



48348386

Senior Swing IQ

LCN®

2800IQ Overhead Concealed Series

Installation Instructions

Table of Contents

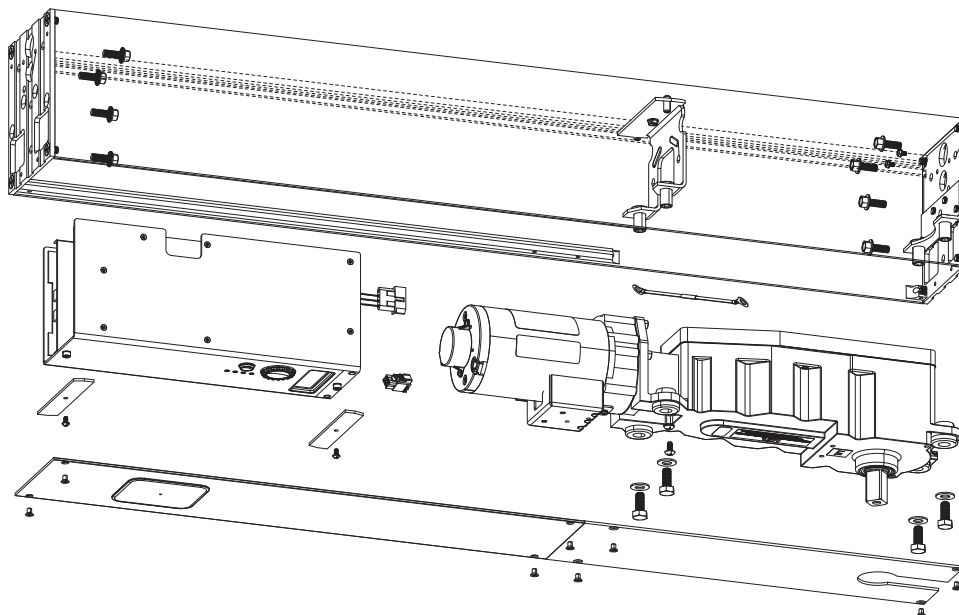
General	1	8 Control Box Wiring	9
1 Pre-Installation Site and Product Check	2	9 Finger Guard Installation (Center Pivoted)	10
2 Header Installation	3	10 Door and Arm Installation (Center Pivoted)	11
3 AC Power and Ground Wiring	4	11 Arm Installation	14
4 Operator Installation	5	12 Glazing	14
5 Pivot Block Installation (Center Pivoted)	6	13 Control Box Functions	14
6 Breakaway or Fixed Stop Installation (Center Pivoted)	7	14 Plate Installation	15
7 Control Box Installation	8	15 Release for Service	16

General

The Senior Swing IQ is an automatic electromechanical swinging door operator for a single door, simultaneously operated, or independently operated pair of doors. The concealed application operates center pivoted, offset pivoted, or butt hung/hinged doors. The surface application operates balanced (push side only), center pivoted, offset pivoted, or butt hung/hinged doors in either push or pull mode.

When activated, the Senior Swing IQ drives the door to the full open position and the door is closed by spring force. The activating circuit opens the door from any position in the closing swing. During a power failure, the Senior Swing IQ acts as a manual door closer (size 3). Door opening and closing cycles, including opening speed, back check speed, hold open time delay, closing speed, and latch position, are adjustable.

Introducing AdaptivIQ™ from LCN. This groundbreaking technology automatically and intuitively self-adjusts LCN low-energy electromechanical operators to changing environmental conditions—providing smooth, consistent performance year-round. It's like adaptive cruise control, but for your doors



Digital Experience, Please Read!

For the best installation experience, scan the QR code with your Smartphone or go to: qr.allegion.com/r?Model=9500IQ

This will give you access to specialized interactive installation instructions as well as specific product information



Customer Service

1-877-671-7011

www.allegion.com/us

⚠ CAUTION ⚠

The Senior Swing IQ Power Operator System is a low energy product and must conform to the latest version of ANSI/BHMAA156.19 (American National Standard for Power Assist and Low Energy Power Operated Doors). All installation instructions are valuable references and should not be discarded. They should be given to the building owner or maintenance supervisor after installation is complete.

⚠ CAUTION ⚠

Improper installation or set up may result in personal injury or property damage. Follow all instructions carefully. For answers to questions, call: Technical Support 1-877-671-7011

⚠ IMPORTANT ⚠

These instructions are presented in step-by-step sequence. It is very important that installation begins with "1. Pre-Installation Site and Product Check" (page 2) and continues as directed after each section.

⚠ WARNING ⚠

Always disconnect main power to the operator prior to installing or replacing.

⚠ WARNING ⚠

Ensure all wiring is compliant with local codes.

1 Pre-Installation Site and Product Check

⚠ IMPORTANT ⚠

Do not install the Senior Swing unless all of the following conditions are correct.

- 1a Check that the product model is correct for the required application.
- 1b Check that all parts listed on the bill of material are in the shipping container.
- 1c Check architectural and final approved shop drawings for position of frame and openings.
- 1d For concealed applications, check that the opening allows 1/4" at each side and at the top so that the frame and the header can be plumbed square and caulked.
- 1e Required tools and included hardware are as follows:

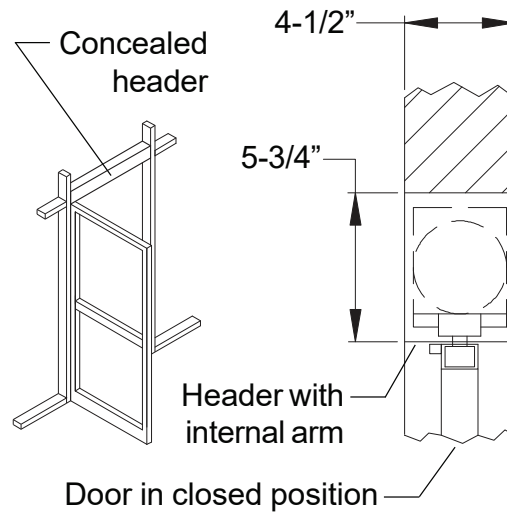
Required Tools List

- No. 2 Phillips Head Screwdriver
- No. 3 Phillips Head Screwdriver
- 1/4" Slotted or Flat head Screwdriver
- 5/16" Hex Socket
- 7/16" & 1/2" Wrench
- Tape Measure with 1/16" Divisions
- Drill (and standard drill bit set)
- Hand Riveter
- Center-Punch
- Level
- Hammer
- 25/64" and 3/8" Drill Bit

2800IQ Provided Hardware List

Part Number	Description	QTY
48213799	Screw Bag, Gearmotor Concealed Mount	
	5/16-18 3/4 Hex CAPSTL CZNC	4
	Washer, .688 X .344 X .080	4
	10-32 3/8" Slotted Hex Washer Head Machine Screw, Ground, Steel	1
48364118	Parts Bag Assy, Control Box	
	Control Box Bracket	2
	6-32 X 1/4 RHMS	2
	Instructions, SRSWIQ Controller Install	1
700113-00	Header End Cap Screw Bag	
	1/4-20x1 Hex Serrated Flange Cap Scrw STL CZNC	8
	1/4-20 X 3/4 Flat Head Rivet Nut Steel	8
48053228	Bag, Senior Swing Harnesses	
	Harness, Motor Ground Cable	1
	Harness, 115v Power Cable	1
	Harness, Activation Cable	1
	Harness, Lock Interface Cable	1
	Adhesive Cable Routing Clip	3
47989164	Harness, 9550IQ and 2850IQ Companion	

- 1f Check for sufficient header clearances:



- 1g For a ramped floor, check that the break in the grade occurs at the edge of the 2" threshold and slopes away from the entrance to allow proper door swing or panic breakaway.

- 1h For 120 VAC Incoming Power:** Check that a 120 VAC, single phase, 60 Hz, fused, 15 amp, 3-wire power supply is available at either side jamb with approximately 12" of wire available to connect to the operator. 1/2" EMT trade size UL approved type flexible or rigid conduit is recommended for the 120 VAC power line.

