

# SECTION II

## FRONT END CONSTRUCTION AND REAR BUMPERS

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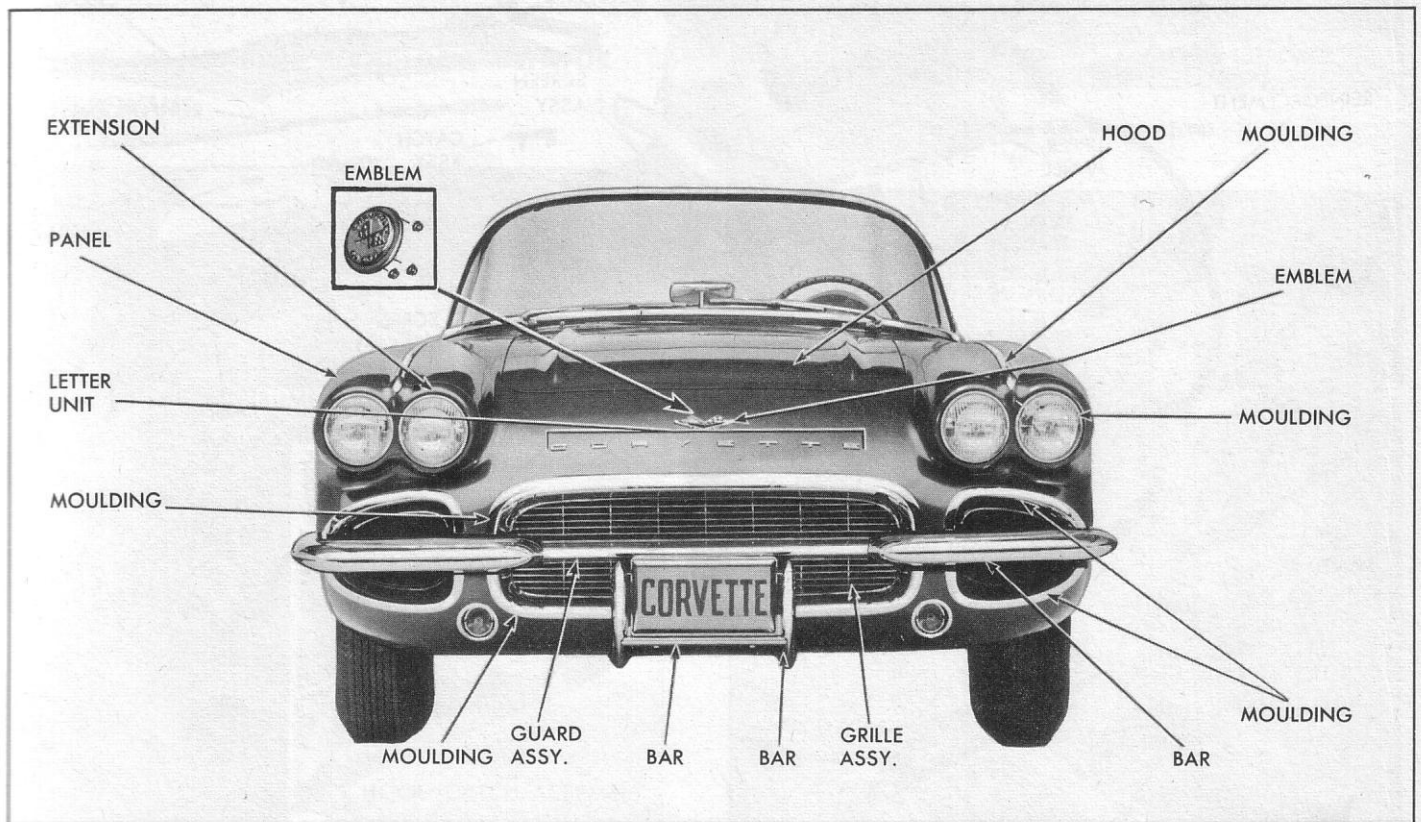


Fig. 1—Corvette Front End

## GENERAL DESCRIPTION

All outside panels of the front end body construction (fig. 1) are fiber glass which become an integral part of the plastic body when joined together with bonding strips and a liquid plastic (polyester resin). Support brackets and reinforcements help secure the body (fig. 2). There are approximately ten outside panels available for major front end repair. These parts are bonded together with liquid plastic which is used as a bond between mating pieces to form a solid panel. A plastic solder repair kit (minor repairs) and the resin repair kit (major repairs) help produce easy, quick and lasting repair jobs.

The same lacquer preparations and painting procedures used on metal bodies are recommend for the Corvette plastic body.

In addition to those above listed front end parts (fig. 3) in the index, this section includes; fender skirts, support rods, heater inlet screen brackets, screen as-

semblies, panel and support brackets. Detailed fiber glass repair and painting are covered under Body, Section 1, in this manual.

