



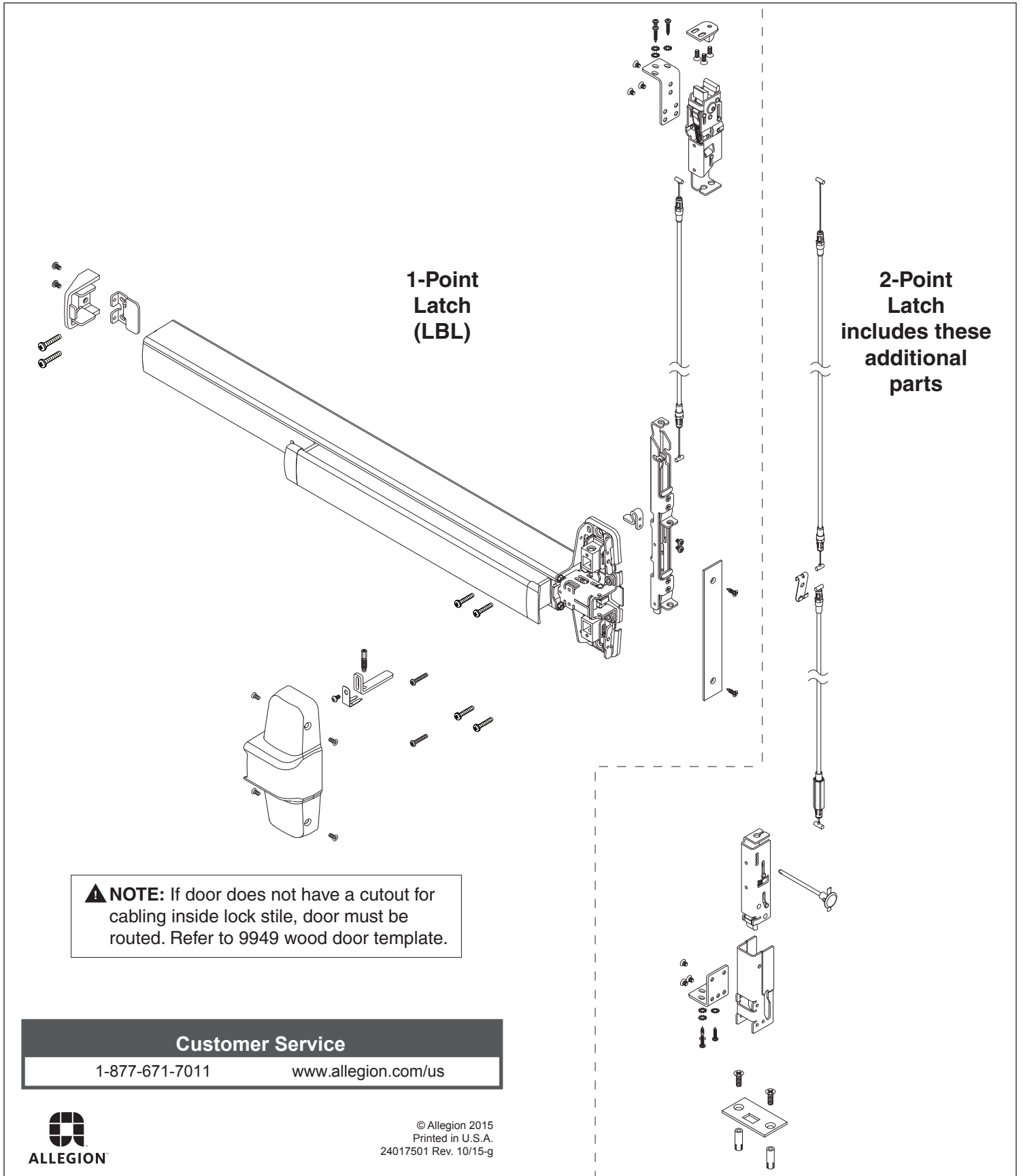
24017501

98/9949WDC

VON DUPRIN®

Concealed Vertical Device for Wood Doors

Installation Instructions



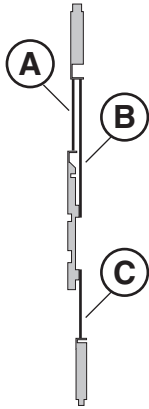
Customer Service

1-877-671-7011 www.allegion.com/us



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 24017501 Rev. 10/15-g

1 Identify Cables and Locations.



CABLE IDENTIFICATION (STANDARD SIZES) WOOD DOORS			
Door Opening Height	A	B	C
6' 8"	24078495	23925761	24078453
7' 0"	23925787	23925720	24078453
8' 0"	23925662	23925605	24078453
9' 0"	23925548	23925480	24078453
10' 0"	23925423	24009334	24078453

⚠ **NOTE:** Cables **A** and **B** are red. Cable **C** is white

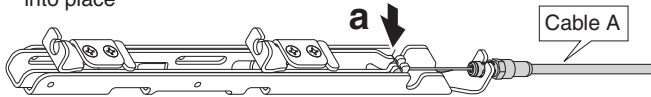
⚠ **NOTE:** Cables **B** is 6" longer than Cable **A**.

24492399

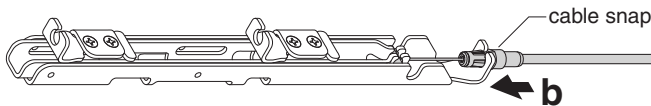
⚠ **NOTE:** 98/9949WDC 2-point latch with threshold requires cable 24492399 (sold separately) for Cable C.

2 Install Top Latch Cable Assembly.

a. Using **Cable A**, position cable end to clip on center slide, and snap it into place

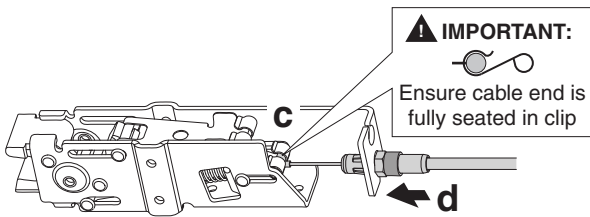


b. Push cable snap against center slide to secure cable



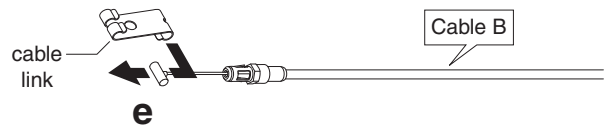
c. Position opposite end of **Cable A** to the top latch in the position marked red. Pull cable into clip to snap it into place.

d. Push cable snap against latch to secure cable

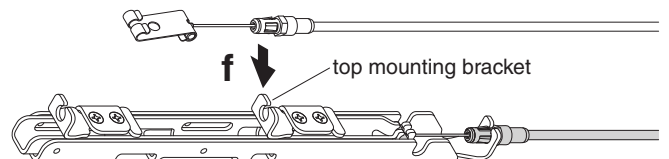


For 2-Point Latch Only

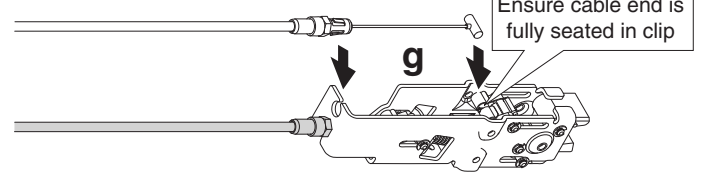
e. Snap cable link onto one end of **Cable B**



f. Install **Cable B** to the top mounting bracket

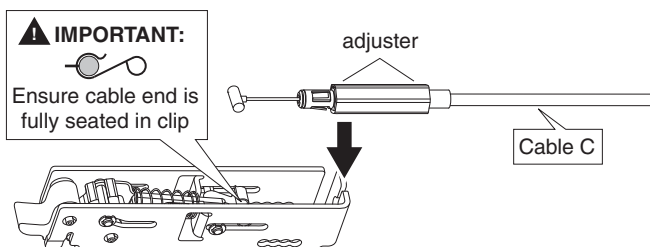


g. Install opposite end of **Cable B** to the remaining top latch position (marked as white)



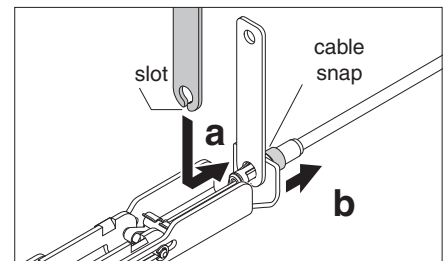
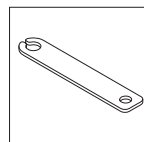
3 Install Bottom Latch Cable Assembly. For 2-Point Latch Only

One end of **Cable C** has an adjuster. Install this end to the bottom latch.

