



23970734

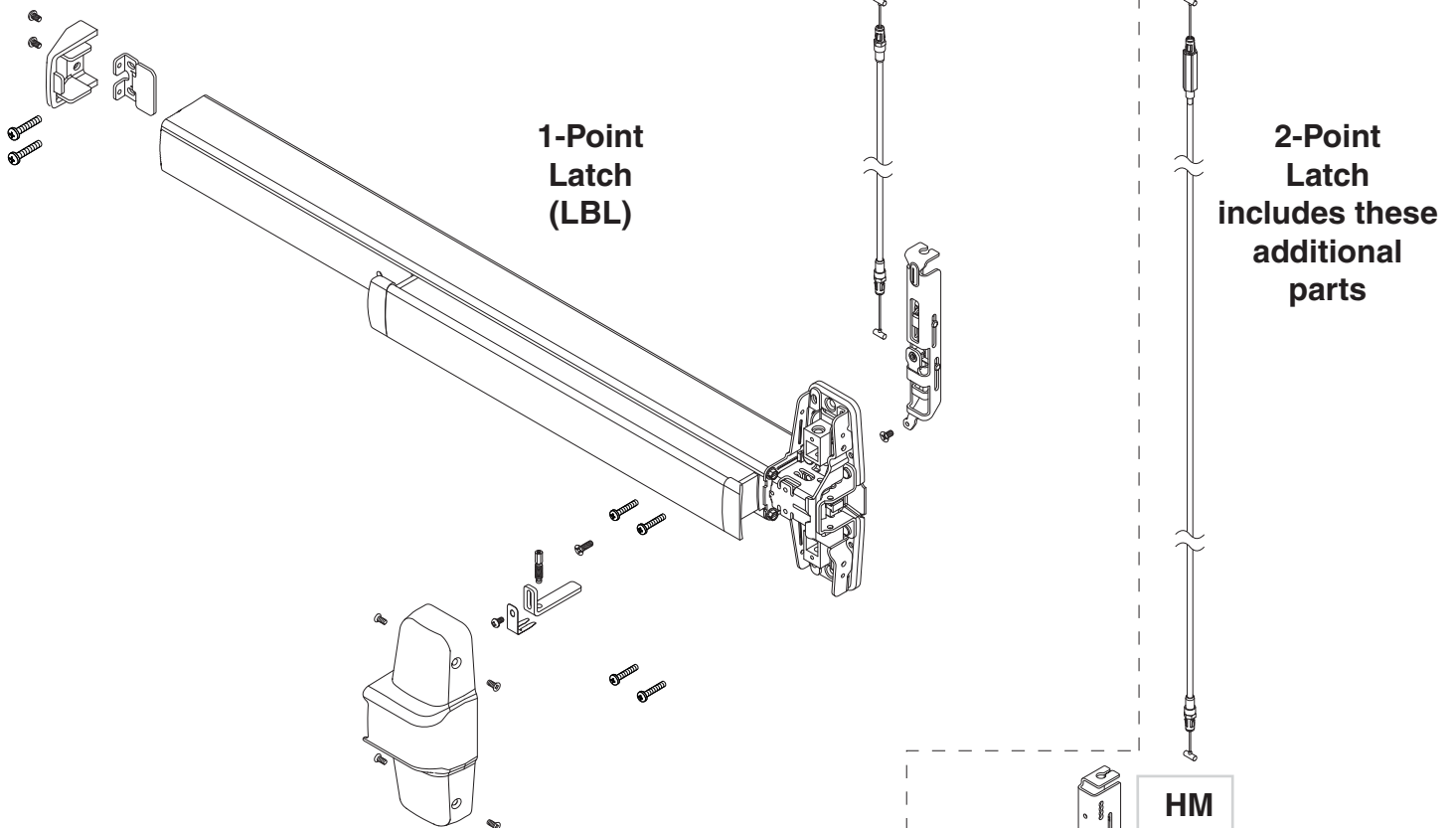
98/9949 CS 98/9949

VON DUPRIN®

Installation Instructions

This instruction covers new installation of the 98/9949 concealed vertical device for hollow metal and aluminum doors.

Also covered is the CS 98/9949 retrofit cabling system for converting 98/9947 Series to 98/9949 Series (compatible with models 98/9947, 98/9947-F, 98/9947-LBR, and 98/9947-F-LBR).



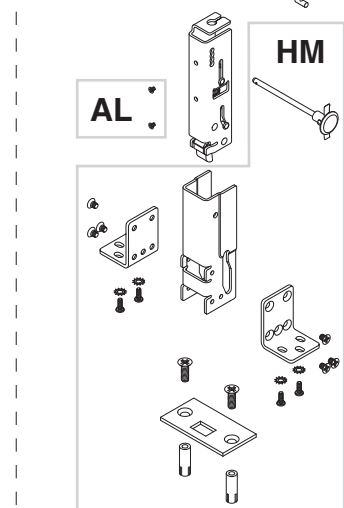
- HM** = for Hollow Metal Door applications
- AL** = for Aluminum Door applications
- RF** = for Hollow Metal Door Retrofit applications

Customer Service

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23970734 Rev. 03/14-g

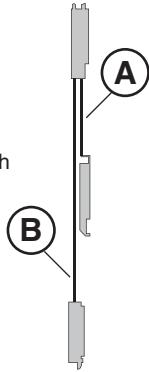


1 Identify Cables and Locations.

(if not preinstalled in door)

NOTE: For retrofit installations, begin at Step 5.

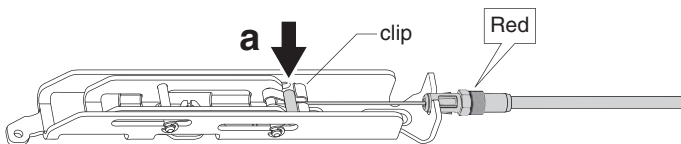
For easy identification, each cable is labeled with part number and location.



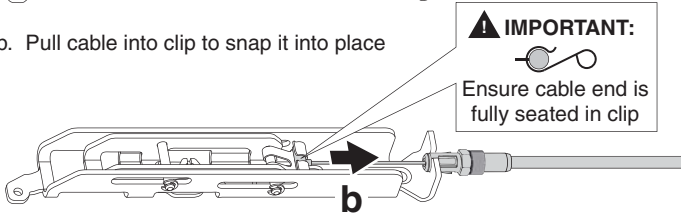
CABLE IDENTIFICATION (STANDARD SIZES)				
Door Opening Height	HOLLOW METAL AND WIDE STILE ALUMINUM DOORS		NARROW STILE ALUMINUM DOORS	
	A Top Cable (Red)	B Bottom Cable (White)	A Top Cable (Red)	B Bottom Cable (White)
6' 8"	23925795	23926207	23925803	23926215
7' 0"	23925761	23926173	23925761	23926173
8' 0"	23925647	23926058	23925647	23926058
9' 0"	23925522	23925936	23925522	23925936
10' 0"	23925407	23925811	23925407	23925811

2 Install Cable(s).

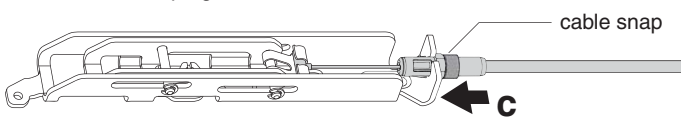
a. Position red cable end to clip on center slide



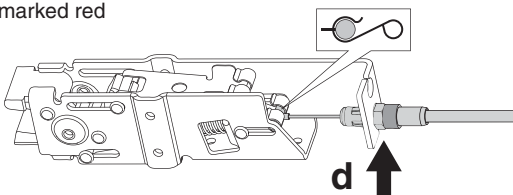
b. Pull cable into clip to snap it into place



c. Push cable snap against center slide to secure cable

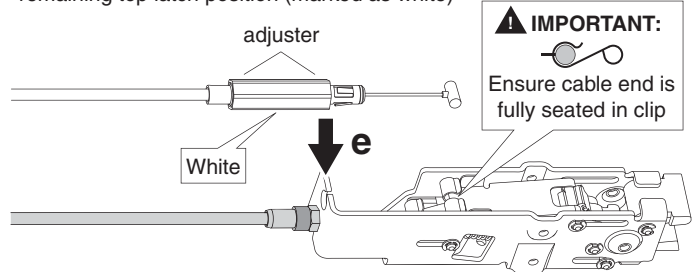


d. In the same way, install opposite end of red cable to top latch in the position marked red

