Seat Back	15-39
Cushion - Rear Seat	15-37
Cushion, Folding Third Seat - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Cushion, Rear Seat - Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-46
Cushion, Second Seat (Full Width or Split Seat) - Station Wagon Rear Seats - "B"	15-43

Subject	Page No.
Cushion, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-50
Cushion Trim, Third Seat - Station Wagon Folding Rear Seat - "A-65" Styles	15-53
Cylinder Assembly, Lock - Front Doors	6-39
Cylinder - Front Compartment Lid Lock - Corvair	5-9
Cylinder, Luggage Compartment Lock - 15-16000 Styles - Station Wagon Rear Seats "B" Body	15-45

D

Subject	Page No.
Division Channel, Stationary Ventilator - "X-35 & 69" Styles - Rear Door Window	6-97
Door Arm Rests	14-2
Door Bottom Auxiliary Sealing Strip - Front and Rear Doors	6-3
Door Bottom Drain Hole Sealing Strips - Front and Rear Doors	6-3
Door Hinge Hold-Open Assembly Lubrication - Front Door	2-1
Door Hinge Hold-Open Assembly Lubrication - Rear Door	2-1
Door Hinge Lubrication - Gas Tank Filler	2-5
Door Jamb Switch Lubrication	2-2
Door Lock Actuator, Vacuum - Front Doors	6-79
Door Lock Fork Bolt and Rotary Bolt Lubrication	2-1
Door Lock Mechanism and Lock Parts Lubrication	2-2
Door Lock Striker Lubrication	2-1
Door Lock System, Vacuum - Front Door	6-78
Door Locks - Instrument Panel - All Except "E" and Cadillac "C"	5-7
Door Lubrication - Instrument Panel Compartment	2-1
Door Pull Handles	14-1
Door Trim Assemblies - "A-F" Styles	14-6
Door Trim Assemblies - "B-C-E" Styles	14-4
Door Trim Assemblies - "X" Styles	14-8
Door Trim Assemblies - "Z" Styles	14-9
Door Wedge Plates - "67" Styles - Front Doors	6-78
Door Window Regulator Cams and Guides Lubrication - Styles with Upper Frames	2-2
Door Window Regulator and Cams Lubrication - Styles with Upper Frames	2-2
Drain Hole Sealing Strips - Bottom - Tail Gate	9-12
Drain Hole Sealing Strips - Front and Rear Door Bottom	6-3
Drive Cables and Transmission Assembly - Power Operated Four-Way Adjuster - Front Strato Seat	15-36
Drive Cables, Horizontal and Vertical - Standard Front Seats - "A" Body - Four-Way	15-11
Drive Cables, Horizontal and Vertical - Standard Front Seats - "B, C & E" Body - Four-Way	15-13
Drive Cables, Vertical and Horizontal - Standard Front Seats - "B, C & E" Body - Six-Way	15-16

E

Subject	Page No.
Electric Motor - "C" Body - Standard Front Seats - Two-Way	15-6
Electric Motor - Front Door Window Regulator	6-72
Electric Motor - Standard Front Seats - "A" Body - Four-Way	15-7
Electric Motor - Standard Front Seats - "B, C & E" Body - Four-Way	15-12
Electric motor - Standard Front Seats - "B, C & E" Body - Six-Way	15-14

Subject	Page No.
Electric Motor Removal - Rear Door Window Regulator	6-116
Electric Regulator Motor Assembly - Tail Gate Window	9-5
Electric Release Lock - Rear Compartment Lid	8-11
Electrical Checking Procedure - Hydro-Electric System	13-30
Engine Lid - Rear Compartment - Corvair	8-2
Engine Lid Latch - Rear Compartment - Corvair	8-7
Engine Lid Latch Striker - Rear Compartment - Corvair	8-7
Engine Lid Support - Rear Compartment Lid - Corvair	8-4
Exterior Moldings	17-1
Chevrolet Styles - "A" Body	17-5
"B" Body	17-16
"F" Body	17-27
"X" Body	17-29
"Z" Body	17-35
Pontiac Styles - "A" Body	17-39
"B" Body	17-49
Oldsmobile Styles - "A" Body	17-63
"B-C" Body	17-74
"E" Body	17-85
Buick Styles - "A" Body	17-87
"B-C" Body	17-98
"E" Body	17-106
Cadillac Styles - "C" Body	17-109
"D" Body	17-116
"E" Body	17-119

F

Subject	Page No.
Fabric Cover - Tail Gate	12-10
Fabric Roof Covers (All Styles Except Station Wagons)	12-1
Fabric Roof Covers (Station Wagon Styles)	12-6
Filler and Back Panel, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Filler Door Hinge Lubrication - Gas Tank	2-5
Filler Panel and Cover Panel, Luggage Compartment - Station Wagon Folding Rear Seat - "A-65" Styles	15-54
Filler Panel, Compartment Pan Side - Station Wagon Rear Seat - "B" Body	15-40
Filler Panel, Folding Rear Seat Back	15-38
Filler Panel, Rear Floor - Station Wagon Folding Two Seat Styles - "A" Except "65"	15-47
Filler Panel, Rear Floor - Station Wagon Rear Seats - "B" Body	15-43
Flocked Type Headlining	11-4
Floor Anchorage - Shoulder Straps	15-60
Floor Covering, Rear Compartment - Station Wagon Styles with Rubber Mat - "A" Body Except "65"	15-46
Floor Mount, Retractor Type - Seat Belts	15-55
Floor Mounts with Plastic Cover, Standard - Seat Belts	15-55
Floor Pan Linkage, Second Seat Front - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Floor Pan Linkage, Second Seat Rear - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Floor Panel (At Kick-Up), Compartment - Station Wagon Rear Seats - "B" Body	15-43
Floor Panel (At Kick-Up), Rear Compartment, Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-47
Floor Panel and Third Seat - Station Wagon Folding Rear Seat - "A-65" Styles	15-53
Floor Panel Covering, Rear Compartment - Station Wagon Styles with Floor Carpet - "A" Body Except "65" Styles	15-46

