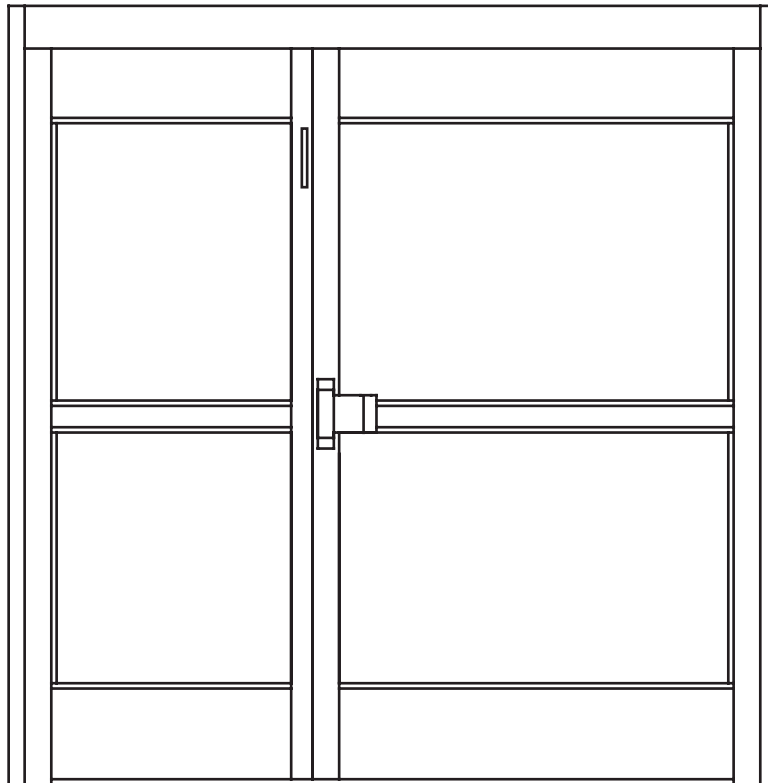




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## Model GT 2300 ICU Manual Swing Door Unequal Panels - Smoke Rated



DN 0451

### **WARNING**

- Turn OFF all power to the Automatic Door if a Safety System is not working.
- Instruct the Owner to keep all power turned OFF until corrective action can be achieved by a NABCO trained technician. Failure to follow these practices may result in serious consequences.
- NEVER leave a Door operating without all Safety detection systems operational.

Part #15-13913  
Rev. 4/10/13

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## WARNING LABELS

Warning labels are universal and used to alert an individual of potential harm to one's self or to others. The following warning labels are listed in a hierarchy order that defines the most potential danger first, and the least potential danger last. Please refer to this page in the event that a warning label is displayed within this manual and further definition needs to be explained.

**DANGER**

Indicates potentially dangerous situations. Danger is used when there is a hazardous situation where there is a *high* probability of severe injury or death. It should not be considered for property damage unless personal injury risk is present.

**WARNING**

Indicates a hazardous situation which has *some* probability of severe injury. It should not be considered for property damage unless personal injury risk is present.

**CAUTION**

Indicates a hazardous situation which *may result in a minor injury*. Caution should not be used when there is a possibility of serious injury. Caution should not be considered for property damage accidents unless a personal injury risk is present.

**Notice:** Indicates a statement of company policy as the message relates to the personal safety or protection of property. Notice should not be used when there is a hazardous situation or personal risk.

*Note:* Indicates important information that provides further instruction.

## GENERAL SAFETY RECOMMENDATIONS

### WARNING

Do Not install or service this product unless Safety Practices, Warning Labels, Installation Instructions, and Operating Instructions, have been read and fully understood. Failure to so do may result in bodily injury or property damage.

### CAUTION

Handle Glass With Care!!! Use caution when moving and installing the glass panels. These panels are designed to be assembled with tempered glass. Any sharp objects that come in contact with glass may cause the glass to shatter. NABCO Entrances is not responsible for glass that is broken during the installation of this Unit.

**Notice:** Read, study and understand the operating instructions contained in, or referenced in this manual before operating. If you do not understand the instruction, ask the installing qualified technician to teach you how to use the door.

**Notice:** This manual and the owner's manual must be given to and retained by the purchasing facility or end user.

**Notice:** Advise the purchasing facility or end user to make regular safety checks and all other duties that may apply.

- ▶ If the door appears broken or does not seem to work correctly, it should be immediately removed from service until repairs can be carried out or a qualified service technician is contacted for corrective action.
- ▶ It is the responsibility of the purchasing facility or end user to keep warning and instructional labels and literature legible, intact and with the door. Replacement labels and literature may be obtained from local NABCO Entrances, Inc. distributors. If the name of the local distributor is unknown, contact NABCO Entrances, Inc. at 1-877-622-2694 for assistance.
- ▶ Do Not take shortcuts.
- ▶ Ensure that all safety devices provided by the manufacturer work as intended.
- ▶ Ensure that all safety decals are properly displayed on any/all swing doors.

## CHAPTER 1: SCOPE

### Section 1a: To the Installer

The purpose of this manual is to familiarize the installer and purchaser with the proper installation and operation of this system. It is essential that this equipment be properly installed and operational before the door is used by the public. It is the installer's responsibility to inspect the operation of the entrance system to be sure it complies with any applicable standards.

In the United States, the GT-2300 ICU Swing door is certified to have a Smoke and Air Infiltration NFPA-105 rating (for sprinklered buildings).

Instruct the building owners and operator on the essentials of the operation of the door and this device. The owner should follow these instructions to determine whether the door is operating properly and should immediately call for service if there is any malfunction. All installation changes and adjustments must be made by qualified, NABCO trained technicians.

### Section 1b: Objective

The GT-2300 is designed to be installed in the frame of a door opening. The door function is controlled manually. Adhesive gaskets plus a continuous hinge help to provide smoke and air infiltration at ambient temperature. Two unequal door panels allow maximum CDO width, and incorporate NABCO's sturdy tie rod construction (accommodating 1/4 inch to 1 inch thick glass). A low profile Header allows greater CDO height in a low ceiling/frame height application.

This manual offers step by step instructions.

## CHAPTER 2: GETTING STARTED

### Section 2a: Materials Specifications

List of Materials	
▶ Tape Measure	▶ Power Drill
▶ Pencil	▶ 5/8 and 3/4 inch Drill Bit
▶ Assorted Phillips Head Screw Drivers	▶ Chalk
▶ Level	▶ 3/32 inch Allen Wrench
▶ Plumb	▶ Shims

### Section 2b: Standard Swing Door Configurations

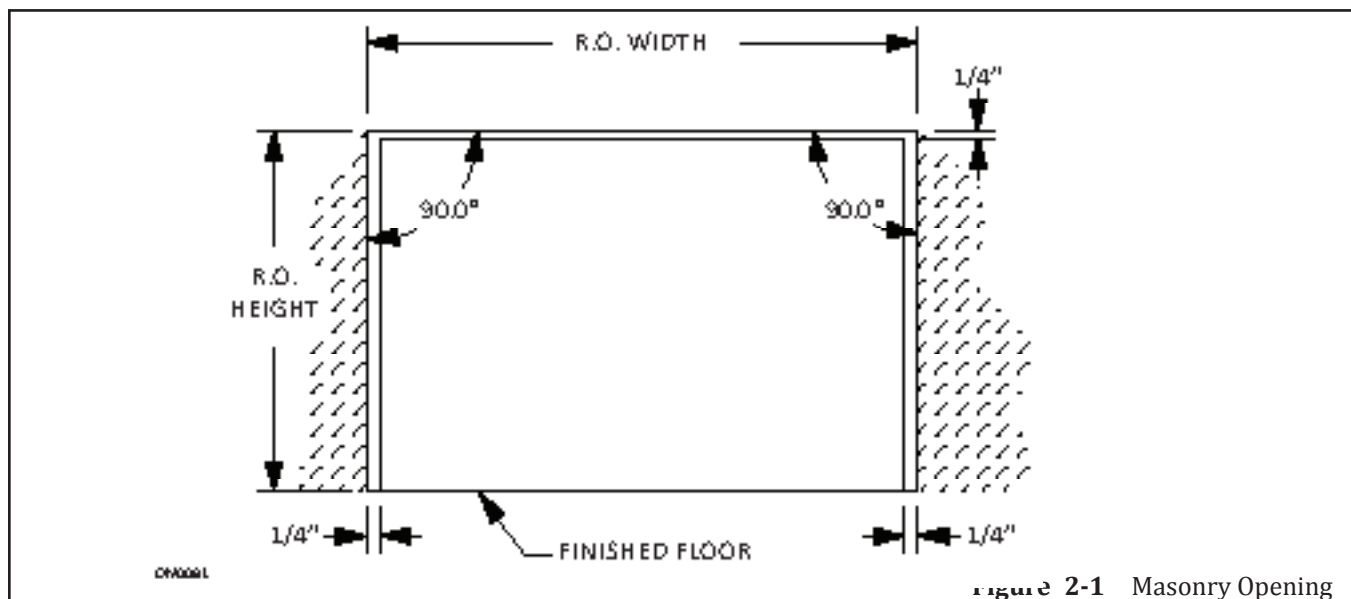
*Note:* Optional width of an Inactive Panel can be minimum 12 inches to maximum 48 inches.