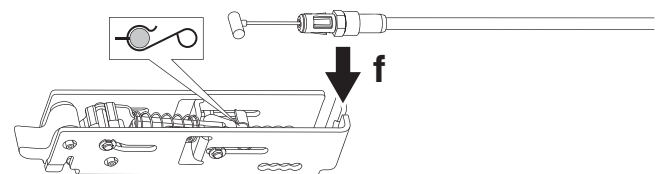


For 2-Point Latch Only

e. There is an adjuster on one end of the white cable. Install this end to the remaining top latch position (marked as white)

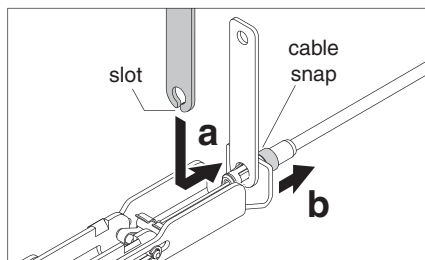
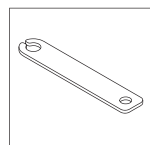


f. Install opposite end of white cable to bottom latch



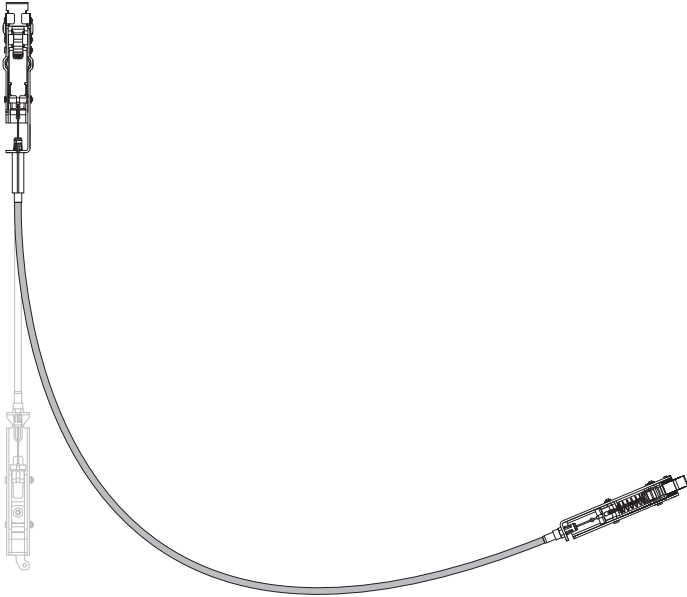
CABLE REMOVAL

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.

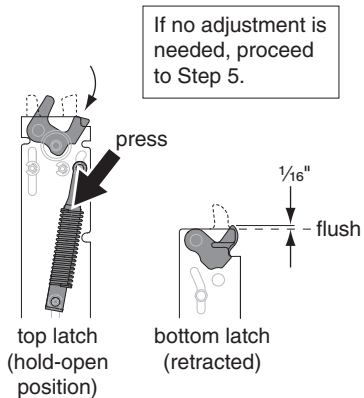


3 Determine if Bottom Latch Retraction Adjustment is Necessary.
For 2-Point Latch Only

- 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.

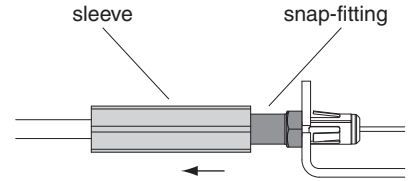


4 Adjust Bottom Latch Retraction (if necessary).
For 2-Point Latch Only

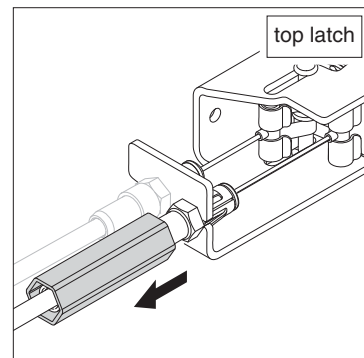
NOTE: Adjustment must be made while the top latch is in the hold-open position, with cable flexed into an L-shape to simulate the installed condition of the latches.



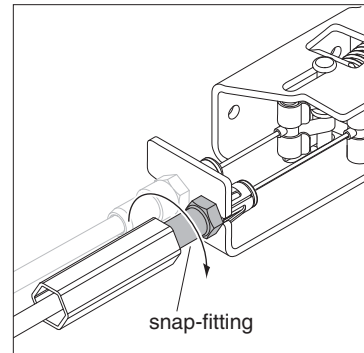
These (2) hex components are used to make the adjustment.



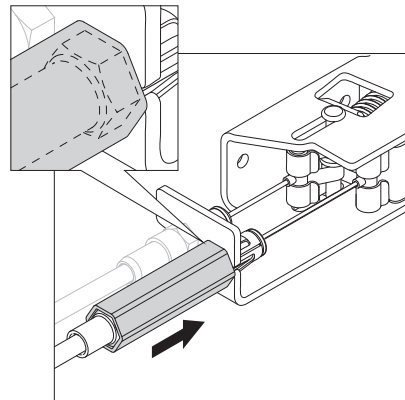
- a. Pull back and hold the spring-loaded sleeve.



- 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.



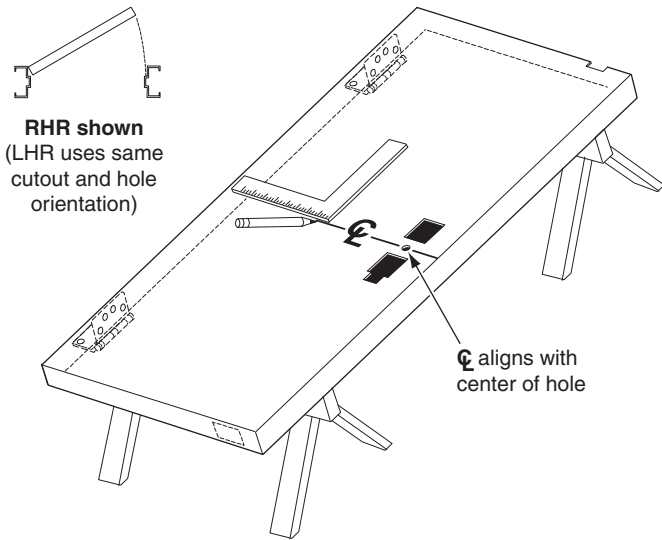
- c. Slowly release the sleeve, confirming it has seated over the hex end of the snap-fitting.



5 If Retrofit Installation

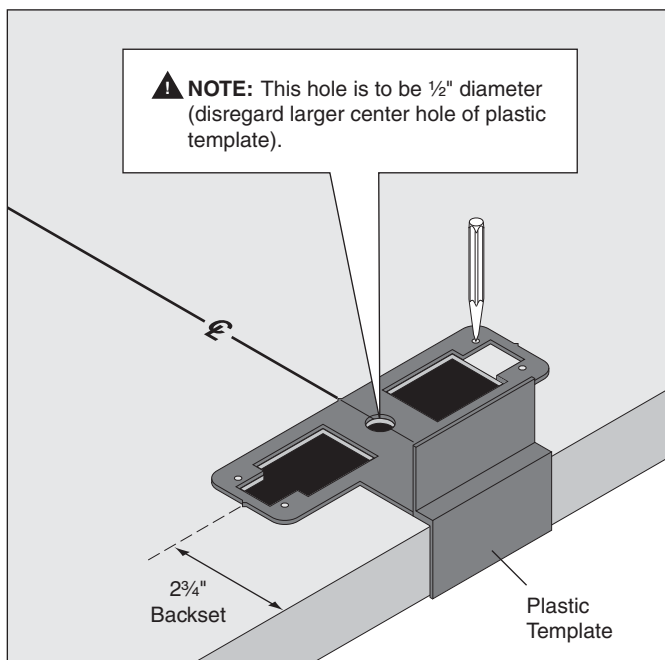
- Remove device from existing door.
- Remove existing door.
- Remove and discard existing strikes.

