

SECTION 10

BODY

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GENERAL INFORMATION

BODY NAME PLATE

A body name plate containing style, trim, body and paint identification numbers is attached to the interior left side of the engine compartment for the convenience of the serviceman (see Section 1).

BODY LUBRICATION

The movable mechanical parts of the body are lubricated at the factory to insure proper and quiet operation. Because of the frequent use of some parts

such as door locks and door lock strikers, it is important that these readily accessible parts be lubricated at least twice a year. Other body parts should be lubricated whenever access to the parts is available.

Refer to "Section 2—Lubrication and General Maintenance" for complete body lubrication information.

BODY WIRING

Refer to "Section 8—Electrical Systems" for complete body wiring information.

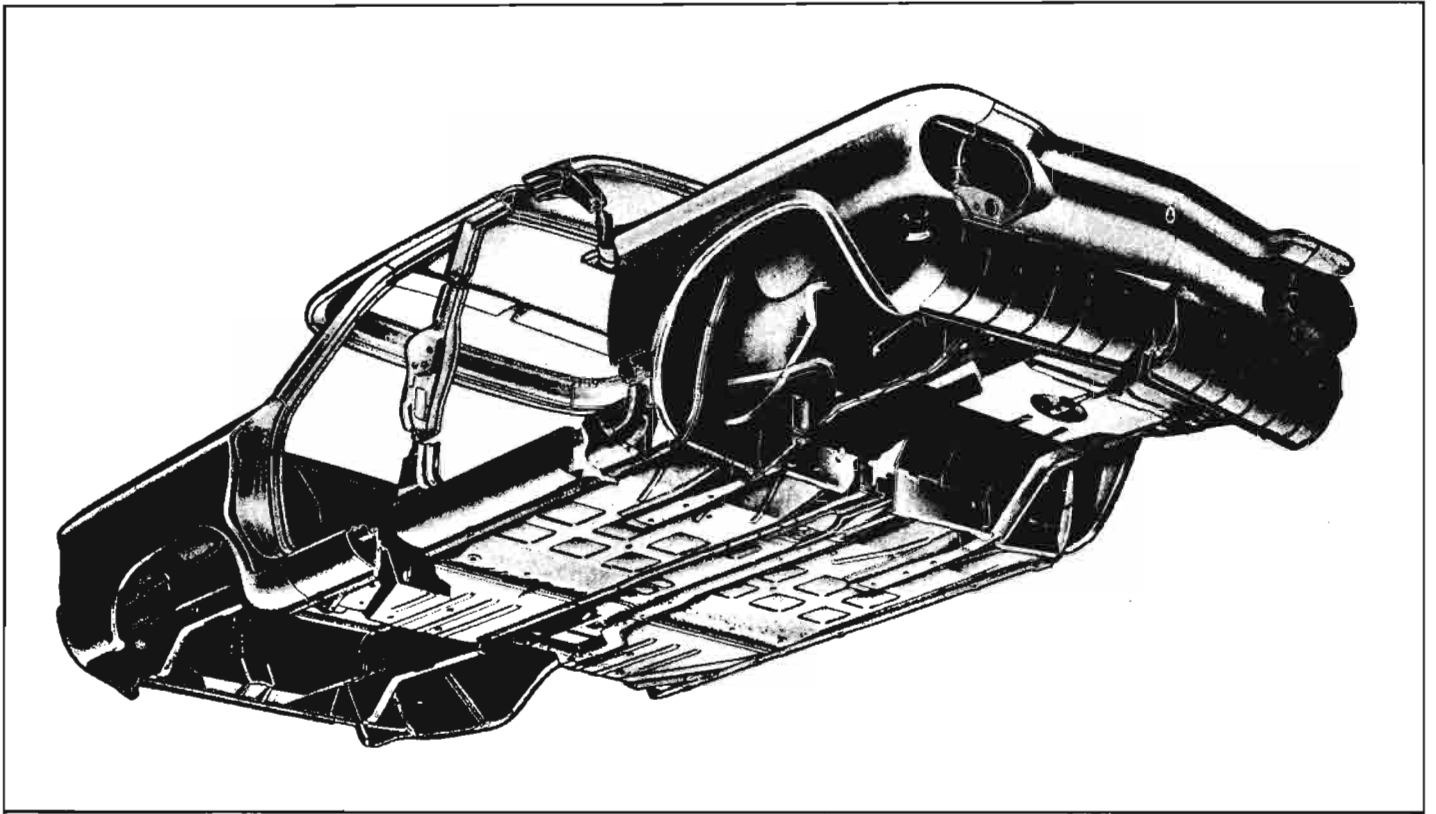


Fig. 10-1—Corvair Body Shell Construction—Lower Front Quarter View

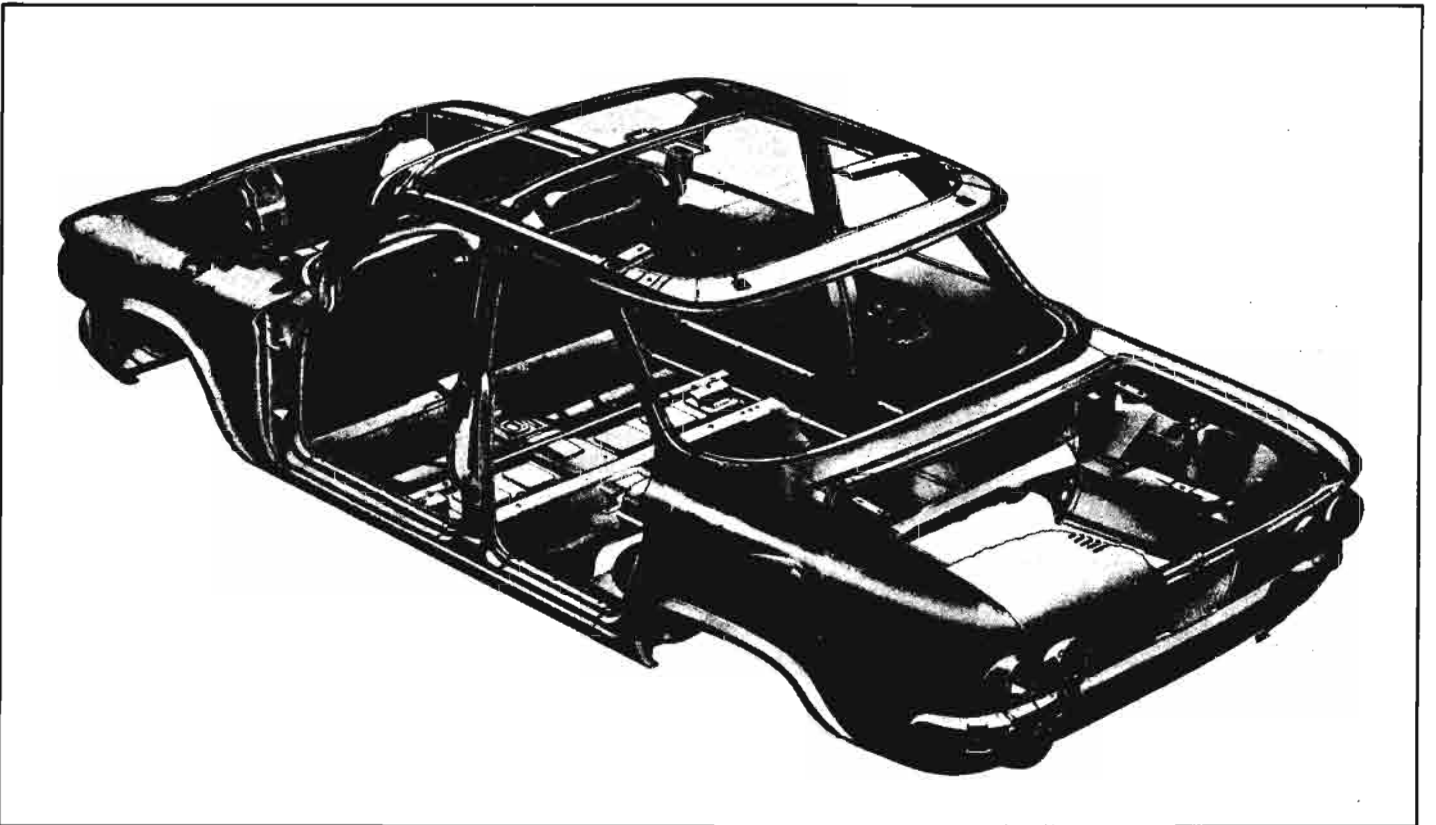


Fig. 10-2—Corvair Body Shell Construction—Rear Quarter View

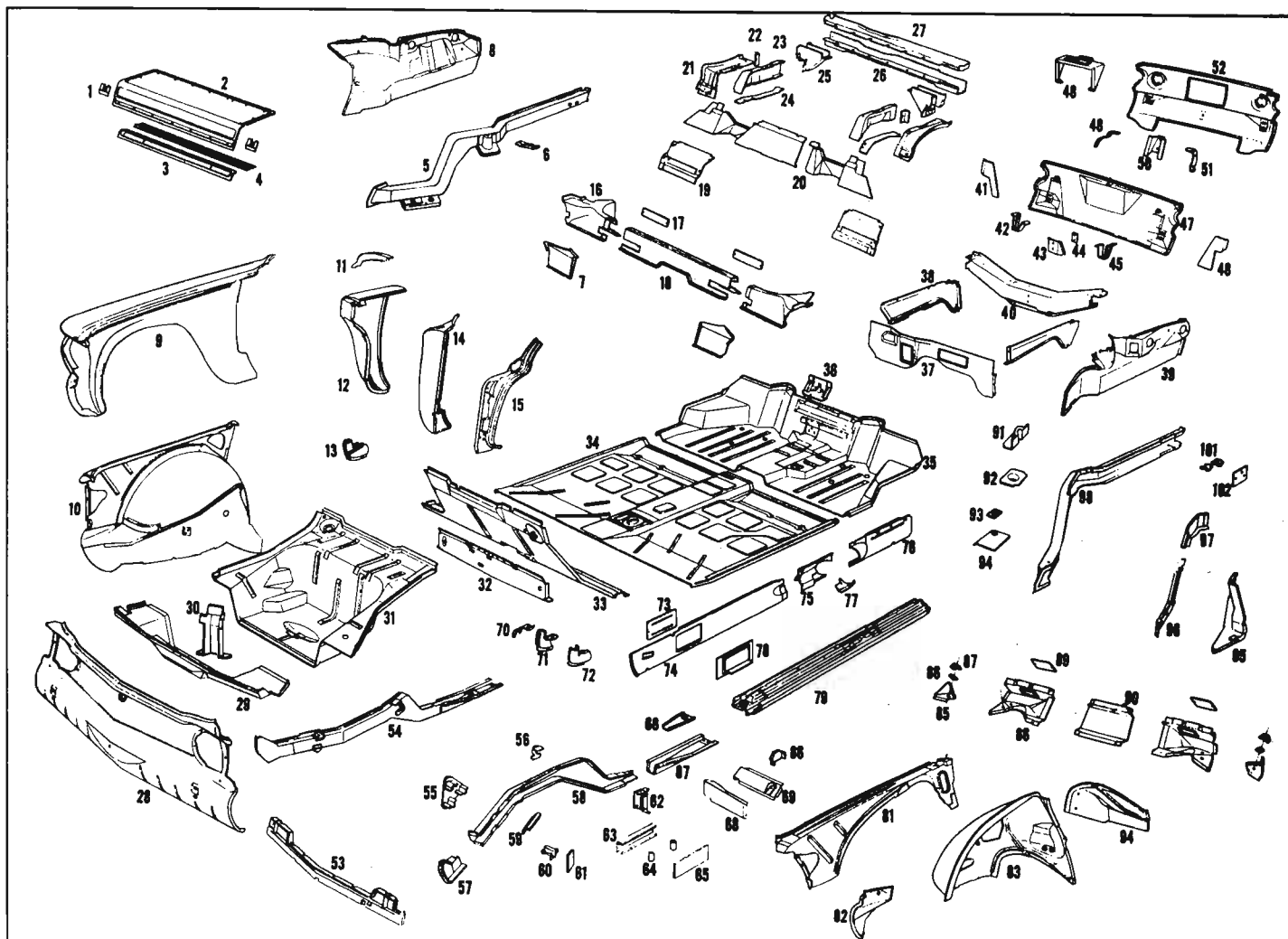


Fig. 10-3—Exploded View of Underbody, Front End and Shroud Sheet Metal

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|---|--|---|
| <ol style="list-style-type: none"> 1. Support—Heat Exchanger Bolt 2. Cover—Heat Exchanger Opening 3. Reinforcement—Heat Exchanger Opening Cover Front 4. Reinforcement—Heat Exchanger Opening Cover Rear 5. Rail Assembly—Engine Compartment Side 6. Reinforcement—Rear Seat Pan Rear To Side Rail 7. Filler—Rear Seat Pan (Two-Door Style Only) 8. Panel—Rear Quarter Side Inner and Wheelhouse—Right 9. Panel—Front Fender 10. Panel Assembly—Front Wheelhouse 11. Plate—Shroud Lower To Front Fender Baffle 12. Panel—Shroud Lower To Front Fender Baffle 13. Connector Assembly—Rocker To Pillar Hose 14. Panel—Front Body Hinge Pillar Front 15. Panel—Front Body Hinge Pillar Outer Rear 16. Support—Rear Seat Outer 17. Cover—Rear Seat Support Heater Opening 18. Support—Rear Seat Center 19. Cover—Rear Seat Pan Duct 20. Extensions—Rear Seat Front Pan Rear 21. Extension—Heat Exchanger Opening Cover | <ol style="list-style-type: none"> 22. Extension—Heat Exchanger Opening Cover Support 23. Support—Heat Exchanger Opening Cover 24. Reinforcement—Engine Compartment Side Rail to Heat Exchanger Opening Cover Support 25. Support—Division Panel Reinforcement To Side Rail 26. Reinforcement—Engine Compartment Cover Panel (At Hinge) Lower 27. Reinforcement—Engine Compartment Cover Panel (At Hinge) Upper 28. Panel—Front End 29. Pan—Front Compartment Front 30. Reinforcement—Front Compartment Pan (At License Plate) 31. Pan—Front Compartment Rear 32. Bar—Toe Pan Cross—Lower 33. Pan—Toe 34. Pan—Floor 35. Pan—Rear Seat Rear 36. Reinforcement—Rear Seat Pan Front (At Cordon Shaft) 37. Plate—Engine Compartment Baffle—Front 38. Plate—Engine Compartment Baffle—Side 39. Panel—Rear Quarter Side Inner and Wheelhouse—Left 40. Rail—Engine Compartment Rear Cross Filler—Rear End Inner Panel (At Bumper Depression)—Right | <ol style="list-style-type: none"> 42. Reinforcement—Rear End Panel—Right 43. Reinforcement—Engine Mount Rear Support 44. Plate—Engine Mount Tapped 45. Reinforcement—Rear End Panel—Left 46. Filler—Rear End Inner Panel (At Bumper Depression)—Left 47. Panel—Rear End Inner 48. Housing—Rear End Panel License Plate 49. Filler—Rear End Outer Panel—Right 50. Plate—Rear Bumper Mounting 51. Filler—Rear End Outer Panel—Left 52. Panel—Rear End Outer 53. Rail—Front Compartment Cross 54. Rail Assembly—Front Compartment Pan Side 55. Spacer and Plate—Front Compartment Pan Side Rail—Left 56. Support—Gas Tank Strap 57. Support—Front Bumper 58. Rail—Front Compartment Pan Side 59. Reinforcement—Front Compartment Side Rail (At Steering Gear) 60. Spacer—Front Compartment Side Rail (At Bumper) 61. Reinforcement—Front Compartment Side Rail (At Bumper) 62. Reinforcement—Front Compartment Side Rail (At Stabilizer) |
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- | | | |
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| <ul style="list-style-type: none"> 63. Reinforcement—Front Compartment Side Rail Inner (At Suspension) 64. Spacers—Front Wheel Suspension 65. Reinforcement—Front Compartment Side Rail Outer (At Suspension) 66. Reinforcement—Floor Pan Side Rail (At Hold Down) 67. Rail—Floor Pan Side Rail 68. Reinforcement—No. 1 Floor Pan Bar 69. Bar No. 1—Floor Pan 70. Support—Rocker To Pillar Hose Connector 71. Connector—Rocker To Pillar Hose—Inner 72. Connector—Rocker To Pillar Hose—Outer 73. Cover—Rocker Inner Front Heater Opening 74. Panel—Rocker Inner Front 75. Panel—Rocker Inner Center 76. Panel—Rocker Inner Rear | <ul style="list-style-type: none"> 77. Reinforcement—Rocker Inner Center To Rear Panel 78. Reinforcement—Rocker Inner Front Duct Opening 79. Panel—Rocker Outer 80. Filler—Toe Pan To Floor Rail End 81. Panel—Front Wheelhouse Upper 82. Extension—Front Wheelhouse Lower Panel Front 83. Panel—Front Wheelhouse Lower 84. Extension—Front Wheelhouse Lower Panel Rear 85. Support—Rear Suspension Outer Mounting—Front 86. Nut—Rear Suspension Front Mounting 87. Retainer—Rear Suspension Front Mounting Nut 88. Reinforcement—Rear Seat Pan (At Kick-Up) Side 89. Cover—Rear Seat Pan Reinforcement Heater Opening | <ul style="list-style-type: none"> 90. Reinforcement—Rear Seat Pan (At Kick-Up) Center 91. Brace—Rear Wheel Suspension Outer Mounting Support 92. Support—Rear Wheel Suspension Outer Mounting Support 93. Plate—Rear Body Hold Down Nut Mounting 94. Reinforcement—Engine Compartment Side Rail (At Hold Down) 95. Filler—Engine Compartment Side To Rocker Inner Panel 96. Reinforcement—Engine Compartment Side Rail Outer (At Kick-Up) 97. Reinforcement—Engine Compartment Side Rail Outer 98. Rail—Engine Compartment Side 99. Spacer—Engine Compartment Side Rail (At Bumper) 100. Reinforcement—Engine Compartment Side Rail (At Bumper) |
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BODY SHELL

GENERAL BODY CONSTRUCTION

The body design used on the 1961 Chevrolet Corvairs is of an integral, all steel, welded 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. This type of integral construction eliminates the conventional independent chassis frame and has become

known as the "unitized" type of body construction. Figures 10-1 and 10-2 illustrate the construction of the Corvair metal body shell.

Figure 10-3 illustrates the major assemblies, sub-assemblies and various individual components that make up the underbody, front end sheet metal and shroud assembly portion of the unitized body shell. These illustrations primarily show construction details of the parts and are intended as a guide to parts nomenclature. They do not necessarily reflect a breakdown of available service replacement parts.

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. Particularly critical are the enclosed box areas. 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 of primer surfacers.

ALIGNMENT CHECKING PROCEDURES

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, station wagon back door 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 $\frac{1}{16}$ " 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 Corvair 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.

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 from a length of 8" to a length of 108". At least one of the vertical pointers must be capable of a minimum reach of 17".

Dimensions shown in the upper portion of Figure 10-4 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 always 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 10-4.

A proper tramming tool is essential for analyzing

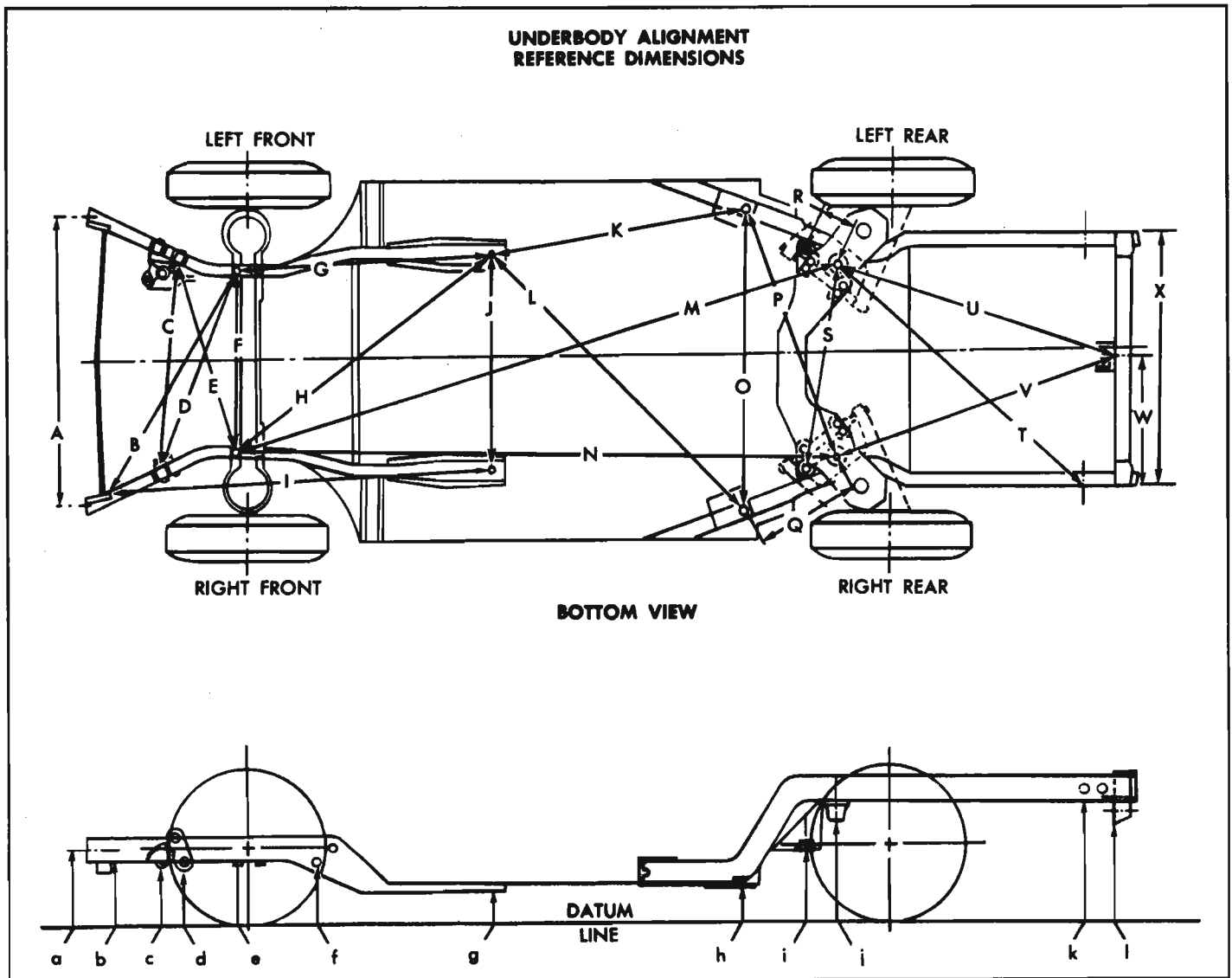


Fig. 10-4—Underbody Alignment

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 10-5. 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—Figure 10-4

Dimensions to gauge 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.

The dimensions and locations presented below are illustrated in Figures 10-4, 10-6 and 10-7.

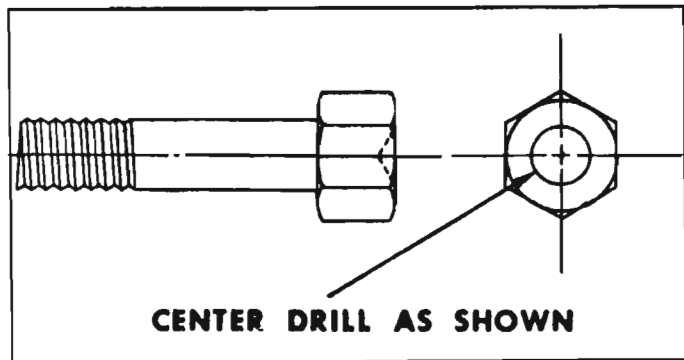


Fig. 10-5—Tram Gage Centering Bolt

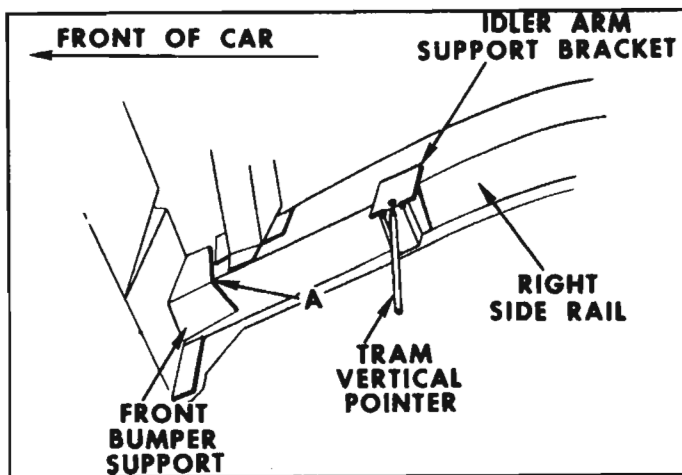


Fig. 10-6—Alignment Reference Points

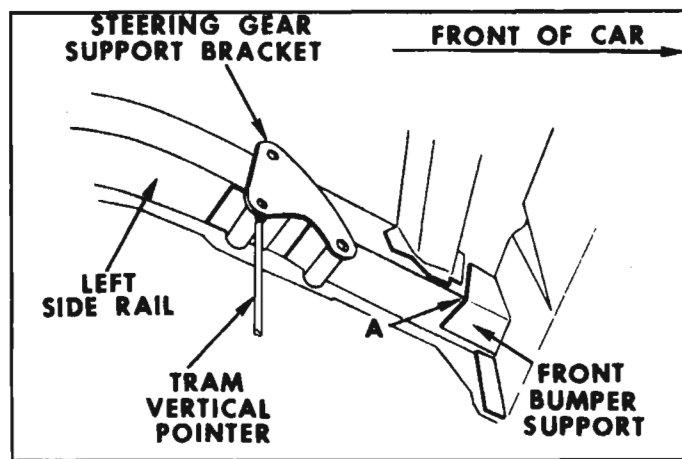


Fig. 10-7—Reference Points at Steering Gear Plate

HORIZONTAL DIMENSIONS

Reference Fig. 10-4	Dimension	Location
A	42 ⁵ / ₃₂ "	Center of bumper bracket lower attaching bolt holes.
B	35 ¹¹ / ₃₂ "	Front suspension crossmember front attaching bolt and front compartment side rail inner lower corner at rear of bumper support bracket (see point "A," fig. 10-6 and fig. 10-7).
C	30 ⁵ / ₈ "	Lower inner surface of idler arm support lower bracket at a point directly below center of the attaching bolt hole (see fig. 10-7) and lower edge of steering gear reinforcement plate at a point directly below center of the rear attaching bolt hole (see fig. 10-6).
D	30 ³¹ / ₃₂ "	Lower inner surface of idler arm support lower bracket at a point directly below center of the attaching bolt hole (see fig. 10-7) and center of front crossmember front attaching bolt on left side rail.
E	29 ²⁷ / ₃₂ "	Lower edge of steering gear reinforcement plate at a point directly below center of the rear attaching bolt hole (see fig. 10-6) and center of front crossmember front attaching bolt on right side rail.
F	27 ¹⁷ / ₃₂ "	Front suspension crossmember front attaching bolts.
I	49 ³ / ₄ "	Center of threaded hole at body front tie-down strap location and front compartment frame side rail inner lower corner at rear of bumper support bracket (see point "A" in fig. 10-6 and fig. 10-7).

HORIZONTAL DIMENSIONS—Continued

Reference Fig. 10-4	Dimension	Location
J	33 $\frac{1}{32}$ "	Body front tie-down strap locations.
K	55 $\frac{5}{32}$ "	Body front tie-down strap location and body rear tie-down strap location.
L	67 $\frac{5}{32}$ "	
M	107 $\frac{1}{2}$ "	Center of front suspension crossmember front attaching bolt and center of rear suspension crossmember outer mounting bolt.
N	103 $\frac{1}{16}$ "	
O	44 $\frac{1}{32}$ "	Center of threaded hole at body rear tie-down strap locations.
P	40 $\frac{15}{32}$ "	Center of threaded hole at body rear tie-down strap locations and center of rear suspension crossmember outer mounting bolt.
Q	15 $\frac{1}{16}$ "	
R	8 $\frac{5}{32}$ "	Center of rear suspension inner mounting bolt hole to center of rear suspension outer mounting bolt hole on same side of car (engine and suspension system removed).
S	33 $\frac{5}{8}$ "	Center of rear suspension inner mounting bolt to center of rear suspension outer mounting bolt on opposite side of car.
T	49 $\frac{15}{16}$ "	Center of rear suspension crossmember outer mounting bolt and engine compartment side rail outer flange at a point directly under the center of the rear bumper bracket front attaching bolt hole.
U	43 $\frac{11}{16}$ "	Center of rear suspension crossmember outer mounting bolt or bolt hole and front lower edge of rear crossrail at a point directly below center of lower attaching bolt hole for engine rear mount bracket.
V	43 $\frac{1}{16}$ " (Sedans)	
W	19 $\frac{3}{16}$ " (Sedans)	Engine compartment right side rail outer flange and front lower edge of rear crossrail at a point directly below center of lower attaching bolt hole for engine rear mount bracket.
X	39"	Engine compartment side rail outer flanges at rear bumper bracket forward attaching bolt holes.

VERTICAL DIMENSIONS

Reference Fig. 10-4	Dimension	Location
a	13 $\frac{5}{32}$ "	Center of bumper bracket lower attaching bolt holes.
b	10 $\frac{9}{32}$ "	Front compartment side rail inner lower corner at rear of bumper support bracket (see point "A" in fig. 10-6 and fig. 10-7).
c	91 $\frac{7}{32}$ "	Lower inner surface of idler arm support lower bracket at a point directly below center of the attaching bolt hole (see fig. 10-7).
d	91 $\frac{3}{32}$ "	Lower edge of steering gear reinforcement plate at a point directly below center of the rear attaching bolt hole (see fig. 10-6).
e	10 $\frac{9}{32}$ "	Front compartment side rail at front suspension crossmember front attaching bolt hole.
*e	92 $\frac{5}{32}$ "	Center of lower surface of front suspension crossmember front attaching bolt head.
f	9 $\frac{3}{16}$ "	Center of stabilizer support bracket lower attaching bolt.
g	4"	Body front tie-down strap location. Bottom surface of weld nut.
h	5 $\frac{9}{32}$ "	Body rear tie-down strap location. Bottom surface of weld nut.
i	92 $\frac{3}{32}$ "	Lower surface of rear seat pan reinforcement panel at rear suspension inner mounting location. For vertical check with engine and suspension system removed.
j	15 $\frac{1}{4}$ "	Rear suspension crossmember outer mounting support at attaching bolt hole.
*j	13 $\frac{7}{16}$ "	Lower surface of rear suspension crossmember outer mounting attaching bolt head.
k	161 $\frac{1}{32}$ "	Lower surface of engine compartment side rail outer flange at a point directly under the center of the rear bumper front attaching bolt hole.
l	9 $\frac{1}{2}$ " (Sedans)	Front lower edge of rear crossrail at a point directly below center of lower attaching bolt hole for engine rear mount bracket.

