

### Removal and Installation - "B and C-39, 49" and "C-69" Styles

1. Remove upper and lower portion of door trim assembly and inner panel water deflector.
2. Remove front and rear window up-travel stops ("1" and "2", Fig. 5-115) and guide pin stabilizer ("10", Fig. 5-115).
3. Loosen front and rear belt trim support retainers ("3", Fig. 5-115).
4. With window in three-quarter-down position, remove lower sash channel cam to glass attaching nuts ("4", Fig. 5-115). Remove window by lifting straight up and aligning rollers with notches provided in the door inner panel. Remove rear end of window first, then front end.
5. To install, reverse removal procedure. Adjust window for proper alignment and operation as described previously. Torque all previously removed attaching nuts to 72 inch-pounds and all attaching screws to 60 to 90 inch-pounds. Make sure that when the glass is cycled, it does not come in contact with the blow-out clip.

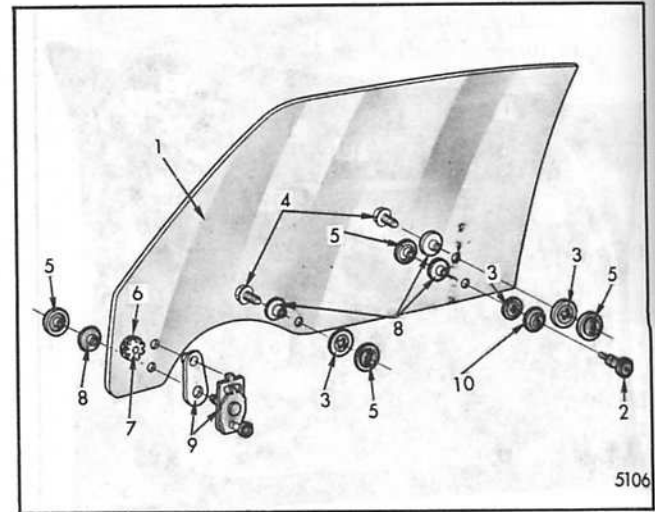


Fig. 5-116-Door Window Assembly - "F" Styles

- |                           |                                 |
|---------------------------|---------------------------------|
| 1. Window Assembly        | 7. Glass Bearing Fastener Cap   |
| 2. Roller                 | 8. Spacers                      |
| 3. Washer (Plastic)       | 9. Roller Assembly (Bell Crank) |
| 4. Bolt Inner Panel Cam   | 10. Washer (Metal)              |
| 5. Nut                    |                                 |
| 6. Glass Bearing Fastener |                                 |

### DOOR WINDOW ASSEMBLY - "F" Styles

The door window assembly consists of a solid tempered safety plate glass window and an individually bolted-on roller at the rear and a roller assembly (bellcrank) at the front. The lower sash channel cam is bolted to the glass, but is removed in the process of removing the window.

Figure 5-116 is an exploded view of the window assembly and identifies the various components and their assembly sequence.

**NOTE:** When installing glass attachments, torque attaching nuts to 72 inch-pounds (6 foot-pounds). Also, when replacing door glass, replace door glass washers and spacers ("3" and "8", Fig. 5-116). When the glass is cycled, it must not come in contact with the blow-out clip.

### Diagnosis and Adjustment

1. **WINDOW NOT PARALLEL WITH SIDE ROOF RAIL WEATHERSTRIP** - A rotated window condition (glass cocked in opening) can be corrected by loosening front and rear up-travel stops ("1" and "2", Fig. 5-117) and inner panel cam screws ("8", Fig. 5-117) and raising or lowering front edge of glass in relation to rear edge of glass as required. Then tighten inner

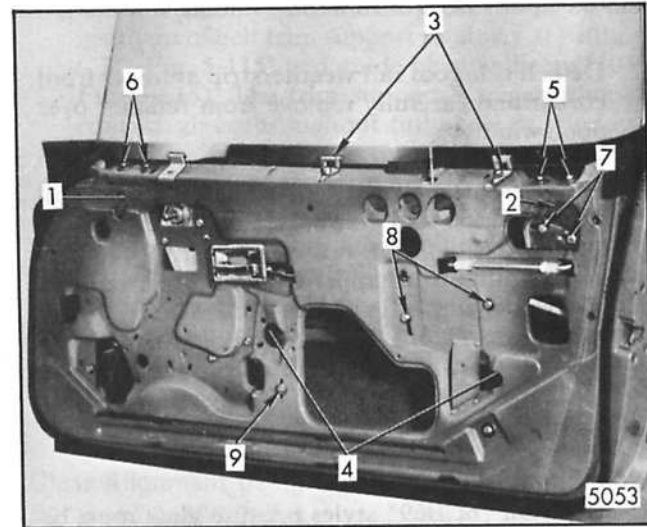


Fig. 5-117-Window Removal and Adjustment - "F" Styles

- |  |   |
|--|---|
| 1. Front Up-Travel Stop Screw          | 6. Front Guide Upper Screws                 |
| 2. Rear Up-Travel Stop Screw           | 7. Rear Guide to Guide Upper Bracket Screws |
| 3. Belt Trim Support Retainers         | 8. Inner Panel Cam Screws                   |
| 4. Lower Sash Channel Cam Access Holes | 9. Window Down Travel Bumper Support        |
| 5. Rear Guide Upper Bracket Screws     |   |