6 With Door Laying Flat, Draw Horizontal Device Center Line (☿).

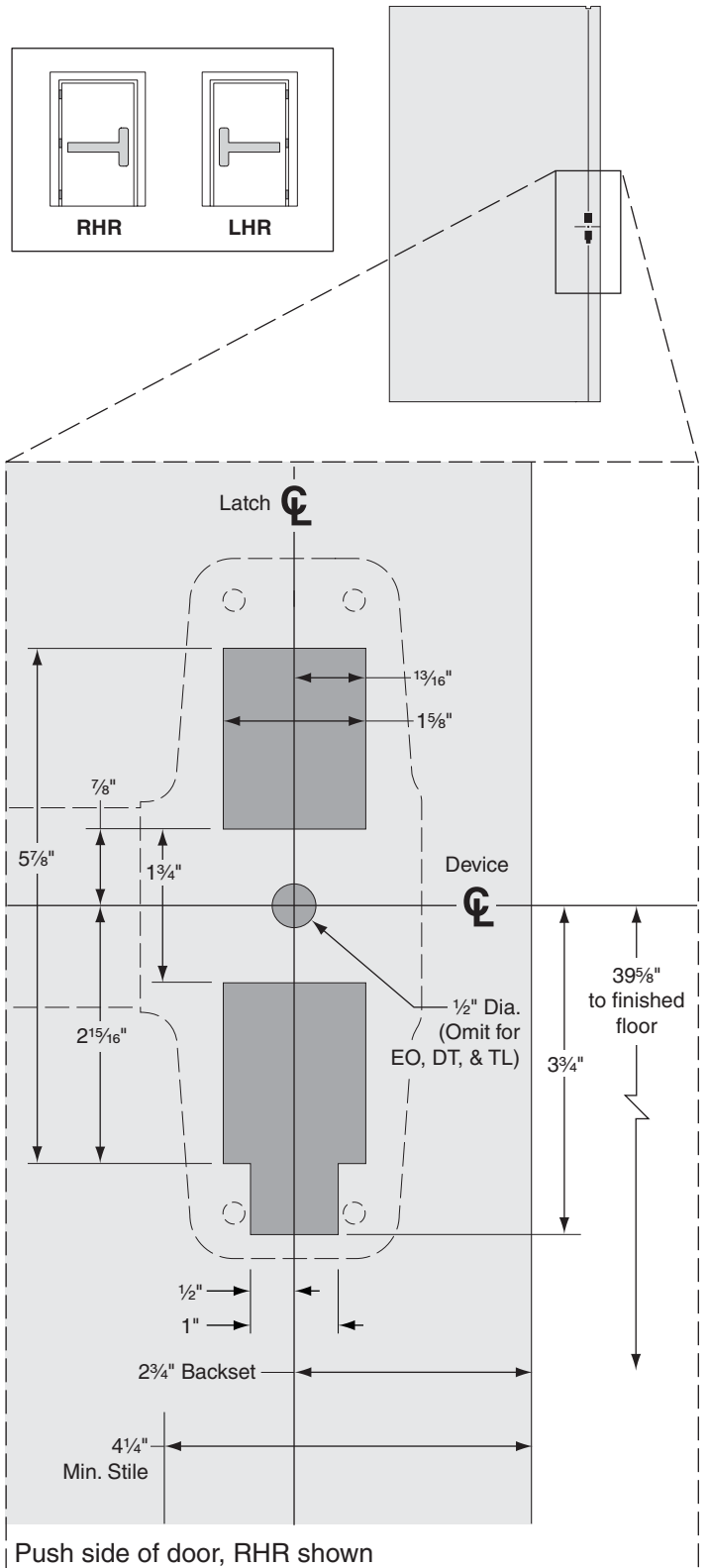


NOTE: Centerline is predetermined by cutout. If no cutout exists, refer to Step 8 to determine centerline.

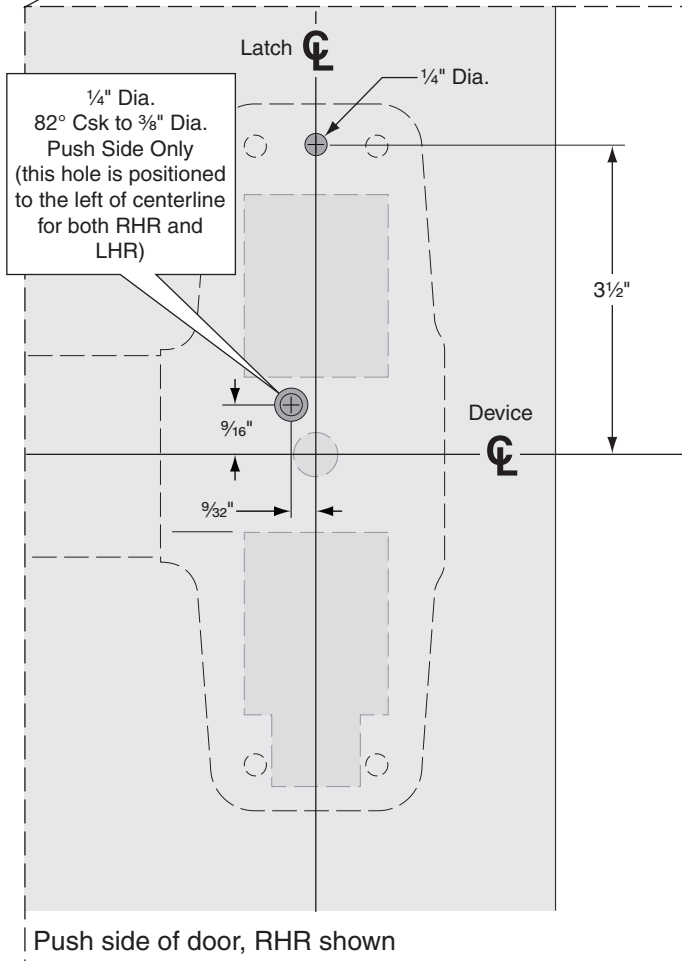
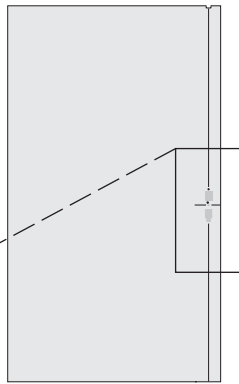
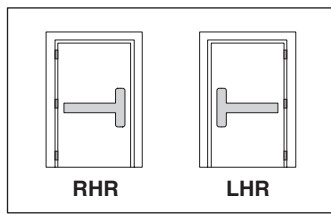
7 Align Plastic Template and Mark Door.



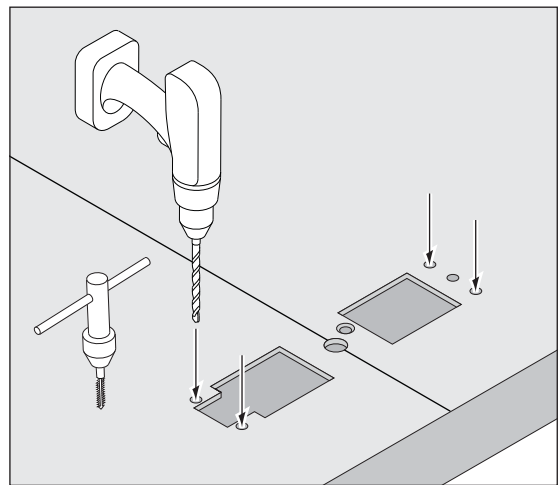
8 If Necessary, Prepare Door Cutouts.