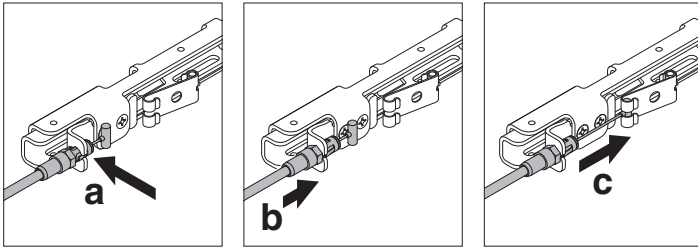


CABLE REMOVAL

A cable removal tool has been provided. Slot in tool fits over cable, holding tabs down. Pull on cable snap to loosen cable for removal.



4 Temporarily Attach Bottom Latch Cable Assembly to Center Slide.
For 2-Point Latch Only



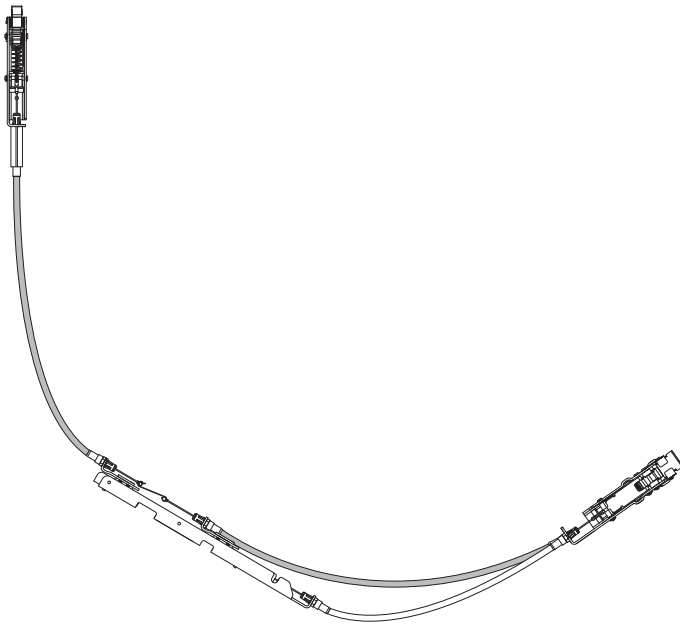
Position **Cable C** to bottom mounting bracket on center slide

Push cable snap against mounting bracket to secure cable

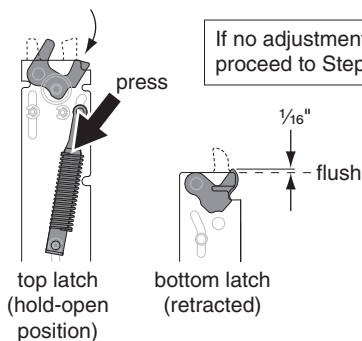
Pull on cable end to attach it to the cable link

5 Determine if Bottom Latch Retraction Adjustment is Necessary.
For 2-Point Latch Only

- a. Flex the cable into an L-shape as shown to simulate the installed condition of the latches.



- b. To determine whether an adjustment is required, actuate the top latch to the hold-open position by pressing down on the connecting rod. Bottom latch should retract to within $\frac{1}{16}$ " of flush. If it does not, an adjustment is necessary.

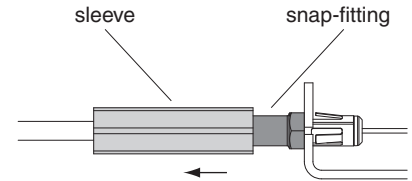


6 Adjust Bottom Latch Retraction (if necessary).
For 2-Point Latch Only

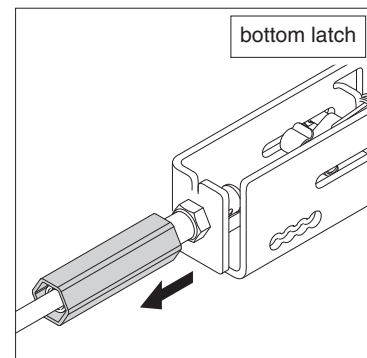
NOTE: Adjustment must be made while the top latch is in the hold-open position, with cable flexed into an L-shape to simulate the installed condition of the latches.



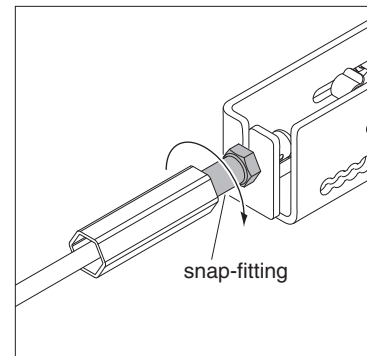
These (2) hex components are used to make the adjustment.



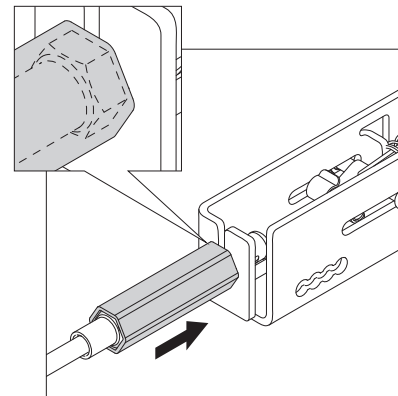
- a. Pull back and hold the spring-loaded sleeve.



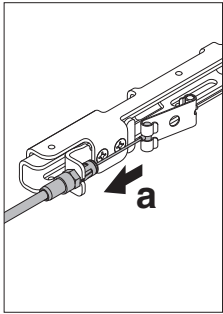
- b. While holding the sleeve in place, rotate the barrel of the snap-fitting clockwise by hand until the bottom latch is retracted to within $\frac{1}{16}$ " of flush.



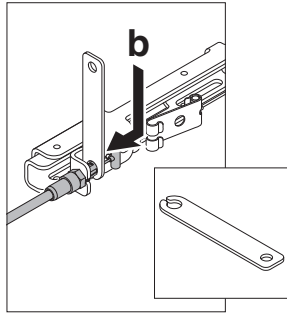
- c. Slowly release the sleeve, confirming it has seated over the hex end of the snap-fitting.



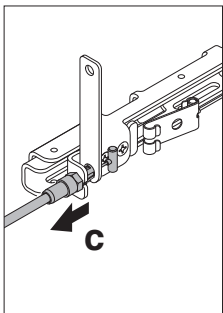
7 Disconnect Bottom Latch Cable Assembly from Center Slide.
For 2-Point Latch Only



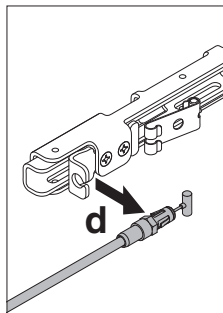
Disconnect cable end from cable link



A cable removal tool has been provided. Slot in tool fits over cable, holding tabs down

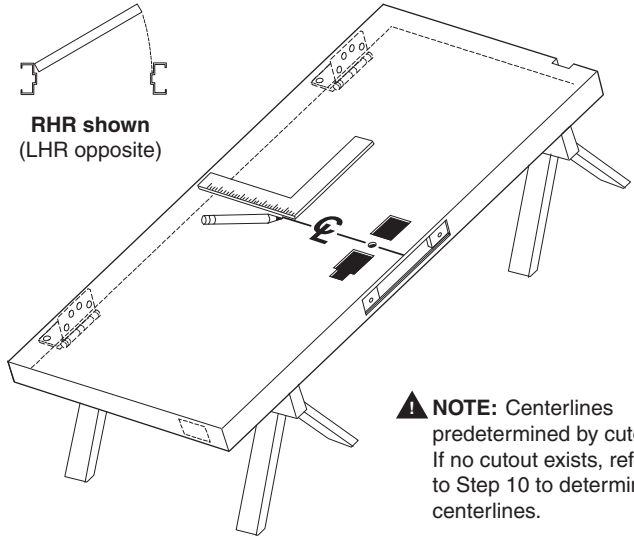


Pull on cable snap to loosen cable for removal



Remove bottom latch cable assembly from center slide.