*With Suspension Systems Installed

Principles of Trimming

In the upper portion of Figure 10-4, dimensions B, G, H, I, K, L, M, N, P, Q, R, S and T are of equal distance to the same matching points on the opposite side of the body. For example when performing a cross-check of the body floor pan area, dimension "L" should measure the same distance in both diagonal directions of the cross-check operation.

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

- The horizontal dimension between the two points to be trammed.
- The vertical dimension from the datum line to the points to be trammed. As an example, Figure 10-4 indicates that the diagonal measurement (calculated on a horizontal plane) between reference points of dimension line "N" is $103\frac{7}{16}$ inches. With the front and rear suspension systems removed, the specifications from the datum line indicate a vertical height difference of $4\frac{3}{32}$ inches between the forward location of dimension "N" (at vertical dimension e) and the rearward location of dimension "N" (at vertical dimension j). The vertical pointer used at the rearward location should be positioned so as to extend $4\frac{3}{32}$ inches further from the tram bar than the pointer used at the forward 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:

- Place the car on level surface.
- The weight of the car should be supported at the wheel locations.
- A visual damage inspection should be made to eliminate needless measuring. Obviously damaged or misaligned areas can often be located by sight.

Trimming Sequence

The trimming sequence will vary depending upon the nature and location of the misaligned area. Basically there are eight key points that should be utilized when making underbody alignment checks. These locations are:

Front and rear body tie-down strap attaching holes (4, Fig. 10-4)

Front suspension crossmember front attaching bolts (2, Fig. 10-4)

Rear suspension crossmember outer mounting bolts (2, Fig. 10-4)

Prior to performance of any trimming 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 two conditions of "twist" and "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 tie-down strap locations in the 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 the key 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.

REPAIRS

REAR SUSPENSION CROSSMEMBER ATTACHING BOLT LOCATIONS

The rear suspension crossmember assembly is attached to the body at two outer and inner mounting locations. At each outer mounting location one attaching bolt extends upward through the crossmember and attaches to a weld-nut in the suspension outer mounting assembly. The outer mounting assembly is an integral part of the engine compartment frame side rail.

The rear suspension crossmember inner mounting bolts extend upward through the crossmember into caged, tapped plates located inside the rear seat pan reinforcement.

When either the weld-nuts on the outer mounting or the tapped plates on the inner mounting are damaged, the repairs will be made by using the Heli-Coil type of thread replacement if nuts are still in place and stripped. If nuts are loose or if the mounting supports housing the nuts are defective, the mount parts which are welded to the frame member of the body will have to be replaced. Service Operations for both nut repair and mount part replacement follow:

Replacing Mount Support Threads

- Remove rear suspension crossmember assembly as outlined in Section Three.
- From under the vehicle, drill out and tap damaged threads to accept $\frac{7}{16}$ " National Coarse Heli-Coil type thread insert.
- Reassemble as outlined in Section Three.

Replacing Forward Inner Crossmember Mounting Support Nut

- Remove crossmember assembly as outlined in Section Three.

2. Remove rear seat and wheelhouse trim.
3. Locate point on floor directly above weldnut by measuring as shown in Figure 10-8. Indent with center punch and drill 2" hole with hole saw.

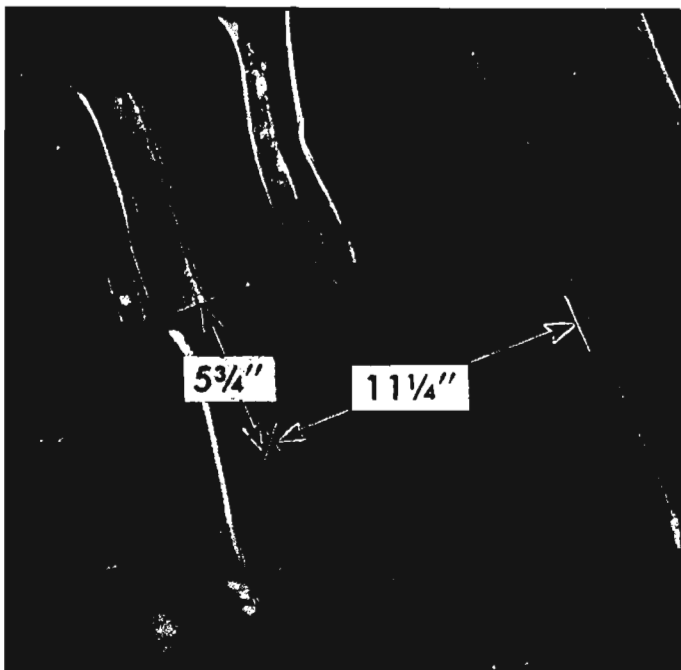


Fig. 10-8—Floor Area for Forward Mount Repair

4. Prepare weldnut mounting area as necessary and position new nut for welding using as a guide the body tramping instructions in this section.
5. Securely weld the nut in place; paint weld area with rust proof coating and cover 1½" hole with water proof tape. (Material cut out with hole saw may be welded back into position if desired.)
6. Replace crossmember assembly as outlined in Section Three.

Replacing Rear (Outer) Mounting Support Cup and Nut Assembly

1. Remove rear crossmember assembly as outlined in Section Three.
2. Using Tool J-8943 or its equivalent, drill out spot-welds holding cup assembly to body frame member (fig. 10-9). Remove arc welds by grinding.
3. Prepare cup mounting area for installation of new cup by grinding off all excess material left after weld removal.
4. Carefully position new cup for welding, using as a guide, the body tramping instructions in this section.
5. Securely weld new cup assembly to body frame member. Cover weld area with rust proof paint when welding is completed.
6. Replace rear crossmember as outlined in Section Three.

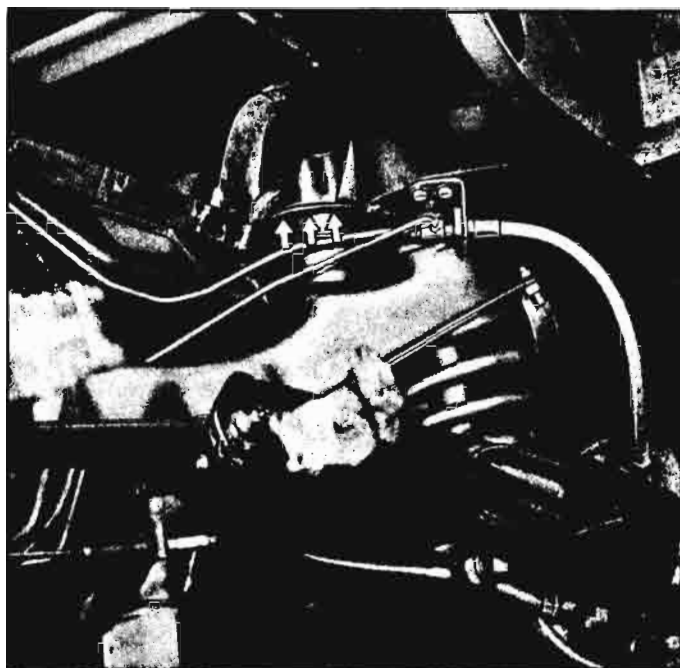


Fig. 10-9—Spot Weld Area—Rear Mount

FRONT SUSPENSION CROSSMEMBER CAGE NUTS

Removal and Installation

1. From underneath front of car, remove front suspension crossmember attaching bolt at affected location.
2. Bend up inboard retaining lip of cage nut retainer. Front and rear retaining lips are spot welded to front compartment pan side rails.
3. Slide cage nut out of retainer.
4. Install new cage nut into retainer and rebend inboard retaining lip into original position.
5. Install new front suspension crossmember attaching bolt.

FRONT FENDER OUTER PANEL

The front fender outer panel is a single, stamped panel which is spot welded to other body components. The upper inner edge of the panel, combined with the upper edge of the front wheelhouse upper panel, forms the side gutter section for the front compartment lid. The left front fender provides an opening for the gas tank filler neck.

Removal

1. Remove front bumper face bar and bumper bracket on side affected. When replacing left front fender, remove gas tank assembly.
2. Remove head lamp and parking lamp assembly.
3. Remove front door assembly.
4. Along inside upper edge of fender, remove front

compartment weatherstrip sufficiently to prevent damage during cutting and welding operations.

5. Remove cowl top grill panel.
6. If damage to fender extends into windshield opening, it will be necessary to remove windshield glass assembly and remove fender panel at windshield pinchweld. If fender panel is undamaged at this area, remove old panel by cutting at area indicated by broken line in Figure 10-10. Sectioning new fender at this location will save time and labor.
7. Using drill or air chisel, cut spot welds securing

fender panel to body hinge pillar and rocker panel indicated in "A" in Figure 10-11.

8. Cut spot welds that attach front fender panel to body front panel assembly and headlamp pocket panel indicated at "A" in Figure 10-12.
9. Along upper inner edge (gutter area), cut spot welds that secure fender panel to wheelhouse upper panel indicated at "A," Figure 10-12.
10. Cut spot welds securing fender panel to cowl top center panel indicated, "B" in Figure 10-12. If windshield has been removed, cut welds securing fender panel to windshield pinchweld indicated at "C," Figure 10-12.

NOTE: When replacing left front fender panel, it will be necessary to salvage gas tank filler neck housing from original fender or replace it with new housing prior to installation of new fender outer panel.

Installation

1. Clean off all sealer at areas to be welded. This prevents fire and excessive smoke during welding operations.
2. Straighten and align all panels that attach to fender outer panel.
3. Place new panel into position and hold in place using locking pliers or clamps. Make sure rubber gasket is positioned properly at joint of gas tank filler neck cover and gas tank filler neck pocket.
4. Check and adjust panel to provide proper alignment with adjacent parts. If new fender panel is to be sectioned forward of windshield opening, mark and trim new panel. Prepare new and old panels for splicing.
5. Tack weld panel at several locations and remove clamps. Maintain constant check on panel align-

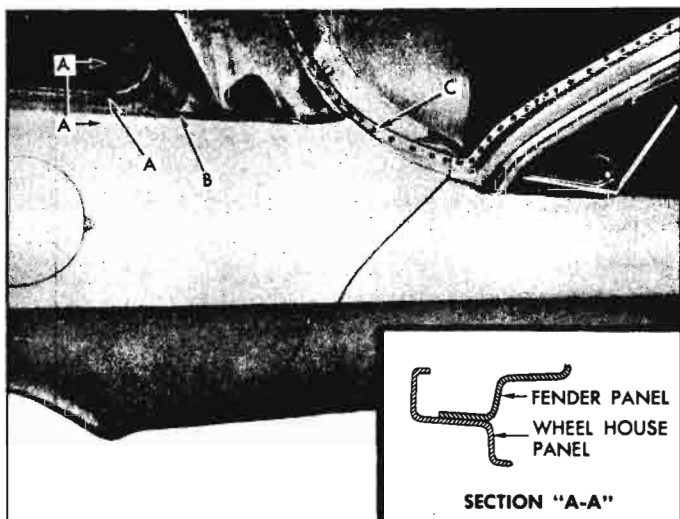


Fig. 10-10—Fender Panel Attachment at Windshield, Cowl and Wheelhouse

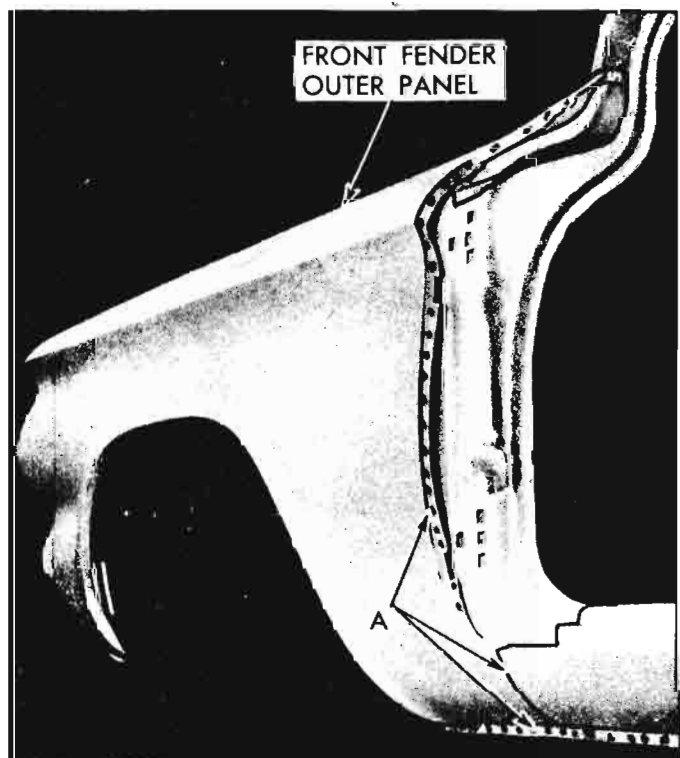


Fig. 10-11—Fender Panel Welds at Hinge Pillar and Rocker Panel

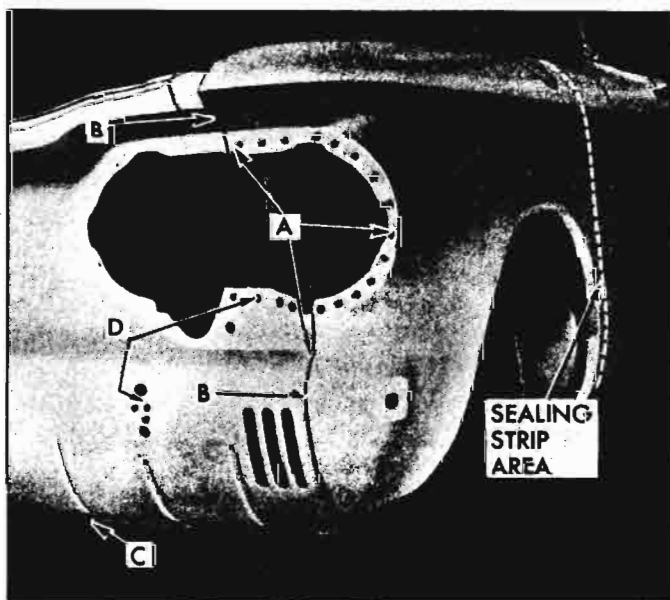


Fig. 10-12—Fender Panel and Front End Panel Welds in Headlamp Area (Typical)

ment during welding operations and weld panel securely into position. If gas welding (oxy-acetylene) is being used, make welds one-half inch long; space each weld about one inch apart. Whenever possible, weld any previously drilled holes closed. If spot welder is being used, locate new welds in same relative position as original spot welds.

6. If old fender panel was removed by cutting ahead of windshield opening, complete splicing operation (including solder filling). Use care not to burn windshield rubber channel or rubber sealing strip which is installed between cowl lower panel and fender outer panel as indicated in Figure 10-12.
7. Solder fill all previously soldered joints.
8. Wire brush and sand underside of panels where zinc base primer has been burned by welding. Re-prime bare metal areas using zinc-chromate type of primer. Do not use combination type of primer-surfacer.
9. Using medium-bodied sealer, seal all joints that will allow water or dust to enter front compartment area.

NOTE: It is important that tight seal is established at vertical rubber sealing strip located between front fender outer panel and cowl lower panel. If seal is not intact along its entire length (from rocker panel to wheelhouse upper panel), use underbody or medium-bodied sealer and reseal affected area.

10. After refinishing operations have been completed, install previously removed parts.

FRONT END PANEL ASSEMBLY

The body front end panel assembly is comprised of the front end panel, the front compartment lid front gutter and the front compartment lid bumper stops. The upper edge of the assembly forms the forward section of the front compartment lid opening. The outer ends of the panel assembly are stamped to form a part of the headlamp openings. Piercings located in the lower front section of the panel assembly allow the attaching bolts for the bumper and license brackets to pass through and attach to the inner construction. The front compartment lid lock cylinder is located in the top center area of the panel.

Removal

1. Remove front bumper face bar with supporting brackets.
2. Remove license plate bracket.
3. Remove both headlamp and parking lamp assemblies.
4. Detach front compartment lid weatherstrip along upper edge of front end panel sufficiently to prevent damage during cutting and welding operations.

5. Remove front compartment lid lock and lock cylinder assembly.
6. Using drill or air chisel, cut spot welds securing front end panel assembly to front fenders at locations indicated at "B" in Figure 10-12.
7. Cut spot welds securing front end panel assembly to front compartment front cross rail indicated at "C" in Figure 10-12.
8. Cut spot welds attaching front end panel assembly to bumper supports and headlamp pockets indicated at "D" in Figure 10-12.
9. Drill out spot welds securing front compartment lid lock support to front end panel assembly indicated at "A," in Figure 10-13.
10. Cut spot welds attaching front end panel assembly to front wheelhouse front panel indicated at "B," Figure 10-13.
11. Cut spot welds securing front end panel to front compartment front panel indicated at "C," Figure 10-13.

Installation

1. Clean off all sealer at areas to be welded. This prevents fire and excessive smoke during welding operations.
2. Straighten and align all panels that attach to front end panel.
3. Clamp new front end panel into position. Check and adjust panel to provide proper alignment at front compartment lid opening, headlamp openings and along attaching points at each fender.
4. Tack weld panel at several locations. Remove clamps. Keep constant check on panel alignment and weld panel securely into position. If gas welding (oxy-acetylene) is being used, make welds approximately one-half inch long; space each weld about one inch apart. Wherever possible, make

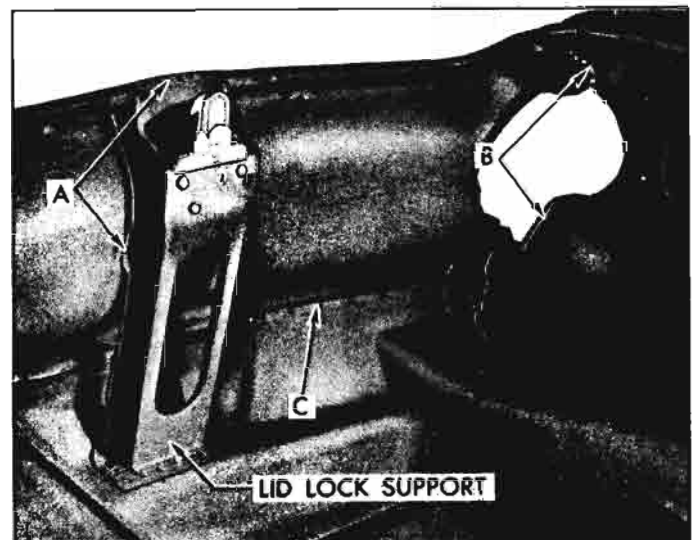


Fig. 10-13—Front End Panel Welds in Front Compartment Area (Typical)

welds at previously drilled holes in attaching panels. If spot welder is being used, locate new welds in same relative position as original spot welds.

5. Welding front end panel assembly to wheelhouse panel front extension and front compartment front panel may cause local distortion in front end panel at welded areas. Solder fill as required to correct distorted surface.

6. Wire brush and sand underside of panels where zinc base primer has been burned by welding. Re-prime bare metal areas using zinc-chromate type of primer. Do not use combination type of primer-surfacer.
7. Seal all joints that will allow water or dust to enter front compartment area.
8. After refinishing operations have been completed, install previously removed parts.

FRONT END

FRONT COMPARTMENT

Each front compartment lid hinge assembly employs the use of an individual torque rod which acts as a counter-balance and hold open for the lid. Holes are provided in the torque rod retainer for adjustment of the rods. The front compartment lid lock assembly is a side action snap-bolt mechanism equipped with a safety latch and is attached 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 closed. To open the lid, the key must be turned partially to the right to unlock the lock and then turned further to the right to unlock the safety catch.

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

FRONT COMPARTMENT LID

Removal and Installation

1. Open front compartment lid. faces of front compartment opening to prevent damage to painted surfaces.
2. Scribe location of hinge straps on lid inner panel.
3. With aid of a helper remove lid attaching bolts "A" and "B" (fig. 10-14) from each hinge and remove compartment lid.
4. To install, align hinges within scribe marks and reverse removal procedure.

Adjustments

1. To adjust front compartment lid forward or rearward or from side to side in body opening, loosen hinge strap-to-lid attaching bolts at each hinge and adjust lid as required; then tighten bolts.
2. To adjust lid at one or both hinge attaching areas up or down, install shims between hinge strap and front compartment lid inner panel 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 location indicated by "B" (fig. 10-14).
 - b. To lower rear edge of lid at hinge area, place shim between hinge strap and lid inner panel at front attaching bolt location indicated by "A" (fig. 10-14).

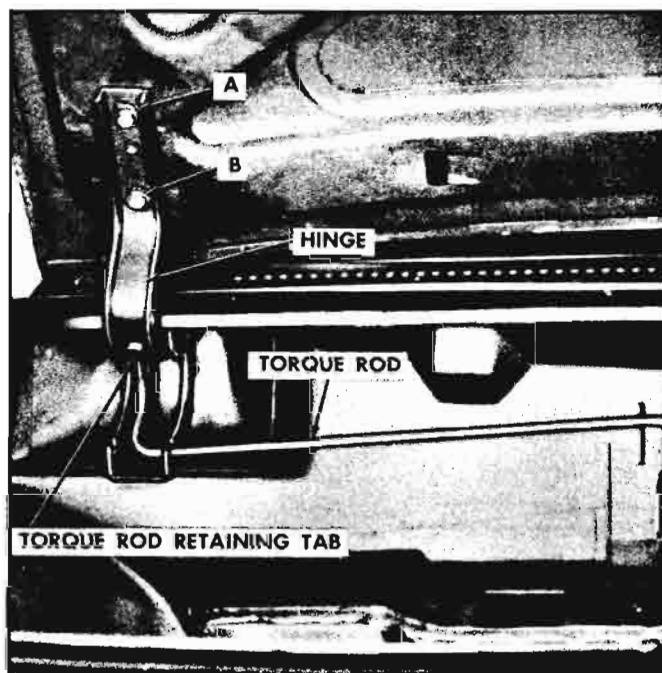


Fig. 10-14—Front Compartment Lid Hinge

3. Check front compartment lid lock engagement with striker.

FRONT COMPARTMENT LID TORQUE RODS

Removal

1. Open front compartment lid.
2. Prop lid in extreme up position.
3. Place end of large screwdriver or other suitable tool at base of torque rod retainer immediately behind tabs shown in Figure 10-15. Insert block of wood, the approximate width of retainer opening, between shaft of screwdriver and ends of both torque rods immediately below torque rod attaching pin; then carefully pry block rearward to take tension of torque rods off pin and remove pin.

NOTE: Mark pin retaining hole prior to removal of pin to insure rods are installed in same position.

CAUTION: Exercise care when releasing tension from rods after removal of pin as torque rods may be under considerable tension.

4. Disengage each torque rod from movable portion of affected hinge and remove rods.

Installation

1. Position appropriate torque rod behind retaining tab on movable portion of affected hinge as shown in Figure 10-14 and engage rod in notches in lower portion of hinge assembly and in torque rod retainer (fig. 10-15).

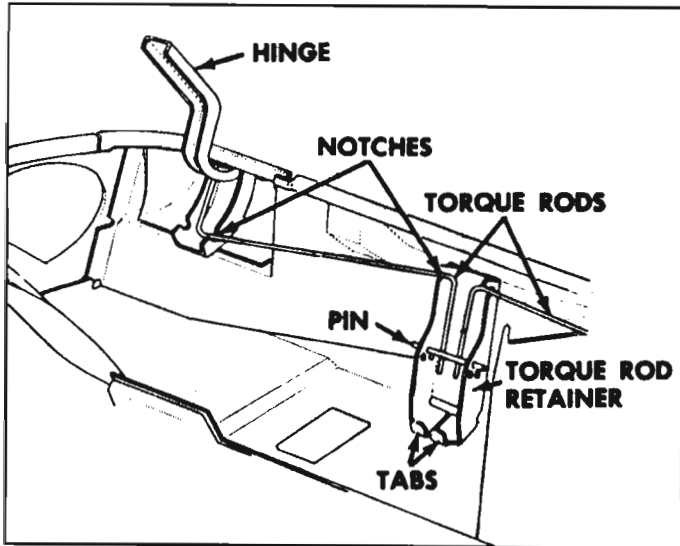


Fig. 10-15—Front Compartment Lid Torque Rods

2. Tension torque rods as outlined in Step 3 of the removal procedure and install pin in previously marked hole in torque rod retainer.

NOTE: Rotate pin after installation to insure pin is locked in hole.

3. Lubricate torque rod bearing points as outlined under "Body Lubrication" in Section 2.

Adjustments

The amount of effort required to open and close the front compartment lid is determined by the position of the retaining pin in the torque rod retainer. If the retaining pin is located in the hole farthest rearward, the amount of effort required to open the lid is the least and the amount of effort required to close the lid is the greatest. If the retaining pin is located in the hole farthest forward, 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.

FRONT COMPARTMENT LID LOCK CYLINDER ASSEMBLY

Removal and Installation

1. Open front compartment lid and disengage retainer

(fig. 10-16) securing lock cylinder assembly to front end panel and remove assembly.

2. To install, replace sealing gasket if necessary, engage end of lock cylinder shaft in lock and reverse removal procedure.

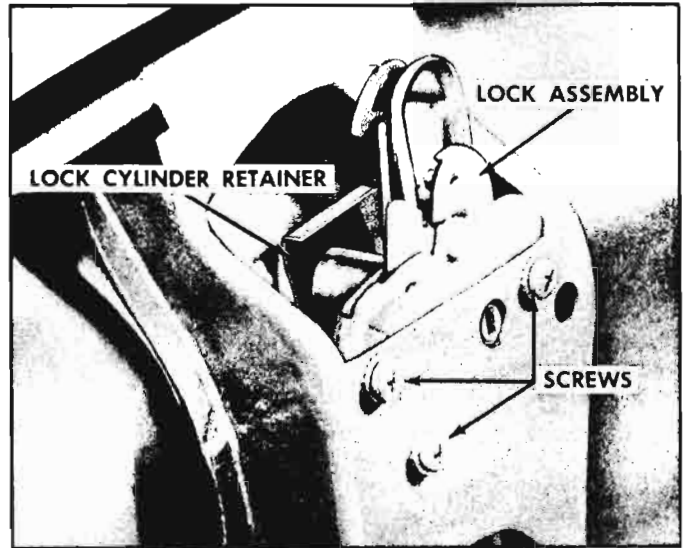


Fig. 10-16—Front Compartment Lid Lock

Disassembly and Assembly

1. Remove lock cylinder assembly from body.
2. Disengage return spring (fig. 10-17) from lock cylinder case and remove spring.

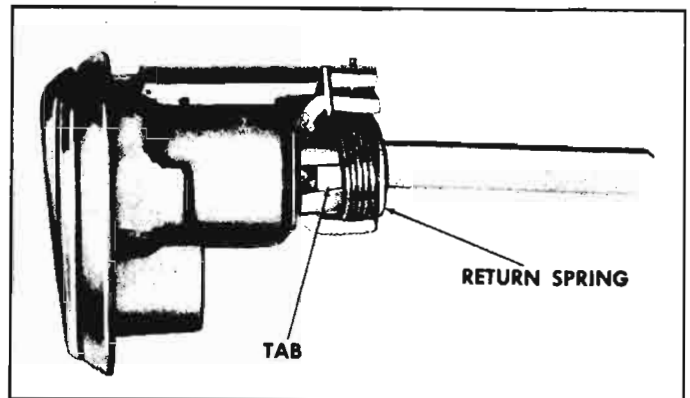


Fig. 10-17—Front Compartment Lid Lock Cylinder Assembly

3. Disengage retainer tabs (fig. 10-17) from lock cylinder case; then remove retainer, shaft and lock cylinder assembly (fig. 10-18).
4. Disengage dust cover spring from end of dust cover shaft and remove spring and cover (fig. 10-18).

NOTE: Dust cover may be removed without removing other components of the lock cylinder assembly.

5. To install, reverse the removal procedure.

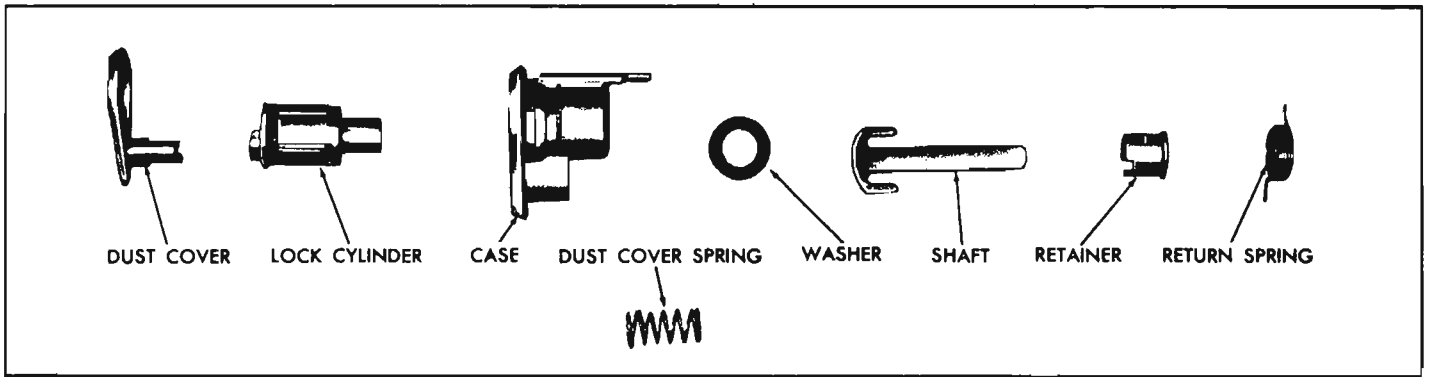


Fig. 10-18—Front Compartment Lid Lock Cylinder Disassembled

FRONT COMPARTMENT LID LOCK ASSEMBLY

Removal and Installation

1. Remove front compartment lid lock cylinder assembly.
2. Remove screws shown in Figure 10-16 securing lock to lid lock support and remove lock assembly.
3. To install, reverse removal procedure.