Subject	Page No.
Floor Panel Covering, Rear Compartment - Station Wagon Styles with Vinyl Mat - "A" Body Except "65" Styles	15-46
Fluid Control Valve - Hydro-lectric System	13-29
Folding Rear Seat Back - Corvair	15-38
Folding Rear Seat Back Assembly	15-38
Folding Rear Seat Back Filler Panel	15-38
Folding Rear Seat Back Linkage	15-38
Folding Seat Back - "F" Body - Rear Seat	15-38
Folding Seat Linkage Lubrication	2-5
Folding Second Seat Back Lock - Station Wagon Folding Two Seat Styles - "A, B & X" (Except "55" & "65")	15-48
Folding Third Seat Back Panel - Three Seat Styles - Station Wagon Rear Seats - "B" Body	15-42
Folding Third Seat Back Trim - Three Seat Styles - Station Wagon Rear Seats - "B" Body	15-42
Folding Third Seat Cushion - Three Seat Styles - Station Wagon Rear Seats - "B" Body	15-42
Folding Third Seat Cushion, Panel and Support - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Folding Top Catch Clips - Manually Operated Tops	13-36
Folding Top Silencer	13-24
Folding Top Trim Assembly - Complete	13-1
Folding Top Trim Assembly - Less Back Curtain	13-14
Foot Rest Assembly - Cadillac 68169 Styles - Standard Front Seat Back	15-22
Fork Bolt and Rotary Bolt Lubrication - Door Lock	2-1
Four-Way Adjuster, Power Operated - Front Strato Seat	15-34
Front and Rear Panel Assembly, Luggage Compartment - Two Seat Styles Station Wagon Rear Seat - "B" Body	15-41
Front and Rear Panel Hinge, Luggage Compartment - Station Wagon Rear Seat - "B" Body	15-41
Front Back Assembly - Standard Bucket	15-25
Front Back Lock - Standard Bucket	15-26
Front Bucket Seat Back Stop Cable or Spring, Passenger	15-25
Front Compartment Description - Corvair	5-8
Front Compartment Lid - Corvair	5-8
Front Compartment Lid Gutter Weatherstrip - Corvair	5-11
Front Compartment Lid Lock Assembly - Corvair	5-10
Front Compartment Lid Lock Cylinder - Corvair	5-9
Front Compartment Lid Lock Lubrication	2-2
Front Compartment Lid Lock Striker - Corvair	5-10
Front Compartment Lid Torque Rods - Corvair	5-8
Front Door Hinge Hold-Open Assembly Lubrication	2-1
Front Floor Pan Linkage, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Front Guide - 26657 Style - Front Door Window	6-76
Front Guide - "B-C 47-57-67-87" Styles - Rear Quarter Window	7-25
Front Guide and Guide Plate - 68069 & 68169 Styles - Rear Doors	6-112
Front Guide Assembly - Rear Quarter Window - "A-X-Z" Hardtop and Convertible Styles and "E-87" Styles	7-25

Subject	Page No.
Front Guide Channel - "E" Styles - Front Door Window	6-74
Front Panel - Oldsmobile and Buick "E" Body - Rear Compartment Lid	8-3
Front Seats, Standard - Full Width	15-3
Front Seat Assembly, Standard - Manually Operated	15-3
Front Seat Adjuster Mechanism Lubrication	2-6
Front Seat Back, Reclining	15-30
Front Seat Center Arm Rest - Standard Front Seat	15-21
Front Seat Shoulder Straps	15-55
Front Trim Panel - Rear Quarter - "A" Station Wagon Styles	14-20
Front Trim Panel - Rear Quarter - Chevy II Station Wagon Styles	14-24
Front Vertical Gearnut - Standard Front Seats - "B, C & E" Body - Six-Way	15-15
Full Width Seat Assembly, Strato - Front	15-23
Full Width Standard Front Seats	15-3

G

Subject	Page No.
Gas Tank Filler Door Hinge Lubrication	2-5
Gearnut Adjuster, Vertical - Power Operated Four-Way - Front Strato Seat	15-36
Gearnut, Front Vertical - Standard Front Seats - "B, C & E" Body - Six-Way	15-15
Gearnut, Horizontal - Standard Front Seats - "C" Body - Two-Way	15-7
Gearnut, Rear Vertical - Standard Front Seat - "B, C & E" Body - Six-Way	15-15
Gearnut, Vertical - Standard Front Seat - "A" Body - Four-Way	15-8
Gearnut, Vertical - Standard Front Seat - "B, C & E" Body - Four-Way	15-12
Glass Run Channel - "B-11-35-45-69" Styles - Front Door	6-76
Glass Run Channels - "X-11-35-69" Styles - Front Door Window	6-75
Glass Run Channels - "X-37" Styles - Front Door Window	6-75
Glass Run Channel - "Z" Styles - Front Door Window Rear	6-75
Glass Run Channel - "A-17-39-67" Styles - Front Door Rear Window	6-73
Glass Run Channel - Inner and Outer Strip Assemblies - Front and Rear Doors	6-9
Glass Run Channel - "A-35-55-65 & 69" Styles - Rear Door Window	6-110
Glass Run Channel - "B-35-45 & 69" Styles - Rear Door Window	6-111
Glass Run Channel - "X-35 & 69" Styles - Rear Door Window	6-113
Glass Run Channel - Rear Quarter Window - "E-47" Styles	7-26
Glass Run Channel - Tail Gate Upper - "A & B" Body	9-13
Glass Run Channel - Tail Gate Upper - "X" Body	9-14
Glass Run Channels - Tail Gate Window - Lower	9-7
Guides and Cams Lubrication - Rear Quarter Window Regulator	2-4
Guides and Cams Lubrication - Window Regulator - Styles with Upper Frames	2-2
Guide and Guide Plate Assembly - All "B-C" Except "B-11-35-45-57-69" Styles - Front Door Window	6-76

Subject	Page No.
Guide Assembly - "F" Styles - Front Door Window Rear	6-74
Guide Assembly - Rear Quarter Window - All "F" Styles	7-26
Guide Channel - "E" Styles - Front Door Window Rear	6-74
Guide Channel - "E" Styles - Front Door Window Front	6-74
Guide Channels - "A-39" Styles Rear Door Window	6-111
Guide Plate and Front Guide - 68069 and 68169 Styles - Rear Doors	6-112
Guide Plate - "A-17-39-67" Styles - Front Door Window Sash Channel	6-54
Guide Tube, Strato Back Headrest Support - Front Seat	15-28
Gutter Weatherstrip - Front Compartment Lid - Corvair	5-11

H

Subject	Page No.
Handles - Inside	14-2
Handles - Outside - Front and Rear Doors	6-6
Handle - Rear Quarter Window Regulator	14-9
Headlining - Cloth and Vinyl Coated - All Styles	11-1
Headlining - Flocked Type	11-4
Headlining - "55 and 65" Station Wagon Styles	11-6
Headrest, Seat Back - Full Width Seat - Standard Front Seat	15-21
Headrest, Strato Back - Front Seat	15-28
Headrest Support Guide Tube, Strato Back - Front Seat	15-28
Headrest Supports, Strato Back - Front Seat	15-29
Hinges - Rear Doors	6-87
Hinge Adjustment - Front Doors	6-35
Hinge and Torque Rod Lubrication - Rear Compartment	2-5
Hinge Assembly - Tail Gate	9-2
Hinge Hold-Open Assembly Lubrication - Front Door	2-1
Hinge Hold-Open Assembly Lubrication - Rear Door	2-1
Hinge, Luggage Compartment Front and Rear Panel - Station Wagon Rear Seat - "B" Body	15-41
Hinge Lubrication - Gas Tank Filler Door	2-5
Hinge Lubrication (Station Wagon) - Tail Gate	2-5
Hinge Removal - Front Doors	6-22
Hold-Open Assembly Lubrication - Front Door Hinge	2-1
Hold-Open Assembly Lubrication - Rear Door Hinge	2-1
Horizontal Actuator - Power Operated Four-Way Adjuster - Strato Front Seat	15-36
Horizontal Actuator - Standard Front Seats - "A" Body - Four-Way	15-9
Horizontal Actuator - Standard Front Seats - "B, C & E" Body - Four-Way	15-13
Horizontal Actuator - Standard Front Seats - "B, C & E" Body - Six-Way	15-14
Horizontal Adjuster, Power Operated - Front Strato Seat	15-34
Horizontal and Vertical Drive Cables - Standard Front Seats - "A" Body - Four-Way	15-11
Horizontal and Vertical Drive Cables - Standard Front Seats - "B, C & E" Body - Four-Way	15-13
Horizontal and Vertical Drive Cables - Standard Front Seats - "B, C & E" Body - Six-Way	15-16

