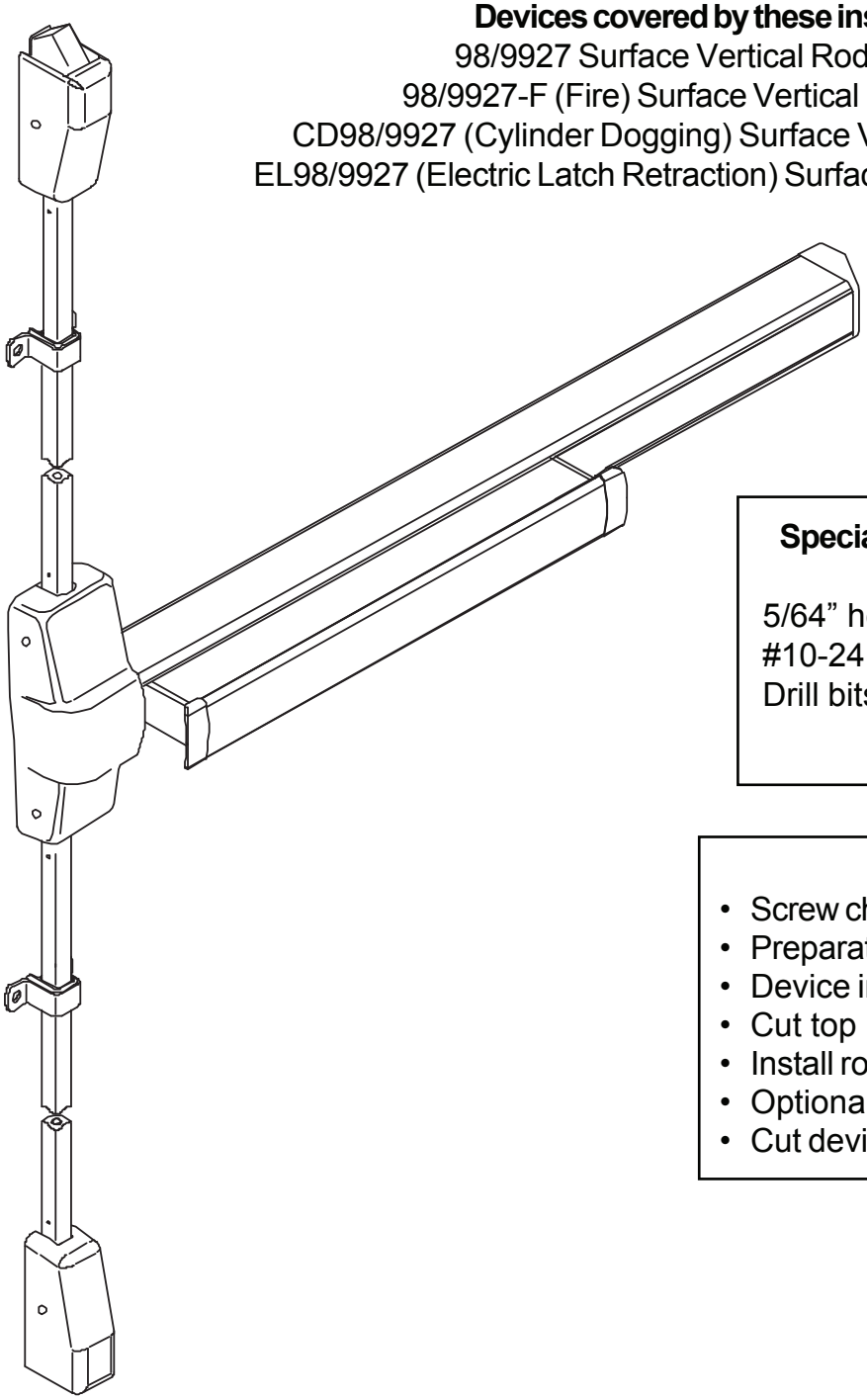
911375-00

Surface Vertical Rod Exit Device

98/9927

VON DUPRIN®

Installation Instructions



Devices covered by these instructions:

98/9927 Surface Vertical Rod Exit Device
98/9927-F (Fire) Surface Vertical Rod Exit Device
CD98/9927 (Cylinder Dogging) Surface Vertical Rod Exit Device
EL98/9927 (Electric Latch Retraction) Surface 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:

ALLEGION

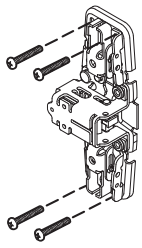
Customer Service

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

Printed in U.S.A.
911375-00 Rev. 12/16-e

SCREW CHART

A



#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)

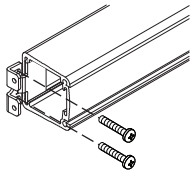
#10 x 1-1/4" Wood screw — Surface mount (wood)

- 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



#10-24 X 3/4" — Surface mount or Sex bolts (1-3/4" door)

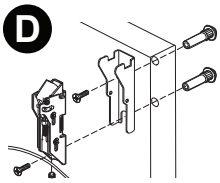
#10-24 X 1-1/8" — Sex bolts 2-1/4" door

#10 x 1-1/4" Wood screw — Surface mount (wood)

C

#10-16 x 3/8" Thread cutting — End cap

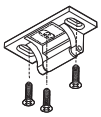
D



1/4-20 X 3/4" — 1-3/4" door

1/4-20 X 1-1/4" — 2-1/4" door

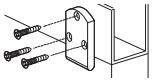
E



#10-24 X 3/4" — Metal frame

#10 x 1-1/2" Wood screw — Wood frame

F



#10-12 x 10-24 x 1-1/4" Combination — Metal or wood frame

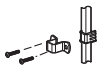
G

#10-12 x 10-24 x 1-1/4" Combination — Variable floor surfaces

H

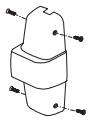
#8-32 X 1/4" — Latch covers

I



#10-12 x 10-24 x 1" Combination — Metal or wood door

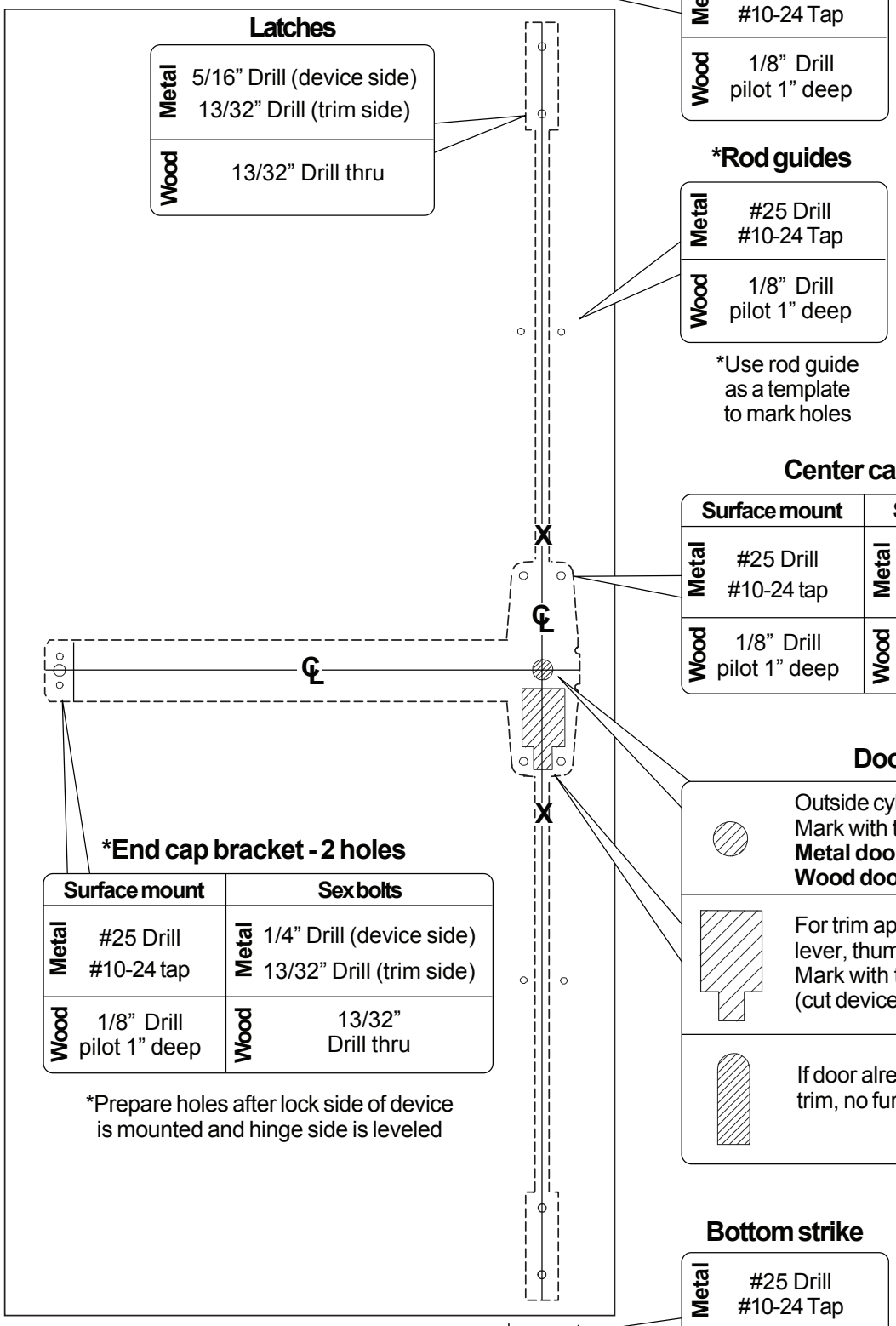
J



#8-18 x 3/8" Thread cutting — Center case cover

PREPARATION CHART

Go to instructions on next page before using Preparation Chart



Top strike

Metal	#25 Drill #10-24 Tap
Wood	1/8" Drill pilot 1" deep

Latches

Metal	5/16" Drill (device side) 13/32" Drill (trim side)
Wood	13/32" Drill thru

*Rod guides

Metal	#25 Drill #10-24 Tap
Wood	1/8" Drill pilot 1" deep

*Use rod guide as a template to mark holes

Center case - 4 holes

Surface mount		Sex bolts or 990 trims	
Metal	#25 Drill #10-24 tap	Metal	1/4" Drill (device side) 13/32" Drill (trim side)
Wood	1/8" Drill pilot 1" deep	Wood	13/32" Drill thru

Door cut-outs

	Outside cylinder applications: Mark with template and cut-out: **Metal door** (cut device side) **Wood door** (cut thru)
	For trim applications with working lever, thumbpiece, or knob: Mark with template and cut out: (cut device side only)
	If door already has this cut-out for trim, no further cutting is necessary

*End cap bracket - 2 holes

Surface mount		Sex bolts	
Metal	#25 Drill #10-24 tap	Metal	1/4" Drill (device side) 13/32" Drill (trim side)
Wood	1/8" Drill pilot 1" deep	Wood	13/32" Drill thru

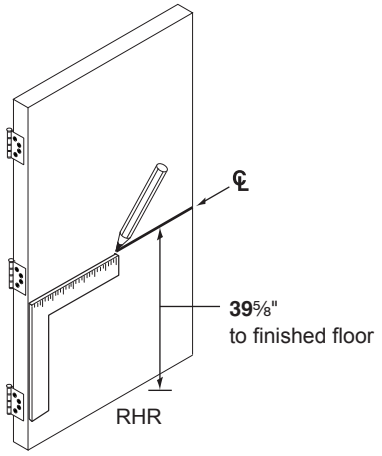
*Prepare holes after lock side of device is mounted and hinge side is leveled

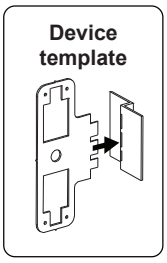
Bottom strike

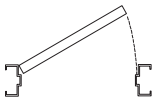
Metal	#25 Drill #10-24 Tap
Wood	1/8" Drill pilot 1" deep

See template for strike variations

1 Draw Horizontal Center Line (℄) and Assemble Device Template

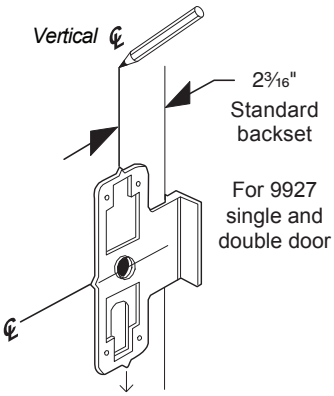




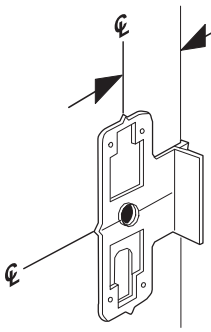


RHR shown
(LHR opposite)

2 Position Template as Shown and Mark Vertical ℄



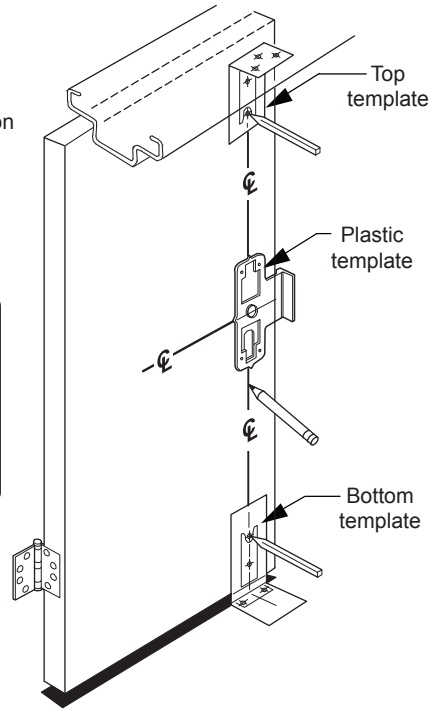
Or flip template over for:



3 Align Top and Bottom Templates Along ℄ and Prepare Door

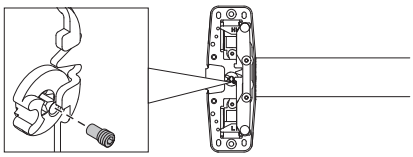
See "**Preparation Chart**" on page 3 for drill, tap, and cut-out information

See trim instructions for pull side door preparation. Line **X-X** in trim instructions is same as vertical device ℄.



4 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.