Adjustment

1. 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 location of front compartment lid lock striker on striker support.
2. Remove striker retainer plate attaching bolts and remove retainer plate and striker (fig. 10-19).
3. To install, position striker within scribe marks and reverse removal procedure. Check striker for proper engagement with lock.

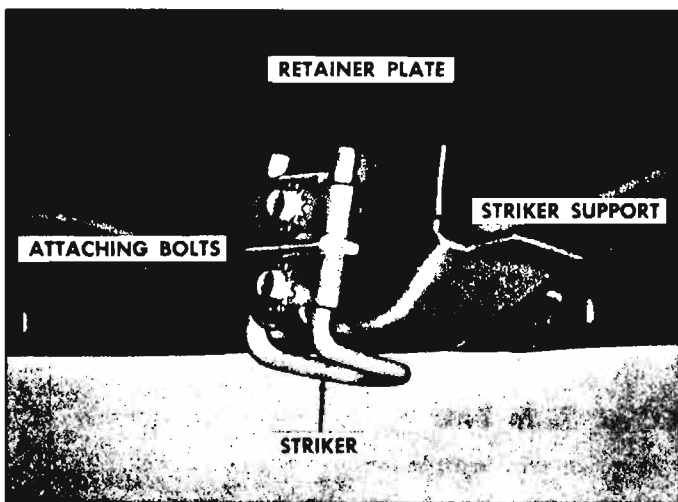


Fig. 10-19—Front Compartment Lid Lock Striker

Adjustments

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

1. To adjust striker up or down, loosen retainer plate attaching bolts while holding retainer plate in position. Adjust striker up or down as required, then tighten bolts (fig. 10-19).
2. To adjust striker right or left, loosen retainer plate attaching bolts while holding retainer and striker in position. Then slide striker and retainer plate right or left as required and tighten bolts (fig. 10-19).

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. Brush an approved weatherstrip cement along base and outboard side of gutter as indicated by "1" (fig. 10-20) around 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 completely fill area indicated by "3" (fig. 10-20).

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

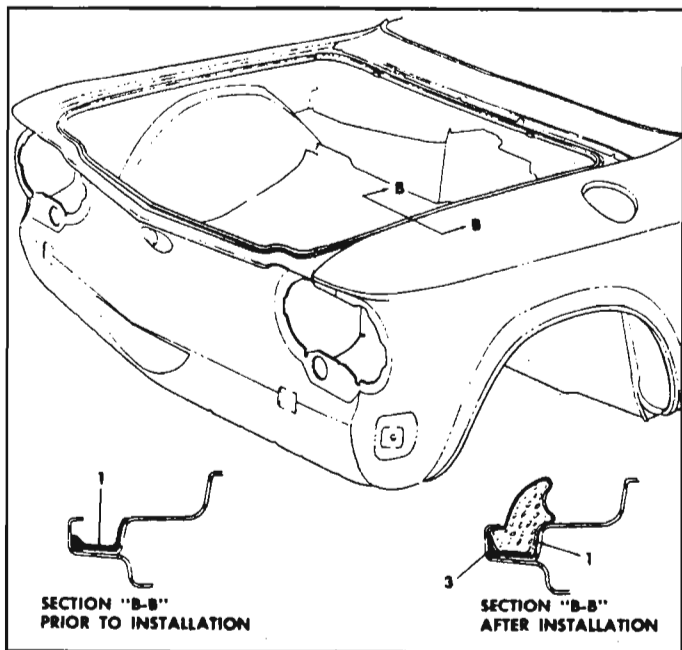


Fig. 10-20—Front Compartment Lid Gutter Weatherstrip

4. Using a flat-bladed tool such as a putty knife with rounded corners, insert weatherstrip into gutter across top, down sides and across front of compartment opening in that order. Roll or press weatherstrip to insure a good seal and proper retention of weatherstrip.
5. If installing new weatherstrip, trim ends of weatherstrip to form "butt" joint at front center of opening. Brush weatherstrip cement on both ends of weatherstrip and secure ends of "butt" joint together.
6. Allow sufficient time for cement to set before closing front compartment lid.

GAS TANK FILLER DOOR ASSEMBLY

Removal and Installation

1. Open door and scribe location of hinge on body.
2. Remove bolts (fig. 10-21) securing hinge to body and remove door assembly.
3. To install, align hinge within scribe marks and reverse removal procedure.

Adjustment

1. To position door in or out or up or down in its opening, loosen hinge attaching bolts, adjust door as required; then tighten bolts.

BODY VENTILATING SYSTEM

The body ventilating system incorporates the use of an air intake grille located on top of the cowl panel. The air entering the cowl top ventilator grille flows through a duct which guides the air into the body

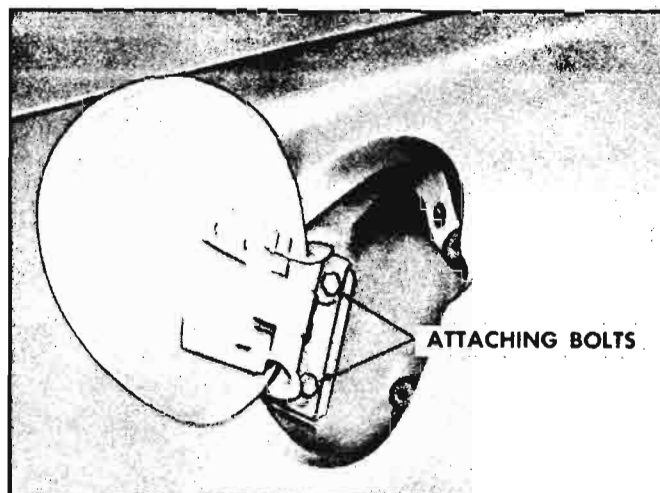


Fig. 10-21—Gas Tank Filler Door

through a cowl 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 air inlet grille flows down the cowl side duct panel and is discharged through an opening in the cowl side panel.

COWL TOP VENTILATOR GRILLE

Removal and Installation

1. Remove windshield wiper arm and blade assembly from each wiper transmission.
2. Raise front compartment lid and remove screws (fig. 10-22) securing front edge of grille to cowl.



Fig. 10-22—Cowl Top Ventilator Grille

3. Carefully raise front edge of grille and slide grille forward to disengage tabs along rear edge of grille from slots in cowl; then carefully remove grille.
4. To install apply medium-bodied sealer around screw attaching holes and grille retaining slots as indicated by "1" (fig. 10-23).
5. Insert retaining tabs along rear edge of grille in slots in cowl panel and reverse removal procedure.

COWL TRIM PAD

Removal and Installation

1. Remove screws (fig. 10-24) securing air outlet grille.

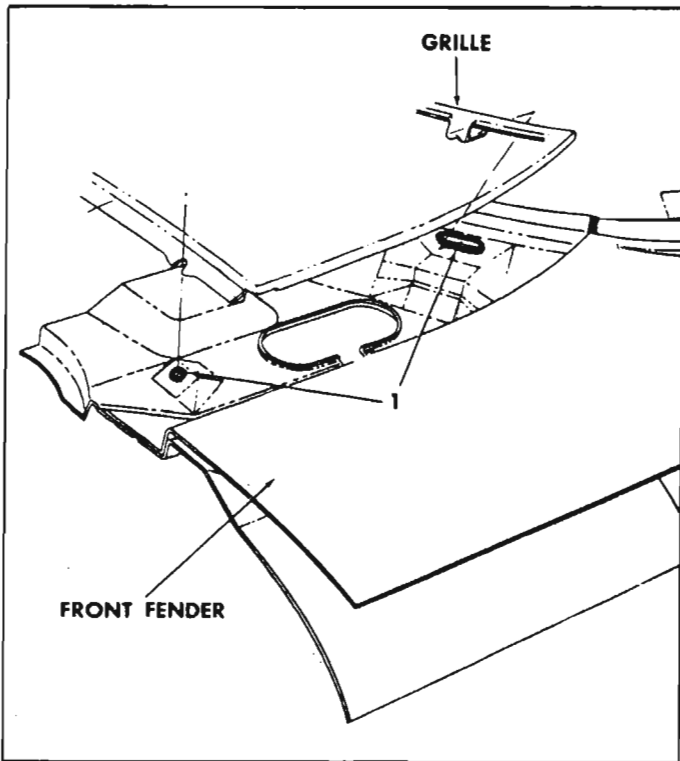


Fig. 10-23—Cowl Top Ventilator Grille Sealing

2. Slide pad forward to disengage rear edge of pad from retainer and remove pad.
3. To install, reverse removal procedure.

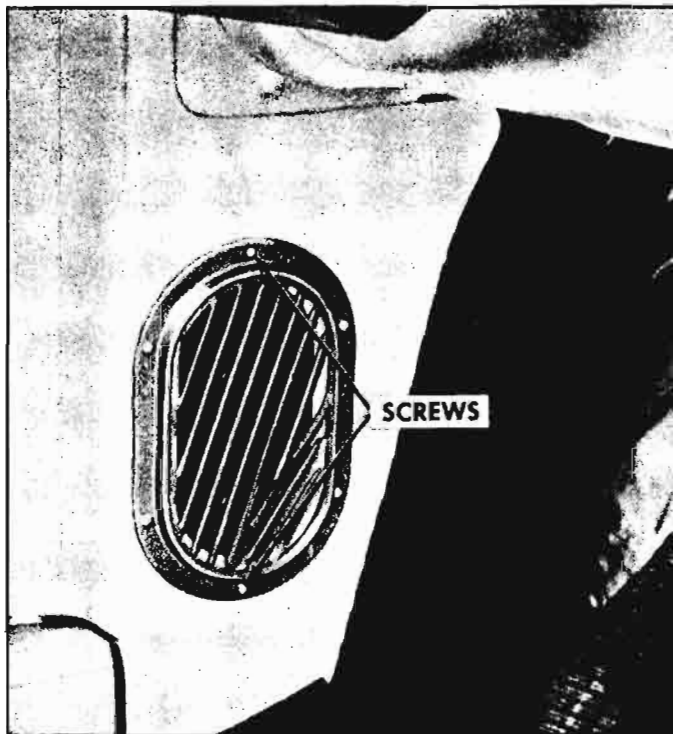


Fig. 10-24—Cowl Trim Pad

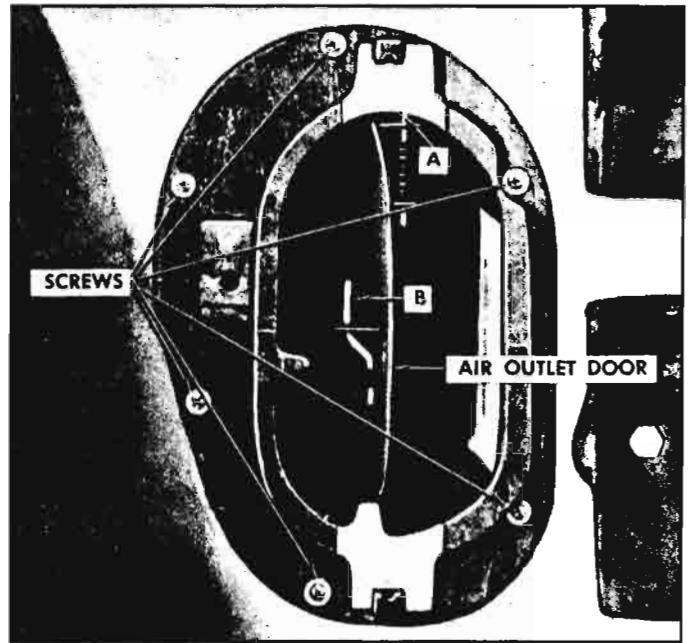


Fig. 10-25—Air Outlet and Door

COWL SIDE DUCT AIR OUTLET

Removal and Installation

1. Remove cowl trim pad.
2. Remove screws (fig. 10-25) securing outlet to cowl panel, disengage cable from pin "B" on door and remove outlet.
3. To install, apply a bead of medium-bodied sealer to cowl panel at areas indicated by "1" (fig. 10-26) and reverse removal procedure.

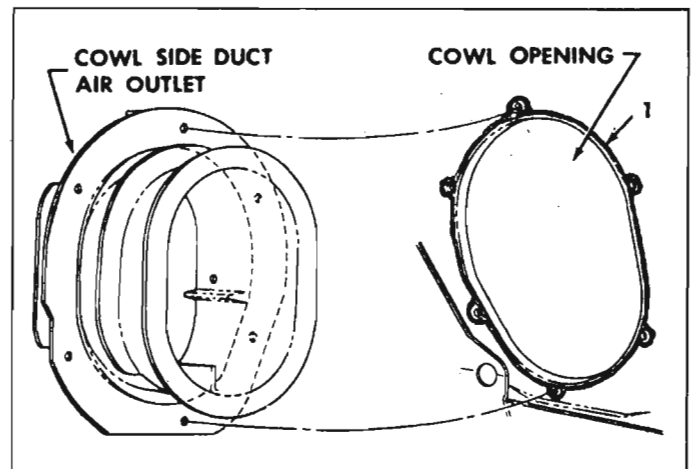


Fig. 10-26—Cowl Side Duct Air Outlet Sealing

COWL SIDE DUCT AIR OUTLET DOOR

Removal and Installation

1. Remove cowl trim pad.

2. Remove end of control cable from pin indicated at "B" (fig. 10-25).
3. Pry hinge pin at "A" downward and remove door.
4. To install, reverse removal procedure.

WINDSHIELD WIPER COMPONENTS

The positive action, single-speed, electric type windshield wiper system incorporates rigid linkage to operate the wiper transmissions and arms in parallel. Blade wipe areas overlap to a considerable degree.

The standard equipment wiper motor does not incorporate a windshield washer pump, while the optional wiper motor is basically the same as the standard motor except that it contains an integral washer pump.

The checking and servicing of the electric wiper motor is described in "Section 8—Electrical Systems."

WINDSHIELD WIPER LINK AND TRANSMISSION ASSEMBLY

Removal and Installation

1. Position wiper system in "Park" position.
2. Remove wiper arm and blade assemblies.
3. Remove retainer securing drive link to wiper motor drive arm (fig. 10-27).
4. Remove retainers securing the ends of the link to each wiper transmission with J-4880 (Truarc No. 22) pliers and remove link.
5. Remove the three screws at each transmission assembly securing the transmissions to weld nuts and remove each transmission and gasket.

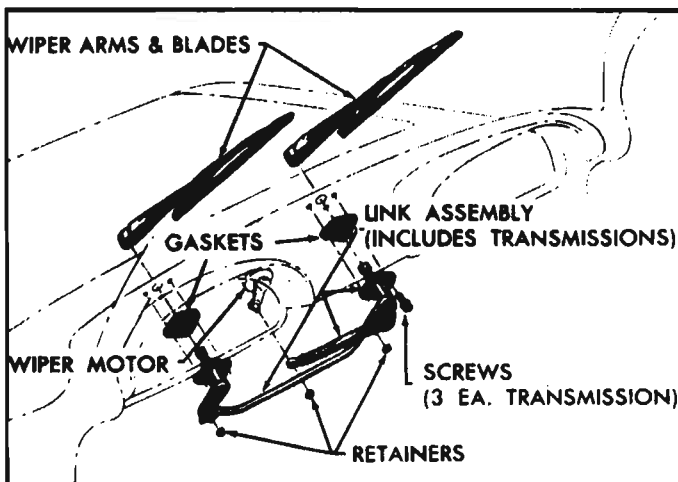


Fig. 10-27—Windshield Wiper Linkage

6. To install, reverse removal procedure. Apply sealer to weld nuts before driving transmission retaining screws. The tips of the wiper blades should be 1½ inches above the lower windshield opening with motor in "park" position. Arms and blades should be parallel. Operate wipers and check linkage for running clearance.

WINDSHIELD WIPER MOTOR

Removal and Installation

1. Remove retainer securing drive link to wiper motor drive arm (see fig. 10-27).
2. If equipped with a windshield washer, note loca-

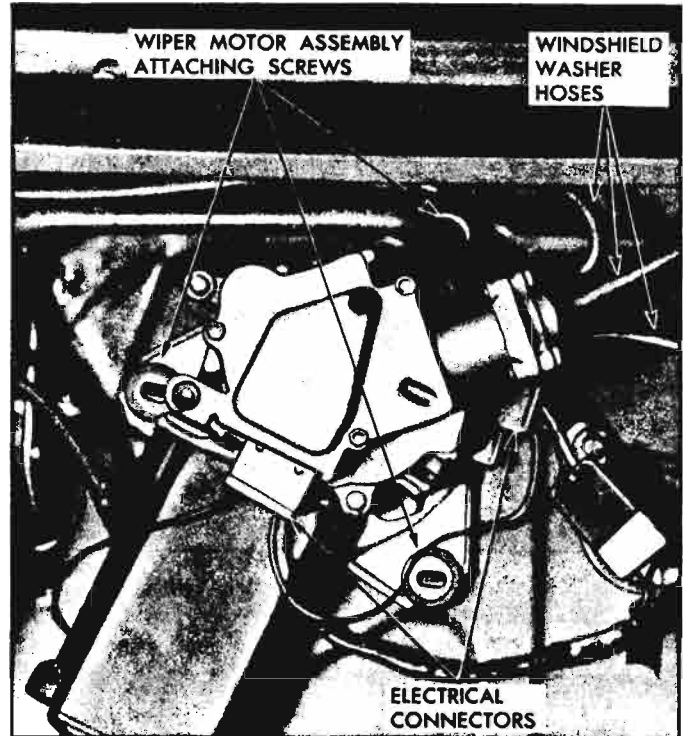


Fig. 10-28—Windshield Wiper Motor Installed

tions of washer hoses to wiper motor, then remove hoses from motor from inside front compartment. Also remove electrical connectors from motor.

3. Remove the three screws (fig. 10-28) securing the motor assembly to the body and remove the motor. See Section 8—"Electrical Systems" for wiper motor electrical checks and service.
4. To install, reverse the above procedure. It is important that the three motor attaching screws be fully tightened so that the sleeves surrounding the screws bottoms to prevent "floating" of the motor.

WINDSHIELD ASSEMBLY

REAR VIEW MIRROR SUPPORT

Removal and Installation

1. Remove screws securing mirror support and remove support (fig. 10-29).
2. To install, reverse removal procedure.

WINDSHIELD GARNISH MOULDINGS

The windshield garnish mouldings consist of upper right and left garnish mouldings, lower right and left

side garnish mouldings and lower right and left center garnish mouldings. The lower side garnish mouldings must be removed prior to removing the lower center garnish mouldings. All mouldings are secured in place by screws.

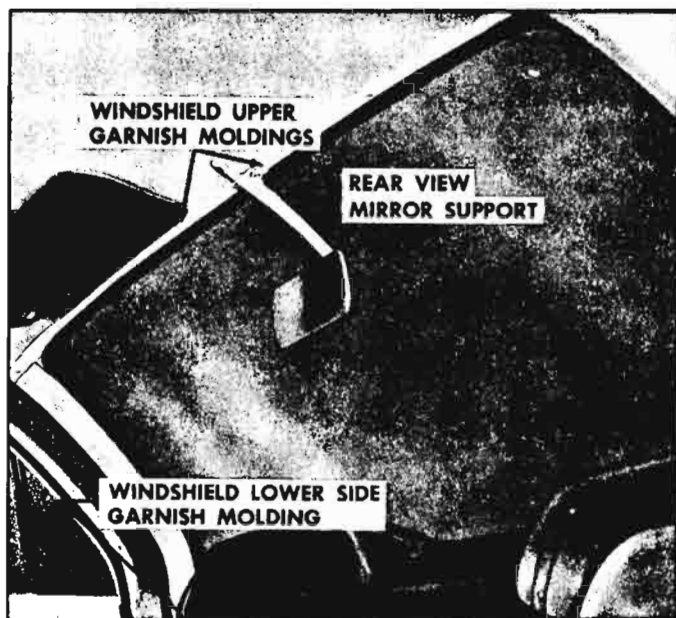


Fig. 10-29—Windshield Garnish Mouldings

Removal and Installation

Refer to Figure 10-29.

1. Place protective coverings over front seat and instrument panel.
2. Remove rear view mirror support, then remove upper garnish mouldings.
3. Remove lower side garnish mouldings.
4. Remove lower center garnish mouldings. The center escutcheon is an integral part of the lower right center garnish moulding.
5. To install, reverse removal procedure.

SUNSHADE SUPPORT ASSEMBLY

Removal and Installation

1. Remove screws securing support assembly and remove assembly.
2. To install, reverse removal procedure.

WINDSHIELD PILLAR DRIP MOULDING

Removal and Installation

1. Remove screws (fig. 10-30) securing drip moulding and remove moulding. On "700" styles, slide drip moulding downward to disengage upper end of moulding from under front roof drip scalp moulding.
2. To install, apply medium-bodied sealer to screw attaching holes as indicated by "1" and to drip

moulding as indicated by "2" in Figure 10-31 and reverse removal procedure. On "700" styles, position upper end of drip moulding under forward end of roof drip scalp moulding front.

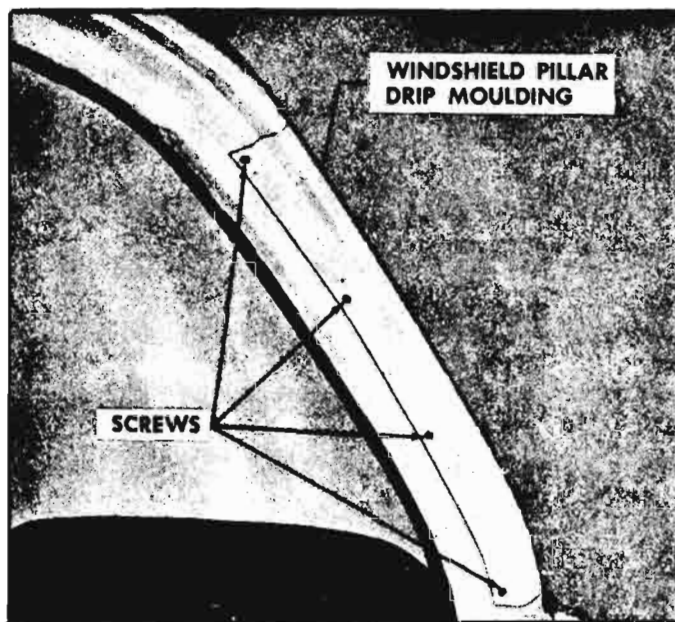


Fig. 10-30—Windshield Pillar Drip Moulding

WINDSHIELD GLASS

Removal of Windshield

1. Place protective covering over hood, front fenders, instrument panel and front seat assembly.
2. Remove rear view mirror support.
3. Remove windshield wiper arms.
4. On inside of body loosen lip of rubber channel from pinchweld flange along top and sides of windshield by applying pressure with palm of hand to glass near edge as shown in Figure 10-32. At the same time use a blunt putty knife or other suitable

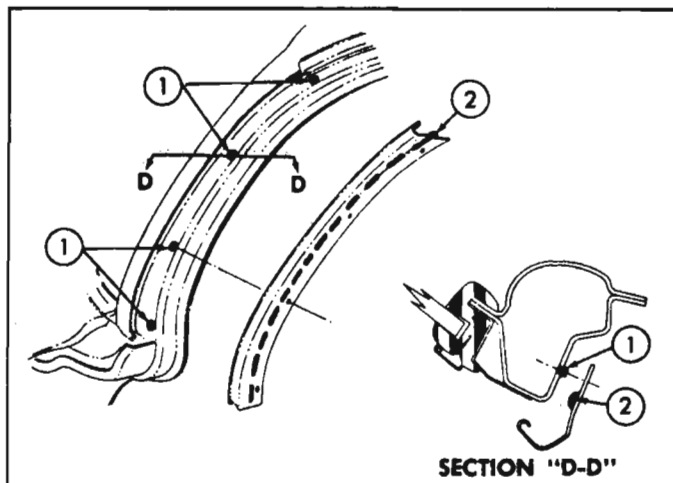


Fig. 10-31—Windshield Pillar Drip Moulding Sealing

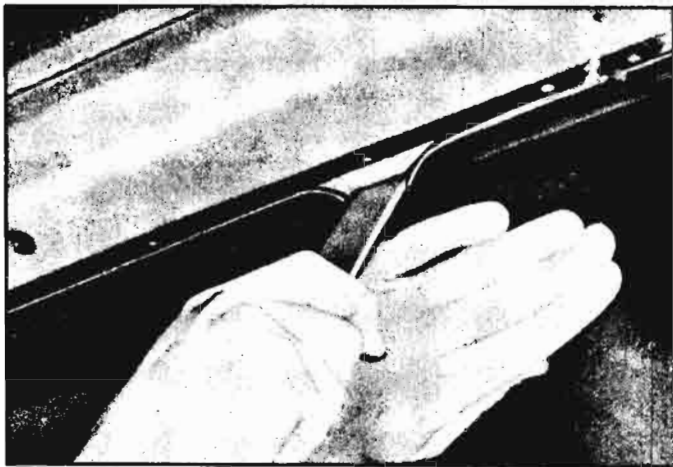


Fig. 10-32—Removing Windshield Rubber Channel from Flange

tool and carefully assist rubber channel over pinch-weld flange.

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

NOTE: On "700" styles the windshield reveal mouldings are installed in the rubber channel and are to be removed prior to removing rubber channel from the glass.

Checking Body Windshield Opening

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

1. Remove windshield from body.
2. Check windshield rubber channel for any irregularities.
3. Clean off old sealer around windshield opening and check entire body opening flange for any irregularities.
4. Install five (5) windshield checking blocks J-8372, as shown in Figure 10-33, to pinch-weld flange at following locations. Position one (1) block over lower pinch-weld flange just inboard of compartment lid opening on each side of body. Position final block on lower pinch-weld flange in center of windshield opening. Position one (1) block over upper pinch-weld flange midway between center block and each outboard block on lower retaining flange.
5. With aid of helper carefully position replacement glass on blocks in windshield opening.

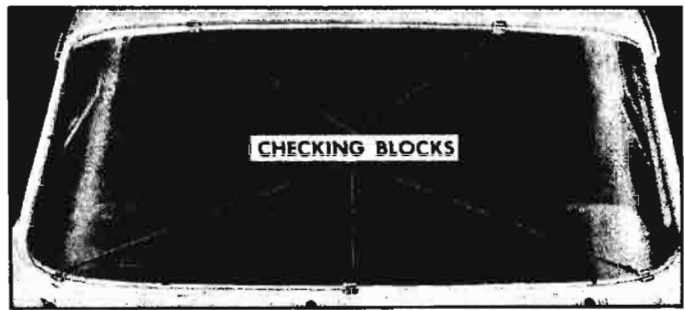


Fig. 10-33—Windshield Checking Blocks J-8372 Installed

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

6. With windshield glass supported and centered in the body opening by checking blocks, check relationship of glass to body opening around entire perimeter of glass. Figure 10-34 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 pinch-weld flange. The dimension should be from $\frac{1}{4}$ " to $\frac{5}{16}$ ".
 - 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 $\frac{5}{16}$ " to $\frac{3}{8}$ ".
7. Mark any sections of body to be re-formed, remove glass and re-form opening as required.
8. Recheck windshield opening as outlined above. **Mark the center line on the glass and body** so that glass can be accurately centered in opening when installed.

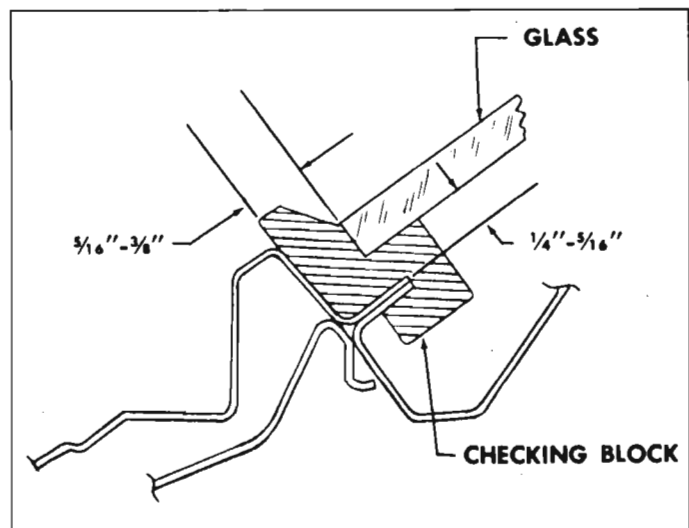


Fig. 10-34—Windshield Opening Check

Installation of Windshield

1. Clean out old sealer in glass cavity of windshield rubber channel and around base of rubber channel.
2. Install rubber channel to glass, and on "700" styles install reveal mouldings in rubber channel.
3. 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 as shown in Figure 10-35.

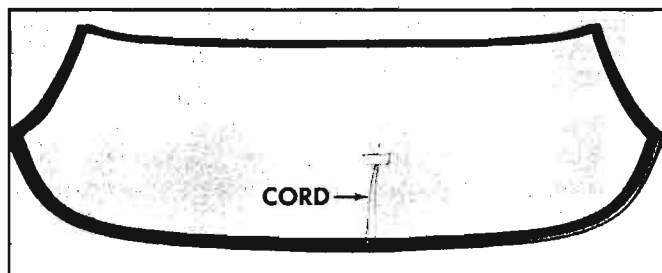


Fig. 10-35—Cord Installed to Windshield Rubber Channel

4. Apply a ribbon of medium-bodied sealer completely around base of rubber channel as indicated by "1" (fig. 10-36).
5. Apply a bead of medium-bodied sealer, approximately $\frac{1}{4}$ " in diameter to corner of windshield opening rabbet around each side of windshield for distance indicated by "3" (fig. 10-36).
6. With aid of helper, carefully position and center windshield assembly in windshield opening.

CAUTION: Do not position glass by tapping or hammering on glass.