panel cam attaching screws and raise glass to desired height to establish proper contact with side roof rail weatherstrip. Position up-travel stops to contact stops on glass and torque attaching screws to 60 to 90 inch-pounds.

2. **WINDOW TOO FAR INBOARD OR OUTBOARD ALONG UPPER EDGE** - Loosen upper ends of front and rear guides ("5" and "6", Fig. 5-117) and glass belt trim support retainers ("3", Fig. 5-117) and position guide inboard or outboard as required. Outboard adjustment of the guide moves the upper edge of the glass inboard. Conversely, inboard adjustment moves the upper edge of the glass outboard. With glass in a full-up position, position trim support retainers against inner surface of glass and tighten attaching screws. Torque all previously loosened hardware attachment components to 60 to 90 inch-pounds. Make sure that when glass is cycled, it does not come in contact with the blow-out clip.
3. **WINDOW TOO HIGH OR LOW IN UP POSITION** - Loosen front and rear up-travel stops ("1" and "2", Fig. 5-117) and operate window to desired position to establish proper glass to side roof rail weatherstrip contact. Position up-travel stops to contact stops on glass and torque up-travel stop screws to 60 to 90 inch-pounds.
4. **WINDOW TOO HIGH OR LOW IN DOWN POSITION** - Loosen down-travel bumper support ("9", Fig. 5-117) and lower or raise window to desired full-down glass height. Then position bumper support against lower edge of glass and torque attaching screw to 60 to 90 inch-pounds.
5. **WINDOW TOO FAR FORWARD OR REARWARD** - Loosen upper end of rear guide ("7", Fig. 5-117) and reposition glass as necessary. Because the roller assembly (bellcrank) which attaches to the glass at the front pivots, the front guide does not have to be adjusted during fore and aft window alignment. Torque guide attachments to 60 to 90 inch-pounds.
6. **WINDOW MECHANISM BINDS WHEN OPERATING** - Ease of window operation and window stability depends a great extent on the adjustment of the window belt trim support retainers at the beltline ("3", Fig. 5-117). The support retainers should contact the glass throughout the full cycle of the window. However, in some cases due to the slight variations in glass contour, the strip may lose contact with the glass halfway through the cycle. This is permissible provided it does not result in loose glass or restrict ease of window operation. After the belt trim support retainers have been adjusted,

torque the attaching screws to 60 to 90 inch-pounds.

### Glass Alignment Using Gauge Blocks - "F" Styles

To consistently align door glass within specifications and to facilitate adjustment of this glass, use glass alignment gauge block tool J-23394 or equivalent (Fig. 5-118). For proper use of gauge blocks, refer to the following procedure.

1. Remove door trim assembly and inner panel water deflector as described in "Door Trim" and "Front and Rear Doors" portion of this section.
2. Detach side roof rail weatherstrip at lower front and rear corners and carefully remove from retainer.
3. With glass in a partially down position, install gauge blocks, tool J-23394-2 (blue) or equivalent, into side roof rail weatherstrip retainer above upper front and rear corners of the glass as shown in Figure 5-119. Then, install glass suction cups on interior surface of glass (Fig. 5-119) to enable adjuster to shift glass when making adjustments with door in a closed position.

**NOTE:** When installing gauge blocks (blue) or equivalent into upper retainer on "F" styles, handle portion of blocks must protrude outboard (Fig. 5-119). Also, grooves on sides of blocks must be fully engaged with side roof rail weatherstrip retainer.

4. Working from inside body, with door in a closed position, loosen front and rear up-travel stops ("1" and "2", Fig. 5-117) and belt trim support retainers ("3", Fig. 5-117).