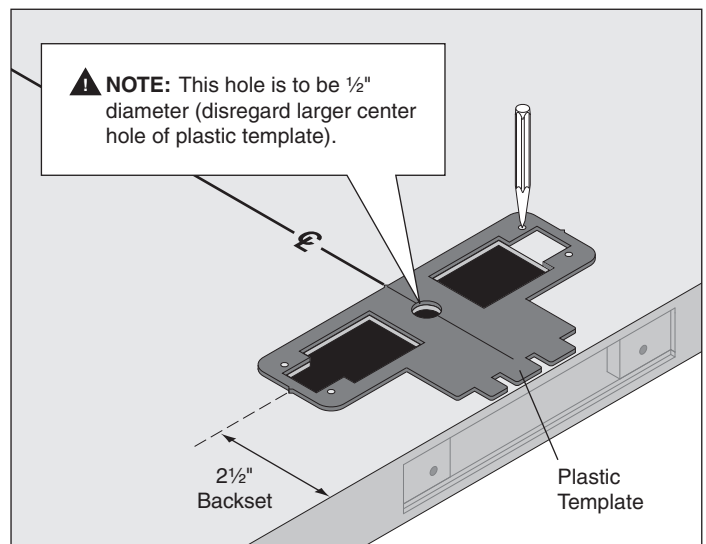
8 With Door Laying Flat, Draw Horizontal and Vertical Device Center Lines (☉).



RHR shown (LHR opposite)

NOTE: Centerlines predetermined by cutout. If no cutout exists, refer to Step 10 to determine centerlines.

9 Align Plastic Template to Mark and Prepare Door, if Required.

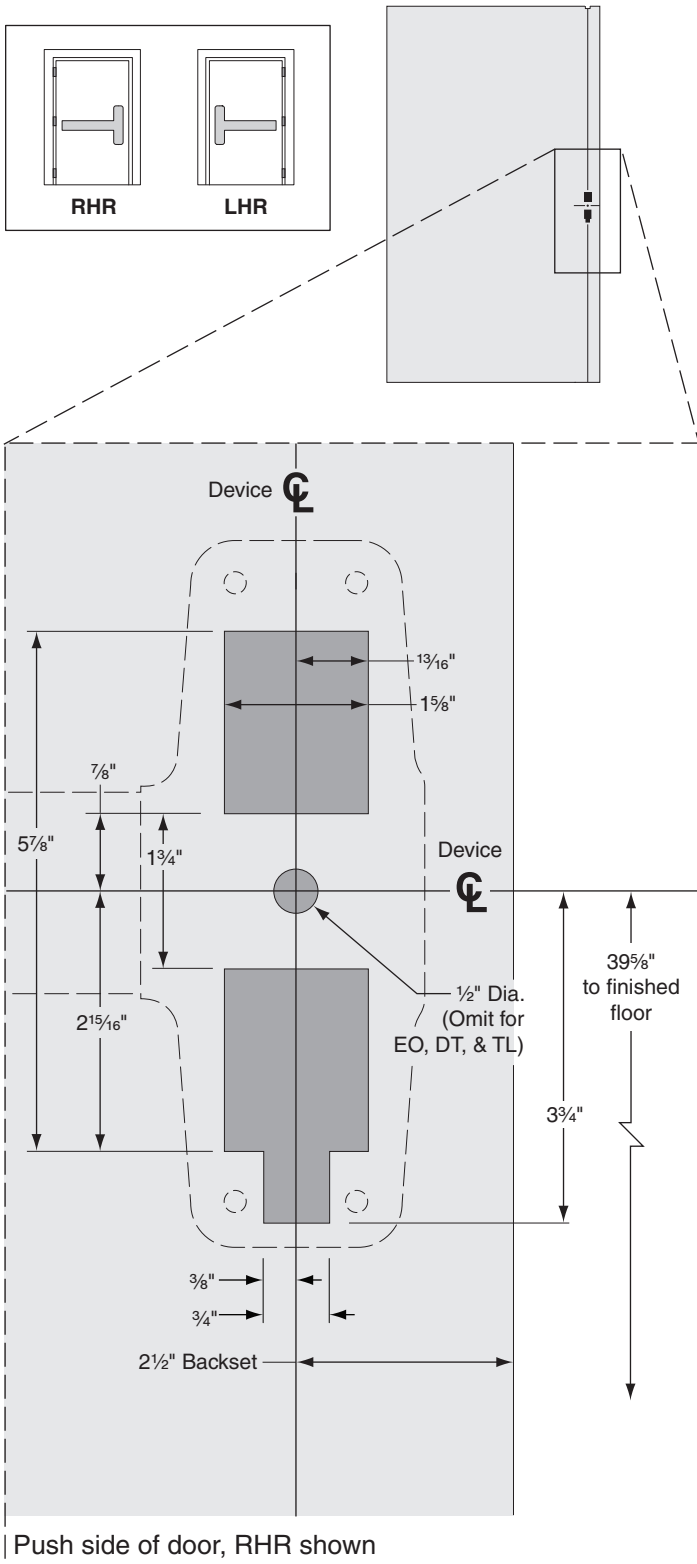


NOTE: This hole is to be 1/2" diameter (disregard larger center hole of plastic template).