*Note:* Optional width of an Active Panel can be minimum 24 inches to maximum 48 inches.

Rough Opening	Inactive Panel	Active Panel	Swing Opening
5 feet 3 inches	24 inches	36 inches	55 - 1/2 inches
5 feet 9 inches	24 inches	42 inches	61 - 1/2 inches
6 feet 3-1/2 inches	24 inches	48 inches	67 - 1/2 inches

### Section 2c: Prepare the Rough Opening

- Ensure the Rough Opening is the correct size. Please see Figure 2-1.
  - ▶ The width of the Rough Opening should equal:  
**PACKAGE WIDTH + 1/4 INCH ON EACH SIDE**
  - ▶ The height of the Rough Opening should equal:  
**PACKAGE HEIGHT + 1/4 INCH**

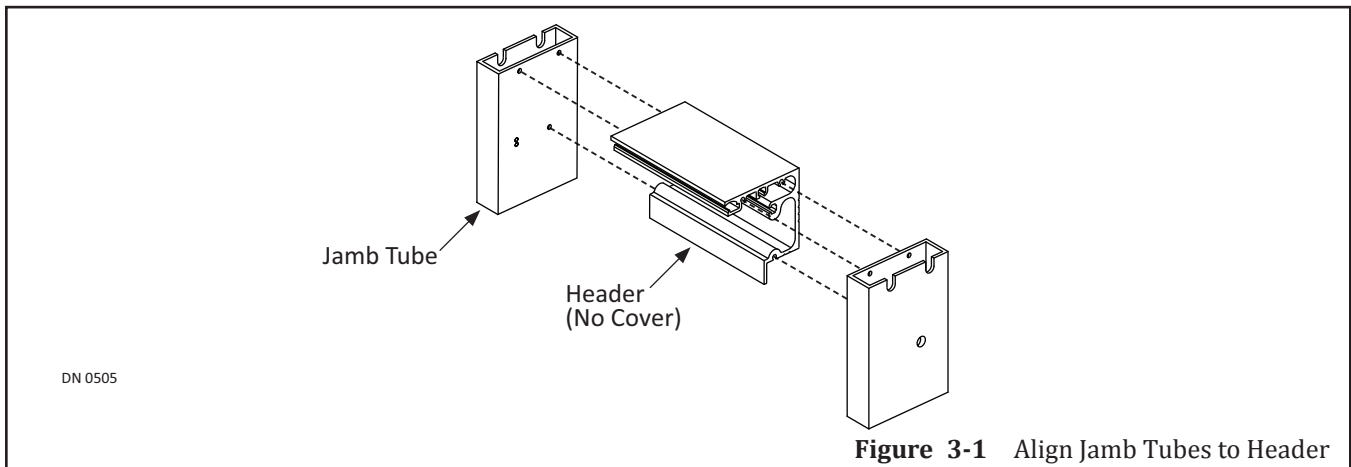


## CHAPTER 3: INSTALL HEADER/FRAME ASSEMBLY

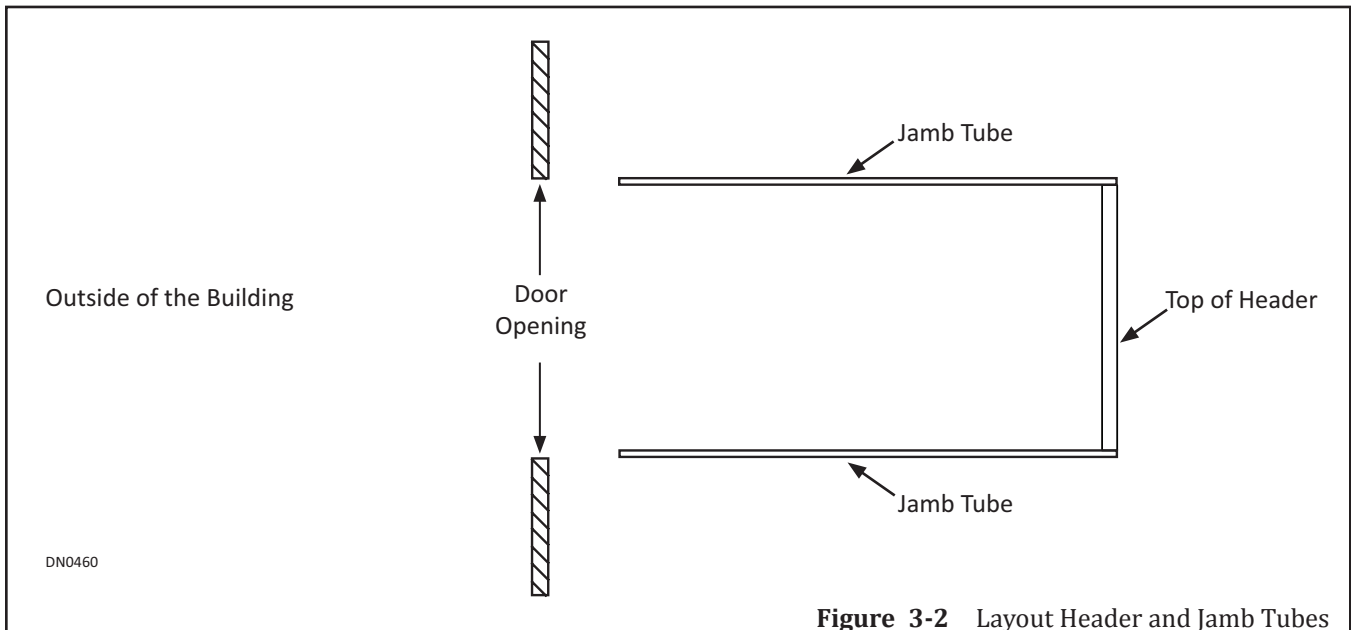
### Section 3a: Install Header to Jamb Tubes

*Note: Jamb Tubes have been pre-drilled at the NABCO factory for proper Header installation.*

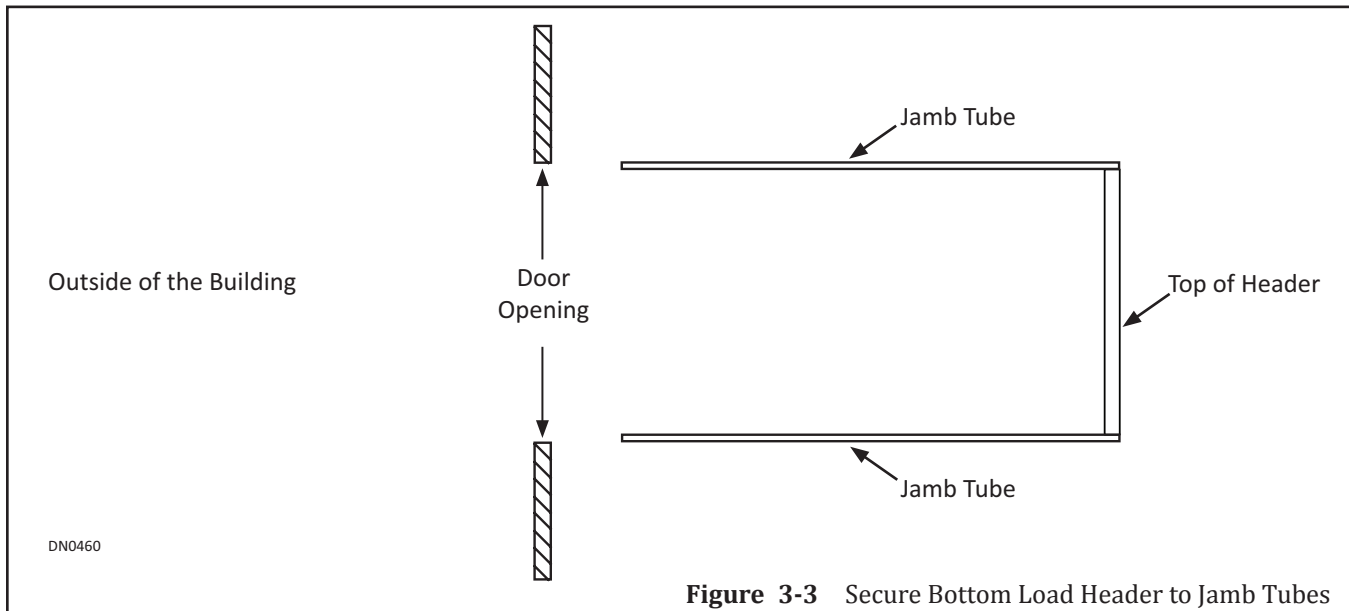
1. Remove from Carton:
  - ▶ Header
  - ▶ Jamb Tubes
2. Align predrilled screw holes located on the inside face of each Jamb tube to both sides of the Header. Please see Figure 3-1.



