Group Index, Alphabetical

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Doors	72.00

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General Information

The cab door features a steel outer skin, welded to a one-piece formed steel inner panel and frame, to make a highly rigid assembly. The unitized construction provides necessary support for various parts attached to the door.

A sector-gear-and-arm window regulator assembly raises and lowers the roll-up window. **See Fig. 1**, Refs. 7 and 4. The regulator assembly bolts to the inner door panel (Ref. 3). Window up-and-down movement is guided by a channel assembly (Ref. 5). The lower portion of the channel assembly bolts to the inside of the inner door panel; screws are installed in the channel around the window opening. A glass-lift support and roller guide (Ref. 8) supports the window at its lower edge.

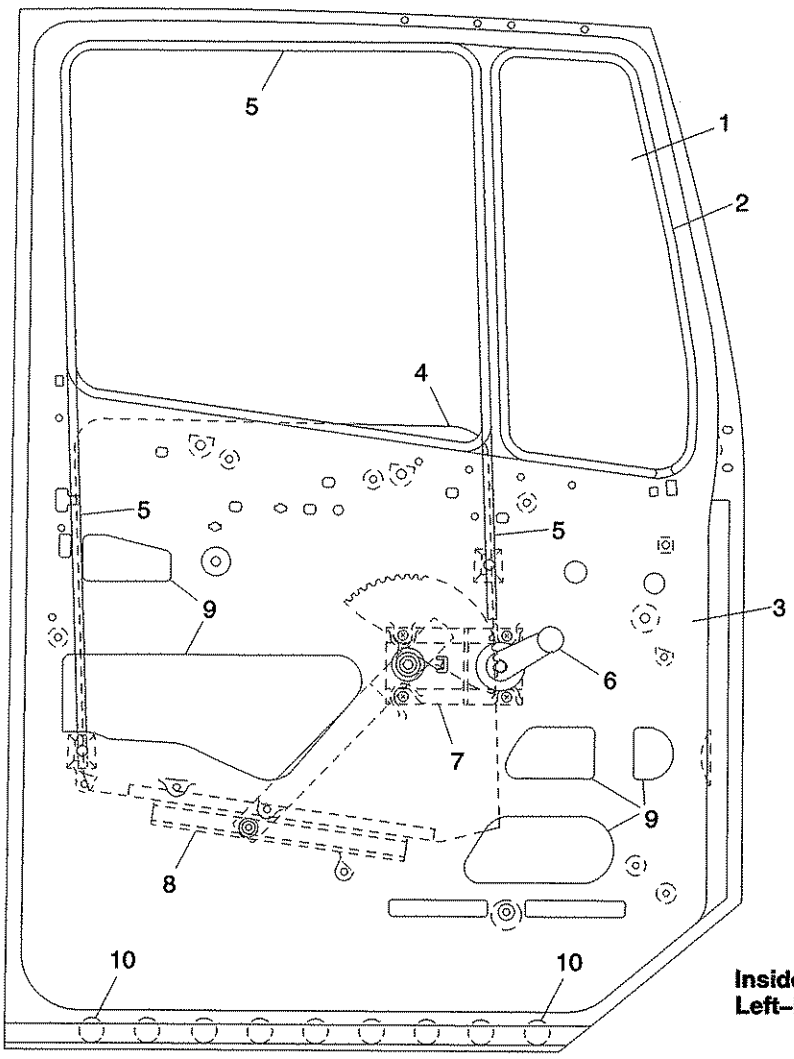
A fixed-position wing window is installed in each door, ahead of the roll-up window. **See Fig. 1**, Ref. 1. A one-piece weather seal (Ref. 2) surrounds each wing window opening.

A door-latch handle inside the cab is recessed in an armrest and grab-handle assembly (called the inner door handle). **See Fig. 2**, Ref. 1. A rod (Ref. 3) links the inner door handle with the latch and lock mechanisms (Refs. 6, 11, and 12) at the rear of the door frame. The flush-mounted exterior door handle assembly (Ref. 10) attaches to the door with two handle retainer clips (wedges) (Ref. 15) from the inside. The lockset tumbler (Ref. 11) is installed just above the paddle handle in the exterior door handle assembly.

Openings in the inner door panel provide easy access to the window regulator and to the latch and lock mechanisms. **See Fig. 1** and **Fig. 2.** Three sections of sound-damping material are bonded to the inside of the outer door skin. Drain holes in the bottom of the door prevent any water from collecting.

Two widely spaced hinges attach the door to the front door post of the cab door-opening frame. **See Fig. 3**, Refs. 2, 7, and 3. The hinges can be independently positioned for in-and-out, fore-and-aft, and up-and-down adjustment. A door check arm (Ref. 8) prevents the door from being opened too far. A door-latch striker pin (Ref. 11) attaches to a floating plate in the rear door post of the cab door-opening frame, and can be adjusted vertically and horizontally to correctly engage the latch assembly jaw (Ref. 9). For fore-and-aft adjustment, shims (Ref. 12) are added (or removed) behind the striker pin coned washer. The circumference of the cab door-opening frame is sealed with a strip of preformed rubber (Ref. 5).

General Information



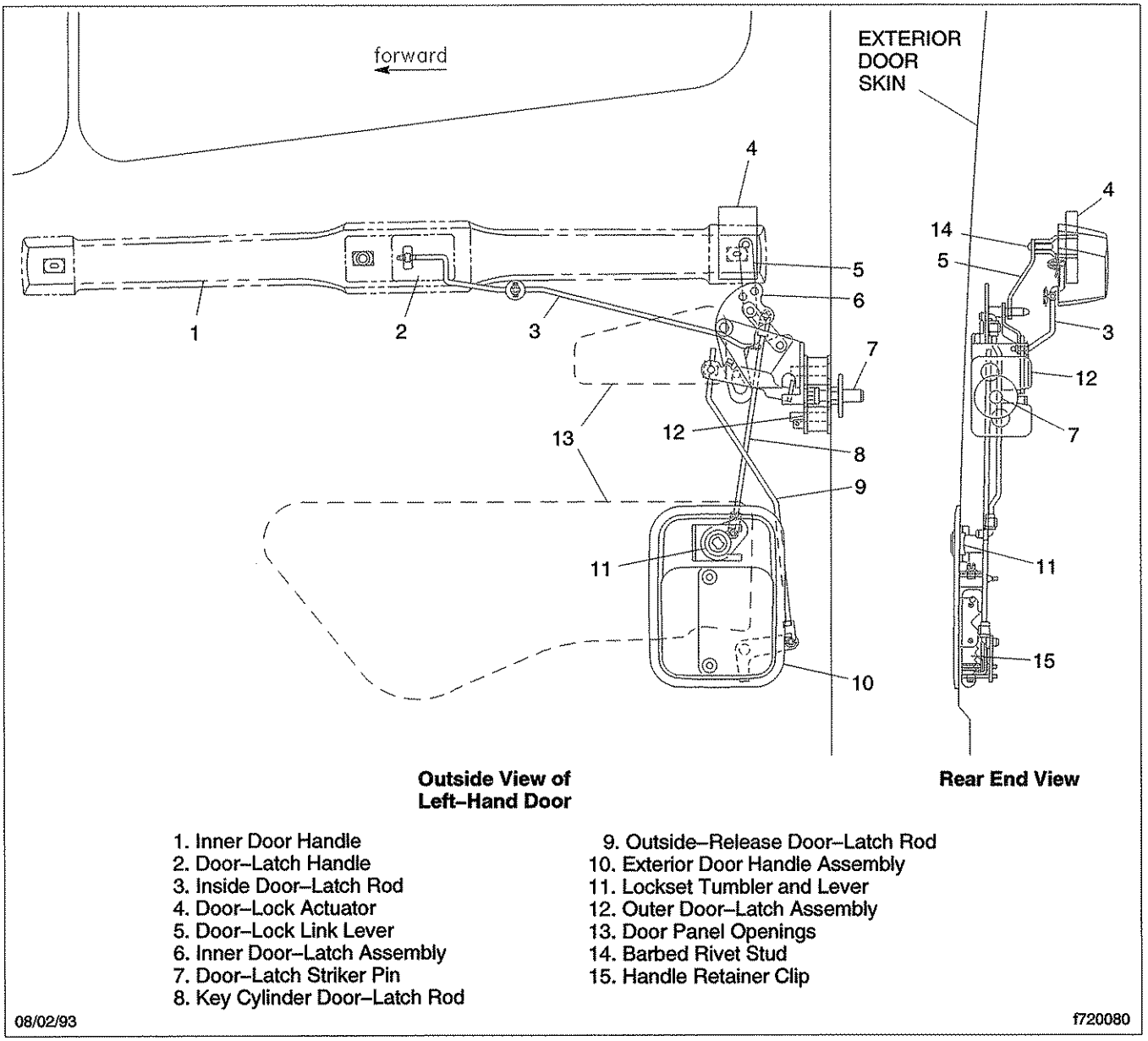
1. Fixed–Position Wing Window
2. Wing Window Weather–Seal
3. Inner Door Panel
4. Roll–up Window
5. Window–Glass Channel Assembly
6. Window Regulator Crank Arm
7. Sector–Gear–and–Arm Window Regulator Assembly
8. Glass Lift–Support and Roller Guide
9. Door Panel Openings
10. Drain Hole

NOTE: Interior door trim panel, inner door handle assembly, and door moulding are not shown.

Inside View of Left–Hand Door

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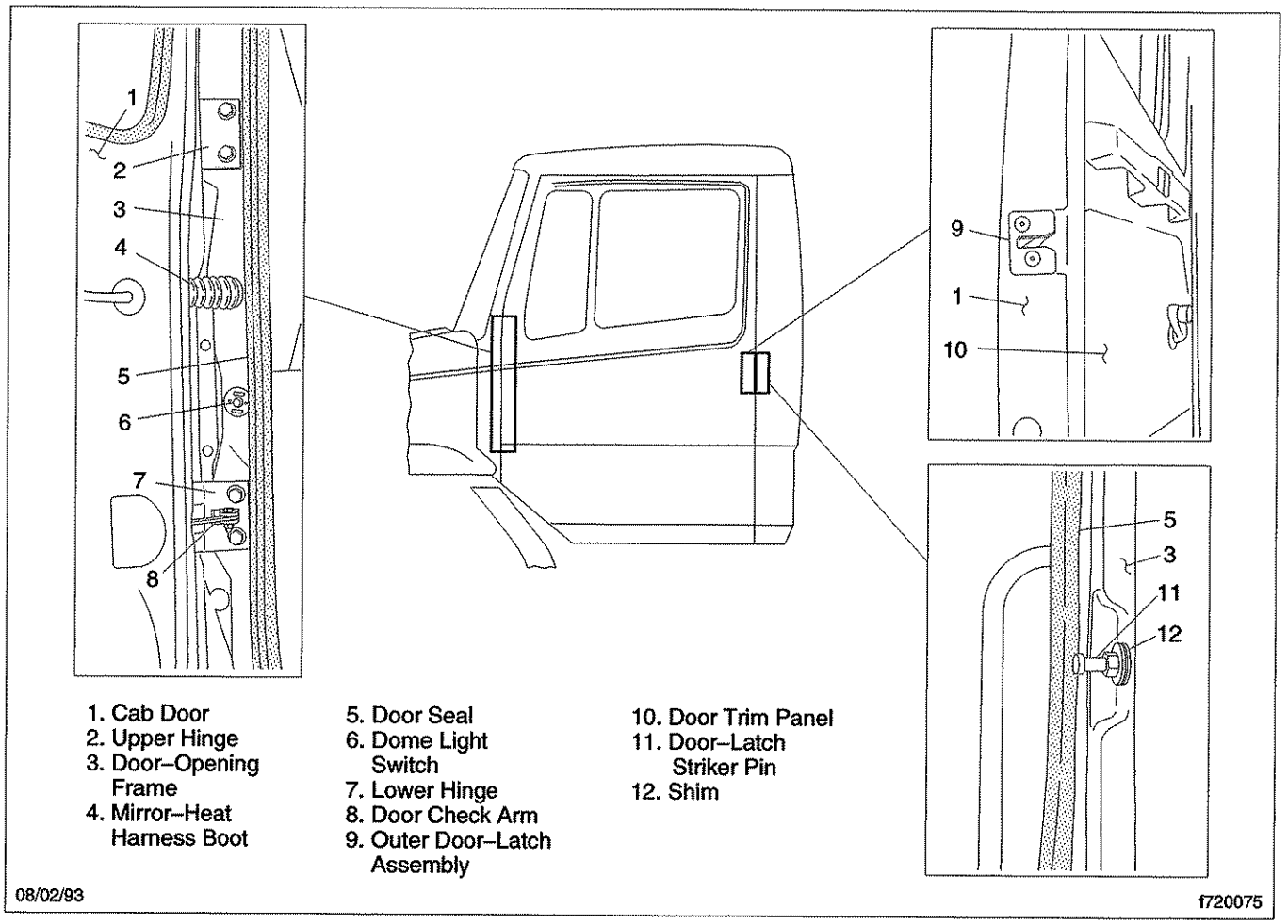
Fig. 1