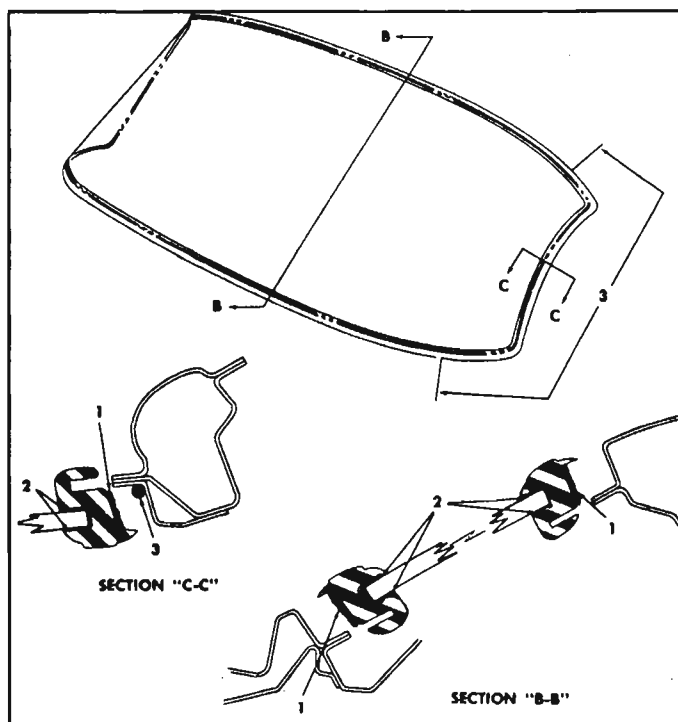


Fig. 10-36—Windshield Sealing

7. 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.
8. Using a pressure type applicator, seal inner and outer lips of rubber channel ("2," fig. 10-36) to glass with an approved weatherstrip adhesive. Sealer is to extend completely around rubber channel.
9. Clean off excess sealer from windshield glass with mineral spirits.
10. Reinstall all previously removed parts and remove protective coverings.
11. Water-test windshield.

WINDSHIELD REVEAL MOULDINGS

The windshield reveal mouldings are secured in a cavity of the windshield rubber channel. The mouldings consist of an upper and lower reveal moulding and a right and left side reveal moulding. The ends of the side reveal mouldings overlap the upper and lower reveal mouldings.

Removal

1. Remove windshield assembly from body and place it on a protected bench.
2. Locate and mark center of upper and lower reveal mouldings.
3. Carefully remove side reveal mouldings from cavity of rubber channel; then, remove upper and lower reveal mouldings.

Installation

1. Install and center upper and lower reveal mouldings in cavity of rubber channel; then, install side reveal mouldings.

NOTE: To facilitate installation, apply a mild soap solution to the cavity of the rubber channel prior to installing the mouldings.

2. Install windshield assembly in body.

INSTRUMENT PANEL COMPONENTS

INSTRUMENT PANEL COMPARTMENT DOOR

Removal and Installation

1. Mark location of compartment door hinge on door inner panel.
2. Remove hinge stop attaching screws (fig. 10-37) from door inner panel.
3. Remove door hinge attaching screws from door inner panel (fig. 10-37), disengage hinge stop from door and remove door.
4. To install, engage hinge stop in door, position hinge within locating lines and install attaching screws.

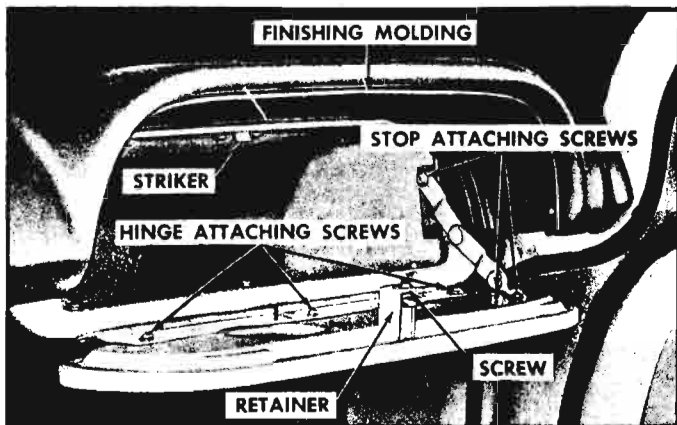


Fig. 10-37—Instrument Panel Compartment

Adjustments

1. To reposition compartment door up or down in its opening, loosen hinge and hinge stop attaching screws at door inner panel and shift door in desired direction.

NOTE: A slight up or down adjustment may also be obtained at hinge-to-instrument panel attaching screw locations on underside of instrument panel.

2. To reposition the door right or left, loosen hinge to instrument panel attaching screws located on underside of instrument panel and shift door to desired position. Adjust stop assembly accordingly on door inner panel.

3. The door lock striker (fig. 10-37) may be adjusted by loosening attaching screws and moving striker forward or rearward.

INSTRUMENT PANEL COMPARTMENT DOOR KNOB

Removal and Installation

1. Open compartment door and remove lock retainer screw (fig. 10-37) and remove knob assembly.
2. To install, reverse removal procedure.

INSTRUMENT PANEL COMPARTMENT DOOR HINGE STOP

Removal and Installation

1. Remove hinge stop attaching screws (fig. 10-37), disengage stop assembly from door inner panel and remove from body.
2. To install, reverse removal procedure. Check for proper alignment of hinge stop on door inner panel.

INSTRUMENT PANEL FINISHING MOULDING

Removal and Installation

1. Remove screws securing finishing moulding to instrument panel compartment area and remove moulding (fig. 10-37).
2. To install, reverse removal procedure.

INSTRUMENT PANEL COVER—ALL MODELS

Refer to "Two Door Models" this section.

DOORS

The entire door section has been divided into the following parts:

- Service operations which are the same or similar for both front and rear doors.
- Service operations for front doors only.
- Service operations for rear doors only.

FRONT AND REAR DOORS

INSIDE HANDLES—FRONT AND REAR DOORS

Removal

1. Depress door trim assembly at handle sufficiently to install Tool J-7797 between handle and handle bearing plate.
2. Push handle retaining spring out of engagement as shown in Figure 10-38 and remove handle and bearing plate from door.

Installation

1. To install inside handle, first install retaining spring to handle.
2. Install bearing plate over regulator spindle.

3. Position handle on spindle, push handle until spring is engaged.

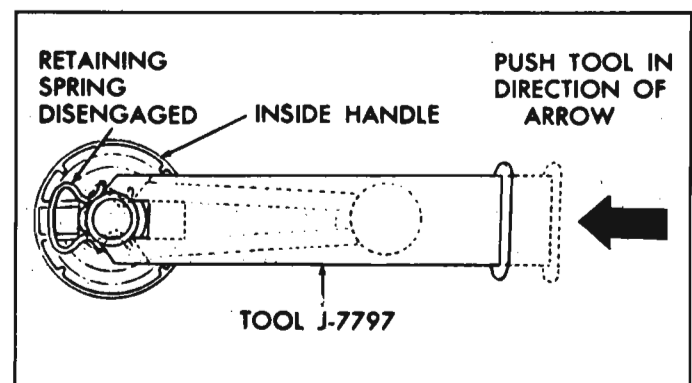


Fig. 10-38—Removing Inside Handle Retaining Spring

NOTE: Install handle at same angle as handle on opposite door.

TRIM ASSEMBLY—FRONT AND REAR DOORS

The front and rear door trim assemblies have the conventional retaining nails attached to the back side

of the door trim assembly. The nails, however, are pressed or tapped into a new trim assembly plastic retainer which fits into a slot in the door inner panel and firmly holds the door trim assembly in position (fig. 10-39).

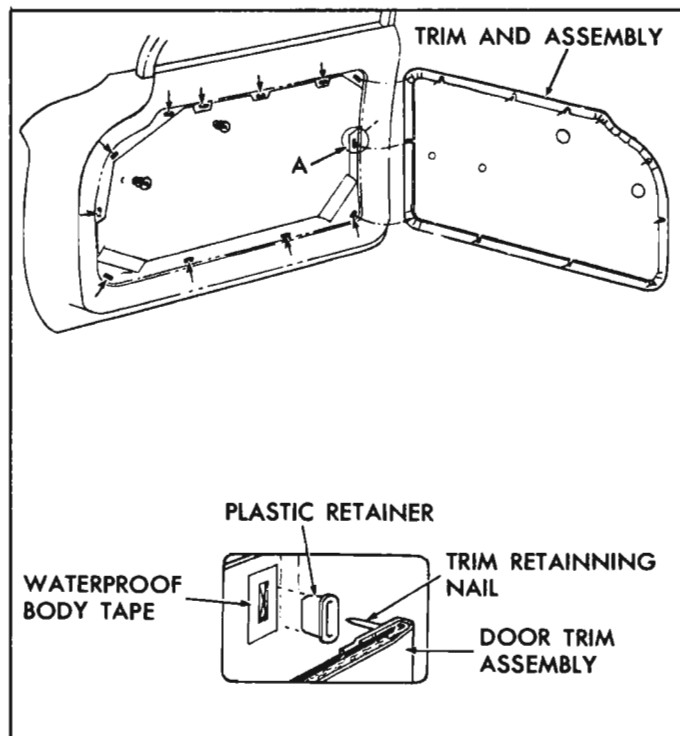


Fig. 10-39—Door Trim Installation

Removal and Installation

1. Apply masking tape to door inner panel at trim assembly retainer locations shown in Figure 10-39 to avoid paint damage when pad is removed.
2. With a clean rubber mallet, tap around entire edge of trim assembly to free trim nails from plastic retainers.
3. Insert a flat-bladed tool between inner panel and door trim assembly at each retaining nail location. Carefully loosen trim assembly nails from retainers until trim can be removed from door.
4. To install, reverse removal procedure. Broken retaining nails should be replaced with repair tabs which are available as service parts.

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.

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 retainer hole in inner panel as shown in View "A," Figure 10-39. Make two (2) slits in tape to form an "X" pattern. Check retainer for snug fit. If retainer is still loose, re-

peat above operation by installing second piece of tape over existing repair. This procedure may also be used to repair waterleaks which may develop around perimeter of retainer.

LOCK STRIKER—FRONT AND REAR DOORS

Removal and Installation

1. With pencil, mark position of striker on body pillar.
2. Remove three (3) door lock striker attaching screws and remove striker and adjusting plates from pillar.
3. To install, seal all striker plate attaching screw clearance holes with body caulking compound.
4. Install 1/8" bead of body caulking compound around entire back surface of striker plate.
5. Place striker and adjusting plates within marks on pillar and install striker plate attaching screws.

CAUTION: Whenever a door has been removed and installed, or re-aligned, the door SHOULD NOT be closed completely until visual check is made to determine if lock extension will engage in striker notch. Where required, door lock striker emergency spacers should be installed so that door can be closed and an accurate check made to determine emergency spacer requirements.

6. Clean off all excess caulking compound.

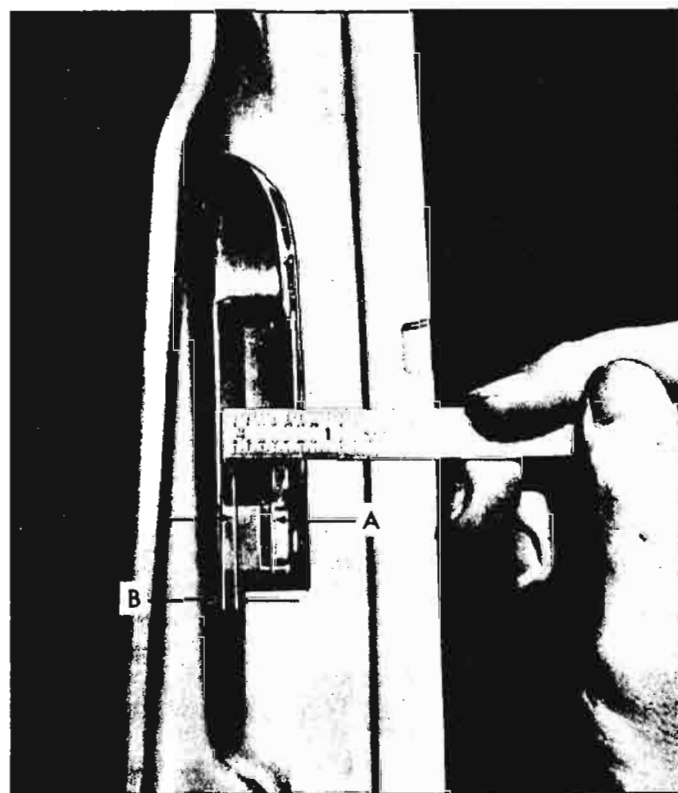


Fig. 10-40—Determining Door Lock Striker Emergency Spacer Requirements

Striker Adjustments

1. To adjust striker "up or down" or "in or out," loosen striker plate attaching screws and shift striker and adjusting plates as required, then tighten screws.
2. To determine if door lock striker emergency spacers are required, apply modeling clay or body caulking compound in door lock striker notch where lock extension engages and then close door to form measurable impression in clay or caulking compound as shown in Figure 10-40.

NOTE: Door(s) should be properly aligned before checking door spacer requirements.

When dimension "A" from rear face of striker teeth to center of lock extension is less than $1\frac{1}{32}$ ", install emergency spacers and proper length striker attaching screws as indicated.

Dimension "A" Fig. 10-40	No. of Spacers Required	Spacer Thickness	Striker Attaching Screws
$1\frac{1}{32}$ " to $\frac{3}{32}$ "	1	$\frac{1}{16}$ "	Original Screw
$\frac{3}{32}$ " to $\frac{1}{2}$ "	1	$\frac{1}{8}$ "	Emergency Screw ($\frac{1}{8}$ " longer)
$\frac{1}{2}$ " to $\frac{5}{8}$ "	1—($\frac{1}{8}$ " Spacer) 1—($\frac{1}{16}$ " Spacer)	$\frac{3}{16}$ " (Total)	Emergency Screw ($\frac{1}{8}$ " longer)
$\frac{5}{8}$ " to $\frac{3}{2}$ " Interference	2—($\frac{1}{8}$ " Spacers)	$\frac{1}{2}$ " (Total)	Emergency Screw ($\frac{1}{4}$ " longer)

NOTE: Dimension "B" in Figure 10-40 should never be less than $\frac{1}{8}$ ".

**WATER DEFLECTORS—
FRONT AND REAR DOOR**

A waterproof paper deflector is used to seal the door inner panel and prevent entry of water into the body. The polyethylene (shiny) side of the deflector is placed against the inner panel. The deflector fits into a retaining slot at the bottom of the door inner panel and deflects the water to the bottom of the door and out the bottom drain holes. Whenever work is performed on front or rear doors where the paper water deflector has been disturbed, the deflector must be properly sealed and taped to the inner panel to prevent serious water leaks. It is important that all service personnel performing door hardware adjustments or sealing operations are 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 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.

Partial Removal

1. Remove door trim assembly.
2. Remove strips of waterproof body tape securing lower corners of deflector to inner panel (figs. 10-41 and 10-42).
3. Carefully cut deflector from top to bottom inside cemented edge of deflector as shown.

NOTE: Do not tear water deflector.

4. Carefully disengage lower edge of water deflector from retaining slot, then roll deflector back to gain access to door inner panel (fig. 10-43).

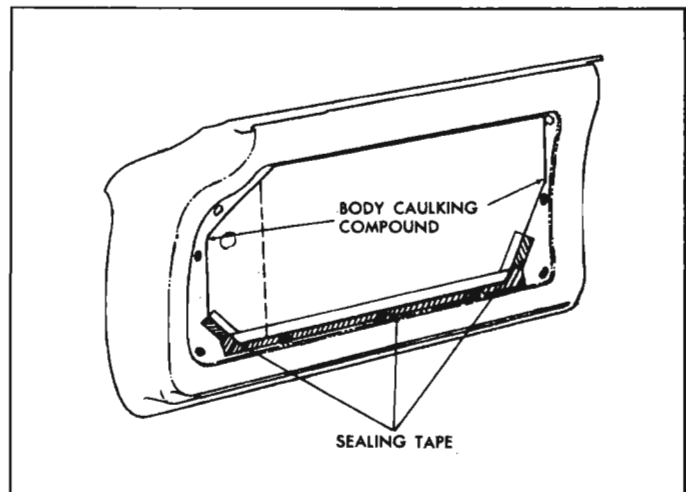


Fig. 10-41—Partial Removal of Front Door Water Deflector

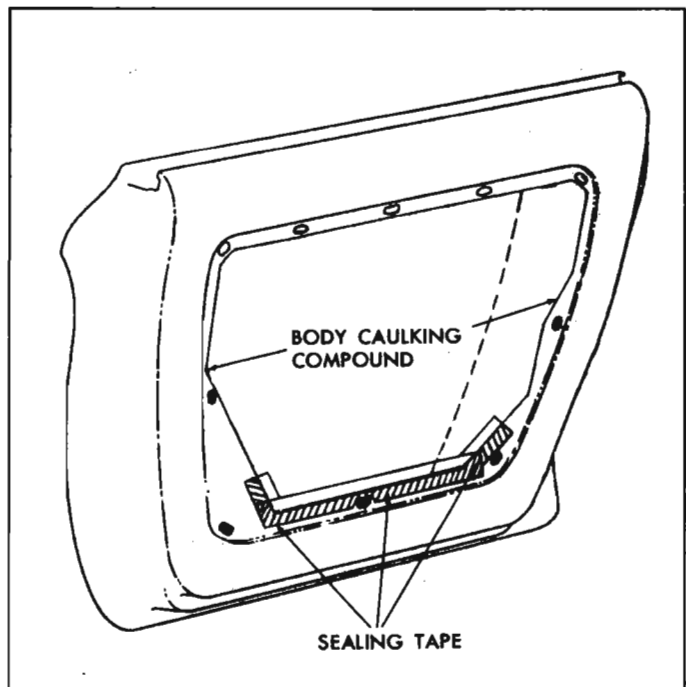


Fig. 10-42—Partial Removal of Rear Door Water Deflector

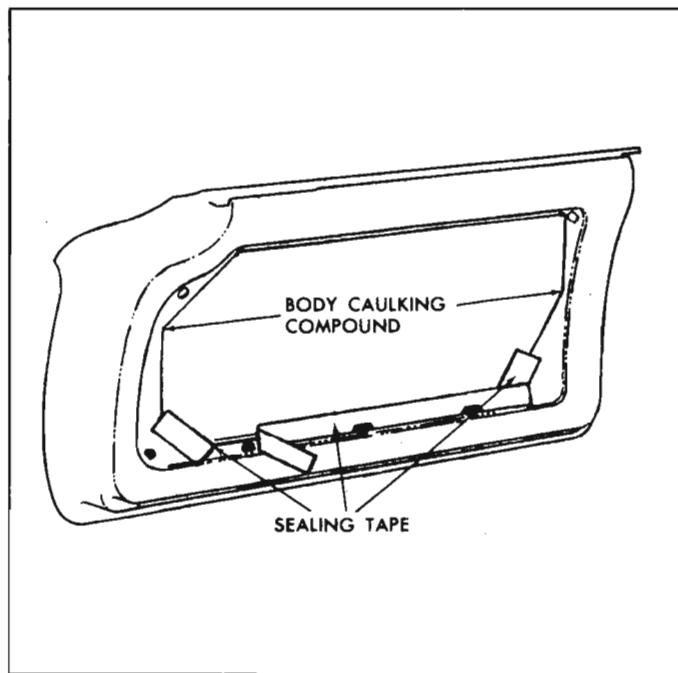


Fig. 10-43—Water Deflector Sealing Along Retaining Slot Area

Removal—Complete

1. Remove door trim assembly.
2. Remove strips of waterproof body tape securing lower corners of water deflector (see fig. 10-44).
3. Carefully break cement bond securing upper corners of water deflector to door inner panel. Then while holding string located within sealer against water deflector, carefully disengage edges of deflector from door. Exercise care so as not to tear water deflector.

NOTE: If necessary, a flat-bladed tool such as a putty knife can be used to help break cement bond.

4. Disengage lower edge of water deflector from retaining slot in door inner panel and remove water deflector.

Installation

1. Inspect water deflector and, where necessary, repair any tears or holes with waterproof body tape applied to both sides of deflector. In addition, if bond between polyethylene and deflector paper has been torn, cut or damaged, apply waterproof body tape to both sides of deflector over damaged area to prevent water from wicking on uncoated side of deflector paper.
2. If 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. In addition, clean off old cement from door inner panel and apply a continuous bead of body caulking compound (approximately $\frac{3}{16}$ " diame-

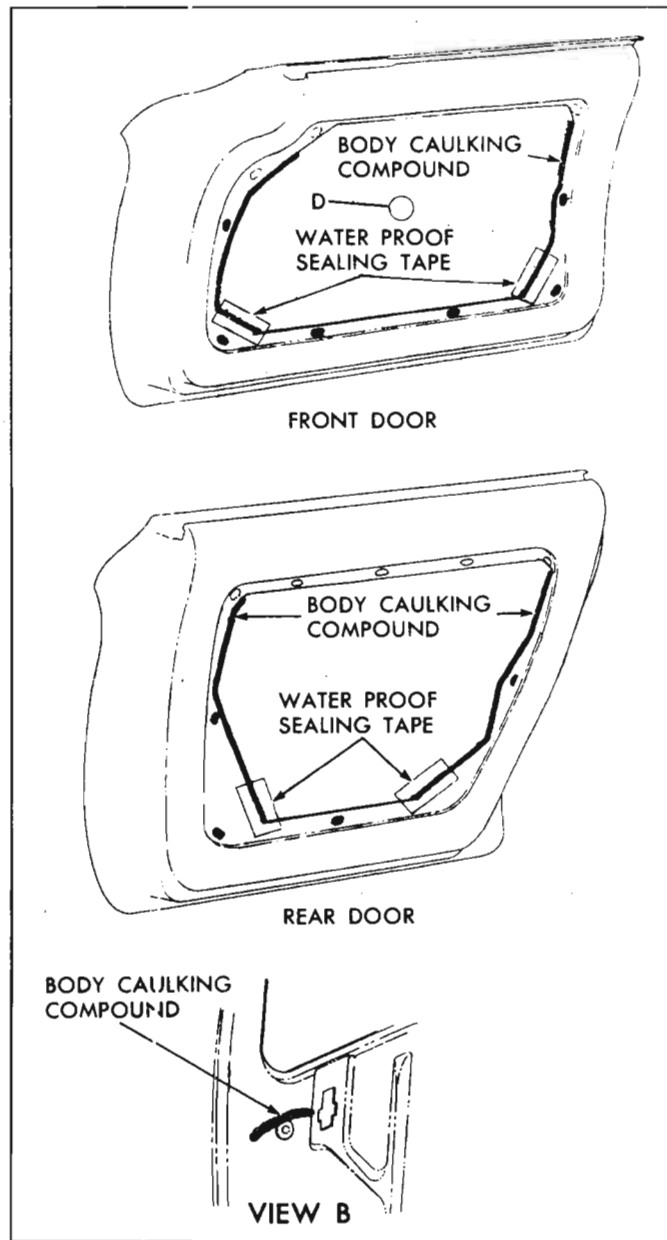


Fig. 10-44—Door Panel Sealing

ter) to door inner panel along line contacted by front and rear edges of water deflector (see fig. 10-44).

3. If necessary, seal all arm rest screw attaching holes with body caulking compound.
4. Position water deflector to door inner panel with polyethylene coated side of deflector against inner panel. Insert lower edge of deflector in retaining slot. Then firmly roll or press sealed areas to obtain a good bond between deflector and door inner panel.

NOTE: If old sealer does not give a satisfactory seal, apply a bead of body caulking compound (approximately $\frac{3}{16}$ " diameter) at unsealed areas.

5. Seal lower corners of deflector with 2" or 2½" waterproof body sealing tape (see fig. 10-44).
6. Clean off all excess cement or caulking compound and install previously removed door trim and inside hardware.

**WEATHERSTRIP ASSEMBLY—
FRONT AND REAR DOORS**

The one-piece door weatherstrip is cemented into the door window frame assembly which forms a retainer type channel for retention of the weatherstrip assembly. The remainder of the door weatherstrip is retained by clips inserted into attaching hole sealing plugs. Service procedures for front and rear door weatherstrips are similar and both weatherstrips are covered below.

Removal

1. With a flat-bladed tool, carefully break cement bond along door window frame assembly. Also break cement bond along cove area on front doors. Refer to "1," Figure 10-45.
2. Insert tip of Tool J-5757 at clip location and carefully snap clips from retaining plugs and remove weatherstrip from door.

Installation

1. Clean off old cement from inner panel and window frame to insure a clean cementing surface.
2. Check weatherstrip clips for proper contour and reform if necessary using Tool J-5984 (fig. 10-46).
3. Check all attaching hole sealing plugs. If sealing plugs are loose and will not remain engaged in door inner panel, install a ½" x 1" piece of cloth backed waterproof body tape over sealing plug retaining hole as shown in Section "B-B," Figure 10-45. Make two ⅛" slits in tape to form an "X" pattern. Check sealing plug for snug fit. If plug is still loose, repeat above operation by installing second piece of tape over existing repair. This procedure may also be used to repair waterleaks which may develop at sealing plug locations.
4. Prior to installation of weatherstrip on front doors, apply continuous bead of approved weatherstrip cement, extending from approximately one (1) inch below front door upper hinge, upward along cove area of door to lower front corner of window frame assembly as indicated at "1," Figure 10-45. Continue application of weatherstrip cement along entire outboard portion of door window frame as-

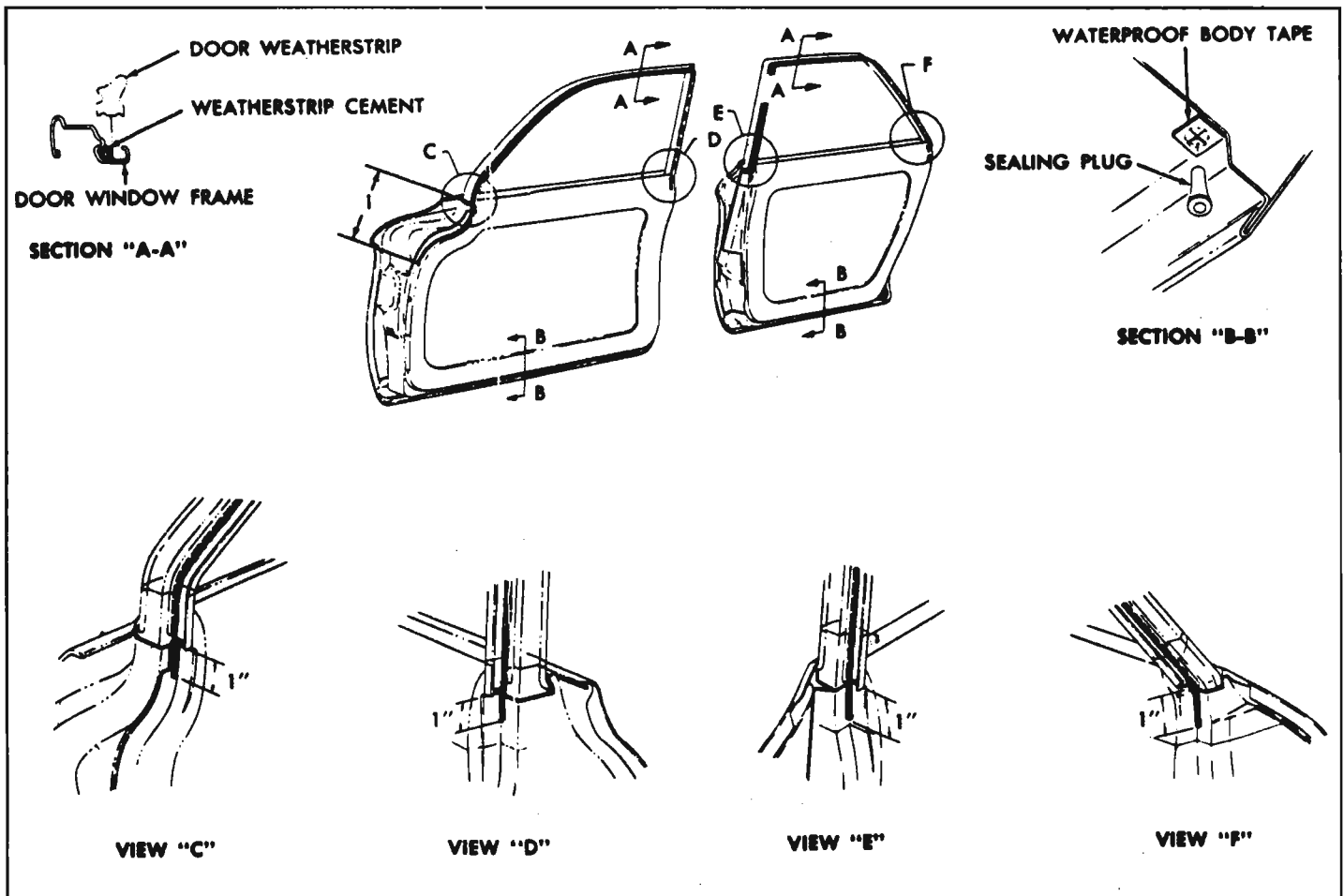


Fig. 10-45—Door Weatherstrips

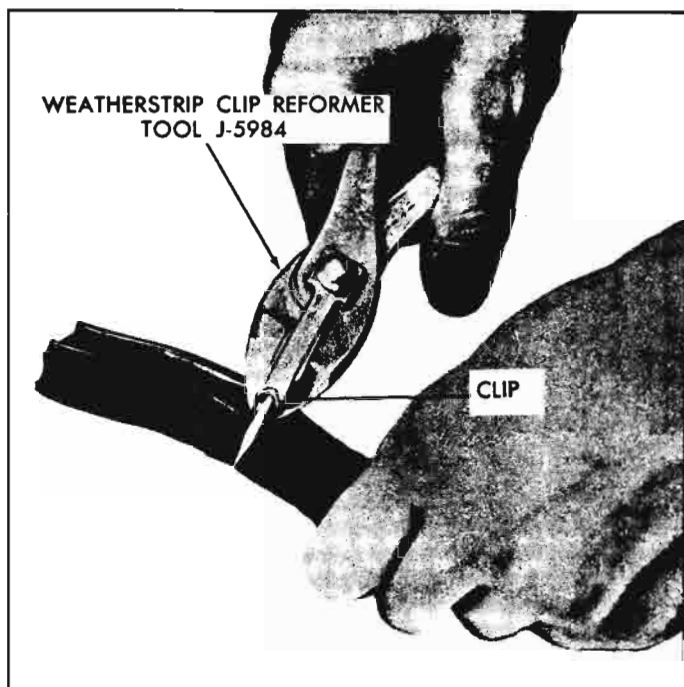


Fig. 10-46—Reforming Weatherstrip Clips with Tool J-5984

sembly channel to one (1) inch below lock pillar section of frame as shown in Views "C" and "D" in Figure 10-45. Section "A-A" in Figure 10-45 illustrates application of cement to outboard portion of window frame assembly channel.