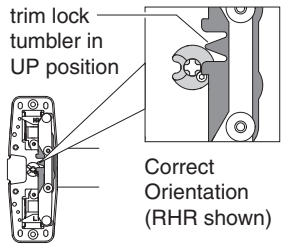
996L	696TP	990TP
996K	697TP	

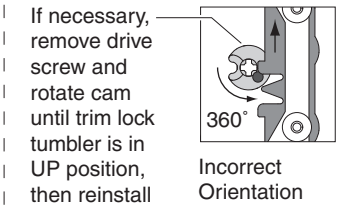
With the NL drive screw installed, key retracts latch bolt. **DO NOT** remove NL drive screw for the following applications:

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	

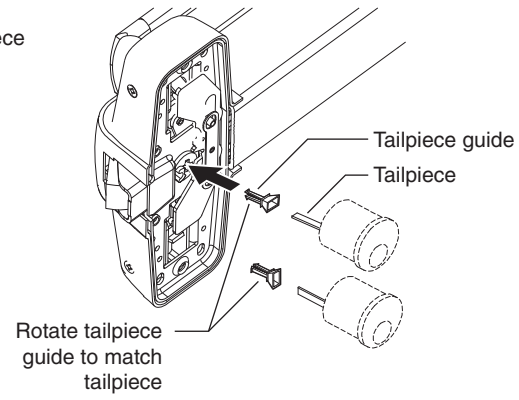
* If the trim being installed is "BE" (i.e. 996L-BE), the trim lock tumbler on the back of the device must be in the **UP** position before device is installed. This allows the trim to be unlocked at all times.



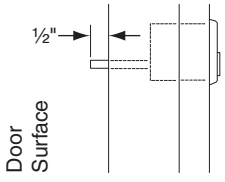


5 If Using a Cylinder with a Tailpiece, Prepare Device and Cylinder

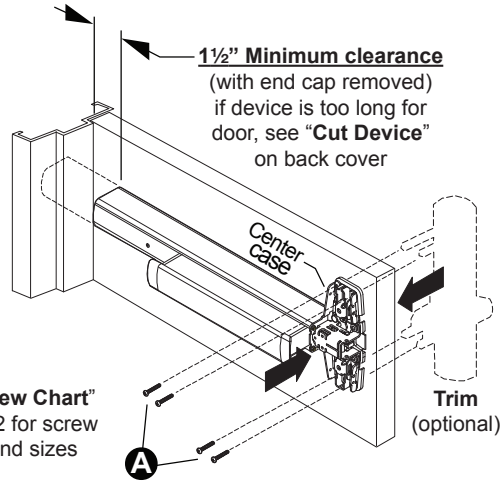
a. Install tailpiece guide.



b. Cut tailpiece as needed.

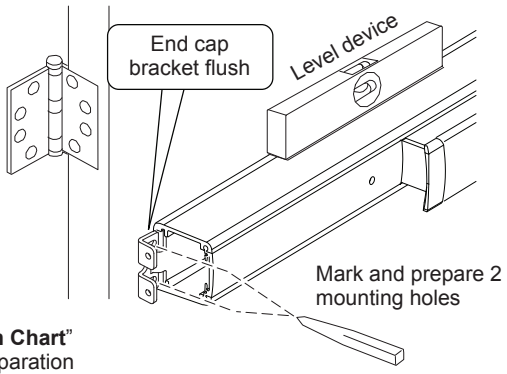


6 Install Trim (if using) and Secure Device Center Case to Door



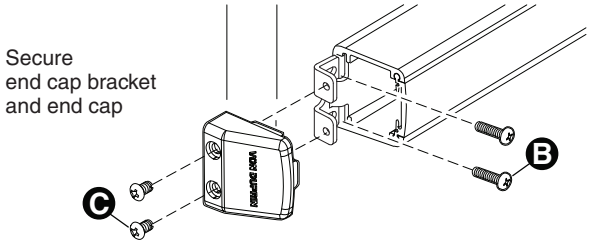
See "**Screw Chart**" on page 2 for screw types and sizes

7 Mark and Prepare 2 Holes for End Cap Bracket

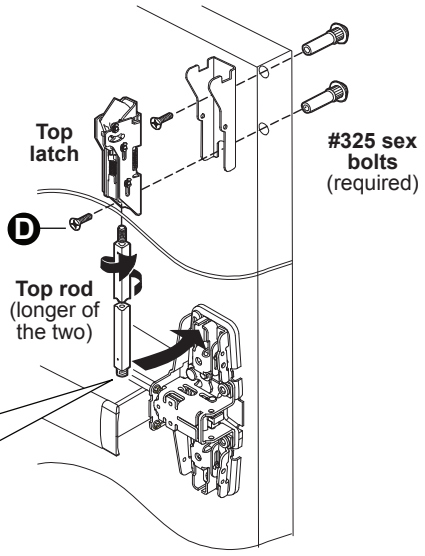


See "**Preparation Chart**" on page 3 for preparation information

8 Install End Cap Bracket and End Cap



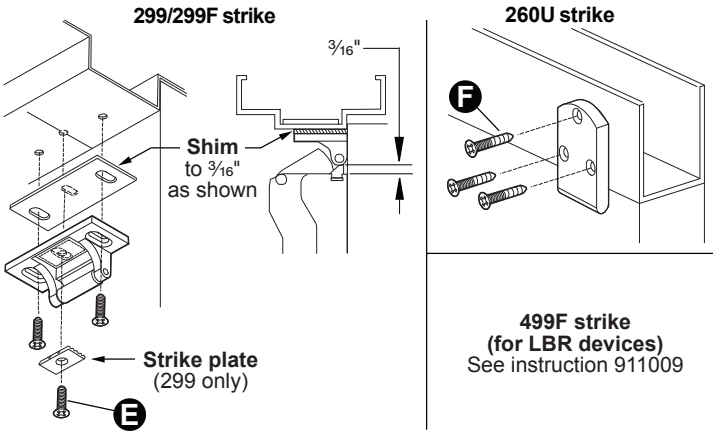
9 Install Top Latch and Rod



If top rod is too long, see "**Cut Top Rod**" on page 7

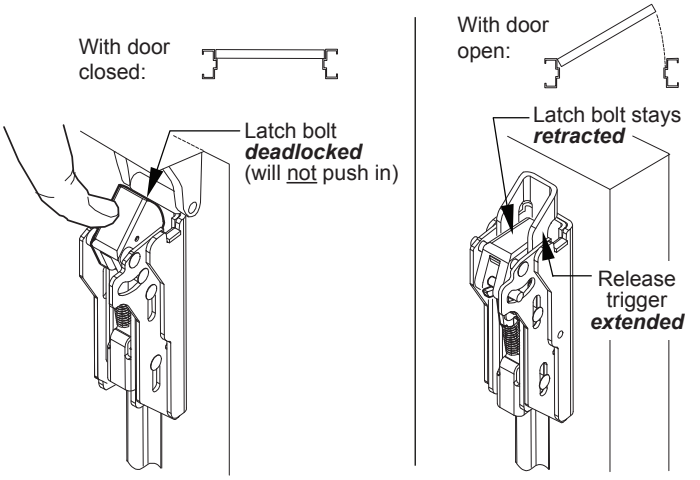
If top rod is too short, see "**Install Rod Extension**" on page 7

10 Install Top Strike

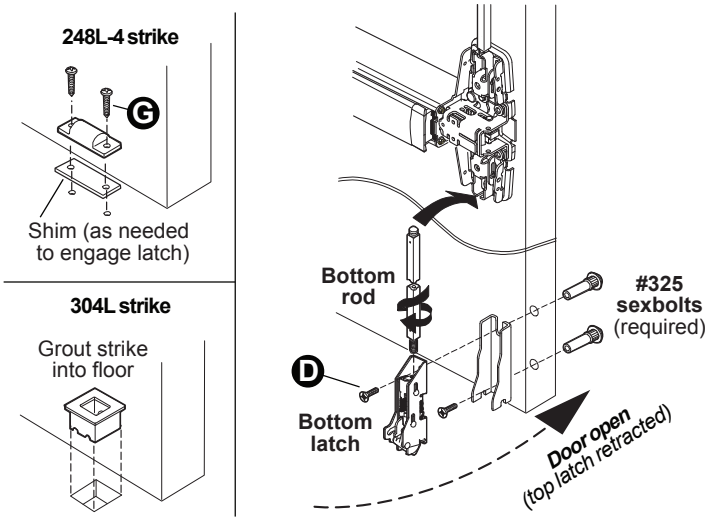


499F strike
(for LBR devices)
See instruction 911009

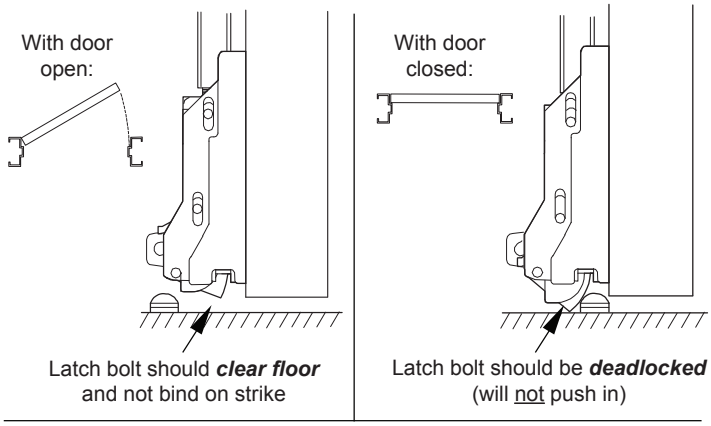
11 Adjust Top Rod (Screw Rod Into or Out of Latch) Until Adjusted as Shown



12 Install Bottom Strike, Latch, and Rod

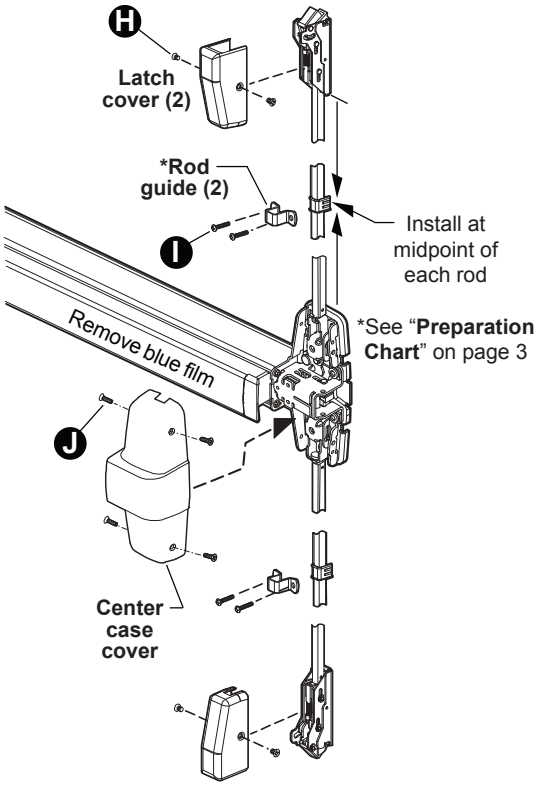


13 Adjust Bottom Rod with Door Open (Top Latch Retracted)



Open and close door a few times and check for deadlatching when door is closed. Readjust rods if needed.

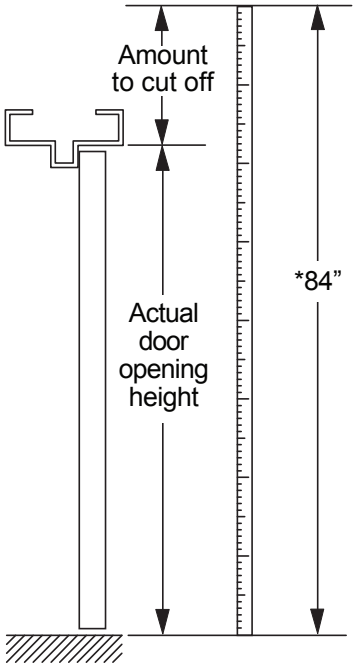
14 Install Rod Guides and Covers



CUT TOP ROD

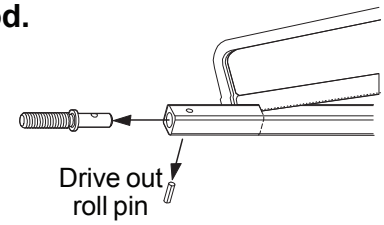
1. Measure amount to cut off rod as shown below.

Note: Rod cutting is required for doors shorter than 7'.

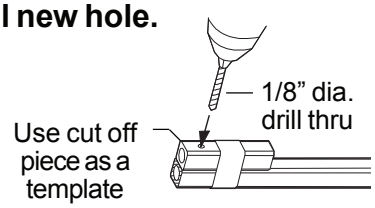


*Rods are factory sized for 7' (84") door. Measure actual door opening height and subtract that number from 84" to get amount to cut off top rod.

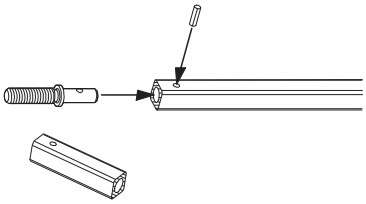
2. Cut rod.



3. Drill new hole.

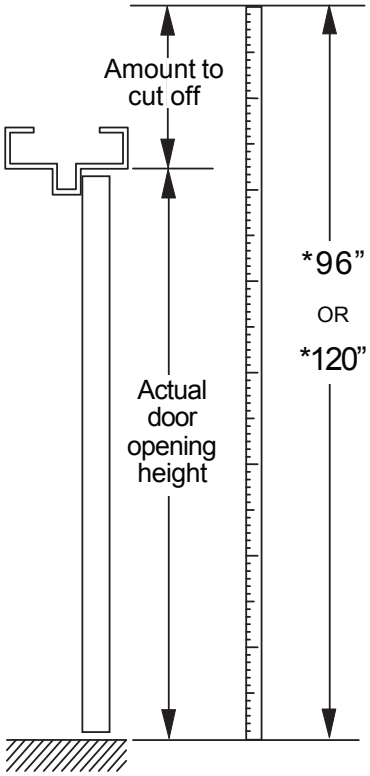


4. Reinstall rod end and roll pin.



INSTALL ROD EXTENSION

1. Measure door opening to determine amount to cut off rod extension.

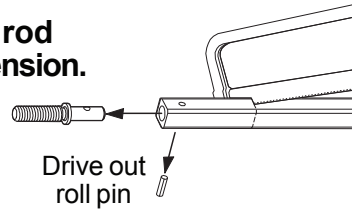


***Standard door heights:**

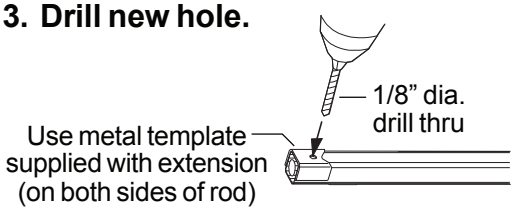
With no extension	7' (84")
With 1' extension	8' (96")
With 3' extension	10' (120")

*Rods are factory sized for door heights shown above. Measure actual door opening height and subtract that number from 96" (for 1' extension) or 120" (for 3' extension) to get amount to cut off extension.

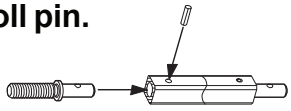
2. Cut rod extension.



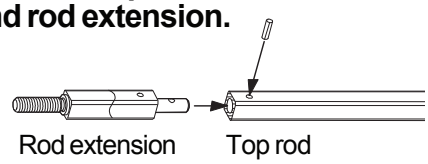
3. Drill new hole.