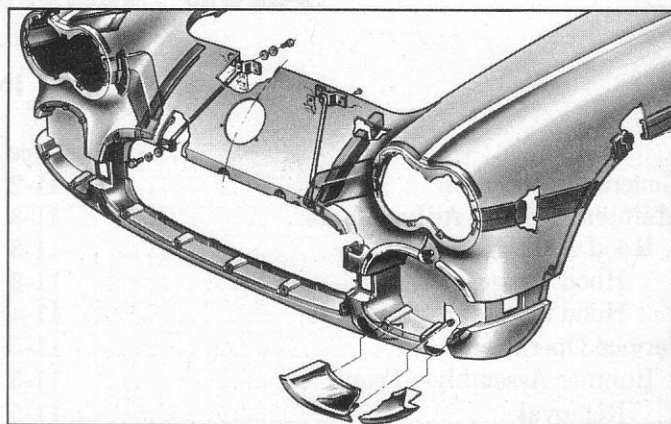


Fig. 2—Front End Support and Reinforcement

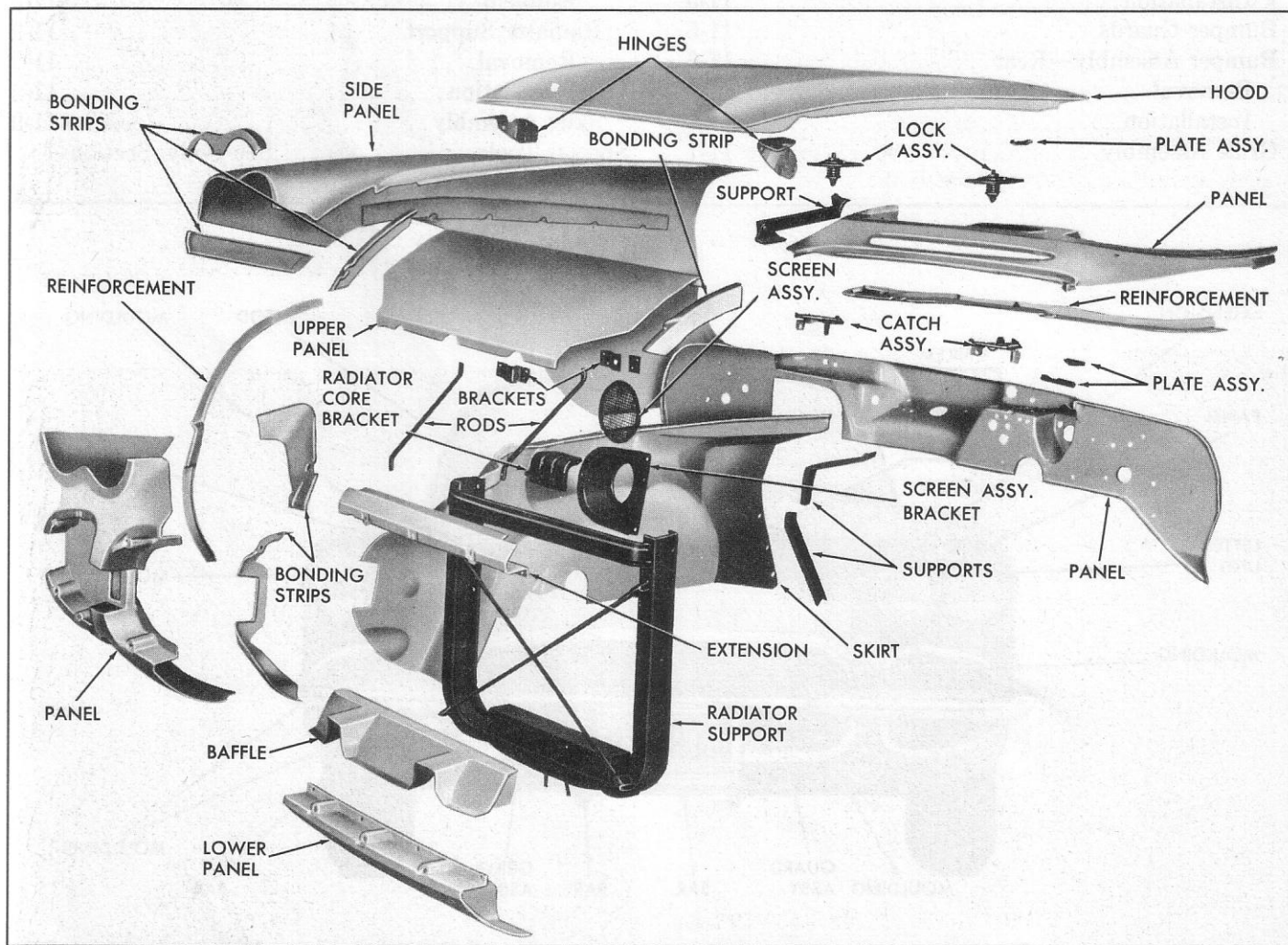


Fig. 3—Front End Construction



## MAINTENANCE AND ADJUSTMENTS

### HOOD ADJUSTMENT

The hood adjustments (figs. 4 and 5) are controlled by the position of the hood lock and hinges and the height of the hood bumpers.

**Vertical**—Adjust rear hood bumpers at each hood lock (fig. 4). The front hood bumpers (fig. 5) are adjusted at each hinge by loosening the bolts attaching the hinge to the radiator support and raising or lowering the hinge as required. If this range of adjustment is insufficient, shims may be added or removed between the hinge assembly and the hood.

**Lateral**—Adjust by loosening the two hood lock assemblies at the rear of the hood (fig. 4) and loosen bolts attaching the hinge assembly to the hood (fig. 5). Relocate hood as necessary and retighten bolts. The hood lock assemblies (fig. 4) should then be adjusted to freely enter the hood catch assemblies.

**NOTE: DO NOT BEND HOOD LOCK BOLTS FOR ALIGNMENT.**

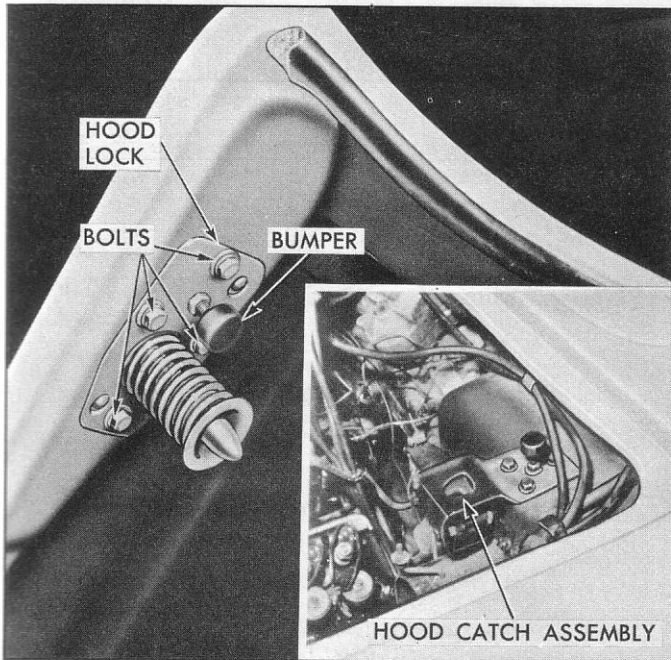


Fig. 4—Hood Adjustments—Rear

### HOOD HINGE

The hood hinge (fig. 6) has slotted mounting holes at the radiator support for up and down movement of the hood assembly and slotted holes at the hood mounting for fore and aft positioning.