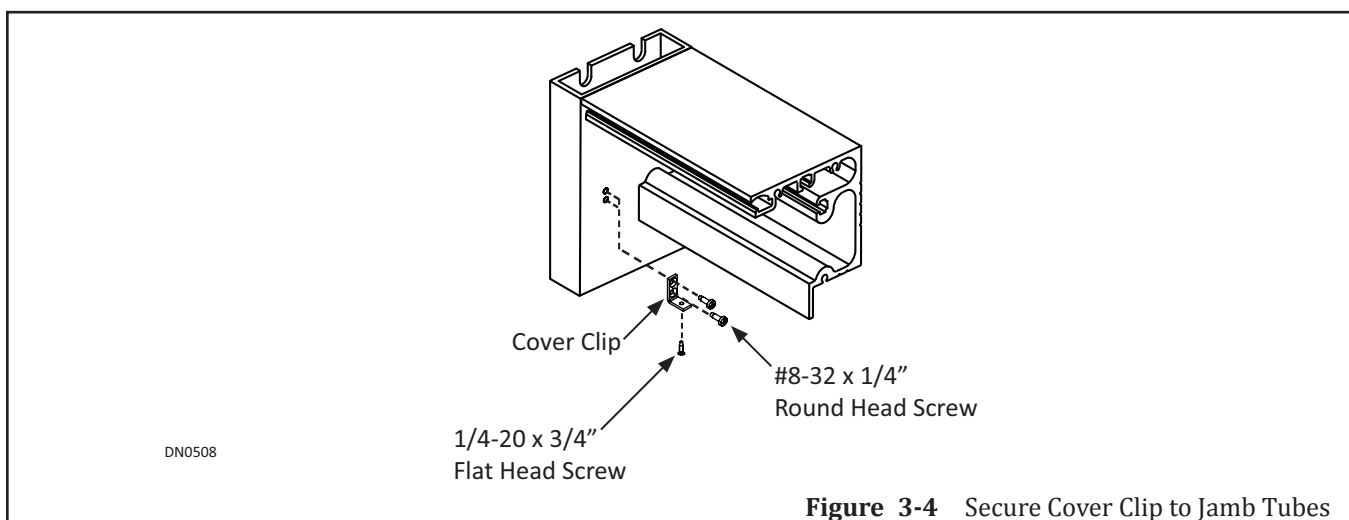
3. Orientate the frame in relation to the outside of building. Please see Figure 3-2.



4. Obtain Parts bag 12-11019 provided within Header. The following should be provided:
  - ▶ (6) 1/4-20 x 3/4 inch Large Phillips Head Screws
  - ▶ (2) L-Shaped Brackets
  - ▶ (4) 1/4-20 x 3/4 inch Phillips Flat Head Screws
  - ▶ (2) #8-32 x 1/4" Round Head Screws
5. Secure Header to both Jamb Tubes with (6) 1/4-20 x 3/4 inch Large Philips Head Screws by inserting screws through Access Holes located on outside face of Jambs. Please see Figure 3-3.

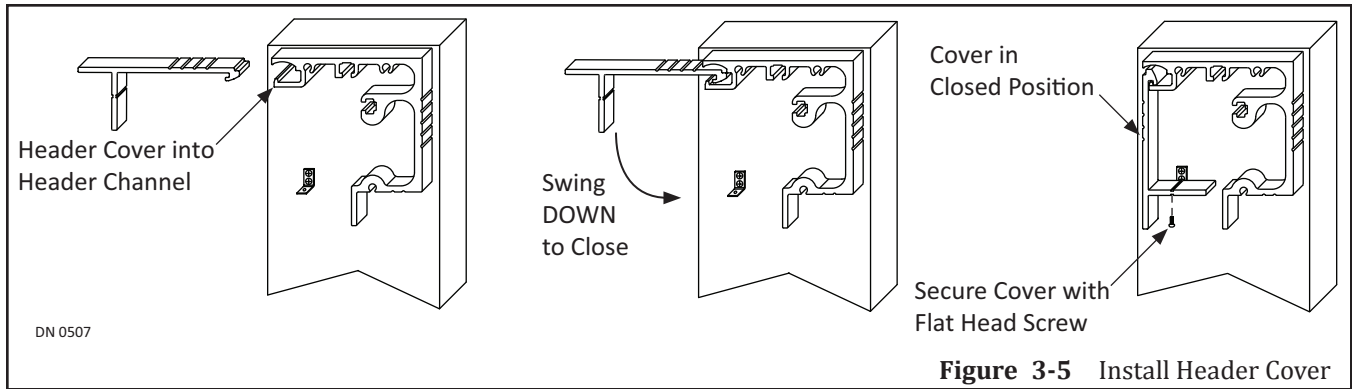


6. Secure (1) Cover Clip to each Jamb Tube with (4) 1/4-20 x 3/4 inch Flat Head Screws. Please see Figure 3-4.



7. Insert Cover into the Header Channel, swing down to close, and secure Cover to each Cover Clip with (2) Round Head Screws. Please see Figure 3-5.

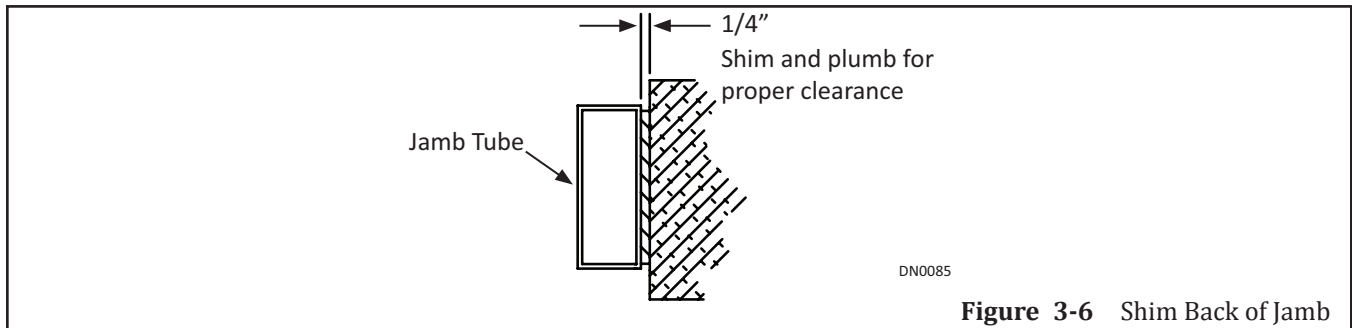




**Figure 3-5** Install Header Cover

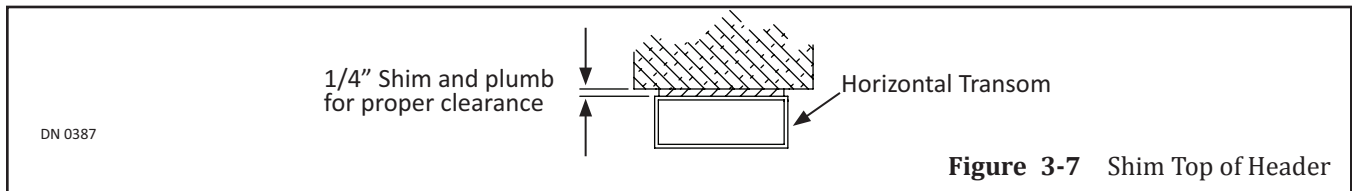
### Section 3b: Install Frame Assembly to Building

1. Lift to position the assembled Frame into the rough opening.
2. Plumb Jamb tubes in both planes to ensure the rough opening allows a 1/4 inch clearance. Please see Figure 3-6.
  - a. Shim back of Jamb as required.



**Figure 3-6** Shim Back of Jamb

3. Plumb the Header at the top to ensure the rough opening allows a 1/4 inch clearance. Please see Figure 3-7.
  - a. Shim top of Header as required.



**Figure 3-7** Shim Top of Header

*Note: It is recommended to countersink holes as required to flush the surface.*

*Note: It is recommended to drill tap threads for anchors in a steel or aluminum structure.*

*Note: If anchor points in structure are known, the aluminum door framing can be pre drilled prior to installing into the opening.*

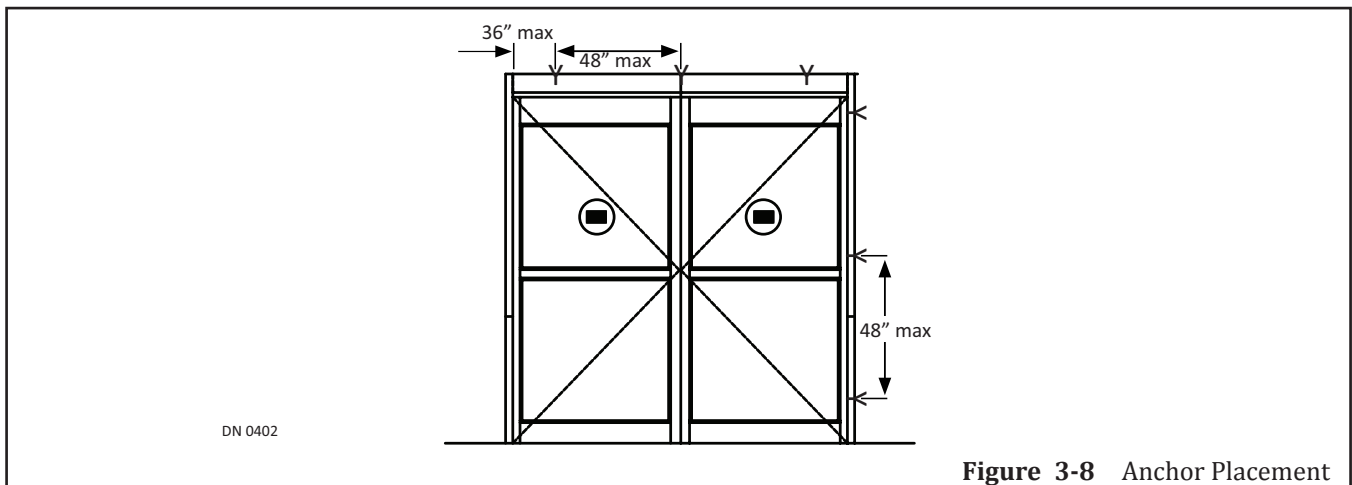
*Note: To prevent Header sag, secure the Header in the middle to the top horizontal structural member of the opening. Use of 3/8 inch threaded rod or 1/4 inch bolts are acceptable methods of supporting the center of the header.*

**3.b.a: Anchor Placement for Header**

Use 1/4 inch diameter anchors or 3/8 inch threaded rods, with a maximum 48 inches on center. First anchor maximum is 36 inches from each end of the Header. Anchors and Fasteners must be appropriate for the type of structure being fastened into. Anchors and Fasteners are not provided by NABCO. Please see Figure 3-8 and Figure 3-9.