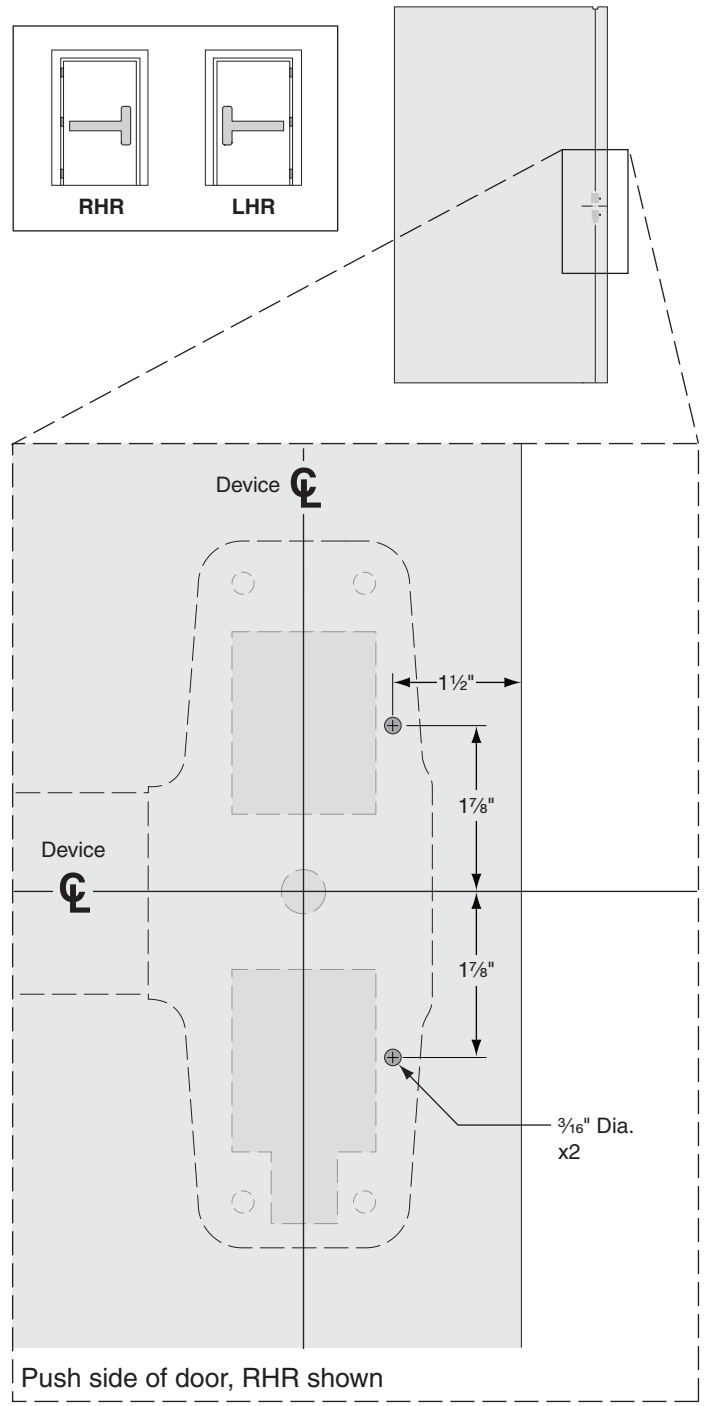
2 1/2" Backset

Plastic Template

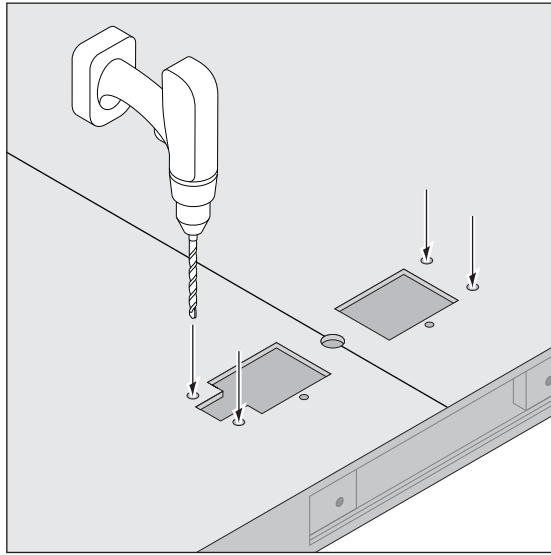
10 If Necessary, Prepare Door Cutouts.



11 Prepare 2 Center Slide Holes.



12 Prepare 4 Holes.

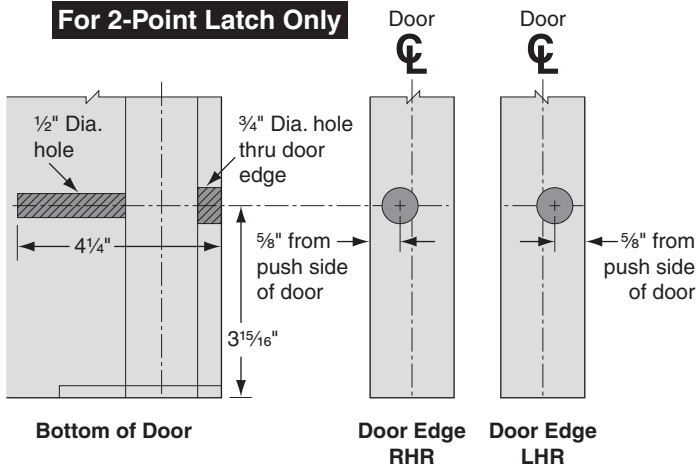


Surface Mount
1/8" Drill Pilot 1" Deep

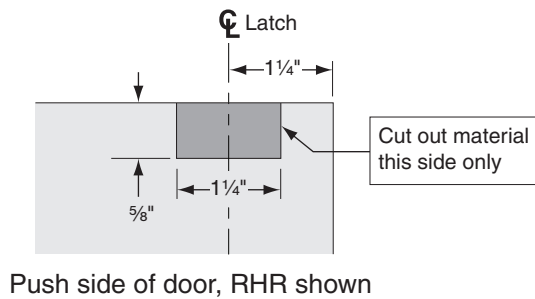
Sex Bolts or 990 Trims
1 3/32" Drill thru

OR

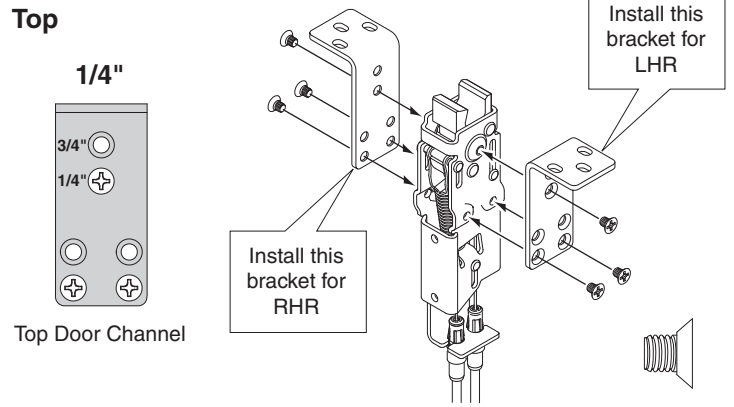
13 Prepare Access Hole for Bottom Latch Adjustment Pin.
For 2-Point Latch Only



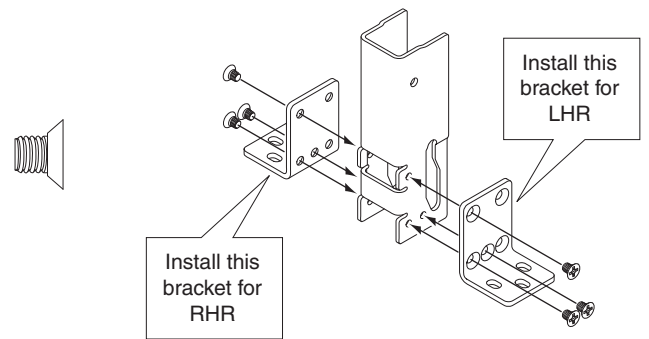
14 If Necessary, Prepare Door for Top Strike Cutout.



15 Assemble Latch Mounting Bracket(s).



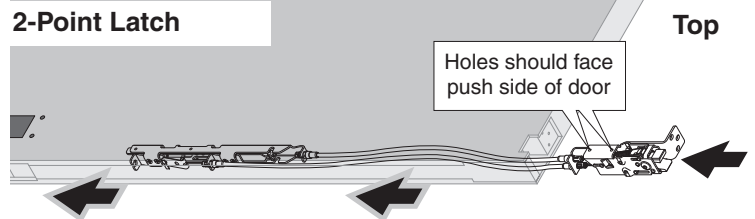
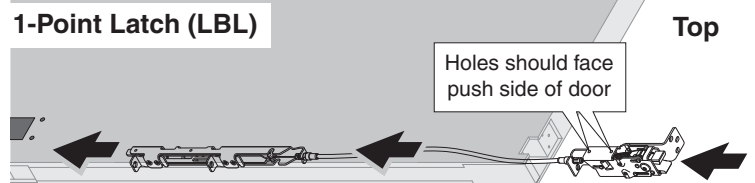
Bottom
For 2-Point Latch Only



16 Insert Center Slide Assembly Thru Top Door Pocket.

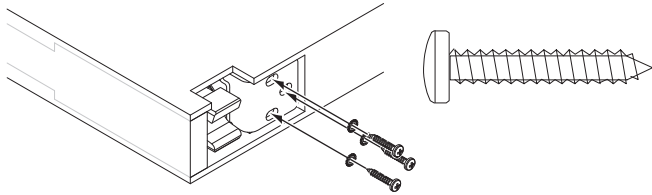
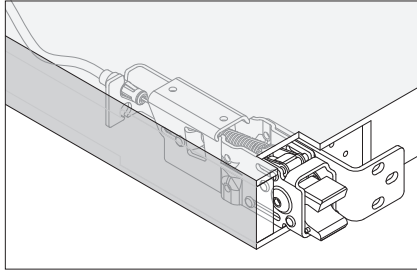
NOTE: Confirm top latch is in correct orientation before proceeding.

NOTE: It is normal for the cable to bend inside the door, forcing the latch outward.