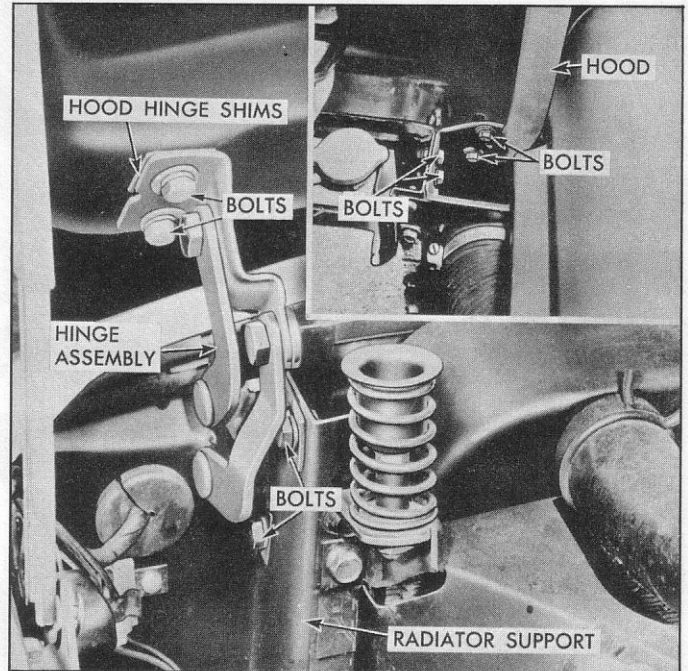


Fig. 5—Hood Adjustments—Front

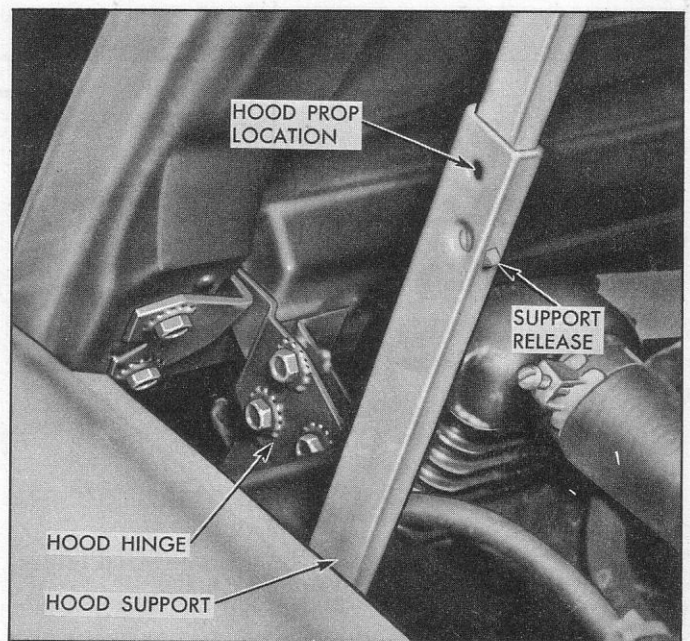


Fig. 6—Hood Hinge and Support

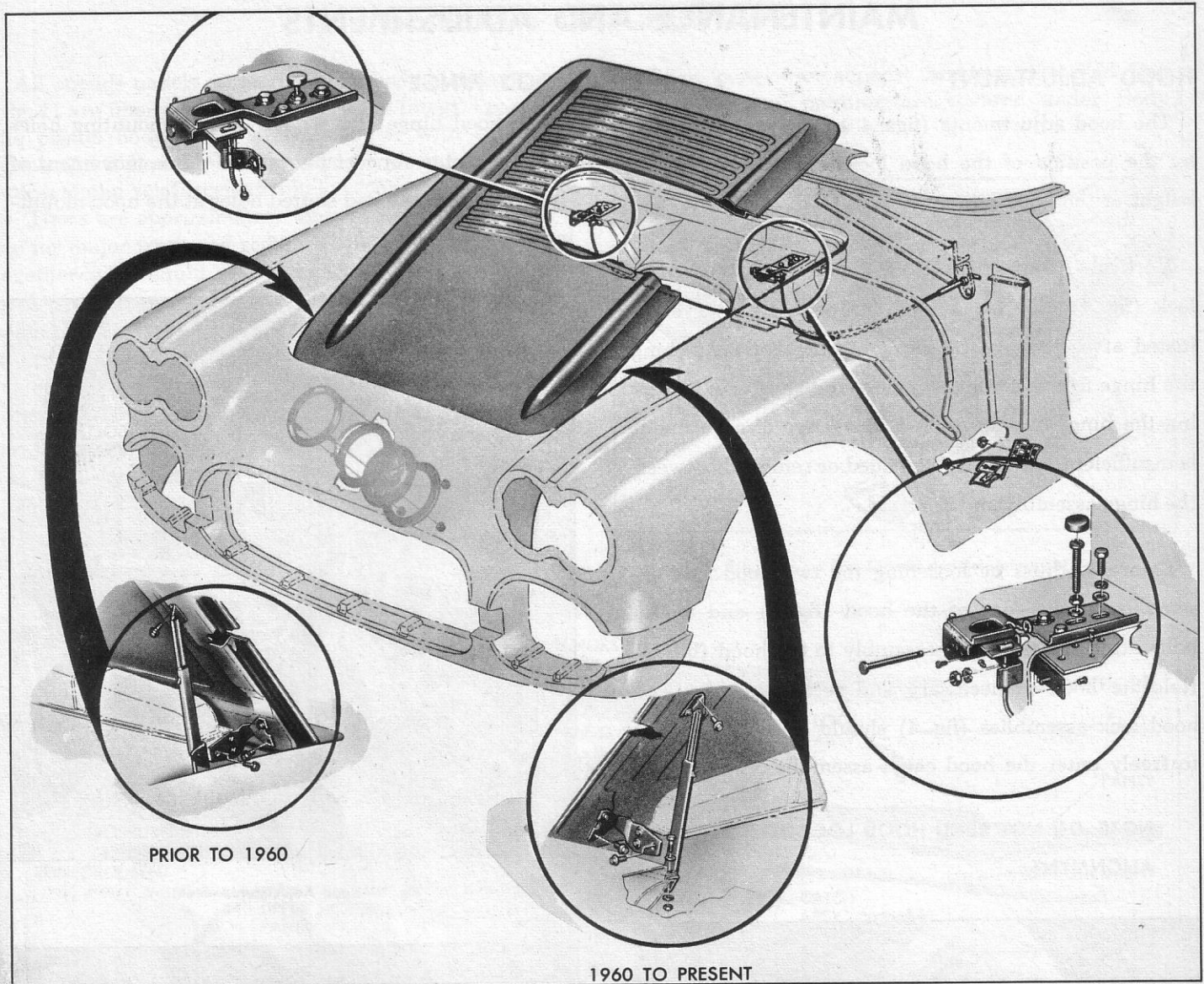


Fig. 7—Hood Catch Assemblies, Bumpers and Supports

## HOOD CATCH AND BUMPERS

The hood catch assembly (fig. 7) has slotted mounting holes for fore and aft adjustment. The hood lock bolt is adjustable for proper engagement with the hood catch. The hood bumpers should have slight clearance when the hood is locked so that the hood release control will release the hood from the hood catch with reasonable effort.