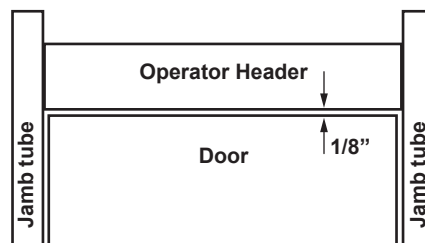
The 120 volt power supply must be a dedicated circuit from the main circuit breaker panel and must not be connected into a building lighting system operating fluorescent lights.

- 1i For 230 VAC Incoming Power:** Check that a 230 VAC, single phase, 50 Hz, fused, 6 amp, 3-wire power supply is available at either side jamb with approximately 12" of wire available to connect to the operator. 16mm EMT trade size UL approved type flexible or rigid conduit is recommended for the 230 VAC power line.

The 230 VAC power supply must be a dedicated circuit from the main circuit breaker panel and must not be connected into a building lighting system operating fluorescent lights.

2 Header Installation

- ① **Note:** Install concealed application headers so there is 1/8" between the bottom of the header and the top of the door.



- 2a Prepare existing jamb tubes using template 740069, then install four 1/4-20 rivet nuts inside each jamb tube.

- 2b Align the header with the jamb tubes. For headers with a single operator, position the end of the header containing the operator brackets near the pivot side of the opening (Figure 2-1). Secure the header to the jamb tubes with four 1/4-20 hex head screws at each end (Figure 2-2).

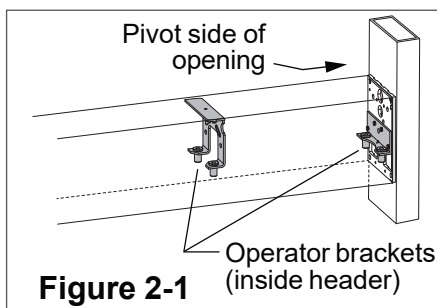


Figure 2-1

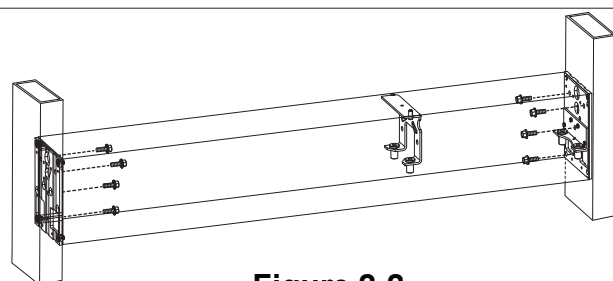


Figure 2-2

- 2c Stand the header/jamb tube assembly in the opening.
- 2d Feed the 120/230 volt power conduit into the header (Figure 2-3). Leave 12" minimum of wire inside the header for final hookup.
- 2e Shim and square the side jamb tubes in position, then secure the jamb tubes in the opening.

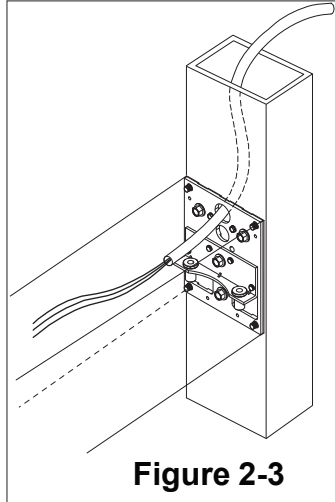
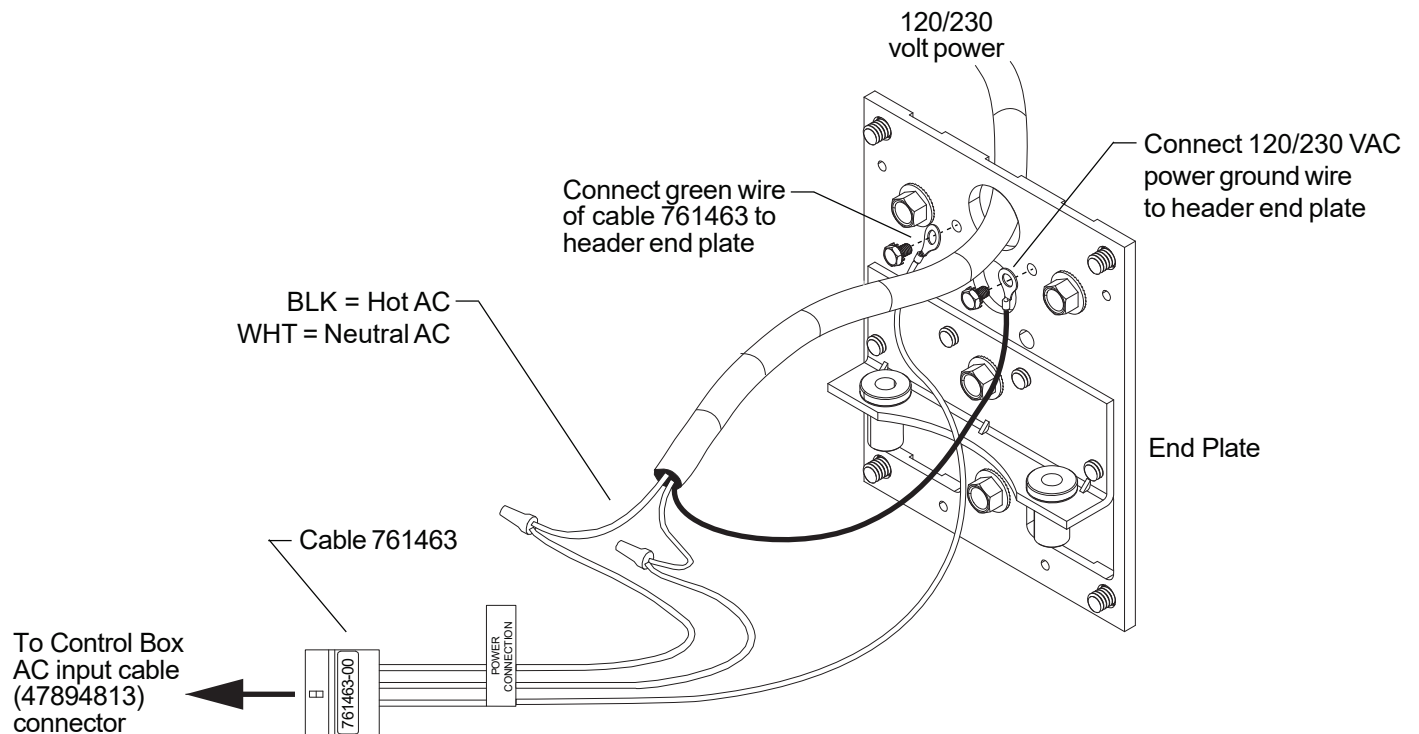


Figure 2-3

3 AC Power and Ground Wiring

- 3a Connect the 120/230 volt power wires to the AC power cable (part number 761463) and Ground wires to the header end plate as shown in Figure 3-1.

