

## OPTIONAL EQUIPMENT - CONTINUED

### CD (CYLINDER DOGGING)

1. Remove mortise cylinder cam and reinstall in reverse (Figure 6).
2. Insert key and rotate cam to install the cylinder to the cover plate (Figure 7).
3. Remove key to slide cover plate in position in the mechanism case.

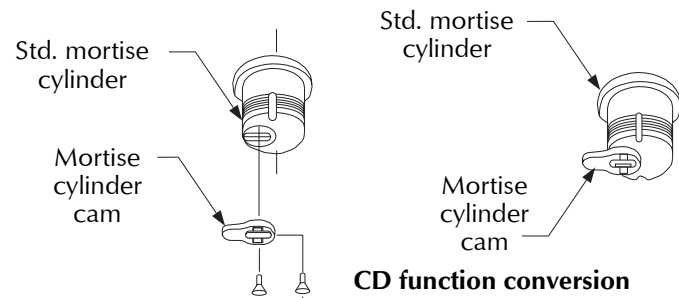


Figure 6

#### Dogging procedure

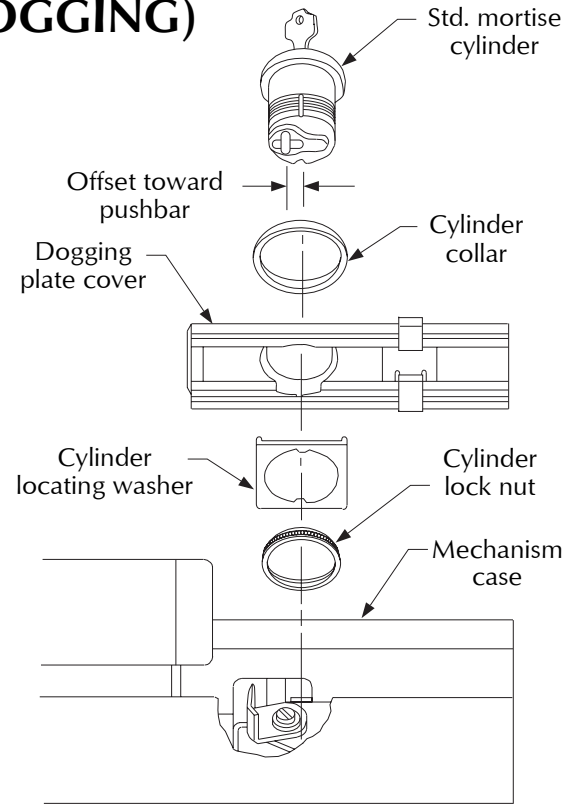
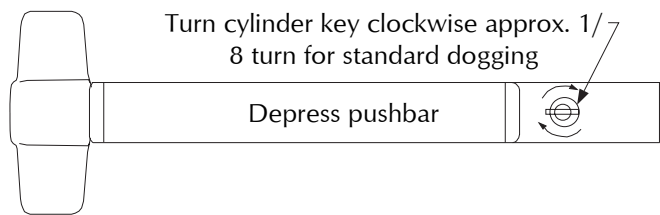
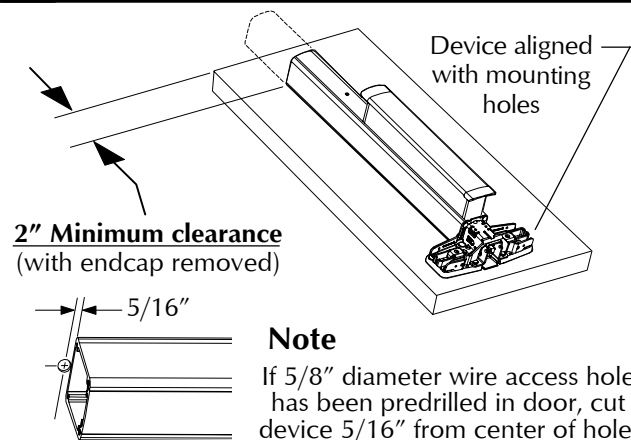


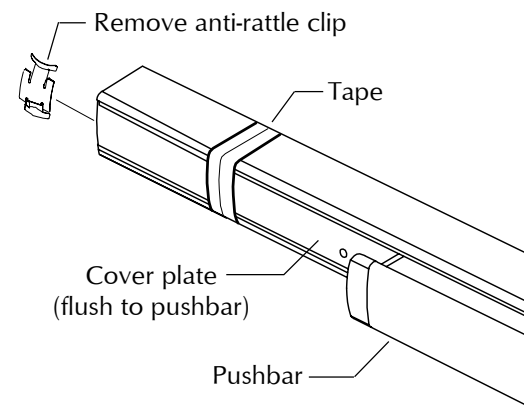
Figure 7

## CUT DEVICE

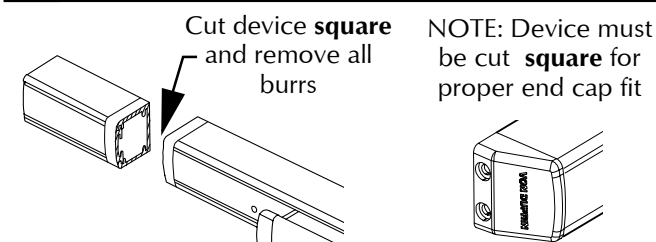
### 1 Measure amount to cut off device.



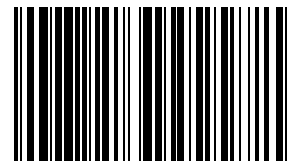
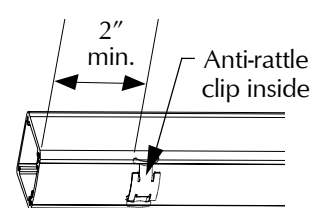
### 2 Tape and mark area being cut.