9 If Necessary, Prepare 2 Center Slide Holes.



10 Prepare 4 Holes per Plastic Template.



Surface Mount (metal doors only)

#25

#10-24

OR

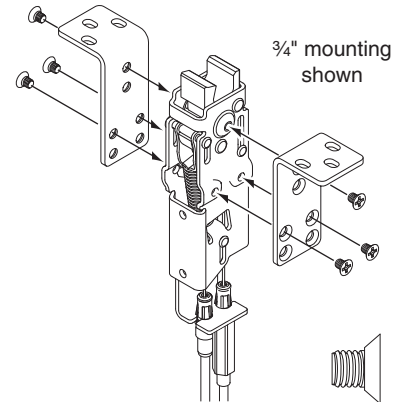
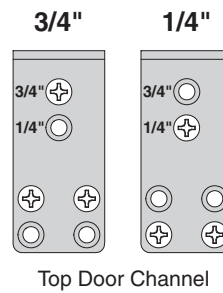
Sex Bolts or 990 Trims

1/4" (device side)

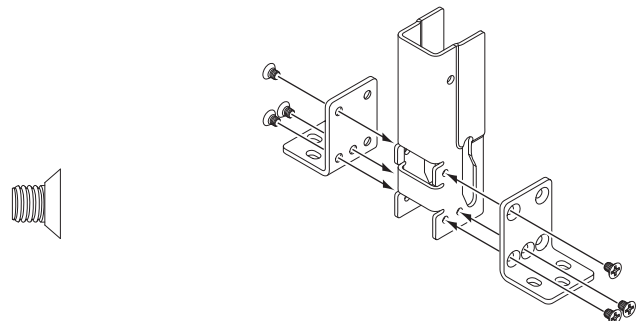
1 3/32" (trim side)

11 Assemble Latch Mounting Brackets. **Hollow Metal**

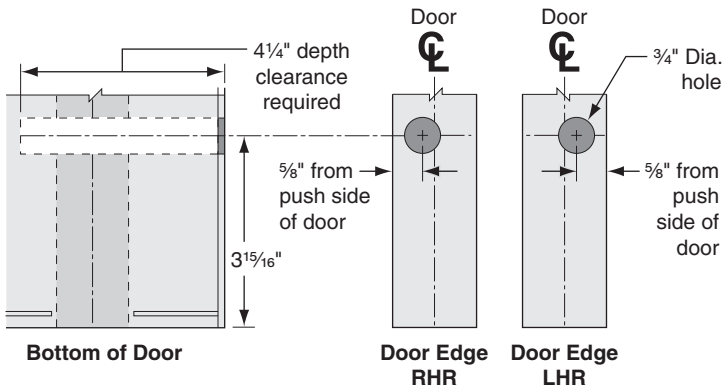
Top



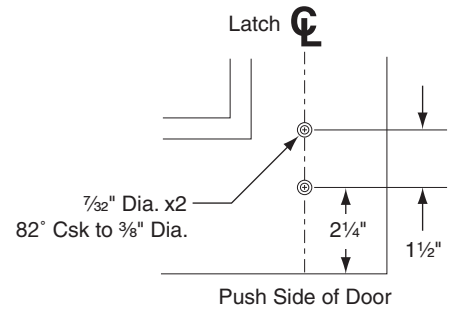
Bottom
For 2-Point Latch Only



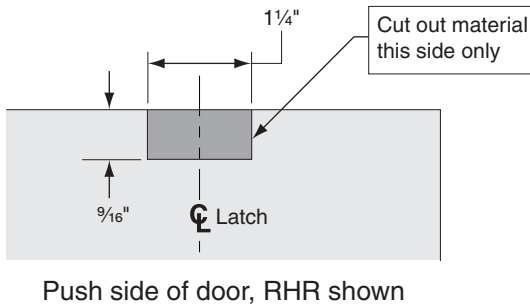
12 Prepare Access Hole for Bottom Latch Adjustment Pin.
Hollow Metal For 2-Point Latch Only



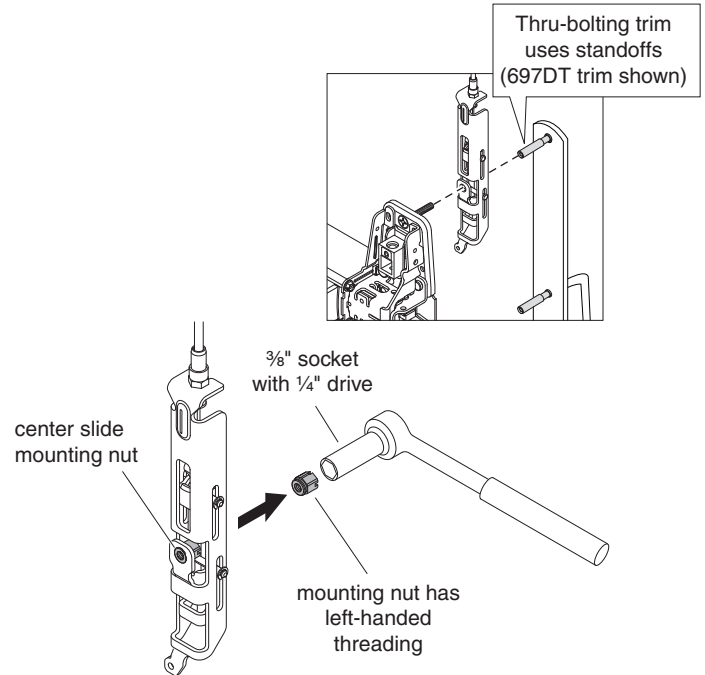
15 Prepare Bottom of Door for Latch Mounting.
Aluminum For 2-Point Latch Only



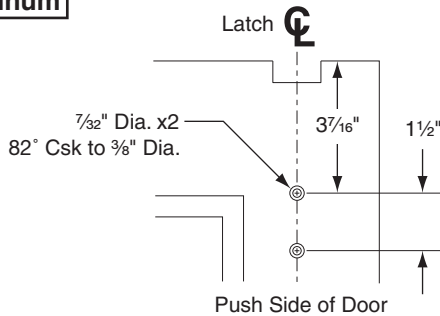
13 If Necessary, Prepare Door for Top Strike Cutout.



16 If Using 696/697 Thru-Bolting Trim, Remove Center Slide Mounting Nut.



14 Prepare Top of Door for Latch Mounting.
Aluminum

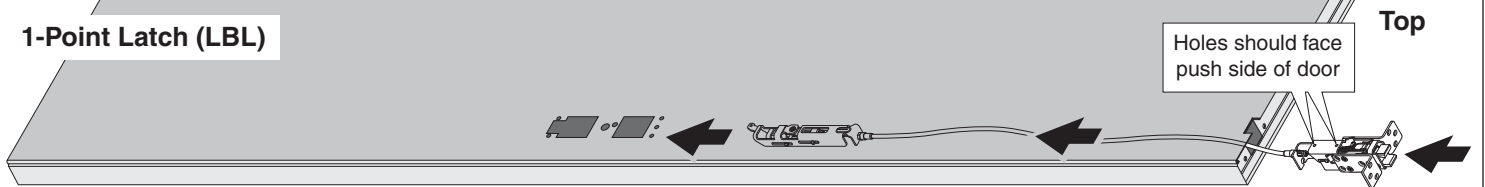


17 Slide Latch and Center Slide Assembly thru Door.

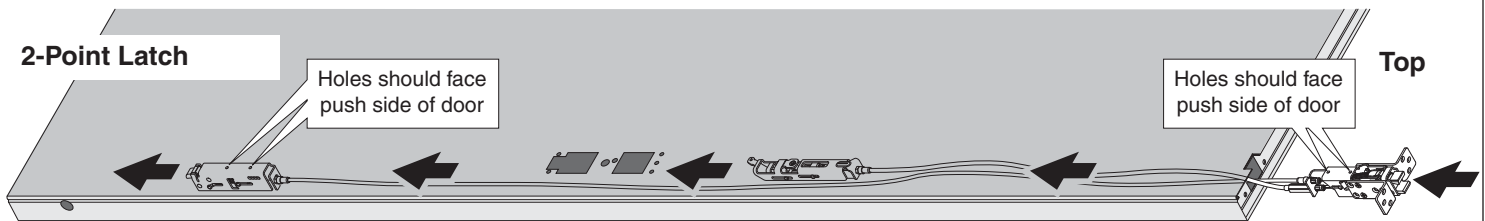
NOTE: Confirm top latch (and bottom latch, if applicable) is in correct orientation before proceeding.