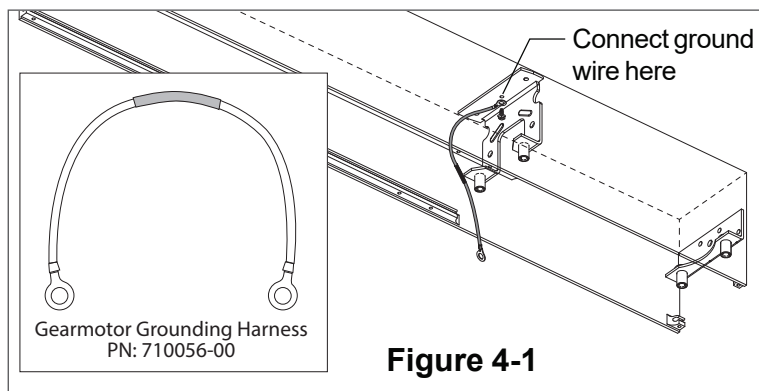
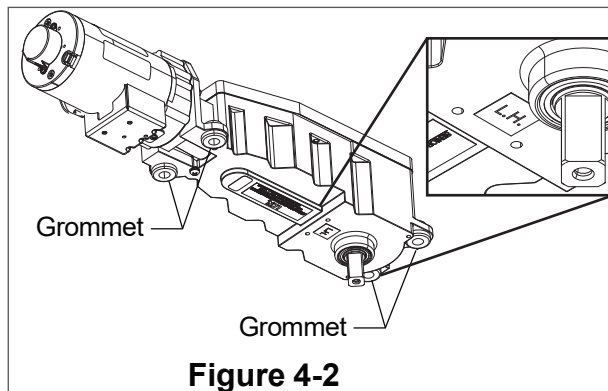
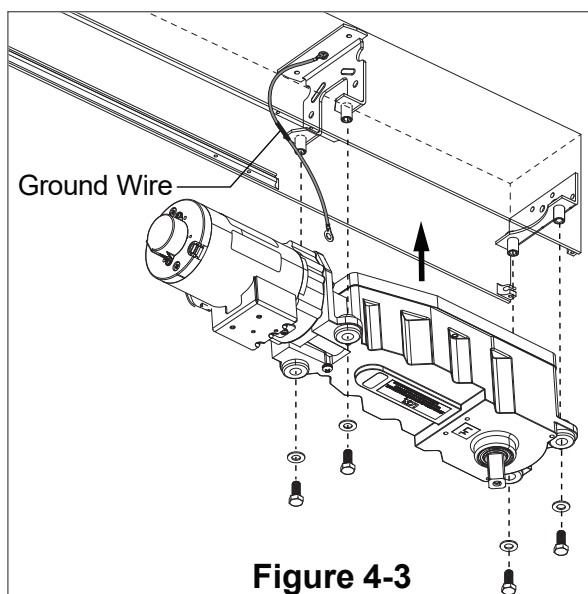
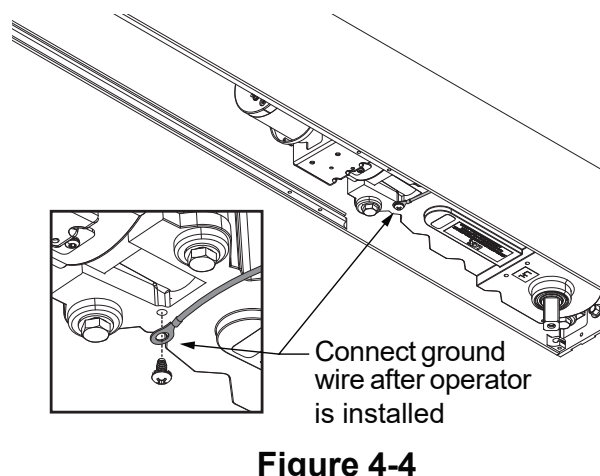


Warning: Do NOT connect the 761463 wire harness connector to the Control Box AC Input connector (47894813) until step 7 has been completed

Figure 3-1

4 Operator Installation

- 4a For double operator systems with differently handed operators, make sure that the correct operator is installed in each end of the header. The handing of the operator (R.H. or L.H.) is indicated on a label on the operator.



- 4b Connect the end of the green operator ground wire to the rear operator mounting bracket in the header (Figure 4-1) using the #10-32 hex head green ground screw supplied in the operator screw pack.
- 4c Make sure there is a rubber grommet inside each of the four operator mounting holes (Figure 4-2).
- 4d Line up the four mounting holes on the operator with the four mounting studs on the operator brackets (Figure 4-3). Make sure that the operator cables are hanging down freely and push the operator up onto the mounting studs. Make sure cables are not pinched when operator is installed. (The mounting studs fit snugly into the grommets, and firm pressure may be required to get the operator into position.)
- 4e Secure the operator to the header using four 5/16-18 hex head screws and washers (Figure 4-3). Tighten the screws until they make contact with the mounting studs on the operator brackets.
- 4f Connect the other end of the green ground wire to the bottom of the operator (Figure 4-4).
- 4g For a header with two operators, install the second operator in the same manner.
- For center pivoted doors, continue with “5. Pivot Block Installation (Center Pivoted)” on page 6.
 - For other doors, continue with “7. Control Box Installation” on page 8.

5 Pivot Block Installation (Center Pivoted)

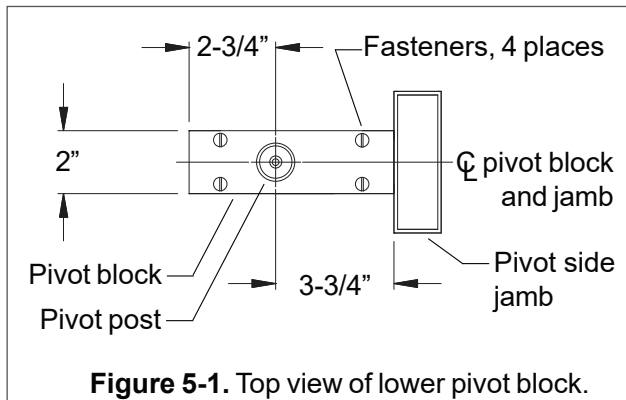
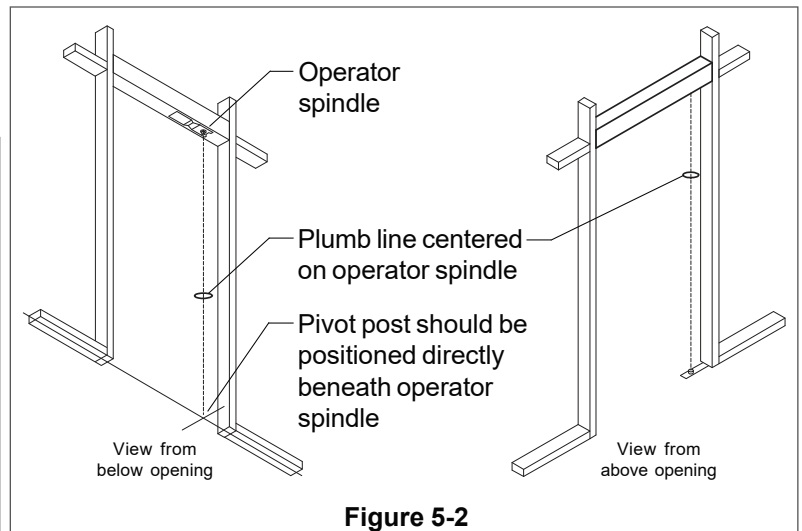
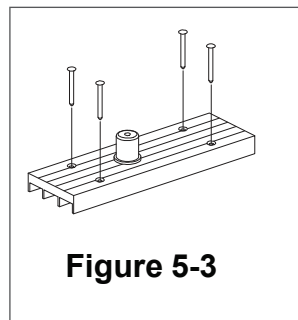
① **NOTE:** This section is applicable **ONLY** if using the factory supplied lower pivot block (with pivot post attached) on center pivoted doors. If not being used, continue with “6. Breakaway or Fixed Stop Installation (Center Pivoted)” on page 7.

5a Position the lower pivot block (Figure 5-1) as shown in Figure 5-2 oriented so the pivot post is 2-3/4" or 3-3/4" (nominal) from the jamb, as necessary.

5b Use the pivot block as a guide and mark and prepare four mounting holes for appropriate fasteners for the mounting surface.

5c Secure the pivot block in place with appropriate fasteners (Figure 5-3).

① **NOTE:** Pivot block shown installed for a door with a 3-3/4" mounting point. For 2-3/4" mounting point, reverse pivot.



6 Breakaway or Fixed Stop Installation (Center Pivoted)

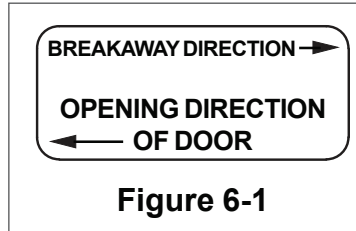
- ① **NOTE:** This section is applicable **ONLY** to center pivoted doors using the factory supplied breakaway or fixed stop. If not being used, continue with “7. Control Box Installation” on page 8.