### 3 Cut device square.



### 4 Slide anti-rattle clip into device.

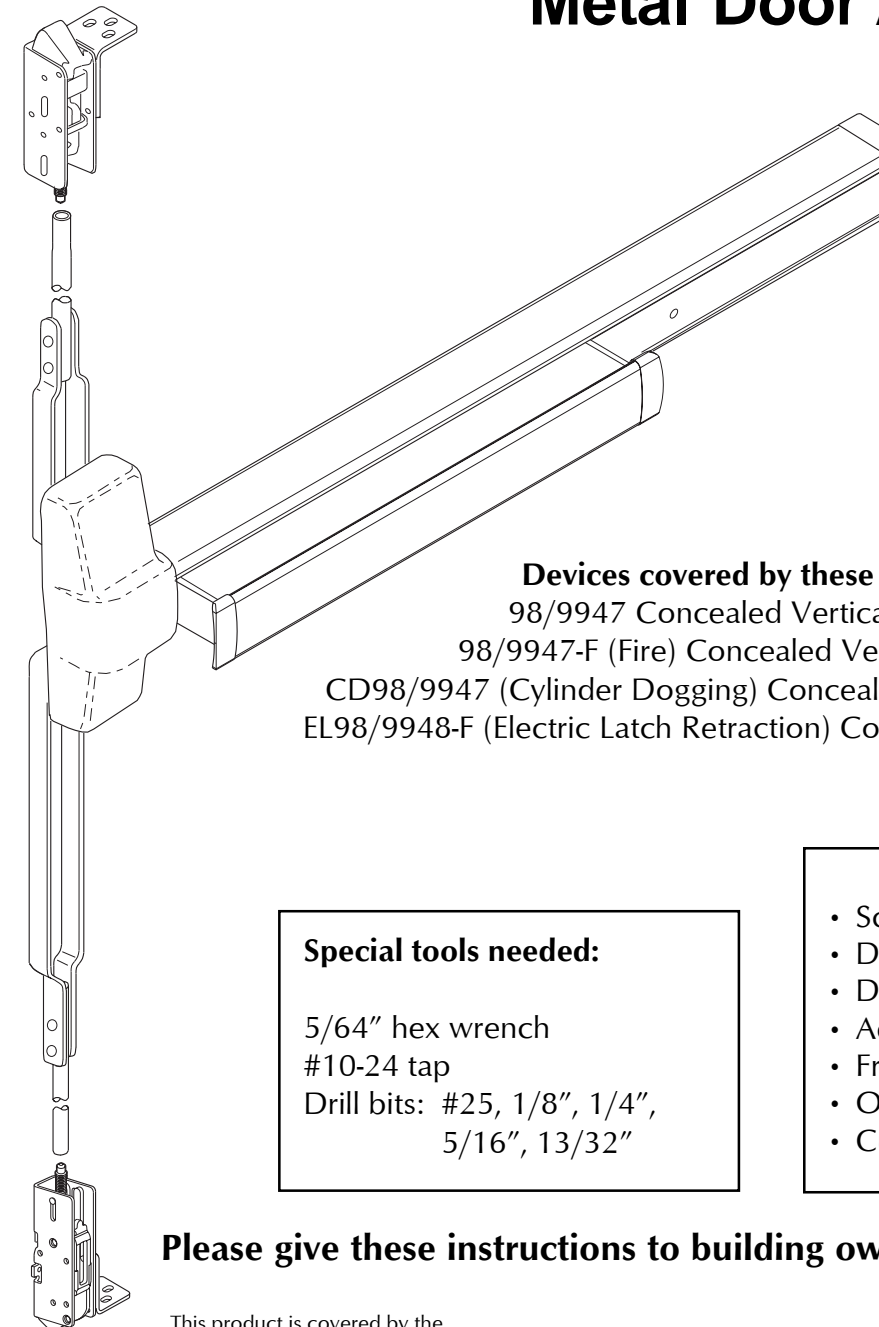


911376-00

# VON DUPRIN®

## Installation Instructions

### The Quiet One® 98/9947 Concealed Vertical Rod Exit Device Metal Door Applications



**Devices covered by these instructions:**  
 98/9947 Concealed Vertical Rod Exit Device  
 98/9947-F (Fire) Concealed Vertical Rod Exit Device  
 CD98/9947 (Cylinder Dogging) Concealed Vertical Rod Exit Device  
 EL98/9948-F (Electric Latch Retraction) Concealed Vertical Rod Exit Device

#### Special tools needed:

5/64" hex wrench  
 #10-24 tap  
 Drill bits: #25, 1/8", 1/4",  
 5/16", 13/32"

#### Index:

• Screw chart .....	2
• Door preparation chart .....	3
• Device installation .....	4-5
• Adjust rods .....	6
• Frame preparation chart .....	6
• Optional equipment .....	7-8
• Cut device .....	8

Please give these instructions to building owner after device is installed

This product is covered by the following patent numbers:

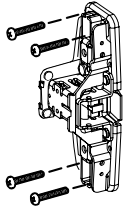
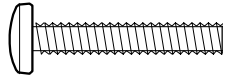
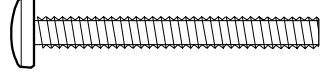
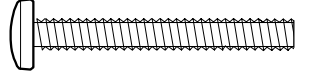
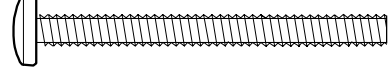
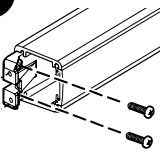
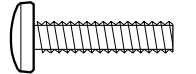
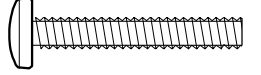