1. Inner Door Handle
2. Door–Latch Handle
3. Inside Door–Latch Rod
4. Door–Lock Actuator
5. Door–Lock Link Lever
6. Inner Door–Latch Assembly
7. Door–Latch Striker Pin
8. Key Cylinder Door–Latch Rod
9. Outside–Release Door–Latch Rod
10. Exterior Door Handle Assembly
11. Lockset Tumbler and Lever
12. Outer Door–Latch Assembly
13. Door Panel Openings
14. Barbed Rivet Stud
15. Handle Retainer Clip

Fig. 2

General Information



1. Cab Door
2. Upper Hinge
3. Door–Opening Frame
4. Mirror–Heat Harness Boot
5. Door Seal
6. Dome Light Switch
7. Lower Hinge
8. Door Check Arm
9. Outer Door–Latch Assembly
10. Door Trim Panel
11. Door–Latch Striker Pin
12. Shim

Fig. 3

Door Removal and Installation

Removal

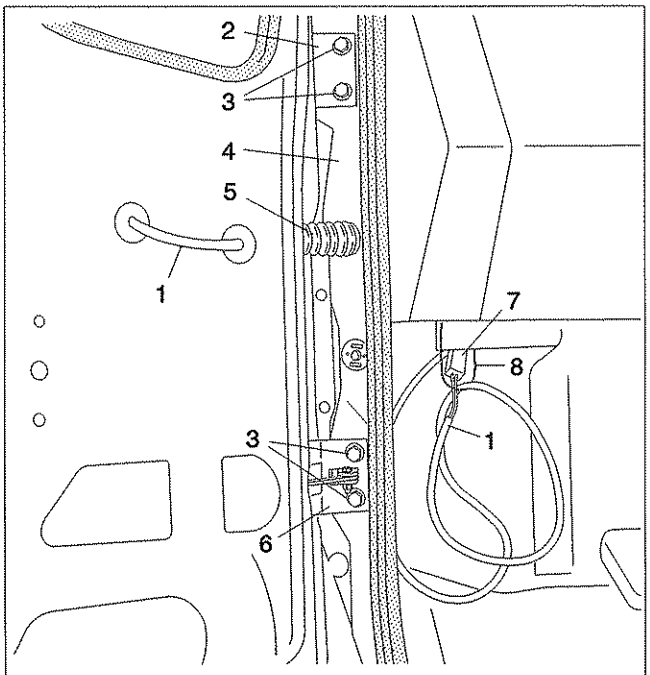
1. Apply the parking brakes, and chock the tires.
2. Lower the roll-up window for easier handling of the door during removal.
3. Support the door frame from the bottom to prevent the door from falling or tipping.
4. If so equipped, disconnect the mirror-heat wiring. **See Fig. 1.**

   4.1 Carefully, pull the end of the mirror-heat harness boot (Ref. 5) out of the cab door-opening frame (Ref. 4).

   4.2 If removing the right-hand door, remove the right-hand, lower dash panel to gain access to the mirror-heat wiring harness connector.

   4.3 Separate the halves of the mirror-heat harness connector (Ref. 7). Remove any harness clamps, then feed the harness (Ref. 1) through any tie straps (Ref. 8), and through the cab door-opening frame.

5. Remove the four capscrews, flatwashers, and split lockwashers that attach the door check and hinges to the cab door-opening frame. **See Fig. 1**, Refs. 2, 3, and 6. Remove the door.



1. Mirror–Heat Harness
2. Upper Hinge
3. Hinge Fasteners
4. Cab Door–Opening Frame
5. Mirror–Heat Harness Boot
6. Lower Hinge and Door Check
7. Mirror–Heat Harness Connector
8. Tie Strap

NOTE: Interior door trim panel, inner door handle assembly, and door moulding are not shown.

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Fig. 1

Installation

IMPORTANT: Use a support or have another person hold the door from the bottom to prevent it from falling or tipping during installation.

1. Align the hinges with their mounting holes in the door-opening frame, then install the fasteners. Tighten the capscrews just tight enough to prevent unintentional hinge movement during door adjustment.
2. If so equipped, connect the mirror-heat wiring. **See Fig. 1.**

   2.1 Feed the mirror-heat harness (Ref. 1) into the cab through the door-opening frame, and through any tie straps (Ref. 8). Install any harness clamps, then join the halves of the harness connector (Ref. 7).

   2.2 If it was removed, install the lower right-hand dash panel.

   2.3 Install the end of the mirror-heat harness boot (Ref. 5) in the door-opening frame.

3. Adjust the door, then tighten the hinge capscrews and striker pin. **See Fig. 2.**

   NOTE: A misaligned door can cause wind noise, poor temperature control in the cab due to drafts, water damage to the cab interior, difficult closing of the cab door, or premature wear of the door seal. The striker pin and both door hinges are attached to floating plates that move up and down and in and out so the door can be adjusted.

   3.1 Loosen the striker pin (**Fig. 2**, Ref. 21), then tighten it finger-tight.

Door Removal and Installation

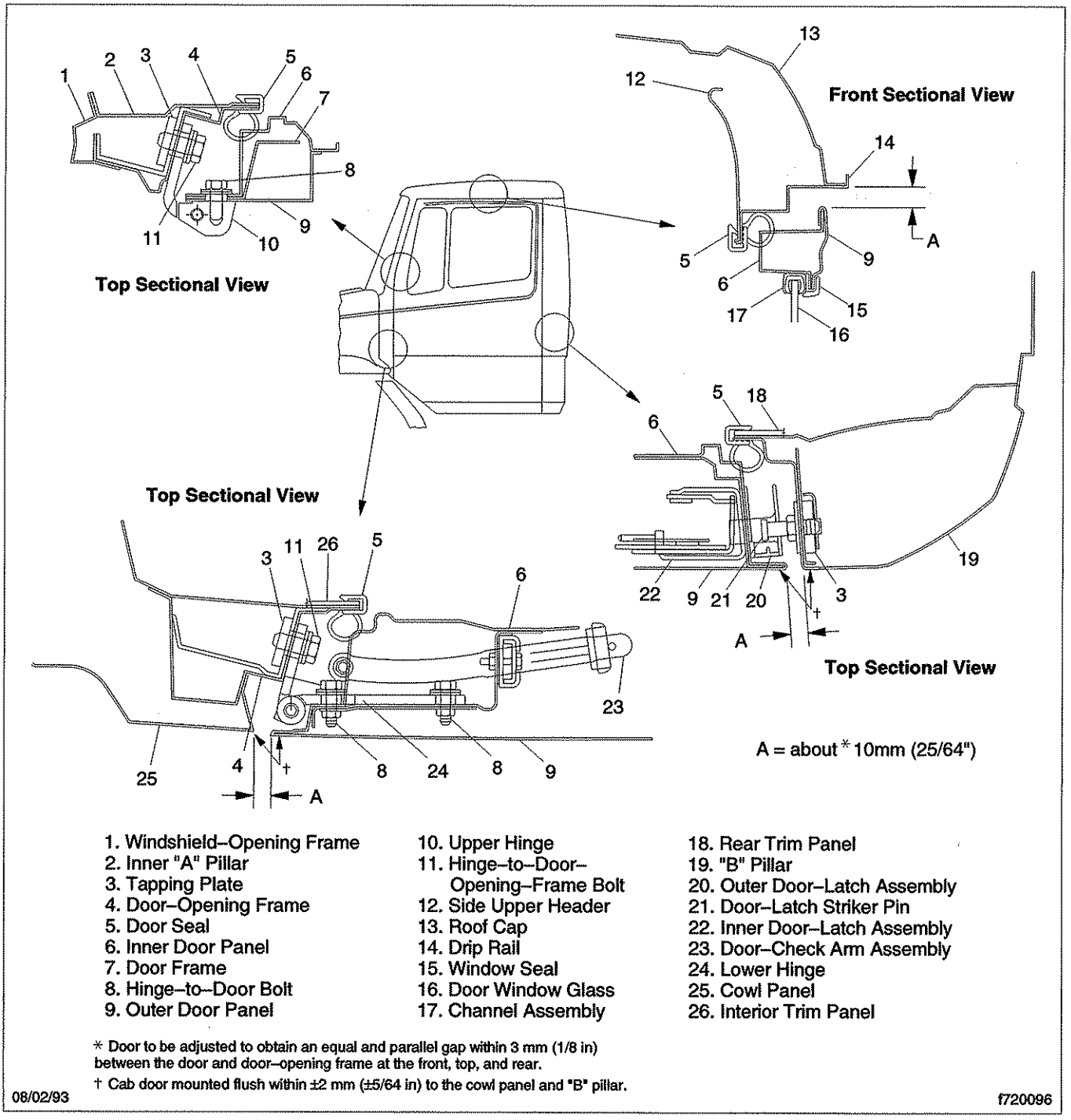


Fig. 2

3.2 Carefully close the door. As needed, move the door in or out until its outer surface is flush, within 2 mm (5/64 in), with the

surface of the cab skin at *both* its front and rear edges.

3.3 As needed, raise or lower the door until the space between the top of it and the door-opening frame is uniform, and is equal within 3 mm (1/8 in) to the spaces between the front and rear edges of the door and the door-opening frame. **See Fig. 2.** Be careful not to disturb the in-and-out adjustment.

3.4 Without disturbing the positions of the hinges or striker pin, carefully open and support the door, then tighten the hinge capscrews 46 N·m (34 lbf·ft).

3.5 Securely tighten the striker pin. From outside the cab, partially close the door until the latch jaws are about 25 to 50 mm (1 to 2 in) from the striker pin. Be sure the striker pin will be centered in the latch jaw when the door is closed. If needed, reposition the striker pin.

3.6 Tighten the striker pin 61 N·m (45 lbf·ft), then close the door and recheck the door alignment.

4. Check the door seal (**Fig. 2**, Ref. 5) for damage or wear. If needed, replace it; **see Subject 120.**

5. Remove the chocks.

Up-and-Down Adjustment (See Fig. 1)

From outside the cab, visually check the alignment of the door with the cab door-opening frame. See if the spaces around the top of the door are uniform, the gaps are all about 10 mm (3/8-inch), and are within 3 mm (1/8-inch) of being equal.

1. Mark both the vertical and horizontal positions of the latch striker pin and the two hinges before loosening them for adjustment. This will greatly simplify the procedure.
2. Loosen the striker pin, then tighten it finger-tight.
3. Loosen the capscrews that attach the hinges to the cab door-opening frame, but keep them tight enough to prevent unintentional hinge movement.
4. Carefully close the door, then raise or lower it until the space across the top of it is uniform, the gap is about 10 mm (3/8-inch), and is within 3 mm (1/8-inch) of the gaps at both the front and rear vertical edges of the door. Be careful not to disturb the in-and-out adjustments at the front or rear of the door.
5. Without disturbing the positions of the hinges or striker pin, carefully open and support the door, then tighten the hinge capscrews 46 N·m (34 lbf·ft).
6. Securely tighten the striker pin. From outside the cab, partially close the door until the latch jaws are about 25 to 50 mm (1 to 2 inches) from the striker pin. Be sure the striker pin will be centered in the latch jaw when the door is closed. If needed, reposition the striker pin.
7. Tighten the striker pin 61 N·m (45 lbf·ft), then close the door and recheck door alignment.

In-and-Out Adjustment

Poor in-and-out adjustment of the door is often indicated by hard closing of the door, wind and water leaks around the edge of the door, or premature wear of the door seal. Move the door in or out until its outer surface is flush, within ± 2 mm (± 5/64-inch), with the surface of the cab skin at *both* its front and rear edges.

1. If only the rear edge of the door needs adjusting, go on to the step for adjusting the rear edge.

   If the front edge of the door needs adjusting (**see Fig. 2**), mark the vertical and horizontal positions of the hinges before loosening them for adjustment. This will greatly simplify the procedure.
2. Loosen the capscrews that attach the hinges to the cab door-opening frame, but keep them tight enough to prevent unintentional hinge movement.
3. Carefully close the door, then move the front edge of the door in or out until its outer surface is flush, within ±2 mm (±5/64-inch), with the surface of the cab skin. Be careful not to disturb the up-and-down adjustment.
4. Without disturbing the positions of the hinges, carefully open and support the door, then tighten the hinge capscrews 46 N·m (34 lbf·ft).
5. If the rear edge of the door needs adjusting, mark the vertical and horizontal positions of the latch striker pin before loosening it for adjustment. **See Fig. 3.**
6. Loosen the striker pin, then tighten it finger-tight.
7. Carefully close the door, then move the rear edge of the door in or out until its outer surface is flush, within ±2 mm (±5/64-inch), with the surface of the cab skin. Be careful not to disturb the up-and-down adjustment.
8. Without disturbing the position of the striker pin, carefully open the door, then tighten the striker pin 61 N·m (45 lbf·ft).
9. Close the door and recheck door alignment.