## BODY FRONT END CLEARANCE

The door and headlamp adjustment is covered under Body, Section 1, in this manual. Hood and Bumper adjustments are covered in this section. See Figure 8 for front end clearances.

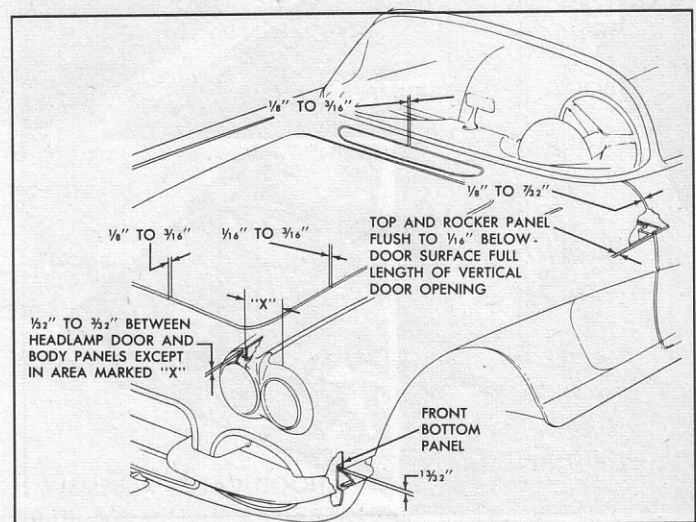


Fig. 8—Front End Clearances



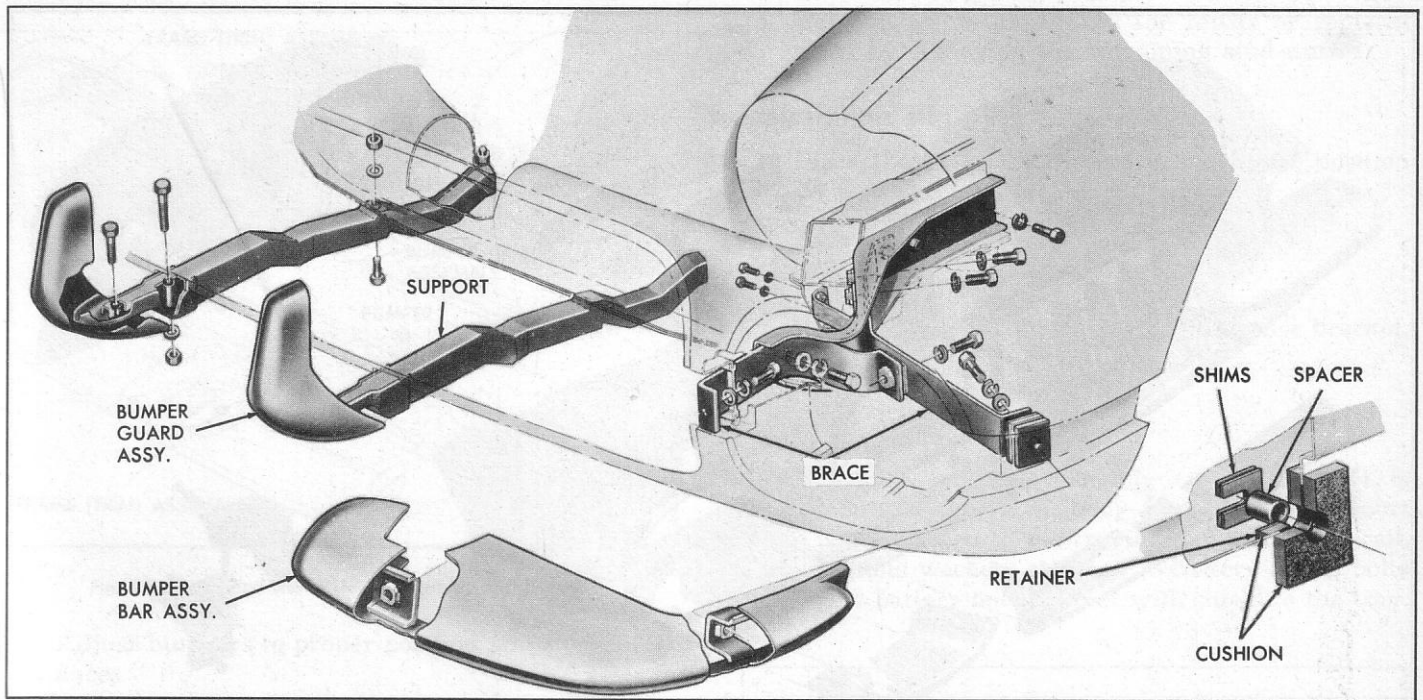


Fig. 9—Front Bumpers

## SERVICE OPERATIONS

### FRONT BUMPERS

#### Removal (fig. 9)

1. Raise front of car slightly for easier removal.
2. Remove bolt and washers from under each front fender side bumper brace.
3. Remove bolt and washers at both front bumper braces.
4. Remove the two bumper bars and guard as a complete assembly.
5. Secure loose bumper cushions, retainers, spacers and all shims for bumper replacement.

#### Disassembly (fig. 10)

Remove the bolts securing the guard assembly to the bumper bars.

#### Assembly (fig. 10)

Refer to Figure 10, reverse disassembly procedure.

**NOTE:** The bumper guard is assembled to the bars with the notch at the bottom.

#### Installation (fig. 9)

1. Position the assembled bumper unit on the bumper brace.

2. Position loose cushions, retainers and spacers add required shims.

3. Attach the bolts with washers finger tight.

**NOTE:** To assist aligning the bolts into the side brace weld nuts, assert leverage between the body and bumper.

4. Check clearances, adjust bumpers and securely tighten to the braces.
5. Before lowering the vehicle to floor, check to see that all shims are secured and all parts rattle free.

### BUMPER GUARDS

Bumper guards are attached to individual braces protruding beyond the bumpers for added front end protection. The guards are easily removed from the brace by detaching the hardware from the back side (fig. 9).

### FRONT LICENSE PLATE BRACKETS

The front license plate bracket is attached to the front bumper guards with four bolts. A bracket bar attaches to the bottom flange of this bracket (fig. 11). The license plate is bolted to the bracket at the slotted holes against a rubber bumper.