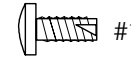
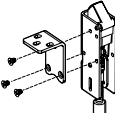

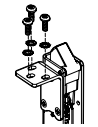
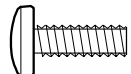
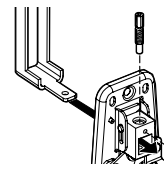
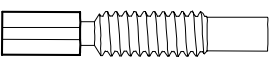
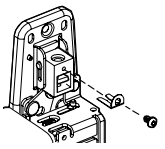
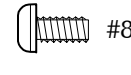

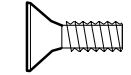

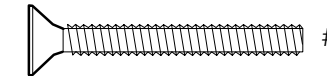
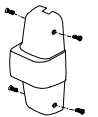
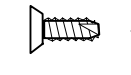
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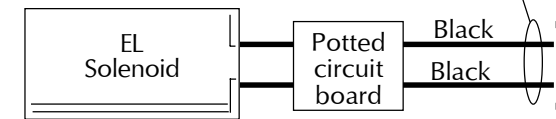
## SCREW CHART

<b>A</b> 	 #10-24 x 1" ————— Surface mount or Sex bolts (1-3/4" door)
	 #10-24 x 1-1/2" ————— Sex bolts (2-1/4" door)
	- Packaged with trim -
	 #10-24 x 1-3/8" ————— 990 trims (1-3/4" door)
	 #10-24 x 1-7/8" ————— 990 trims (2-1/4" door)
<b>B</b> 	 #10-24 x 3/4" ————— Surface mount or Sex bolts (1-3/4" door)
	 #10-24 x 1-1/8" ————— Sex bolts 2-1/4" door
<b>C</b> 	 #10-16 X 3/8" Thread cutting ————— End cap
<b>D</b> 	 #10-32 X 1/4" ————— Bracket to latch
<b>E</b> 	 #10-24 X 1/2" ————— Bracket to door
<b>F</b> 	 Rod adjusting screw ————— Retaining clip
<b>G</b> 	 #8-32 X 5/16" ————— Retaining clip
<b>H</b> 	 #10-24 X 1/2" ————— 338 strike
<b>I</b> 	 #10-24 X 1-1/2" ————— Ratchet release
<b>J</b> 	 #8-18 x 3/8" Thread cutting ————— Center case cover

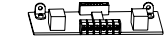
## OPTIONAL EQUIPMENT - CONTINUED


12 AWG required for distances up to 200'  
14 AWG permitted for distances 0-100'

### EL WIRING



**Solenoid draws 16 A inrush current from PS873.  
Solenoid must be wired to a PS873 logic board:**

 If 871-2 logic board, refer to Von Duprin instructions 941352.

 If other 873 logic board, refer to Von Duprin instructions 941356.

#### ELECTRICAL SPECIFICATIONS

Voltage: 24 VDC  
Current: 16 A inrush (0.3 sec.)  
0.25 A holding

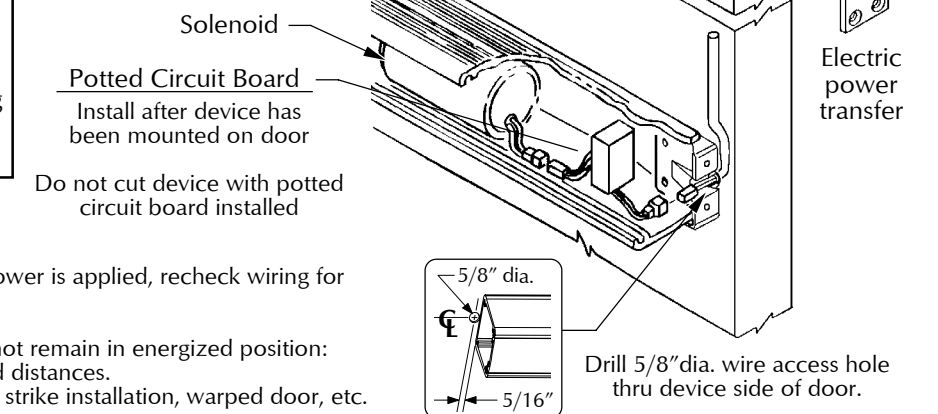
#### NOTE

When power is applied to the **potted circuit board**, the solenoid receives a momentary signal to retract and a separate signal to hold as long as power is applied. When attempting to retract solenoid again, power must be removed from the circuit and reapplied.

#### Troubleshooting solenoid operation

If the solenoid fails to retract the latch bolt when power is applied, recheck wiring for proper connections.

If solenoid retracts latch bolt momentarily but will not remain in energized position:  
1. Check wiring for proper connections, gauge, and distances.  
2. Check for latch bolt binding caused by improper strike installation, warped door, etc. Also check adjustment of vertical rods.



## EL ADJUSTMENT PROCEDURE

#### A. Check for proper function:

1. Make sure device is not dogged.
2. Depress pushbar and make sure latch bolts retract and extends fully (see page 6 Figures 1 & 3).
3. Electrically energize solenoid and hold.
4. Check latch bolt(s) for full retraction (must clear strike (see page 6 Figures 1 & 3).
5. Release solenoid and check latch bolt extension (see page 6 Figures 1 & 3).
6. Continue to Section B if device does not function electrically.