Breakaway and Fixed Stop Operation

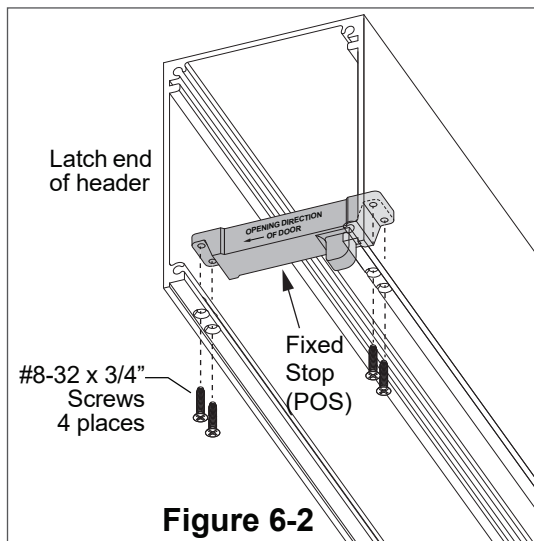
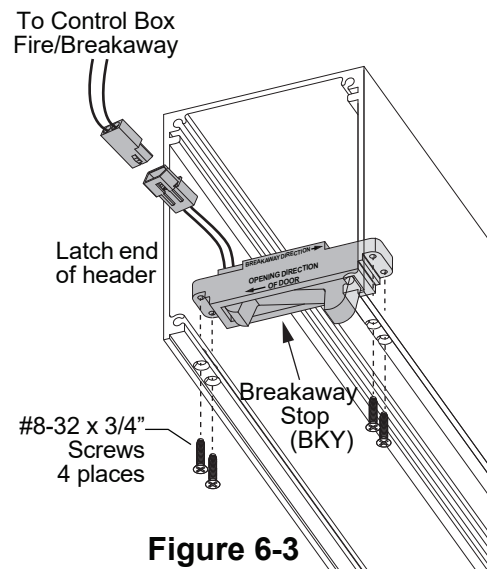
The function of the breakaway or fixed stop is to act as a mechanical stop on an inswinging door so the door cannot normally be opened in the outswinging direction.

The **breakaway stop** differs from the fixed stop in that, in a panic or fire condition, when approximately 50 lbs. of force is applied on the door from the inswinging side, the door will open in the outswinging direction. When this occurs, a switch in the breakaway stop disables the automatic operation of the door. The door then remains inoperative and in the breakaway position until it is manually pushed back through the opening to the inswinging side. This action resets the breakaway stop and restores automatic operation.

- 6a Orient the breakaway stop according to the directions on the switch label (Figure 6-1). The “OPENING DIRECTION OF DOOR” arrow should point in the direction that the door opens during normal operation.

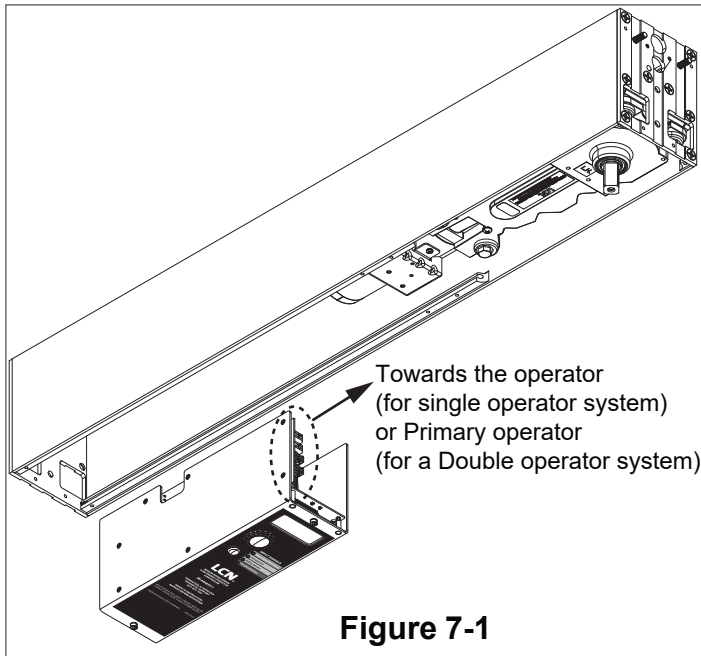
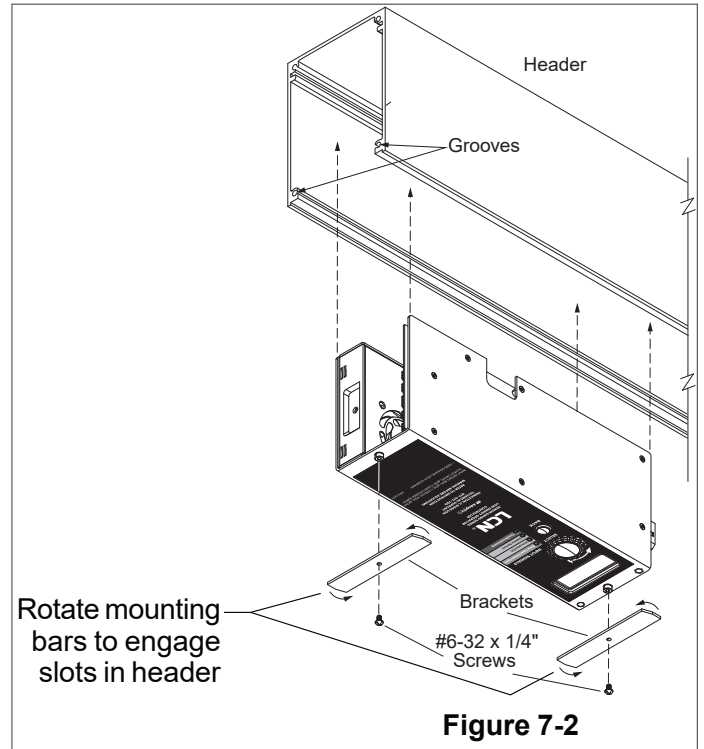
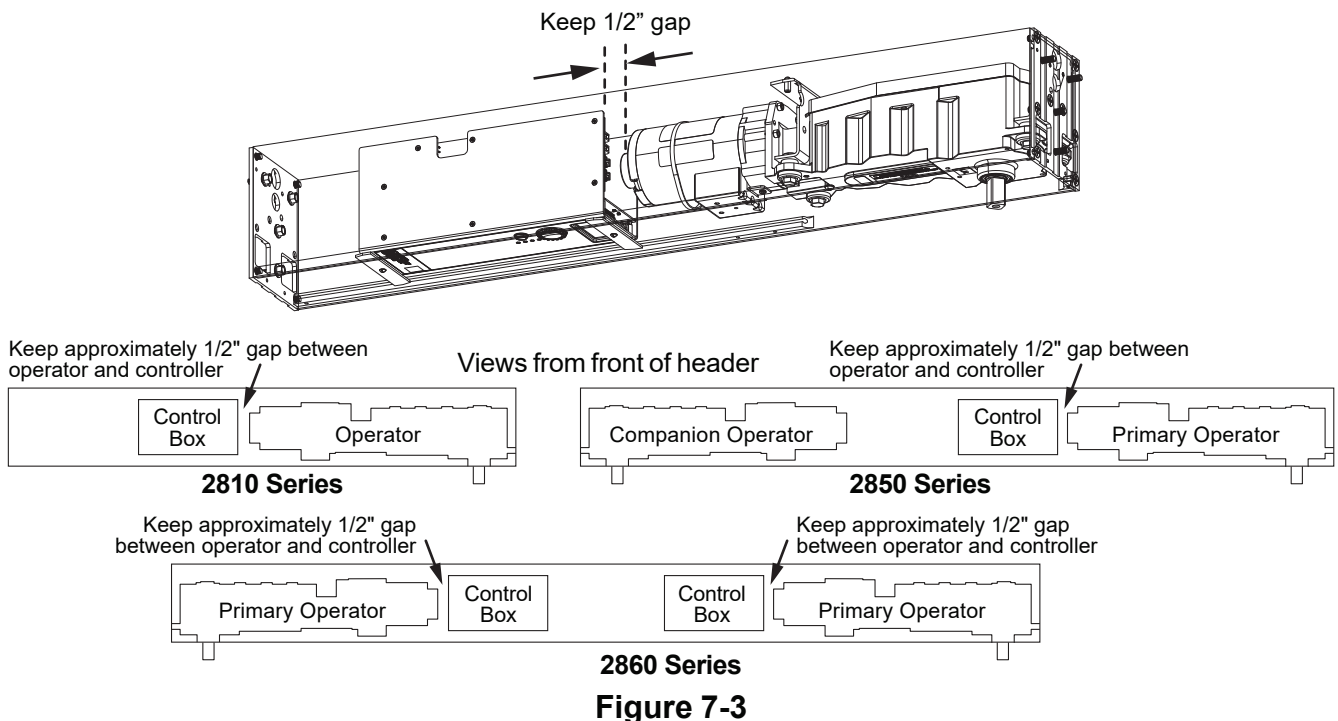