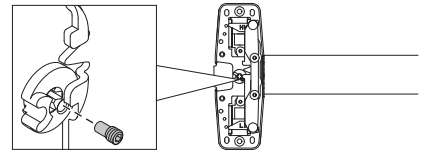
17 Secure Top Latch Mounting Bracket with 3 Screws.

NOTE: It is normal for the cable to bend inside the door, forcing the latch outward as shown here.



19 If Necessary, Remove NL Drive Screw.

NL drive screw
Factory installed on back of center case



With the NL drive screw removed, key locks and unlocks lever, knob, or thumb piece. For the trims listed below, **REMOVE** NL drive screw.

996L
996K

696TP
697TP

990TP

With the NL drive screw installed, key retracts latch bolt. **DO NOT** remove NL drive screw for the following applications:

NL, EO, DT trims and 98/99-2 double cylinder devices (i.e. TP-2, L-2, and K-2).

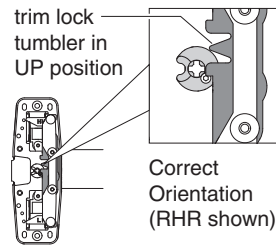
*996L-BE
*996K-BE

*E996L
*E996L-BE

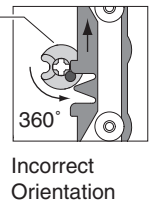
*696TP-BE
*697TP-BE

*990TP-BE

* If the trim being installed is "BE" (i.e. 996L-BE), the trim lock tumbler on the back of the device must be in the **UP** position before device is installed. This allows the trim to be unlocked at all times.

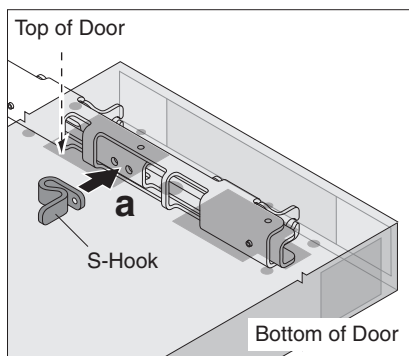


If necessary, remove drive screw and rotate cam until trim lock tumbler is in UP position, then reinstall drive screw

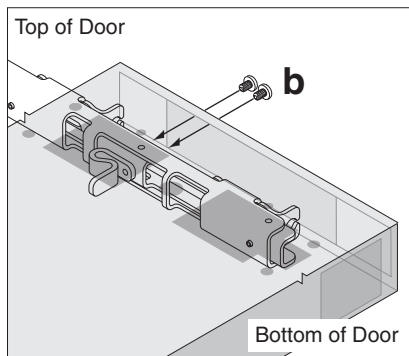


18 Install S-Hook.

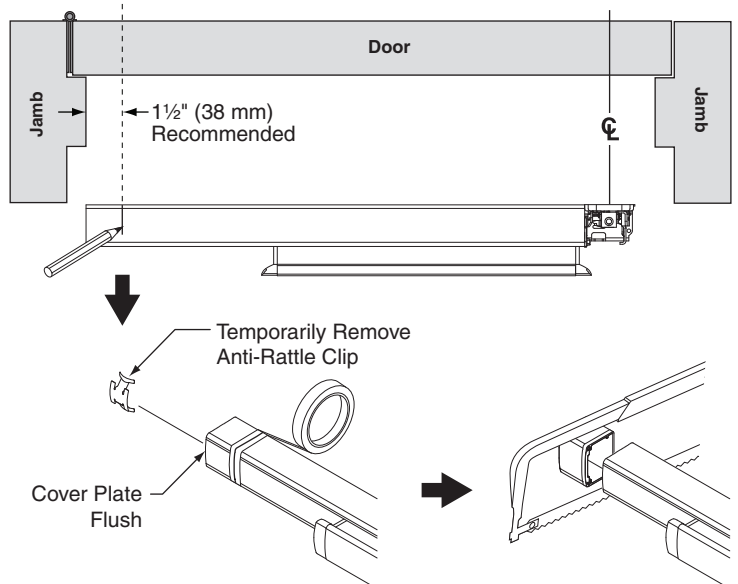
Reach into push side face of door and hold S-hook in place



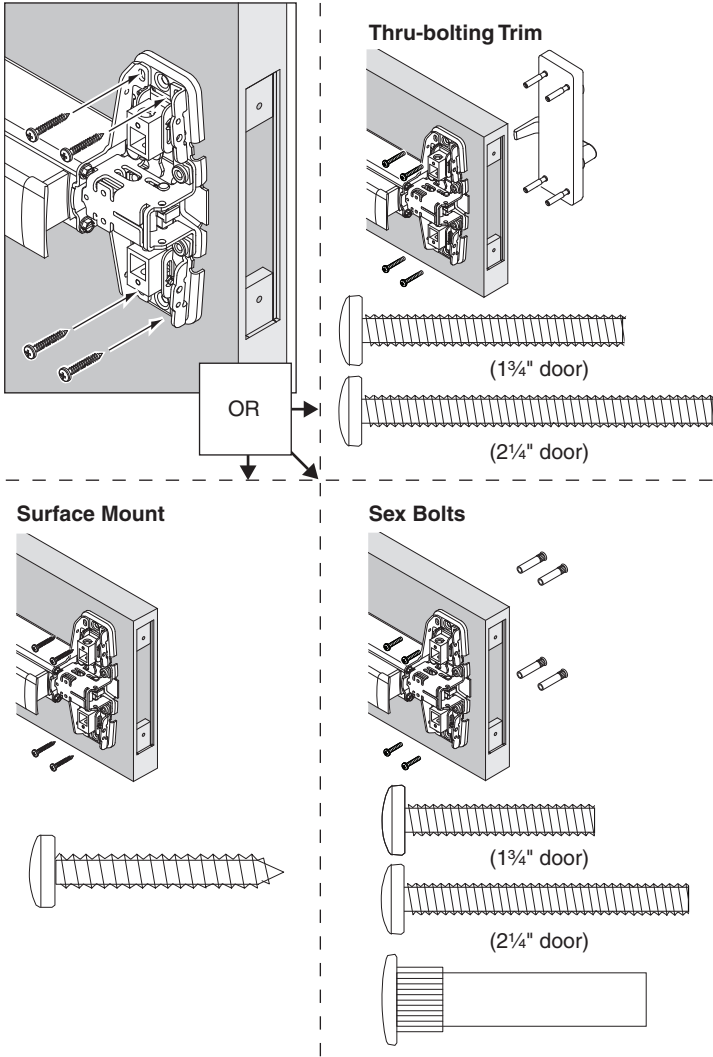
While holding onto S-hook, install finger screws through pocket in edge of door to secure S-hook



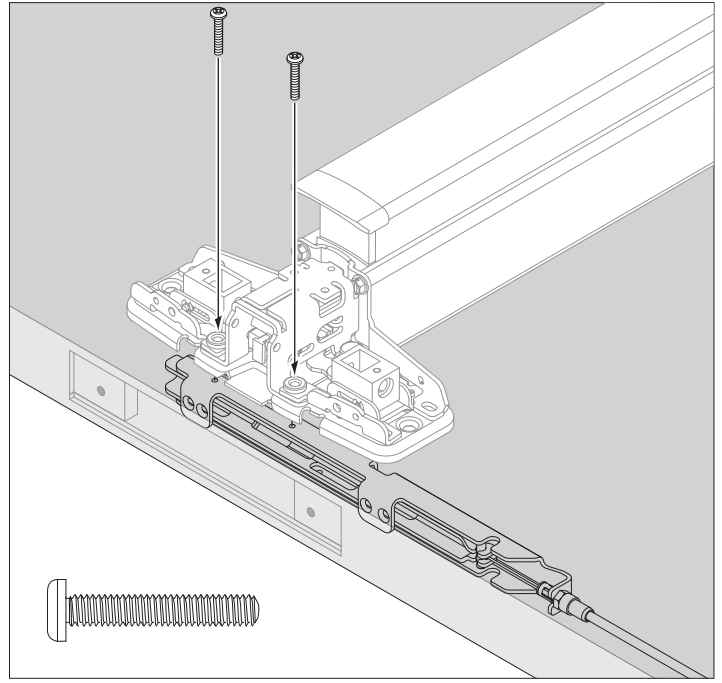
20 If Necessary, Cut Device.