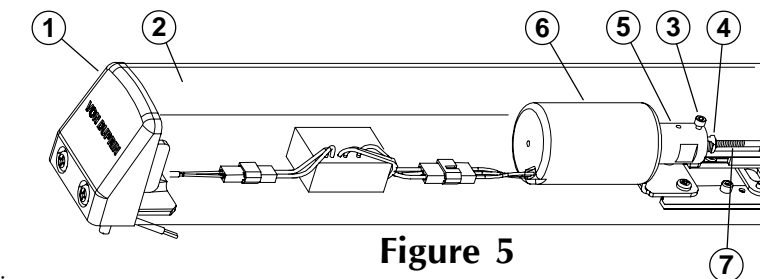


Figure 5

#### B. Determine if dogging rod adjustment is too long or short:

1. The dogging rod adjustment is too **long** if latch bolt does not retract and clear strike (see Section C for adjustment).
2. The dogging rod adjustment is too **short** if latch bolt does not fully extend **or** latch bolt fully retracts but solenoid releases while energized (see Section D for adjustment).

#### C. Adjust solenoid if dogging rod is too **long** (see Figure 5):

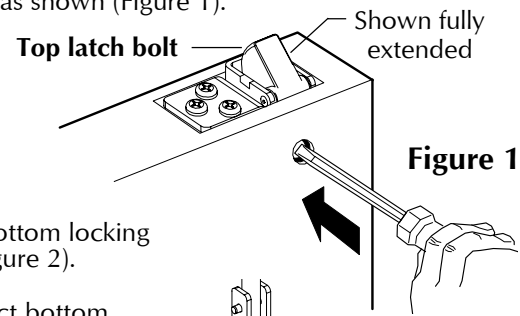
1. Remove end cap ① and dogging cover ②.
2. Loosen cap screw ③.
3. Hold plunger ⑤ depressed in solenoid housing ⑥.  
**Note:** Push hard against plunger ⑤ to overcome an internal spring in solenoid housing ⑥.
4. Turned threaded bushing ④ in to shorten dogging rod ⑦ so latch bolt fully retracts.
5. Tighten cap screw ③.  
**Note:** Cap screw ③ must be tightened against flat on threaded bushing ④. Apply a few drops of Loc-Tite 222 to threads of cap screw ③.
6. Replace dogging cover ② and end cap ①.
7. Return to Section A to check for proper function.

#### D. Solenoid adjustment if dogging rod adjustment is too **short** (see Figure 5):

1. Remove end cap ① and dogging cover ②.
2. Loosen cap screw ③.
3. Hold plunger ⑤ depressed in solenoid housing ⑥.
4. Turn threaded bushing ④ out to lengthen dogging rod ⑦ so plunger ⑤ just bottoms in solenoid housing ⑥ and latch bolt is fully retracted.  
**Note:** Push hard against plunger ⑤ to overcome an internal spring in solenoid housing ⑥.
5. Tighten cap screw ③.  
**Note:** Cap screw ③ must be tightened against flat on threaded bushing ④. Apply a few drops of Loc-Tite 222 to threads of cap screw ③.
6. Replace dogging cover ② and end cap ①.
7. Return to Section A to check for proper function.

## ADJUST RODS

1. Open door and release top latch bolt as shown (Figure 1).



2. Loosen bottom locking screw (Figure 2).

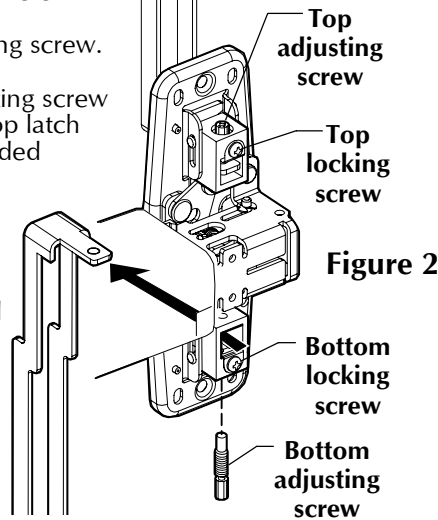
3. Disconnect bottom vertical rod by removing bottom adjusting screw.

4. Loosen top locking screw.

5. Rotate top adjusting screw clockwise until top latch bolt is fully extended (Figure 1).

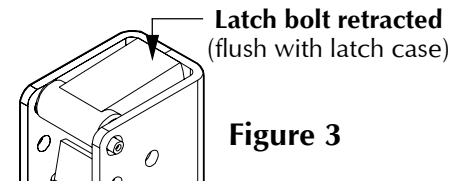
6. Check top latch bolt for deadlocking (latch bolt should not push in).

7. Turn top locking screw in. Do not over-tighten



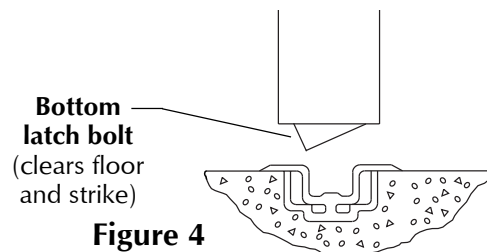
8. Depress pushbar and release.