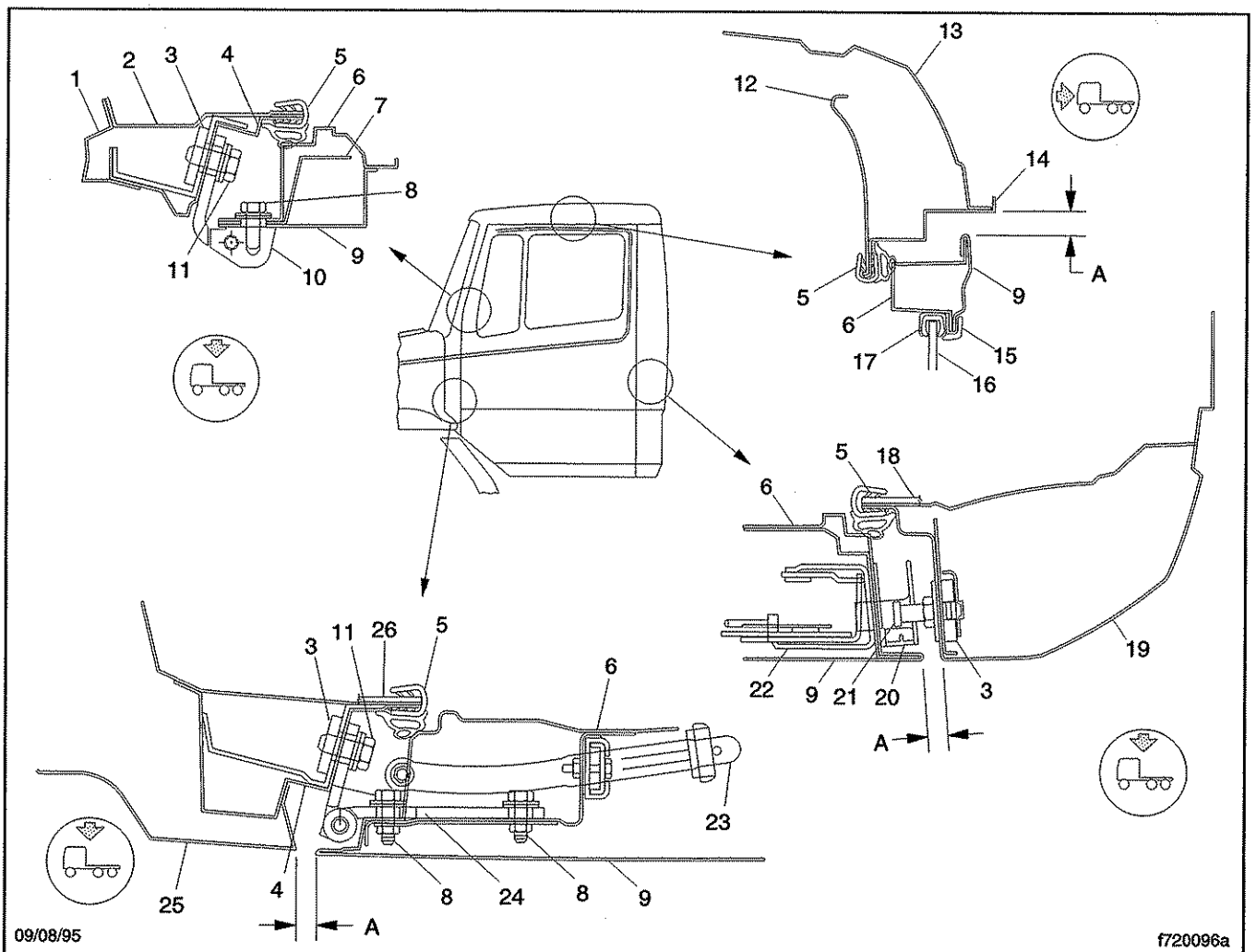
Fore-and-Aft Adjustment (See Fig. 1)

NOTE: Although fore-and-aft adjustment of the door is possible, it should not normally be needed unless a new door is installed.

From outside the cab, visually check the alignment of the front and rear vertical edges of the door with the cab door-opening frame. See if the spaces are uniform, the gaps are about 10 mm (3/8-inch), and are within 3 mm (1/8-inch) of being equal.

1. If the door needs adjusting, loosen the capscrews that attach the upper and lower hinges to the door, then tighten them finger-tight.

Door and Latch Adjustment

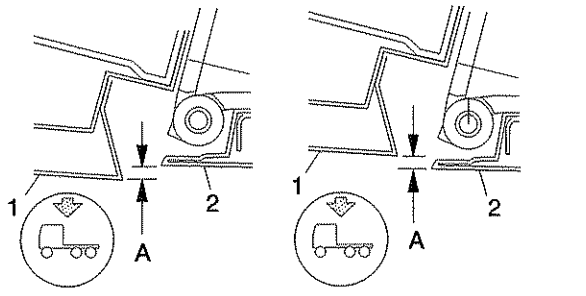


A. At the front, top, and rear, check for a 10 mm (3/8-inch) gap that is parallel and equal to within 3 mm (1/8-inch).

1. Windshield-Opening Frame
2. Inner "A" Pillar
3. Tapping Plate
4. Door-Opening Frame
5. Door Seal
6. Inner Door Panel
7. Door Frame
8. Hinge-to-Door Bolt
9. Outer Door Panel
10. Upper Hinge
11. Hinge-to-Door-Opening-Frame Bolt
12. Side Upper Header
13. Roof Cap
14. Drip Rail
15. Window Seal
16. Door Window Glass
17. Channel Assembly
18. Rear Trim Panel
19. "B" Pillar
20. Outer Door-Latch Assembly
21. Door-Latch Striker Pin
22. Inner Door-Latch Assembly
23. Door Check-Arm Assembly
24. Lower Hinge
25. Cowl Panel
26. Interior Trim Panel

Fig. 1

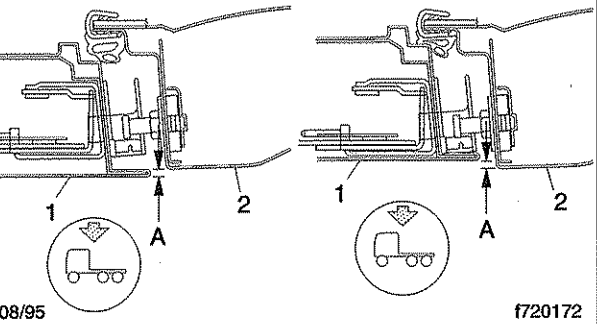
2. Gently close the door. Move the door as needed to align its front and rear vertical edges with the door-opening frame. Adjust the door until the spaces around the door are uniform, the gaps are about



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A. Mount cab door flush to within ±2 mm (±5/64") at both cowl panel and "B" pillar.
1. Cowl Panel 2. Outer Door Panel

Fig. 2, Door Adjustment (In-and-Out), at the Cowl Panel



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A. Mount cab door flush to within ±2 mm (±5/64") at both cowl panel and "B" pillar.
1. Outer Door Panel 2. "B" Pillar

Fig. 3, Door Adjustment (In-and-Out), at the B Pillar

10 mm (3/8-inch), and are within 3 mm (1/8-inch) of being equal.

3. Without disturbing the positions of the hinges, carefully open the door, then tighten the hinge-to-door capscrews 18 N·m (13 lbf·ft).

4. From outside the cab, partially close the door until the latch jaws are about 25 to 50 mm (1 to 2 inches) from the striker pin. Be sure the striker pin will be centered in the latch jaw when the door is closed. If needed, reposition the striker pin.

   4.1 Remove the striker pin.

   4.2 Add shims between the striker pin coned washer and the rear post of the cab door-opening frame.

   NOTE: Add only enough shims to correct the engagement of the jaws around the pin. Too many shims will cause interference between the pin and latch.

5. Tighten the striker pin 61 N·m (45 lbf·ft), then close the door and recheck door alignment.

Door Latch Adjustment

An incorrectly adjusted door latch mechanism can prevent the opening of the cab door from the outside.

If the outside door latch will not open, do the following steps:

1. First, check and adjust, if necessary, the vertical positioning of the striker pin.
2. Adjust the door latch mechanism.

STRIKER PIN ADJUSTMENT

As the door closes, watch to see if the door-latch striker pin is centered in relation to the latch jaws. **See Fig. 1.** The door should not move up or down when the latch jaws engage the striker pin. Only the center of the pin must contact the latch jaws; neither the forward end nor the hex portion of the pin should contact any part of the latch.

1. To center the striker pin vertically in the latch jaws, adjust the striker pin up or down.

   1.1 Loosen the pin fasteners, then tighten them finger-tight.

   1.2 Close the door (the latch jaws will center the pin). Move the rear of the door in or out if needed, until its outer surface is flush, within ±2 mm (±5/64 in), with the surface of the cab skin.

   1.3 Carefully open the door without disturbing the position of the pin. Tighten the pin 61 N·m (45 lbf·ft), then close the door and recheck the adjustment.

2. If needed, adjust the striker pin fore and aft in the latch jaws. For procedures, see "Fore-and-Aft Adjustment."

Door and Latch Adjustment

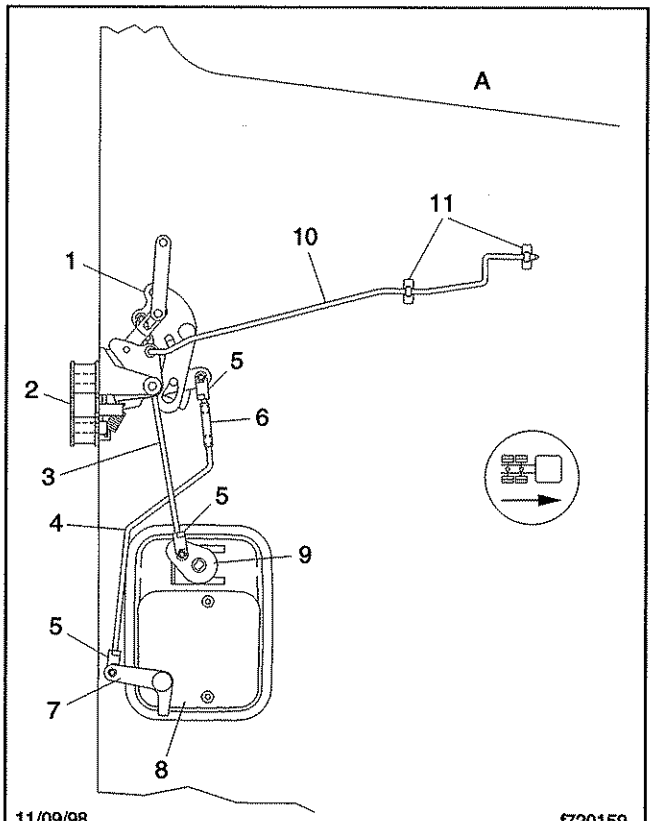
DOOR LATCH MECHANISM ADJUSTMENT (ON VEHICLES BUILT 4/15/94 AND EARLIER)

If the outside paddle handle does not open, adjust the door latch mechanism. If needed, replace the old outside-release rod and spring clip with the revised rod, plastic retainer, and slip link.

1. Open the door and remove the interior door panel.
2. Disconnect the threaded end of the outside-release rod from the spring clip on the latch mechanism.
3. Disconnect the lower end of the outside-release rod by rotating the plastic retainer clip (**see Fig. 4**) counterclockwise to unsnap the clip from the rod.
   - 3.1 To move the lever into a position where the clip can be unsnapped, pull on the outside door handle.
   - 3.2 After unsnapping the clip, remove the rod from the door. Discard the rod.
4. Remove the spring clip that attached the rod to the inner door latch.
   - 4.1 Using a 3/16-inch drill bit, drill out the rivet that attaches the spring clip to the inner door latch. While drilling, place a steel plate behind the spring clip to protect the outer door panel.
   - 4.2 Discard the spring clip.
5. Insert a new plastic retainer clip KIC04075 4 into the rivet hole in the inner door latch. Make sure the barb of the plastic clip faces the outer door panel.
6. Insert a new outside-release rod (18–30394–000 for the left-hand door; 18–30394–001 for the right-hand door) into the release lever.
7. Thread a slip link A18–30397–000 onto the upper end of the outside-release rod.
8. With the latch mechanism in the unlocked position, raise the arm with the newly installed plastic clip as high as possible. Adjust the slip link until it lines up with the inner door latch lever. Insert the slip link into the clip.

DOOR LATCH MECHANISM ADJUSTMENT (ON VEHICLES BUILT AFTER 4/15/94)

1. With the door still open, manually close the latch jaws. Turn the outside door handle and see if the jaws unlatch. If they don't, disconnect the slip link from the plastic clip and rotate it one or two turns lower on the rod. Repeat this procedure as necessary until the outside handle opens the latch jaws.



A. Door Window Opening
1. Inner Door Latch Assembly
2. Outer Door Latch Assembly
3. Key Cylinder Release Rod
4. Outside-Release Rod
5. Plastic Retainer Clip
6. Slip Link
7. Release Lever
8. Exterior Door Handle Assembly
9. Lockset Tumbler Lever
10. (Inside-Release) Door-Latch Rod
11. Door Latch Rod Clips

Fig. 4, Door Latch Mechanism Interior View (Left-Hand Door)

Door and Latch Adjustment

NOTE: The latch jaws should open at approximately 90 per cent travel of the outside door handle. If they open too soon, the mechanism can go over-center and refuse to open the door. In order to open it, the door must be locked again and then unlocked.