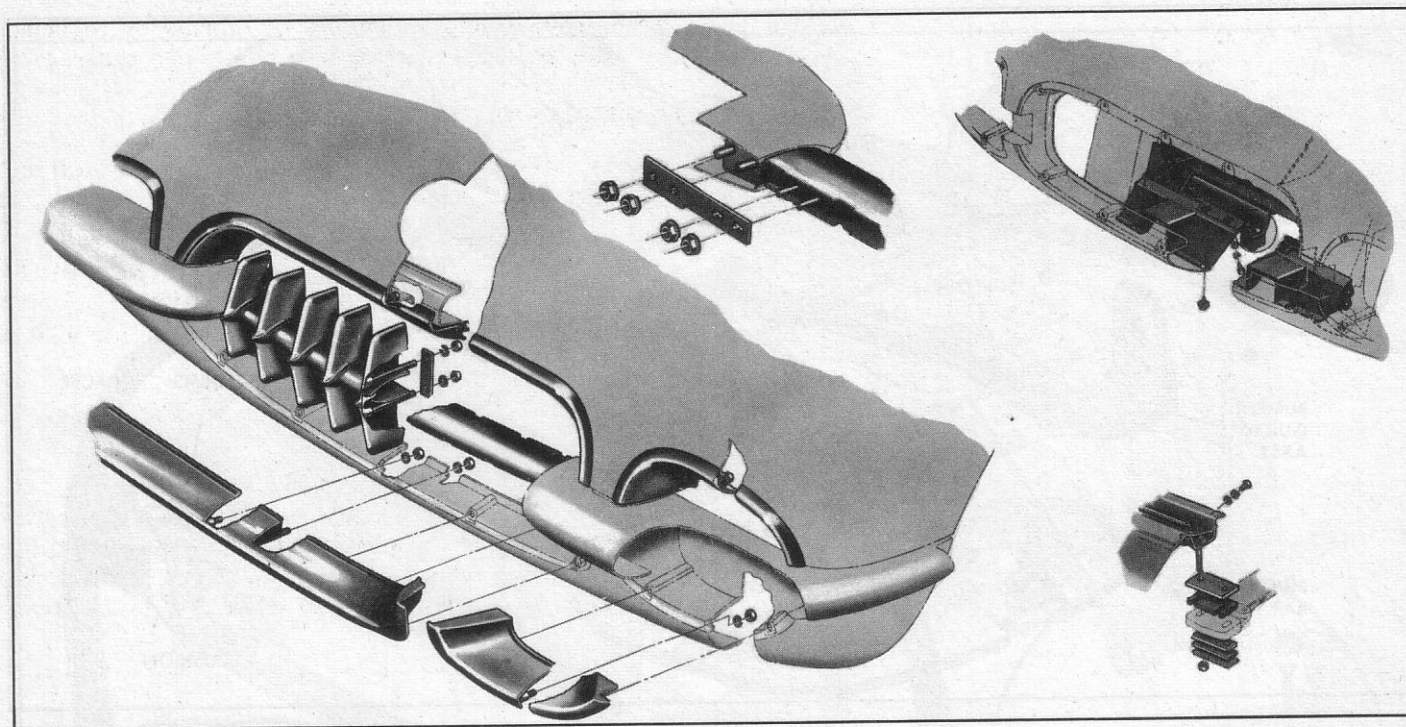


Fig. 10—Bumper Disassembly and Front End Body Adjustment

## REAR BUMPERS

### Removal (fig. 12)

1. Raise vehicle for easier removal.
2. Remove mounting bolts from bumper bar and nut attachments from the back side of the bumpers (see Figure 12).
3. Remove bumpers from vehicle.