9. Make sure top latch bolt stays retracted as shown.



10. Install bottom adjusting screw through bottom rod (Figure 2).

11. With top latch bolt still retracted, adjust bottom rod so latch bolt clears floor and bottom strike.



12. Turn bottom locking screw in. Do not over-tighten.

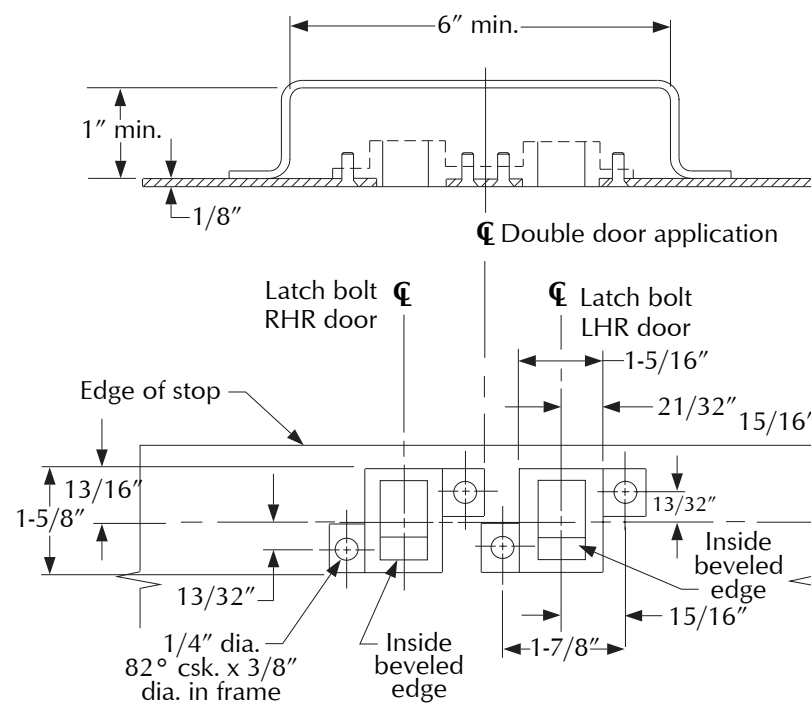
13. Check device operation by opening and closing door several times from the outside.

### Redo adjustment procedure if :

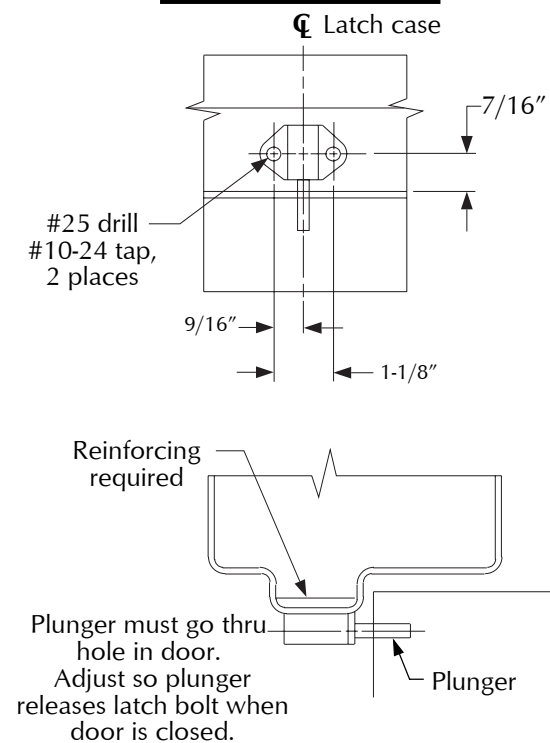
- Top latchbolt is not held retracted
- Bottom latchbolt does not clear floor and bottom strike