- 6b Install the breakaway or fixed stop inside the header approximately 1-1/4" from the latch end using the four #8-32 x 3/4" screws supplied with the stop (Figure 6-2). Mounting holes for the stop have been prepared in the header at the factory.
- ① **Exception:** 2810 Series with Header length between 49" and 70", install breakaway or fixed stop inside header approximately 16 1/2" away from Hinge side.



7 Control Box Installation

- 7a Orient the control box so the keypad faces down and the Molex connectors faces the operator for a single operator system or the Primary operator for a double operator system (Figure 7-1).
- 7b Raise the control box into the header and rotate the two mounting bars so they engage the slots that run the length of the header (Figure 7-2).
- 7c See Figure 7-3 for final positions of operator(s) and control box inside the header. Keep approximately 1/2" gap between Control Box and Operator



⚠ CAUTION ⚠

High voltage wiring must be separated from low voltage wiring by UL listed wiring for the control box, operators, and low voltage accessories.

⚠ CAUTION ⚠

When joining or separating a Molex plug and receptacle, do not push or pull on any of the wires. This may cause a wire to be pulled loose from a terminal, which may result in a malfunction.

8a Single operator system minimum wiring requirements:

- AC power
- Primary motor power
- Breakaway switch or jumper

Double operator system minimum wiring requirements:

- AC power
- Primary motor power
- Companion motor power
- Breakaway switches or jumpers; if two Breakaway switches are used, wire switches in series

8b Primary operator Power wiring must be completed by connecting both Gearmotor harnesses to the two black Control Box headers facing the Gearmotor. See Figure 8-1. Only remove the Fire/Breakaway Jumper Harness if wiring the Control Box into the building fire system or if using a breakaway switch. For wiring of companion operator and additional accessories, see the Senior Swing Control Box Installation.

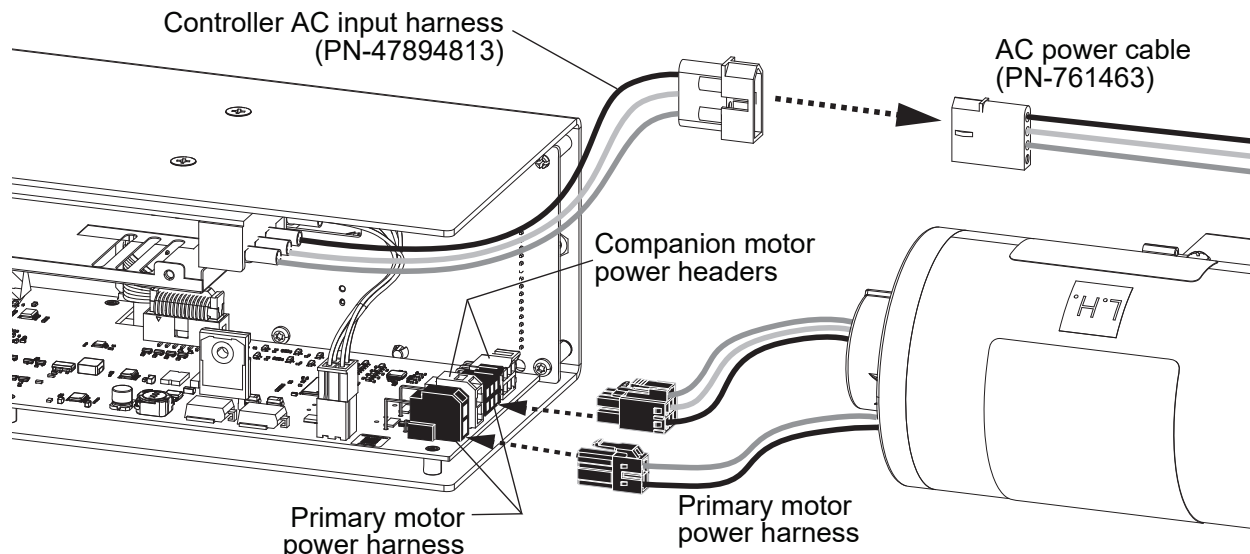
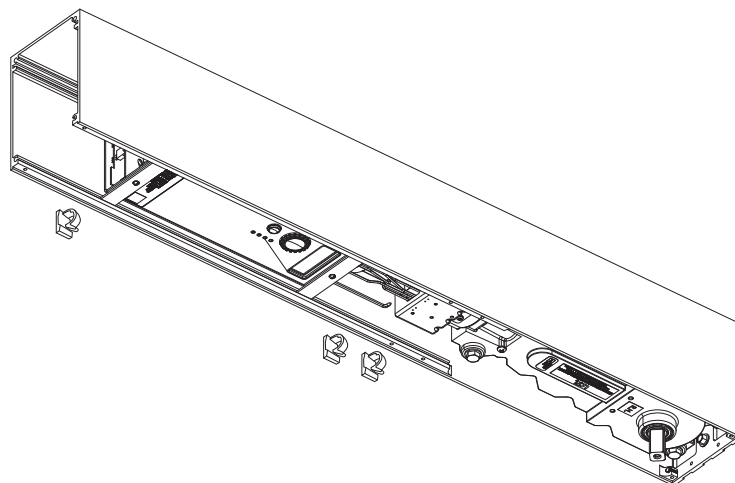


Figure 8-1

8c Dress all wires neatly together and use clips to retain wires in their proper locations.