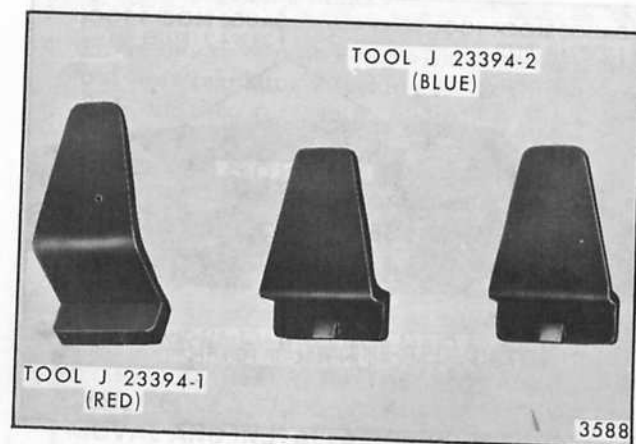


Fig. 5-118-Glass Alignment Gauge Blocks - Tool J-23394 or Equivalent (Set of Three Blocks) - "F" Styles

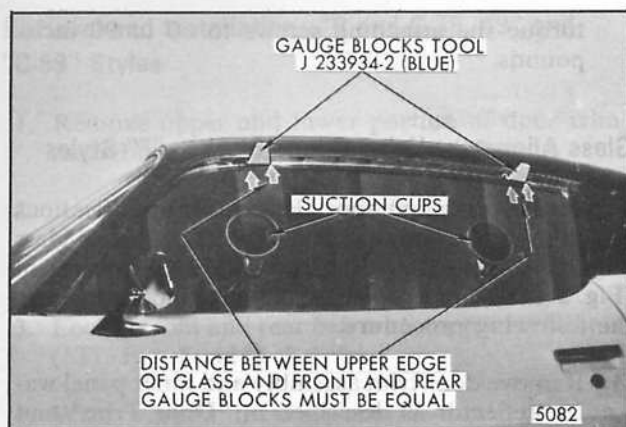


Fig. 5-119-Door Window - Rotated ("Cocked") Glass Alignment - "F" Styles

5. Raise door window to approximately 1" from full-up position as illustrated in Figure 5-119. If distance (space) between upper edge of glass and front and rear gauge blocks is equal (as shown in Fig. 5-119), proceed with step 6. If distance (space) between upper edge of glass and both upper gauge blocks is not equal loosen inner pannel cam attaching screws ("8", Fig. 5-117) and adjust as necessary.
6. Lower glass and install gauge block, tool J-23394-1 (red), or equivalent into the windshield pillar retainer slightly above the beltline (Fig. 5-120).

**NOTE:** When installing gauge block (red) or equivalent into windshield pillar retainer, handle portion of block must protrude inboard. Also grooves on side of block must be fully engaged with retainer.

Raise door window assembly until contact is

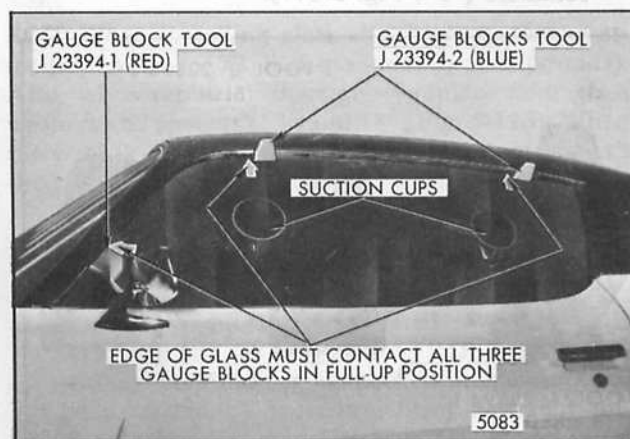


Fig. 5-120-Door Window - Fore and Aft Alignment - "F" Styles

established between upper and forward edge of glass and one or more of the three gauge blocks.

If upper and forward edge of glass contacts all three gauge blocks at the same time (as shown in Fig. 5-120), proceed with step 7. If upper and forward edge does not contact all three gauge blocks simultaneously, loosen fore and aft adjustment on rear guide ("7", Fig. 5-117) and move glass forward or rearward until edge of glass contacts all three gauge blocks in full-up position.

7. Completely loosen upper and lower ends of front and rear guides ("5" and "6", Fig. 5-117). Apply firm outboard pressure against upper end of front guide to remove slack in system and to hold upper inner edge of the glass inboard against outer edge of tab on gauge block. Then tighten front guide upper, then lower attaching screws. Repeat operation with rear guide. Guides will now be coordinated to plane of glass.
8. With glass in full-up position against gauge blocks, tighten up-travel stops ("1" and "2", Fig. 5-117) and adjust belt trim support retainers ("3", Fig. 5-117) outboard for light contact.
9. Lower window and remove gauge blocks from weatherstrip retainer. Reinstall and seal weatherstrip with a pumpable sealer. Make sure that when the glass is cycled, it does not come in contact with the blow-out clip.
10. After all adjustments have been performed, torque all previously loosened hardware attaching nuts to 72 inch-pounds and screws to 60 to 90 inch-pounds.
11. Reinstall previously removed trim and water deflector.