## FRAME PREPARATION

### TOP STRIKE

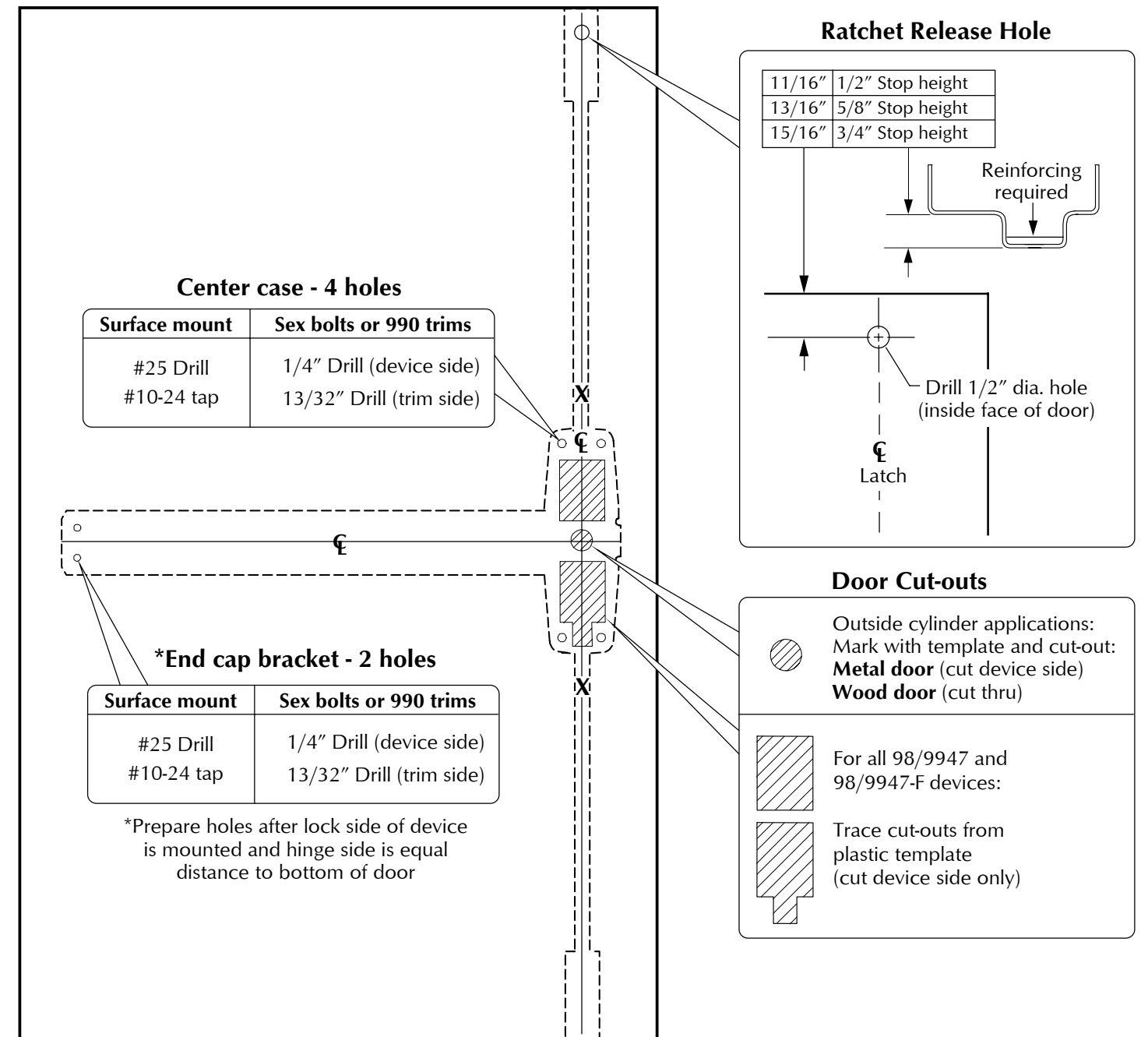


### RATCHET RELEASE



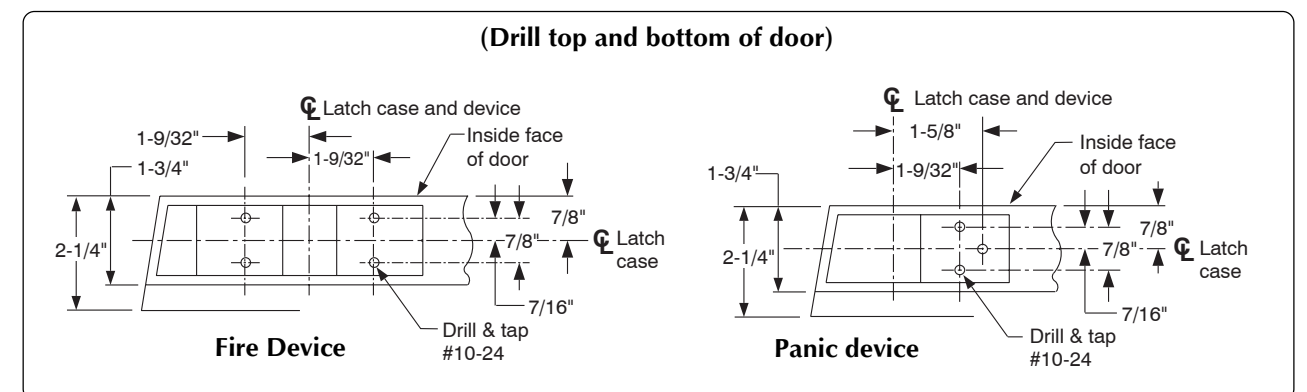
## DOOR PREPARATION CHART

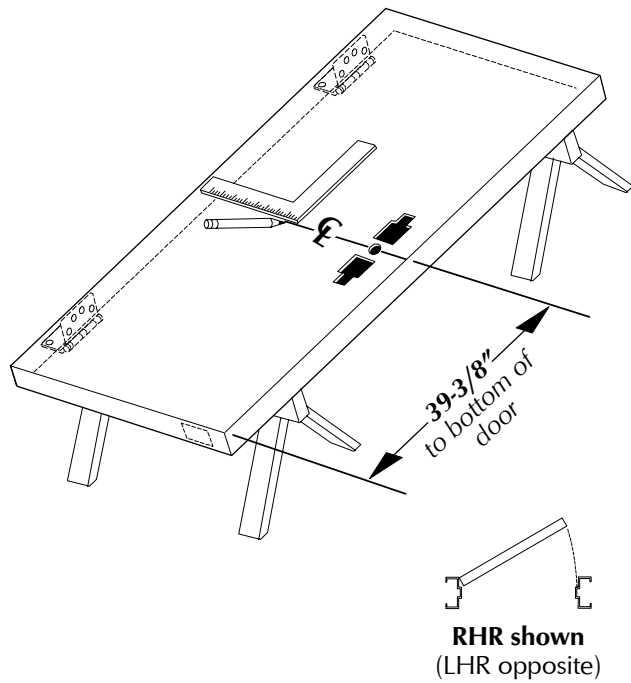
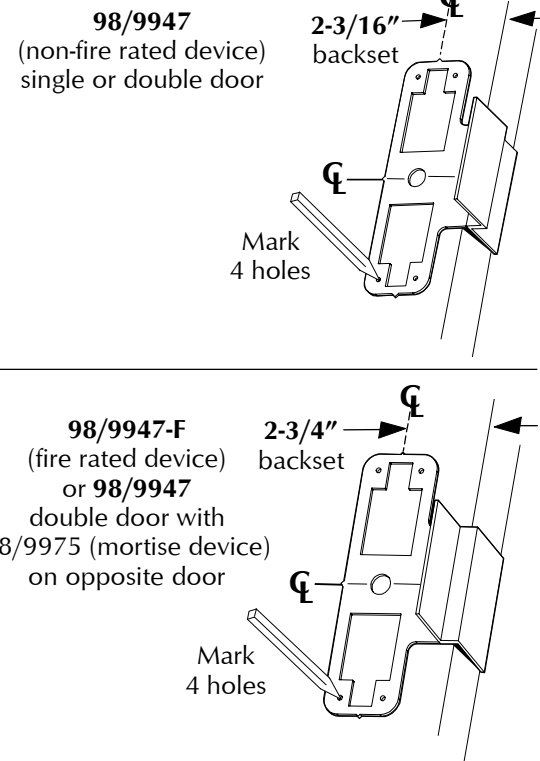
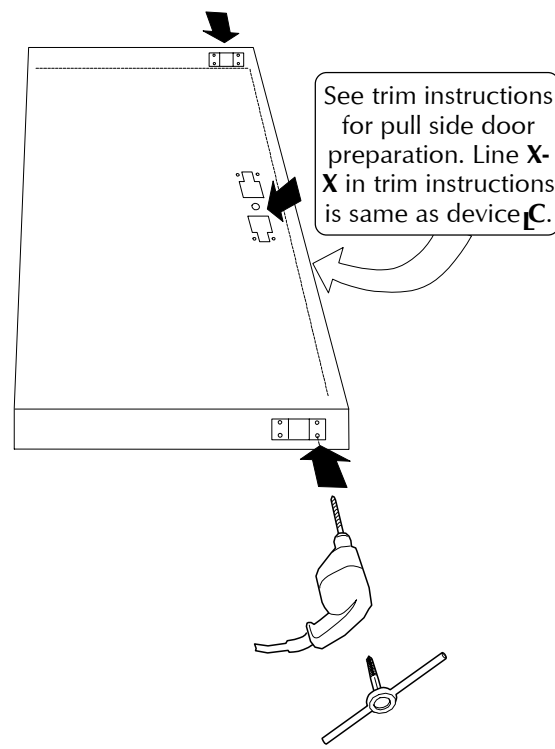
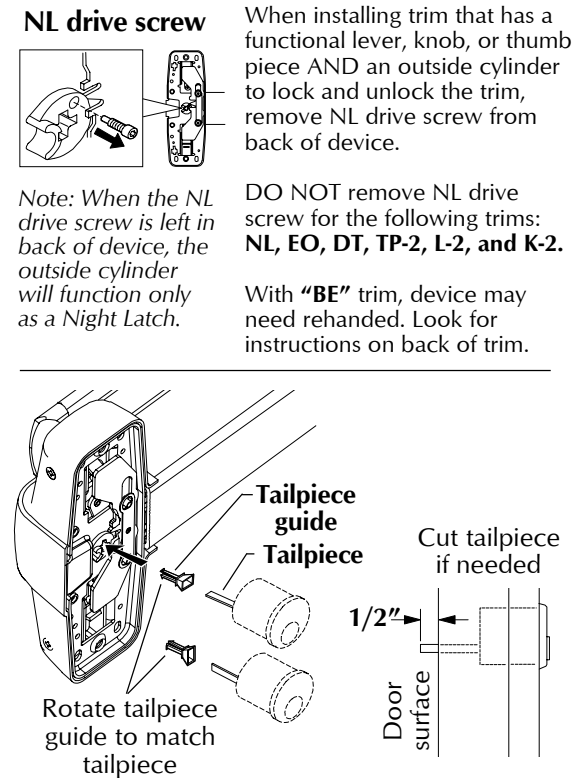
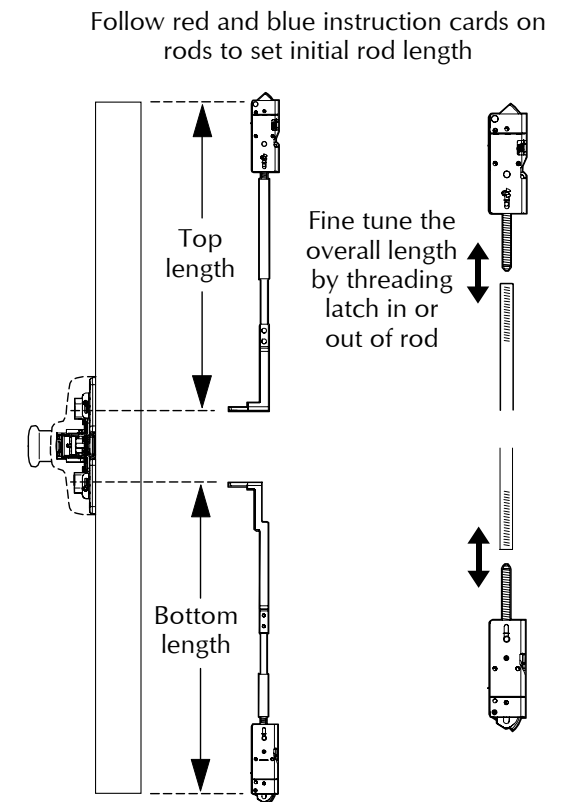
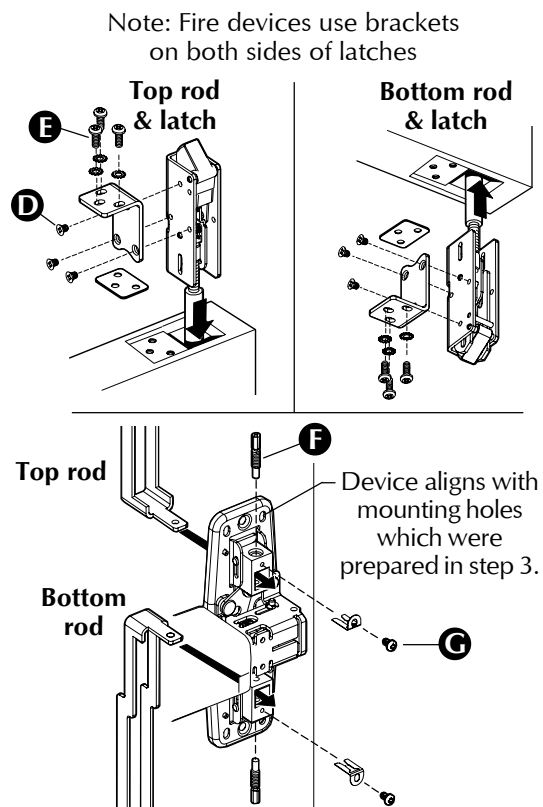