**3.b.b: Anchor Placement for Slick Jamb**

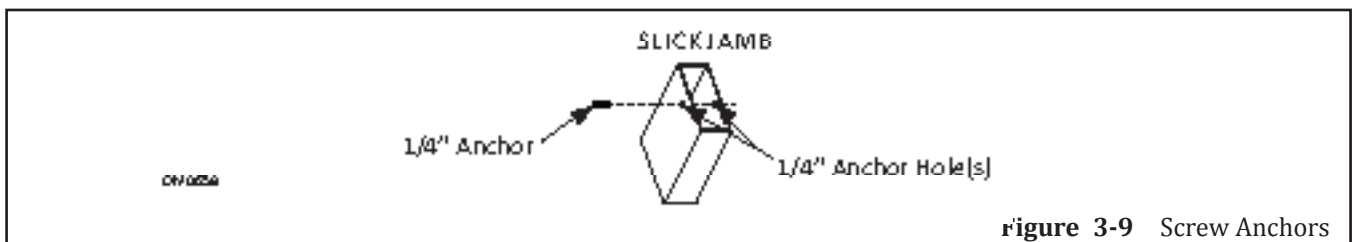
Use 1/4 inch diameter anchors with a minimum of 3 per Jamb tube, maximum is 48 inches on center. Drill 1/4 inch diameter holes in the face of Jamb and then countersink each hole. Anchors and Fasteners must be appropriate for the type of structure being fastened into. Anchors and Fasteners are not provided by NABCO. Please see Figure 3-8 and Figure 3-9.



4. Screw in fasteners to secure the Frame.

*Note: Do not overtighten anchors to prevent deforming Jamb tubes.*

*Note: Ensure anchor heads to not come in contact with edges of glass to prevent breakage.*



## CHAPTER 4: INSTALL THE SWING DOORS

The GT-2300 ICU Manual Swing door System can be ordered with Swing doors of equal width (Optional) or Swing doors of unequal width (Standard). For Swing doors of unequal width, the wider Swing door is the main means of egress and identified as the Active Panel. The narrow Swing door is used to provide additional egress for moving larger objects through the door opening. The narrow Swing door is identified as the Inactive Panel because it is normally fixed.

Remove from Carton:

- ▶ (2) Swing Doors
- ▶ Push Paddle
- ▶ Entry Trim with Handle
- ▶ Strike Plate Assembly
- ▶ Hardware
- ▶ Weathering Seal

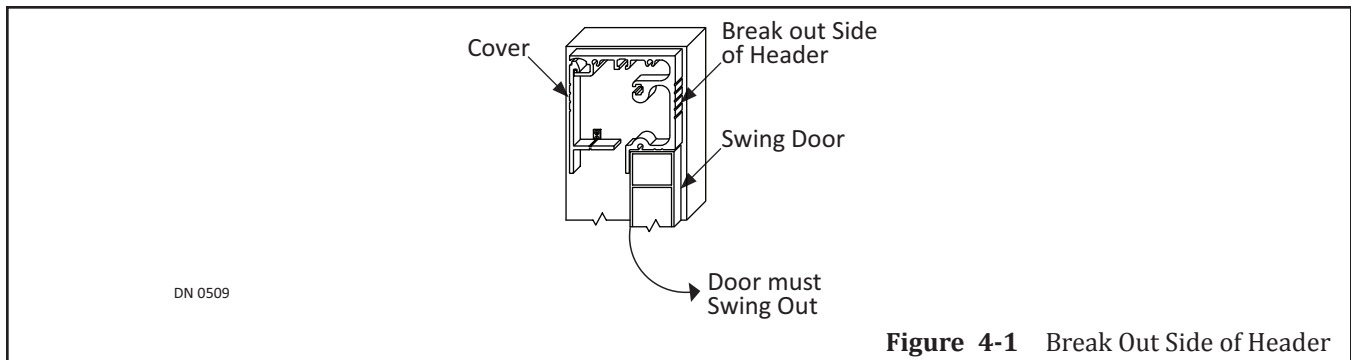
The GT-2300 ICU Manual Swing door System has been shipped with the following support equipment pre-installed at the NABCO factory:

- ▶ Continuous Hinge
  - Listed for fire applications up to 90 minutes without special preparation.
- ▶ Silicone Smoke and Draft Control Gaskets
  - Horizontally on Header, exterior of roller track.
  - Vertically between Swing door Panels and Jamb Tubes.
- ▶ Concealed Vertical Rod Mechanism
  - Used to lock the Active Swing door into position.
- ▶ Flush Bolt
  - Used to lock the Inactive Swing door into position.

### Section 4a: Secure Swing Doors to Jamb Tubes

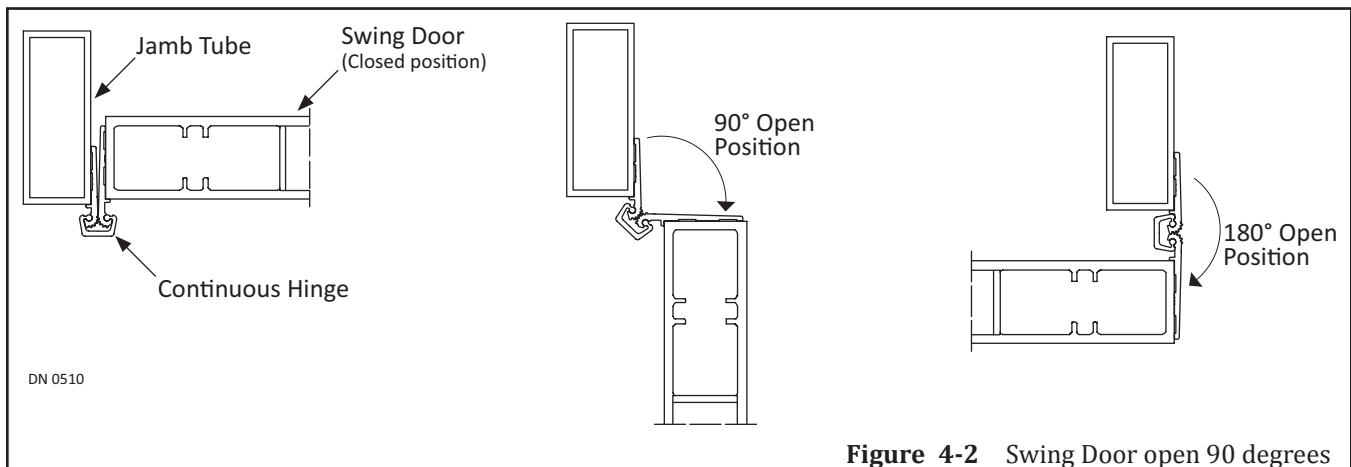
*Note: Do Not cut Continuous Hinge from the top end. Resize Continuous Hinge at bottom end only.*

1. Obtain approximately (40) #12-24 x 7/16 inch thread forming screws provided by NABCO.
2. Place Swing door directly underneath the Break Out side of Header. Please see Figure 4-1.
  - a. Ensure Swing door swings out in right direction.
  - b. If Continuous Hinge is too long, cut it shorter at the bottom only. Fill the gap with foam.