Subject	Page No.
Horizontal Gearnut - Standard Front Seats - "C" Body - Two-way	15-7
Horizontal Jackscrew - Standard Front Seats - "C" Body - Two-Way	15-7
Hydraulic Checking Procedure - Hydro-Electric System	13-31
Hydraulic Cylinder - Rear Compartment Lid Mechanical Pull-Down Unit - Cadillac	8-9
Hydro-lectric System - Folding Top	13-26

I

Inner and Outer Strip Assemblies - Tail Gate Window	9-12
Inner Linkage, Second Seat Split Back - Station Wagon Rear Seats - "B" Body	15-45
Inner Linkage, Second Seat Side - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Inner Panel Access Hole Covers - Tail Gate	9-2
Inner Panel Cam - All Except "X" Styles - Rear Door	6-96
Inner Panel Cam - Front Doors	6-36
Inner Panel Cover - Tail Gate	9-1
Inner Panel Sealing - Rear Quarter	7-2
Inner Panel Water Deflector - Front and Rear Doors	6-4
Inner Panel Water Deflector - Tail Gate	9-1
Inner Sealing Strip - Rear Quarter Window Rear Vertical - "C-47" Styles	7-9
Inside Handles	14-2
Inside Handle - "B" Styles - Tail Gate Remote Control	9-9
Instrument Panel Compartment Door - All Except "E" and Cadillac "C"	5-5
Instrument Panel Compartment Door Lubrication	2-1
Instrument Panel Cover - Chevrolet	5-7
Instrument Panel Door Locks - All Except "E" and Cadillac "C"	5-7

J

Jackscrew, Adjuster - Power Operated Four-Way - Front Strato Seat	15-36
Jackscrew, Horizontal - Standard Front Seats - "C" Body - Two-Way	15-7
Jackscrew, Standard Front Seat - "A" Body - Four-Way	15-10
Jamb Switch - Electric Styles - Tail Gate	9-8
Jamb Switch Lubrication - Door	2-2

L

Latch - Rear Compartment Engine Lid - Corvair	8-7
Lid - Front Compartment - Corvair	5-8
Lid - Rear Compartment - All Except Corvair	8-1
Lid Emblem and Lock Cylinder Assembly - Rear Compartment - Cadillac	8-4
Lid Hinge Strap - Rear Compartment Lid	8-3
Lid Latch - Rear Compartment Engine - Corvair	8-7
Lid Latch Striker - Rear Compartment Engine - Corvair	8-7

Subject	Page No.
Lid Lock - Rear Compartment	8-6
Lid Lock Assembly - Front Compartment - Corvair	5-10
Lid Lock Cylinder - Front Compartment - Corvair	5-9
Lid Lock Cylinder - Rear Compartment - Oldsmobile "E"	8-5
Lid Lock Cylinder - Rear Compartment - Pontiac 26657	8-5
Lid Lock Cylinder - Rear Compartment - Chevrolet "A & F", Pontiac "A & B" (Except 26657), Oldsmobile "B"	8-4
Lid Lock Cylinder - Rear Compartment - Chevrolet "B & X", Buick "A, B, C & E" and Oldsmobile "A & C" Styles	8-4
Lid Lock Electric Release Unit - Rear Compartment - Pontiac "A & B"	8-11
Lid Lock Lubrication - Front Compartment	2-2
Lid Lock Lubrication - Rear Compartment	2-5
Lid Lock Striker - Front Compartment - Corvair	5-10
Lid Lock Striker - Rear Compartment	8-6
Lid Lock Striker Engagement - Rear Compartment - All Except Corvair and Cadillac with Mechanical Closing Unit	8-6
Lid Mechanical Pull-Down Unit - Rear Compartment - Cadillac	8-8
Lid Mechanical Pull-Down Unit Adjustment - Rear Compartment - Cadillac	8-10
Lid Mechanical Pull-Down Unit Cable - Rear Compartment - Cadillac	8-9
Lid Mechanical Pull-Down Unit Hydraulic Cylinder - Rear Compartment - Cadillac	8-9
Lid Torque Rods - Front Compartment - Corvair	5-8
Lid Vacuum Release Unit - Rear Compartment	8-7
Lid Vacuum Unlocking System - Rear Compartment	8-7
Linkage and Center Arm Rest Hanger Plate, Rear Seat Back	15-39
Linkage, Folding Rear Seat Back	15-38
Linkage Lubrication - Convertible Top	2-6
Linkage Lubrication - Folding Seat	2-5
Linkage, Second Seat Back (Full Width Both Sides, Split Seat - Outer Only)	15-44
Linkage, Second Seat Front Floor Pan - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Linkage, Second Seat Rear Floor Pan - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Linkage, Second Seat Side Inner - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Linkage, Second Seat Side Outer - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Lock - Rear Compartment Lid	8-6
Lock Actuator, Vacuum Door - Front Doors	6-79
Lock Assembly - "B-35-45-69" Styles - Rear Door	6-87
Lock Assembly - Front Compartment Lid - Corvair	5-10
Lock Assembly - Tail Gate	9-9
Lock Assembly and Vacuum Actuator - Front Doors	6-38
Lock Assembly and Vacuum Actuator - "B-35-45-69" Styles - Rear Doors	6-95
Lock Control Assembly - Reclining Front Strato Seat Back	15-33
Lock Control Support - Reclining Front Strato Seat Back	15-33

Subject	Page No.
Lock Cylinder Assembly - Front Doors	6-39
Lock Cylinder and Lid Emblem Assembly - Rear Compartment - Cadillac	8-4
Lock Cylinder - Front Compartment Lid - Corvair	5-9
Lock Cylinder, Luggage Compartment - 15-16000 Styles - Station Wagon Rear Seats - "B" Body	15-45
Lock Cylinder - Rear Compartment Lid - Chevrolet "A & F", Pontiac "A & B" (Except 26657), Oldsmobile "B"	8-4
Lock Cylinder - Rear Compartment Lid - Pontiac 26657	8-5
Lock Cylinder - Rear Compartment Lid - Oldsmobile "E"	8-5
Lock Electric Release Unit - Rear Compartment Lid - Pontiac "A & B"	8-11
Lock, Folding Second Seat Back - Station Wagon Folding Two Seat Styles - "A, B & X" (Except "55" & "65")	15-48
Lock, Front Back - Standard Bucket	15-26
Lock Lubrication - Front Compartment Lid	2-2
Lock Lubrication - Rear Compartment Lid	2-5
Lock, Luggage Compartment - 15-16000 Styles - Station Wagon Rear Seat - "B" Body	15-45
Lock Mechanism and Lock Parts Lubrication - Door Lock	2-2
Lock Parts and Lock Mechanism Lubrication - Door Lock	2-2
Lock Release - Rear Compartment Lid - Electric	8-11
Lock Remote Control - All Styles - Rear Doors	6-87
Lock Remote Control - Front Doors	6-36
Lock Remote Control Assembly - Tail Gate	9-9
Lock Remote Control Assembly, Vacuum - Front Doors	6-81
Lock, Seat Back - "A, B & Z" - Standard Front Seat	15-19
Lock, Seat Back - "C & E" - Standard Front Seat	15-19
Lock, Second Seat Back - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Lock Selector Valve, Vacuum - Front Doors	6-79
Lock Storage Tank, Vacuum - Front Doors	6-81
Lock Strikers - Front and Rear Doors	6-7
Lock Strikers - Front Compartment Lid - Corvair	5-10
Lock Strikers - Rear Compartment Lid	8-6
Lock Strikers - Tail Gate	9-10
Lock Striker Adjustments - Tail Gate	9-11
Lock Striker Engagement - Rear Compartment Lid - All Except Corvair and Cadillac with Mechanical Closing Unit	8-6
Lock Striker Lubrication - Door	2-1
Lock Striker Lubrication (Station Wagon) - Tail Gate	2-5
Lock System, Vacuum - Front Door	6-78
Lock Trouble Diagnosis Procedure, Vacuum - Front Doors	6-82
Lock Vacuum Actuator - Front Doors	6-39
Lock Vacuum Actuator - 68069 and 68169 Styles - Rear Door	6-96
Lower Channel and Plastic Slides - Standard Front Seats - "B, C & E" Body - Six-Way	15-16
Lower Glass Run Channels - Tail Gate Window	9-7