4. Reinstall rod end and roll pin.



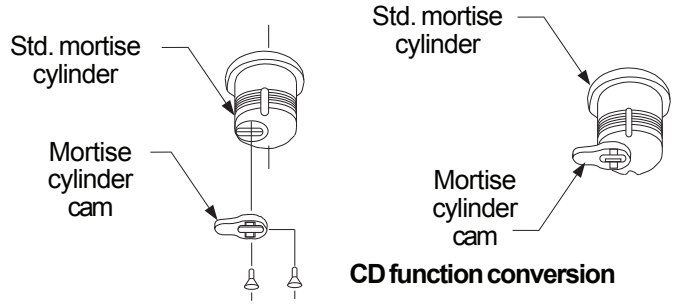
5. Connect top rod and rod extension.



OPTIONAL EQUIPMENT - CONTINUED

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

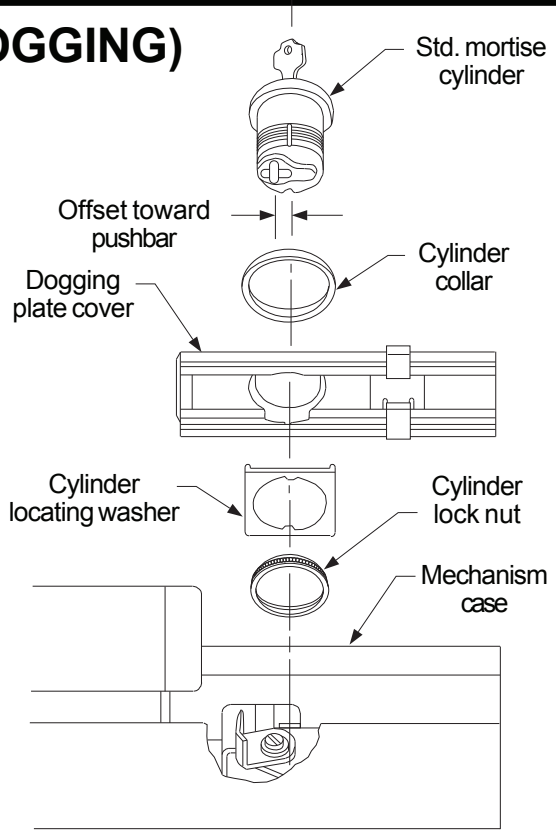
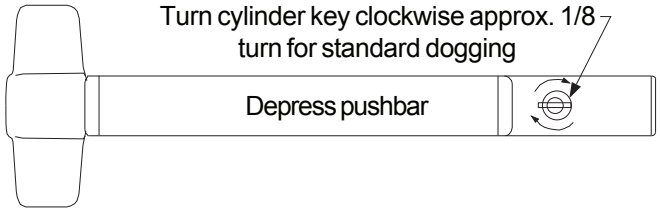


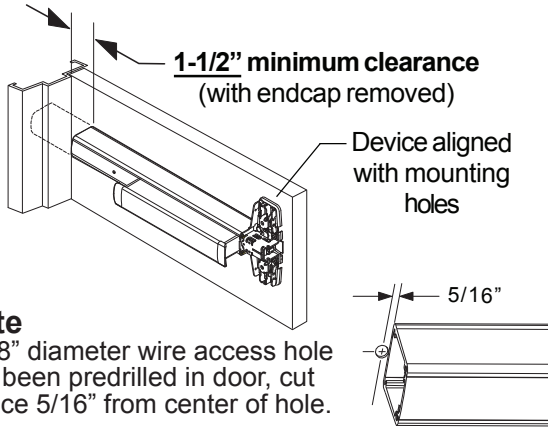
Figure 2

Dogging procedure



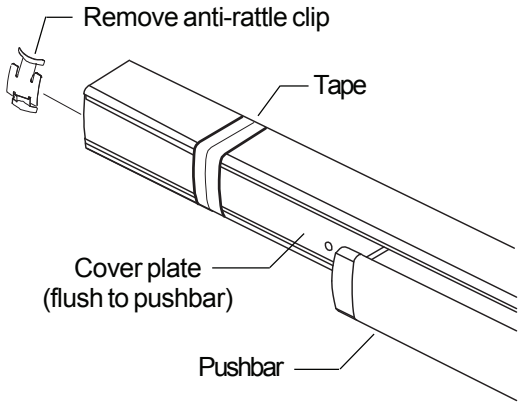
CUT DEVICE

1 Measure amount to cut off device.

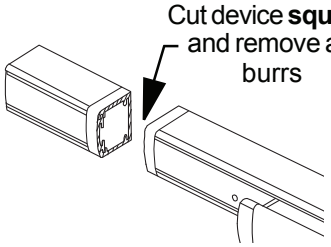


Note
If 5/8" diameter wire access hole has been predrilled in door, cut device 5/16" from center of hole.

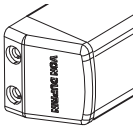
2 Tape and mark area being cut.



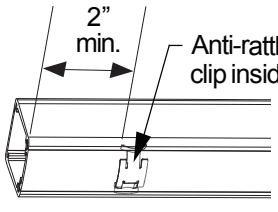
3 Cut device square.



NOTE: Device must be cut **square** for proper end cap fit



4 Slide anti-rattle clip into device.



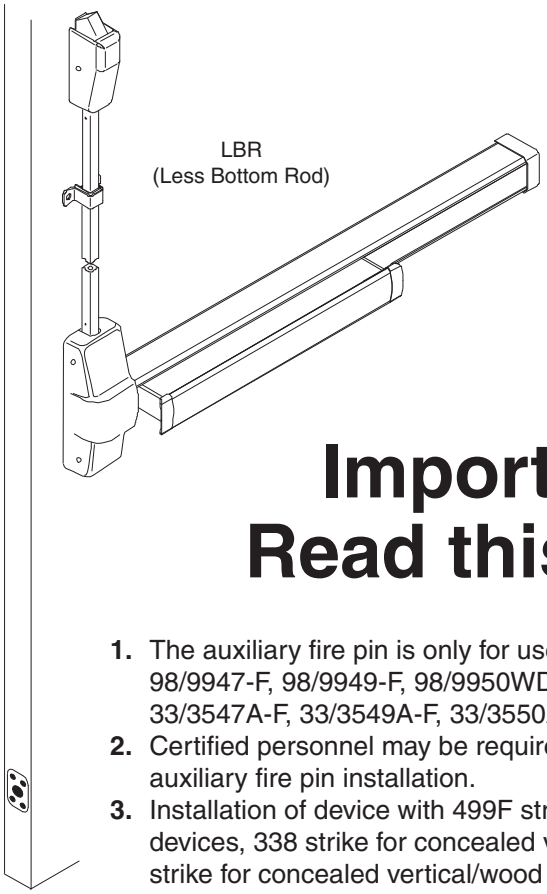
Auxiliary Fire Pin

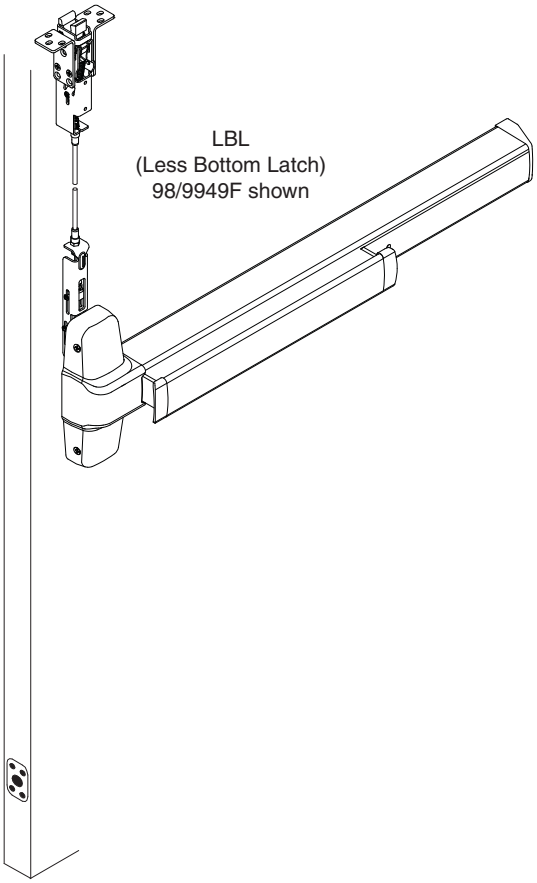
911009-00

For LBR/LBL Devices

VON DUPRIN

Installation Instructions





Important: Read this first!

1. The auxiliary fire pin is only for use with Von Duprin 98/9927-F, 98/9947-F, 98/9949-F, 98/9950WDC-F, 33/3547-F, 33/3527A-F, 33/3547A-F, 33/3549A-F, 33/3550AWDC-F, and 2227-F devices.
2. Certified personnel may be required to perform field prep for the auxiliary fire pin installation.
3. Installation of device with 499F strike for surface vertical rod devices, 338 strike for concealed vertical rod devices, and 249 strike for concealed vertical/wood door concealed vertical cable devices is required to maintain fire listing. **For 499F installation, see page 3 of these instructions.**
4. Follow device installation instructions omitting the bottom rod or cable, bottom rod guide (where applicable), bottom latch, and bottom strike.
5. Install auxiliary fire pin assembly per template on page 2.

⚠ NOTE

One (1) auxiliary fire pin assembly is supplied with two LBR/LBL devices. It does not matter which door leaf the auxiliary fire pin is installed on. However, the pin must be installed to maintain the fire listing. The purpose of the auxiliary fire pin assembly is to keep the doors in alignment during a fire. In a fire, the bolt extends from the auxiliary fire pin into the strike hole in the opposite door leaf. The black cap visible on the face of the auxiliary fire pin and the strike hole plug must melt in order for the bolt to extend. If an Edge Guard is used, make sure it is modified to allow clearance for the Fire Pin and Plastic Cap to be mounted to the door edge after the Edge Guard is installed. See Edge Guard Preparation on page 4 for more information.

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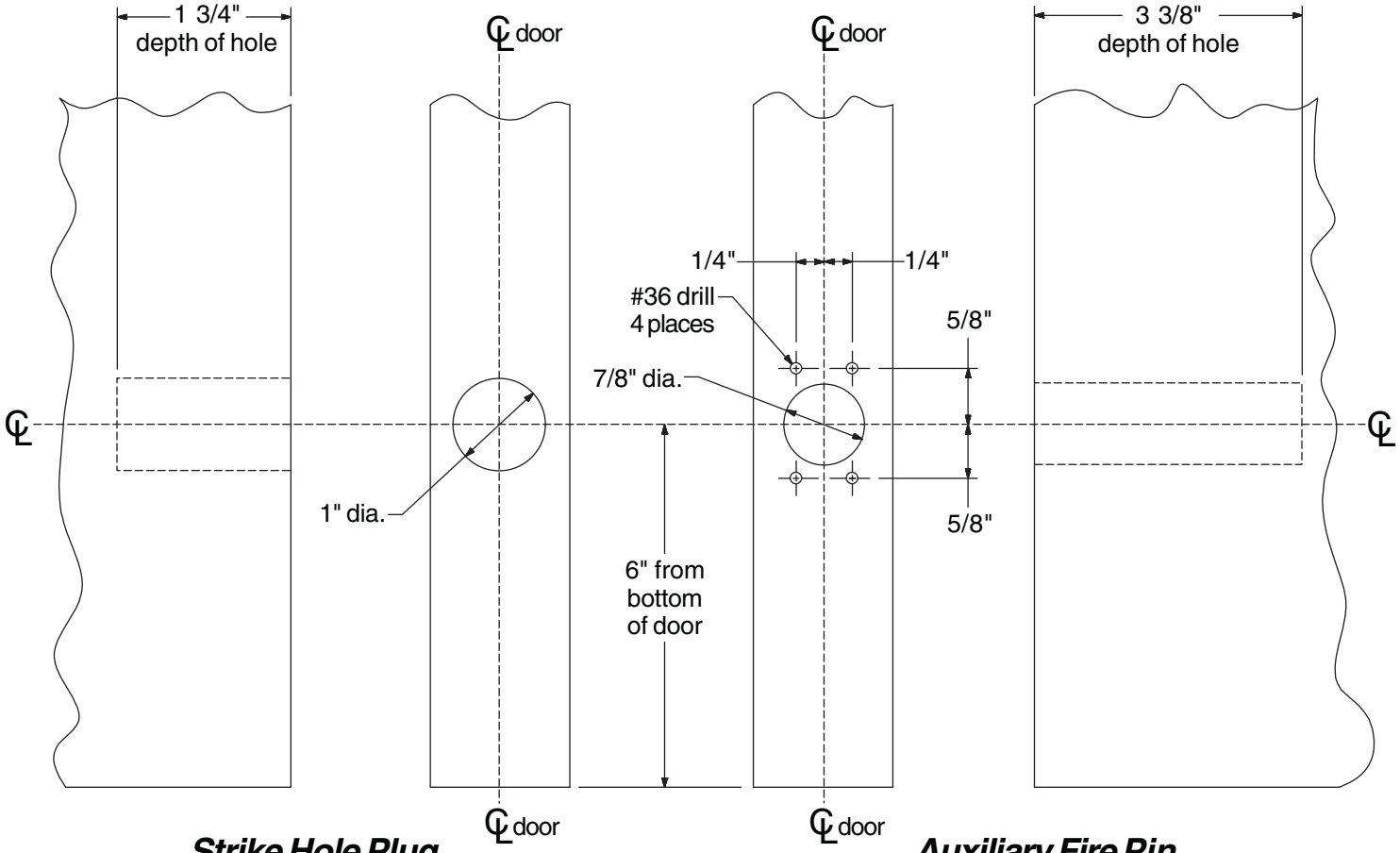
911009-00 Rev. 06/15-g

INSTALLATION

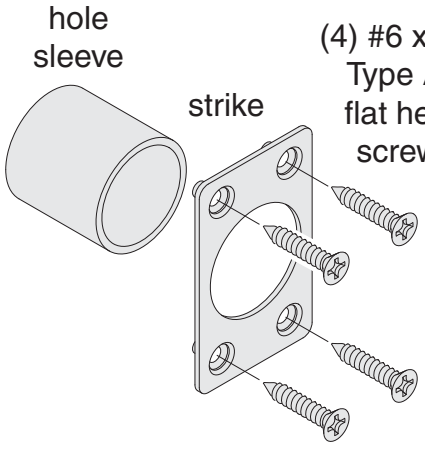
1 Prepare auxiliary fire pin mounting hole, screw holes, and strike hole in door.