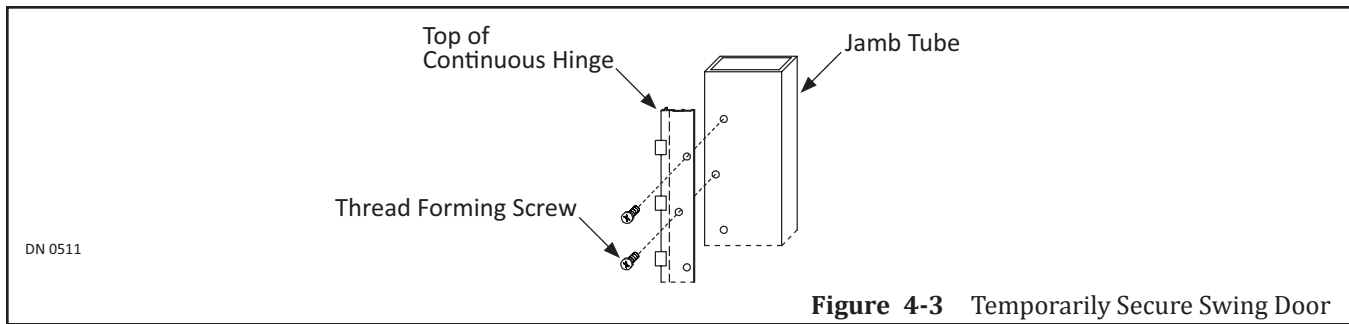
**Figure 4-1** Break Out Side of Header

3. Ensure the Swing door is square and the Continuous Hinge is properly aligned against the Jamb tube.
  - a. It is recommended to use a level.
4. Keep Continuous Hinge flush against Jamb tube while swinging out the door 90 degrees. Please see Figure 4-2.
  - a. It is recommended to prop bottom of door with shims so door will stay square and the Continuous Hinge will stay flush against the Jamb Tube.



**Figure 4-2** Swing Door open 90 degrees

5. Ensure the Continuous Hinge and Swing door are still square.
  - a. It is recommended to use a level.
6. Locate the (2) upper most, predrilled screw holes on the Continuous Hinge at the very top of Swing door.
7. Mark screw holes onto face of Jamb Tube.
8. Carefully place Swing door onto flat surface.
9. Drill (2) #16 (0.177) screw holes onto face of Jamb Tube.
10. Obtain Swing door.
11. Align (2) upper most, predrilled screw holes on the Continuous Hinge with drilled screw holes on face of Jamb tube. Please see Figure 4-3.

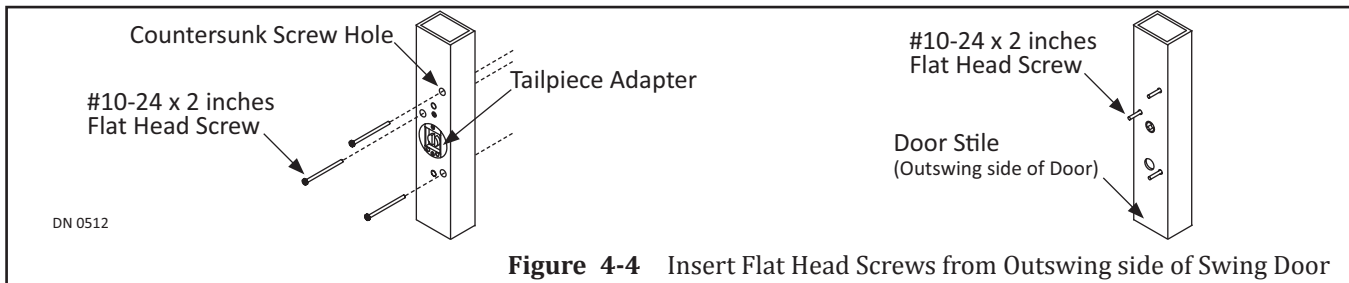


12. Temporarily secure the top of Continuous Hinge with (2) #12-24 x 7/16 inch thread forming screws. Do Not tighten down.
  - a. Screws must be removed at least one time before the Swing door installation is complete.
13. Plumb and Square the Swing door.
  - a. It is recommended to prop bottom of door with shims so door will stay square and the Continuous Hinge will stay flush against Jamb Tube.
14. Mark remaining screw holes onto the Jamb Tube.
15. Remove (2) #12-24 x 7/16 inch thread forming screws.
  - a. Save screws for reinstallation.
16. Carefully place the Swing door back onto a flat surface.
17. Drill remaining #16 (0.177) screw holes onto face of Jamb Tube.
18. Obtain Swing door.
19. Align all predrilled screw holes on the Continuous Hinge with drilled screw holes on face of Jamb tube.
20. Permanently secure the Continuous Hinge with #12-24 x 7/16 inch thread forming screws.
  - a. Do not overtighten screws to prevent deforming Continuous Hinge.
21. Repeat steps for second Swing door.

#### **Section 4b: Install Entry Trim with Curved Handle (Active Swing Door)**

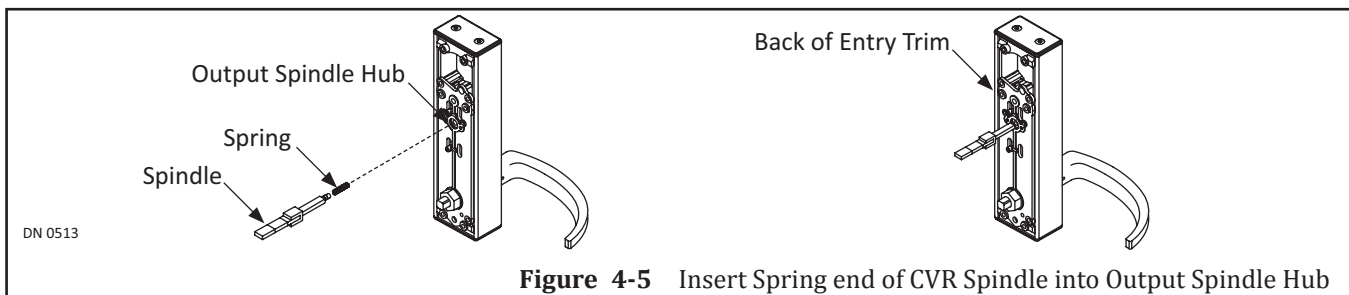
The Entry Trim is installed on the Outswing side of the Active Swing door. It is used to manually latch or unlatch the vertical rod (Same as Push Paddle). When unlocked and pulled the Active Swing door swings out into the corridor.

1. Obtain (1) Entry Trim, (4) #10-24 x 2 inch Flat Head Screws, (1) CVR Spindle, (1) Spring, (1) Handle, (2) Washers, (1) Hex Nut and Installation Instructions provided by NABCO.
2. Go to Inswing side of the Door. Insert (1) #10-24 x 2 inch Flat Head screw through each predrilled countersunk hole located above and below the Tailpiece Adapter. Please see Figure 4-4.
  - a. The inserted Flat Head screws will stick out through the Outswing side of door.



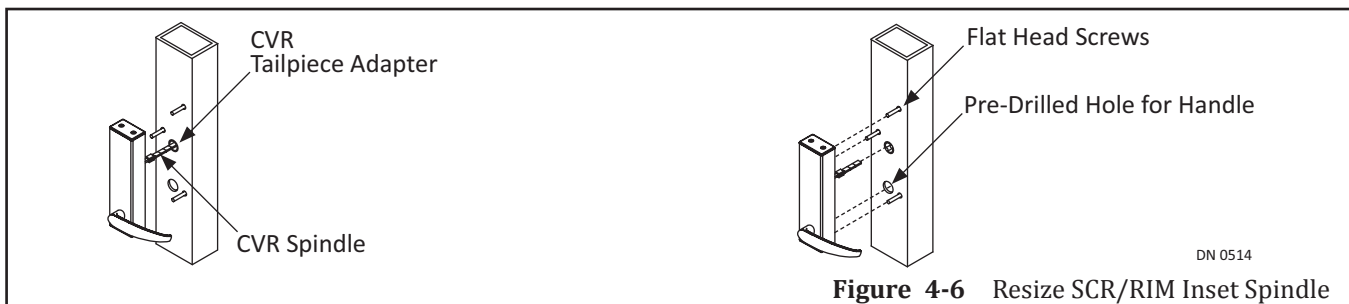
**Figure 4-4** Insert Flat Head Screws from Outswing side of Swing Door

3. Obtain the Entry Trim that was assembled at the NABCO Factory.
  - a. If Entry Trim was not shipped assembled, please refer to the Installation Instructions that were provided by NABCO.
4. Go to the back side of Entry Trim. Locate the Output Spindle Hub that can be found in the middle of the Entry Trim Plate. Please see Figure 4-5.
5. Obtain (1) CVR Spindle and (1) Spring.
  - a. The CVR Spindle was tested and cut according to the Swing door thickness at the NABCO Factory. There is no need to determine the correct CVR Spindle length.
6. Slide the Spring onto the round end of CVR Spindle, then inside the Output Spindle.



**Figure 4-5** Insert Spring end of CVR Spindle into Output Spindle Hub

7. Go to Outswing side of the door. Insert the flat metal end of the CVR Spindle into the CVR Tailpiece adapter. Please see Figure 4-6.
8. Slide the Entry Trim onto the (3) Flat Head screws until it is flush with the face of Stile.
  - a. If the Entry Trim can not be flush against the face of Stile, remove the CVR Spindle to cut off excess notches.