2. Check door latch operation with the door both locked and unlocked.
3. Install the interior panel.

Door Seal Replacement

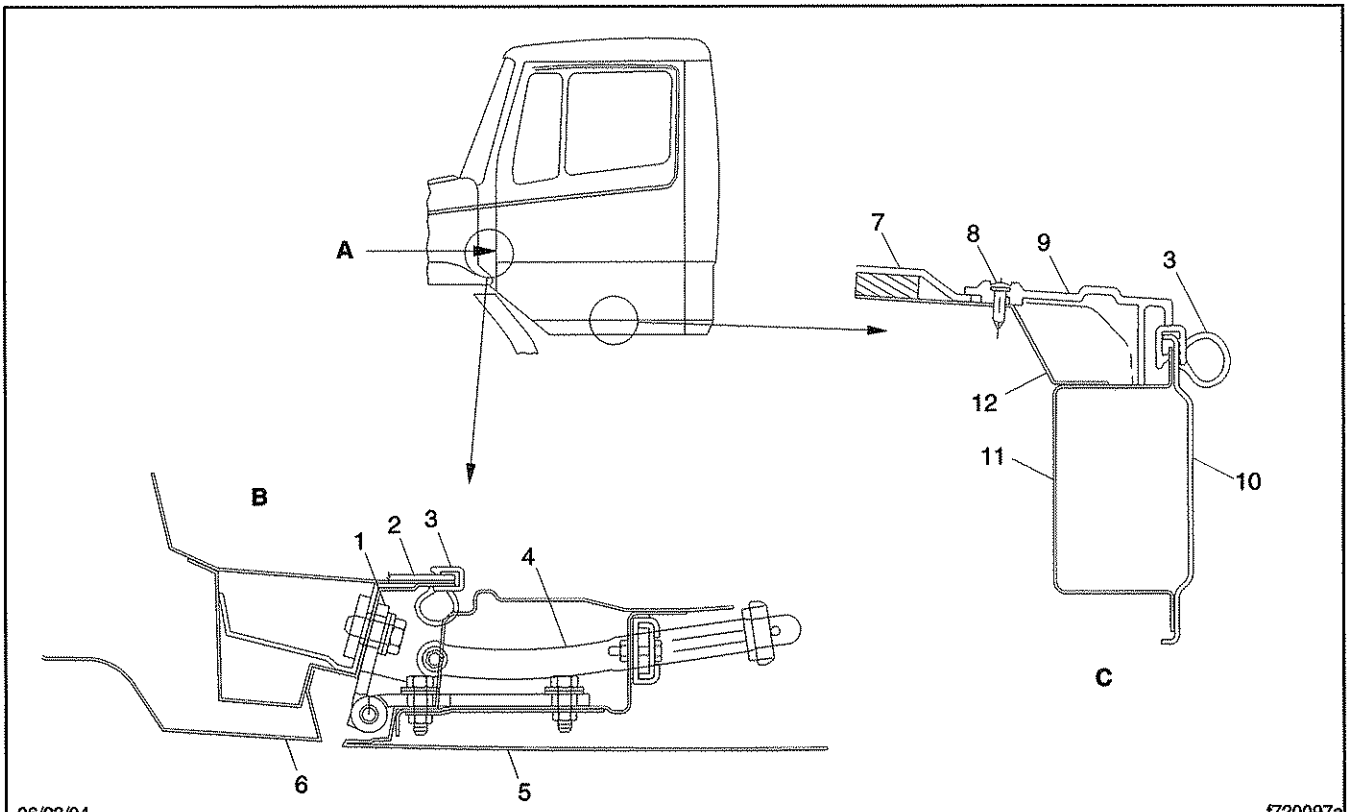
Replacement (See Fig. 1)

1. Remove the three screws that attach the door sill cover to the floor pan; remove the door sill cover.
2. Pull the entire length of the old door seal from the flange of the cab door-opening frame.
3. Adjust the door so that the gap between the door and door opening is uniform. From inside the cab, use a padded block of wood and a hammer to bend the door seal flange until there is a uniform gap of 14 to 15 mm (about 9/16-inch) between the door and the door seal mounting flange.
4. Install the new door seal by pushing its open channel firmly onto the flange of the cab door-opening frame so the ends of the seal will meet at the center of the lower door hinge.

   Make sure the seal is pushed completely onto the flange all the way around the door-opening frame; there must be no creases or buckles on the sealing surface.

⚠ CAUTION

CAUTION: Do not stretch the door seal during installation. To do so may reduce its sealing ability, which could result in water leaks.



A. Ends of Seal
B. Top Sectional View
C. Front Sectional View

1. Lower Hinge
2. Interior Trim Panel
3. Door Seal
4. Door Check-Arm Assembly
5. Outer Door Panel
6. Cowl Panel
7. Floor Mat
8. Door Sill Cover Screw
9. Door Sill Cover
10. Outer Door Sill Panel
11. Inner Door Sill Panel
12. Floor Pan

Fig. 1, Door Seal

Door Seal Replacement

5. Trim the seal to length as needed, and butt the ends together.
6. Install the door sill cover, and tighten the screws snugly.

Interior Door Trim Removal and Installation

Removal (Refer to Fig. 1)

1. Remove the inner door handle assembly. **Refer to Fig. 2** and **Fig. 3.**
   - 1.1 Use a small hook to remove the two door handle plugs from the inner door handle assembly. **See Fig. 2.**
   - 1.2 Hold the door handle so that it doesn't fall while removing the three machine screws. Gently pull the handle from the door panel.
   - 1.3 Pull straight out on the door-lock actuator and actuator guide, to disengage the barbed rivet stud that attaches the actuator to the door-lock link lever. **See Fig. 3.**
2. Remove the window regulator handle. **See Fig. 4.**

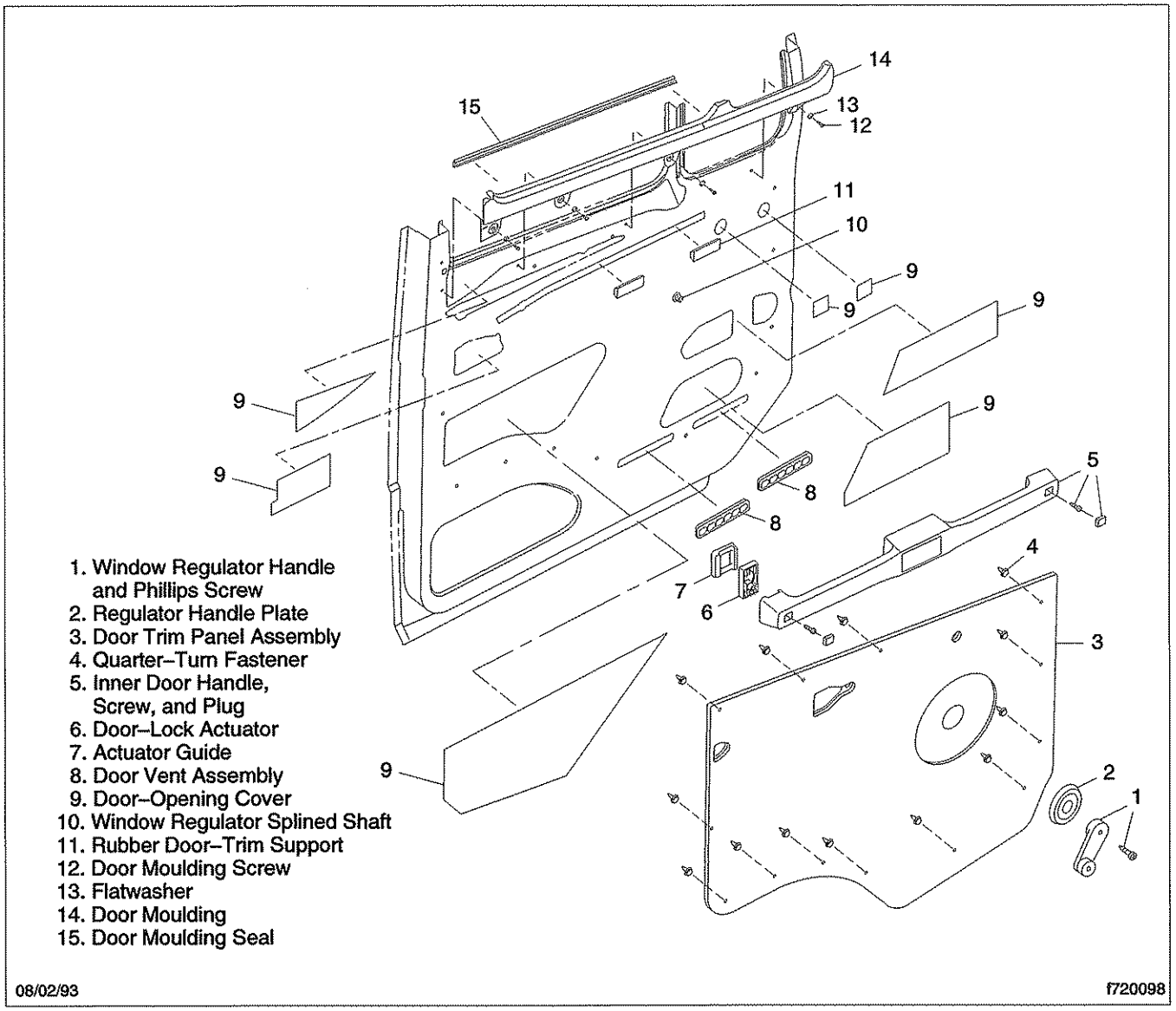


Fig. 1

Interior Door Trim Removal and Installation

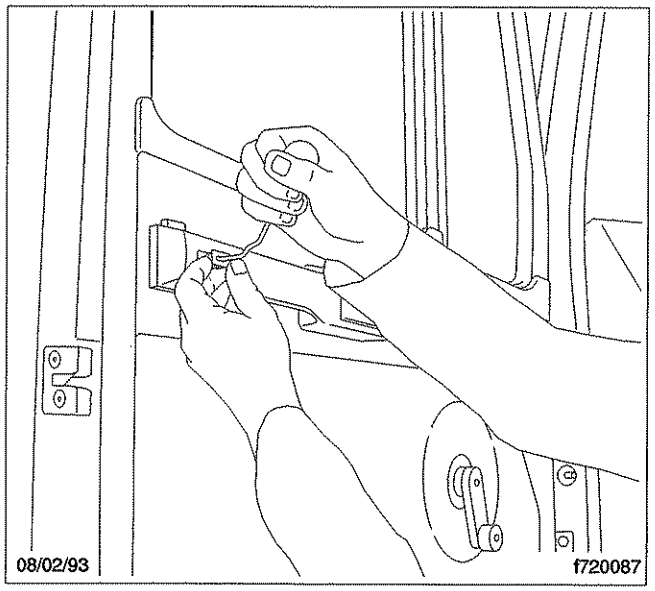


Fig. 2

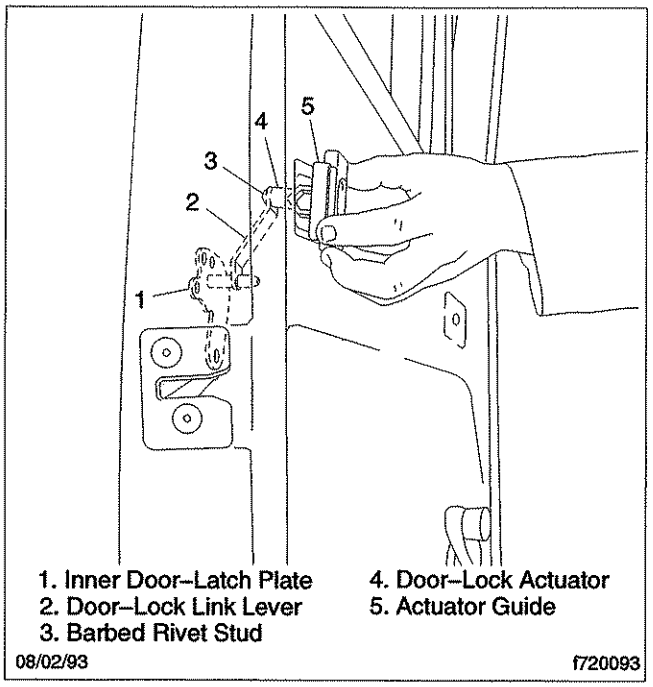


Fig. 3

2.1 Remove the phillips screw that attaches the window regulator handle to the splined shaft. **See Fig. 4.**

2.2 Pull the handle straight off the regulator splined shaft. If necessary, insert a straight-blade screwdriver under the regulator handle plate, and twist it until the handle slides off. Remove the regulator handle plate.

3. Remove the door trim panel assembly. **See Fig. 5.**

3.1 Gently insert a straight-blade screwdriver under a corner of the door trim panel, and lift the panel to pull the first quarter-turn fastener out of the inner door panel. **See Fig. 5.** Use care not to damage the door trim panel.

3.2 Working around the edge of the panel, pull out each of the thirteen quarter-turn fasteners, one at a time.

If any of the quarter-turn fasteners are damaged, replace them (insert the head of the new fastener in the backing-board hole, and twist it a quarter turn).