### Installation (fig. 12)

1. Position bumper on brace assembly and install bolts loosely.

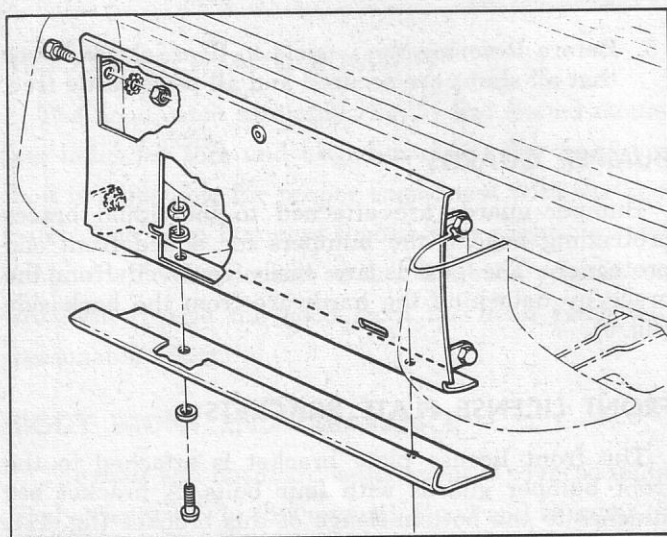


Fig. 11—Front License Plate Brackets

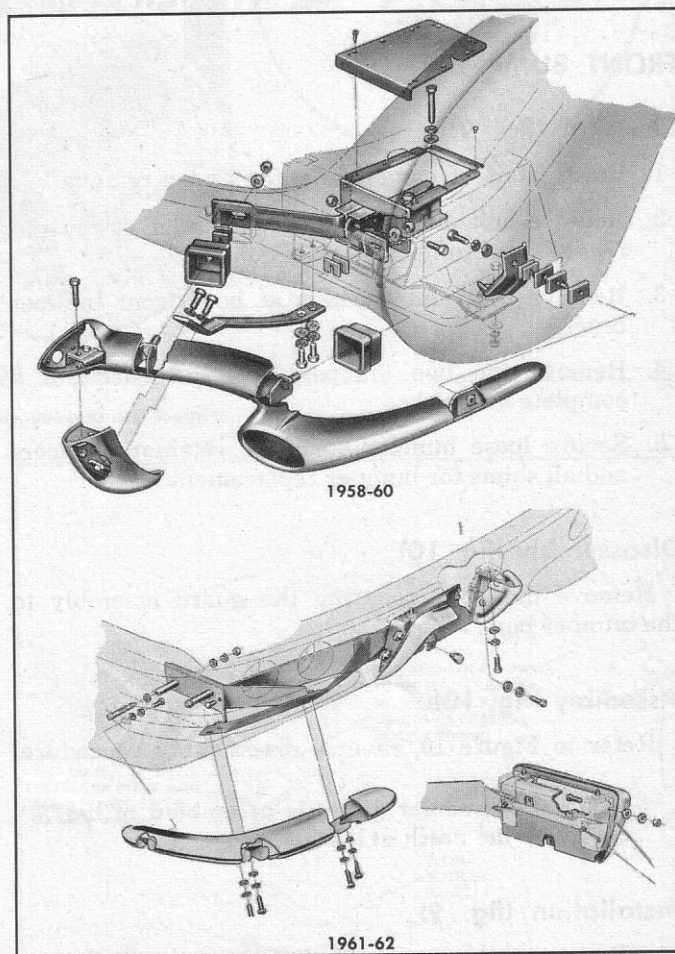


Fig. 12—Rear Bumpers



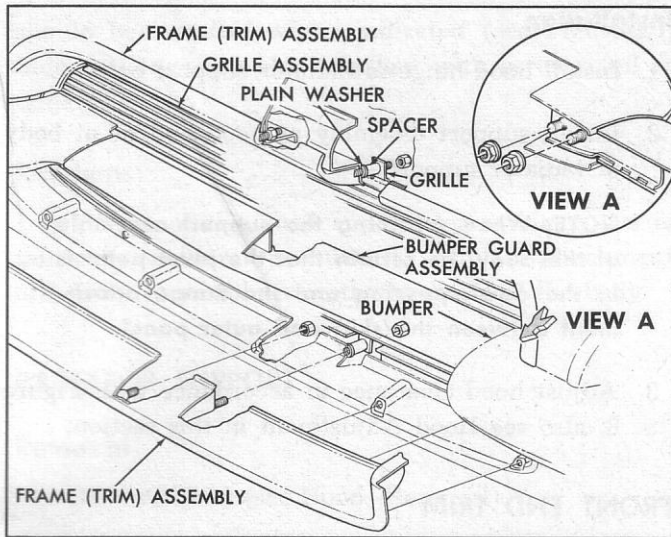


Fig. 13—Grille and Frame (Trim) Assembly Attachment

2. Adjust bumpers to proper position and note clearances.
3. Tighten all bolts securely.

## REAR LICENSE PLATE BRACKET

### Removal (fig. 12)

1. Raise vehicle for easier removal.
2. Remove two license plate mounting bolts. Remove license.
3. Remove upper license plate bracket mounting bolts.
4. Use ratchet wrench, flexible socket and extensions at the rear wheel location to remove lower side bracket mounting nuts.
5. Remove bracket.

### Installation (fig. 12)

Reverse removal procedure.

## GRILLE (including front frame trim moldings)

### Removal (fig. 13)

1. Open hood and secure in position by using a safety hole located in the support assembly.
2. Remove retaining nuts through hood opening. Do not remove plain washers or spacers (fig. 13).
3. Lower bumper guard assemblies by detaching front bolts for grille clearance.
4. Remove grille through the grille opening by rotating on the side and passing under the bumper guard assembly (without grille pieces) and license bracket.

5. Remove frame assemblies for repair or replacement by removing the remaining stud nuts.

### Installation (fig. 13)

1. Place the frame assemblies and grille in position for securing.
2. Attach all hardware finger tight.
3. Tighten evenly.
4. Replace the guard assemblies and license bracket.

## BATTERY TRAY

The battery support assembly (tray) (fig. 14) is located outside the R. H. body frame rail. A support brace is gas welded to the tray bottom and frame rail. Two nuts and washers attached to battery clamp bolts secure the battery and retainer with shield to the tray.

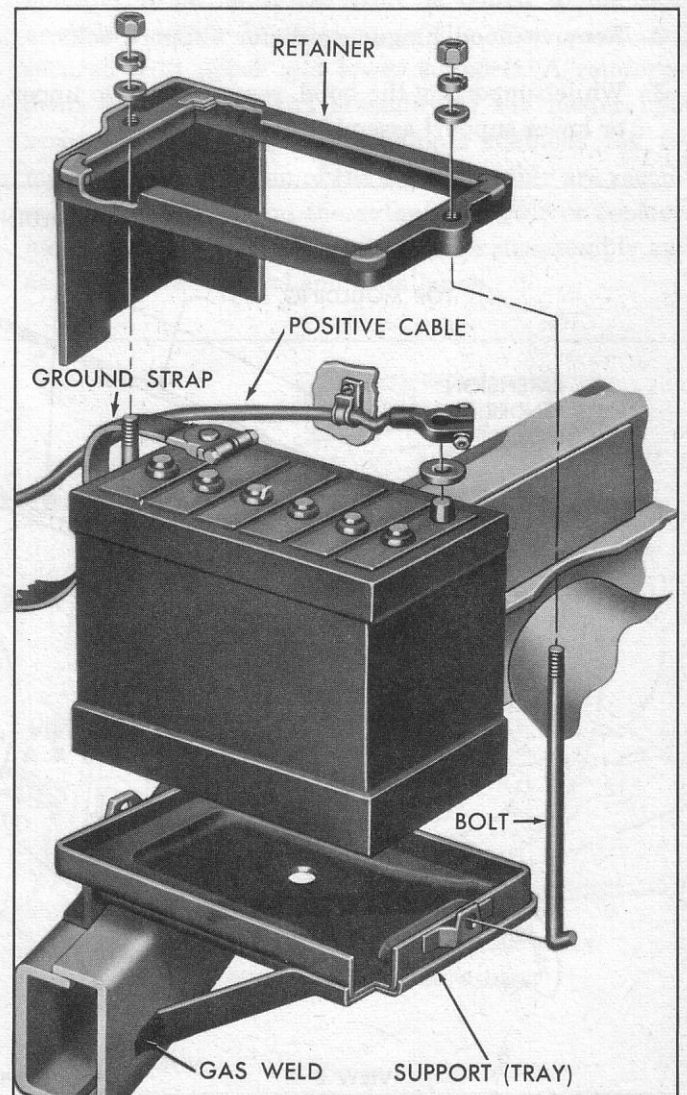


Fig. 14—Battery Tray

## Removal

Note position of battery retainer and attaching parts and remove as shown in Figure 14.

## Installation

Note position of parts and reverse removal as indicated in Figure 14.

## HOOD ASSEMBLY

The hood assembly is hinged to the radiator support and supported by a support assembly at the left or right side of the hood. The hood may be removed either with or without the support assembly attached.

## Removal

1. Open hood.
2. Remove hood hinge-to-radiator support bolts.
3. While supporting the hood, remove the two upper or lower support assembly bolts.

## Installation

1. Install hood hinge-to-radiator support bolts.
2. Install support assembly at hood and/or at body or radiator support.

**NOTE:** When attaching the support assembly at the body, be certain that the pivot point is in the down position and the flange attachment between the skirt and outer panel.

3. Adjust hood clearance in accordance with Figure 8; also see Hood Adjustment in this section.

## FRONT END TRIM

### Moldings

Nut attachment secures the top moldings to the fender. A fender extension molding at the headlamps is riveted securely at the headlamp door.