Strike Hole Plug Door Leaf

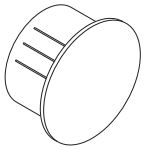
Auxiliary Fire Pin Door Leaf

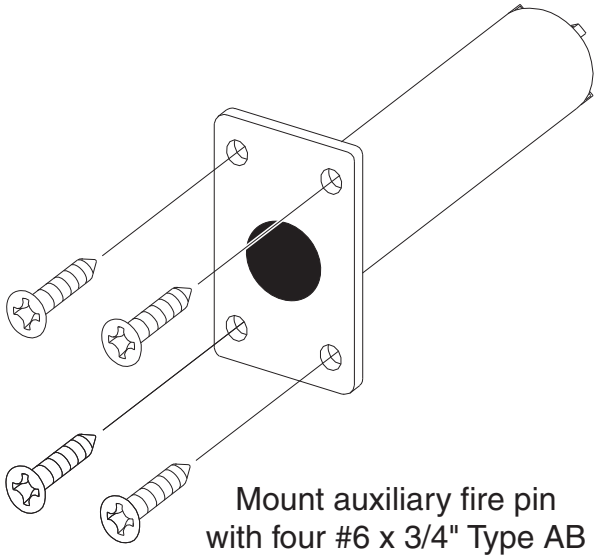
2 Install strike hole plug and auxiliary fire pin.



33/3550AWDC-F & **98/9950WDC-F** devices require these additional components be installed prior to strike hole plug

Install strike hole plug into strike hole





Mount auxiliary fire pin with four #6 x 3/4" Type AB flat head screws

3 Install 499F strike.

NOTE

Install the 499F strike for 98/9927-F LBR and 33/3527A-F LBR devices only. For concealed vertical LBR and LBL devices, follow device instructions for strike installation.

3.1. Prepare the door and frame for the top latch and strike per 299F template in device instructions.

3.2. Adjust 499F strike to position shown in Figure 3-1.

3.3. Install remaining three screws (see Figure 3-2).

3.4. Prepare door for strike hook (see Figure 3-3) and install strike hook. Figure 3-4 shows relative positions of strike, strike hook, and top latch.

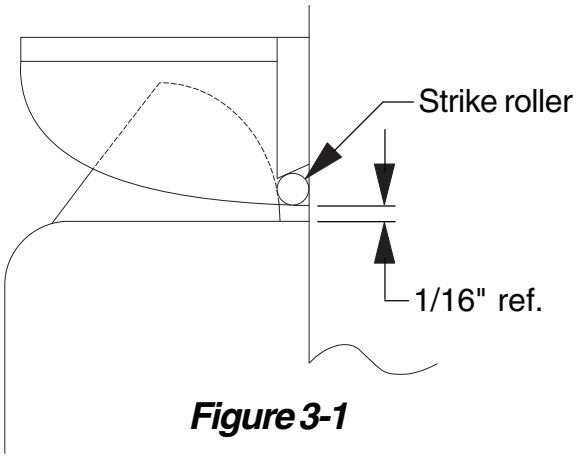


Figure 3-1

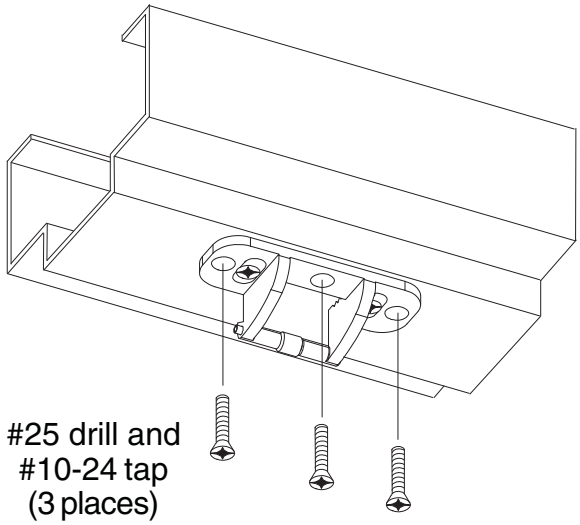


Figure 3-2

Hole Schedule	
Metal door:	#7 drill and #1/4"-20 tap
Wood door:	13/32" dia. drill thru

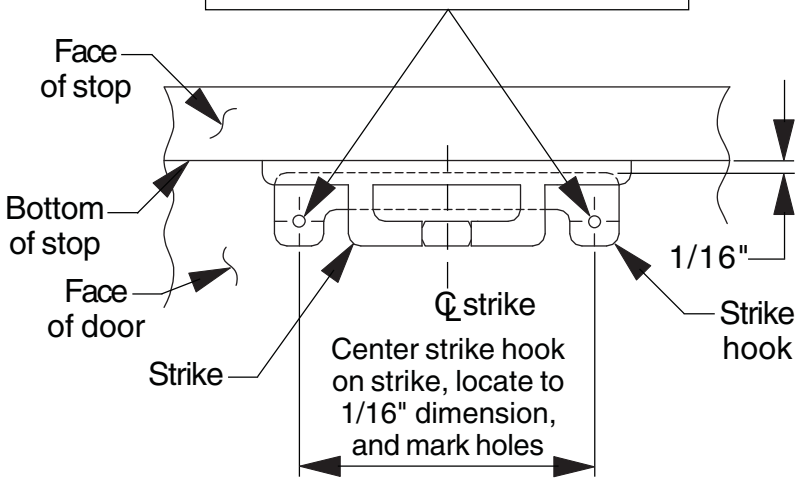


Figure 3-3

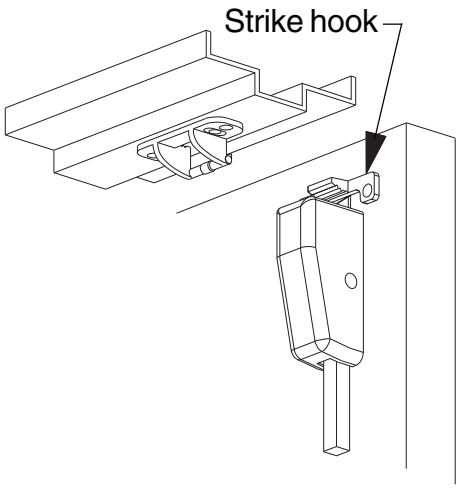


Figure 3-4

EDGE GUARD PREPARATION

If using Edge Guards, clearance holes must be cut into Edge Guards before they are installed on door as shown in Figure 4-1.

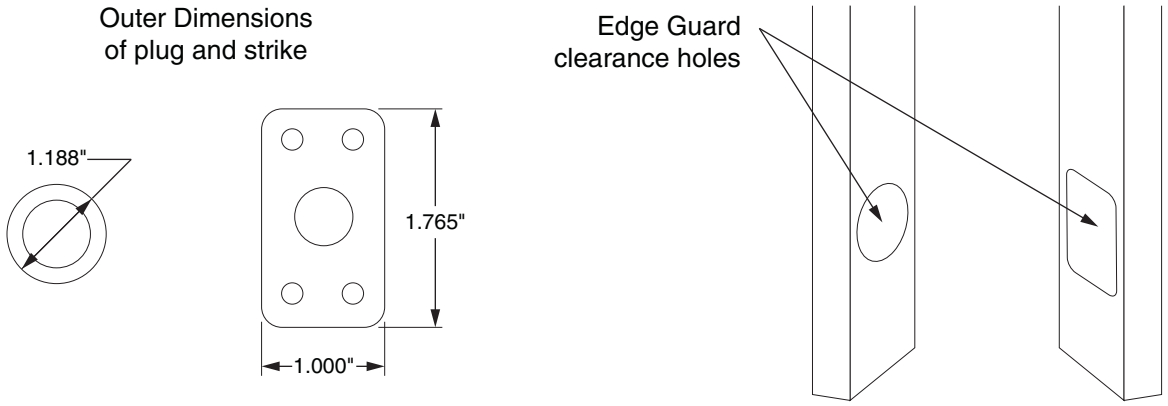


Figure 4-1

Edge guard near exit device center case can extend no further than .0625" from edge of door, as shown in Figure 4-2, or interference with device center case could occur. If Edge Guard is wider than specified, it may need to be trimmed in that area to clear center case.

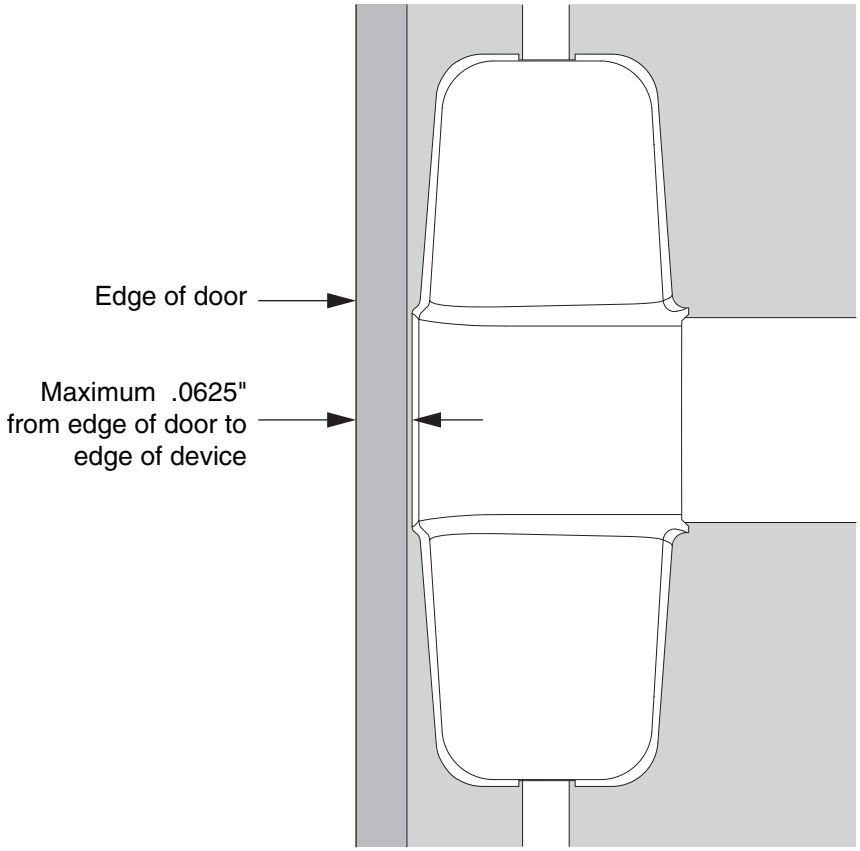


Figure 4-2

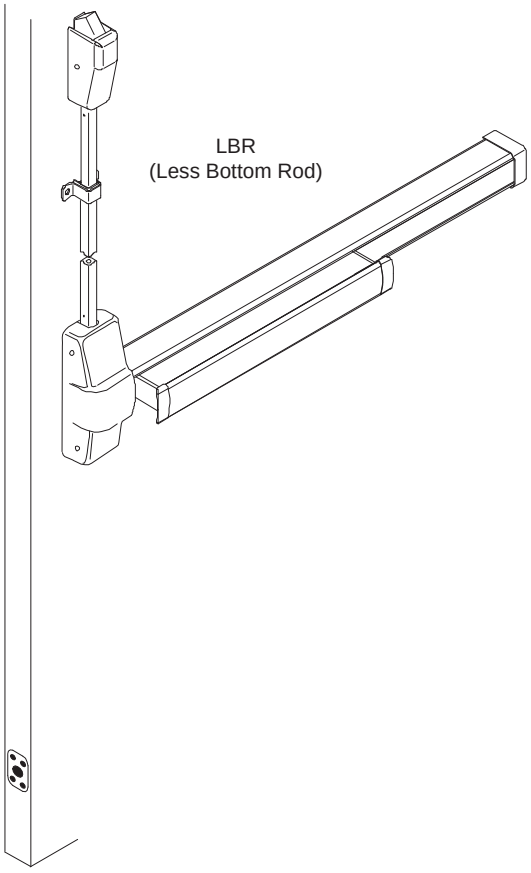
911010-00

Fire Pin/Strike Kit

LBR

VON DUPRIN®

Installation Instructions



Parts List	
Description	Quantity
Auxiliary Fire Pin Assembly	1
#6 x 3/4” Sheet Metal/Wood Flat Head Screw	4
Strike Hole Plug	1
499F Strike Assembly	2
Return Spring	2
Centercase Hole Plug	2

⚠ WARNING

For surface vertical rod installations, incorrect strike installations can result in latching failure in a fire condition. This can result in severe injury or death.

Installer: Discard installed strikes and replace with correctly installed 499F strikes supplied with this kit. Failure to install the 499F strikes on Surface Vertical Rod LBR-F devices will void the UL Fire Label.

Important: Read this first!

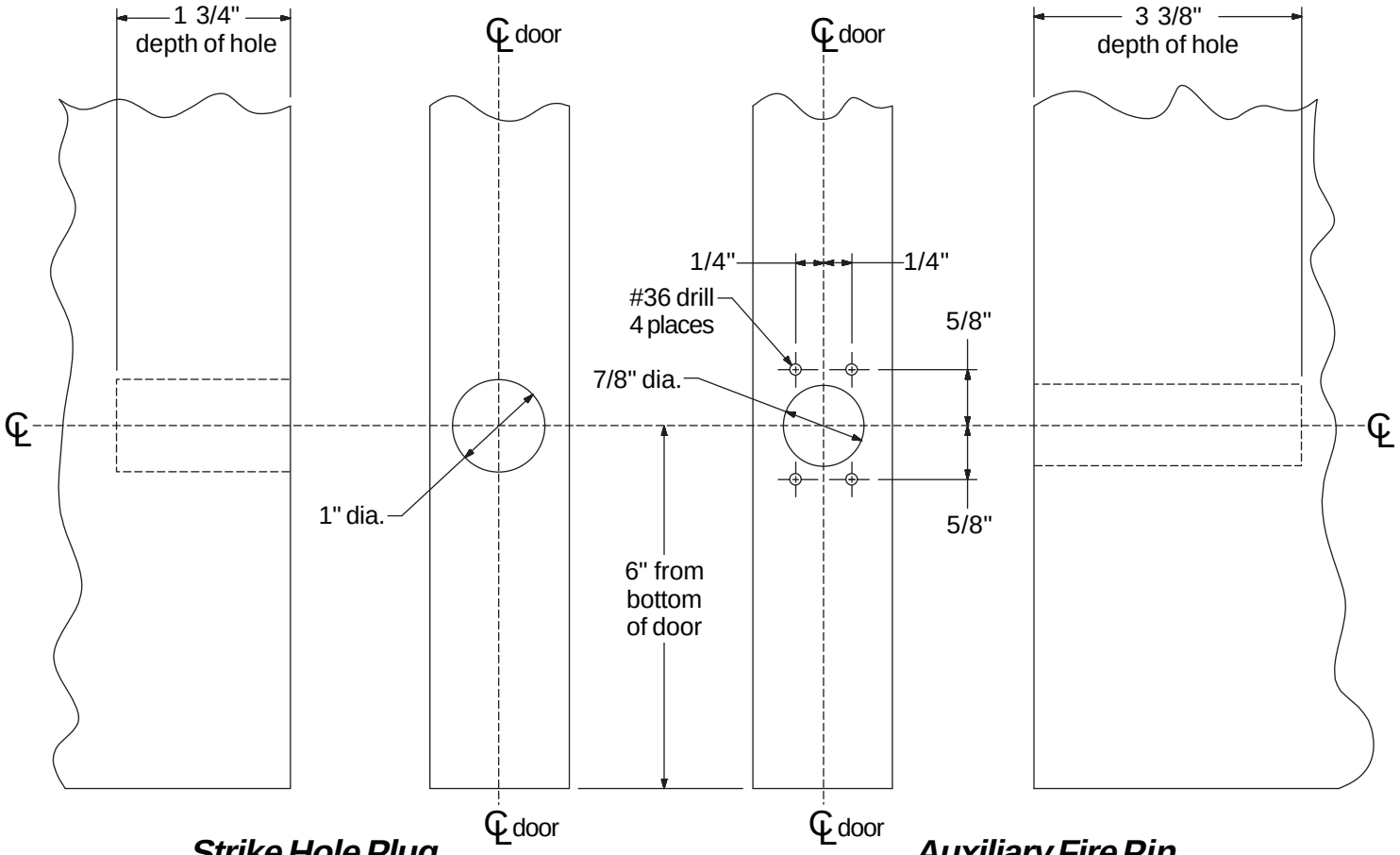
1. LBR Fire Pin/Strike Kit is for use only with Von Duprin 98/9927-F, 98/9947-F, 33/3547-F, 33/3527A-F, 33/3547A-F, and 2227-F devices.
2. Any door preparation must be performed by an installer that is certified by the door manufacturer.
3. Installation of device with 499F strike for surface vertical rod devices, and 338 strike for concealed vertical rod devices is required to maintain fire listing. **For 499F installation, see page 3 of these instructions.**