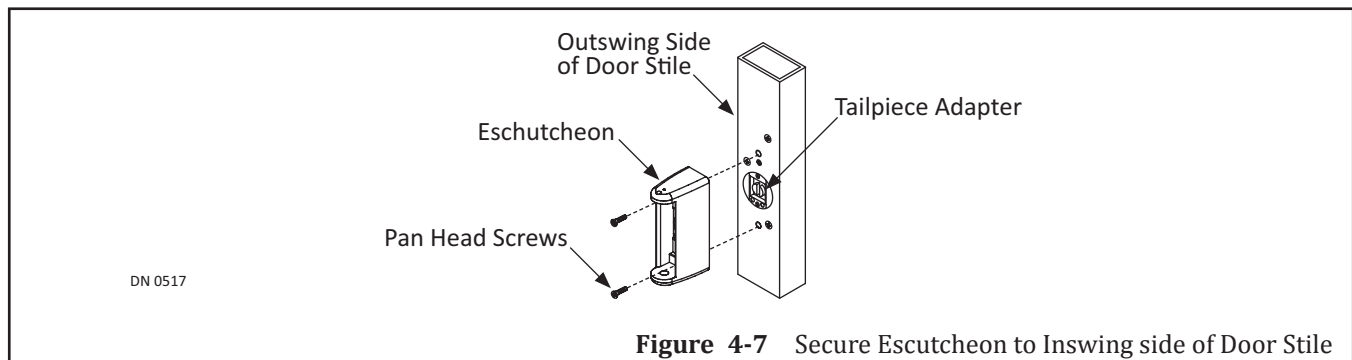
**Figure 4-6** Resize SCR/RIM Inset Spindle

9. Tighten (3) #10-24 x 2 inch Flat Head screws to secure the Entry Trim to the Stile.
  - a. Do not overtighten screws to prevent deforming of Stile.
10. Test the Door Handle to ensure the vertical rod turns clockwise/counter clockwise.

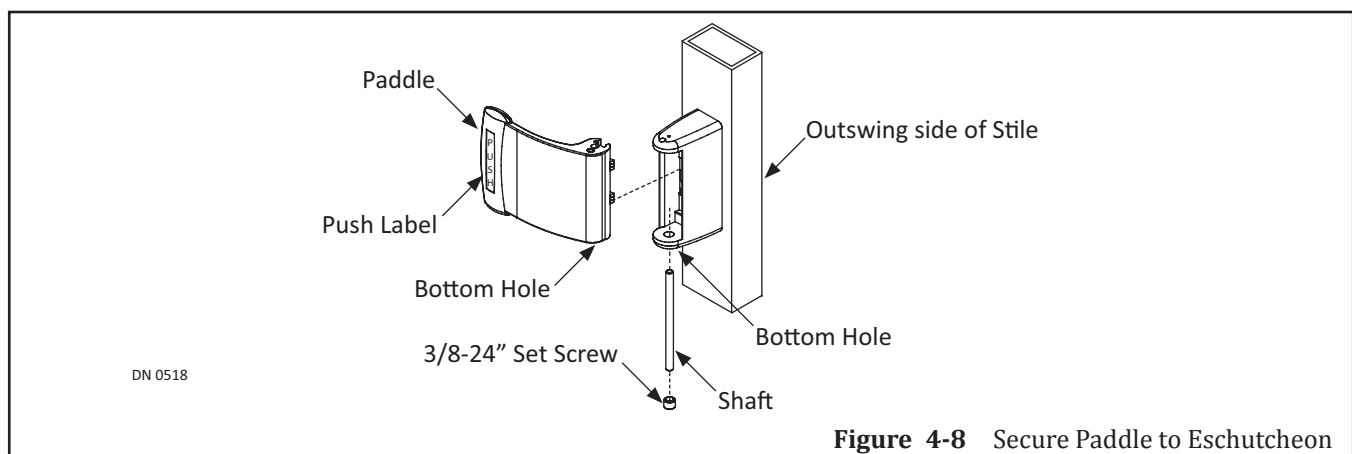
## Section 4c: Install the Push Paddle (Active Swing Door)

The Push Paddle is installed on the Inswing side of the Active Swing Door. It is used to manually latch or unlatch the vertical rod (Same as Handle). When unlocked and pushed, the Active Swing door swings out into the corridor.

1. Obtain (1) assembled Eschutcheon, (1) Push Paddle, (2) #10-24 x 1-1/2 inch Pan Head Screws, (1) Shaft, (1) 3/8-24 inch Set Screw, (1) Label, (1) Dogging Screw, and (1) Dogging Key provided by NABCO.
2. Obtain the Escutcheon and (2) #10-24 x 1-1/2 inch Pan Head screws.
3. Go to the Inswing side of Stile. Please see Figure 4-7.
4. Align (2) screw holes located inside the Escutcheon to (2) pre-drilled screw holes located on the face of Stile. Directly above and below the Tailpiece Adapter.
5. Secure the Escutcheon to the Stile with (2) #10-24 x 1-1/2 inch Pan Head screws.



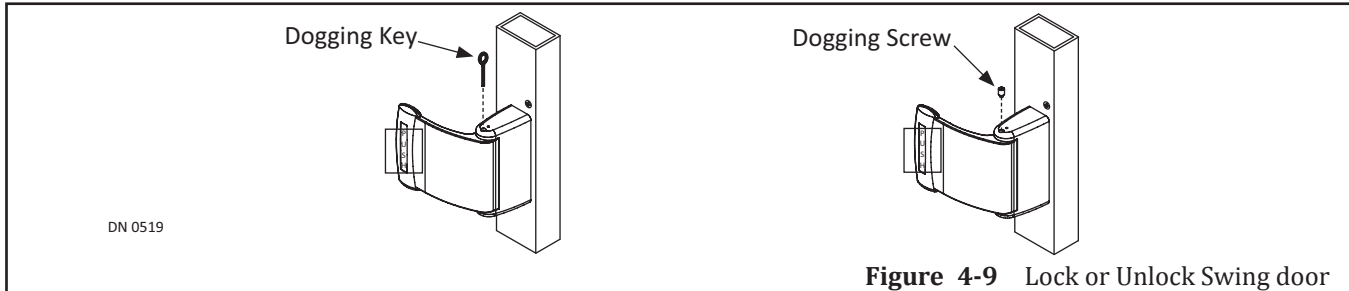
6. Obtain (1) Push Paddle, (1) Shaft, and (1) 3/8-24 inch Set screw.
7. Insert the hinge end of Push Paddle into the Eschutcheon until the bottom holes are aligned. Please see Figure 4-8.



8. Run (1) Shaft up into the aligned holes.
9. Insert (1) 3/8-24 inch Set Screw into the bottom of the Shaft. Tighten the Set Screw.
10. Adhere (1) Push label onto the Paddle.

#### 4.b.a: Dogging Key

A Dogging Key is used to lock or unlock the Push Paddle. If the Push Paddle is locked the Swing door is not allowed to open from the Inswing side of door. Please see Figure 4-9.

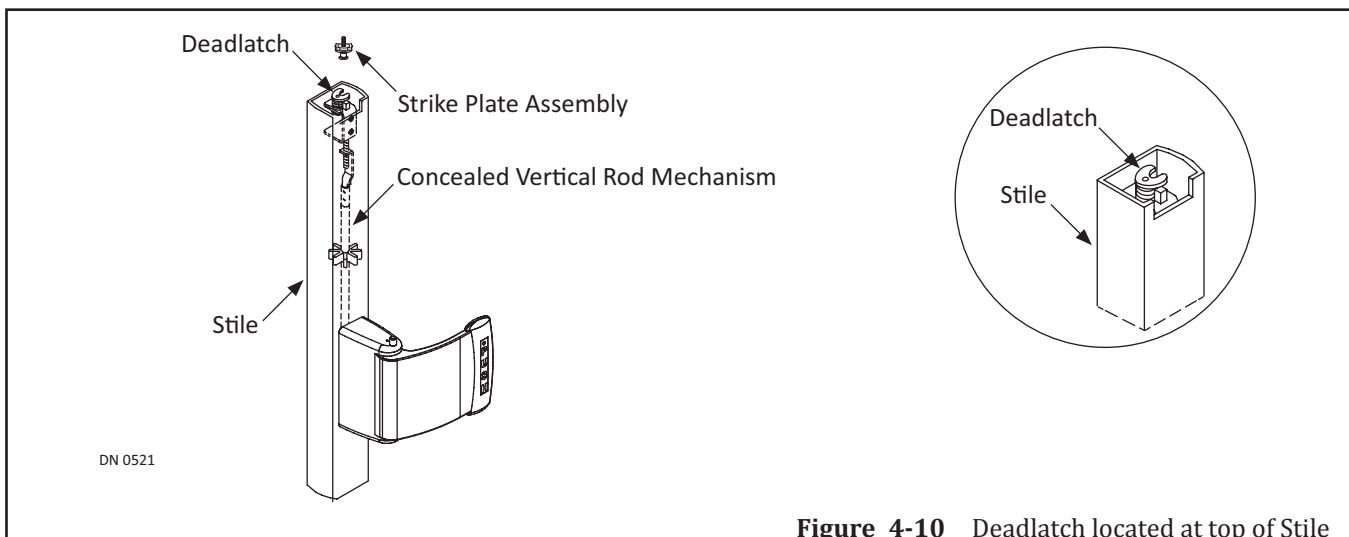


1. Obtain (1) Dogging Key.
2. Insert (1) Dogging Key in the hole located on top of the Escutcheon.
3. Turn the Dogging Key:
  - ▶ Clockwise to lock the vertical rod.
  - ▶ Counter Clockwise to unlock the vertical rod.
4. Remove the Dogging Key when not in use.
5. Replace the Dogging Key with the Dogging Screw. Please see Figure 4-9.
  - a. The Dogging Screw must be inserted into the hole when the Swing door does not need to be locked or unlocked by the Dogging Key.