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

1-Point Latch (LBL)



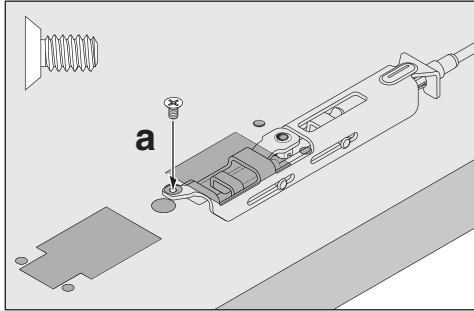
2-Point Latch



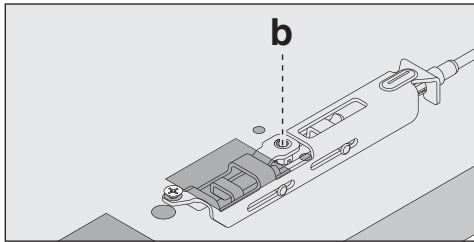
Hollow Metal Door application shown

18 Secure Center Slide to Door.

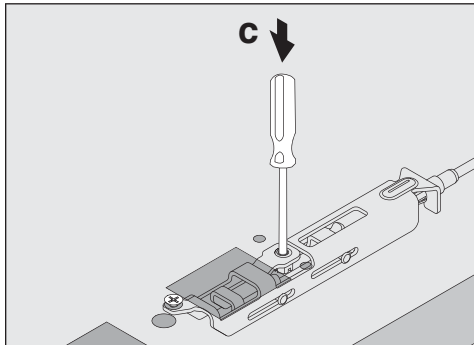
Secure center slide to door by lightly tightening lower screw



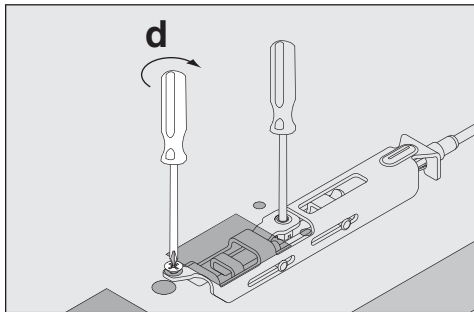
Align upper hole visually



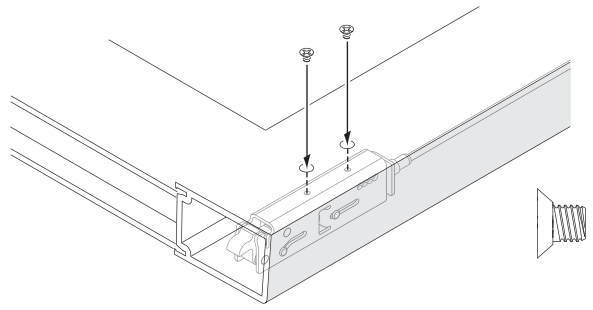
Insert small screwdriver into upper hole to prevent center slide from rotating



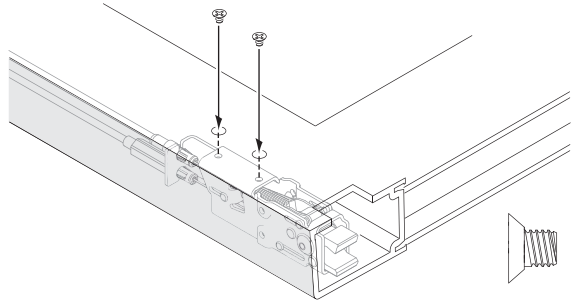
Fully tighten lower screw



19 Align Bottom Latch and Install Mounting Screws. Aluminum For 2-Point Latch Only

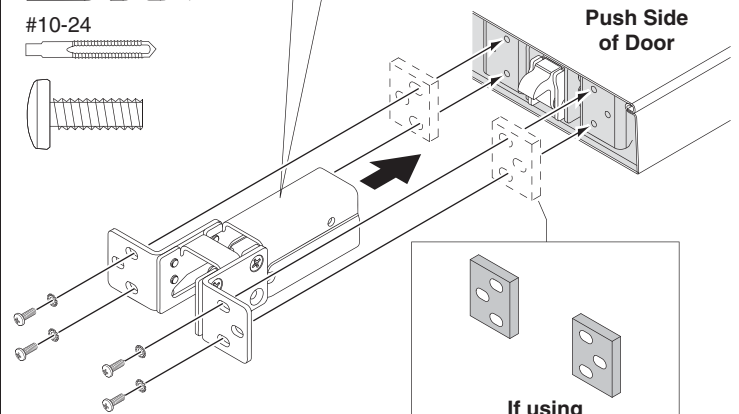
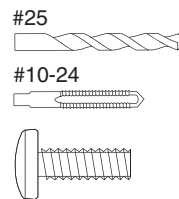


20 Secure Top Latch with 2 Screws. Aluminum



21 Install Bottom Latch Mounting Bracket Assembly. Hollow Metal For 2-Point Latch Only

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



NOTE: Use 2 screws per bracket (center hole not used for this application).

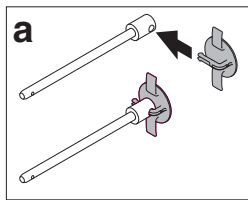
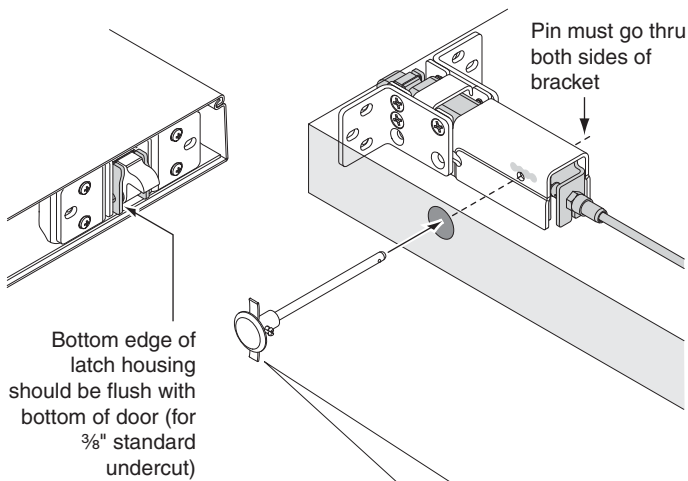
If using $\frac{3}{4}$ " undercut door

spacer blocks (2) are required

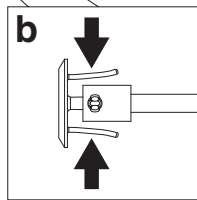
Spacer Block Kit (24231516) purchased separately

22 Insert Latch Adjustment Pin to Hold Bottom Latch in Place.

Hollow Metal For 2-Point Latch Only



Assemble pin

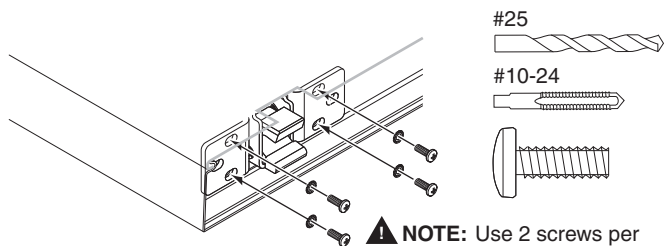
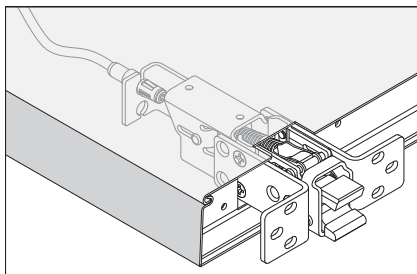


Squeeze tabs on cap, then insert pin

23 Secure Top Latch Mounting Bracket.

Hollow Metal

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



NOTE: Use 2 screws per bracket (center hole not used for this application).

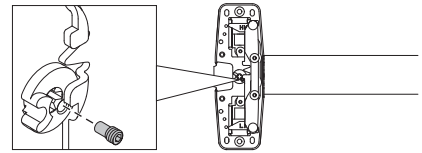
24 Hang Door on Frame.

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

25 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.

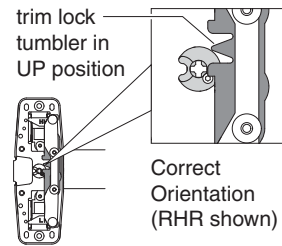
996L	696TP	990TP
996K	697TP	

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).

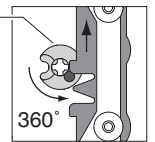
*996L-BE	*E996L	*696TP-BE	*990TP-BE
*996K-BE	*E996L-BE	*697TP-BE	

* 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.