NOTE: When applying weatherstrip cement, follow manufacturer's directions.

5. Prior to installation of weatherstrip on rear doors, apply continuous bead of approved weatherstrip cement, extending from approximately one (1) inch below rear door window frame assembly at hinge pillar section (see View "E," fig. 10-45) along entire outboard portion of door window frame assembly channel to approximately one (1) inch below lock pillar section of frame assembly as shown in View "F," Figure 10-45. Section "A-A," Figure 10-45, illustrates application of cement to outboard portion of window frame assembly channel.
6. Using a putty knife, or other suitable flat-bladed tool, install door weatherstrip into door window frame assembly.
7. Install clips to door by placing notched end of Tool J-5757 in loop of clip and pushing clip into attaching hole sealing plug. Repeat operation along both sides and bottom of door.

NOTE: Do not distort clips or unsatisfactory weatherstrip retention will result.

8. Clean off all excess weatherstrip adhesive.

PINCHWELD FINISHING STRIP

The plastic covered body opening pinchweld finish-

ing strips which are installed around the front and rear door body openings consist of a side roof rail front and rear strip and a center pillar front and rear strip. The finishing strips are retained to the body pinchweld flanges by prongs in the metal insert of the finishing strip.

Removal and Installation

To remove pinchweld finishing strip, remove door sill plate, center pillar-to-roof rail finishing plate and retaining clip at butt joint. Starting at lower end of strip, pull strip away from pinchweld flange and remove from body.

To install finishing strips, start at top of center pillar and press strip over pinchweld. Use caution not to bend or deform strip as it will make installation difficult and result in poor appearance.

FRONT AND REAR DOOR WINDOW GLASS RUN CHANNEL INNER AND OUTER STRIP ASSEMBLIES

Removal and Installation

1. Apply masking tape to door panel adjacent to strip assembly being removed to protect paint finish.
2. Insert a pointed hooked tool between strip assembly and door panel at clip locations and pull up to disengage clips from door panel; then remove strip assembly.
3. To install, position assembly and secure clips in slots in door panel. Remove protective tape.

FRONT DOORS

FRONT DOOR ASSEMBLY AND HINGES

The front door assembly may be removed with or without the hinges attached.

Removal from Hinge Pillar

1. Place suitable protective covering over front fender at door opening to protect finish.
2. Remove cowl trim pad.
3. Mark hinge locations on front body hinge pillar.
4. With aid of helper to support door properly, remove bolts securing upper and lower hinges to front body hinge pillar as shown in Figure 10-47, then remove door assembly with attached hinges from body.

Installation to Hinge Pillar

1. As an anti-squeak precaution and to prevent entry of water into body at hinge attaching bolt locations before installation of door, coat attaching surfaces of hinges with heavy-bodied sealer as indicated in Figure 10-48.
2. With aid of helper, reinstall door to body opening. Align hinges within marks and tighten bolts. Check door for proper operation and alignment. Where

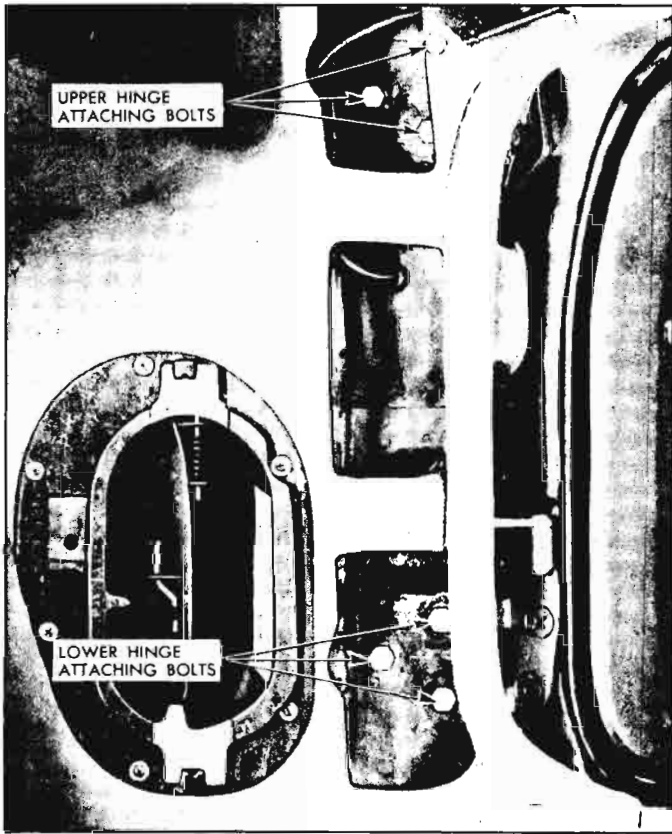


Fig. 10-47—Front Door Hinge Attachment at Cowl

required, adjust door as described under "Front Door Adjustments."

3. Install cowl trim pad and remove protective covering from front fender.

NOTE: For lubrication information, see "Body Lubrication" in Section 2.

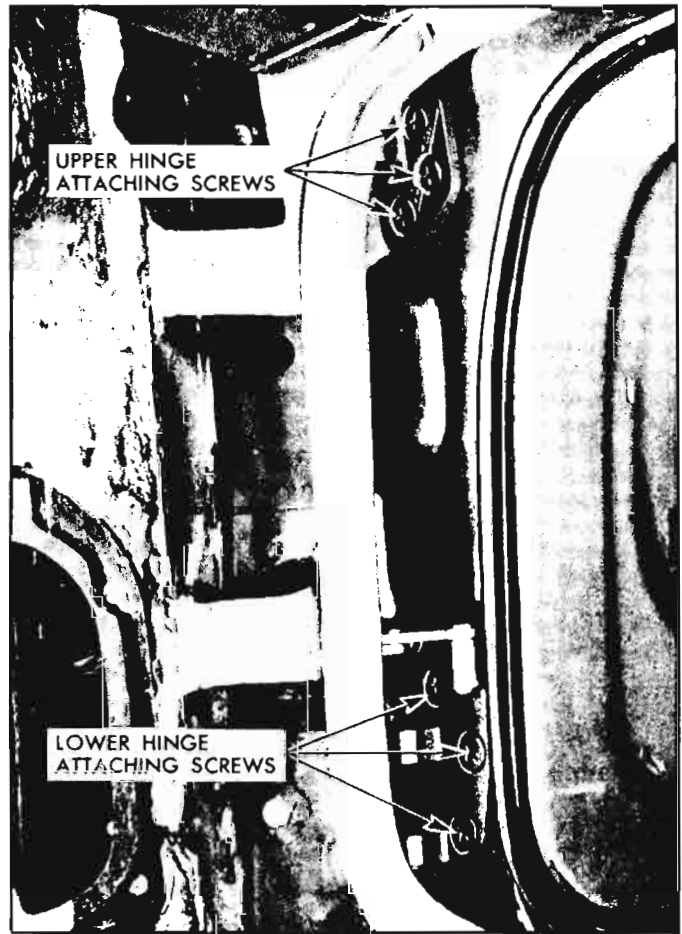


Fig. 10-49—Front Door Hinge Attachment at Door

Removal from Hinges

1. Place suitable protective covering over front fender at door opening to protect finish.

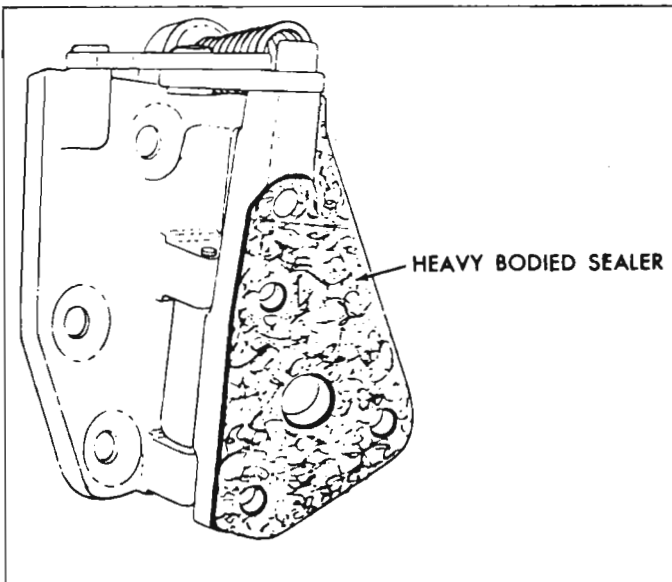


Fig. 10-48—Front Door Hinge Sealing at Body Hinge Pillar—Lower Hinge Shown, Upper Typical

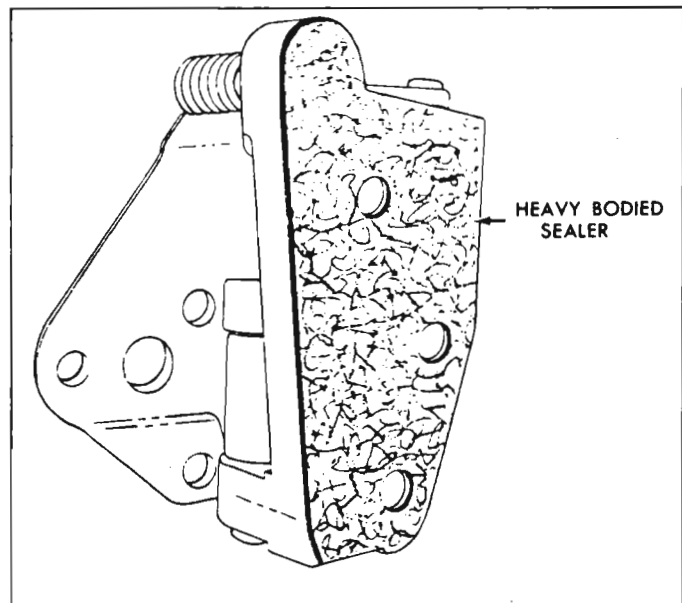


Fig. 10-50—Rear Door Hinge Sealing at Door—Lower Hinge Shown, Upper Typical

2. Mark hinge locations on door.
3. With aid of helper to properly support door, remove screws securing upper and lower hinges to door as shown in Figure 10-49; then remove door assembly from hinges.

Installation to Hinges

1. As an anti-squeak precaution, before installation of door, coat attaching surfaces of hinges with heavy-bodied sealer as indicated in Figure 10-50.
2. With aid of helper, reinstall door to hinges. Align hinges within marks and tighten screws. Check door for proper operation and alignment. Where required, adjust door as described under "Front Door Adjustments".
3. Remove protective covering from front fender.

NOTE: For lubrication information, see "Body Lubrication" in Section 2.

Front Door Adjustments

Door adjustments are provided through the use of floating cage nuts and anchor plates at the door hinge pillar and oversize attaching holes in the body hinge pillar. When checking the door for misalignment, remove the door lock striker from the body pillar to allow door to hang free on its hinges.

NOTE: After performing any door adjustments, the door lock extension-to-striker engagement should be checked, and, if necessary, adjusted as described under "Door Lock Striker Adjustments."

"Up or Down"—"Fore or Aft" Adjustments

To adjust door up or down and/or fore or aft at the front body hinge pillar, proceed as follows:

1. Remove cowl trim pad.
2. Mark location of hinges on front body hinge pillar.
3. Loosen hinge attaching bolts shown in Figure 10-47. Shift door to desired position, then tighten hinge attaching bolts.
4. Check door for proper alignment and, where required, repeat steps 2 and 3 above until desired adjustment is obtained.

"In or Out" Adjustment

To adjust door in or out at the door hinge pillar, proceed as follows:

1. Mark hinge locations on door.
2. Loosen hinge attaching screws shown in Figure 10-49. Shift door in or out to desired position; then tighten hinge attaching screws.
3. Check door for proper alignment and, where required, repeat steps 1 and 2 above until desired adjustment is obtained.

Door Opening Stop Adjustment

The front door upper hinge has been provided with an adjustable stud. The stud contacts the upper hinge strap when the door is fully opened and assists the

lower hinge in maintaining adequate clearance between the door and front fender. To adjust stud, proceed as follows:

1. Remove cowl trim pad.
2. Turn stud clockwise to increase clearance between door and fender, counterclockwise to decrease clearance. Turn stud until desired adjustment is obtained.
3. Install cowl trim pad.

VENTILATOR ASSEMBLY—FRONT DOOR

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector.
2. Remove ventilator division channel lower adjusting stud and nut (fig. 10-51).

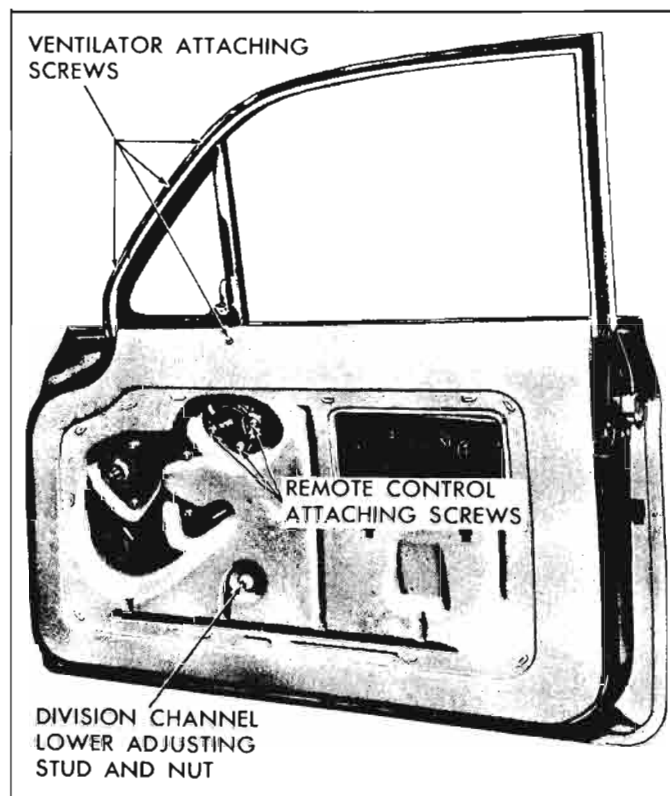


Fig 10-51—Front Door Ventilator and Remote Control Attachment

3. Remove door lock remote control assembly and door window inner draft strip assembly.
4. Lower door window. Remove three (3) door window frame to ventilator attaching screws and one (1) inner panel to ventilator attaching screw (fig. 10-51).
5. Tilt ventilator assembly rearward; then lift assembly inboard and upward and remove from door.

CAUTION: After ventilator has been removed, door glass should be held or otherwise suit-

ably supported as lower sash channel cam could roll off regulator arm(s) causing damage to door glass.

6. To install, reverse removal procedure. Check operation of ventilator and door window assembly and, where required, adjust ventilator assembly as described under "Adjustments" below.

NOTE: On two-door styles, install ventilator division channel lower adjusting stud to channel prior to installing ventilator.

Adjustments

1. To adjust ventilator division channel "in or out" or "fore or aft", remove door trim assembly and detach inner panel water deflector sufficiently to loosen division channel lower adjusting stud nut (fig. 10-51). Adjust stud in or out as required or position channel "fore or aft" as required, then tighten stud nut. Seal water deflector and install door trim and inside hardware.
2. The effort required to open or close the ventilator may be increased or decreased by bending up washer tab and tightening or loosening the adjusting nut (fig. 10-52).

Tightening the adjusting nut will increase effort required to open and close ventilator; loosening adjusting nut will decrease opening and closing effort. When desired adjustment has been obtained, bend down washer tab to lock nut in position.

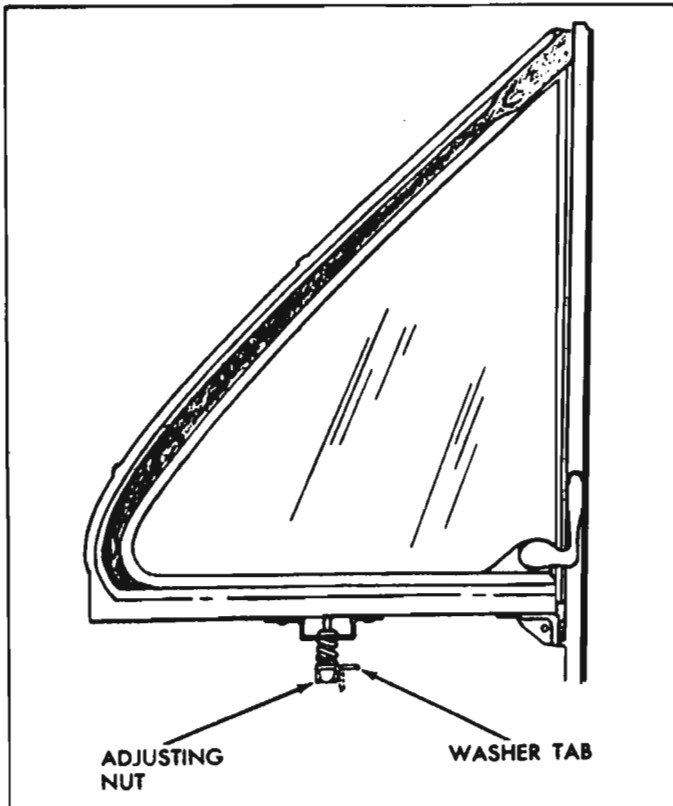


Fig. 10-52—Ventilator Friction Adjustment

NOTE: This adjustment should be performed as a bench operation.

WINDOW ASSEMBLY—FRONT DOOR

The front door glass is a solid tempered safety plate glass. The glass fits into a lower sash channel assembly which incorporates a welded-on lower sash channel cam. With this type design, the door glass, lower sash channel and sash channel cam are removed from the door as a unit.

Removal and Installation

1. Remove door trim assembly and detach inner panel water deflector.
2. Remove front door ventilator assembly as previously described under "Front Door Ventilator—Removal and Installation."

CAUTION: After ventilator has been removed, door glass should be held or otherwise suitably supported as lower sash channel cam could roll off of regulator arms causing damage to door glass.

3. To install window assembly, reverse removal procedure. After installation of window assembly, lubricate lower sash channel cam along entire length of cam with lubriplate or its equivalent.

Adjustments

1. To adjust the lower portion of the ventilator di-

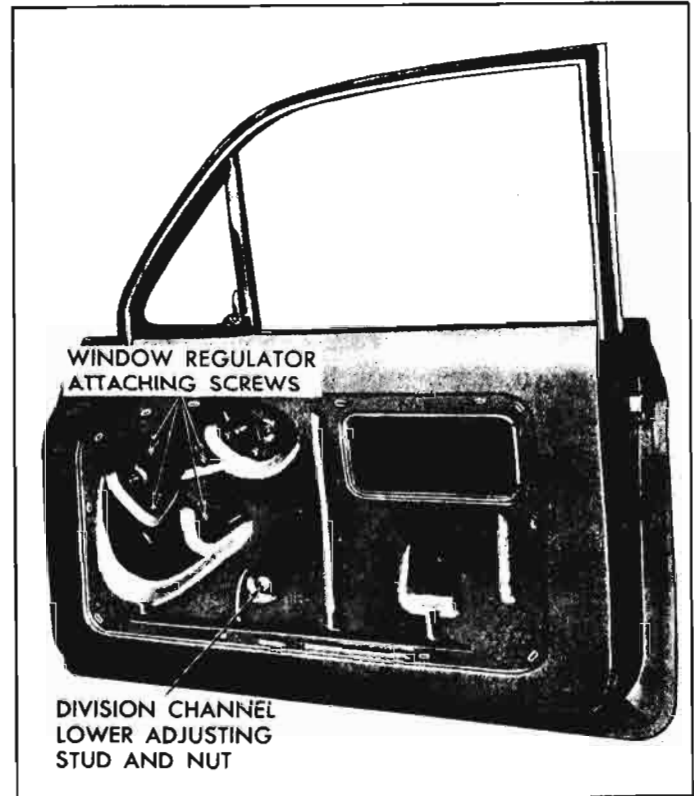


Fig. 10-53—Front Door Window Regulator and Lower Ventilator Attachment

vision channel for alignment with window, lower door window and loosen ventilator division channel adjusting stud nut (fig. 10-54). Turn adjusting stud "in or out" or position lower end of channel "fore or aft" as required, then retighten stud nut.

WINDOW GLASS RUN CHANNEL— FRONT DOOR

Removal and Installation

1. Remove door window assembly.
2. Disengage glass run channel along upper and rear sections of window frame and remove channel from door.
3. To install, reverse removal procedure.

WINDOW REGULATOR ASSEMBLY— FRONT DOOR

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector.
2. Remove ventilator division channel lower adjusting stud and nut (fig. 10-53).
3. Place a protective piece of paper over window frame assembly and door weatherstrip to protect paint and weatherstrip from damage, then install a twelve to fifteen inch piece of body tape (2" or

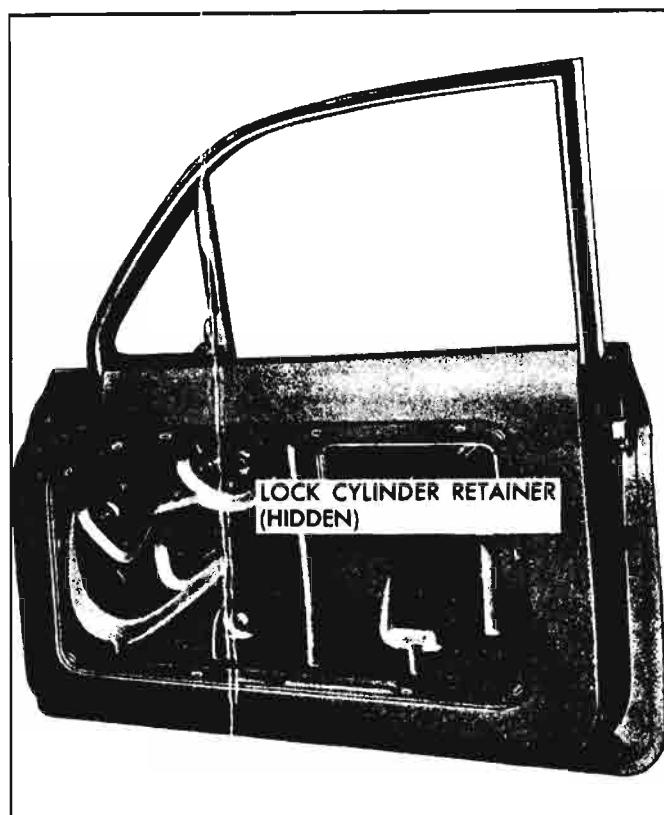


Fig. 10-55—Front Door Lock Cylinder Retainer Location

2½" in width) over window frame, firmly pressing tape to both sides of glass. This operation is required to positively hold glass in "up" position during regulator removal operation.

4. Remove window regulator attaching screws (fig. 10-53). Carefully work regulator assembly approximately one inch toward door hinge pillar or until regulator arm roller disengages from lower sash channel cam, then carefully work regulator assembly rearward and remove through access hole.
5. To install regulator assembly, reverse removal procedure. After removal of body tape, clean-up door window glass. Cycle window assembly several times to insure proper operation.

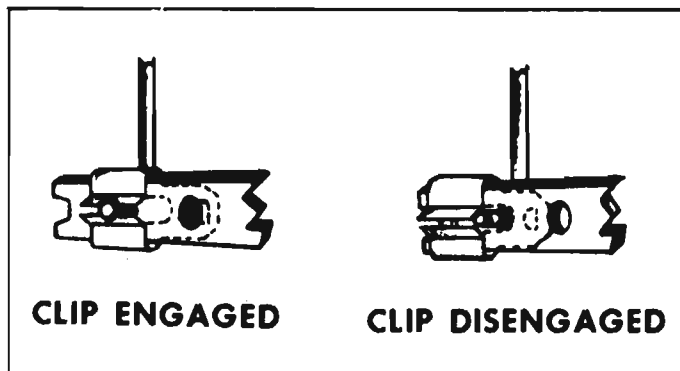


Fig. 10-54—Front Door Lock Spring Clip

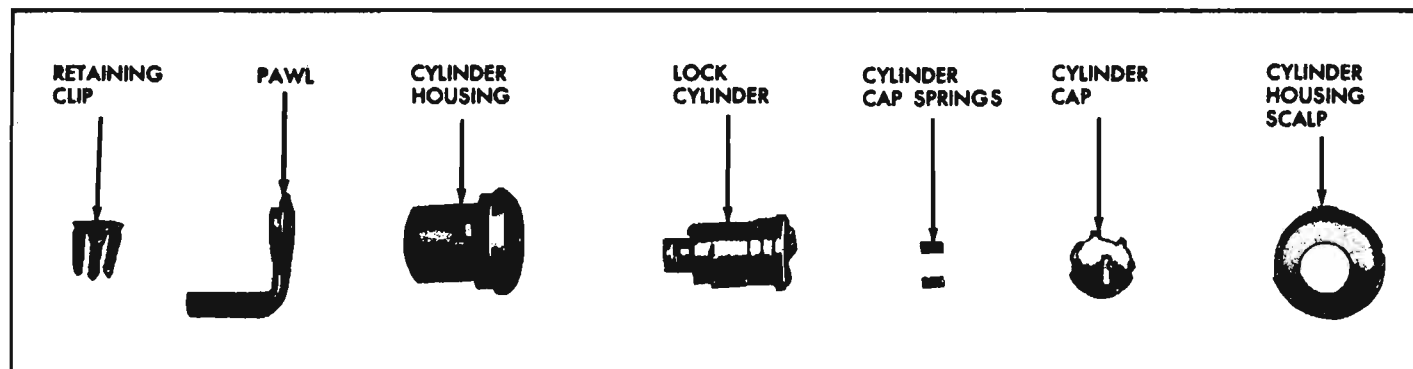


Fig. 10-56—Front Door Lock Cylinder Disassembled

LOCK SPRING CLIPS—FRONT DOOR

A spring clip is used on the door lock lever to secure remote control connecting link to lock lever. A slot in the spring clip provides for disengagement of clip, thereby facilitating detachment of the lock connecting link from the lock assembly.

To disengage spring clip, use a screwdriver or other suitable tool to slide clip out of engagement. Figure 10-54 shows door lock spring clip engaged and disengaged.

LOCK CYLINDER ASSEMBLY—FRONT DOOR

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector.
2. With a suitable tool through inner panel access hole, pry out lock cylinder retaining clip (fig. 10-55) sufficiently to allow removal of cylinder, then remove cylinder and gasket.
3. To install, reverse removal procedure. Using key, check operation of lock cylinder assembly.

Disassembly and Assembly

1. Remove cylinder assembly from door as previously described.
2. With suitable tool, remove retaining clip and remove pawl (fig. 10-56).
3. Carefully bend open cylinder housing scalp and remove scalp from housing.

NOTE: While removing scalp, hold cylinder cap, which is under tension from cap springs, depressed with finger. After scalp is removed, observe position of springs and cap so that they can be reinstalled in same relative positions.

4. Remove cylinder from cylinder housing.
5. To assemble, reverse disassembly procedure.

NOTE: The locking cylinder housing scalp used in production is usually damaged when removed and must be replaced by a new scalp available as a service part. The service lock cylinder housing scalp is secured by tabs (see fig. 10-56).

LOCK REMOTE CONTROL ASSEMBLY—FRONT DOOR

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector.
2. Remove door lock cylinder and remove screws securing door lock.
3. Remove screws securing remote control assembly, then while holding remote control rod, rotate remote control assembly approximately one-quarter turn and remove from door (see fig. 10-57).

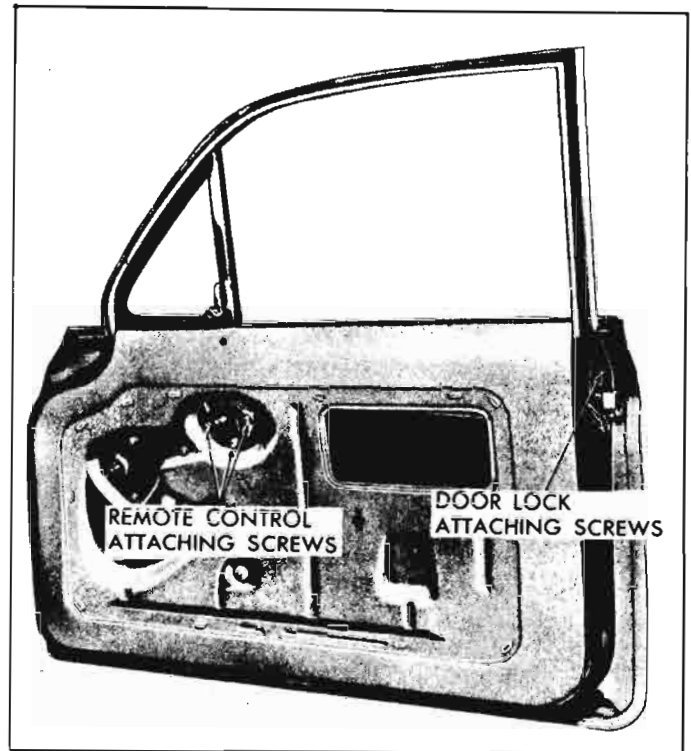


Fig. 10-57—Front Door Lock and Remote Control Attachment

4. To install, reverse removal procedure. Check operation of remote control assembly before installing inner panel water deflector.

LOCK AND REMOTE CONTROL CONNECTING LINK ASSEMBLY—FRONT DOOR

Locks are the rotary bolt-type with safety inter-lock feature. With the inter-lock feature it is very important that the lock extension engages properly in the door lock striker notch and that, where necessary, striker emergency spacers of the proper thickness are used to obtain proper engagement.

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector.
2. Remove door lock cylinder assembly and loosen screws securing remote control assembly.
3. Remove door lock attaching screws (see fig. 10-57).
4. Move remote control connecting link forward sufficiently to permit door lock housing to enter inside door; then lower lock to permit remote link to be disengaged from remote control assembly. Remove lock assembly and remote control connecting link through access hole.

NOTE: On two-door styles disengage remote control connecting link from lock prior to removing lock and link from door.

5. Remove remote control connecting link and lock as a bench operation.

- To install, reverse removal procedure. Check all operations of lock assembly before installing inner panel water deflector (fig. 10-58).