4. Remove the door moulding and door moulding seal. **See Fig. 6** and **Fig. 7.**

4.1 Remove the four screws and flatwashers that attach the door moulding to the door. **See Fig. 6.**

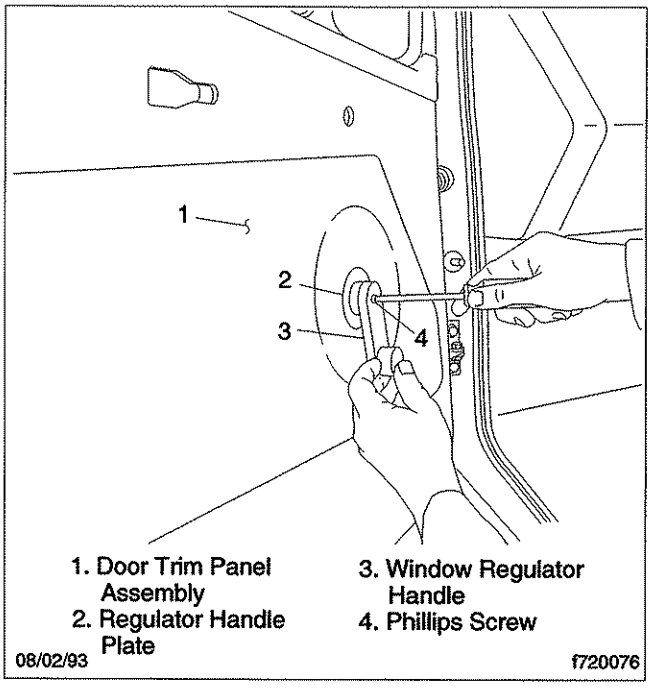


Fig. 4

Interior Door Trim Removal and Installation

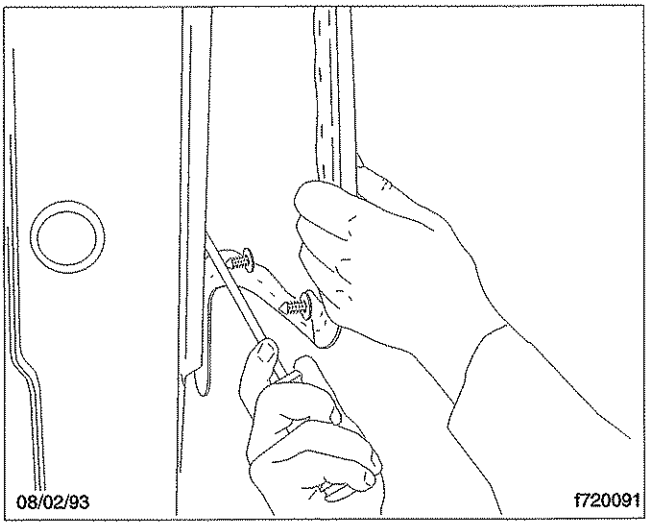


Fig. 5

4.2 Remove the door moulding and door moulding seal, **as shown in Fig. 7.** To prevent damaging the two positioning tabs, rotate the rear of the moulding slightly downward, and the front slightly upward, while sliding it forward and off the door.

Installation (Refer to Fig. 1)

1. Install the door moulding and door moulding seal. **See Fig. 6 and Fig. 7.**

   1.1 Install the door moulding and door moulding seal, **as shown in Fig. 7.** To prevent damaging the two positioning tabs, rotate the rear of the moulding upward, and the front slightly downward while sliding it backward and onto the door.

   1.2 Install and tighten the four screws that attach the door moulding to the door. **See Fig. 6.**

2. Install the door trim panel assembly.

   2.1 Make sure all thirteen of the quarter-turn fasteners are correctly installed in the door panel.

   2.2 Working around the edge of the door trim panel, push in each of the fasteners, one at a time.

3. Install the window regulator handle and regulator handle plate. **See Fig. 4.**

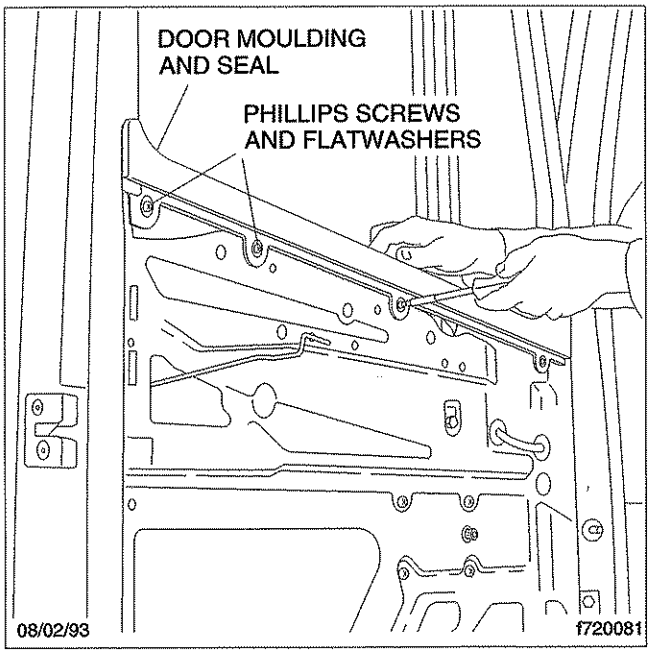


Fig. 6

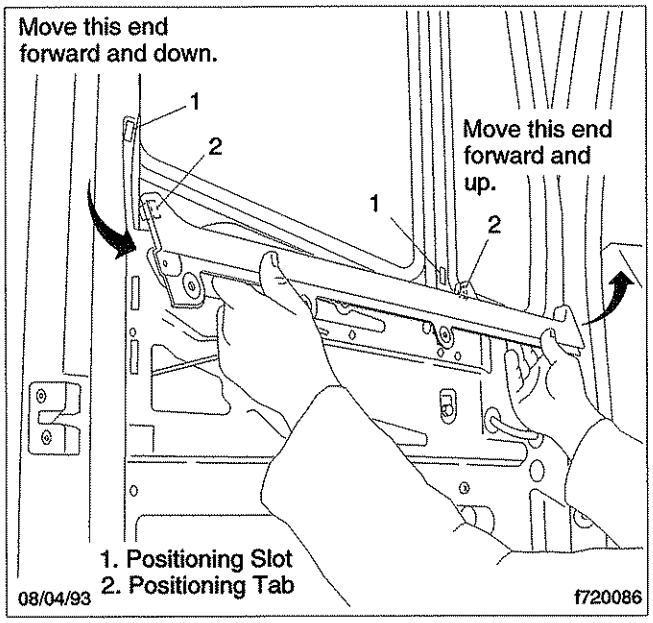


Fig. 7

Interior Door Trim Removal and Installation

3.1 Install the regulator handle plate on the splined shaft, then push the handle straight onto the shaft.

3.2 Install the phillips screw, and tighten it snugly while holding the regulator handle in place to keep the splined shaft from turning. **See Fig. 4.**

4. Install the inner door handle assembly. **See Fig. 3.**

4.1 Install the door-lock actuator and actuator guide, by engaging the barbed rivet stud that attaches the actuator to the door-lock link lever. **See Fig. 3.** Hold them in place while installing the inner door handle.

4.2 While holding the inner door handle assembly in place, install and tighten the three screws.

4.3 Press the two door handle plugs into the ends of the inner door handle assembly.

Fixed Window Replacement

General Information

No special tools are needed to remove and install the glass. A thin, flat tool, such as a putty knife, can be used if a special corkscrew instrument (utilized in major body shops for window glass replacement) isn't available.

⚠ WARNING

WARNING: Use care when working around or handling glass. Wear protective gloves to eliminate the possibility of personal injury resulting from accidentally breaking or splintering the glass.

When a broken window is being replaced, it is very important that the cause of glass breakage be found, and the condition corrected before a new window is installed. If not removed, a small obstruction or high spot somewhere around the window opening may break the replacement glass, especially when it is exposed to high winds, pressure, temperature extremes, and vehicle motion.

Wing Window Replacement (Refer to Fig. 1)

1. Remove the inner door handle assembly, window regulator handle, door trim panel assembly, and the door moulding and door moulding seal; **refer to Subject 130.**
2. Wear heavy protective gloves to prevent cutting your hands while removing all of the shattered glass from the weather seal. Using a putty knife, lift up the inside lip of the weather seal and pry it over the inner door-panel flange. If the weather seal will be re-used, take care not to damage it with the putty knife.
3. Check for high spots or obstructions in the window opening flange and the weather seal. Correct any areas on the window opening that need to be fixed. Inspect the weather seal for damage or deterioration; replace it if needed.

⚠ CAUTION

CAUTION: When handling the new window glass, use care not to nick or splinter the edges; chipped edges could cause future breaks.

4. Using soap and water, lubricate the weather seal, then install the weather seal on the new window glass, beginning at the bottom, and ending at the upper front corner. **See Fig. 2.**
5. Place the assembled glass and weather seal in the window opening, from the outside. With another person lightly pushing in on the glass, use a putty knife to pry the weather seal lip over the window opening flange. Begin with the upper edge, and continue down both sides, across the bottom to the lower front corner. **See Fig. 3.**

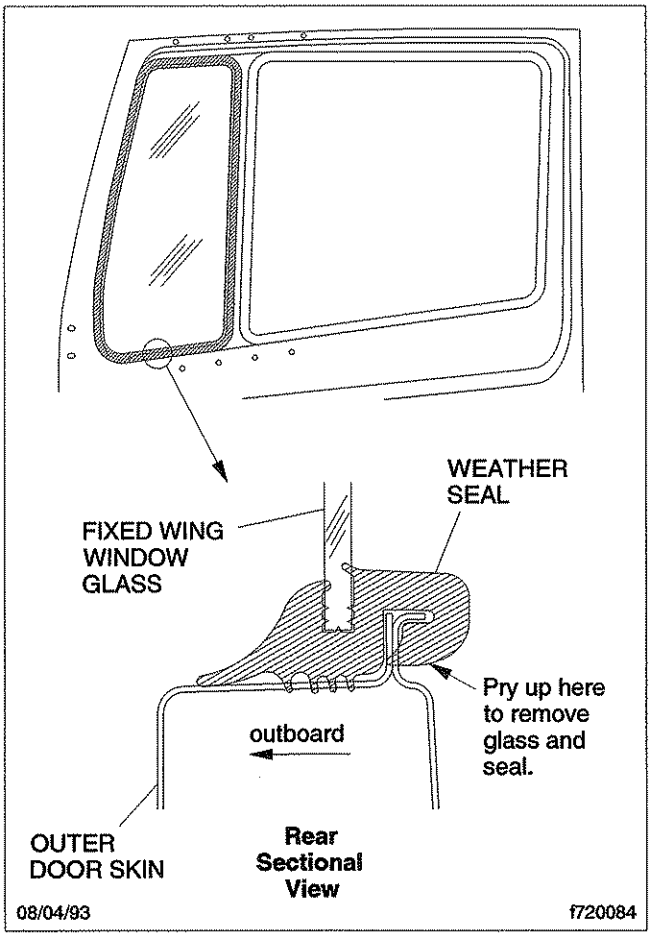


Fig. 1

Fixed Window Replacement

IMPORTANT: To prevent cab water leaks, the weather seal should lie flat against the glass and the inner and outer door panels, and should not crease at any point, especially around the corners. Reinstall the window if the weather seal creases.

6. Install the inner door handle assembly, window regulator handle, door trim panel assembly, and the door moulding and door moulding seal; **refer to Subject 130.**

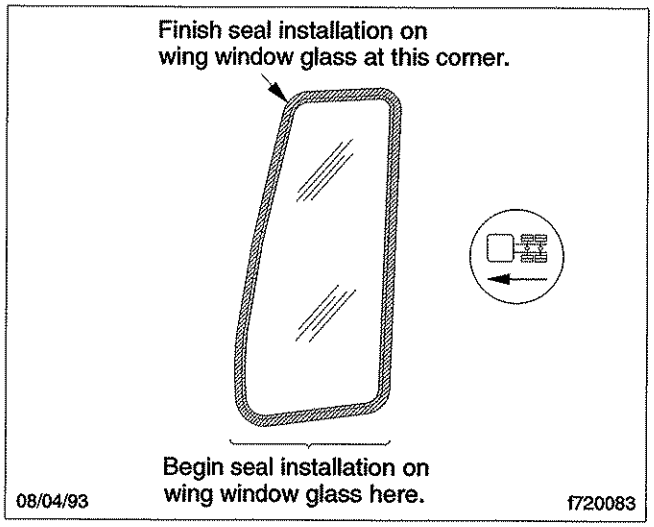


Fig. 2

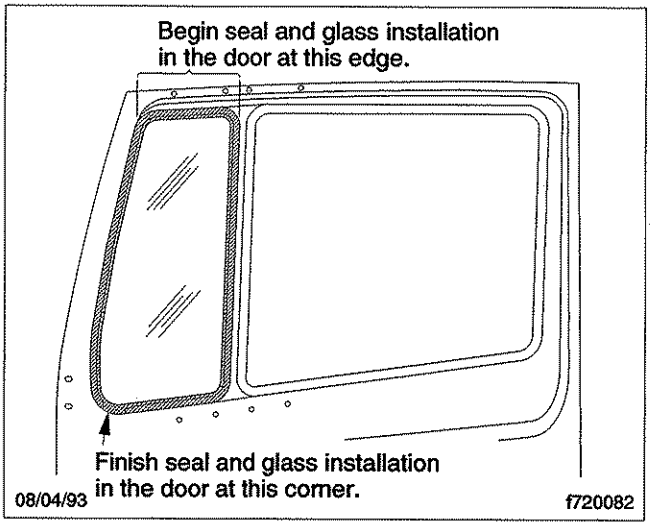


Fig. 3

Roll-Up Window Removal and Installation

Removal (Refer to Fig. 1)

1. Remove the inner door handle assembly, window regulator handle, door trim panel assembly, and the door moulding and door moulding seal; **refer to Subject 130.**
2. Lower the roll-up window. Loosen the six screws in the window-channel seal. **See Fig. 2.** Use needle-nose pliers to remove the screws, and be careful to keep them from falling down the window cavity.
3. Remove the two hexbolts attaching the channel to the lower portion of the inner door panel. **See Fig. 3.**
4. Pull the upper portion of the channel toward the inside until it is clear of the top of the door frame.