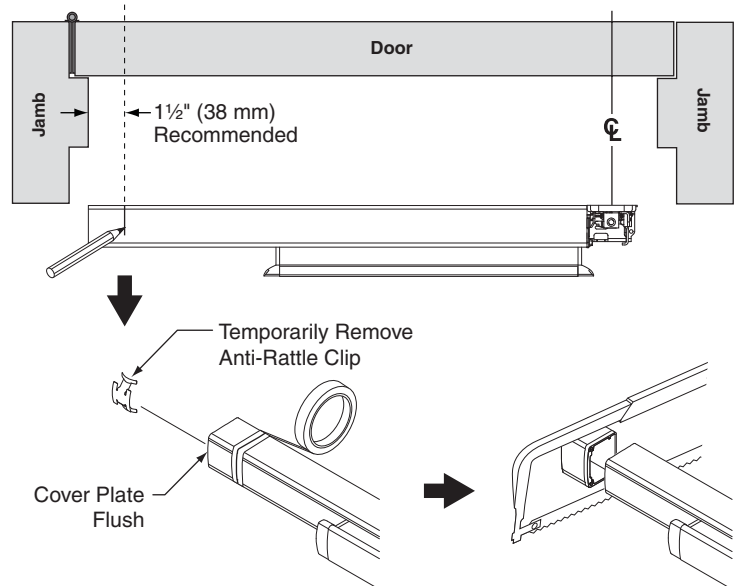
Correct Orientation (RHR shown)

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

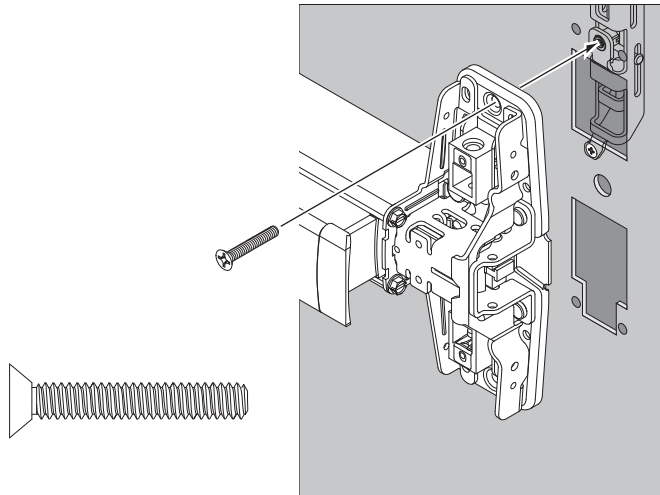


Incorrect Orientation

26 If Necessary, Cut Device.

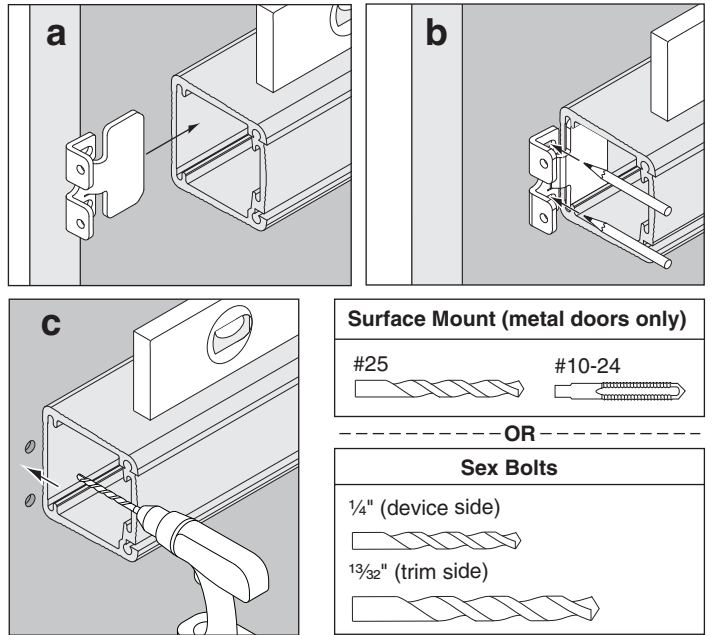


27 Install Top Center Slide Screw.

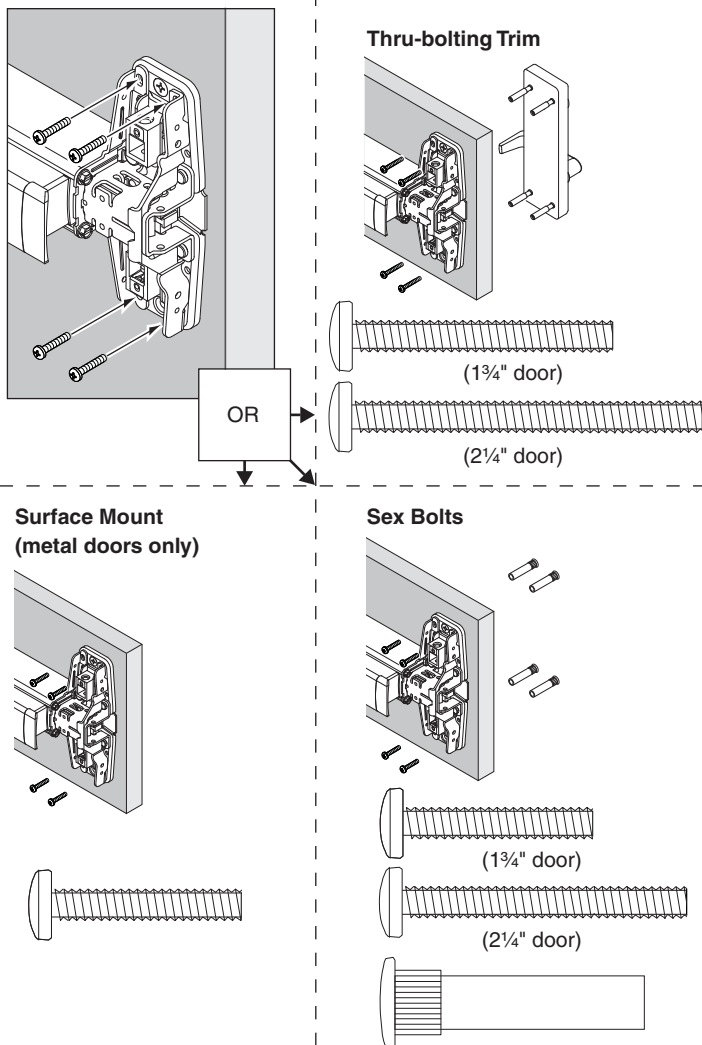


NOTE: If using 696/697 trim, this screw will pass thru top center slide hole and secure directly into trim during Step 28.

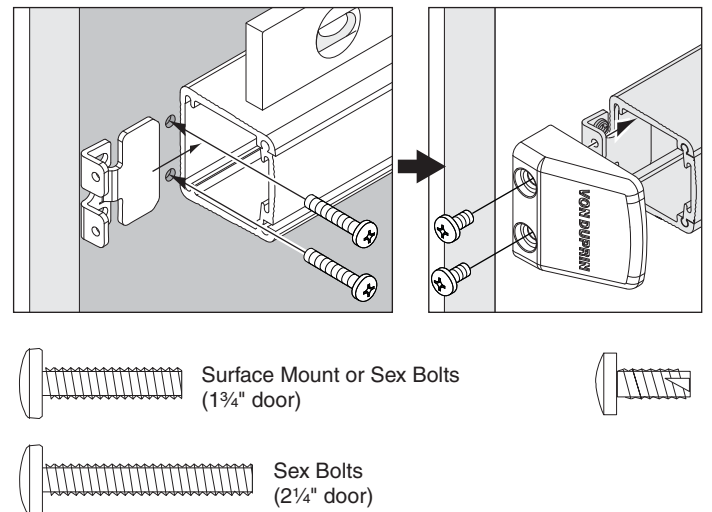
29 Mark and Prepare 2 Holes.



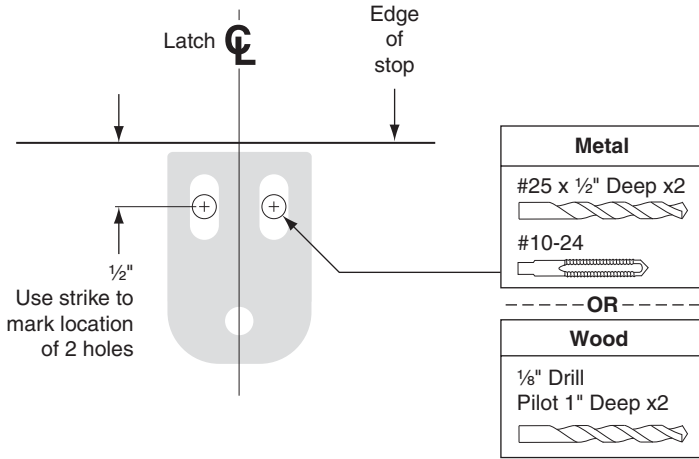
28 Attach Center Case to Door.