⚠ NOTE

One (1) auxiliary fire pin assembly is supplied with two LBR devices. It does not matter which door leaf the auxiliary fire pin is installed on. However, the pin must be installed to maintain the fire listing. The purpose of the auxiliary fire pin assembly is to keep the doors in alignment during a fire. In a fire, the bolt extends from the auxiliary fire pin into the strike hole in the opposite door leaf. The black cap visible on the face of the auxiliary fire pin and the strike hole plug must melt in order for the bolt to extend. If an Edge Guard is used, make sure it is modified to allow clearance for the Fire Pin and Plastic Cap to be mounted to the door edge after the Edge Guard is installed. See Edge Guard Preparation on page 4 for more information.

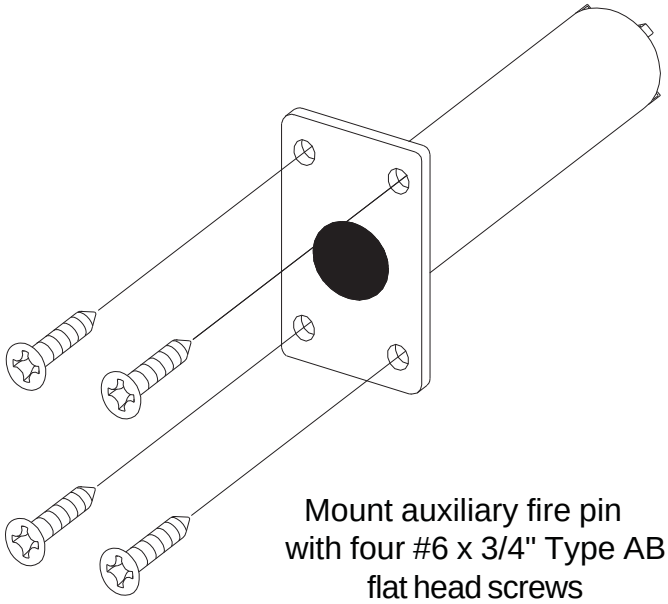
INSTALLATION

1 Prepare auxiliary fire pin mounting hole, screw holes, and strike hole in door.



2 Install strike hole plug and auxiliary fire pin.

Install strike hole plug in strike hole



Mount auxiliary fire pin with four #6 x 3/4" Type AB flat head screws

3 Install 499F strike.

NOTE

The 499F strike installation is only for 98/9927-F-LBR, 33/3527A-F-LBR, and 2227-F-LBR devices. For concealed vertical rod LBR devices, skip this procedure.

3.1. Replace 299F strikes with 499F strikes as shown below.

3.2. Adjust 499F strike to position shown in Figure 3-1.

3.3. Install remaining three screws (see Figure 3-2).

3.4. Prepare door for strike hook (see Figure 3-3) and install strike hook. Figure 3-4 shows relative positions of strike, strike hook, and top latch.

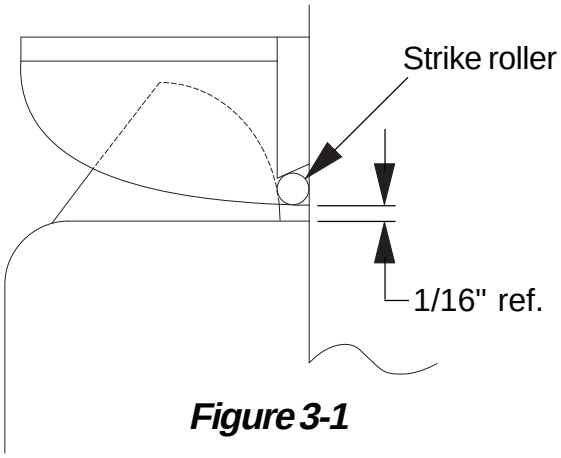


Figure 3-1

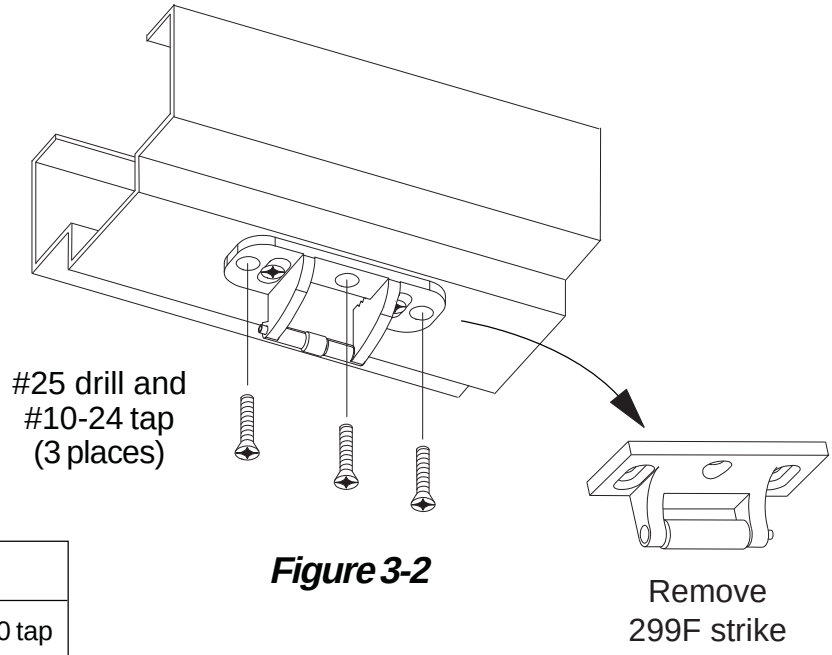


Figure 3-2

Hole Schedule	
Metal door:	#7 drill and #1/4"-20 tap
Wood door:	13/32" dia. drill thru

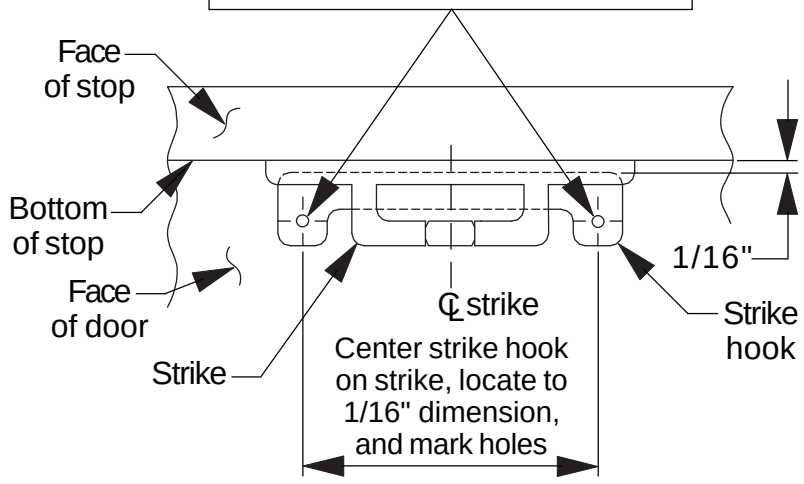


Figure 3-3

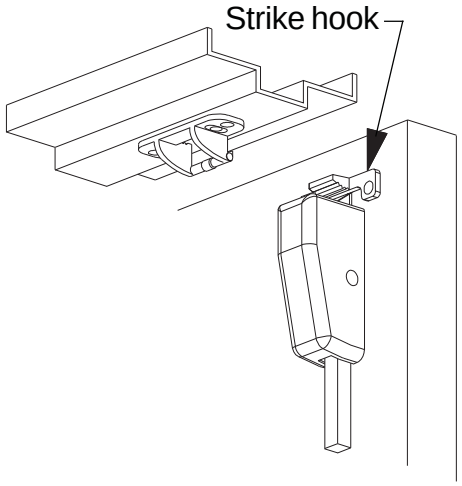


Figure 3-4

EDGE GUARD PREPARATION

If using Edge Guards, clearance holes must be cut into Edge Guards before they are installed on door as shown in Figure 4-1.

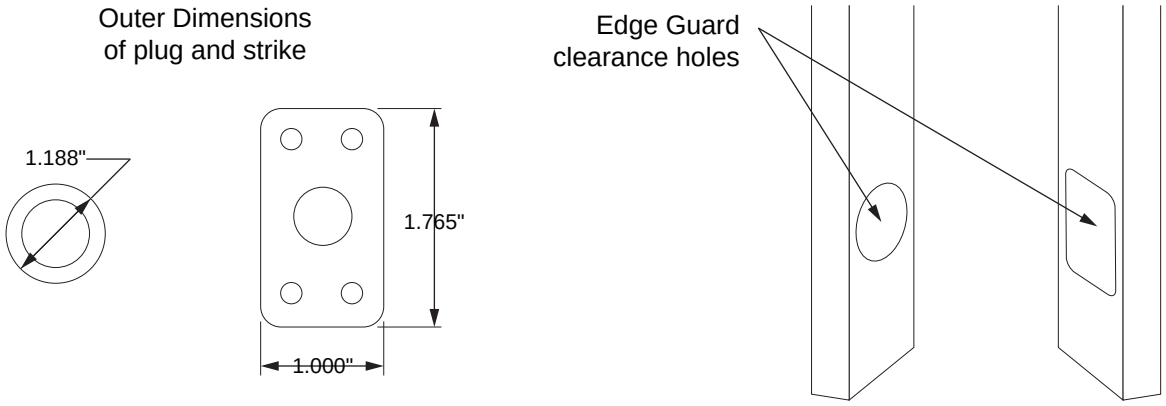


Figure 4-1

Edge guard near exit device center case can extend no further than .0625" from edge of door, as shown in Figure 4-2, or interference with device center case could occur. If Edge Guard is wider than specified, it may need to be trimmed in that area to clear center case.