⚠ CAUTION

CAUTION: Failure to wear rubber gripper gloves while removing the window glass from the door

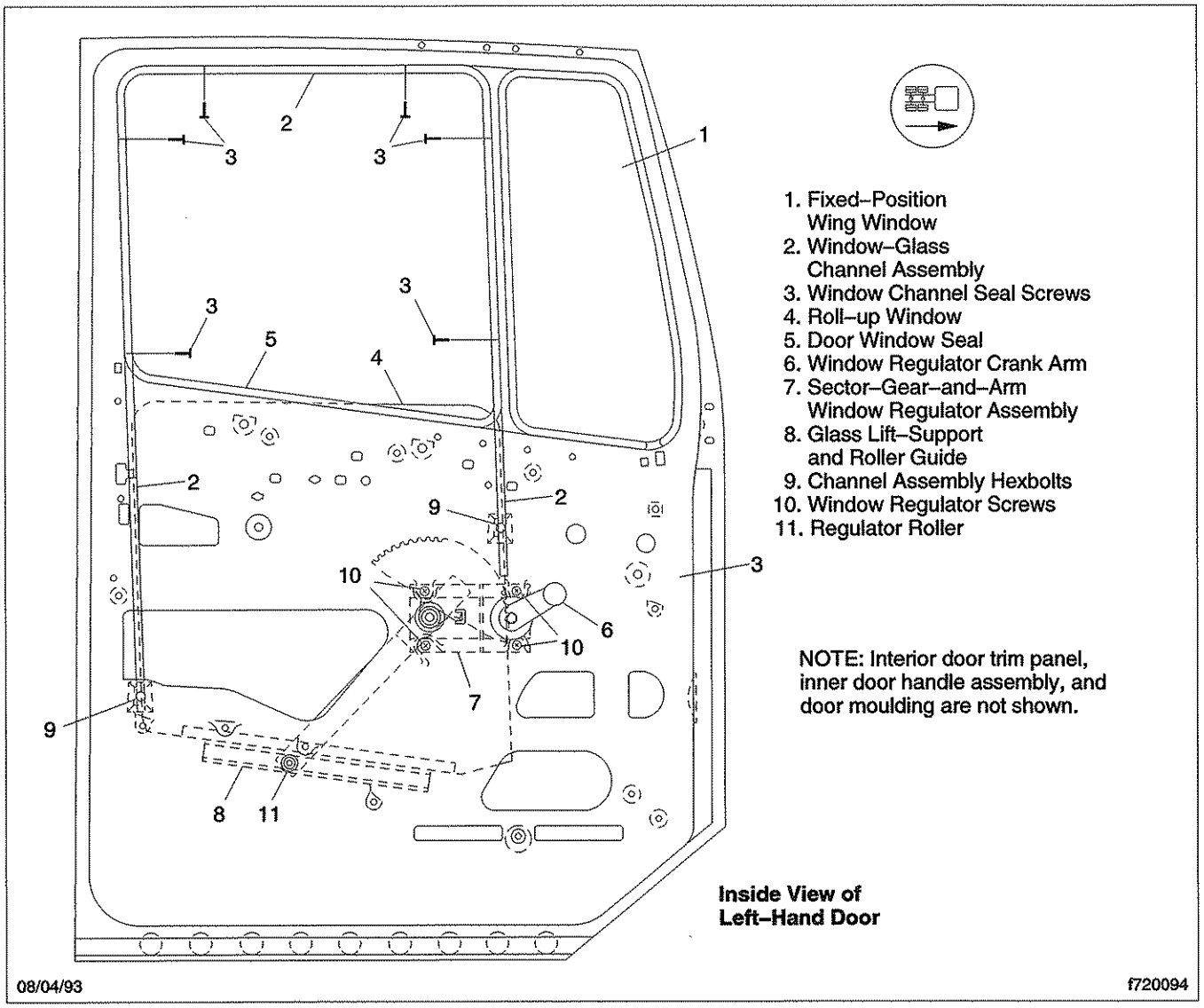


Fig. 1

Roll-Up Window Removal and Installation

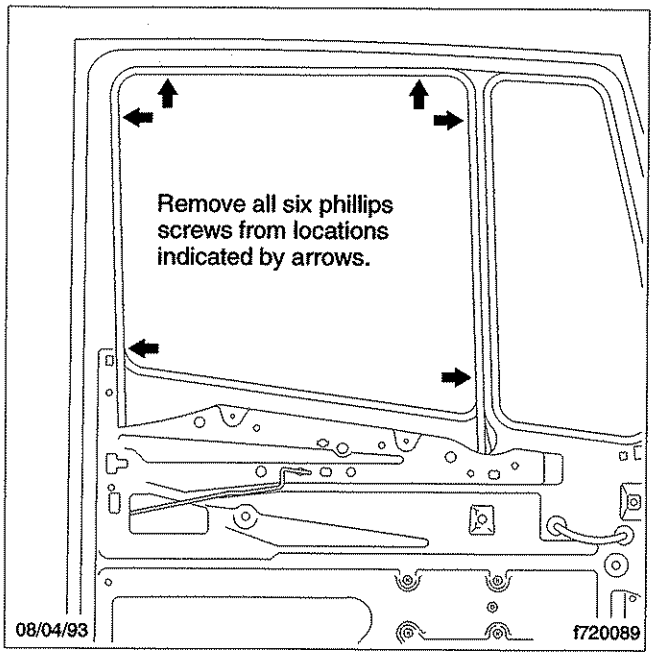


Fig. 2

could result in the glass slipping out of your hands and breaking.

IMPORTANT: Wear rubber gripper gloves when removing the window glass. Usually, service operations performed on the door will be done while the door is in a vertical position (that is, attached to the vehicle). Because of this, you will need a secure grip when handling the glass.

5. Place the window regulator handle on the splined shaft, and raise the window in the channel. Grasp the glass securely, and pull it up and in while cranking the window glass and channel out of the door. **See Fig. 4.** Stop cranking when the window regulator roller reaches the end of the glass-lift support roller guide.
6. Carefully remove the glass and channel assembly. Leave the regulator roller arm in a vertical position.
7. Remove the window seal by pulling it off of the window opening flange.

Installation (Refer to Fig. 1)

1. Inspect the window channel seal, door moulding seal, and window seal for deterioration or damage; replace them if needed.

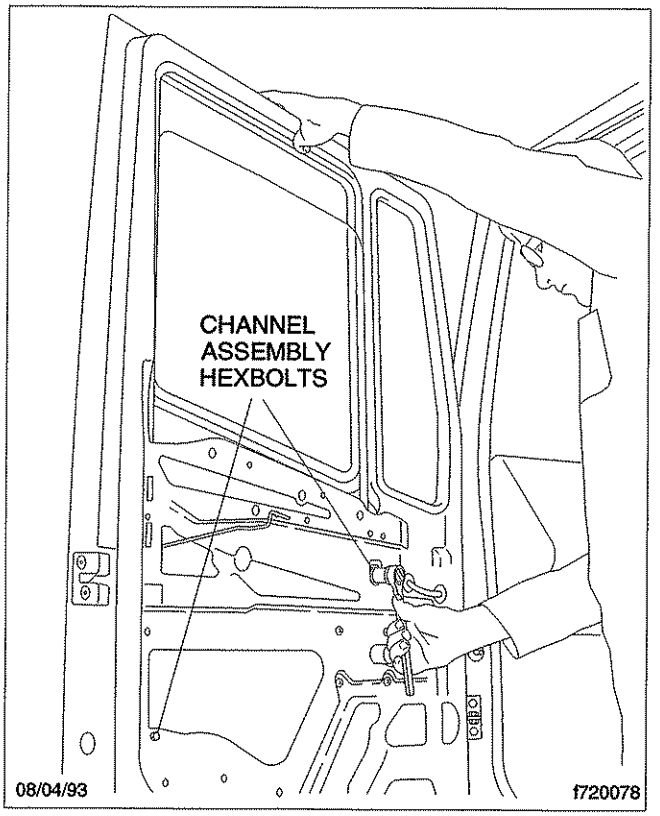


Fig. 3

2. Install the window seal **as shown in Fig. 5,** by working it onto the flange of the window opening so its seal brush is at the bottom of the opening.

⚠ CAUTION

CAUTION: Incorrect positioning of the cushion in the glass-lift support can cause the glass to contact the metal, which may crack the glass.

3. Check the position of the window glass cushion in the glass-lift support. **See Fig. 6.** The cushion must be centered in the support, with equal lengths of cushion extending beyond the ends of the support.

   Then check the position of the glass-lift support on the window glass. **See Fig. 6.** The lowest corner of the support roller guide must be 141.0 mm (5-9/16 in) back from the lower front corner of the window glass.

Roll-Up Window Removal and Installation

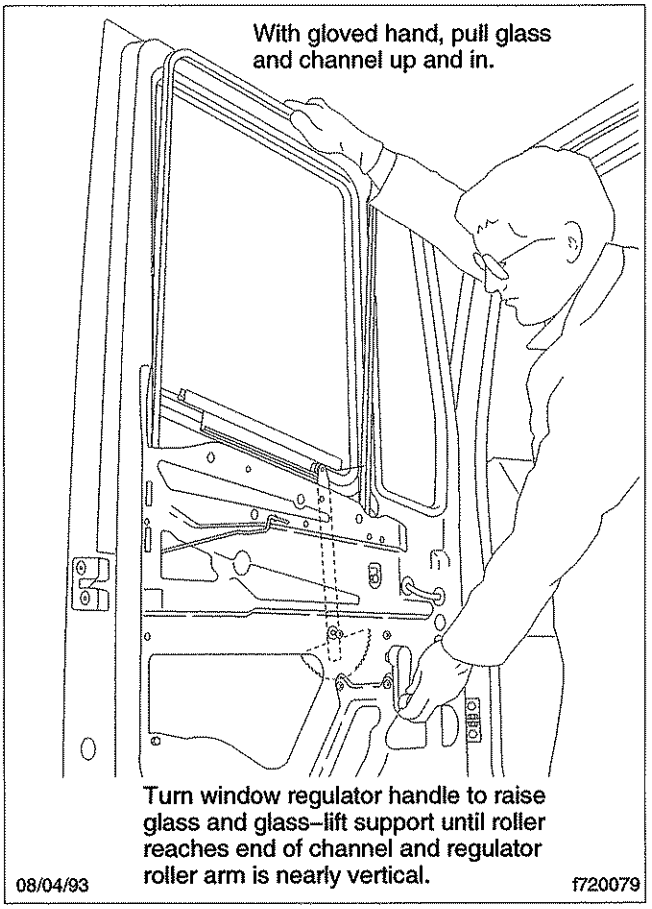


Fig. 4

4. Clean and lubricate the window regulator roller and the roller guide on the glass-lift support.
5. Place the regulator roller arm in a vertical position. Loosen the four regulator assembly mounting screws. **See Fig. 7.**

IMPORTANT: Wear rubber gripper gloves when installing the window glass. Usually, service operations performed on the door will be done while the door is in a vertical position (that is, attached to the vehicle). Because of this, you will need a secure grip when handling the glass.

⚠ CAUTION

CAUTION: Failure to wear rubber gripper gloves while installing the window glass in the door could result in the glass slipping out of your hands and breaking.

6. Grasp the glass securely, and lower the window glass and channel assembly into the door. Continue to lower the assembly until the regulator roller can be installed in the roller guide of the glass-lift support.
7. Place the regulator handle on the splined shaft, and slowly crank the glass down into the channel. Push the upper portion of the channel firmly into the window opening until it seats.
8. Install the two hexbolts attaching the channel to the lower portion of the inner door panel; don't fully tighten them at this time. **See Fig. 3.**

   Install and tighten the six screws in the upper channel seal. **See Fig. 2.** The screw heads must not stick out into the channel. Fully tighten the regulator screws, then tighten the two channel hexbolts 18 N·m (13 lbf·ft).