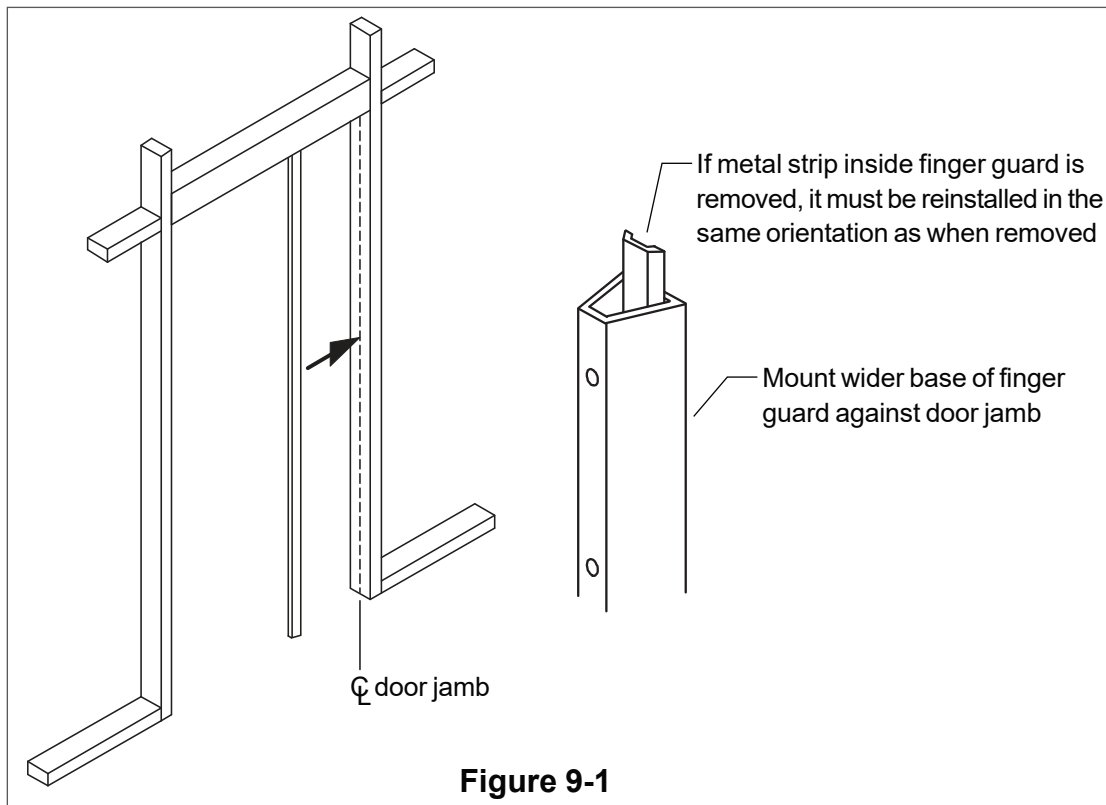


- For center pivoted doors, continue with “9. Finger Guard Installation (Center Pivoted)” on page 10.
- For other doors, continue with “11. Arm Installation” on page 14.

9 Finger Guard Installation (Center Pivoted)

① **NOTE:** This section is applicable **ONLY** to center pivoted doors using the factory supplied finger guard. If not being used, continue with “10. Door and Arm Installation (Center Pivoted)” on page 11.

- 9a Scribe a line down the center of the pivot side door jamb (Figure 9-1).
- 9b If necessary, cut down the finger guard to fit the installation.
- 9c Align the center of the finger guard over the scribed line. Use the screw holes in the finger guard as guides to locate the mounting holes, and drill #21 (0.159" dia.) mounting holes in the door jamb.
- 9d Secure the finger guard to the door jamb with #10 self-threading screws.
- 9e Make sure there is one mounting screw approximately 1" from each end of the finger guard. If necessary, drill additional mounting holes in the finger guard and door jamb in these locations and install #10 self-threading screws.



10 Door and Arm Installation (Center Pivoted)

10a Prepare door for arm (Figure 10-1).

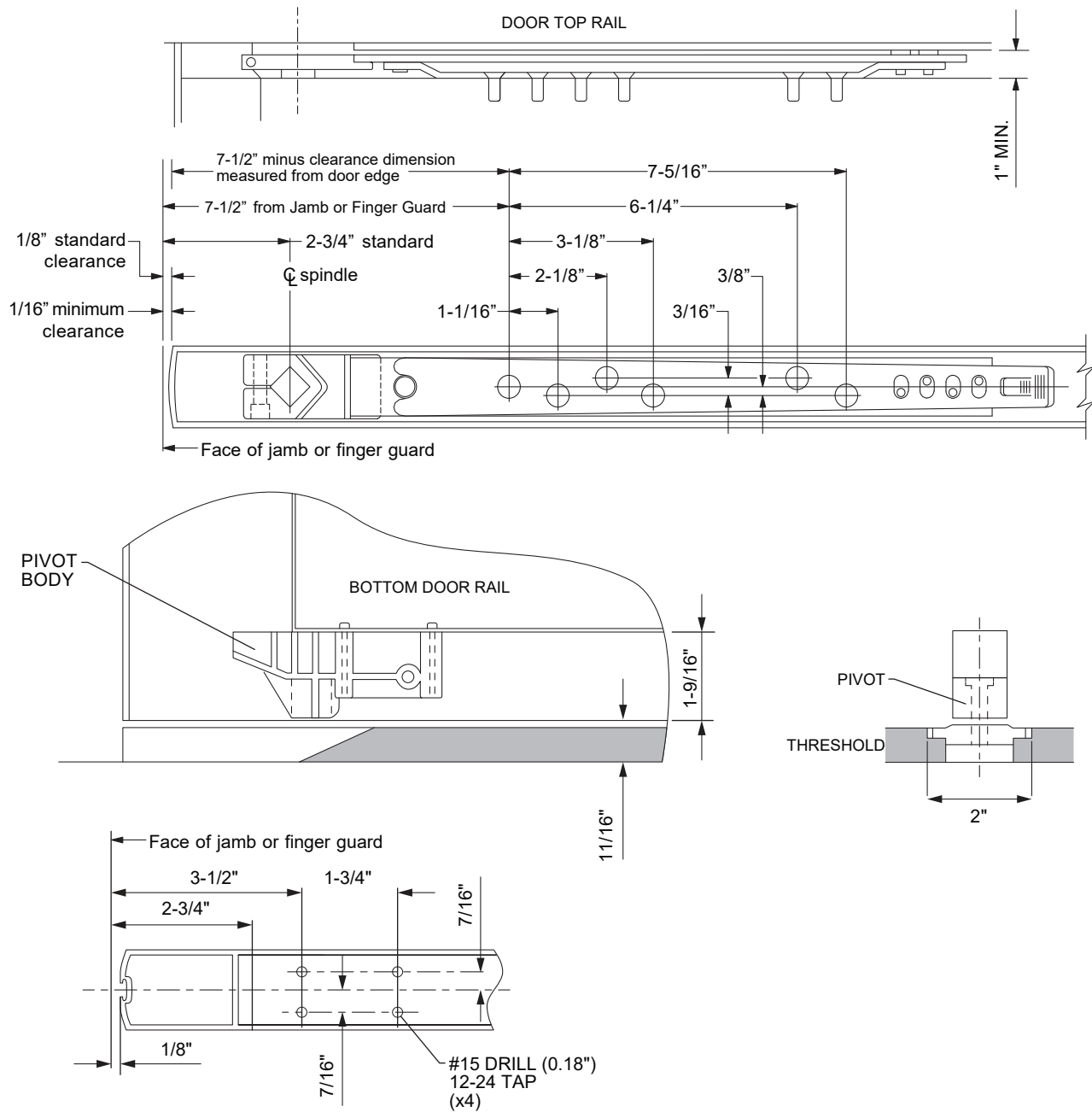
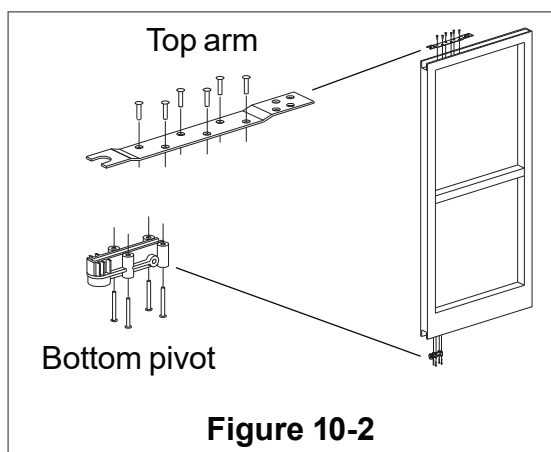
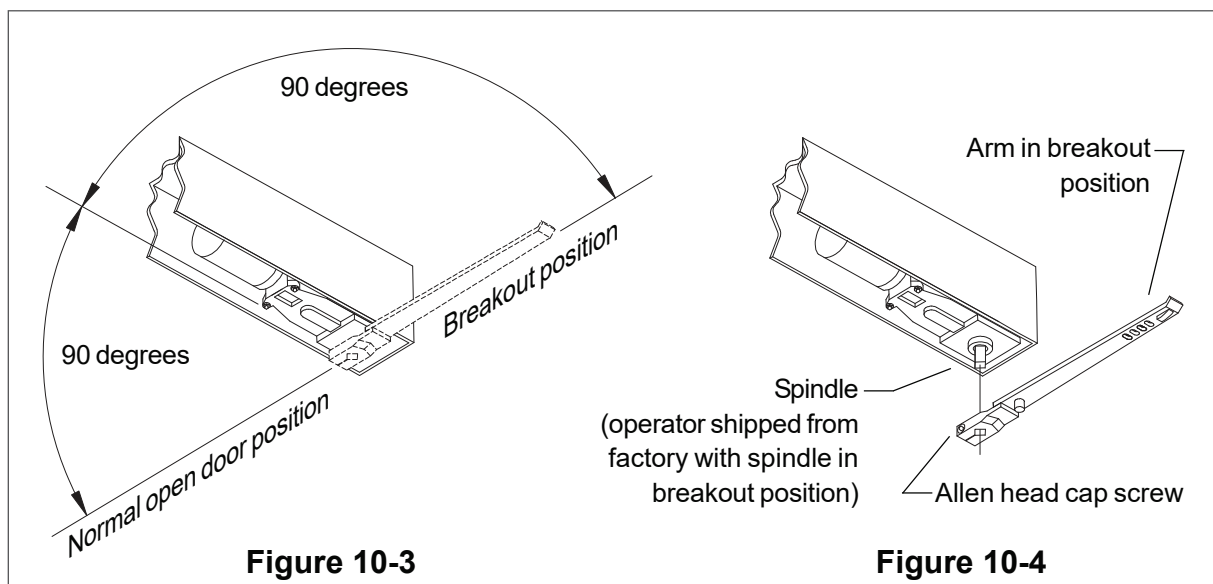