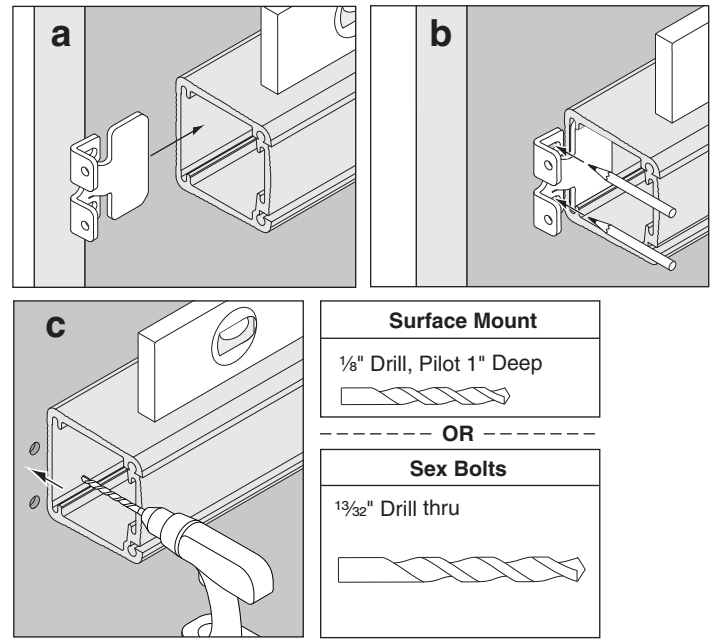
21 Attach Center Case to Door.



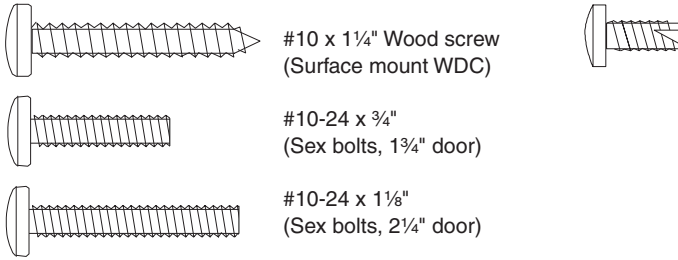
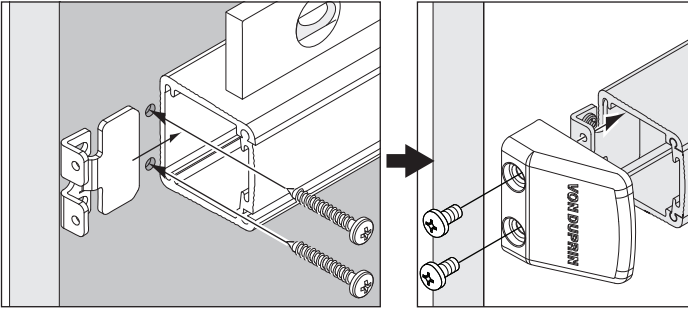
22 Install 2 Center Slide Mounting Screws.



23 Mark and Prepare 2 Holes.

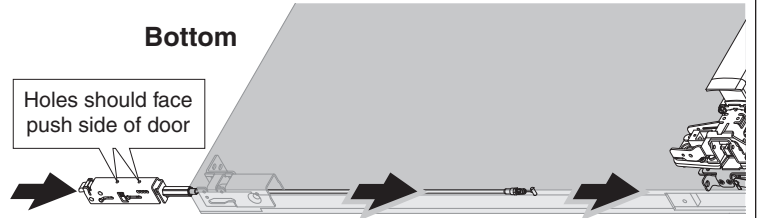


24 Install End Cap Bracket and End Cap.



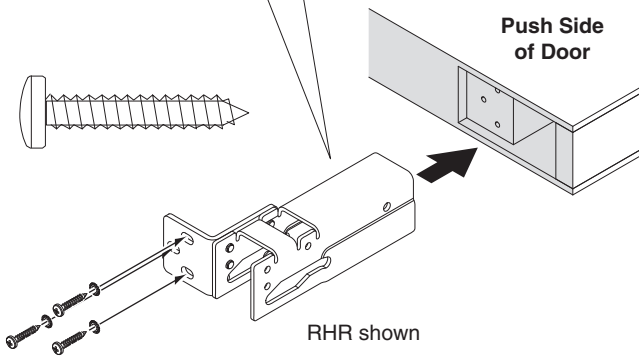
26 Slide Lower Cable / Bottom Latch Assembly Thru Bottom Latch Housing and into Bottom Door Pocket.
For 2-Point Latch Only

NOTE: Confirm bottom latch is in correct orientation before proceeding.

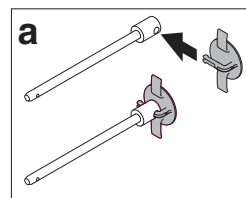
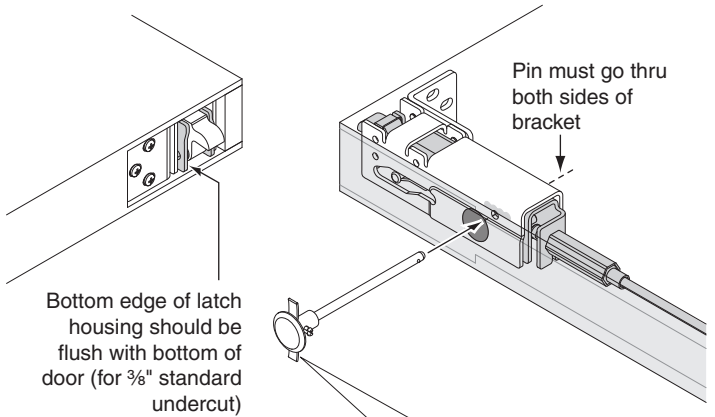


25 Install Bottom Latch Mounting Bracket Assembly to Bottom of Door with 3 Screws.
For 2-Point Latch Only

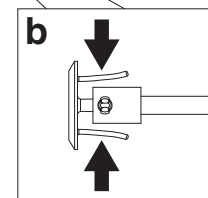
NOTE: Confirm correct orientation of assembly before proceeding. Open side of housing should face pull side of door.



27 Insert Latch Adjustment Pin to Hold Bottom Latch in Place.
For 2-Point Latch Only



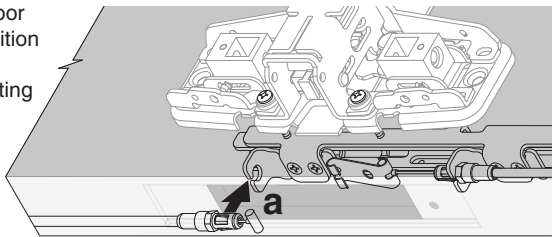
Assemble pin



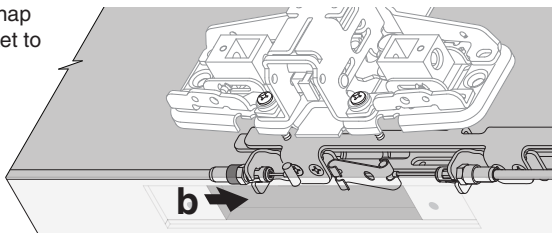
Squeeze tabs on cap, then insert pin

28 Attach Lower Cable Assembly to Center Slide.
For 2-Point Latch Only

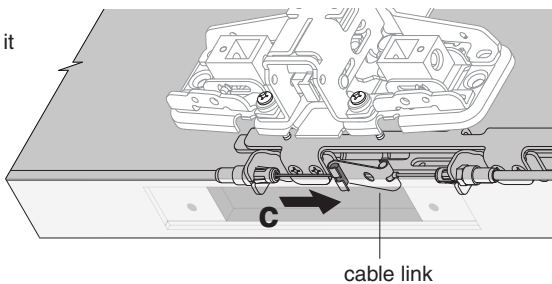
Reach into door pocket to position cable end to bottom mounting bracket