#### Section 4d: Install the Strike Plate Assembly (Active Swing Door)

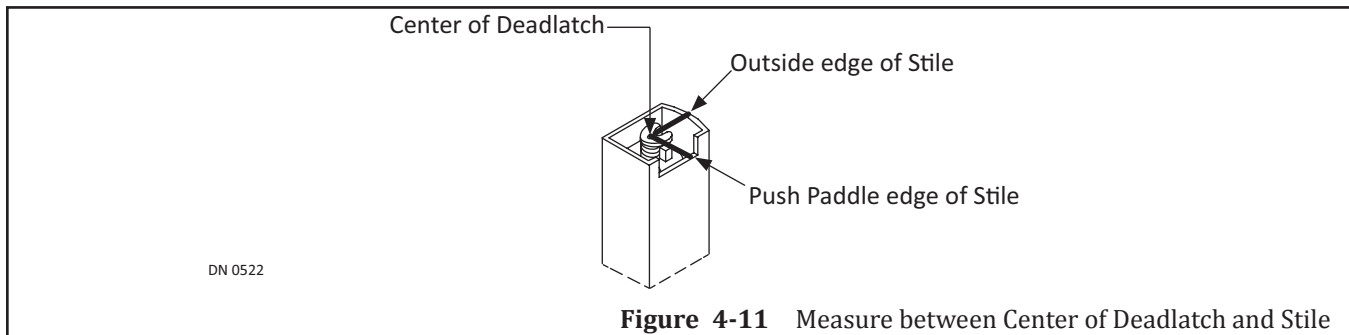
The Strike Plate assembly is installed within the Header so the Deadlatch that is located at the top of the Concealed Vertical Rod Mechanism can wrap around it. The Strike Plate assembly is used to prevent forced entry by bowing of the Swing door Panel.

1. Open the Active Swing Door.
2. Go to the top of Stile. Locate the Deadlatch. Please see Figure 4-10.

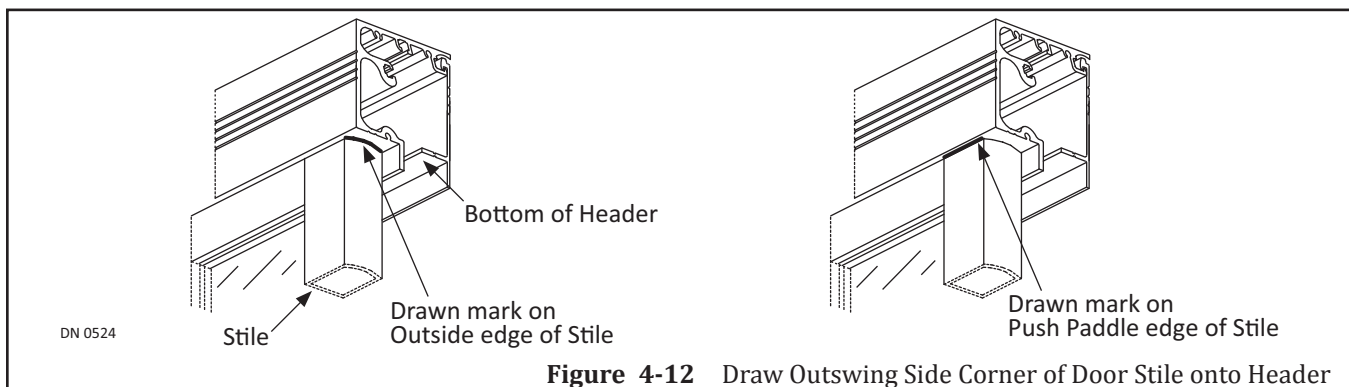




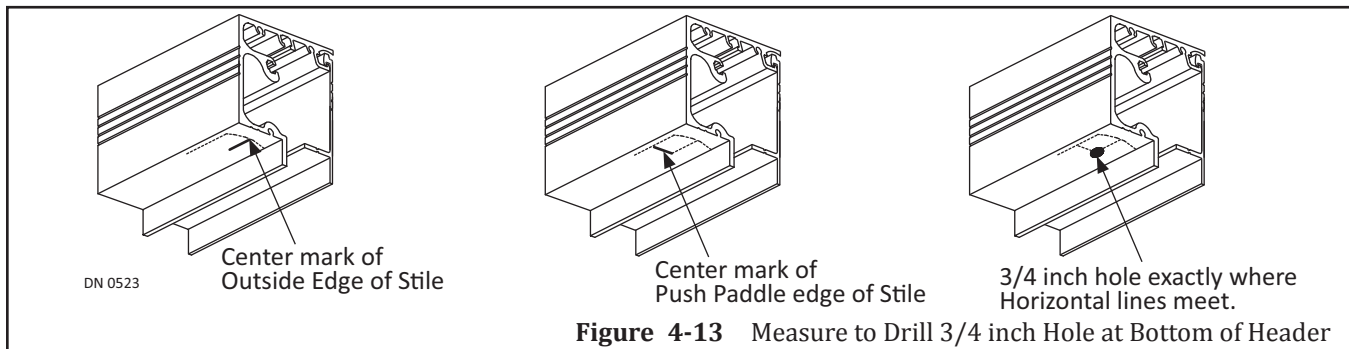
3. Measure (2) Horizontal lines. (1) each; between the center of the Deadlatch to the:
  - ▶ Outside edge of the Stile.
  - ▶ Push Paddle edge of the Stile.
4. Mark both measurements down. Please see Figure 4-11.



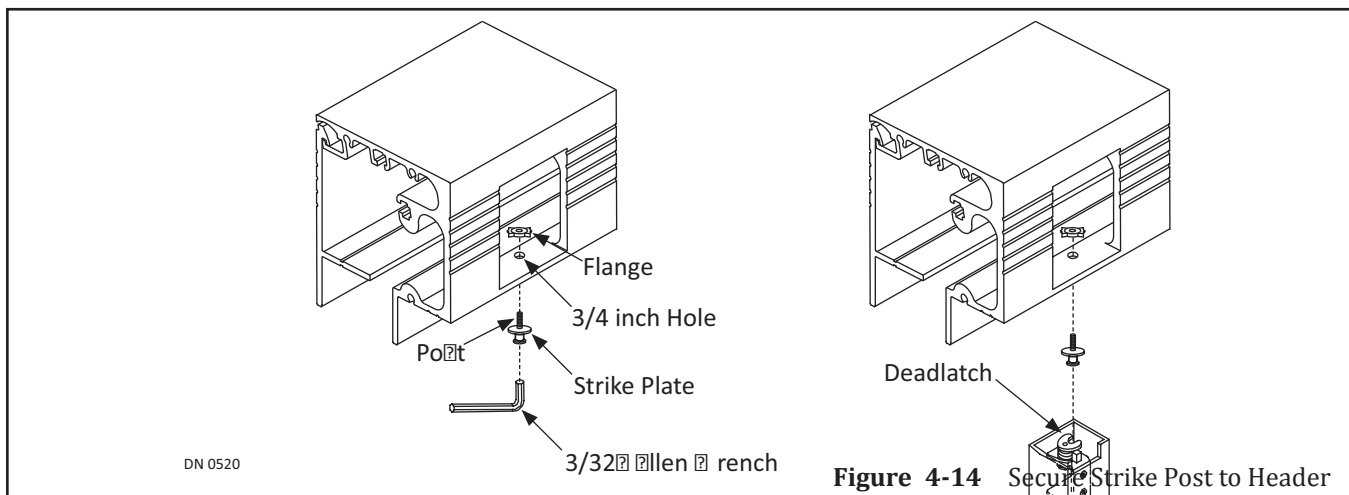
5. Open the Inactive Swing door, then immediately close the Active Swing door.
6. Go to the bottom of Header. Please see Figure 4-12.
7. Draw (2) Horizontal lines on the bottom face of Header to reflect the entire width of the:
  - ▶ Outside edge of the Stile.
  - ▶ Push Paddle edge of the Stile.
  - a. Do not draw horizontal lines longer than the actual width.



8. Open the Active Swing Door.
9. Go to the drawn line mark of the Outside edge of Stile. Please see Figure 4-13.
10. Locate the center of the drawn line. Draw a horizontal line from the center of the outside edge to be as long as the measurement that was recorded in Step 3.
  - a. Do not draw line longer than measurement.
11. Go to the drawn line mark of the Push Paddle edge of Stile.
12. Locate the center of the drawn line. Draw a horizontal line from the center of the Push Paddle edge to be as long as the measurement that was recorded in Step 3.
  - a. Do not draw line longer than measurement.
13. Drill 3/4 inch hole at the center of where both Horizontal lines meet.



14. Obtain the Strike Plate assembly.
15. Unscrew the Flange Nut from the Post. Please see Figure 4-14.
16. Insert the Post through the 3/4 inch hole until the Strike Plate is flush against the face of Header. Ensure Post is centered.
17. Screw the Flange Nut down onto the Strike Post.
  - a. Ensure the Strike Plate assembly is centered.
18. Insert a 3/32 inch Allen Wrench into bottom of the Strike Plate. Tighten down.