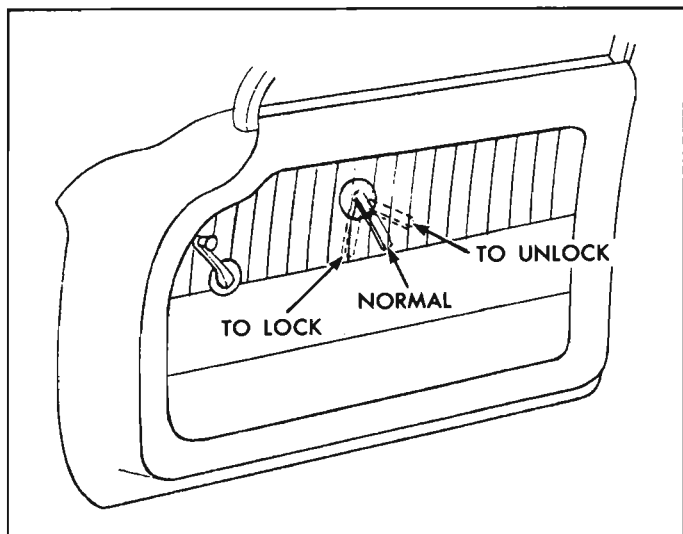


Fig. 10-58—Front Door Lock Remote Control Handle Positions

OUTSIDE HANDLE—FRONT DOOR

Removal and Installation

- 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 nuts (fig. 10-59).

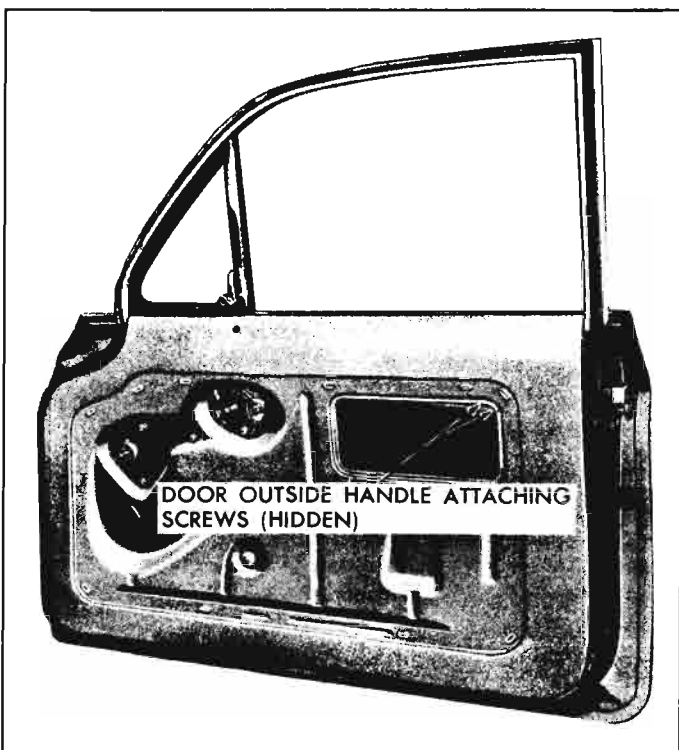


Fig. 10-59—Front Door Outside Handle Attachment

- Using a suitable tool, through access hole, remove two nuts securing handle to door outer panel.
- Remove door lock handle and gaskets from outside of body.
- To install, reverse removal procedure.

OUTSIDE HANDLE PUSH BUTTON—FRONT DOOR

Disassembly and Assembly

- Remove door outside handle as previously described.
- Depress retainer slightly and turn retainer one-quarter turn. Remove retainer, spring, push button and shaft and sealing ring from handle (fig. 10-60).

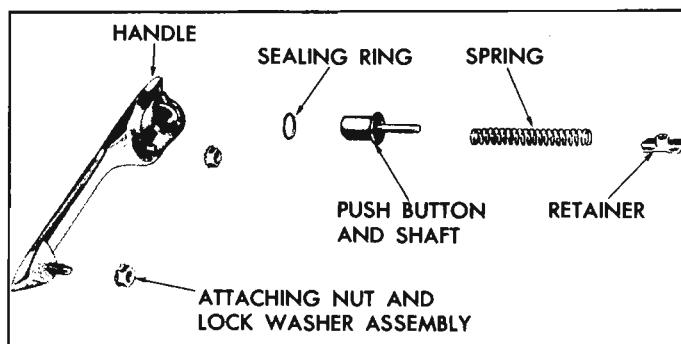


Fig. 10-60—Front Door Outside Handle Disassembled

- To install, reverse disassembly procedure.

REAR DOORS

REAR DOOR ASSEMBLY AND HINGES

The rear door assembly is attached to the body center pillar with two (2) butt-type hinges. The upper hinge on all styles is secured with three (3) screws to an anchor plate at the door hinge pillar and three (3) bolts to an upper hinge support at the center pillar. The lower hinge on all styles incorporates an integral type door check and hold open and is secured with three (3) screws to an anchor plate at both the door hinge pillar and center pillar.

Removal

Either of the following two (2) methods can be used to remove the door from the body.

- The door and hinges can be removed as an assembly from the center pillar.
- The door can be removed from the hinge straps.
 - Clean off excess sealer from around each hinge strap and mark hinge location on door hinge pillar or center pillar, depending on method of removal being used.
 - With door properly supported, remove three (3) upper and lower hinge attaching screws at door

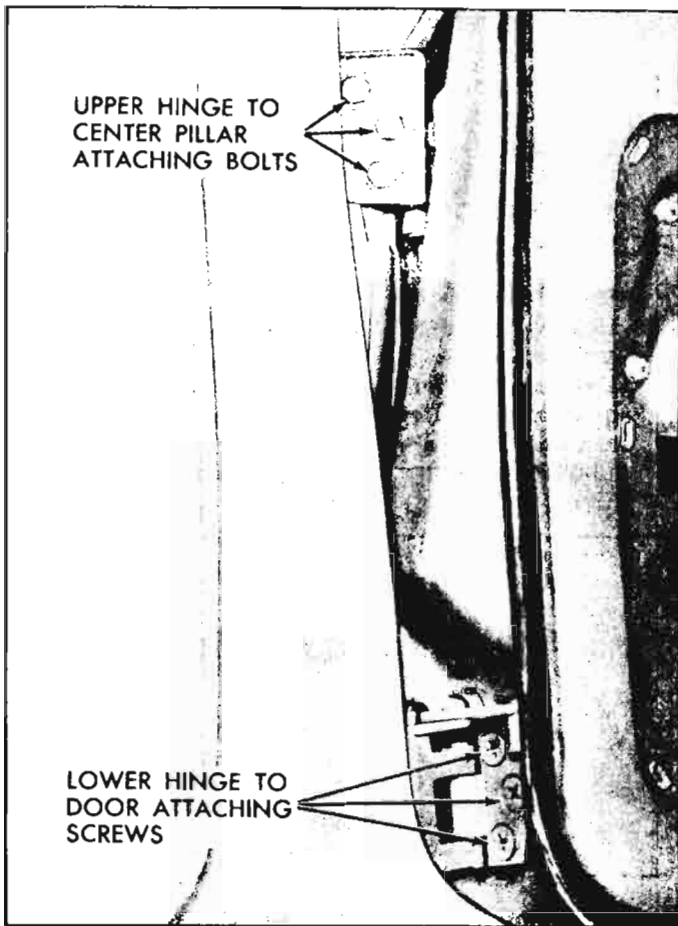


Fig. 10-61—Rear Door Hinges

hinge pillar or screws and bolts at center pillar (fig. 10-61) depending on method of removal being used.

3. With aid of helper, remove door from body opening.

Installation

1. With scraper and mineral spirits, carefully clean off old sealing compound at hinge areas.
2. Apply a coat of heavy-bodied sealer to attaching surfaces of hinge straps or corresponding surfaces of door and body (fig. 10-62).
3. With helper, lift door into position. Install screws loosely, then align straps within marks on pillar and tighten bolts. Check door for alignment.

Adjustments

An "in and out" adjustment is provided at the door hinge pillar. "Up and down" or "fore and aft" adjustments are provided at the center pillar.

When checking the door for alignment, remove the door lock striker from body pillar to allow door to hang free on its hinges.

NOTE: After performing any door adjustments, the door lock extension-to-striker engagement

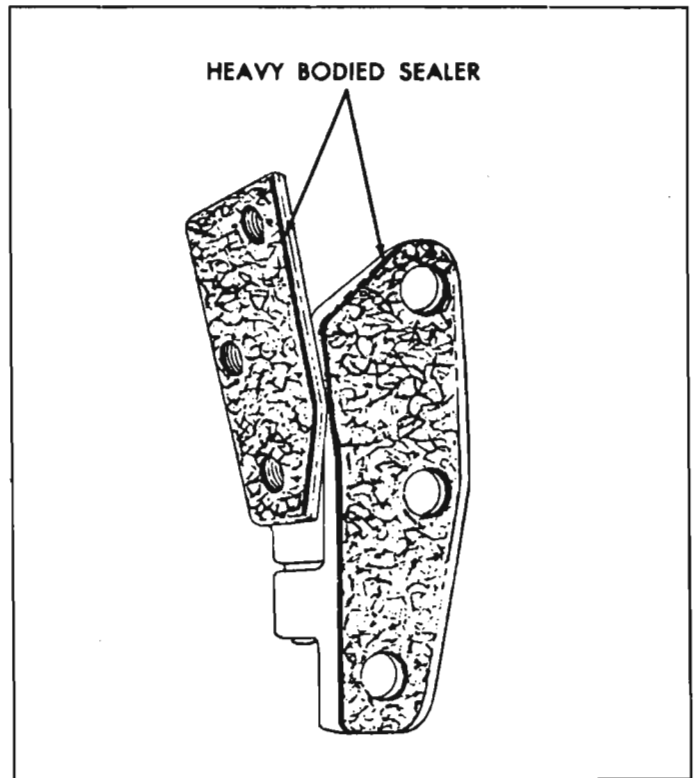


Fig. 10-62—Rear Door Hinge Sealing—Upper Hinge Shown, Lower Typical

should be checked, and if necessary, adjusted as described under "Door Lock Striker Adjustments".

1. For "in and out" adjustment, loosen hinge to door pillar attaching screws. Adjust door as required and tighten screws.
2. To adjust door "up or down" or "fore or aft", loosen hinge to center pillar attaching bolts. Adjust door "up or down" or "fore or aft" as required and tighten attaching bolts.

NOTE: When performing "fore or aft" adjustments, adjust one (1) hinge at a time so that the "up and down" adjustment of door is maintained.

WINDOW ASSEMBLY—REAR DOOR

The rear door glass is a solid tempered safety plate glass. The glass fits into a lower sash channel assembly which incorporates a welded-on lower sash channel cam. With this type design the door glass, lower sash channel and sash channel cam are removed from the door as a unit.

Removal

1. Remove door trim assembly and detach inner panel water deflector.
2. Remove rear door panel caps (fig. 10-63).

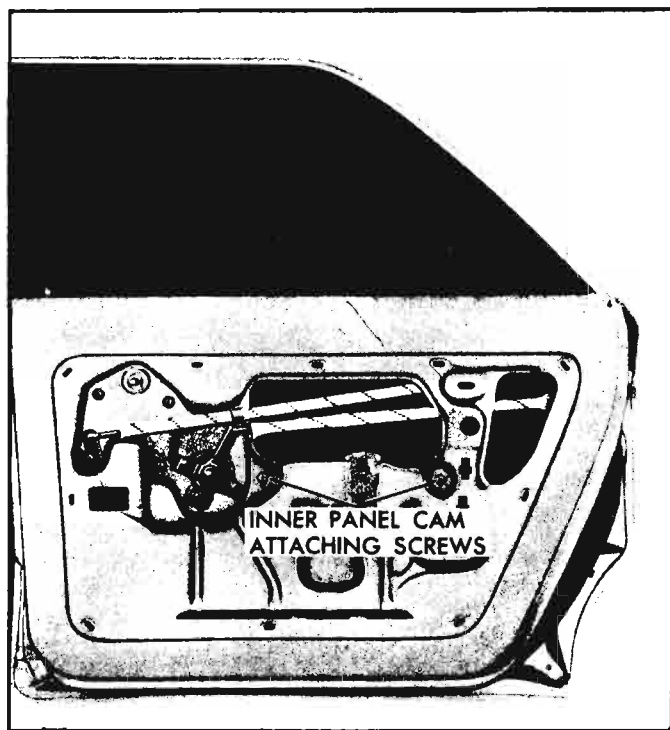


Fig. 10-63—Rear Door Window Vertical Guide Roller Attachment

3. While supporting glass by hand, carefully lower window to disengage window lower sash channel cam from regulator lift arm roller.
4. With window partially down, rotate front edge of window upward and carefully lift window assembly upward and outboard to clear window frame and disengage window lower sash channel cam from regulator balance arm roller. Then remove window.

Installation

1. Raise window regulator balance arm up so that roller is just below window glass run channel strip assembly.
2. Install rear edge of window assembly between inner and outer panels and engage balance arm roller into window lower sash channel cam.

NOTE: Window regulator lift arm must be pulled slightly inboard during this operation to clear glass assembly.

3. Carefully lower window and window regulator assemblies and engage roller on lift arm in window lower sash channel cam.
4. Install inner panel cam and all previously removed hardware and trim items. Prior to installation of water deflector, lubricate window lower sash channel cam and door inner panel cam with 630AAW Lubriplate or equivalent. Check operation of window and, where required, adjust window as described under "Adjustments" below.

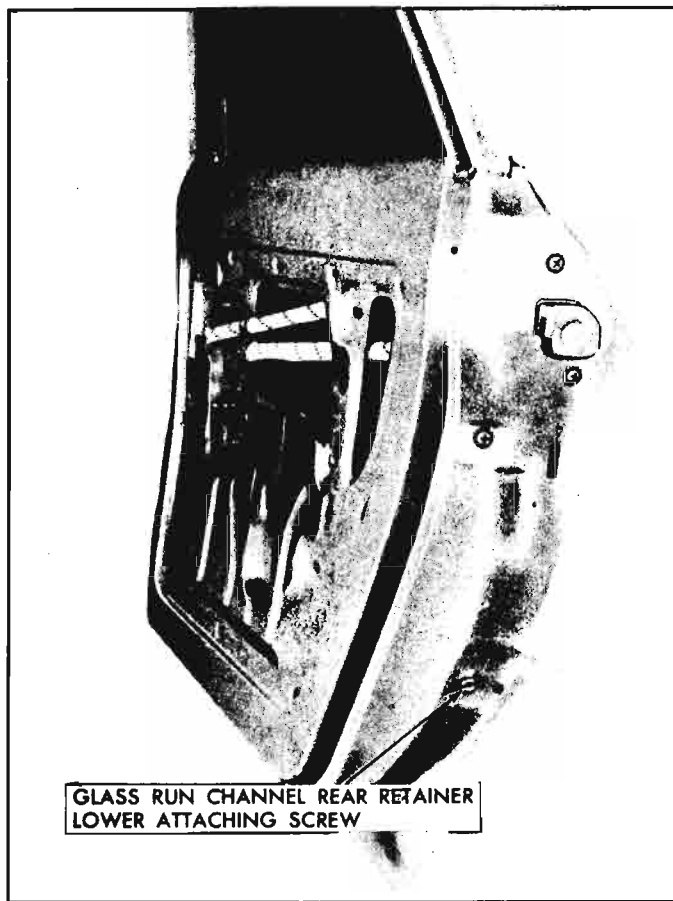


Fig. 10-64—Rear Door Window Adjustments

Adjustments

1. To adjust rear door window in or out, lower door window. Loosen glass run channel lower rear retainer attaching screw and adjust retainer assembly as required; then tighten screw (see fig. 10-64).
2. To correct condition where glass is cocked in glass run channels, loosen door window inner panel cam front and rear attaching screws, adjust cam as required and tighten screws (see fig. 10-63).

REAR DOOR WINDOW GLASS RUN CHANNEL

Removal and Installation

1. Remove rear door window.
2. Disengage glass run channel along front, upper and/or rear sections of window frame and remove channel from door.
3. To install, reverse removal procedure.

REAR DOOR WINDOW GLASS RUN CHANNEL LOWER REAR RETAINER ASSEMBLY

Removal and Installation

1. Raise rear door window. Remove door trim assembly and detach inner panel water deflector.

2. Remove retainer attaching screw from lock pillar facing of door (see fig. 10-70).
3. Inside of door, disengage end of window glass run channel from retainer. Then lower retainer to disengage tab at upper end from door window frame and remove from door.
4. To install, reverse removal procedure. Check operation of window assembly and, if necessary, adjust retainer as outlined under "Rear Door Window Adjustments."

WINDOW REGULATOR—REAR DOOR

Removal and Installation

1. Remove door trim assembly and detach inner panel water deflector.
2. Raise door window and secure window in the full up position by placing a protective piece of paper over window frame assembly and door weatherstrip to protect paint finish; then install a twelve to fifteen inch piece of body tape (2" or 2½" 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 the window regulator.
3. Remove rear door remote control assembly and allow remote control connecting rod to hang down.
4. Remove door inner panel cam.
5. Remove regulator attaching screws (see fig. 10-65). Then work regulator rearward to disengage arms from window lower sash channel cam and remove regulator through large access hole.

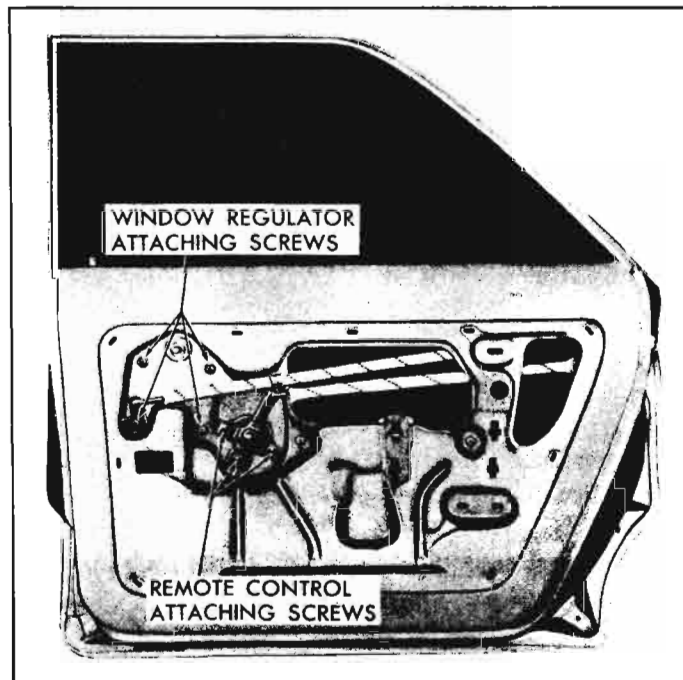


Fig. 10-65—Rear Door Window Regulator Attachment

6. To install, reverse removal procedure. Cycle window assembly several times to insure proper operation prior to installing water deflector.

REAR DOOR INNER PANEL CAM

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector sufficiently to expose inner panel cam attaching screws (see fig. 10-63).
2. Remove cam attaching screws; then disengage cam from window regulator arm roller and remove from door.

NOTE: Only one end of the cam is open sufficiently to permit removal of the roller.

3. To install, reverse removal procedure. Prior to installation of inner panel cam, lubricate entire length of cam with 630AAW Lubriplate or equivalent.

REAR DOOR REMOTE CONTROL AND CONNECTING ROD ASSEMBLY

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector sufficiently to gain access to remote control attaching screws (see fig. 10-65).
2. Remove screws securing remote control assembly to door inner panel, disengage anti-rattle clip securing remote control connecting rod to remote control assembly and remove assembly.
3. Through access hole, disengage remote control connecting rod spring clip from lock assembly and disengage rod from lock (see "Door Lock Spring Clips").
4. To install, reverse removal procedure. Check lock for proper operation before installing inner panel water deflector.

LOCK ASSEMBLY—REAR DOOR

Locks are the rotary bolt type with the inter-lock feature. With the inter-lock feature it is very important that the lock extension engages properly in the door lock striker notch and that, where necessary, striker emergency spacers of the proper thickness are used to obtain proper engagement.

Removal and Installation

1. Raise rear door window. Remove door trim assembly and detach inner panel water deflector sufficiently to gain access to rear door lock and rear door window rear guide.
2. Remove rear door window rear guide.
3. With a screwdriver or other suitable tool, disengage spring clips securing remote control con-

necting rod and inside locking rod to lock assembly and disengage rods from lock.

4. Remove door lock attaching screws and remove lock through inner panel access hole (see fig. 10-66).

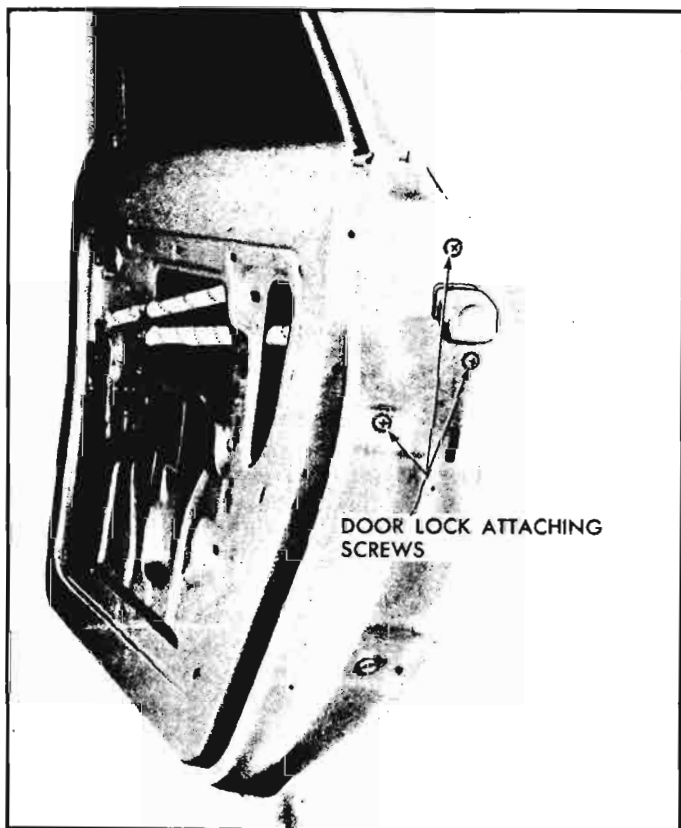


Fig. 10-66—Rear Door Lock Attachment

5. To install, reverse removal procedure. Check all operations of door lock assembly before installing inner panel water deflector.

REAR DOOR INSIDE LOCKING TO LOCK ROD ASSEMBLY

Removal and Installation

1. Raise door window. Remove door trim assembly and detach inner panel water deflector.
2. Remove inside locking rod knob from rod.
3. Through access hole, disengage spring clip securing inside locking rod assembly to door lock and disengage rod from lock.
4. Remove inside locking rod assembly attaching screw and washer, disengage rod from spring clip on door inner panel and remove inside locking rod assembly (see fig. 10-67).
5. To install, reverse removal procedure. Check operation of inside locking rod assembly before installing door inner panel rod assembly.

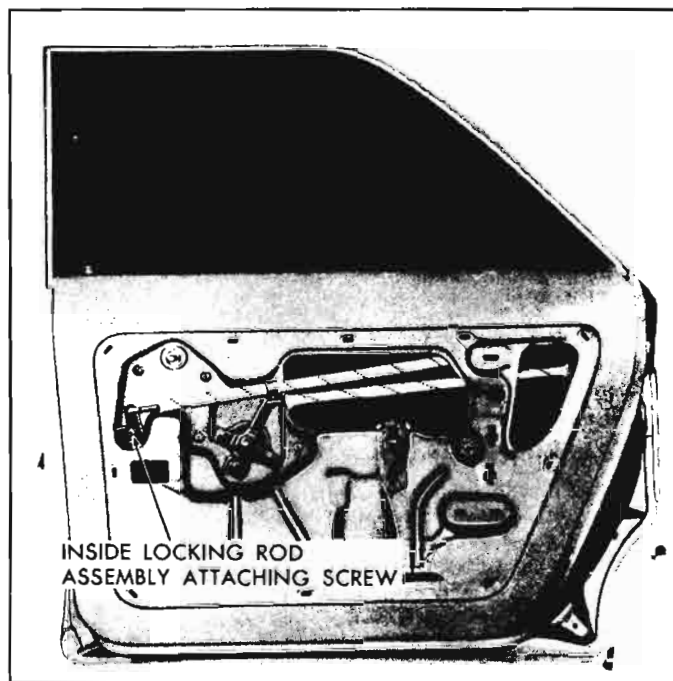


Fig. 10-67—Rear Door Lock Remote Control Attachment

OUTSIDE HANDLE—REAR DOOR

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 nuts (fig. 10-68).
2. Using a suitable tool, through access hole, remove two nuts securing handle to door outer panel.

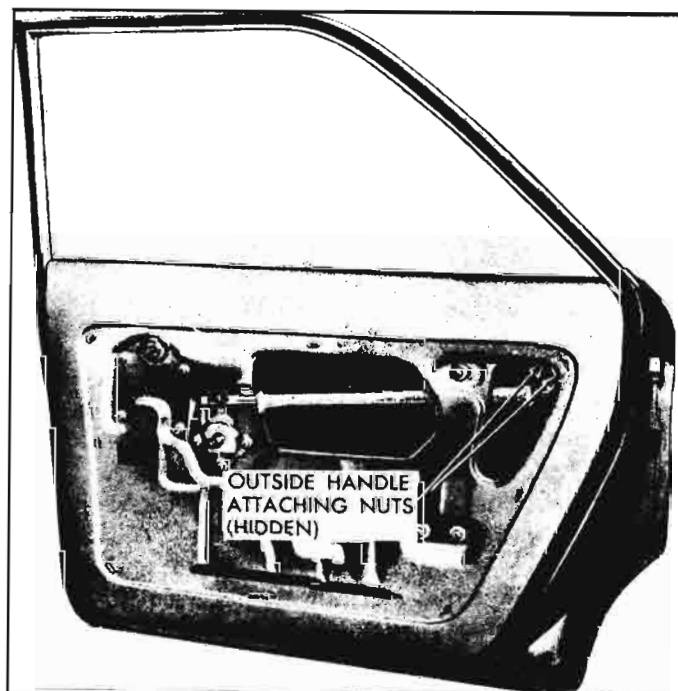


Fig. 10-68—Rear Door Outside Handle Attaching Nut Location

3. Remove door outside handle and gaskets from outside of body.
4. To install, reverse removal procedure.

OUTSIDE HANDLE PUSH BUTTON— REAR DOOR

Disassembly and Assembly

1. Remove door outside handle as previously described.
2. Depress retainer slightly and turn retainer one-quarter turn. Remove retainer, spring, push button and shaft and sealing ring from handle (fig. 10-69).
3. To install, reverse disassembly procedure.

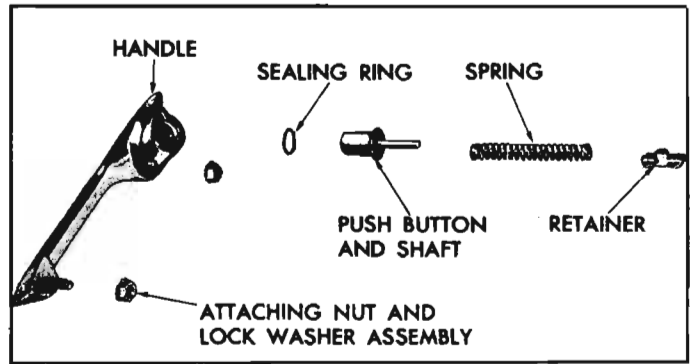


Fig. 10-69—Rear Door Outside Handle Disassembled

HEADLINING

HEADLINING ASSEMBLY

The headlining assembly is formed to contour by concealed listing wires. The ends of each listing wire are installed into holes in listing wire clips secured to the side roof rails. The wire and listing pocket at the front roof bow are secured to the bow by bend-over metal tabs. The rear listing wire is secured at the center of the back window inner panel by a bend-over tab.

The headlining is secured at the windshield and back window by cement and tacks or staples. Along the side roof rails, the headlining is cemented around the flange of the roof inner rail.

CAUTION: Clean hands are essential when working with headlining material.

Removal

1. Place protective coverings over seat cushions and backs.
2. Prior to removing headlining, remove following hardware and trim assemblies.
 - a. Rear view mirror support.
 - b. Sunshade support assembly(s).
 - c. Windshield upper garnish mouldings.
 - d. Back window upper garnish moulding.
 - e. Center pillar-to-roof rail finishing plates.
 - f. Dome lamp.
 - g. Pinchweld finishing strip along top of each door opening sufficiently to expose edge of headlining.
3. Carefully detach cemented edge of headlining along each side roof rail. (See View "A," Figure 10-70).
4. Carefully remove tacks or staples securing headlining at windshield and back window openings, then carefully detach cemented edges.
5. Working from front to rear of body, disengage headlining listing wires from side roof rails, gath-

ering or rolling headlining with listing wires on outside to keep headlining clean. At front roof bow bend down metal tabs shown in View "C" securing listing wire, and at center of back win-

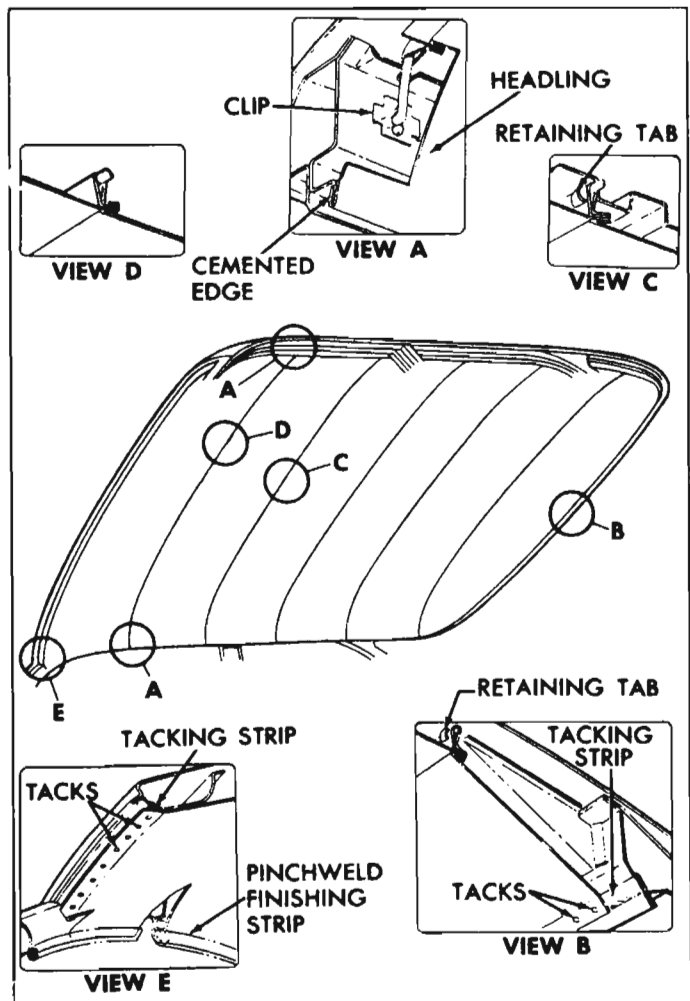


Fig. 10-70—Headlining Installation

dow bend down tab securing center of rear listing wire (see View "B"). Remove headlining.