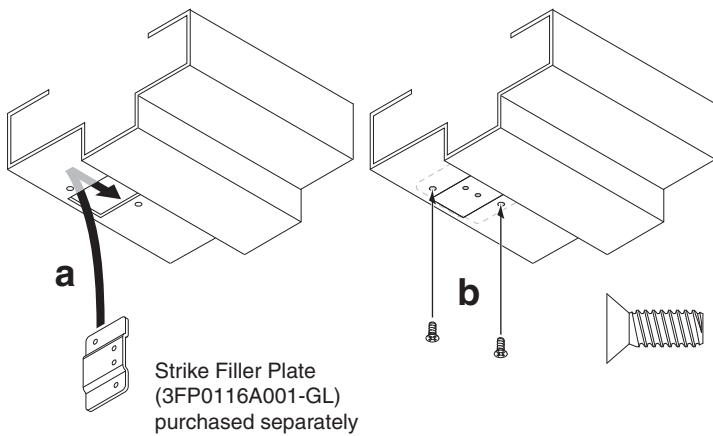
30 Install End Cap Bracket and End Cap.



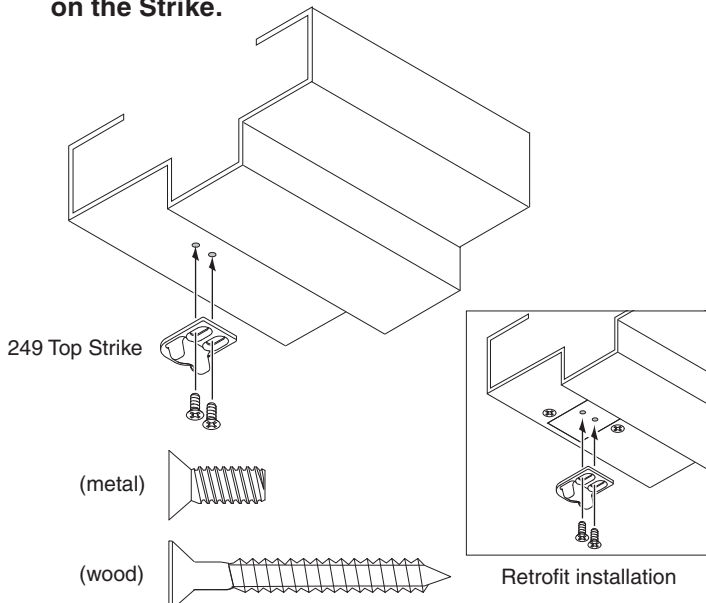
31 If New Installation, Prepare Door Frame for Top Strike.



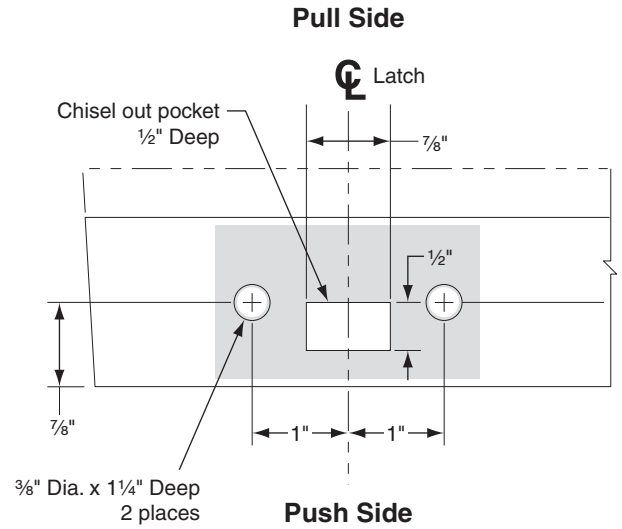
32 If Retrofit Installation, Install Steel Cover Plate to Cover Existing 338 Strike Opening in Accordance with the Frame Manufacturer's Fire Listing.



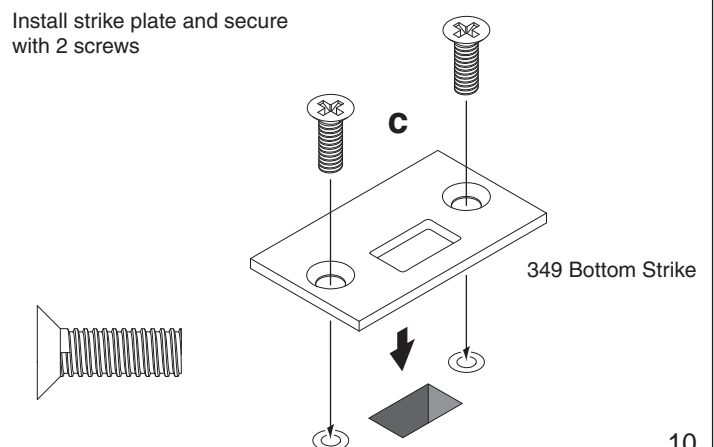
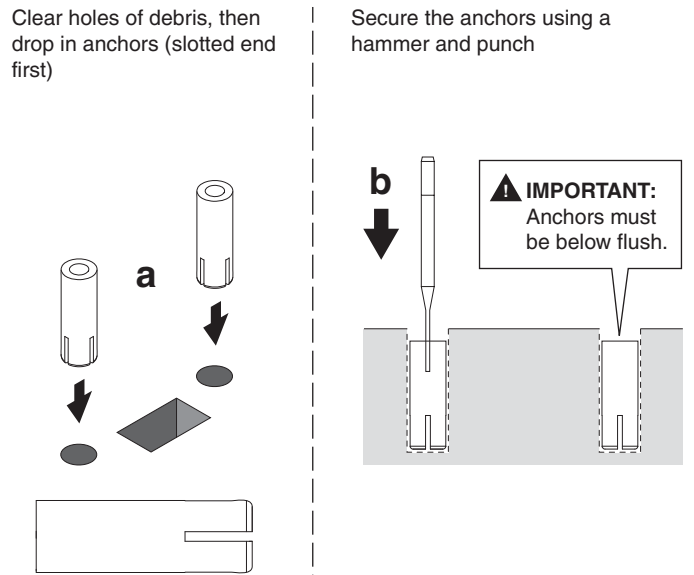
33 Install 2 Top Strike Screws Using the Slot Features on the Strike.



34 Prepare Floor for Bottom Strike.
Hollow Metal For 2-Point Latch Only



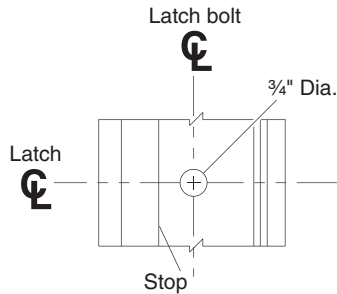
35 Install Bottom Strike.
Hollow Metal For 2-Point Latch Only



36 Prepare Threshold.

Aluminum For 2-Point Latch Only

- After closing door with bottom latch installed, mark the location the bottom latch bolt is contacting the threshold.
- Drill a 3/4" diameter hole in the threshold.



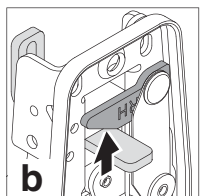
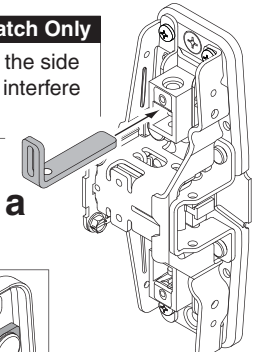
37 Install Lift Finger and Retainer Clip.

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

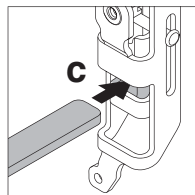
Slide L-shaped lift finger thru block in device center case and then into center slide

For 2-Point Latch Only

Push cable to the side so it does not interfere with lift finger.