#### Section 4e: Install the Flush Bolt Strike (Inactive Swing Door)

1. Open the Inactive Swing door, then immediately close the Active Swing door.
2. Go to the top of Stile. Locate the Flush Bolt. Please see Figure 4-15.
3. Heavily chalk top of Bolt.
4. Close the Inactive Swing door.
5. Raise the Flush Bolt until it hits the bottom face of Header.
6. Lower the Flush Bolt and reopen the Inactive Swing door.
  - a. The bottom face of Header should be marked with a circular chalk mark.
  - b. If a circular chalk mark is not visible, chalk the bolt again. Repeat steps until a chalk mark can be seen.

7. Drill a 5/8 inch hole at the exact center of the Chalk mark.
8. Close the Inactive Swing door.
9. Raise the Flush Bolt until it is all the way through the 5/8 inch hole.
  - a. If Flush Bolt cannot go all the way through, drill the hole again to make it slightly bigger.
  - b. Do not drill hole so big that the Flush Bolt will be rendered useless.

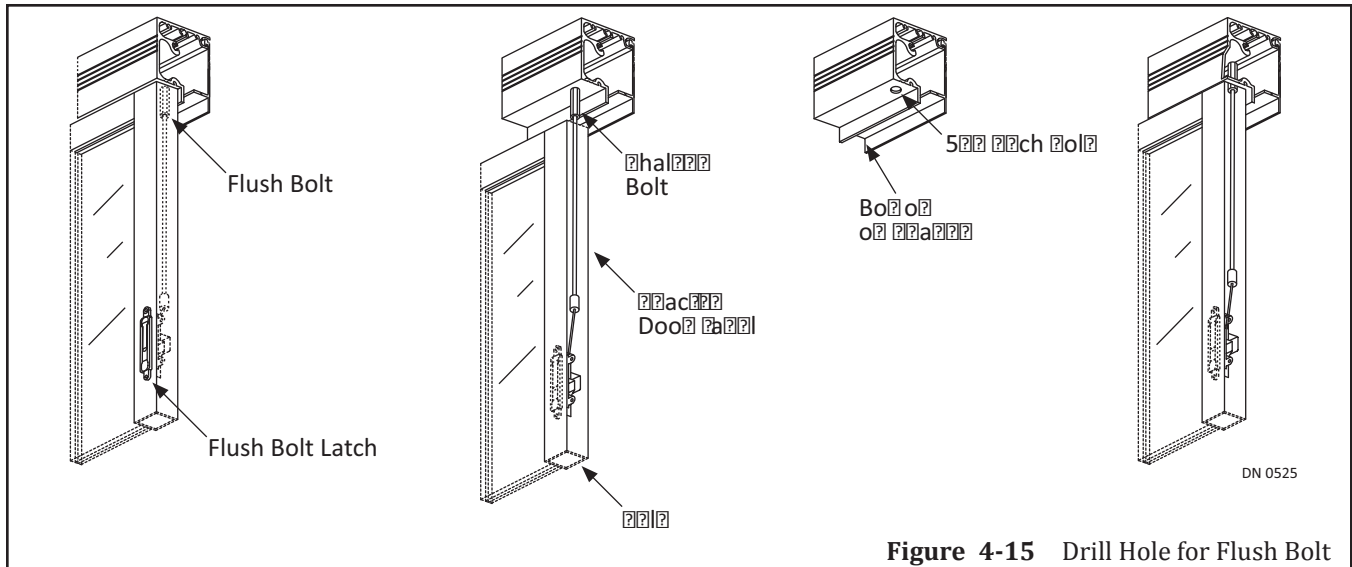
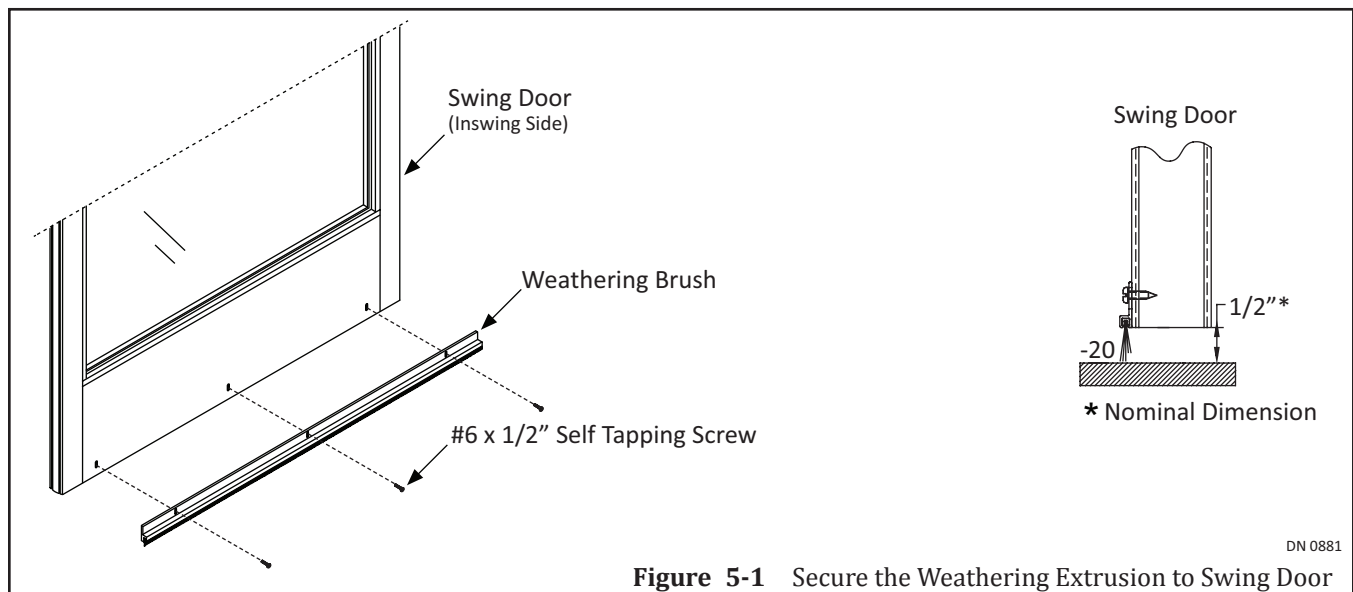


Figure 4-15 Drill Hole for Flush Bolt

## CHAPTER 5: INSTALL WEATHERING

### Section 5a: Install the Weathering Brush

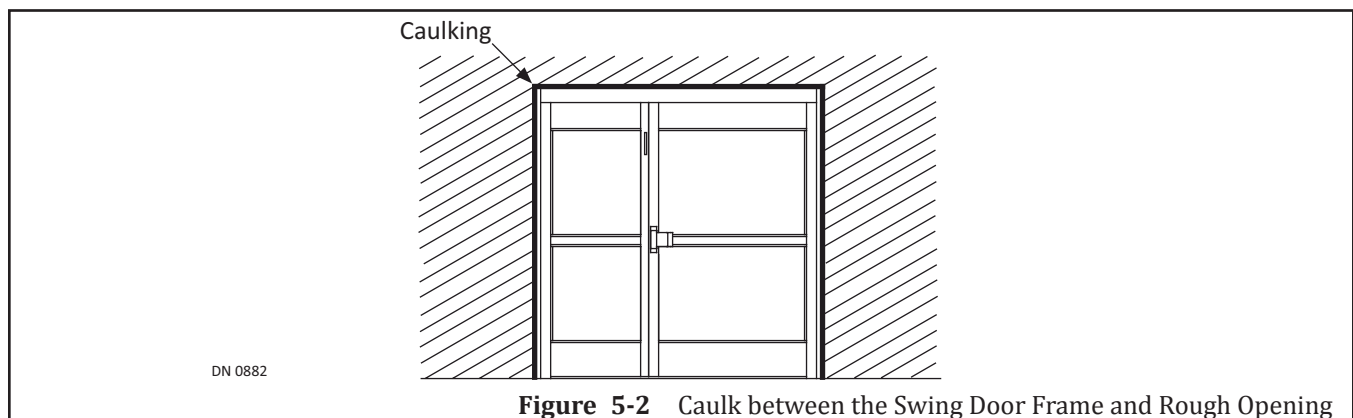
1. Obtain the Weathering Extrusion with Brush pre-installed.
2. Go to the Inswing side of the Swing door. Please see Figure 5-3.
3. Align the Weathering Extrusion along the bottom edge of Swing Door.
4. Use the Weathering Extrusion as a template to mark and drill (3) 1/8 inch diameter holes onto the face of Swing door.
  - a. There should not be any excess Brush on this weathering.
5. Secure Weathering Extrusion to the Swing door with color coordinated #6 x 1/2 inch self tapping screws provided by NABCO.



**Figure 5-1** Secure the Weathering Extrusion to Swing Door

### Section 5b: Apply Caulking Bead

1. Ensure the entire Swing Door Frame is properly secured to the Rough Opening.
2. Apply caulking bead between the Swing Door Frame and Rough Opening (inside and outside)



**Figure 5-2** Caulk between the Swing Door Frame and Rough Opening