NOTE: Roll the window up and down a couple of times before fully tightening the channel screws and window regulator screws. This will help to align the window in the tracks.

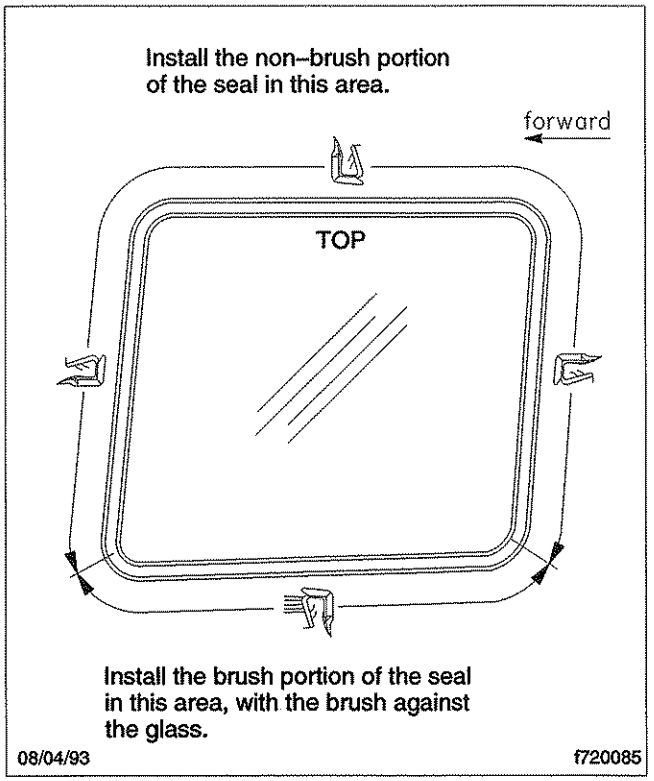


Fig. 5

Roll-Up Window Removal and Installation

9. Install the inner door handle assembly, window regulator handle, door trim panel assembly, and the door moulding and door moulding seal; **refer to Subject 130.**

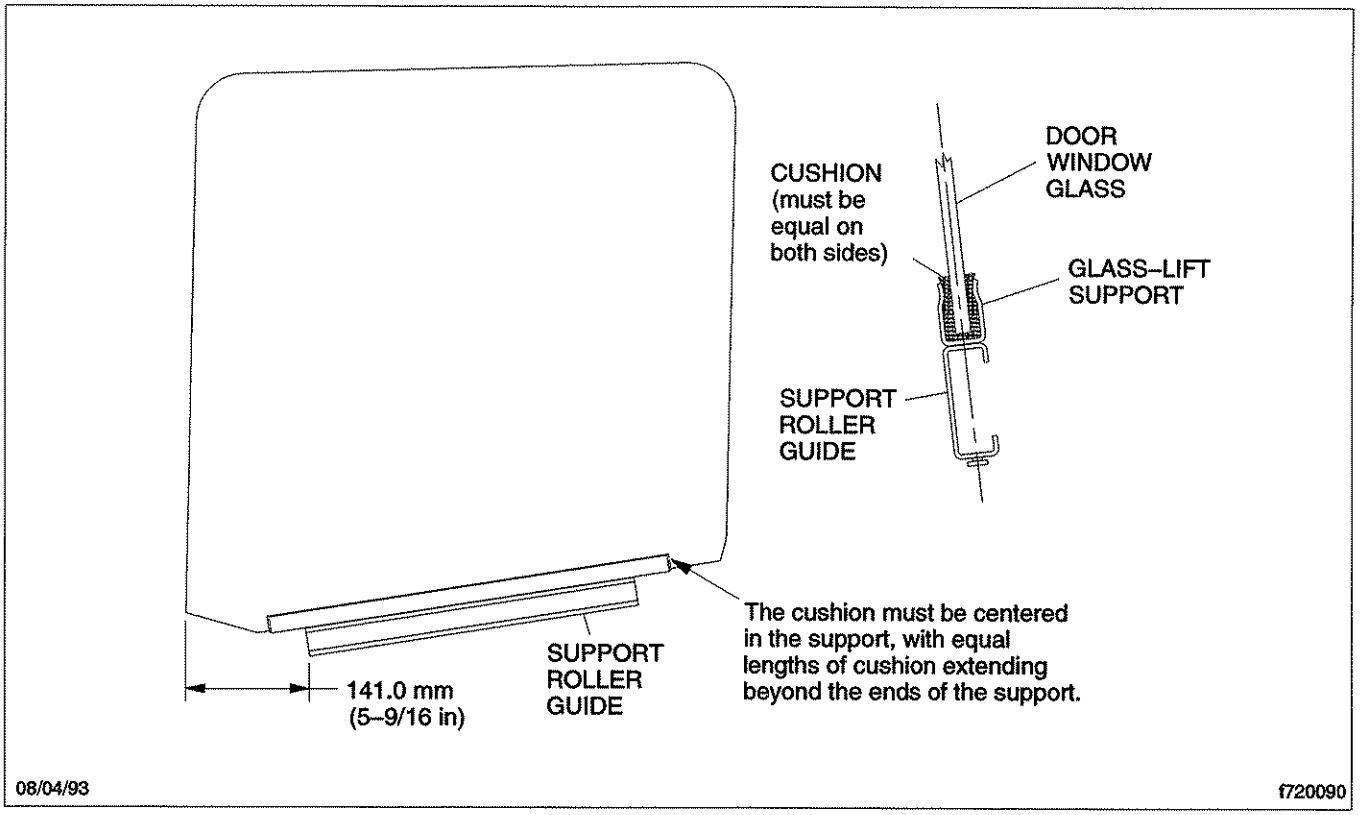


Fig. 6

Roll-Up Window Removal and Installation

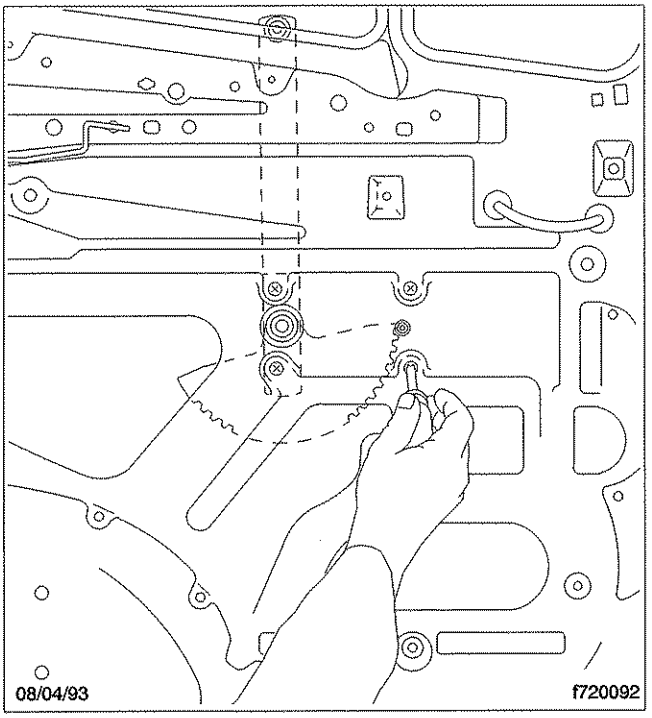
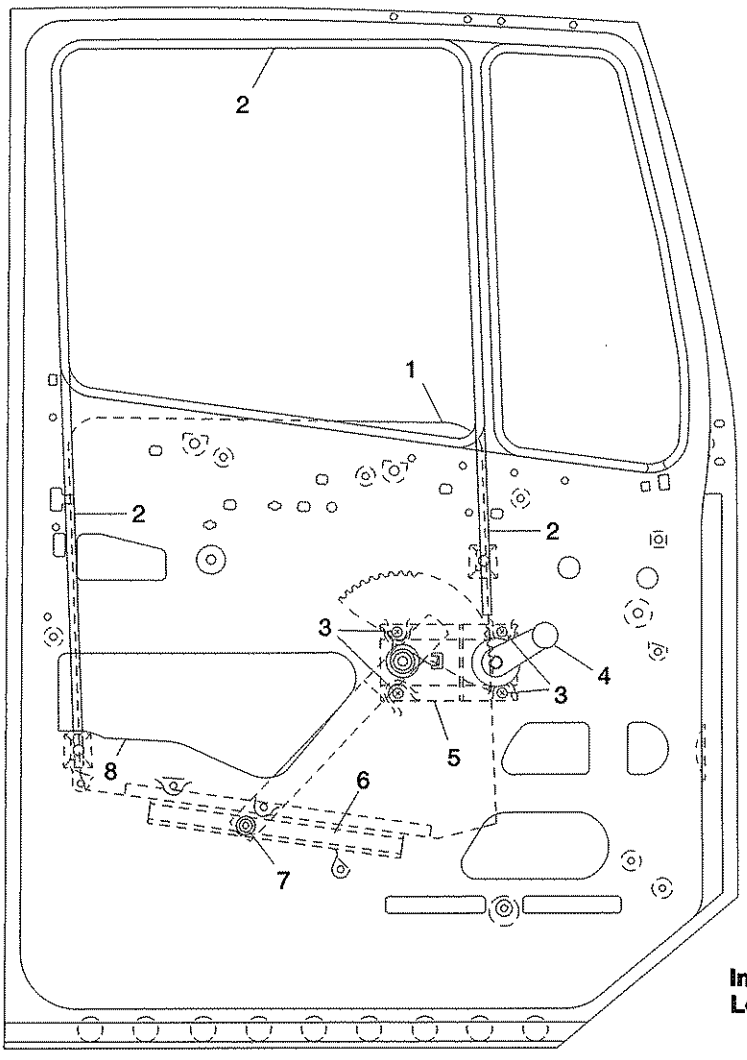


Fig. 7

Window Regulator Replacement

Regulator Replacement (Refer to Fig. 1)

1. Remove the roll-up window; **refer to Subject 150.**
2. Leave the regulator roller arm in a vertical position. Remove the four screws that attach the window regulator to the inner door panel. Remove the window regulator.
3. Lubricate the roller of the new window regulator.
4. Place the regulator roller arm in a vertical position, and align the regulator with the screw holes in the inner door panel while installing the four screws. Don't fully tighten the screws at this time.
5. Install the roll-up window; **refer to Subject 150.**



1. Roll–Up Window
2. Window–Glass Channel Assembly
3. Regulator Assembly Mounting Screws
4. Window Regulator Crank Arm
5. Sector–Gear–and–Arm Window Regulator Assembly
6. Glass Lift–Support and Roller Guide
7. Regulator Roller
8. Door Panel Opening (Access Hole)

NOTE: Interior door trim panel, inner door handle assembly, and door moulding are not shown.

Inside View of Left–Hand Door

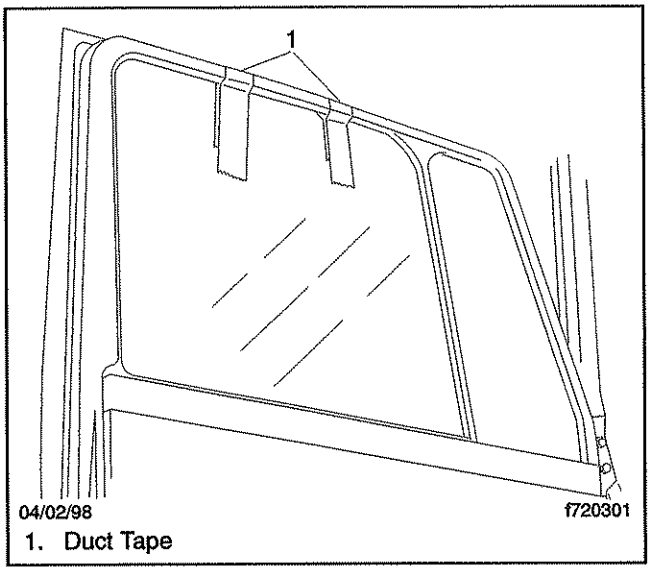
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Fig. 1

Power Window Regulator Replacement

Regulator Replacement

1. Secure the closed window to the top of the door frame using several pieces of duct tape. See **Fig. 1**.
2. Remove the inner door handle.
   - 2.1 Using a small hook, remove the door handle plug from the door handle. See **Fig. 2**.
   - 2.2 Remove the three screws that attach the door handle to the door.
   - 2.3 Mark the cable assemblies and switches in the door handle for assembly reference.
   - 2.4 Disconnect the cable assemblies from the door handle, and remove the door handle.
3. Pull straight out on the door-lock actuator and actuator guide to free the door-lock link lever from the pin on the inner door-latch plate. See **Fig. 3**.
4. Remove the inner door trim panel.
   - 4.1 Gently insert a straight-blade screwdriver under a corner of the door trim panel, and lift the panel to pull the first quarter-turn fastener out of the door. See **Fig. 4**. Use care not to damage the door trim panel.
   - 4.2 Working around the edge of the panel, pull out each of the quarter-turn fasteners one at a time. If any of the quarter-turn fasteners are damaged, replace them by inserting the head of the new fastener in the