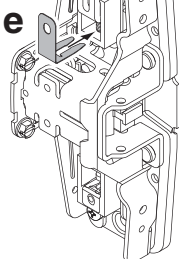
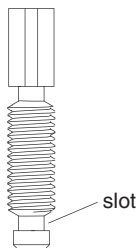


Lift finger must pass below locking tumbler (back of center case shown for clarity)

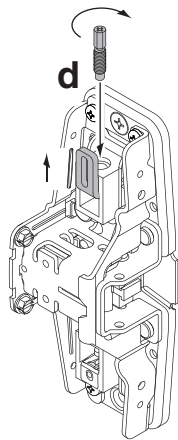


Lift finger must insert into center slide here

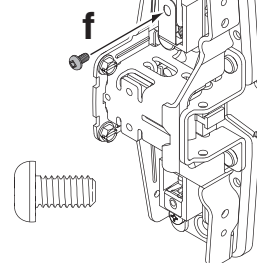
Install retainer clip against lift finger, snapping it into the slot of the adjustment screw



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



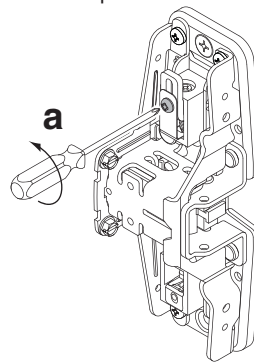
Secure lift finger and retainer clip with screw



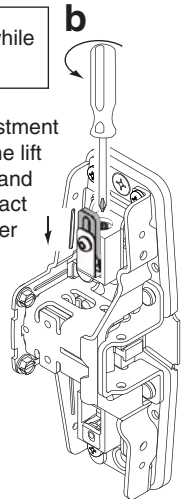
38 Adjust Lift Finger.

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

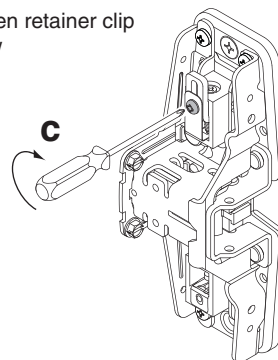
Loosen retainer clip screw



Loosen adjustment screw until the lift finger drops and you feel contact with the center slide



Tighten retainer clip screw



39 Perform Functional Test of Door.

- Depress pushbar. Door should begin to open when pushbar is nearly fully depressed. If necessary, refer to Step 38 to readjust lift finger.
- With door closed, top latch should be secure.

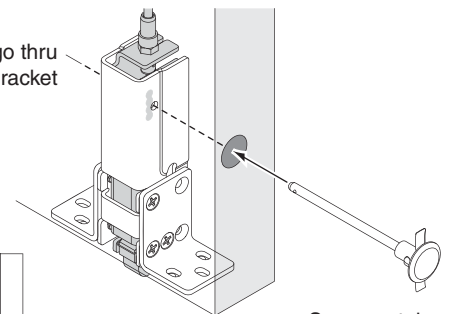
For 2-Point Latch Only

- With door closed, bottom latch should be secure.
- Confirm that bottom latch does not drag against floor when door is opened.

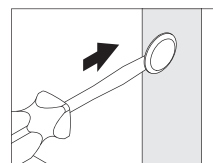
Hollow Metal For 2-Point Latch Only

If this occurs, remove latch adjustment pin and raise latch, then reinsert pin in next notch.

Pin must go thru both sides of bracket

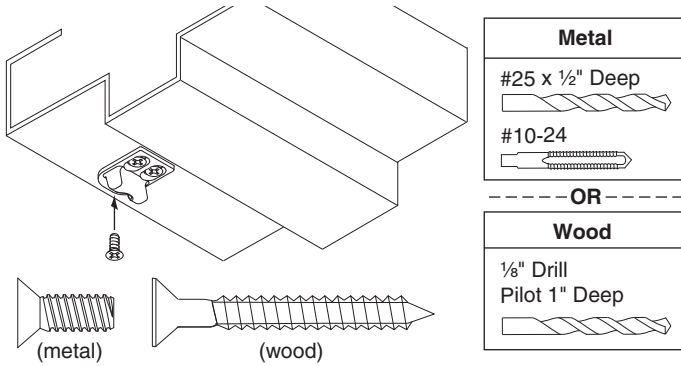


Squeeze tabs on cap before reinserting pin

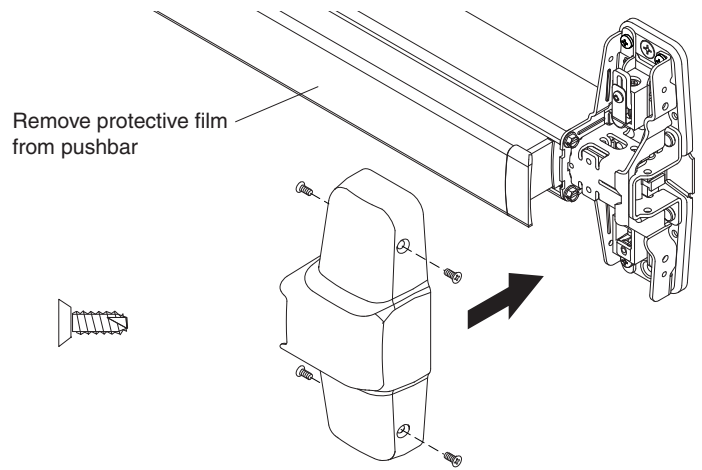


To remove pin, slide a screwdriver beneath the latch adjustment pin cap

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



41 Install Center Case Cover.



OPTIONAL EQUIPMENT

CD (CYLINDER DOGGING)

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

CD function conversion

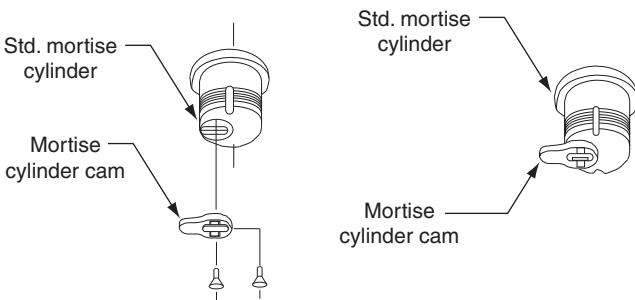


Figure 1

Dogging procedure

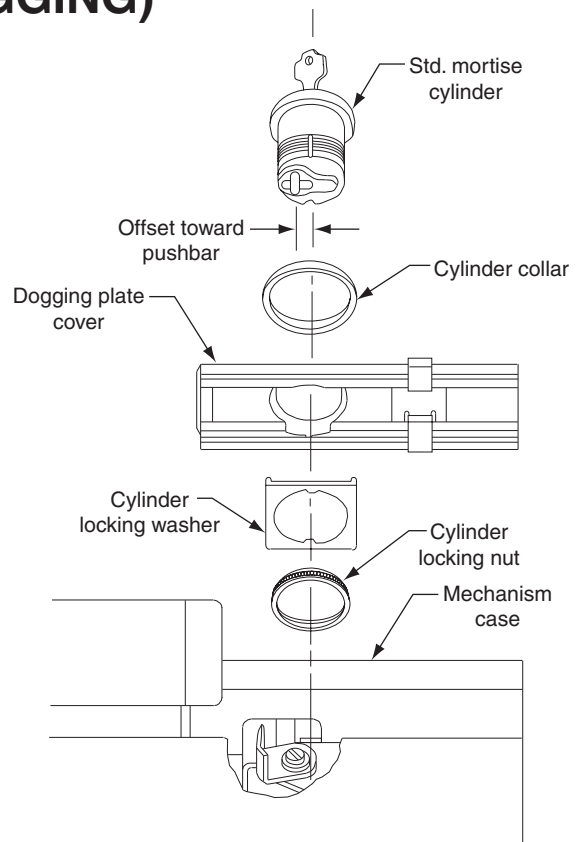
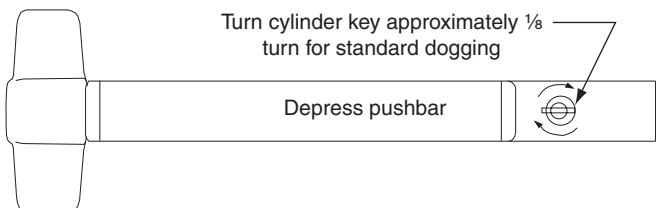


Figure 2