Subject	Page No.
Lower Sash Channel Cam - All Except "X" Styles - Rear Door Window	6-96
Lower Sash Channel Cam - "E-F-Z" Styles - Front Door Window	6-53
Luggage Compartment Cover Panel and Filler Panel - Station Wagon Folding Rear Seat - "A-65" Styles	15-54
Luggage Compartment Front and Rear Panel Assembly - Two Seat Styles - Station Wagon Rear Seat - "B" Body	15-41
Luggage Compartment Front and Rear Panel Hinge - Station Wagon Rear Seat - "B" Body	15-41
Luggage Compartment Lock - 15-16000 Styles - Station Wagon Rear Seat - "B" Body	15-45
Luggage Compartment Lock Cylinder - 15-16000 Styles - Station Wagon Rear Seat - "B" Body	15-45
Luggage Compartment Rear Panel - Two Seat Styles - Station Wagon Rear Seat - "B" Body	15-41

M

Subject	Page No.
Manual Lift Assembly - Manually Operated Tops	13-35
Manually Operated Bucket Assembly - Front Seat	15-24
Manually Operated Bucket Seat Adjuster - Front Strato	15-33
Manually Operated Standard Front Seat Assembly	15-3
Mechanical Checking Procedure - Hydro-Lectric System	13-29
Mechanical Pull-Down Unit - Rear Compartment Lid - Cadillac	8-8
Mechanical Pull-Down Unit Cable - Rear Compartment Lid - Cadillac	8-9
Mechanism Lubrication - Front Seat Adjuster	2-6
Moldings - Exterior	17-1
Chevrolet Styles - "A" Body	17-5
"B" Body	17-16
"F" Body	17-27
"X" Body	17-29
"Z" Body	17-35
Pontiac Styles - "A" Body	17-39
"B" Body	17-49
Oldsmobile Styles - "A" Body	17-63
"B-C" Body	17-74
"E" Body	17-85
Buick Styles - "A" Body	17-87
"B-C" Body	17-98
"E" Body	17-106
Cadillac Styles - "C" Body	17-109
"D" Body	17-116
"E" Body	17-119
Motor and Pump Assembly - Hydro-Lectric System - Folding Top	13-26
Motor and Transmission Drive Belt and Pulleys - Power Operated Four-Way Adjuster - Front Strato Seat	15-35
Motor Assembly - Power Operated Four-Way Adjuster - Front Strato Seat	15-35
Motor Removal, Electric - Rear Door Window Regulator	6-116
Motor Assembly - Tail Gate Electric Window Regulator	9-5

O

Subject	Page No.
Opening Weatherstrip - Tail Gate	9-12
Operation of Folding Top - Hydro-Lectric System	13-28
Operation of Pump Assembly - Hydro-Lectric System	13-28
Outside Handles - Front and Rear Doors	6-6

Subject	Page No.
Outside Handle - Tail Gate Window Regulator - Manual or Electric	9-7
Outer and Inner Strip Assemblies - Tail Gate Window	9-12
Outer Linkage, Second Seat Side - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Outer Strip Assembly - Rear Quarter Window - All Closed Styles	7-9

P

Panel and Linkage (Full Width of Split Seat), Second Seat Back Trim - Station Wagon Rear Seats - "B" Body	15-44
Panel and Seat Back - Station Wagon Folding Rear Two Seat Styles - "A" Body Except "65" Styles	15-47
Panel Hinge, Luggage Compartment Front and Rear - Station Wagon Rear Seat - "B" Body	15-41
Passenger Front Bucket Seat Back Stop Cable or Spring	15-25
Plastic Slides - Standard Front Seats - "C" Body - Two-Way	15-7
Plastic Slides and Lower Channel - Standard Front Seat - "B, C & E" Body - Six-Way	15-16
Positioning Unit, Seat Back - Reclining Strato Front Seat	15-32
Power Operated Horizontal Adjuster - Front Strato Seat	15-34
Power Operated Two or Four-Way Bucket Assembly - Front Seat	15-24
Power Operated Four-Way Adjuster - Front Strato Seat	15-34
Pull-Down Unit - Rear Compartment Lid Mechanical - Cadillac	8-8
Pull-Down Unit Adjustment - Rear Compartment Lid - Mechanical - Cadillac	8-10
Pull-Down Unit Cable - Rear Compartment Lid Mechanical - Cadillac	8-9
Pull-Down Unit Hydraulic Cylinder - Rear Compartment Lid - Mechanical - Cadillac	8-9
Pull Handles - Door	14-1
Pump Assembly Operation - Hydro-Lectric System	13-28

Q

Quarter Anchorage (Convertibles) - Shoulder Straps	15-60
Quarter Trim - Rear	14-9
Quarter Window Regulator Cams and Guides Lubrication - Rear	2-4

R

Rear and Front Panel Assembly, Luggage Compartment - Two Seat Styles - Station Wagon Rear Seat - "B" Body	15-41
Rear Compartment	8-1
Rear Compartment Floor Panel (At Kick-Up) - Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-47
Rear Compartment Floor Panel Covering - Station Wagon Styles with Floor Carpet - "A" Body Except "65" Styles	15-46
Rear Compartment Floor Panel Covering - Station Wagon Styles with Rubber Mat - "A" Body Except "65" Styles	15-46
Rear Compartment Floor Panel Covering - Station Wagon Styles with Vinyl Mat - "A" Body Except "65" Styles	15-46
Rear Compartment Hinge and Torque Rod Lubrication	2-5
Rear Compartment Lid Lock Lubrication	2-5