Figure 10-1

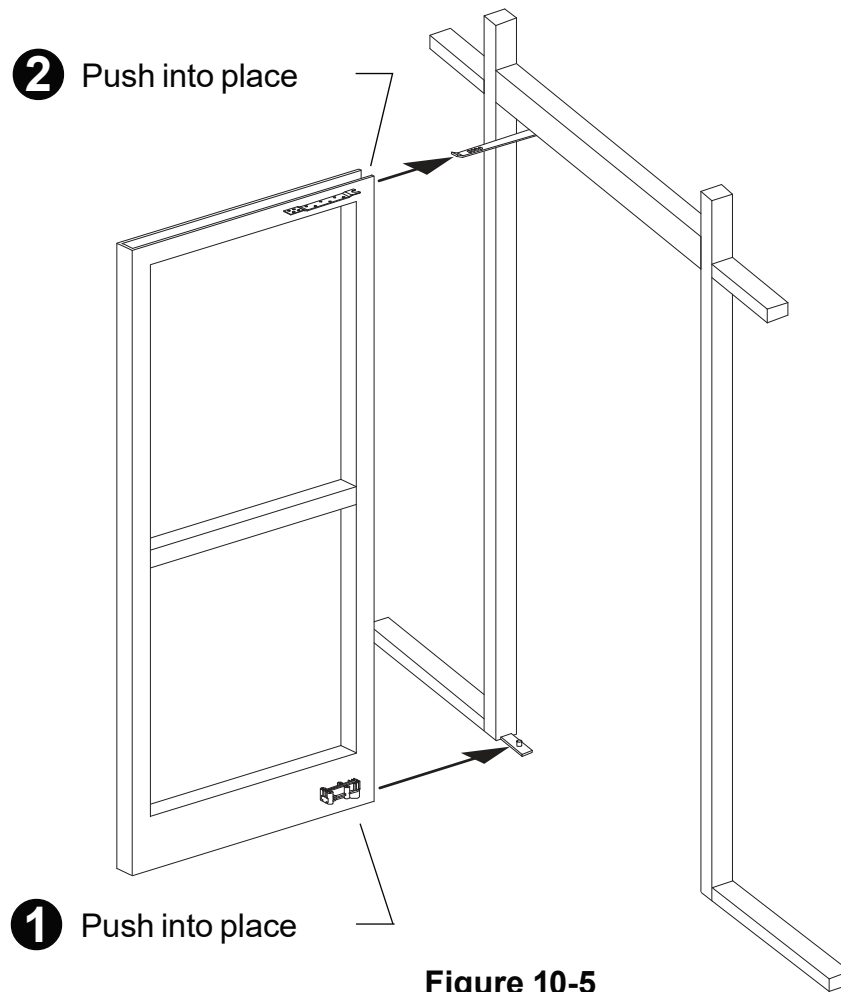
- 10b Install top arm and bottom pivot using screws supplied with those components (Figure 10-2). Use machine screws for metal door; use wood screws for wood door.



- 10c Orient the arm in the breakout position (Figure 10-3). Install the arm in the breakout position by pressing the arm onto the spindle until the end of the spindle is flush with the bottom surface of the arm (Figure 10-4). Tighten the Allen head cap screw on the arm (Figure 10-4).



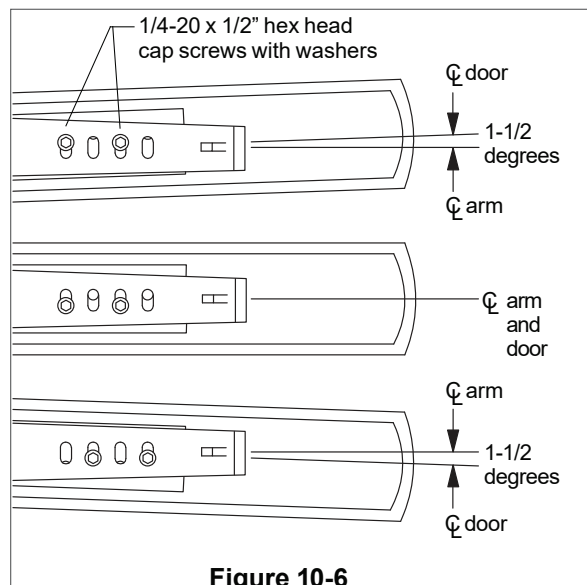
10d Position the door so the arm is in the top channel of the door and gently slide the door up against the lower pivot. (Figure 10-5).



10e Lift the door slightly and push back until the bottom pivot locks into place.

10f Raise the nose of the door and push back until the top arm snaps into place.

10g Align the door in the open position (perpendicular to the opening).



10h Install two 1/4-20 x 1/2" hex head cap screws and washers through two of the oval holes in the arm and into the top attachment arm (Figure 10-5).

10i Install screws in whichever of the positions shown align with the door in the open position (perpendicular to the opening).

10j Check door operation by pushing door to normal closed position, continue pushing through breakaway stop to 90 degree open position, and then release door. Door should close.



If the operator is not connected to the control box, the door will slam closed when released.

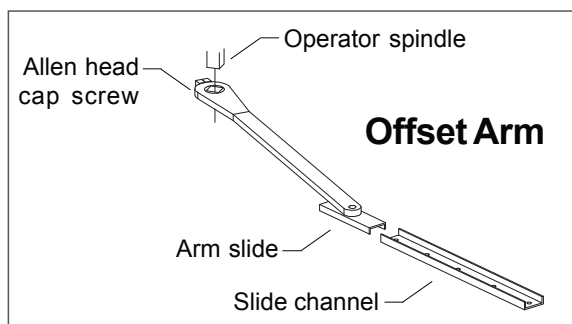
- Continue with "12. Glazing" on page 14.

11 Arm Installation

Concealed (Butt hung and Offset pivoted)

Offset Arm: For concealed header applications with butt hung and offset pivoted doors. To install:

1. Prepare door and install slide channel (see separate Installation Instructions for Offset Arm).
2. Note position of operator spindle. Turn on operator power. Momentarily short activation wires so spindle slowly rotates toward full open position and stops. Continue doing this until spindle reaches full open position (refer to Figure 10-3), then join activation wires together with a wire nut. The blue LED on the Control Box will indicate that Hold Open is active.
3. Insert arm slide into slide channel, slide arm onto spindle, and tighten arm Allen head cap screw.
4. Remove wire nut from activation wires; turn off power.