Push cable snap against bracket to secure cable



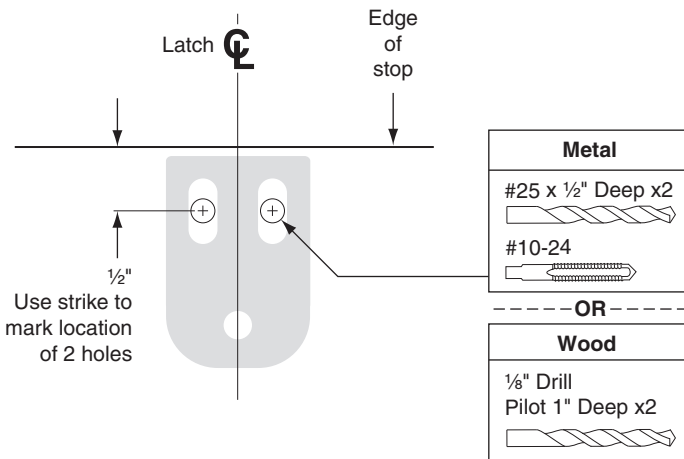
Pull on cable end to attach it to cable link



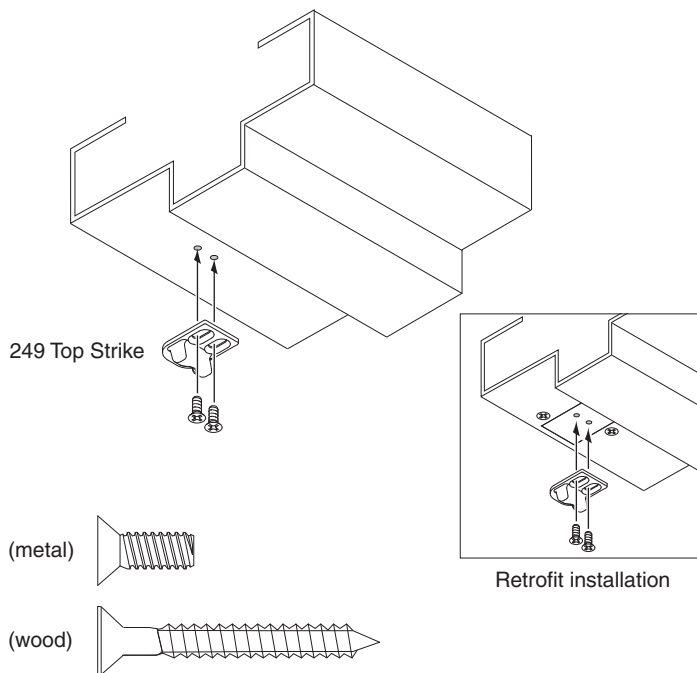
29 Hang Door on Frame.

CAUTION: For 2-point latches, bottom latch cannot be in locked position while hanging door on frame. Latch must be retracted.

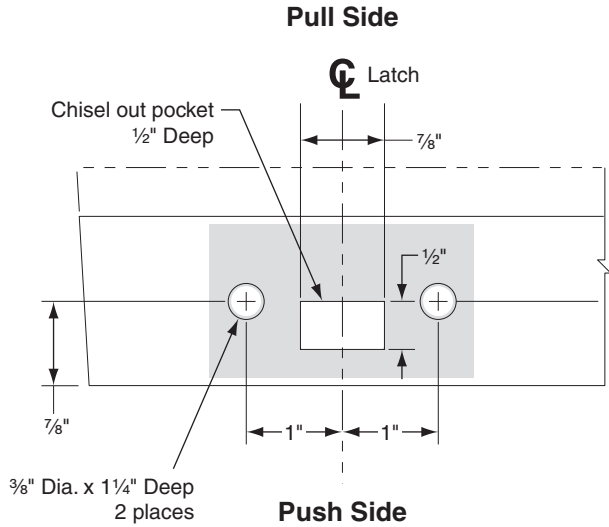
30 Prepare Door Frame for Top Strike.



31 Install 2 Top Strike Screws Using the Slot Features on the Strike.

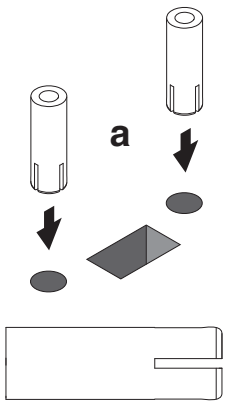


32 Prepare Floor for Bottom Strike.
For 2-Point Latch Only

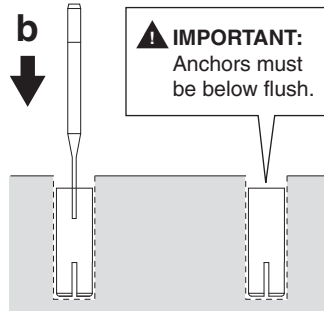


33 Install Bottom Strike.
For 2-Point Latch Only

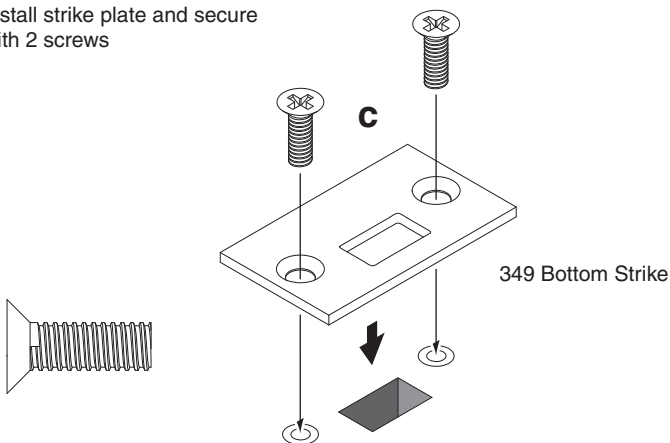
Clear holes of debris, then drop in anchors (slotted end first)



Secure the anchors using a hammer and punch



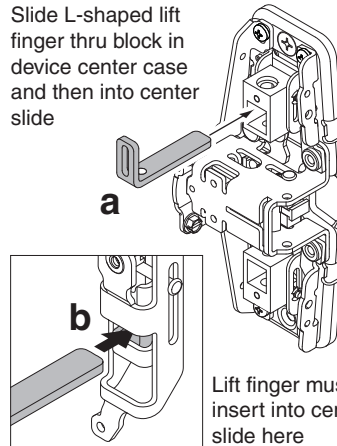
Install strike plate and secure with 2 screws



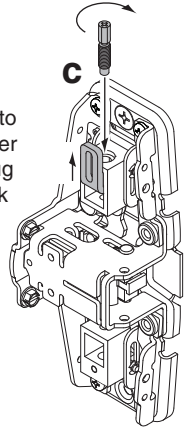
34 Install Lift Finger and Retainer Clip.

NOTE: The lift finger installation and adjustment must be performed while the latches are in the extended (latched) position.

Slide L-shaped lift finger thru block in device center case and then into center slide

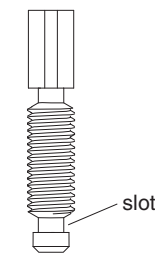


Insert adjustment screw and rotate with screwdriver to raise lift finger until it is snug against block

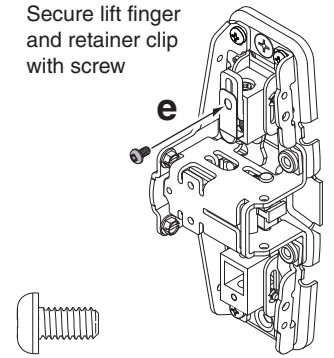


Lift finger must insert into center slide here

Install retainer clip against lift finger, snapping it into the slot of the adjustment screw



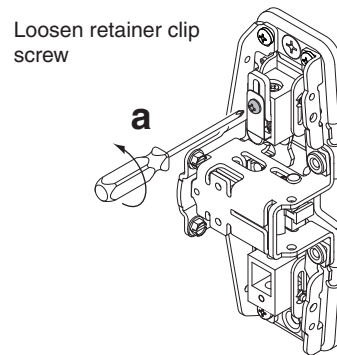
Secure lift finger and retainer clip with screw



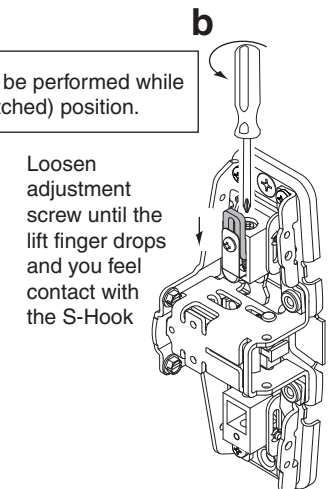
35 Adjust Lift Finger.