1. Duct Tape

Fig. 1, Window Secured to Door Frame

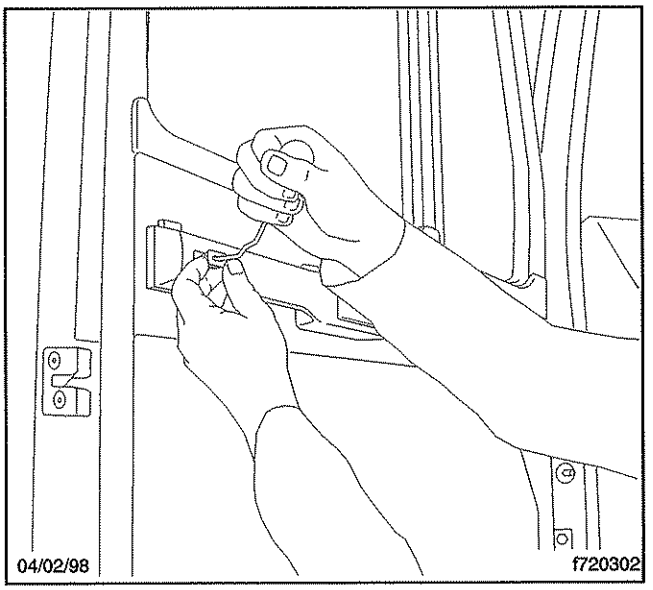
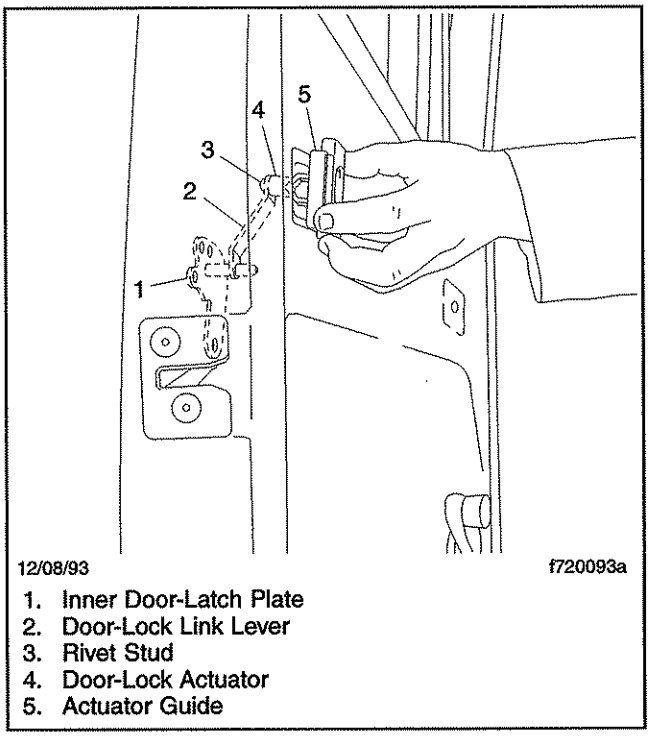


Fig. 2, Removing the Door Handle Plug



1. Inner Door-Latch Plate
2. Door-Lock Link Lever
3. Rivet Stud
4. Door-Lock Actuator
5. Actuator Guide

Fig. 3, Removing the Door-Lock Actuator

Power Window Regulator Replacement

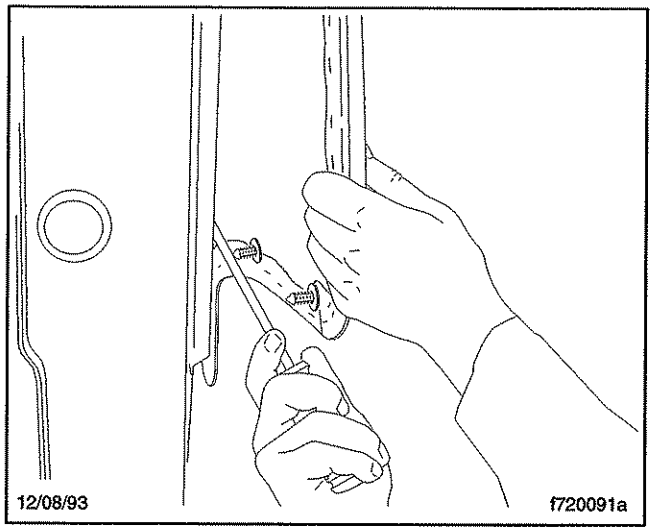


Fig. 4, Removing the Door Trim Panel

backing-board hole, and twist it a quarter turn.

5. Remove the door moulding.

   5.1 Remove the four screws and flatwashers that attach the door moulding to the door. See **Fig. 5**.

   5.2 Remove the door moulding as shown in **Fig. 6**. To prevent damaging the two positioning tabs, turn the rear of the moulding slightly downward, and the front slightly upward, while sliding it forward and off the door.

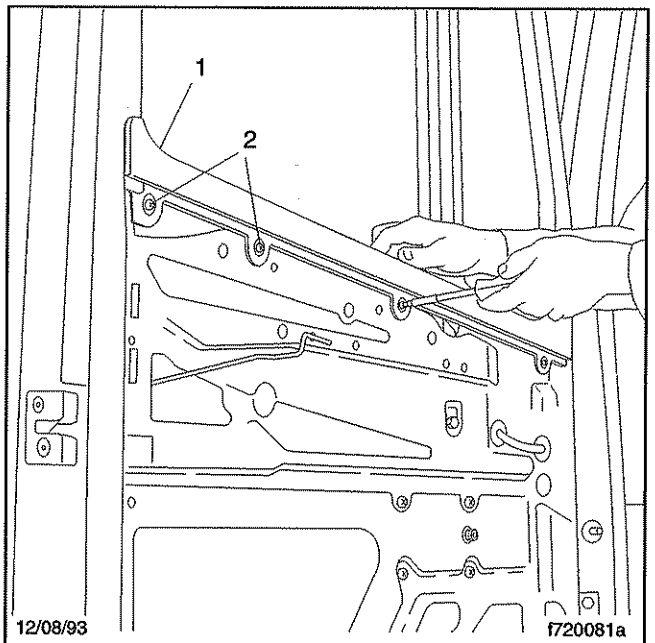
6. Peel the plastic covering off of the access cutout at the rear of the door. See **Fig. 7**.

7. Remove the regulator.

   7.1 Remove the four screws that attach the regulator to the door. See **Fig. 7**.

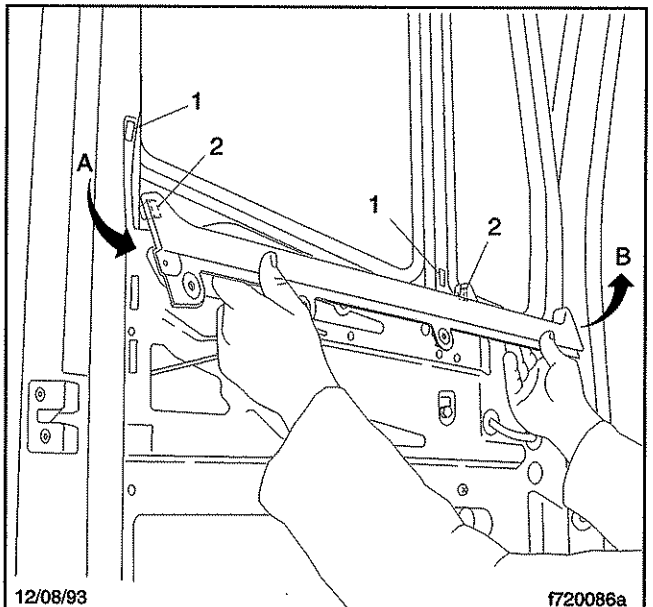
   7.2 Remove the plastic fasteners that attach the lower edge of the window to the channel bracket. See **Fig. 8**. Pull the channel bracket and the cushion inside the channel bracket off the window.

   7.3 Pull the channel bracket up until the bracket at the top of the regulator is above the lower window frame. Remove the two screws that attach the regulator bracket to the channel bracket. See **Fig. 8**.



1. Door Moulding
2. Screws and Flatwashers

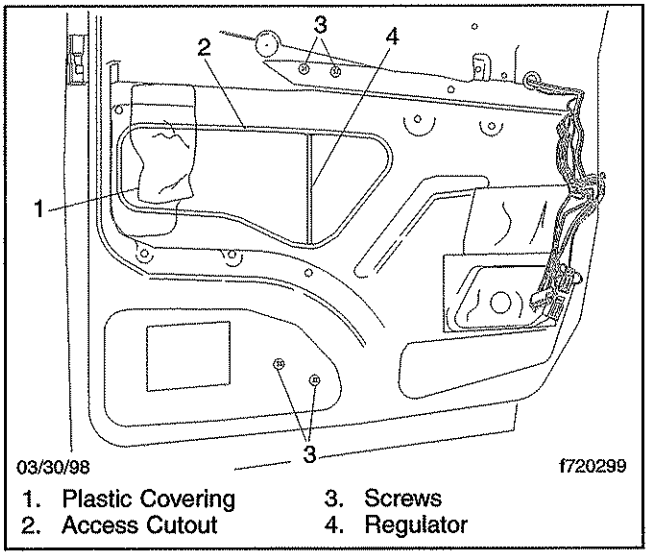
Fig. 5, Door Moulding



A. Move this end forward and down.
B. Move this end forward and up.
1. Positioning Slot 2. Positioning Tab

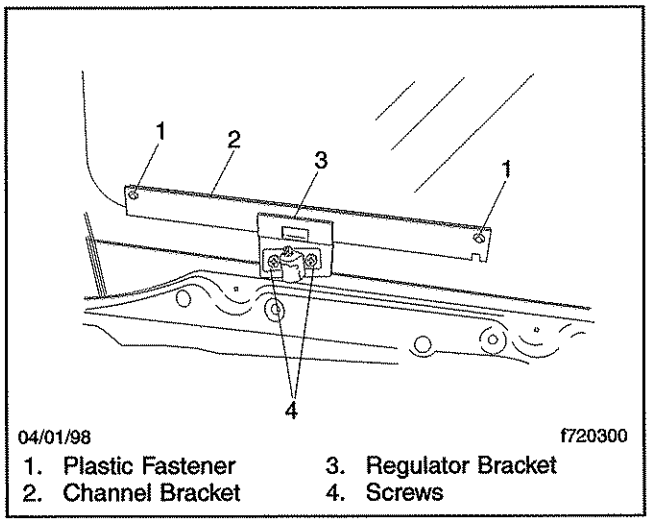
Fig. 6, Removing the Door Moulding

Power Window Regulator Replacement



1. Plastic Covering
2. Access Cutout
3. Screws
4. Regulator

Fig. 7, Rear Access Cutout



1. Plastic Fastener
2. Channel Bracket
3. Regulator Bracket
4. Screws

Fig. 8, Channel Bracket

7.4 Pull the regulator up until you are able to disconnect the cable assembly from the regulator. Disconnect the cable assembly and remove the regulator.

8. Install the new regulator.

8.1 Place the new regulator inside the door through the access cutout, and attach the cable assembly to the regulator.

8.2 Attach the bracket at the top of the regulator to the channel bracket using two screws. Tighten the screws 30 to 35 lbf·in (339 to 395 N·cm).

8.3 Place the cushion along the lower edge of the window; then place the channel bracket over the cushion. Attach the channel bracket to the window using plastic fasteners.

8.4 Attach the upper bracket of the regulator to the door using two screws. Tighten the screws 30 to 35 lbf·in (339 to 395 N·cm).

8.5 Attach the lower bracket of the regulator to the door using two screws. Tighten the screws 30 to 35 lbf·in (339 to 395 N·cm).

9. Press the plastic coverings back over the access cutout on the inner door.

10. Install the door moulding.

10.1 Attach the door moulding to the door. To prevent damaging the two positioning tabs, turn the rear of the moulding upward, and the front slightly downward while sliding it backward and on to the door.

10.2 Install and tighten the four flatwashers and screws that attach the door moulding to the door.

11. Feed the cable assemblies through the hole in the upper, right portion of the door trim panel.

12. Attach the door trim panel to the door only at the top of the panel.

13. Connect the cable assemblies to the switches in the door handle.

14. Install the door handle.

14.1 Install the screws in the two holes toward the front of the door handle. Tighten the screws 30 to 35 lbf·in (339 to 395 N·cm).

14.2 Install the door-lock actuator and actuator guide by placing the door-lock link lever over the pin on the inner door-latch plate. See **Fig. 3**. Hold the door-lock actuator and actuator guide in place while installing the third screw in the door handle. Tighten the screw 30 to 35 lbf·in (339 to 395 N·cm).

14.3 Press the door handle plug in to the door handle.

Power Window Regulator Replacement

15. Attach the sides and lower portion of the door trim panel to the door by pushing in each of the fasteners one at a time.

Specifications

Description	Grade	Size	Torque N·m (lbf·ft)
Door Latch Striker Pin	—	M12	61 (45)
Hinge to Door-Opening-Frame Bolt	10.9	M10	46 (34)
Hinge to Door Bolt	8.8	M8	18 (13)
Window-Channel to Inner-Door-Panel Bolt	8.8	M8	18 (13)

Table 1, Fastener Torques