Subject	Page No.
Rear Compartment Weatherstrips - All Styles	8-11
Rear Door Hinge Hold-Open Assembly Lubrication	2-1
Rear Floor Filler Panel - Station Wagon Folding Rear Two Seat Styles - "A" Except "65" Styles	15-47
Rear Floor Filler Panel - Station Wagon Rear Seats - "B" Body	15-43
Rear Floor Pan Linkage, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Rear Floor to Tail Gate Filler Panel Assembly - 25-26000 Series - Station Wagon Rear Seats	15-39
Rear Glass Run Channel - "A-17-39-67" Styles - Front Door Window	6-73
Rear Glass Run Channel - "Z" Styles - Front Door Window	6-75
Rear Guide - 26657 Style - Front Door Window	6-77
Rear Guide Assembly - "F" Styles - Front Door Window	6-74
Rear Guide Assembly - Rear Quarter Window - "A-X-Z" Hardtop and Convertible Styles and "E-87" Styles	7-26
Rear Guide Channel - "E" Styles - Front Door Window	6-74
Rear Quarter Arm Rest	14-10
Rear Quarter Front Trim Panel - "A" Styles - Station Wagon	14-20
Rear Quarter Front Trim Panel - Chevy II Station Wagon Styles	14-24
Rear Quarter Rear Trim Panel - All Station Wagon Styles Except 13435 and 23335	14-21
Rear Quarter Rear Trim Panel - Chevy II Station Wagon Styles	14-23
Rear Quarter Rear Trim Panel (Left Side) - 13435 and 23335 Styles	14-22
Rear Quarter Trim	14-9
Rear Quarter Trim Assemblies "A-B-C" Body and "69 and 39" Styles	14-17
Rear Quarter Trim Assemblies - "A-B-C" Two-Door Styles (Hang-On Type)	14-12
Rear Quarter Trim Assemblies - "A-X-Z" Two-Door Styles (Insert Type)	14-14
Rear Quarter Trim Assemblies - "A-80" Styles	14-16
Rear Quarter Trim Assemblies - "E" Styles	14-15
Rear Quarter Trim Assemblies - "F" Styles	14-15
Rear Quarter Trim Assemblies - "Z-39" Styles	14-17
Rear Quarter Trim Panel (Left Side) - "B" Station Wagon Styles	14-18
Rear Quarter Wheelhouse Cover Panel (Right Side) - "B" Body - Station Wagon Styles	14-19
Rear Quarter Wheelhouse Trim Cover - Chevy II Station Wagon Styles	14-24
Rear Quarter Window - Adhesive Caulked Type	4-12
Rear Quarter Window - Rubber Channel - Adhesive Caulked Type	4-15
Rear Quarter Window Regulator Cams and Guides Lubrication	2-4
Rear Quarter Window Regulator Handle	14-9
Rear Seat and Station Wagon Full Width Second Seat - Seat Belts	15-55
Rear Seat Back (Except "F & Z")	15-37
Rear Seat Cushion	15-37
Rear Seat Back and Panel - Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-47
Rear Seat Back Center Arm Rest and Curtain	15-39
Rear Seat Back Center Arm Rest Hanger Plate and Linkage	15-39

Subject	Page No.
Rear Seat Back Trim and Spring - Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-47
Rear Seat Cushion - Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-46
Rear Trim Panel - Rear Quarter - All Station Wagon Styles Except 13435 and 23335	14-21
Rear Trim Panel - Rear Quarter - Chevy II Station Wagon Styles	14-23
Rear Trim Panel (Left Side) - Rear Quarter - 13435 and 23335 Styles	14-22
Rear Vertical Gearnut - Standard Front Seats - "B, C & E" Body - Six-Way	15-15
Rear Vertical Inner Sealing Strip - Rear Quarter Window - "C-47" Styles	7-9
Reclining Front Seat Back	15-30
Regulator - Electric - "B-35-45-69" Styles - Front Door Window	6-72
Regulator - Manual and Electric - All "B-C" Except "B-11-35-45-57-69" Styles - Front Door Window	6-71
Regulator - Manual and Electric - "A-E-F-X-Z" Styles - Front Door Window	6-70
Regulator - Manual and Electric - All "B & C" Styles - Rear Door Window	6-114
Regulator - Manual or Electric - Tail Gate Window	9-5
Regulator and Cam Lubrication - Door Window - Styles with Upper Frames	2-2
Regulator Assembly - "A-Z 39" Styles Rear Door Window	6-116
Regulator Assembly - "A-35-55-65 & 69" Styles and "X35 & 69" Styles - Rear Door Window	6-114
Regulator and Cams Lubrication - Tail Gate Window (Station Wagon)	2-5
Regulator Cams and Guides Lubrication - Rear Quarter Window	2-4
Regulator Cams and Guide Lubrications - Window - Styles with Upper Frames	2-2
Regulator Electric Motor Removal - Rear Door Windows	6-116
Regulator Motor Assembly - Tail Gate Electric Window	9-5
Regulator Outside Handle - Tail Gate Window - Manual or Electric	9-7
Regulator, Ventilator - Manual and Electric - ("B-C" Styles) - Front Doors	6-41
Regulator - Manual or Electric - 26657 Style - Front Door Window	6-71
Regulator Electric Motor - Front Door Window	6-72
Release Unit - Rear Compartment Lid Lock Electric - Pontiac "A & B" Styles	8-11
Release Unit - Rear Compartment Lid Vacuum	8-7
Remote Control Assembly - Tail Gate Lock	9-9
Remote Control Assembly, Vacuum Lock - Front Doors	6-81
Remote Control Inside Handle - "B" Styles - Tail Gate	9-9
Reservoir Tube - Hydro-Lectric System - Folding Top	13-28
Retainer, Buckle - Shoulder Straps	15-60
Retractor, Bail Type - Seat Belt	15-55
Retractor Type Floor Mount - Seat Belts	15-55
Roof Anchorage (Closed Styles) - Shoulder Straps	15-59
Roof Rail Weatherstrip Adjustment, Side - Front and Rear Doors	6-14
Roof Rail Weatherstrip Retainer, Side - Front and Rear Doors	6-10
Rotary Bolt and Fork Bolt Lubrication - Door Lock	2-1
Run Channel - "A-17-39-67" Styles - Front Door Rear Window Glass	6-73

Subject	Page No.
Run Channel - "A-35-55-65 & 69" Styles - Rear Door Window Glass	6-110
Run Channel - "B-11-35-45-69" Styles - Front Door Window Glass	6-76
Run Channel - "B-35-45 & 69" Styles - Rear Door Window Glass	6-111
Run Channel - "X-11-35-69" Styles - Front Door Window Glass	6-75
Run Channel - "X-37" Styles - Front Door Window Glass	6-75
Run Channel - "X-35-69" Styles - Rear Door Window Glass	6-113
Run Channel - "Z" Styles - Front Door Window Rear Glass	6-75
Run Channel, Glass - Inner and Outer Strip Assemblies - Front and Rear Doors	6-9
Run Channel - Tail Gate Upper Glass - "A & B" Body	9-13
Run Channel - Tail Gate Upper Glass - "X" Body	9-14

S

Subject	Page No.
Sash Channel Cam - "E-F-Z" Styles - Front Door Lower Window	6-53
Sash Channel Cam, Lower - All Except "X" Styles - Rear Door Window	6-96
Sash Channel Guide Plate - "A-17-39-67" Styles - Front Door Window	6-54
Sealing - Rear Quarter Inner Panel	7-2
Sealing Strip - Front and Rear Door Bottom Auxiliary	6-3
Sealing Strip - Front and Rear Door Bottom Drain Hole	6-3
Sealing Strip - Tail Gate Bottom Drain Hole	9-12
Seat Adjuster Mechanism Lubrication - Front	2-6
Seat Assembly - Standard Front Seats	15-3
Seat Assembly - Power Operated Standard Front Seats	15-5
Seat Back and Panel - Station Wagon Folding Rear Two Seat Styles - "A" Body Except "65" Styles	15-47
Seat Back Assembly - "A-39" Styles with Arm Rest - Standard Front Seat	15-18
Seat Back Assembly - Four Door with Standard Front Seat	15-17
Seat Back Assembly - Reclining Strato Front Seat	15-32
Seat Back Assembly (Right or Left) - Two Door with Standard Front Seat	15-18
Seat Back, Front Reclining	15-30
Seat Back Headrest - Full Width Seat - Standard Front Seat	15-21
Seat Back Linkage, Second (Full Width Both Sides, Split Seat - Outer Only)	15-44
Seat Back Lock - "A, B & Z" - Standard Front Seat	15-19
Seat Back Lock - "C & E" - Standard Front Seat	15-19
Seat Back Lock and Striker - Reclining Front Strato Seat	15-32
Seat Back Panel, Folding Third - Three Seat Styles - Station Wagon Rear Seats - "B" Body	15-42
Seat Back Positioning Unit - Reclining Strato Front Seat	15-32
Seat Back, Rear (Except "F & Z")	15-37
Seat Back Stop Cable or Spring, Passenger Front Bucket	15-25
Seat Back Trim, Folding Third - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Seat Back Trim, Panel and Linkage - (Full Width or Split Seat), Second - Station Wagon Rear Seats - "B" Body	15-44