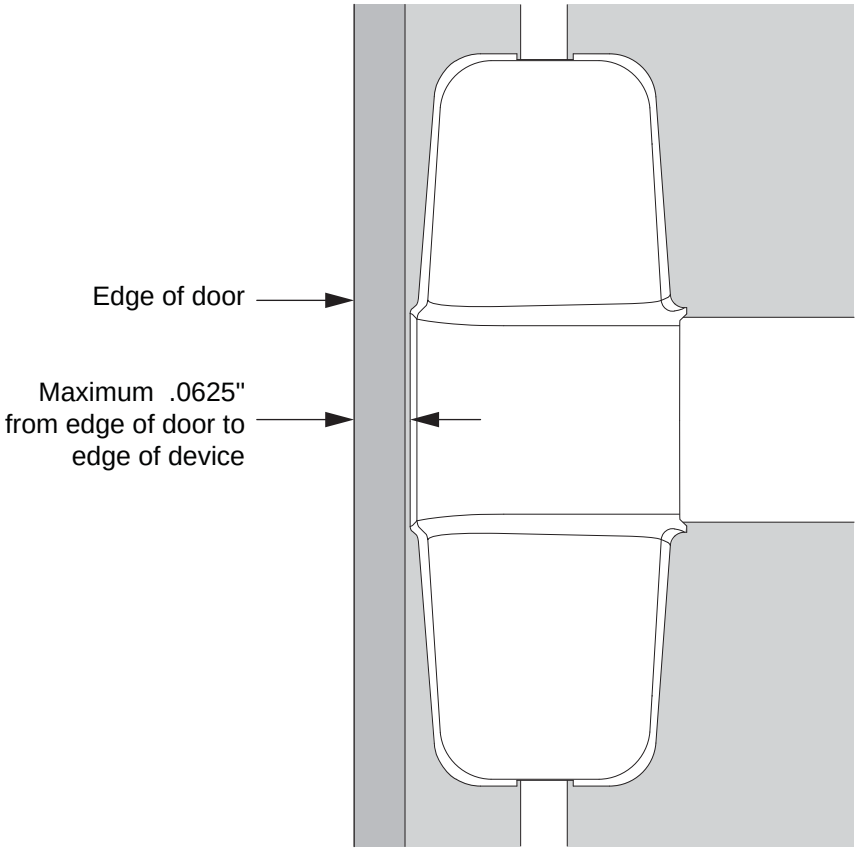


Figure 4-2

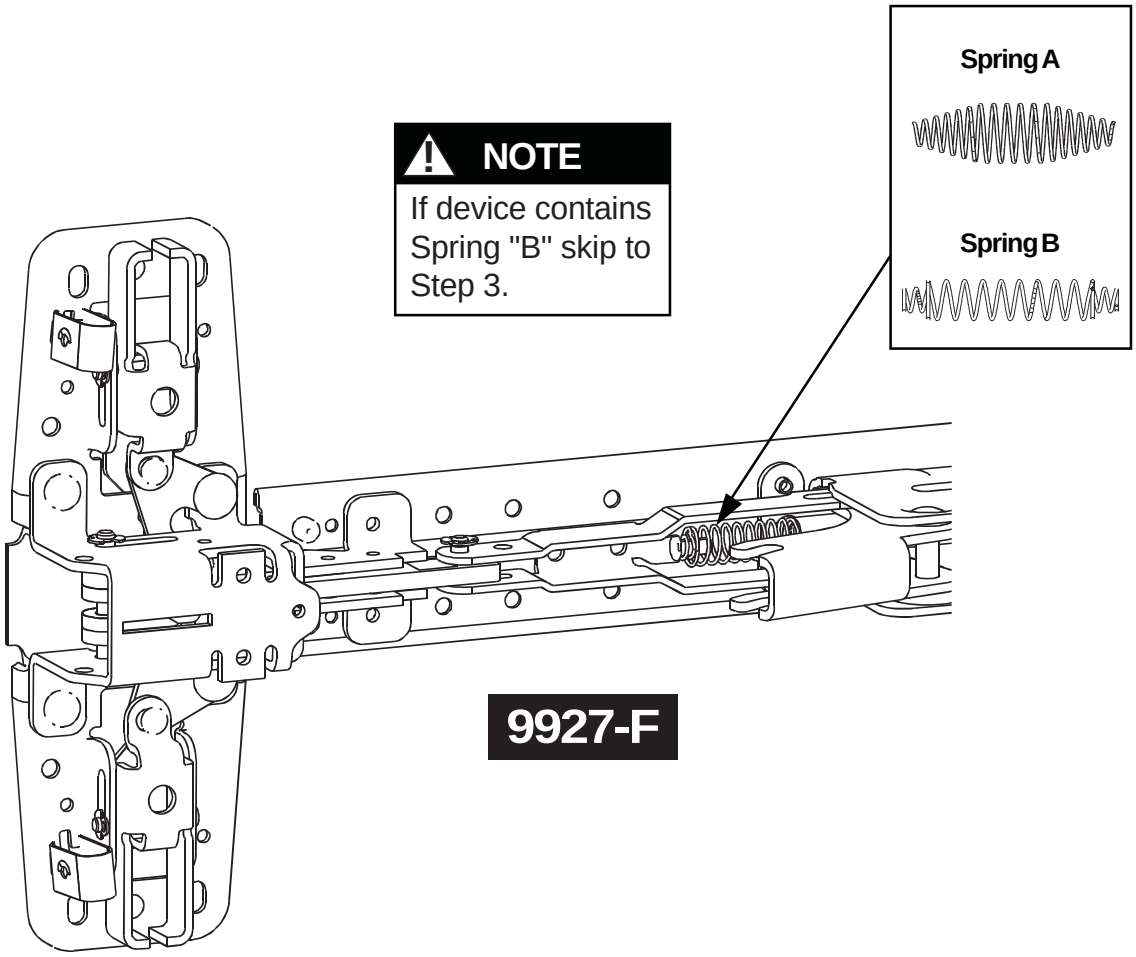
RETURN SPRING REPLACEMENT

WARNING

Installation of the wrong spring can result in latching failure in a fire condition. This can result in severe injury or death.

Installer: Make sure correct return spring is installed per instructions below.

1 Determine which spring the device baseplate contains comparing to the following two springs:



2 Remove return spring "A" and replace with spring supplied in kit.

3 Repeat steps 1 and 2 for device on other door leaf.

4 Reinstall devices.

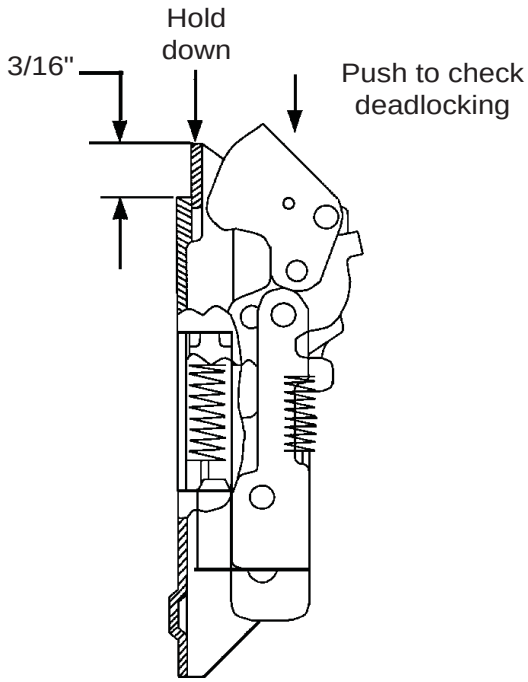
VERTICAL ROD ADJUSTMENT PROCEDURE

33/3527A-F-LBR, 98/9927-F-LBR, & 2227-F-LBR

1 Screw top vertical rod to top latch case.

2 Push rod upward slowly until it has fully extended top latch bolt to achieve deadlocking as shown.

3 Adjust top vertical rod until rod snaps into centercase.



4 Check device operation by opening and closing door with outside lever or thumbpiece.

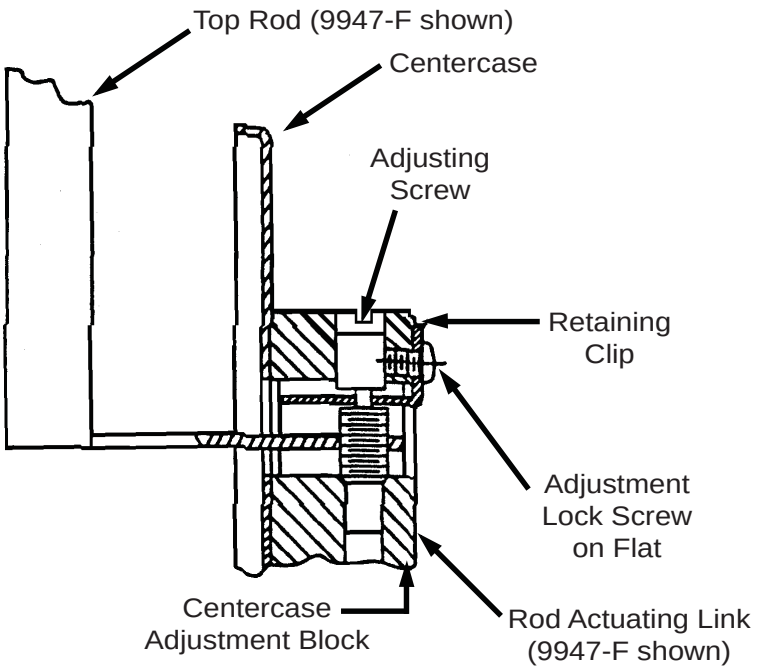
VERTICAL ROD ADJUSTMENT PROCEDURE

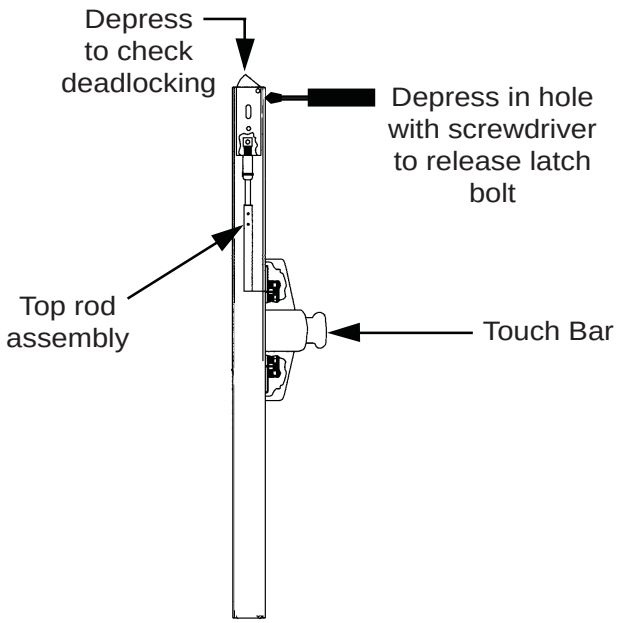
33/3547A-F-LBR & 98/9947-F-LBR

1 Loosen top adjustment lock screw.

2 Rotate adjusting screw clockwise until centercase adjustment block begins to move down and top latch bolt is fully extended (do not remove retaining clip).

3 Set adjusting screw as shown. Tighten adjustment lock screw.





4 Check device operation by opening and closing door with outside lever or thumbpiece.

VERTICAL ROD ADJUSTMENT PROCEDURE

3347F-LBR

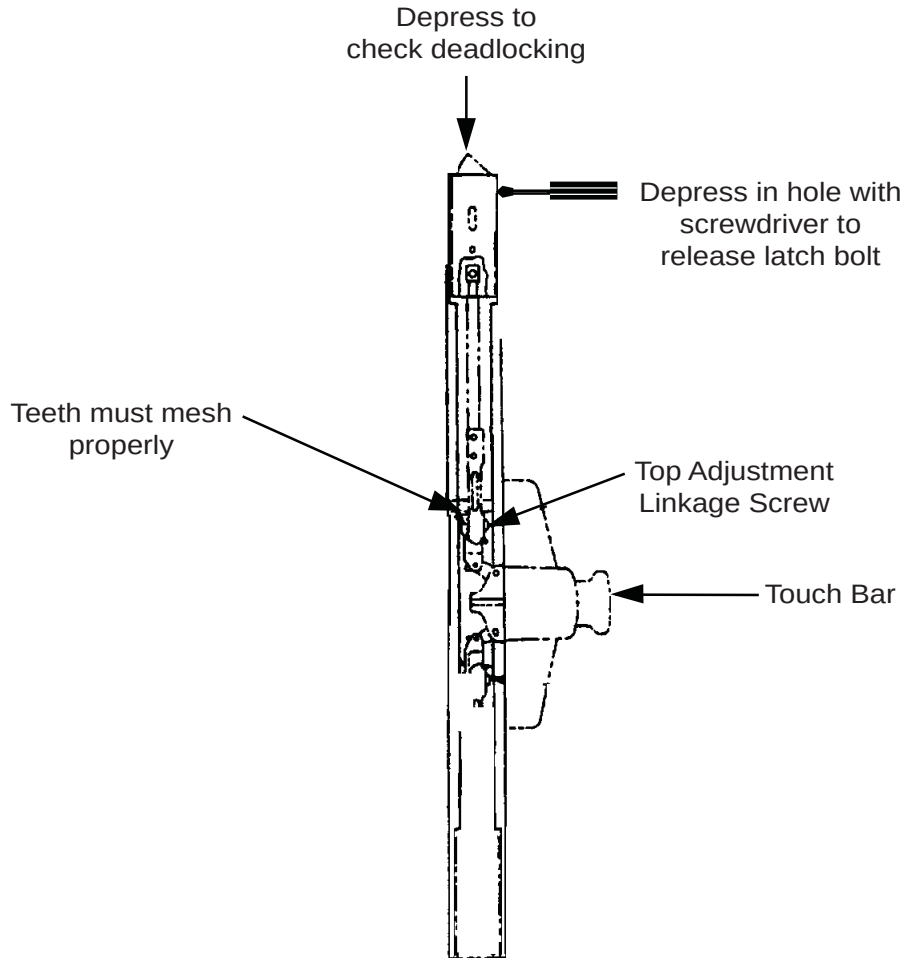
1 Loosen top adjustment linkage screw on top connector as shown in the diagram.

2 Fully extend latch bolt. Retighten top adjustment linkage screw.

3 Open door and release pushbar. Top latch bolt should be held retracted.

4 Release latch bolt as shown.

5 Check deadlocking.



6 Check device operation by opening and closing door with outside lever or thumbpiece.

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ALLEGION

911010-00 Rev. 06/15-e

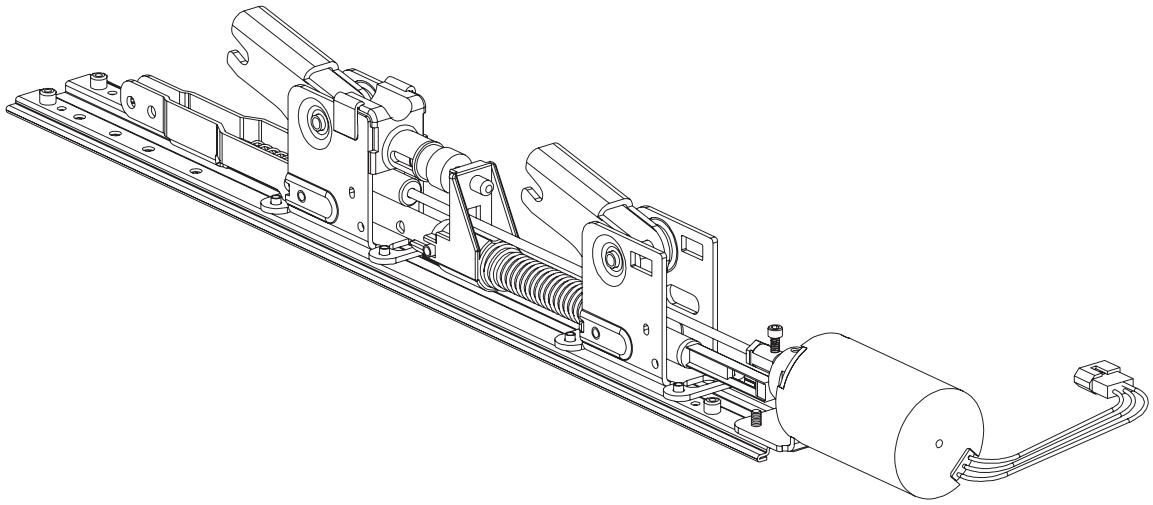
941255-00

Conversion Kit

EL/HD-EL

VON DUPRIN®

Installation Instructions



Read All Warnings Before Starting Installation!

Index

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ALLEGION™

Printed in U.S.A.
941255-00 Rev. 01/14-c

GENERAL INFORMATION

This kit converts 33/35, 33A/35A, and 98/99 series devices to electric latch (EL) retraction devices.

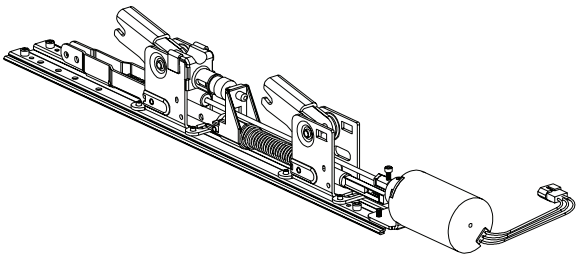
Before beginning installation, review “Specifications,” “Parts List,” “Warnings,” and “Tools Needed.”

SPECIFICATIONS

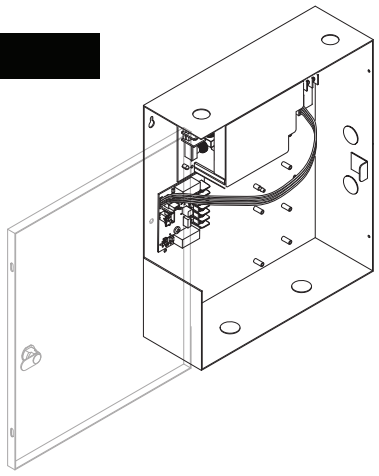
Solenoid:

Continuous duty: 24 VDC
Current inrush: 16 A
Current holding: 0.3 A

PARTS LIST

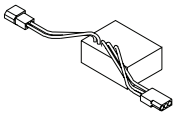


Baseplate with solenoid

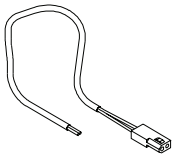


PS914 power supply with 900-2RS logic board
*not in kit

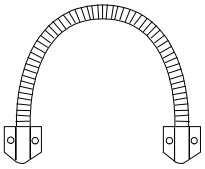
Pin and retaining clip



Circuit breaker



Cable



DL-12 door loop
*not in kit

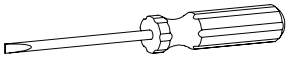
* This part is required for installation but not included in this kit. Contact factory to order.