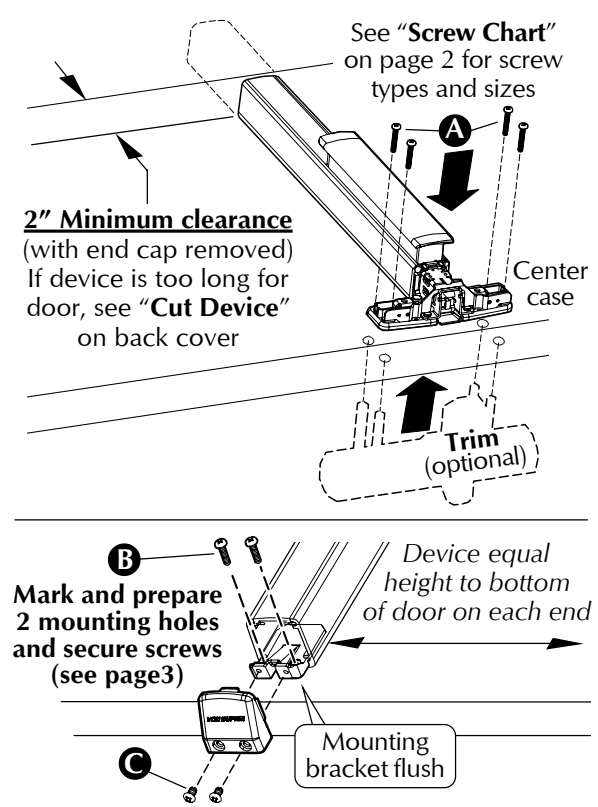
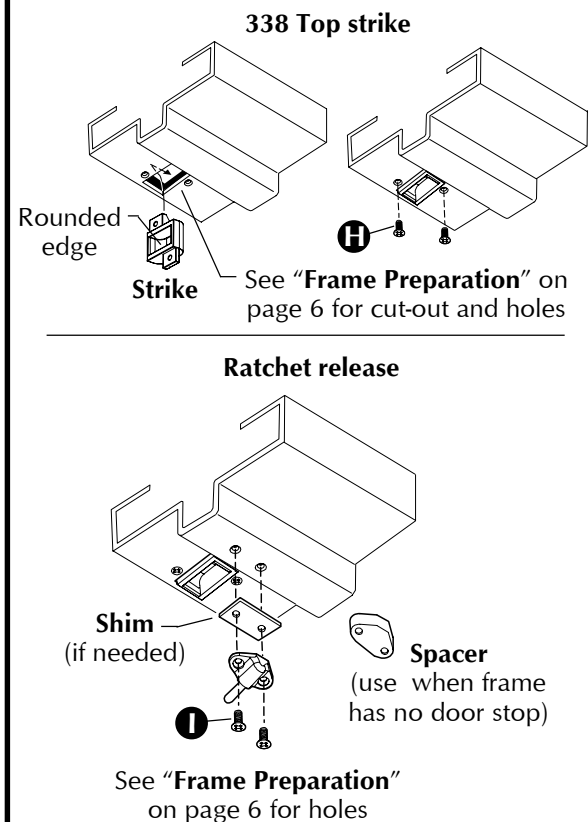
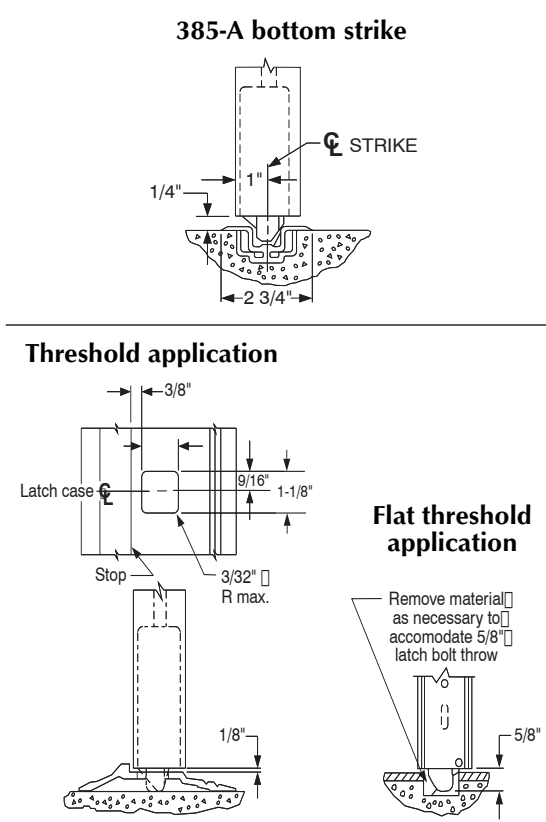
Go to instructions on next page before using preparation chart



### Latch Cases

(Drill top and bottom of door)



**1****Draw horizontal device center line (C).****2****Determine correct backset, then mark 4 holes for device center case using template.****3****Prepare door per preparation chart on page 3.****4****If using an outside cylinder, check NL drive screw and install tailpiece guide.****5****Assemble rods and latches and adjust length for proper door height.****6****Install rods and latches as shown.****7****Secure device to door as shown, then hang door on frame.****8****Install top strike and ratchet release.****9****Install bottom strike and prepare threshold.****10****Adjust rods and install center case cover.**