Subject	Page No.
Seat Back Trim (Full Width or Split Seat), Second - Station Wagon Rear Seat - "B" Body	15-43
Seat Belt Bail Type Retractor	15-55
Seat Belts, Front and Rear	15-54
Seat Center Arm Rest, Front - Standard Front Seat	15-21
Seat Cushion, Folding Third - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Seat Linkage Lubrication - Folding	2-5
Second Seat Assembly - Right or Left - Station Wagon Folding Rear Seats - "A-65"	15-49
Second Seat Back Linkage (Full Width Both Sides, Split Seat - Outer Only)	15-44
Second Seat Back Lock - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Second Seat Back Lock - Station Wagon Folding Two Seat Styles - "A, B & X" Except "55 & 65"	15-48
Second Seat Back Panel and Filler - Right or Left - Station Wagon Folding Rear Seat - "A-65" Style	15-52
Second Seat Back Trim (Full Width or Split Seat) - Station Wagon Rear Seats - "B" Body	15-43
Second Seat Back Trim and Spring - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-50
Second Seat Back Trim, Panel and Linkage (Full Width or Split Seat) - Station Wagon Rear Seats - "B" Body	15-44
Second Seat Cushion (Full Width or Split Seat) - Station Wagon Rear Seats - "B" Body	15-43
Second Seat Cushion - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-50
Second Seat Front Floor Pan Linkage - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Second Seat Rear Floor Pan Linkage - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Second Seat Side Inner Linkage - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51
Second Seat Side Outer Linkage - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Second Seat Split Back Inner Linkage - Station Wagon Rear Seats - "B" Body	15-45
Selector Valve, Vacuum Lock - Front Door	6-79
Shoulder Strap - Front Seat	15-55
Shroud Side Air Outlet Duct Door Body Ventilation - "A, B, C, D & E"	5-2
Shroud Side Air Outlet Duct Door Body Ventilation - "F, X & Z"	5-3
Shroud Side Air Outlet Duct Door Control Cable Body Ventilation - "F, X & Z"	5-5
Shroud Side Air Outlet Duct Door Control Cable Body Ventilation - "A, B, C, D & E"	5-3
Shroud Side Finishing Panel and Air Outlet Duct Body Ventilation - "F, X & Z"	5-2
Shroud Side Finishing Panel Body Ventilation - "A, B, C, D & E"	5-1
Side and Center Trim Panels - Compartment Shelf - Cadillac "E" Styles	14-27
Side Filler Panel, Compartment Pan - Station Wagon Rear Seat - "B" Body	15-40
Side Finishing Panels - Compartment Shelf - Oldsmobile and Buick "E" Styles	14-26
Side Inner Linkage, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-51

Subject	Page No.
Side Outer Linkage, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-52
Side Roof Rail Weatherstrip Adjustment - Front and Rear Doors	6-14
Side Roof Rail Weatherstrip and Retainer - Front and Rear Doors	6-10
Silencer - Folding Top	13-24
Skylight - Windows - Adhesive Caulking	4-9
Slides, Plastic - Standard Front Seats - "C" Body - Two-Way	15-7
Spare Tire Cover Panel - "A" Station Wagon Styles	14-20
Spare Tire Cover Panel - "B" Station Wagon Styles	14-18
Specified Body Opening Clearance Tolerances - Front and Rear Doors	6-15
Split Back Inner Linkage, Second Seat - Station Wagon Rear Seats - "B" Body	15-45
Split Second Seat, Station Wagon - Seat Belts	15-55
Spring and Back Trim, Rear Seat - Station Wagon Folding Two Seat Styles - "A" Body Except "65" Styles	15-47
Spring and Back Trim, Second Seat - Right or Left - Station Wagon Folding Rear Seat - "A-65" Styles	15-50
Spring Clips - Front and Rear Doors	6-6
Spring or Stop Cable, Passenger Front Bucket Seat Back	15-25
Standard Floor Mounts with Plastic Cover - Seat Belts	15-52
Station Wagon Folding Rear Seats and Floor Panels - "B" Body	15-39
Station Wagon Full Width and Rear Seat Second Seat - Seat Belts	15-55
Station Wagon Split Second Seat - Seat Belts	15-55
Station Wagon Third Seat (Facing Forward) - Seat Belts	15-55
Station Wagon Third Seat (Facing Rearward) - Seat Belts	15-55
Stationary Ventilator Assembly - "X-35 & 69" Styles - Rear Door Window	6-98
Stationary Ventilator Division Channel - "X-35 & 69" Styles - Rear Door Window	6-97
Stop Cable or Spring, Passenger Front Bucket Seat Back	15-25
Storage Tank, Vacuum Lock - Front Doors	6-81
Strato Back Assembly - Full Width (16639 Styles) - Front Seat	15-27
Strato Back Assembly - Full Width (Except 16639) - Front Seat	15-26
Strato Back Assembly (Except "F & Z" and Reclining Back) - Front Seats	15-29
Strato Back Lock - Two Door Styles - Front Seat	15-29
Strato Back Headrest - Front Seat	15-28
Strato Back Headrest Supports - Front Seat	15-29
Strato Back Headrest Support Guide Tube - Front Seat	15-28
Strato Back Panel - Two Door Styles - Front Seat	15-28
Strato Back Panel - Four Door Styles - Front Seat	15-27
Strato Full Width Seat Assembly - Front	15-23
Strato Full Width, Strato Bucket and Standard Bucket Seats	15-23
Striker - Front Compartment Lid Lock - Corvair	5-10
Striker - Rear Compartment Lid Lock	8-6

Subject	Page No.
Striker and Back Lock - Reclining Front Strato Seat	15-32
Striker Engagement - Rear Compartment Lid Lock - All Except Corvair and Cadillac with Mechanical Closing Unit	8-6
Strikers, Lock - Front and Rear Doors	6-7
Striker Lubrication - Door Lock	2-1
Striker Lubrication - Tail Gate Lock (Station Wagon)	2-5
Support and Arm Rest - Standard Full Width Seat Back - Standard Front Seat	15-21
Support, Arm Rest - Notch Down and Strato Seat Back - Standard Front Seat	15-22
Support Assemblies - Tail Gate	9-2
Support Guide Tube, Strato Back Headrest - Front Seat	15-28
Supports, Strato Back Headrest - Front Seat	15-29