WARNINGS

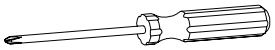
1. This kit cannot be used to convert 33/35 Rim devices. Consult factory.
2. Install according to instructions or device will not function and panic or fire label will be void.
3. The solenoid wiring must be attached to the fire alarm system if installed on fire exit hardware.
4. PS914 power supply with 900-2RS logic board must be used for EL device to operate properly.
5. Field wiring between the power supply and the door must be 12 AWG.

TOOLS NEEDED

5/8” dia. drill bit



Flat blade screwdriver

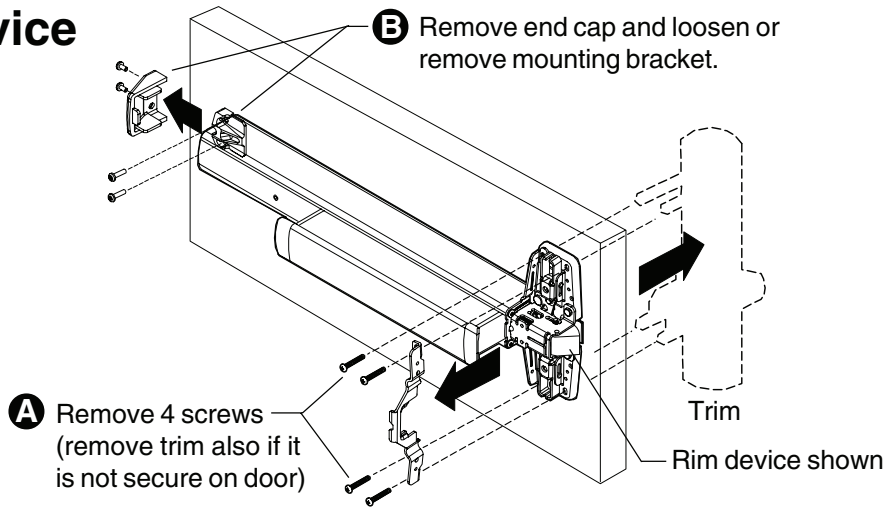


Phillips screwdriver

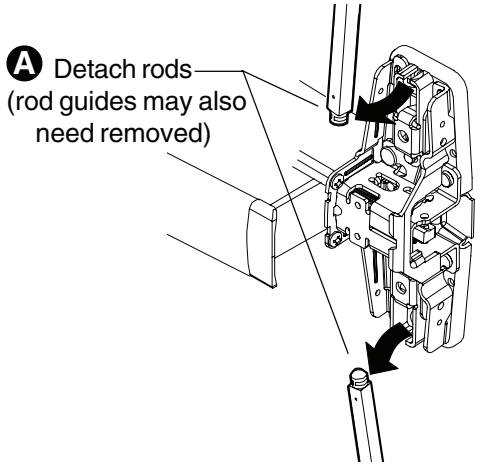
1 Remove device from door if installed (find correct device on page 3 or 4).

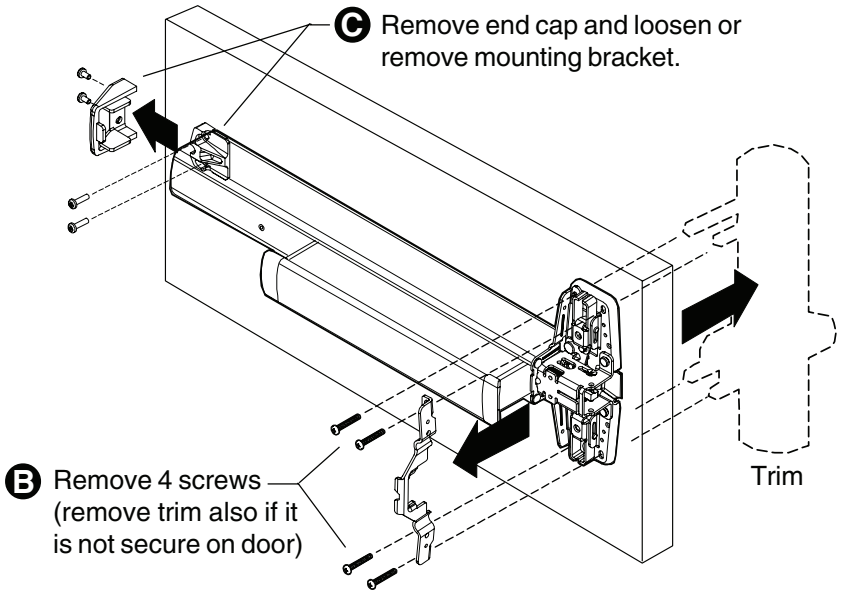
⚠ WARNING Device and trim must be held securely while removing mounting screws to prevent device and trim from dropping to the floor.

98/99 Rim/Mortise Device

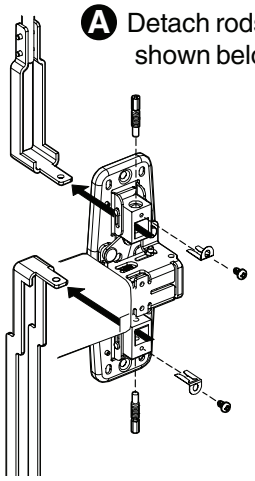


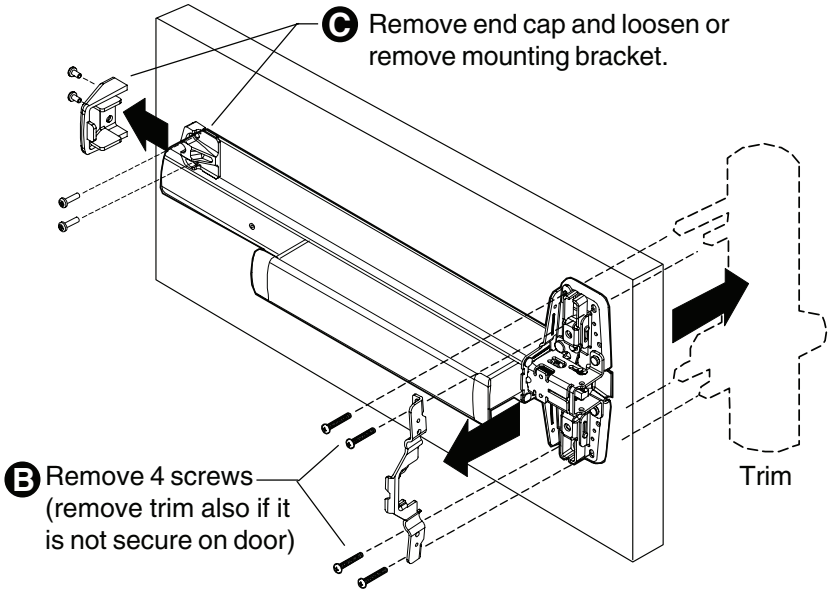
9827/9927 Device





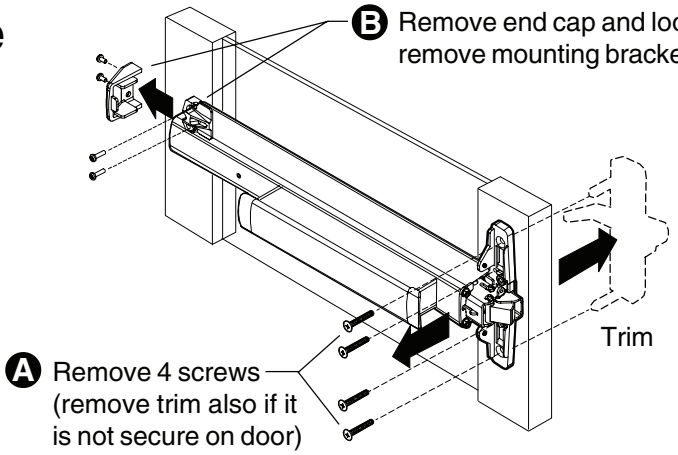
9847/9947 Device





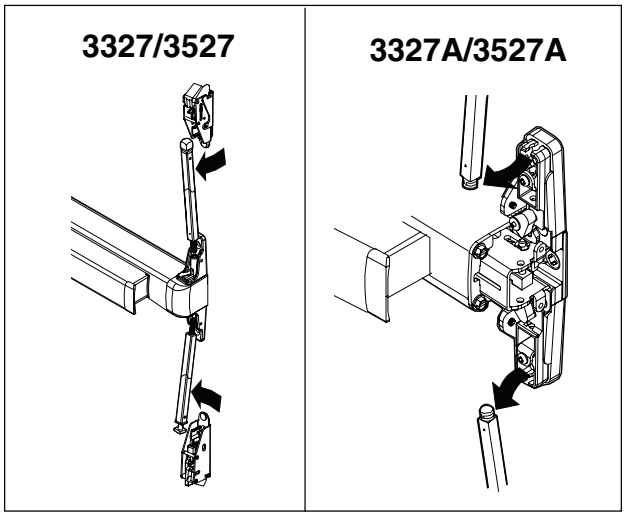
1 Continued from page 3.

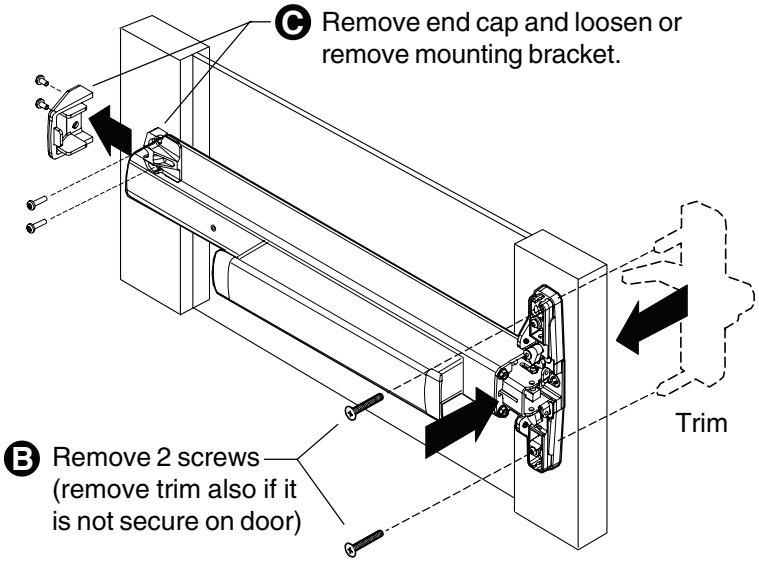
33A/35A Rim Device



3327/3527 & 3327A/3527A Device

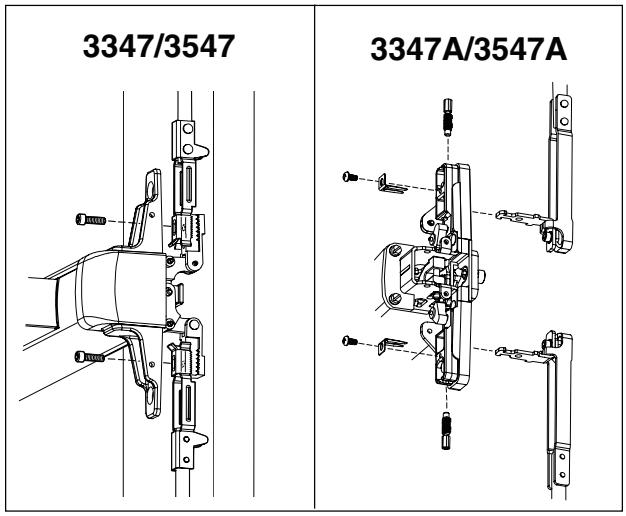
A Detach rods (rod guides may also need removed)