12 Glazing



Glazing material must comply with the ANSI standard specification.



Operator speed adjustments cannot be set properly until after the door is glazed.

13 Control Box Functions

To set control box functions, see the Senior Swing Control Box installation instructions.

14 Plate Installation

- 14a Before installing the plates, make sure the distance from the Primary Operator spindle to the far end of the Control Box is approximately 28 1/2" (Figure 14-1)

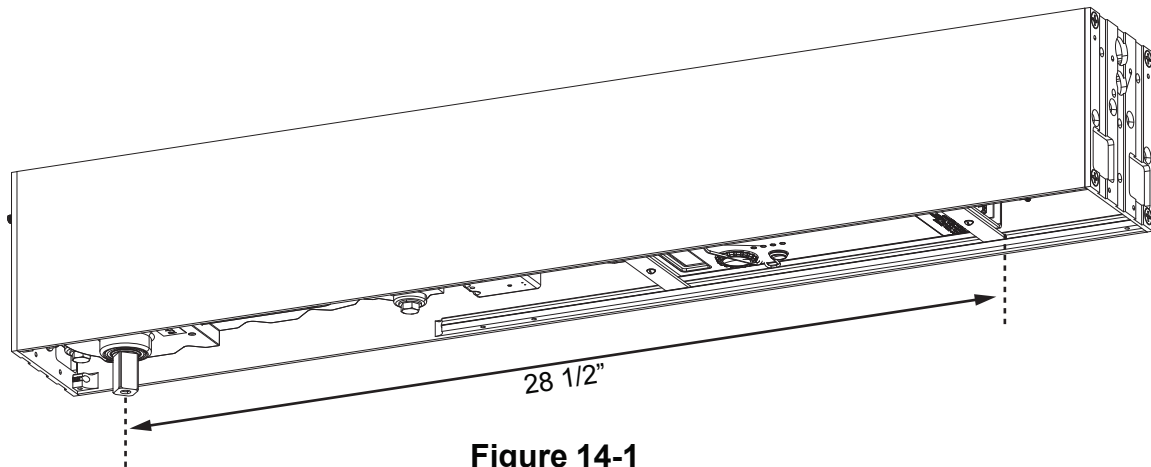


Figure 14-1

- 14b Install spindle plate and filler plate (Figure 14-2). Spindle plate cutout fits over operator spindle.

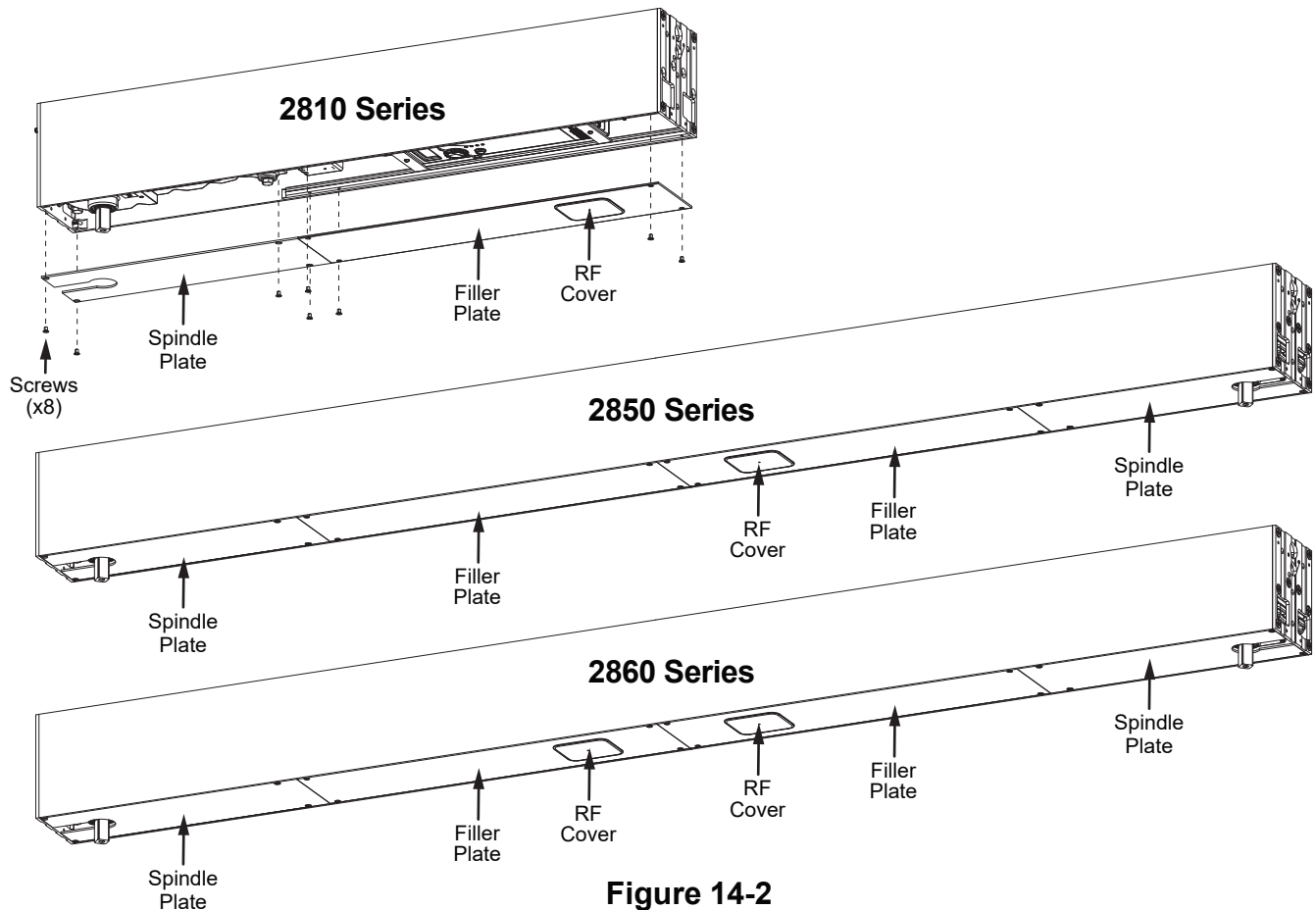
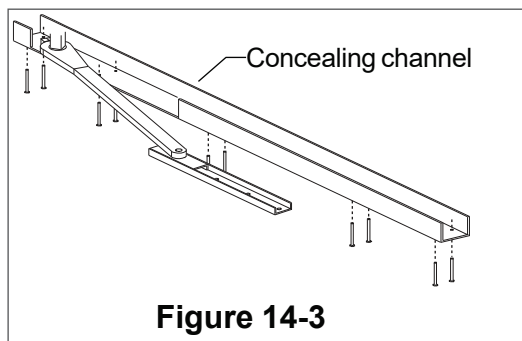


Figure 14-2

- ① Make sure the orientation of the Filler plate with RF Cover matches Figure 14-2, for proper WIFI/Bluetooth Performance.

- 14c For concealed header applications using offset arm with butt hung and offset pivoted doors only:
1. Prepare header dress plates for concealing channel (Figure 14-3; see separate Installation Instructions for Offset Arm).
 2. Install concealing channel (Figure 14-3).



15 Release for Service

- 15a Remove all tools, installation equipment, and debris from the vicinity of the door.
- 15b Install all safety, traffic control, and instruction decals on the door as required by the latest revision of ANSI/ BHMAA156.19 for the Senior Swing. This is very important! Failure to do this leaves the installer LIABLE for any accident that might occur. This must be done!
- 15c Verbally instruct the owner or person in charge of the proper operation of the door.
- 15d Instruct the owner or person in charge to routinely inspect the door for occasional damage, developing problems, minor preventive maintenance.
- 15e Instruct the owner or person in charge who and where to call for service when required.

⚠ IMPORTANT ⚠

Make sure to install all safety, traffic control, and instruction decals on the door as required.

Customer Service

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