The side moldings are attached with bolt assemblies and secured with nuts and washers. An extra washer

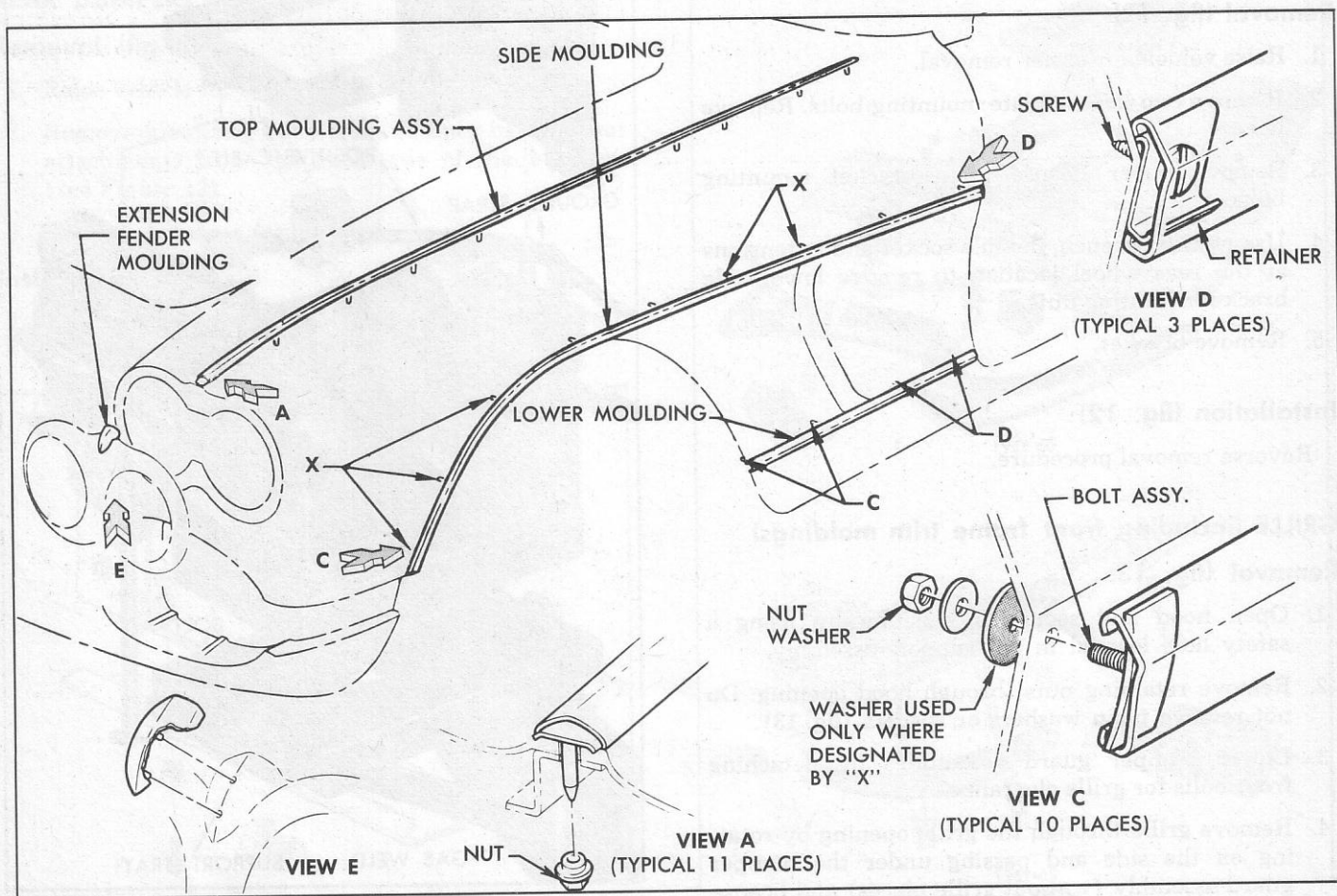


Fig. 15—Front End Moldings and Fender Emblems



should be installed where indicated (see Figure 15). Side moldings are also attached with screws and retainers.

### Emblems

All front of the hood and fender emblems are retained by similar type nuts. All emblem attachments are easily accessible from the backside of the body.

## RADIATOR SUPPORT

### Removal

1. Remove hood (see Hood—Removal).
2. Remove shroud (refer to Section 6S).
3. Remove radiator core (refer to Section 6S).
4. Remove attaching heater intake screen assembly brackets from support.
5. Detach skirt-to-support bolts.
6. Remove steering idler and third arm assembly nuts at the bottom of the radiator support (fig. 16).
7. Carefully remove support.

### Installation

1. Position radiator support studs into the steering idler arm bracket and secure.
2. Attach the heater intake screen assembly mounting brackets to the support.
3. Attach the skirt-to-support bolts.
4. Install the radiator core (refer to Section 6S).
5. Install shroud (refer to Section 6S).
6. Install hood (see Hood Installation).

## FENDER SKIRT ASSEMBLY

The fender skirt assembly is attached to the frame rail with screws and bonded to the outer panel with bonding strips. A splash plate is bolted to the skirt assembly which is screwed to the dash panel and secured with upper and lower supports. A reinforcement secures the skirt assembly to the heater inlet screen assembly bracket. Optional methods for removal and installation of the skirt assembly are recommended depending on the extent of repair or replacement required. Refer to Figure 17 for disassembly and assembly and removal and installation.