IMPORTANT: Note into which holes the ends of the listing wires are installed in side roof rail clips to insure proper installation (See View "A").

- If necessary, listing wires may be removed from pockets.

Installation

- If previously removed, install listing wires into headlining listing pockets and lift entire assembly into body.
- Install rear listing wire. Center and align rear of headlining in relation to back window and side roof rails, then bend over tab securing center of rear listing wire (see View "B"). Then working forward, install ends of listing wires into listing wire holes in side roof rails.

NOTE: Make certain ends of listing wires are

installed in correct holes to insure proper contour of headlining (See View "A").

- At front roof bow, check headlining for proper centering and bend tabs over listing wire (See View "C"). Install remaining listing wire into holes in side roof rails.
- Center and align headlining in relation to windshield opening, sunshade locations and back window location. Then apply trim cement to headlining tacking surfaces at windshield and back window openings, and stretch and stay-tack headlining at these locations.
- Apply trim cement to headlining attaching surfaces along side roof rails and carefully cement headlining in place making certain to remove all "fullness" and "draws" from material.
- Remove any "fullness" and "draws" in headlining material at windshield and back window openings and permanently tack headlining to tacking strips.
- Install all previously removed hardware and trim assemblies and remove protective coverings.

SEATS AND SEAT COMPARTMENT TRIM

FRONT SEAT

Manually operated front seat adjusters provide fore and aft movement of the seat. When the lever at the left seat adjuster is raised the seat adjusters unlock, permitting horizontal travel of the seat. When the seat is in the desired position, the lever is released and the seat is locked.

The front seat adjusters and the floor pan at the front support may be reworked to reposition the front seat assembly one (1) inch rearward. The seat height may be increased or seat tilt adjusted forward or rearward by shimming.

FRONT SEAT ASSEMBLY

Removal and Installation

- Turn back floor carpeting where necessary to expose seat adjuster-to-seat support attaching bolts.
- Scribe location of rear end of adjuster on front seat rear support and remove adjuster rear attaching bolts.
- With aid of helper, tilt seat assembly forward then slide seat assembly rearward to disengage front legs of adjusters from retainers. Remove seat assembly with seat adjusters attached from body.
- To install, reverse removal procedure. Make certain front legs of adjusters are completely engaged under retainers and adjusters are aligned within scribe marks before installing attaching bolts.

SEAT ADJUSTERS

Removal and Installation

- Remove front seat assembly with adjusters at-

tached from body and place it upside down on a clean, protected bench.

- Remove seat adjuster counter balance spring attached to seat adjuster front support and seat bottom frame as shown in Figure 10-71.
- Operate adjusters so that both front and rear attaching bolts are accessible.
- Squeeze hooked end of seat adjuster locking wire together and slide retaining spring back over hump in locking wire. Remove locking wire from adjuster.
- Remove adjuster-to-seat bottom frame front and rear attaching bolts (fig. 71) and remove seat adjuster from seat assembly.
- To install reverse removal procedure. Check seat assembly for proper operation prior to installing seat assembly.

NOTE: The right and left seat adjuster sliding

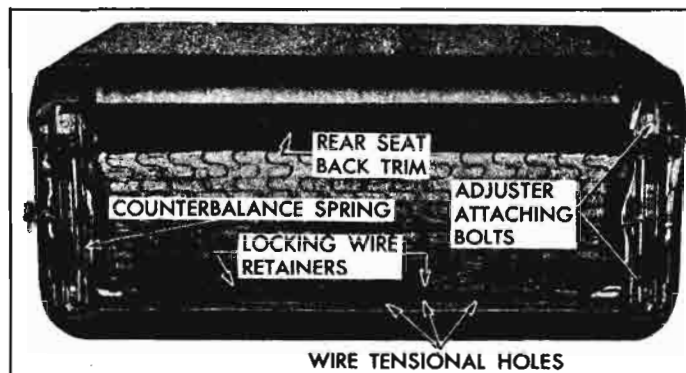


Fig. 10-71—Seat Adjusters Assembled to Front Seat

mechanisms should be in the same relative position when attaching adjuster to the seat bottom frame.

7. If right adjuster does not lock or unlock satisfactorily when the control handle on the left adjuster is operated, disengage the locking wire retainer on the right side of the seat from the hole in the seat bottom frame (fig. 10-79) and engage retainer in one of the adjacent holes to obtain proper tension in the wire.

FRONT SEAT BACK

Removal and Installation

1. Remove front seat assembly from body and place it upside down on a clean, protected bench.
2. Remove hog rings securing central portion of lower rear edge of seat back trim from front seat cushion spring assembly (see Figure 10-71).
3. Raise trim and remove cardboard breakover foundation to expose seat cushion spring attachment to seat back frame along rear of seat and hog rings securing ends of seat back trim to seat bottom frame (see Figure 10-72).
4. At each end of seat remove hog rings securing lower edge of seat back trim from seat bottom frame. Then raise seat back trim to expose bolts securing seat back reinforcement to seat bottom frame (fig. 10-73).
5. Bend open tabs (fig. 10-72) securing seat cushion spring assembly to seat back frame and carefully disengage springs from tabs.
6. Place seat assembly in upright position. Then with a helper holding seat back assembly, remove seat back reinforcement-to-seat bottom frame attaching bolts on each side of seat and remove seat back assembly (fig. 10-73).
7. To install, reverse-removal procedure.

NOTE: Make certain rear edge of seat cushion spring assembly is properly engaged to seat

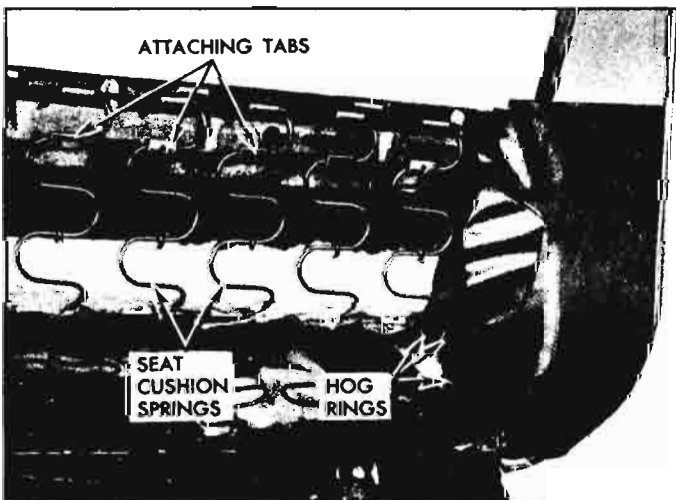


Fig. 10-72—Front Seat Cushion Spring Attachment.

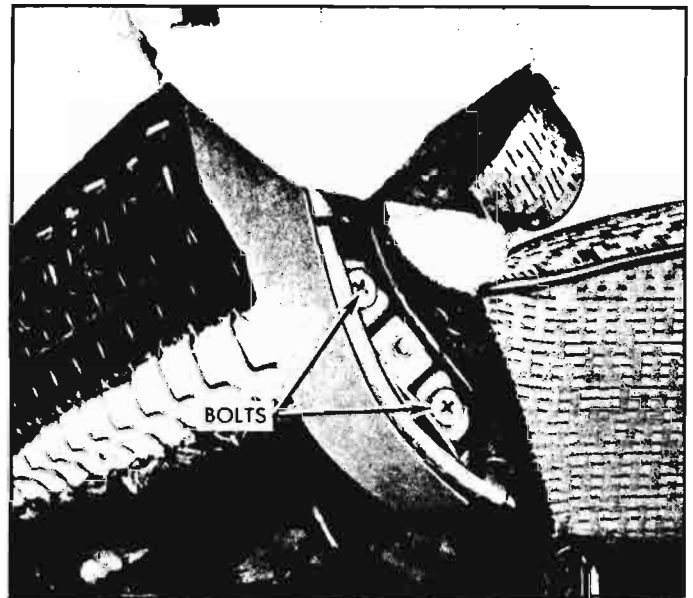


Fig. 10-73—Front Seat Back Attachment

back frame and cardboard break-over foundation is properly positioned prior to hog ringing central portion of trim in place.

FRONT SEAT SIDE PROTECTOR COVER

Removal and Installation

1. Turn back floor covering along outboard side of front seat adjuster sufficiently to expose protector cover.
2. Remove screws securing cover to floor pan (fig. 10-74) and remove cover.
3. To install, reverse removal procedure.

REPOSITIONING FRONT SEAT ASSEMBLY

Rearward Adjustment of Seat

To reposition the front seat assembly one (1) inch rearward, proceed as follows:

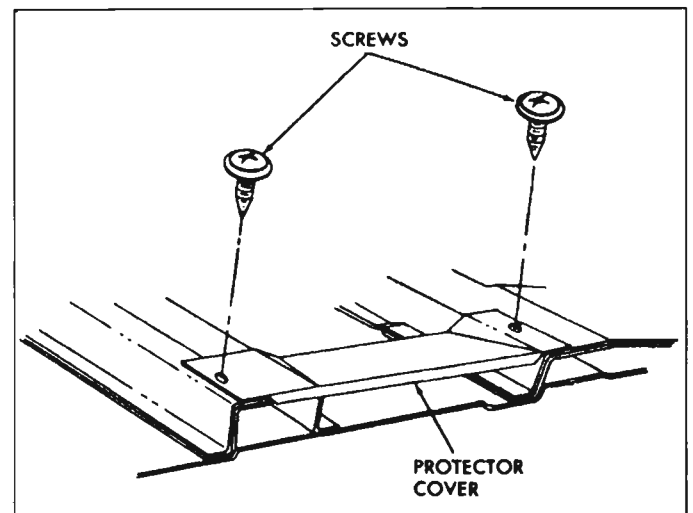


Fig. 10-74—Front Seat Side Protector Cover

1. Remove front seat assembly from body and place it upside down on a clean protected bench.
2. Inside body remove seat adjuster retainers from front seat front support.
3. Locate and drill two (2) $\frac{3}{8}$ " holes in front seat front support 1" rearward of previous retainer attaching holes (fig. 10-75). Install retainers in new location using $\frac{5}{16}$ "-24 bolts, nuts and lockwashers.
4. Enlarge $\frac{1}{8}$ " pilot holes in seat adjuster located 1" forward of attaching holes at rear of each seat adjuster to $\frac{3}{8}$ " diameter (fig. 10-75).
5. Install front seat assembly in body using $\frac{5}{16}$ "-24 x $1\frac{1}{4}$ " bolts at rear of seat adjuster and check for proper operation.

Seat Height Adjustment

The entire seat can be raised by placing $\frac{1}{2}$ " Spacers Pt. #475912 reworked as shown in insert Figure 10-75) under each seat adjuster front retainer and rear mounting, using $\frac{5}{16}$ "-24 x $1\frac{1}{4}$ " bolts to secure the seat in the raised position. Raising the seat will decrease the steering wheel-to-seat clearance from 5.5" to 4.98" or approximately $\frac{1}{2}$ ".

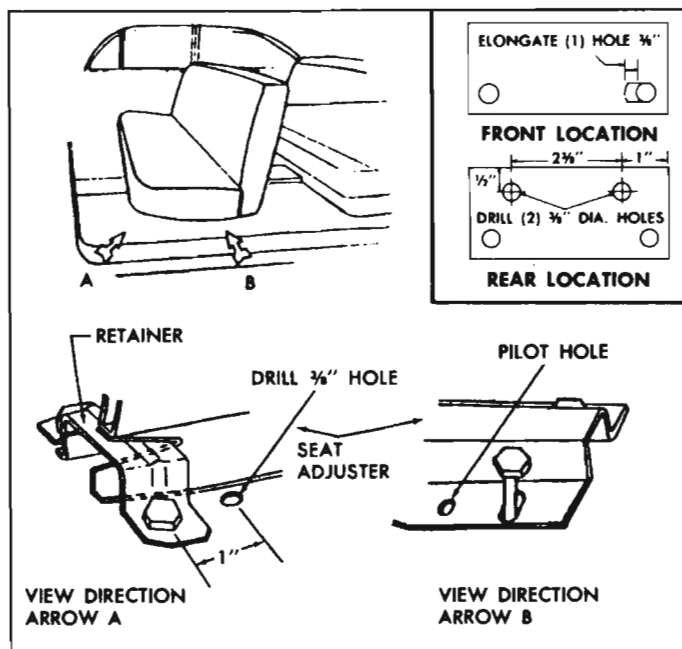


Fig. 10-75—Relocating Holes for Front Seat Repositioning

Seat Tilt

The entire seat may be tilted forward or rearward by using $\frac{1}{2}$ " Spacers (Pt. #475912) under either seat adjuster front retainers or adjuster rear mounting locations.

Spacers used at the rear will do the following:

- Raise driver approximately $\frac{1}{2}$ "
- Tilt seat back forward
- Leave clearance between steering wheel and seat cushion unchanged

- Reduce steering wheel to seat back clearance by $\frac{3}{4}$ "

Spacers used at the front will do the following:

- Lower driver .02"
- Tilt seat back rearward
- Reduce steering wheel-to-cushion clearance $\frac{1}{2}$ "
- Increase steering wheel-to-seat back clearance $\frac{3}{4}$ "
- Increase distance to foot pedals

STATION SEDAN FOLDING REAR SEAT

The optional "Station Sedan," rear folding seat back assembly is secured in the up position by means of a locking pin at each wheelhouse panel engaging a catch in the rear folding seat back panel. The folding seat back assembly is secured in the down position by a combination of spring tension between the seat cushion and seat back springs and a spring loaded filler and hinge panel assembly.

The rear seat back trim finishing mouldings consist of an upper finishing moulding, a right and left side finishing moulding, and a right and left corner escutcheon.

To raise the folding seat back assembly, press down on the forward edge of the seat back to relieve the tension on the filler panel assembly, and raise the rear edge of the filler panel. Then raise the seat back assembly. To lower the folding seat back assembly, first disengage the seat back assembly from the locking pins. Then lower the seat back assembly and compress it against the seat cushion until the filler panel assembly becomes flush with the seat back panel. Release the seat back assembly.

STATION SEDAN FOLDING REAR SEAT BACK PANEL CATCH PLATE

Removal and Installation

1. Remove screws securing catch plate to seat back panel (fig. 10-76) and remove catch plate and catch.

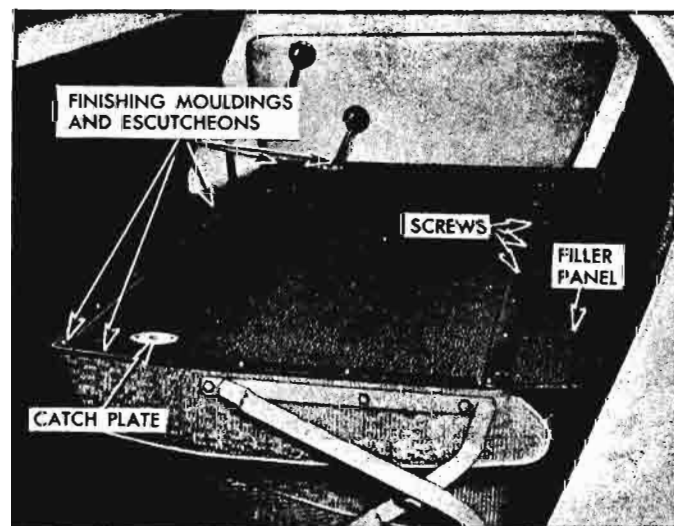


Fig. 10-76—Station Sedan Folding Rear Seat Back

2. To install, position catch in opening in seat back panel and install catch plate.

STATION SEDAN FOLDING REAR SEAT BACK FINISHING MOULDINGS

Removal and Installation

1. Remove screws securing corner escutcheons and upper and side finishing mouldings and remove escutcheons and mouldings (fig. 10-76). Corner escutcheons must be removed prior to removing side and upper moldings.
2. To install, reverse removal procedure.

REAR FLOOR FILLER PANEL AND HINGE—FOLDING SEAT

Removal and Installation

1. Lower rear folding seat back assembly.
2. Slightly raise rear edge of filler panel assembly to remove bind between rear edge of assembly and rear seat compartment floor rear insulator retainer.
3. Remove screws (fig. 10-76) securing assembly to rear seat back frame and remove assembly.
4. To install, reverse removal procedure.

Adjustments

1. To insure proper contact between rear edge of the filler panel assembly and rear floor insulator retainer, the filler panel assembly may be adjusted forward or rearward by adjusting the rear folding seat back mounting support link assembly at the link assembly-to-floor pan attaching screw locations.

STATION SEDAN FOLDING REAR SEAT BACK PANEL LOCKING PIN

Removal and Installation

1. Lower folding rear seat back assembly.
2. Unscrew locking pin from locking pin mounting plate and remove pin.
3. To install, reverse removal procedure.

STATION SEDAN REAR FOLDING SEAT BACK MOUNTING SUPPORT LINK

Removal and Installation

1. Lower rear folding seat back assembly.
2. Scribe location of link assembly on floor pan. Then remove screws (fig. 10-77) securing support link assembly to seat back assembly and floor pan and remove support link assembly.

NOTE: Exercise care when removing support link assembly to avoid damage to seat trim.

3. To install, align link assembly within scribe lines on floor pan and reverse removal procedure. The screw attaching holes in the base of the support

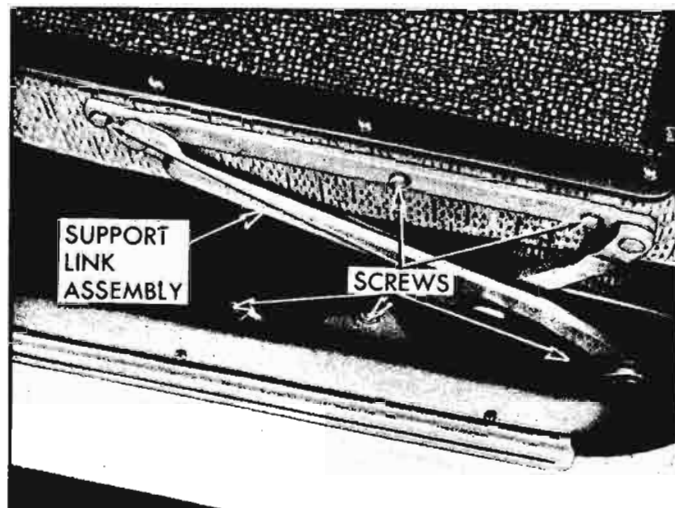


Fig. 10-77—Station Sedan Folding Rear Seat Back Support Link

link assembly are elongated fore and aft to insure proper contact between the rear edge of the filler panel assembly and the rear seat compartment rear insulator retainer.

STATION SEDAN FOLDING REAR SEAT BACK ASSEMBLY

Removal and Installation

1. Lower rear folding seat back assembly and raise rear floor filler and hinge panel assembly.
2. At each side of seat, remove screws securing rear folding seat back mounting support link assembly to folding seat back assembly (see Figure 10-76).
3. With aid of helper carefully remove seat back assembly and attached rear floor filler and hinge panel assembly from body and place it on a clean protected bench.

NOTE: Rear floor filler and hinge panel assembly is spring loaded and must be held against the seat back panel while removing seat assembly from body.

4. To install, reverse removal procedure. Exercise care to avoid damage to seat trim.

REAR SEAT COMPARTMENT TRIM

The rear seat compartment trim consists of several pieces of trim secured in position by cement and/or finishing screws (fig. 10-78). If original trim is to be reinstalled, care should be exercised in detaching trim at cemented locations to prevent damage to trim.

REAR SEAT COMPARTMENT SIDE TRIM REPLACEMENT

The rear seat compartment side trim is cemented to body panels and is also secured by four (4) finishing screws across the top of the trim (fig. 10-78).

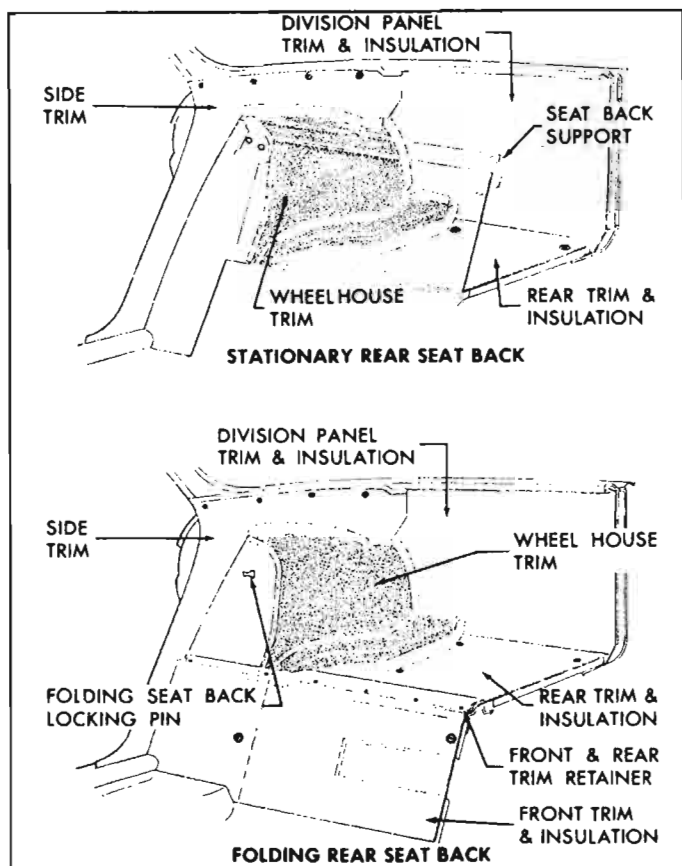


Fig. 10-78—Rear Seat Compartment Trim

To remove trim from bodies equipped with stationary rear seat, remove rear seat cushion and back; on bodies equipped with folding rear seat, lower seat back, then fold seat back filler panel forward and secure in this position. Carefully break cement bond between trim and door opening pinchweld finishing strip. Remove four (4) screws securing top edge of trim, then carefully detach trim from body panels at cemented locations and remove trim from body.

To install, reverse removal procedure using an approved trim cement.

REAR SEAT COMPARTMENT REAR TRIM AND INSULATION REPLACEMENT

The rear seat compartment rear trim and insulation assembly is secured by five (5) screws and a retainer across the front of the trim (fig. 10-78).

To remove rear trim from bodies equipped with stationary rear seat, remove rear seat back; on bodies

equipped with folding seat, lower rear seat back, then fold seat back filler panel forward and secure in this position. Remove trim attaching screws and loosen retainer; then remove trim from body.

To install, reverse removal procedure.

REAR SEAT COMPARTMENT FRONT TRIM AND INSULATION REPLACEMENT (WITH FOLDING SEATS)

The rear seat compartment front trim and insulation on bodies equipped with folding rear seat is secured across the top by a retainer (fig. 10-78).

To remove front trim, lower rear seat back, then fold seat back filler panel forward and secure in this position. Remove retainer and screws from face of trim, then lift trim upward and remove from body.

To install, reverse removal procedure.

REAR SEAT COMPARTMENT DIVISION PANEL TRIM AND INSULATION REPLACEMENT

The rear seat compartment division panel trim and insulation is secured under the rear trim and the upper end is retained by the upper flange of the division panel (fig. 10-78).

To remove the rear seat compartment division panel trim and insulation, remove the rear trim and insulation. Disengage trim from under flange of division panel and remove trim from body.

To install, reverse removal procedure.

REAR SEAT COMPARTMENT WHEELHOUSE TRIM REPLACEMENT

The rear seat compartment wheelhouse trim is cemented to the wheelhouse panel.

To remove wheelhouse trim on styles equipped with stationary seat back, remove rear seat back and support and rear trim and insulation, then detach upper portion of side trim and remove division panel trim and insulation (fig. 10-78). On styles equipped with folding seat back, remove front and rear trim and insulation assemblies and folding seat back locking pin, then detach upper portion of side trim and remove division panel trim and insulation (fig. 10-78). Carefully detach the wheelhouse trim from cemented areas of the wheelhouse panel and remove trim from body.

To install, reverse removal procedure using an approved trim cement applied to the contacting surfaces of both the trim and wheelhouse panel.

REAR END

BACK WINDOW ASSEMBLY

The wrap-around back window is secured in the body opening by a conventional rubber channel. The "700"

style is equipped with back window reveal mouldings which are retained by the back window rubber channel requiring removal of the back window assembly to remove the reveal mouldings. Whenever a replacement

glass is to be installed or the back window is being removed to correct body opening irregularities, it is important that the back window body opening be checked before installation of the glass.

Removal

1. Place protective covering over painted surfaces, rear seat cushion and back and trim adjacent to back window.
2. From inside body, carefully break seal between lip of rubber channel and pinchweld flange completely around perimeter of glass.
3. Carefully push lower edge of window and rubber channel assembly rearward until lip of rubber channel is disengaged from retaining flange; then push upper edge until disengaged from pinchweld flange.
4. With aid of a helper, lift complete assembly from body opening and place on a protected surface. Remove back window reveal mouldings and/or rubber channel from glass.

Checking Back Window Body Opening

Whenever a replacement glass is to be installed or the back window is being removed to correct body opening irregularities, it is important that the back window body opening be checked before the installation of the glass. The following procedure outlines the method which may be used to check the opening.

1. Clean off original sealer from back window body opening.
2. Check body pinchweld flange and retaining flange for any irregularities and correct, where necessary.
3. Install five (5) checking blocks J-8372 over pinchweld flange and retaining flange at locations shown in Figure 10-79.
4. Carefully position glass in back window opening.

CAUTION: Care should be exercised to make certain glass does not strike body metal during checking procedure as edge chips can cause tempered plate glass to shatter. DO NOT attempt to grind glass.

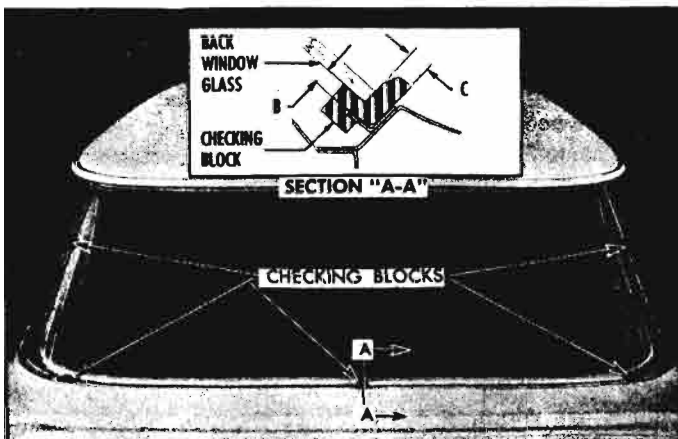


Fig. 10-79—Checking Blocks J-8372 Installed to Back Window Opening

5. With back window glass supported and centered in the opening by checking blocks, check relationship of glass to body opening around entire perimeter of glass. The distance between the inside surface of the glass and the pinchweld or retaining flange indicated at "B," Figure 10-79, and between the outer edge of the glass and body metal indicated at "C" should be uniform completely around the glass and body opening. Any irregularities should be marked and re-formed.
6. Remove glass from opening and reform opening as required.
7. Re-check back window opening again as outlined above.
8. Install back window glass.

Installation

1. Clean original sealer from back window body opening and rubber channel. Check back window body opening and pinchweld and retaining flanges for any irregularities and correct, where necessary.

NOTE: If installing a new back window glass or if glass has been removed to correct body opening irregularities, check glass and body opening as described under "Checking Back Window Body Opening."

2. Install rubber channel to glass. On "700" styles install back window reveal mouldings to rubber channel. A rubber lubricant (soap and water solution) may be applied in reveal moulding cavity of rubber channel to assist in installation of mouldings. Tie back window reveal mouldings and rubber channel to glass as shown in Figure 10-80.

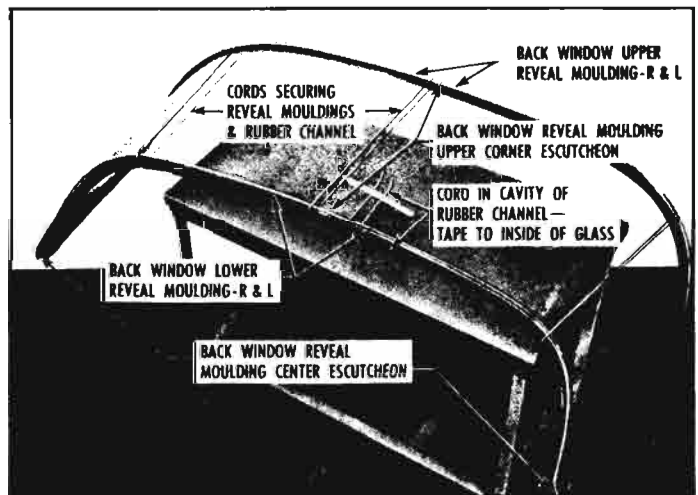


Fig. 10-80—Back Window Assembly Prepared for Installation

3. Insert a strong cord into pinchweld cavity of rubber channel starting at top center and continuing completely around rubber channel ending at starting point. Tape ends of cord to inside surface of glass.

NOTE: When inserting cord into pinchweld cavity of rubber channel, make sure cords are inserted under cords (fig. 10-89) holding reveal mouldings and/or rubber channel to glass.

4. Apply a continuous bead (approximately $\frac{1}{8}$ " in diameter) of medium-bodied sealer to corner of back window rabbet across top of opening, as indicated at "1," Figure 10-81.