#### Removal and Installation - "F" Styles

1. Remove door trim assembly and inner panel water deflector.
2. Remove front and rear up-travel stops ("1" and "2", Fig. 5-117).
3. Loosen front and rear belt trim support retainers ("3", Fig. 5-117).
4. With window in three-quarter-down position, remove lower sash channel cam to glass attaching nuts ("4", Fig. 5-117). Remove window by lifting straight up and aligning rollers with notches provided in the door inner panel.

- To install, reverse removal procedure. Adjust window for proper alignment and operation as described previously. Torque previously removed attaching nuts to 72 inch-pounds and attaching screws to 60 to 90 inch-pounds. Make sure that when the glass is cycled, it does not come in contact with the blow-out clip.

## DOOR WINDOW ASSEMBLY - "H and X" Styles

The door window assembly consists of a frameless piece of solid tempered safety plate glass bonded to a lower sash channel which incorporates a lower sash channel cam. With this design, the door glass, lower sash channel and cam are removed from the door as a unit and replacement glass is installed as a bench operation.

### Adjustments

- The inner panel cam (Fig. 5-121) is adjustable and can correct a rotated ("cocked") window assembly.
- Window down-travel is determined by the position of the down-travel stop on "H" (less "07, 27") and "X" styles. "H-07 and 27" styles do not have an adjustable down stop. To adjust down-travel, loosen stop (Fig. 5-121 - "H" (less 07, 27) styles, Fig. 5-67 - "X" styles) and adjust glass to desired height at beltline. Position stop to contact glass ("X" styles) or regulator ("H" styles) and torque attaching screw to 60 to 90 inch-pounds.

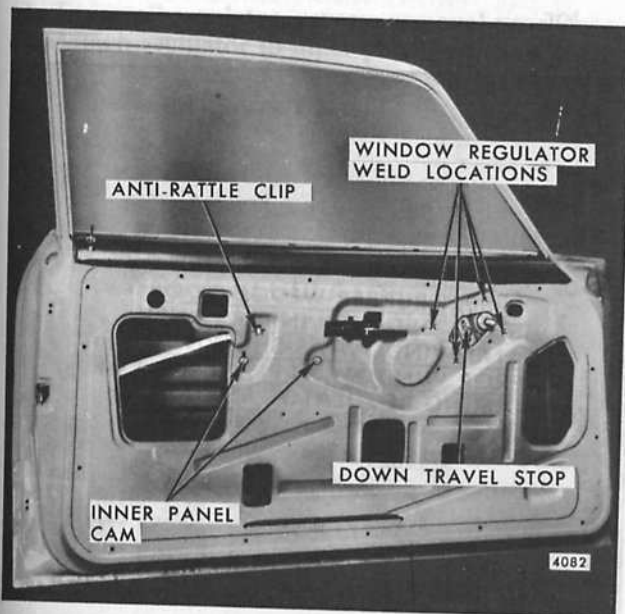


Fig. 5-121-Window Removal and Adjustment - Typical Door for "H" and "X" Styles

### Removal and Installation

- Remove door trim assembly, inner panel water deflector and door window inner belt sealing strip as previously described.
- Lower window to half-down position and remove inner panel cam (Fig. 5-121).
- Remove front glass run channel ("11", Figure 5-62 for "H-07" styles, "2", Fig. 5-66 for "X" styles). Removal is not necessary for "H-27" style.
- Lower front edge of glass and slide window lower sash channel cam off window regulator lift arm rollers. Remove window inboard of door upper frame. For "H-27" style, remove window outboard of door upper frame.
- To install, reverse removal procedure. Adjust window for proper alignment. Torque attaching screws to 60 to 90 inch-pounds.

## FRONT DOOR WINDOW REGULATOR - Manual and Electric - "X" Styles

### Removal and Installation

- Remove front door trim assembly and inner panel water deflector.
- Secure window in "full-up" position with pieces of cloth-backed body tape applied over door frame.
- Mark location and remove inner panel cam attaching screws ("1", Fig. 5-67) and inner panel cam as previously described. On electrical regulators, disconnect wire harness connector at window regulator motor.
- Drive out rivet center pin with punch and drill out four regulator attaching rivets with a 1/4" drill bit; then remove regulator.

**WARNING: THE REGULATOR LIFT ARM IS UNDER TENSION FROM THE COUNTER-BALANCE SPRING AND CAN CAUSE INJURY IF THE SECTOR GEAR IS NOT LOCKED IN POSITION. IF ELECTRIC MOTOR REMOVAL FROM THE REGULATOR IS REQUIRED, REFER TO THE "DOOR WINDOW REGULATOR ELECTRIC MOTOR" REMOVAL AND INSTALLATION PROCEDURE IN THE "FRONT AND REAR DOOR" PORTION OF THIS SECTION.**