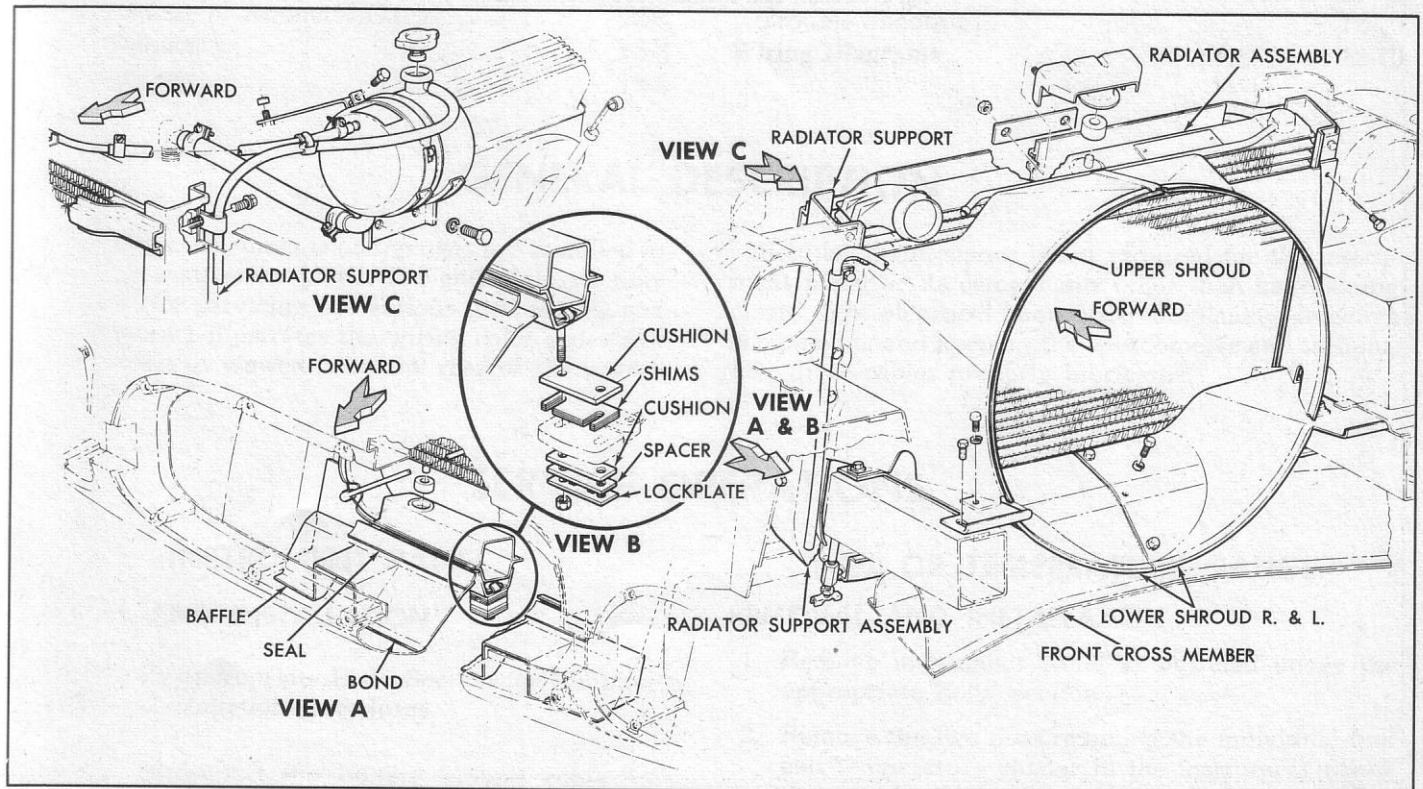


Fig. 16—Radiator, Support, Tank, Lower Baffle and Shrouds

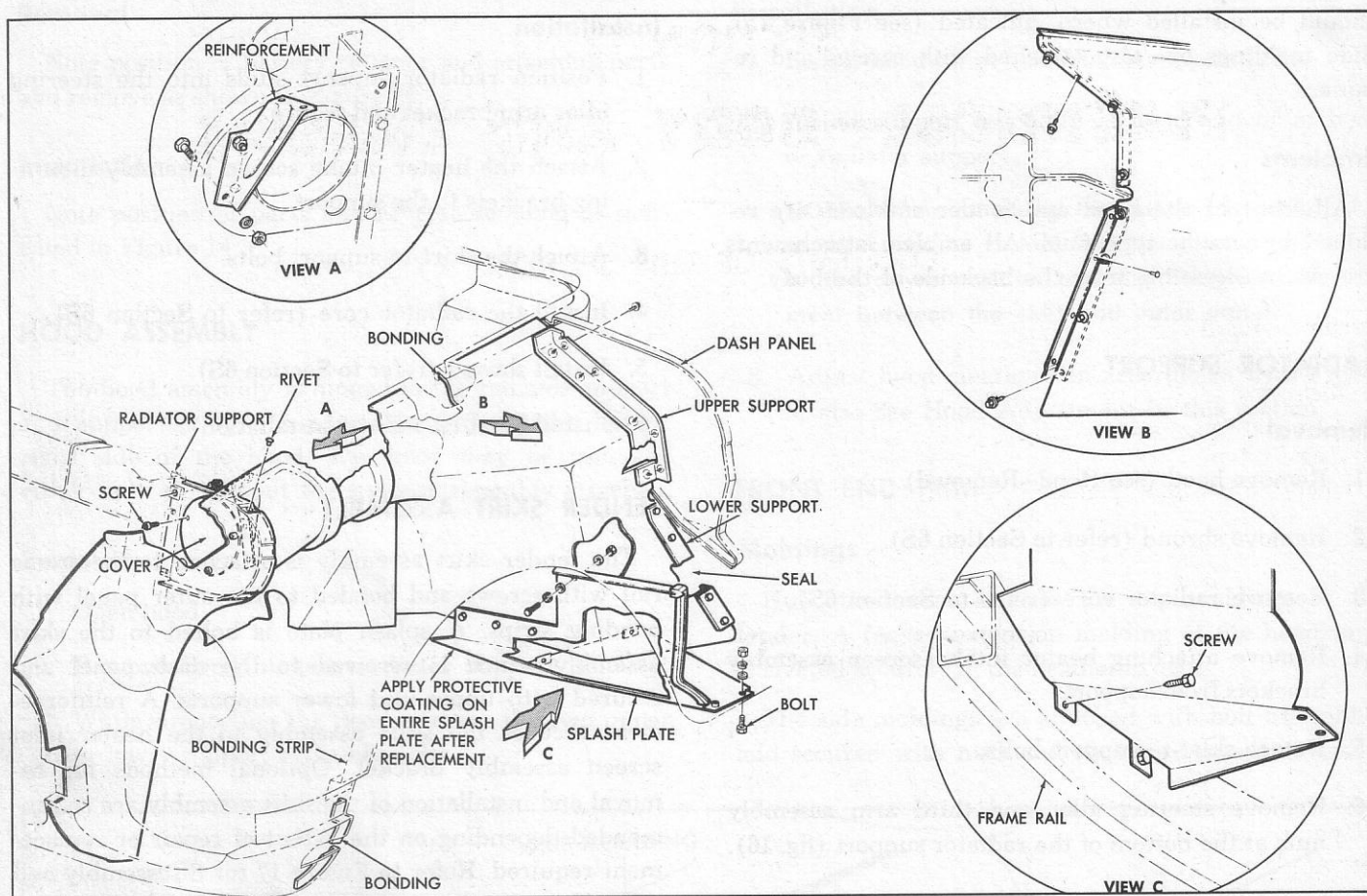


Fig. 17—Fender Skirt Assembly and Attachments