NOTE: Lift finger adjustment must be performed while the latches are in the extended (latched) position.

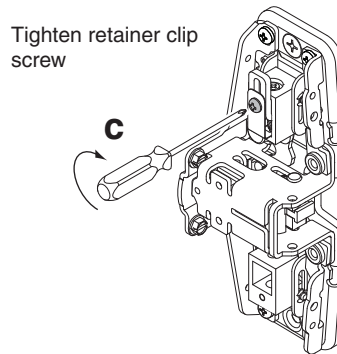
Loosen retainer clip screw



Loosen adjustment screw until the lift finger drops and you feel contact with the S-Hook



Tighten retainer clip screw

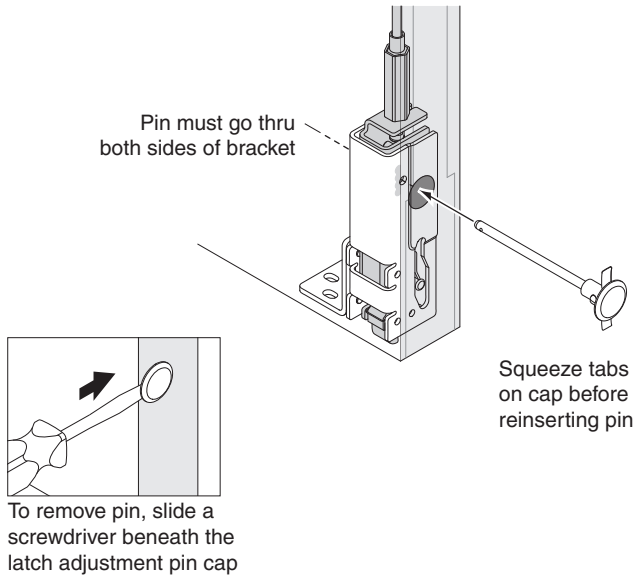


36 Perform Functional Test of Door.

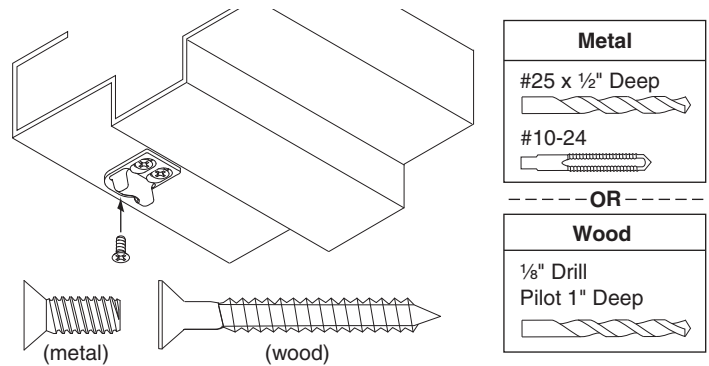
- Depress pushbar. Door should begin to open when pushbar is nearly fully depressed. If necessary, refer to Step 35 to readjust lift finger.
- With door closed, top latch should be secure.

For 2-Point Latch Only

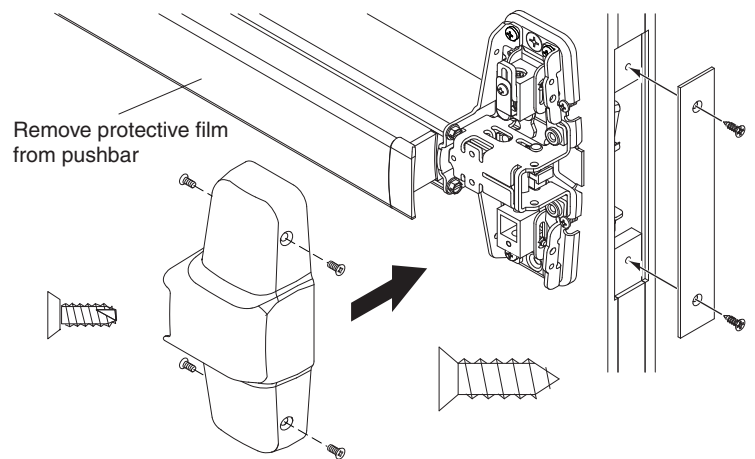
- With door closed, bottom latch should be secure.
- Confirm that bottom latch does not drag against floor when door is opened. If this occurs, remove latch adjustment pin and raise latch, then reinsert pin in next notch.



37 Adjust Top Strike as Necessary, then Install the Third Strike Screw to Fix the Strike Position.



38 Install Center Case Cover and Door Cover Plate.



OPTIONAL EQUIPMENT CD (CYLINDER DOGGING)

- Remove mortise cylinder cam and reinstall in reverse (Figure 1).
- Insert key and rotate cam to install the cylinder to the cover plate (Figure 2).
- Remove key to slide cover plate in position in the mechanism case.

CD function conversion

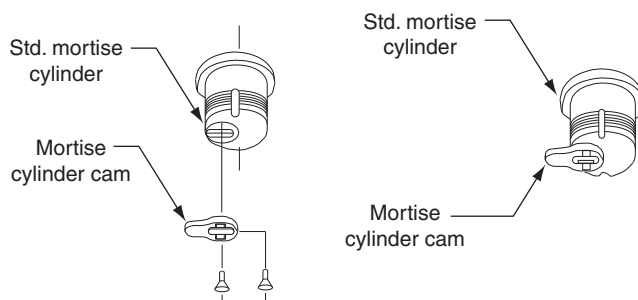


Figure 1

Dogging procedure

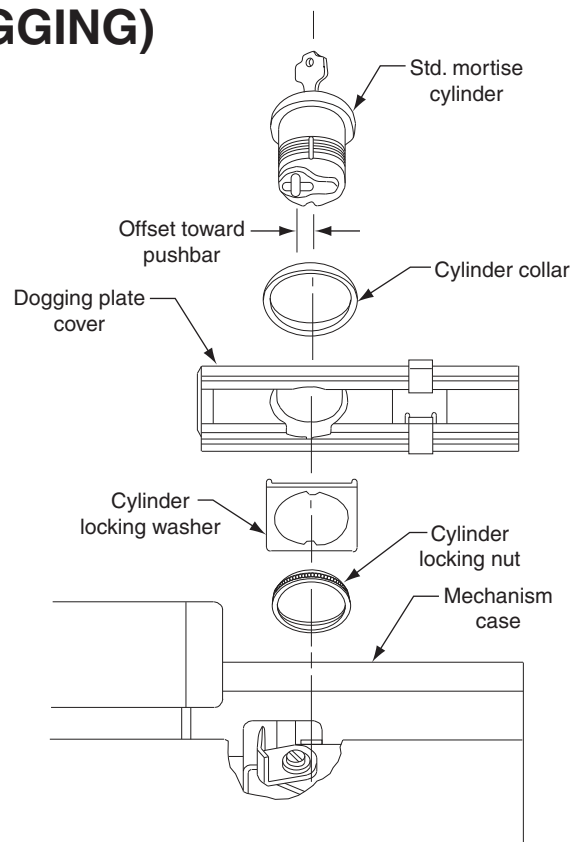
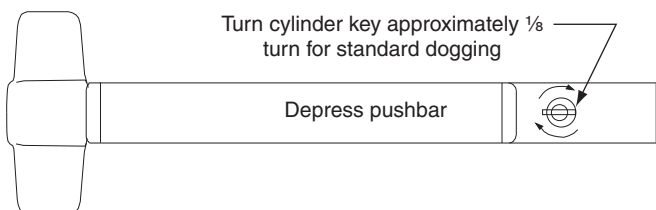


Figure 2