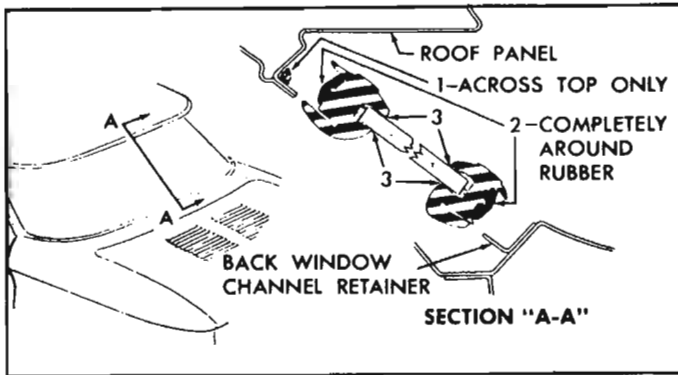


Fig. 10-81—Back Window Sealing

5. Apply a continuous ribbon (approximately $\frac{3}{16}$ " thick x $\frac{1}{2}$ " wide) of medium-bodied sealer to the base of the rubber channel, as indicated at "2," Figure 10-81, completely around rubber channel.
6. Lay a length of cord just inboard of outer sealing lip completely across top of rubber channel. Tape ends of cord to outside surface of glass so that outer sealing lip can be properly seated during installation of glass.
7. Apply a 2 inch wide film of rubber lubricant (soap and water solution) just outboard of the retaining flange around lower portion of back window opening.
8. With aid of a helper, position glass and rubber channel assembly into body opening.
9. While a helper is applying hand pressure to outside surface of glass, pull cords in rubber channel and, where necessary, use a hooked tool to seat lip of rubber channel over body flanges at sides and top first. Remove cords holding reveal mouldings and/or rubber channel prior to seating rubber channel at cord locations. Pull cord on outside of glass to seat outer sealing lip across top of body opening.

NOTE: If, during the string pulling operation, particularly when starting at the top and sides, the rubber lip is not seating properly over the body flanges, check for locations where the rubber channel is tight against the body flange preventing forward movement of the glass and channel assembly into the opening. Using a hooked tool, seat the rubber lip over the body flange at any tight locations before proceeding with the cord pulling sequence.

10. Using a pressure-type applicator, apply an approved weatherstrip adhesive (black) around entire perimeter of glass between rubber channel and glass on inside and outside of glass as indicated at "3," Figure 10-81.
11. Clean off all excess sealer and cement, install previously removed parts and remove protective coverings.
12. Watertest back window.

Sealing of Back Window with Glass Installed

The back window can in most cases be sealed, as described below, without removing the back window assembly.

1. To seal between glass and rubber channel—apply weatherstrip adhesive (black) with a pressure-type applicator between glass and rubber channel on both sides of glass, as indicated at "3," Figure 10-81, completely around glass.
2. To seal between rubber channel and body—pull back inner lip of rubber channel, then using a pressure-type gun, apply medium-bodied sealer between rubber channel and pinchweld or retaining flange completely around opening.

NOTE: This seal can most effectively be made while a helper is applying pressure to inside surface of glass (pushing glass and rubber channel slightly rearward) so that sealer will work to the rear of the pinchweld or retaining flange.

ENGINE COMPARTMENT

The engine compartment lid is secured to the body by two box-type hinges. The hinges are adjustable "up or down" and "sideways" at the body attachment. Forward or rearward adjustment of the lid is provided at the hinge-to-lid attachment. A telescoping, self-locking positive hold support is provided to hold the lid in the open position. The lid latch is secured by a retainer to the rear end panel and is provided with a control handle which is accessible through an opening in the top of the license plate housing. When the latch is actuated, a spring, secured to the lid by three bend-over tabs, opens the lid approximately $\frac{3}{4}$ of an inch to provide finger-clearance to grasp the lid. The lower gutter sealing strip is retained by sealing plugs in the engine compartment lid.

ENGINE COMPARTMENT LID

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 (fig. 10-82).
4. With the aid of a helper to hold lid, remove hinge

strap attaching bolts (fig. 10-82) and remove engine compartment lid.

5. To install, reverse removal procedure, aligning hinge straps within scribe marks.

Adjustments

1. To adjust the engine compartment lid *forward*, *rearward* or *sideways* in the body opening, loosen hinge strap-to-lid attaching bolts (fig. 10-82) and shift lid to required position, then tighten bolts.
2. To adjust the front of the lid *up* or *down* or to adjust the lid *sideways*, loosen hinge-to-body attaching bolts (fig. 10-82), then shift lid to required position and tighten bolts.

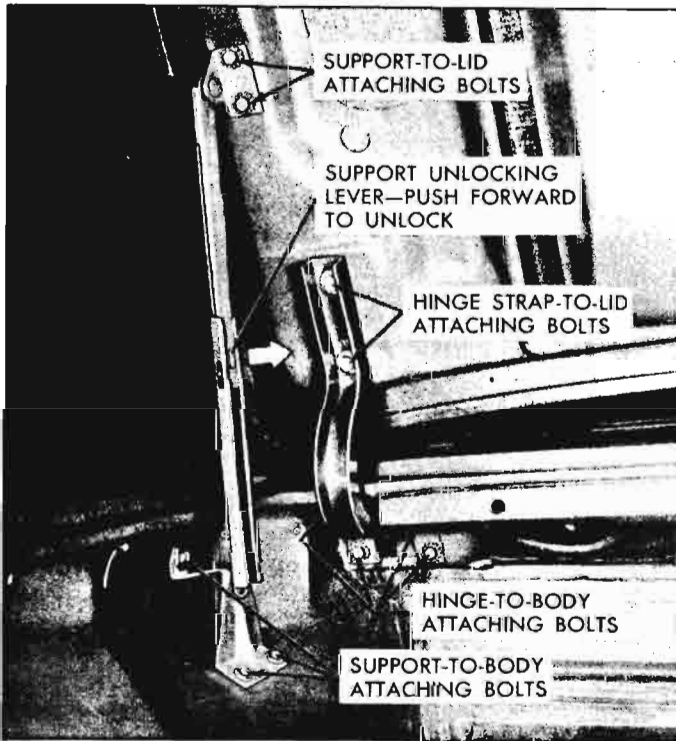


Fig. 10-82—Engine Compartment Lid Hinge and Support

3. To adjust lid bumper supports, carefully bend supports *up* or *down*.

ENGINE COMPARTMENT LID HINGE

Removal and Installation

1. Remove engine compartment lid.
2. Mark position of hinge on body panel.
3. Remove hinge attaching bolts (fig. 10-91) and remove hinge from body.
4. To install, first lubricate hinge pin with a dripless oil, then reverse removal procedure aligning hinge within marks.

ENGINE COMPARTMENT LID SUPPORT

Removal and Installation

1. Raise lid and prop in open position.
2. Remove lid support attaching bolts from both body and lid (fig. 10-82) and remove support.
3. To install, first lubricate support as specified under "Body Lubrication" in Section 2, then reverse removal procedure.

ENGINE COMPARTMENT LID LATCH

Removal and Installation

1. Raise engine compartment lid. Mark position of lid latch on support panel.
2. Remove latch attaching bolts (fig. 83), then remove retainer and latch.

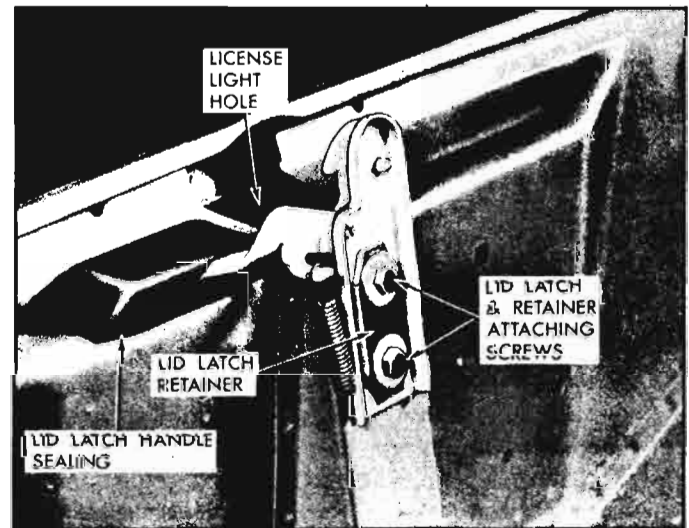


Fig. 10-83—Engine Compartment Lid Latch

3. To install, reverse removal procedure aligning latch within scribe marks. Lubricate latch as specified under "Body Lubrication" in Section 2.

Latch Engagement Check and Adjustments

To check for proper engagement of engine compartment lid latch, first make sure lid is properly aligned in body opening. This can be accomplished by removing lid latch and applying hand pressure on the rear center of the lid until lid bottoms against both lid bumpers.

If lid is not centered within the opening and/or is not flush with body surfaces, adjust lid and/or lid bumpers as described under "Engine Compartment Lid Adjustments."

With compartment lid properly aligned in body opening, install lid latch and retainer, then detach license plate light and move light to one side. After observing latch and striker through license light hole, raise lid and adjust latch *laterally* so that striker engages latch with equal clearance on both sides of latch. Adjust latch *up* or *down* to provide snug contact of the lid with the lid bumpers.

ENGINE COMPARTMENT LOWER GUTTER SEALING STRIP

Removal and Installation

1. Insert tip of Tool J-5757 at each clip location and carefully snap clips from sealing plugs.
2. To install, first check all sealing plugs for cracks or damage and replace where necessary.

NOTE: If sealing plugs are loose and will not remain engaged in engine compartment lid,

install a 1/2" x 1" piece of cloth backed water-proof body tape over sealing plug retaining hole. Make two 5/16" slits in tape to form an "X" pattern. Check sealing plug for snug fit. If plug is still loose, repeat above operation by installing second piece of tape over existing repair.

Install sealing strip to lid by placing notched end of Tool J-5757 in loop of each clip and pushing clip into sealing plug.

EXTERIOR MOULDINGS

REMOVAL AND INSTALLATION

ALL MODELS

The exterior mouldings are secured to the body by any one or a combination of the following: attaching screws, attaching nuts, snap retention on body parts, "bathtub" type snap-on clips of plastic construction, snap-in clips, bolt and clip assemblies, and moulding integral attaching studs. Figure 10-84 depicts cross-section drawings which illustrate some of the typical methods used in attaching moldings to the body.

When removing and installing body exterior mouldings, certain precautions should be exercised. Adjacent finishes should be protected to avoid refinishing. Proper tools and methods should be employed to guard against moulding damage, particularly if the part is to be re-used. Whenever a sealing operation is disturbed, appropriate sealing materials and methods should be used to provide the required watertight seal. Every screw, nut or clip that secures a moulding to a body outer panel, including the attaching hole, requires a specialized type of sealing operation. An approved grade of medium-bodied sealer and body caulking compound are the sealers used most generally in the effective sealing of these mouldings. The exterior mouldings are identified in Figure 10-85.

Bathtub type clips, of plastic construction, can be removed satisfactorily by cutting them part way through or all of the way through from the outer panel with a sharp, flat-bladed tool as shown in Figure 10-86. In some cases it may be necessary to cut the clip from each end to remove it.

WINDSHIELD PILLAR DRIP MOULDING

The moulding, of painted finish on the 0500 Series and of bright finish on the 07 and 0900 Series, extends from the front of the roof drip moulding to the belt line. The moulding is secured to the pillar with screws and requires sealing.

To remove the moulding: open the door, remove the attaching screws, disengage the moulding from the pillar and unhook it from the roof drip moulding.

To install the moulding: clean the mating surfaces of parts and apply a continuous ribbon of medium-bodied sealer (1/4" diameter) along the center of the

entire length of the moulding attaching surface. Position the moulding to the pillar and hook the upper edge over the front edge of the roof drip moulding. Align and seal the screw holes and install the attaching screws.

"700" MODELS

Motor Compartment Lid Outer Panel Moulding

Front Compartment Lid Outer Panel Moulding

The moulding is secured to the lid outer panel by attaching screws and moulding "T" nut clips.

To remove the moulding: raise the lid and remove the attaching screws.

To install the moulding: apply body caulking compound to both sides of the attaching holes in the lid. Position the moulding with aligned "T" nut clips to the lid, align the moulding and attaching screw holes and install the attaching screws.

Front Fender Lower Moulding

The moulding is secured to the front fender by a bolt and clip assembly at the center and by bathtub type snap-on clips.

To remove the moulding: remove the clip bolt nut inside of the front fender. With a flat-bladed tool, carefully unsnap the moulding from each retaining clip.

To install the moulding: replace any damaged clips and seal the replacement clips as required. Apply body caulking compound to the center clip bolt and attaching nut. Position the moulding to the fender and over the retaining clips and snap it into place. Install the center attaching nut.

Roof Drip Moulding Front Scalp

Roof Drip Moulding Rear Scalp

The front and rear scalps are secured to the drip moulding by snap retention. Both scalps, the front and rear, are comprised of a right and a left scalp. The rear right scalp overlaps the rear left scalp. Both of the rear scalps are overlapped at the front by the front scalps.

To remove a front scalp: use a pointed, hook tool and

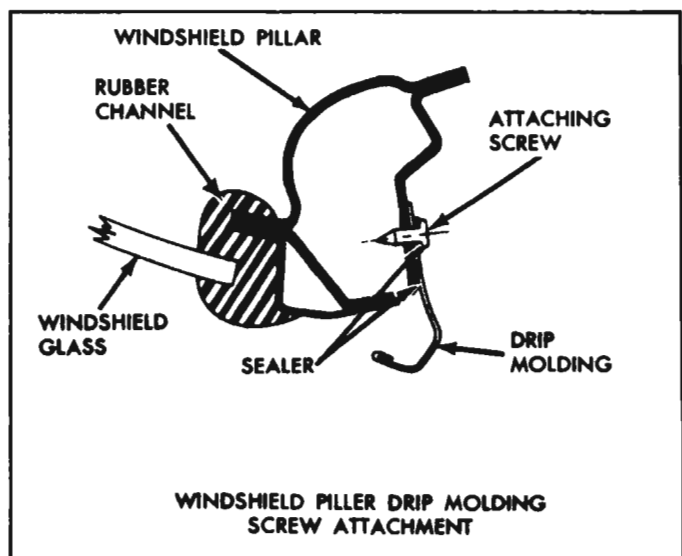
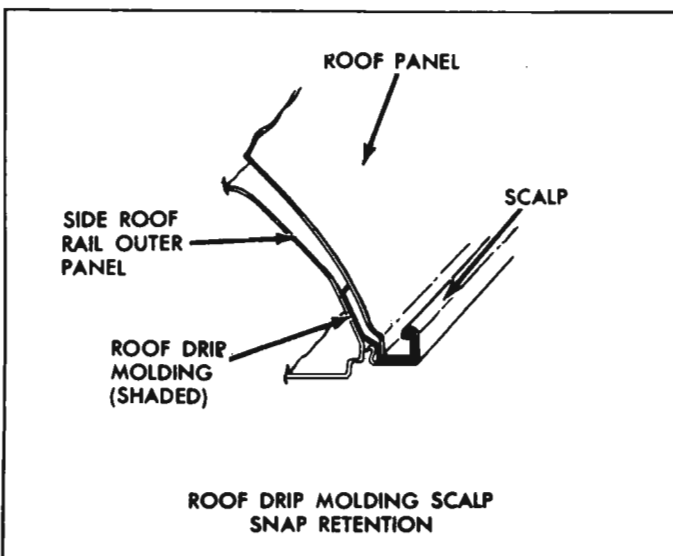
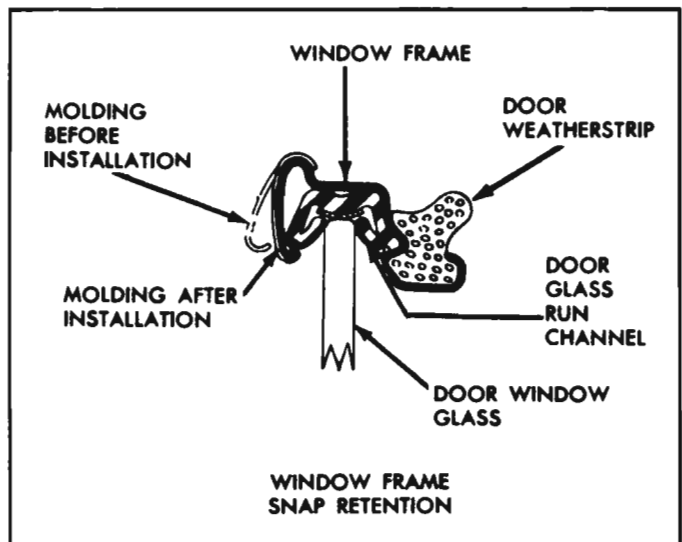
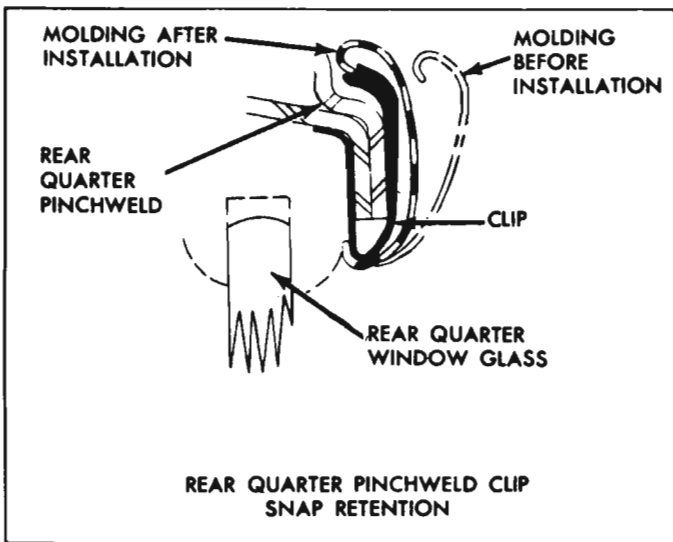
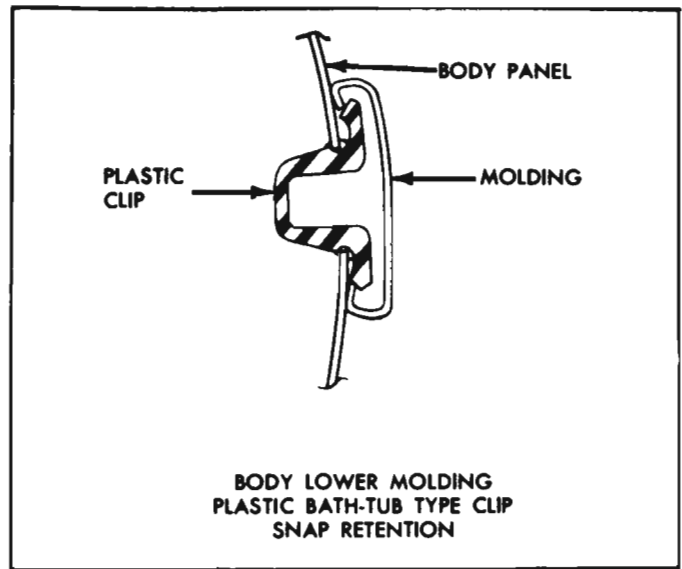
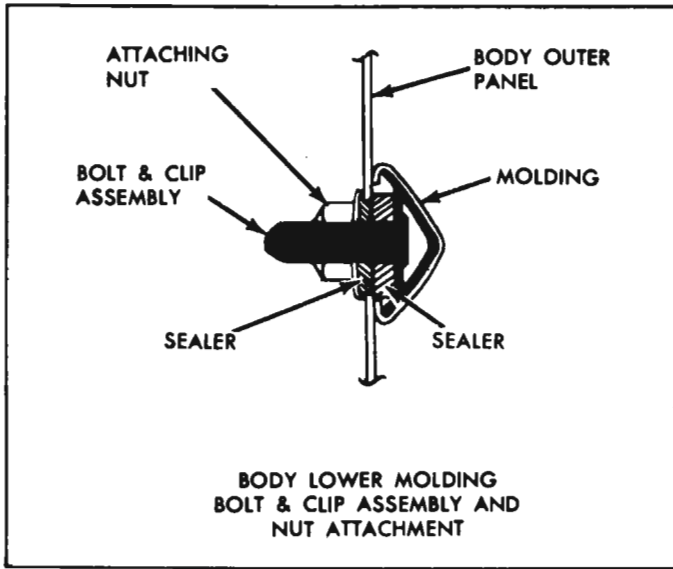


Fig. 10-84—Moulding Attachment

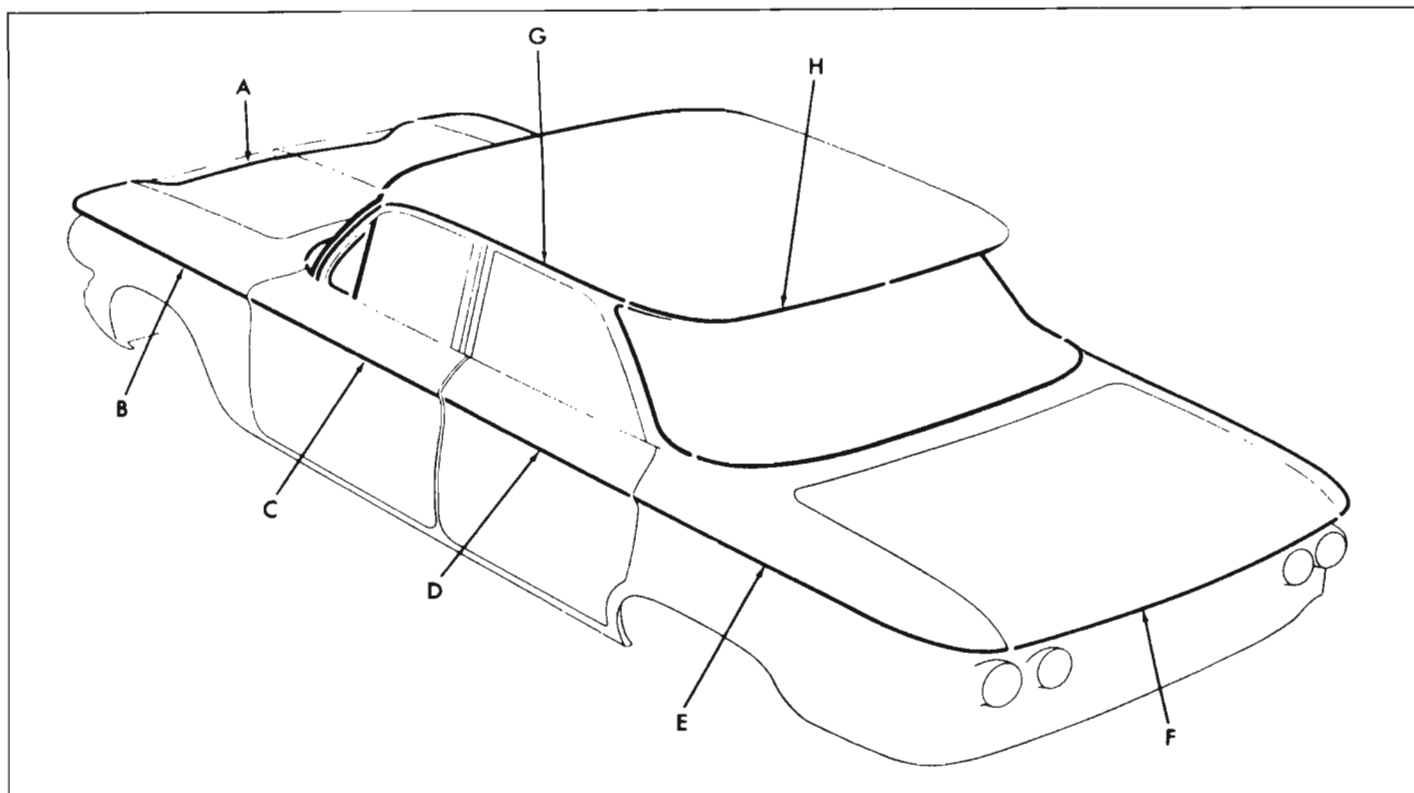


Fig. 10-85—Body Exterior Mouldings on "700" Series

A—Front Compartment Outer Panel Moulding
 B—Front Fender Outer Panel Moulding
 C—Front Door Lower Outer Panel Moulding

D—Rear Door Lower Outer Panel Moulding
 E—Rear Fender Lower Outer Panel Moulding
 F—Engine Compartment Lid Outer Panel Moulding

G—Front Roof Drip Scalp Moulding
 H—Rear Roof Drip Scalp Moulding

unsnap the scalp from the drip moulding. Start the removal on the underside of the drip moulding at either end.

To remove the rear right scalp, first detach the required length of the front right scalp.

To remove the rear left scalp, first detach the required length of the front left scalp and the rear right scalp.

To install the scalps: position the upper edge of the

scalp over the upper lip of the drip moulding, align the scalp to the body, and snap the lower, rolled edge of the scalp under the drip moulding. In sequence, install the rear left scalp first. Then install the rear right scalp. The front scalps are installed after the rear scalps.

Front Door Outer Panel Lower Moulding

The moulding is secured to the door outer panel by a screw at the lock pillar hemming flange and by bathtub type, snap-on clips which are previously installed on the door.

To remove the moulding: remove the rear attaching screw. With a flat-bladed tool, carefully unsnap the moulding from the door at each clip location.

To install the moulding: replace damaged clips as required. Place the moulding upper return flange over the clips and snap the opposite flange over the clips. Seal and install the moulding end attaching screw.

Rear Door Outer Panel Lower Moulding

The moulding is secured to the door outer panel by a screw at the rear hemming flange and by bathtub type, snap-on clips which are previously installed on the door.

To remove the moulding: remove the rear attaching screw. With a flat-bladed tool carefully unsnap the



Fig. 10-86—Removing Bathtub Clip

moulding from the door at each clip location.

To install the moulding: replace damaged clips as required. Place the moulding upper return flange over the clips and snap the opposite flange over the clips. Seal and install the moulding end attaching screw.

Rear Fender Lower Moulding

The moulding is secured to the rear fender by a bolt and clip assembly at the rear and by bathtub type, snap on clips. On "35" styles the bolt and clip assem-

bly is the rearmost attachment. On "27" and "69" styles the bolt and clip assembly is located at the molding rear radius.

To remove the molding: remove the rear clip bolt nut. With a flat-bladed tool, carefully unsnap the molding from each retaining clip.

To install the molding: replace damaged clips and seal the replacement clips as required. Apply body caulking compound to the clip bolt and attaching nut. Position the molding to the fender and over the retaining clips and snap it into place. Install the attaching nut.

BUMPERS

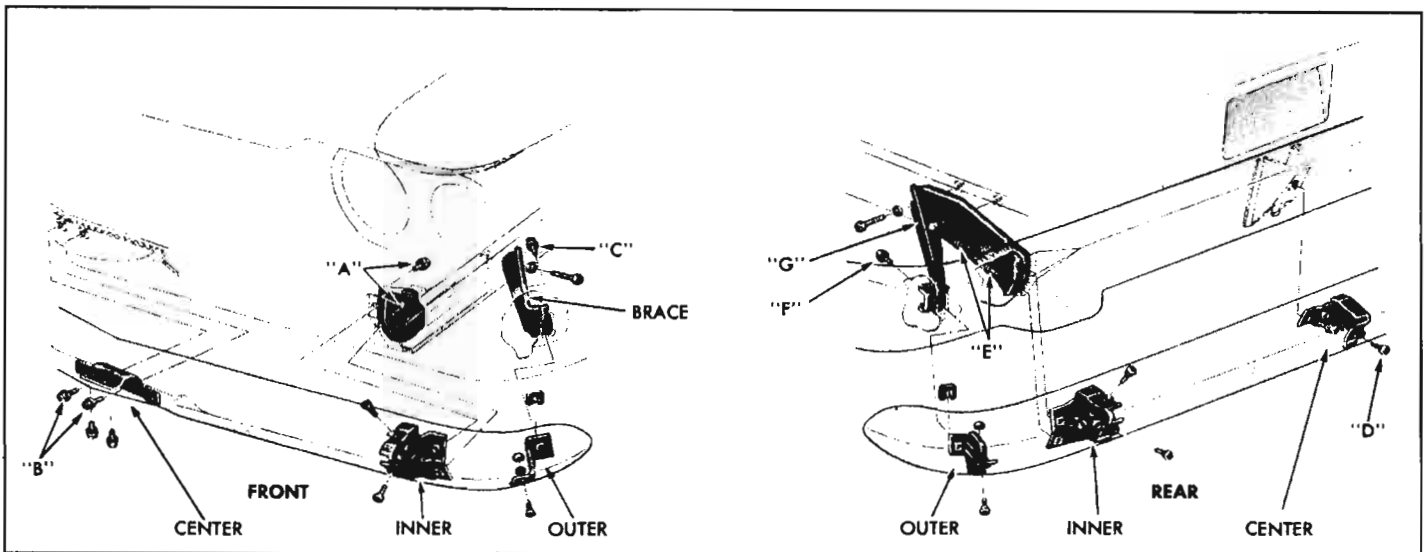


Fig. 10-87—Front and Rear Bumper Attachment

FRONT BUMPER

Refer to Figure 87.

Removal

1. Open front compartment lid and remove two bolts "A" from left and right face inner brackets.
2. Remove two bolts "B" from license and bumper center bracket assembly.
3. From inside of fender well remove bolt "C" from left and right face bar outer bumper brackets. Remove shims if present.
4. Remove bumper and if necessary, remove outer face bar bracket brace.

Installation

1. If installing a new bumper, install bumper brackets to bumper before installation to body.
2. From inside of front compartment install bumper bolts "A" and "B" using sealing compound at center bracket and left and right inner brackets.
3. Install outer face bar bracket bolts "C." Install shims, if required, to give $\frac{1}{16}$ " min. clearance between upper edge of bumper and body at bracket location.

3. Torque bolts "A," "B," "C" and brace bolts 20 to 30 ft. lbs.

REAR BUMPER

Refer to Figure 87.

Removal

1. Remove bolt "D" at center of bumper.
2. Remove bolts "E" at left and right face bar inner brackets. Remove bolts "F" (access from fender well) at left and right face bar outer brackets.
3. Remove bumper face bar inner brace, if necessary, at "G."
4. Remove bumper.

Installation

1. Install brackets to bumper when installing a new bumper, before installation to body.
2. Seal center bumper bracket bolt "D" with sealing compound and install bolt.
3. Install bolts "E" and "F" in left and right inner and outer face bar brackets.
4. Torque all bolts 20 to 30 ft. lbs.