T

Subject	Page No.
Tail Gate Assembly	9-3
Tail Gate Bottom Drain Hole Sealing Strips	9-12
Tail Gate Fabric Cover	12-10
Tail Gate Hinge Lubrication (Station Wagon)	2-5
Tail Gate Lock Striker Lubrication (Station Wagon)	2-5
Tail Gate Window Regulator and Cam Lubrication (Station Wagon)	2-5
Third Seat (Facing Forward), Station Wagon - Seat Belts	15-55
Third Seat (Facing Rearward), Station Wagon - Seat Belts	15-55
Third Seat and Floor Panel - Station Wagon Folding Rear Seat - "A-65" Styles	15-53
Third Seat Back Panel, Folding - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Third Seat Back Trim, Folding - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Third Seat Back Trim or Seat Back Panel - Station Wagon Folding Rear Seat - "A-65" Styles	15-54
Third Seat Cushion Trim - Station Wagon Folding Rear Seat - "A-65" Styles	15-53
Third Seat Cushion, Folding - Three Seat Styles - Station Wagon Rear Seat - "B" Body	15-42
Third Seat Cushion, Folding, Panel and Support - Three Seat Styles - Station Wagon Rear Seats - "B" Body	15-42
Torque Rods - Front Compartment Lid - Corvair	5-8
Torque Rod - Tail Gate	9-11
Torque Rod Adjustment - Rear Compartment Lid	8-3
Torque Rod and Hinge Lubrication - Rear Compartment	2-5
Torque Tube Assembly - Power Operated Four-Way Adjuster - Strato Front Seat	15-37
Transmission Assembly and Drive Cables - Power Operated Four-Way Adjuster - Front Strato Seat	15-36
Transmission Drive Belt and Pulleys and Motor - Power Operated Four-Way Adjuster - Front Strato Seat	15-35
Transmission - Standard Front Seats - "A" Body - Four-Way	15-11
Transmission - Standard Front Seats - "B, C & E" Body - Four-Way	15-13

Subject	Page No.
Transmission - Standard Front Seats - "B, C & E" Body - Six-Way	15-16
Trim - Rear Quarter	14-9
Trim Assembly - Compartment Shelf - All Except "E" Styles	14-25
Trim Assembly - Complete - Folding Top	13-1
Trim Assemblies - Door - "A-F" Styles	14-6
Trim Assemblies - Door - "B-C-E" Styles	14-4
Trim Assemblies - Doors - "X" Styles	14-8
Trim Assemblies - Door - "Z" Styles	14-9
Trim Assemblies - Rear Quarter - "A-80" Styles	14-16
Trim Assemblies - Rear Quarter - "A-B-C" Body and "69 and 39" Styles	14-17
Trim Assemblies - Rear Quarter - "A-B-C" Two-Door Styles (Hang-on Type)	14-12
Trim Assemblies - Rear Quarter - "A-X-Z" Two-Door Styles (Insert Type)	14-14
Trim Assemblies - Rear Quarter - "E" Styles	14-15
Trim Assemblies - Rear Quarter - "F" Styles	14-15
Trim Assemblies - Rear Quarter - "Z-39" Styles	14-17
Trim Assembly - Less Back Curtain - Folding Top	13-14
Trim Cleaning	10-1
Trim Panel - Rear Quarter Front - "A" Station Wagon Styles	14-20
Trouble Diagnosis Procedure, Vacuum Lock - Front Doors	6-82
Tube, Strato Back Headrest Support Guide - Front Seat	15-28

U

Subject	Page No.
Underbody Alignment - Corvair	3-1
Underbody Alignment - Chevy II	3-5
Underbody Alignment - "F" Body Styles	3-12
Upper Channel - Standard Front Seat - "B, C & E" Body - Six-Way	15-16
Upper Glass Run Channel - Tail Gate - "A & B" Body	9-13
Upper Glass Run Channel - Tail Gate - "X" Body	9-14
Up-Travel Stops - All Except "B-C" Styles - Front Door Window	6-56

V

Subject	Page No.
Vacuum Actuator - 68069 & 68169 Styles - Rear Door Lock	6-96
Vacuum Actuator and Lock Assembly - "B-35-45-69" Styles - Rear Doors	6-95
Vacuum Actuator and Lock Assembly - Front Doors	6-38
Vacuum Door Lock Actuator - Front Doors	6-79
Vacuum Door Lock System - Front Door	6-78
Vacuum Lock Remote Control Assembly - Front Doors	6-81
Vacuum Lock Selector Valves - Front Doors	6-79

Subject	Page No.
Vacuum Lock Storage Tank - Front Doors	6-81
Vacuum Lock Trouble Diagnosis Procedure - Front Doors	6-82
Vacuum Release Unit - Rear Compartment Lid	8-7
Vacuum Unlocking System - Rear Compartment Lid	8-7
Valve - Fluid Control - Hydro-Lectric System	13-29
Ventilator and Window Adjustments - 68069 & 68169 Styles - Rear Doors	6-107
Ventilator Assembly and Disassembly - "B-11-35-45-69" Styles - Front Doors	6-48
Ventilator Assembly and Disassembly - All Except "B-11-35-45-57-69" Styles - Front Doors	6-50
Ventilator Assembly, Stationary - "X-35 & 69" Styles - Rear Door Window	6-98
Ventilator Assembly - All Except "B-11-35-45-57-69" Styles - Front Doors	6-49
Ventilator Assembly - "A and X" Closing Styles - Front Doors	6-42
Ventilator Assembly - "A, F, X & Z" Hardtop and Convertible Styles - Front Doors	6-45
Ventilator Assembly - "B-11-35-45 and 69" Styles - Front Doors	6-47
Ventilator Assembly - 68069 & 68169 Styles - Rear Doors	6-106
Ventilator Casting - "X-37" Styles - Front Doors	6-44
Ventilator Division Channel, Stationary - "X-35 & 69" Styles - Rear Door Window	6-97
Ventilator Regulator - 68069 & 68169 Styles - Rear Door	6-106
Ventilator Regulator - Manual and Electric ("B-C" Styles) - Front Doors	6-41
Ventilator Weatherstrip - "A and F" Styles - Front Doors	6-47
Vertical and Horizontal Drive Cables - Standard Front Seats - "A" Body - Four-Way	15-11
Vertical and Horizontal Drive Cables - Standard Front Seats - "B, C & E" Body - Four-Way	15-13
Vertical and Horizontal Drive Cables - Standard Front Seats - "B, C & E" Body - Six-Way	15-16
Vertical Gearnut - Standard Front Seats - "A" Body - Four-Way	15-8
Vertical Gearnut - Standard Front Seats - "B, C & E" Body - Four-Way	15-12
Vertical Gearnut Adjuster - Power Operated Four-Way - Front Strato Seat	15-36
Vertical Gearnut, Front - Standard Front Styles - "B, C & E" Body - Six-Way	15-15
Vertical Gearnut, Rear - Standard Front Seats - "B, C & E" Body - Six-Way	15-15
Vertical Inner Sealing Strip - Rear Quarter Window - "C-47" Styles	7-9
Vinyl Coated and Cloth Headlining - All Styles	11-1

W

Subject	Page No.
Water Deflector - Front and Rear Door Inner Panel	6-4
Water Deflector - Tail Gate Inner Panel	9-1
Weatherstrip - Front and Rear Doors	6-2
Weatherstrip - Rear Compartment - All Styles	8-11
Weatherstrip - Tail Gate Opening	9-12
Weatherstrip Adjustment, Side Roof Rail - Front and Rear Doors	6-14

Subject	Page No.
Weatherstrip - Center Pillar - "C-69" Styles - Front and Rear Doors	6-14
Weatherstrip Retainer, Side Roof Rail - Front and Rear Doors	6-10
Weatherstrip, Ventilator - "A & F" Styles - Front Doors	6-47
Wedge Plates - "67" Styles - Front Door	6-78
Wheelhouse Cover Panel (Right Side) - Rear Quarter - "B" Station Wagon Styles	14-19
Wheelhouse Trim Cover - Rear Quarter - Chevy II Station Wagon Styles	14-24
Wheelhouse Trim Cover Assembly (left side) - All "A" Station Wagon Styles Except 23335	14-21
Wheelhouse Trim Cover Panel (Right Side) - "A" Station Wagon Styles	14-20
Window Adjustments - Rear Quarter - "A & B" Closed Styles	7-3
Window Adjustments - Rear Quarter - "X" Closed Styles	7-4
Window and Ventilator Adjustments - 68069 & 68169 Styles - Rear Doors	6-107
Window Assembly - "A-39" Styles - Rear Doors	6-99
Window Assembly - All "B-C 39" Styles and All "C-49 & 69" Styles Except 68069 and 68169 Styles - Rear Doors	6-103
Window Assembly - All Closed Styles - Rear Doors	6-99
Window Assembly - 68069 and 68169 Styles - Rear Doors	6-104
Window Assembly - "Z-39" Styles - Rear Door	6-108
Window Assembly - "A and X" Closed Styles - Front Doors	6-51
Window Assembly - "A-17-67" Styles - Front Doors	6-56
Window Assembly - "A-39" Styles - Front Door	6-55
Window Assembly - All "B-C" Except B-11-35-45-57-69" Styles - Front Door	6-65
Window Assembly - "B-11-35-45-69" Styles - Front Doors	6-64
Window Assembly - "E" Styles - Front Doors	6-58
Window Assembly - "F" Styles - Front Doors	6-60
Window Assembly - "X-37" Styles - Front Doors	6-62
Window Assembly - "Z" Styles - Front Doors	6-63
Window Assembly - 26657 Style - Front Doors	6-67
Window Assembly - Manual or Electric - Tail Gate	9-4
Window Assembly - Rear Quarter - All Hardtop and Convertible Styles Except "B-C"	7-10
Window Assembly - Rear Quarter - "A & B-11" and "A-07" Styles	7-2
Window Assembly - Rear Quarter - "B-C 47-57-67-87" Styles	7-20
Window Assembly - Rear Quarter - "X-11" Style	7-4
Window Electric Regulator Motor Assembly - Tail Gate	9-5
Window Front Glass Run Channel - Rear Quarter - All Closed Styles	7-8
Window Front Guide Channel - "E" Styles - Front Doors	6-74

Subject	Page No.
Window Front Guide - Rear Quarter - "B-C 47-57-67-87" Styles	7-25
Window Front Guide - 26657 Style - Front Doors	6-76
Window Front Guide Assembly - Rear Quarter - "A-X-Z" Hardtop and Convertible Styles and "E-87" Styles	7-25
Window Front or Rear Guide - "Z-39" Styles - Rear Doors	6-114
Window Glass Run Channel - "A-35-55-65 & 69" Styles - Rear Doors	6-110
Window Glass Run Channel - "B-11-35-45-69" Styles - Front Doors	6-76
Window Glass Run Channel - "B-35-45 & 69" Styles - Rear Door	6-111
Window Glass Run Channel - Rear Quarter - "E-47" Styles	7-26
Window Glass Run Channel - "X-37" Styles - Front Doors	6-75
Window Glass Run Channel - "X-11-35-69" Styles - Front Doors	6-75
Window Glass Run Channel - "X-35 & 69" Styles - Rear Doors	6-113
Window Guide (Front or Rear) - All "B-C 39" & "C-49-69" Styles Except 68069 - 68169 Styles - Rear Doors	6-112
Window Guide and Guide Plate Assembly - All "B-C" Except "B-11-35-45-57-69" Styles - Front Doors	6-76
Window Guide Assembly - Rear Quarter - All "F" Styles	7-26
Window Guide Assembly - Rear Quarter - "X-11" Styles	7-8
Window Guide Channels - "A-39" Styles - Rear Doors	6-111
Window Inner and Outer Strip Assemblies - Tail Gate	9-12
Window Lower Glass Run Channels - Tail Gate	9-7
Window Lower Sash Channel Cam - "E-F-Z" Styles - Front Doors	6-53
Window Lower Sash Channel Cam - All Except "X" Styles - Rear Doors	6-96
Window Outer Strip Assembly - Rear Quarter - All Closed Styles	7-9
Window Rear Glass Run Channel - "A-17-39-67" Styles - Front Doors	6-73
Window Rear Glass Run Channel - "Z" Styles - Front Doors	6-75
Window Rear Glass Run Channel - Rear Quarter - All Closed Styles	7-7
Window Rear Guide - 26657 Styles - Front Doors	6-77
Window Rear Guide Assembly - Rear Quarter - "A-X-Z" Hardtop and Convertible Styles and "E-87" Styles	7-26
Window Rear Guide Channel - "E" Styles - Front Door	6-74
Window Rear Guide Assembly - "F" Styles - Front Door	6-74
Window Rear Vertical Inner Sealing Strip - Rear Quarter - "C-47" Styles	7-9
Window Regulator - Electric - "B-35-45-69" Styles - Front Doors	6-72
Window Regulator - Manual - "B-11-35-45-69" Styles - Front Doors	6-72
Window Regulator (Manual or Electric) - Rear Quarter - "A, B & X" Closed Styles	7-5
Window Regulator (Manual or Electric) - Front Doors - "A-E-F-X-Z" Styles	6-70

Subject	Page No.
Window Regulator (Manual or Electric) - Front Doors - All "B-C" Except "B-11-35-45-57-69" Styles	6-71
Window Regulator (Manual or Electric) - Rear Doors - All "B & C" Styles	6-114
Window Regulator (Manual or Electric) - Rear Quarter - "B-C 47-57-67-87" Styles	7-22
Window Regulator (Manual or Electric) - 26657 Styles - Front Doors	6-71
Window Regulator (Manual or Electric) - Tail Gate	9-5
Window Regulator and Cam Lubrication, Door - Styles with Upper Frames	2-2
Window Regulator and Cam Lubrication, Tail Gate - Station Wagon	2-5
Window Regulator Assembly (Manual or Electric) - Rear Quarter - "A, E, F, X & Z" Hardtop and Convertible Styles	7-24
Window Regulator Assembly - "A-Z 39" Styles - Rear Doors	6-116
Window Regulator Assembly - "A-35-55-65 & 69" Styles and "X-35 & 69" Styles - Rear Doors	6-114
Window Regulator Cams and Guides Lubrication - Rear Quarter	2-4
Window Regulator Cams and Guides Lubrication - Styles with Upper Frames	2-2
Window Regulator Electric Motor - Front Doors	6-72
Window Regulator Electric Motor Removal - Rear Door	6-116
Window Regulator Handle - Rear Quarter	14-9
Window Regulator Outside Handle - Tail Gate - Manual or Electric	9-7
Window Sash Channel Guide Plate - "A-17-39-67" Styles - Front Doors	6-54
Window Stationary Ventilator Assembly - "X-35 & 69" Styles - Rear Doors	6-98
Window Stationary Ventilator Division Channel - "X-35 & 69" Styles - Rear Doors	6-97
Window Up-Travel Stops - All Except "B-C" Styles - Front Doors	6-55
Windshield Glass - Rubber Channel - Adhesive Caulking	4-7
Windshield Glass - Adhesive Caulked Type	4-4