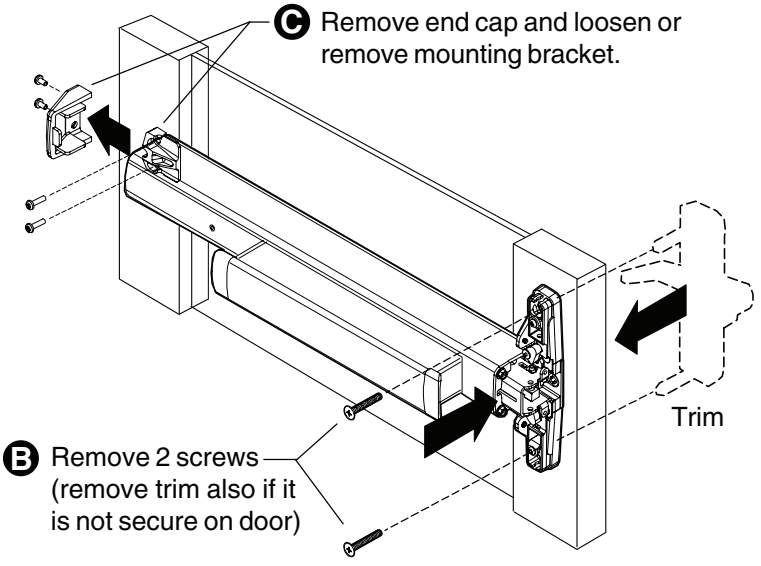




3347/3547 & 3347A/3547A Device

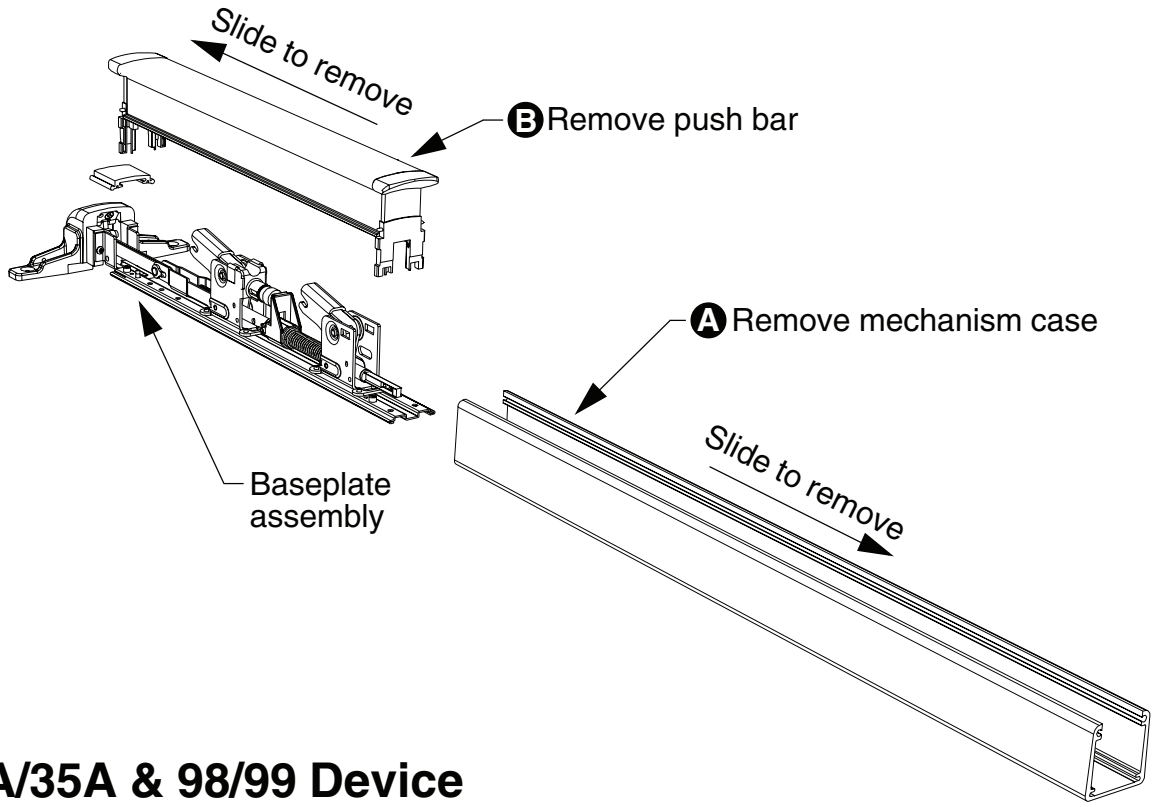
A Detach rods as shown below



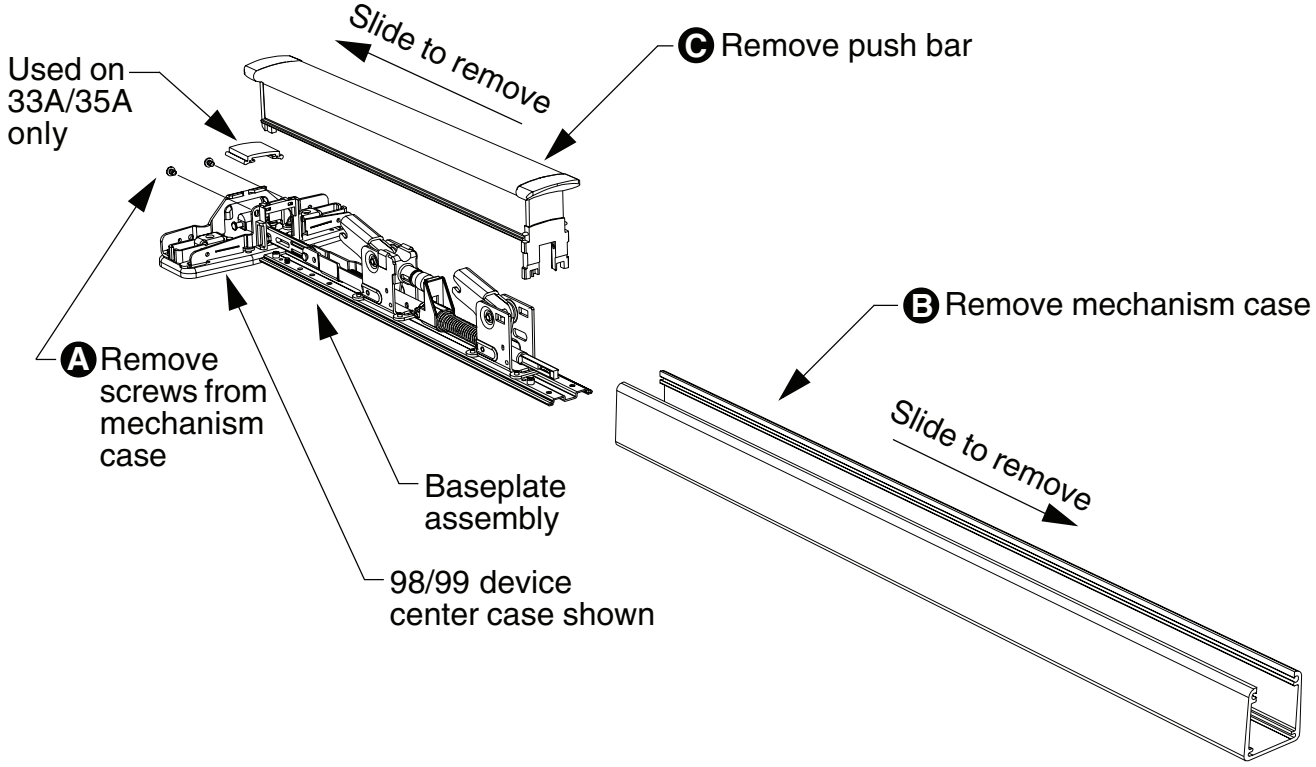


2 Disassemble device.

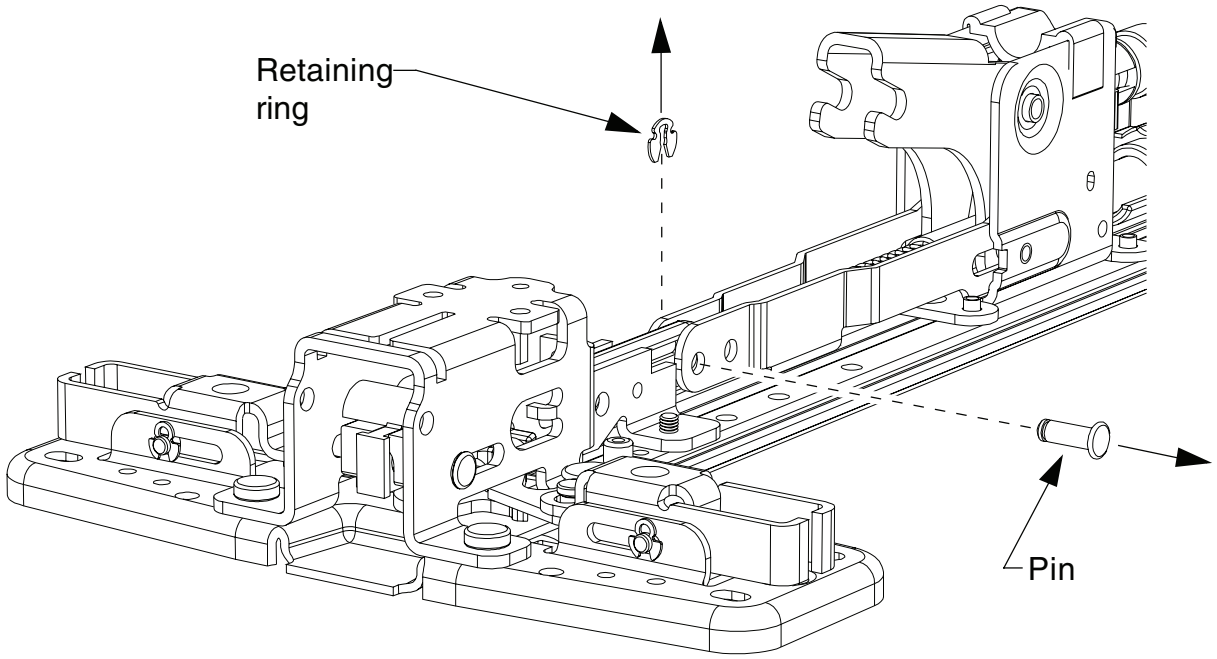
33/35 Device



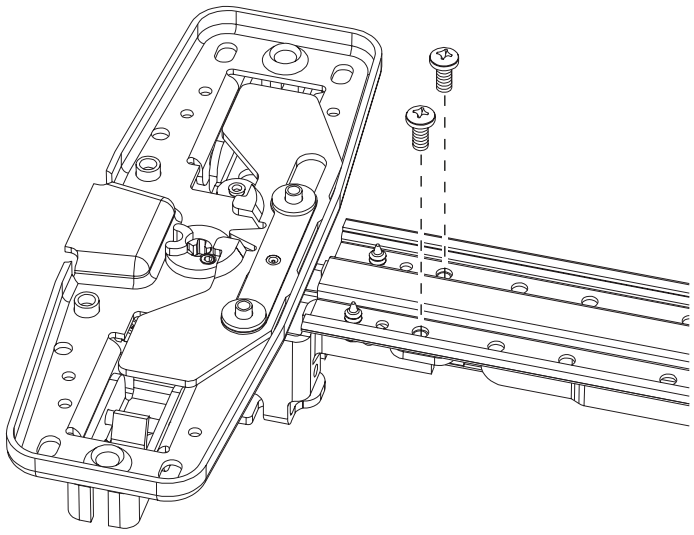
33A/35A & 98/99 Device



3 Remove main link retaining ring and pin.

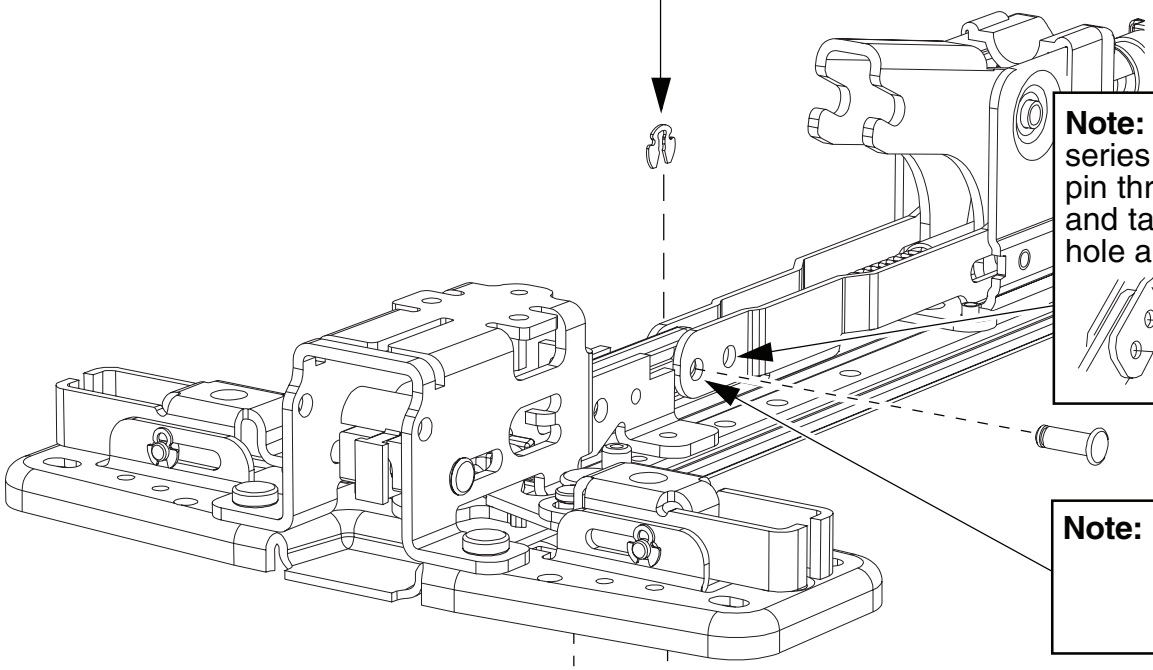


4 Remove screws connecting center case to baseplate.

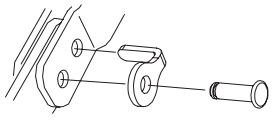


5 Install center case to new EL baseplate.

Warning: Make sure retaining ring is secure in the pin groove. If retaining ring is not secure it could result in an exit device that will not allow exit. This is a serious safety issue.



Note: For 33/35 series devices, place pin through front hole and tab through back hole as shown.

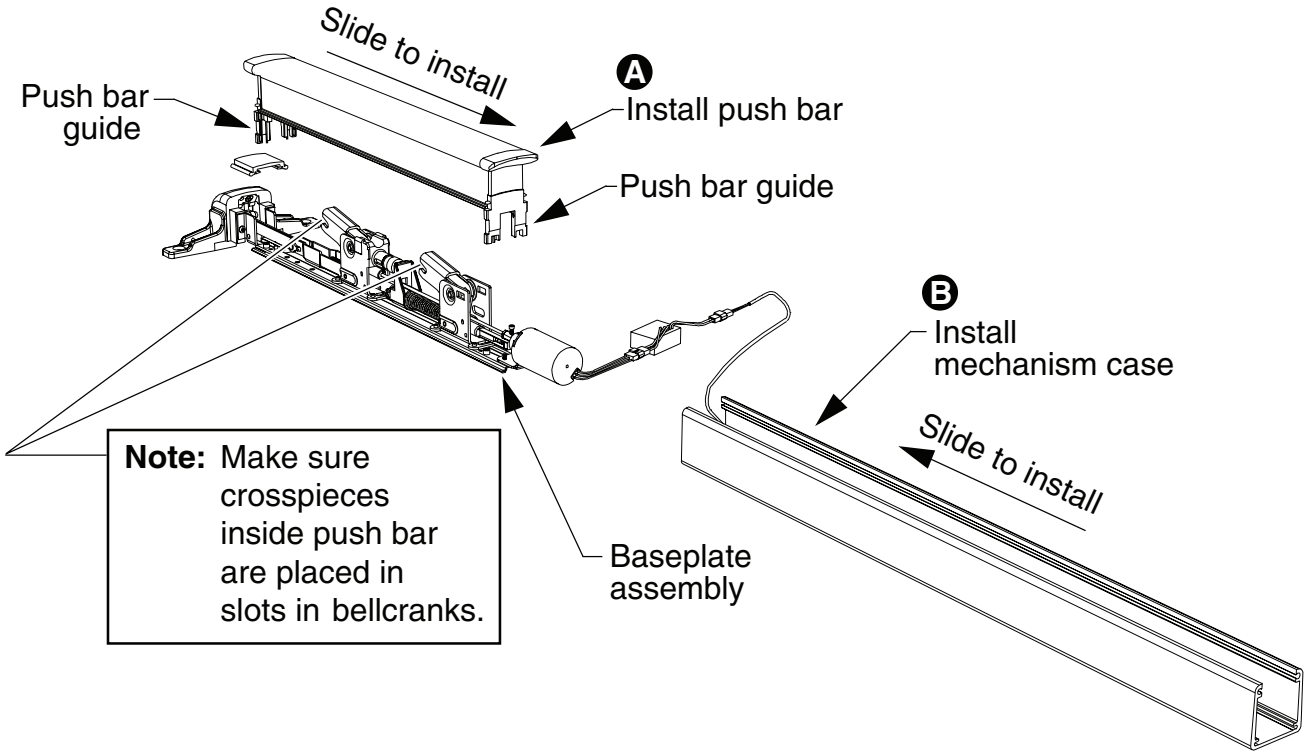


Note: Use this hole for 33A/35A & 98/99 series devices.

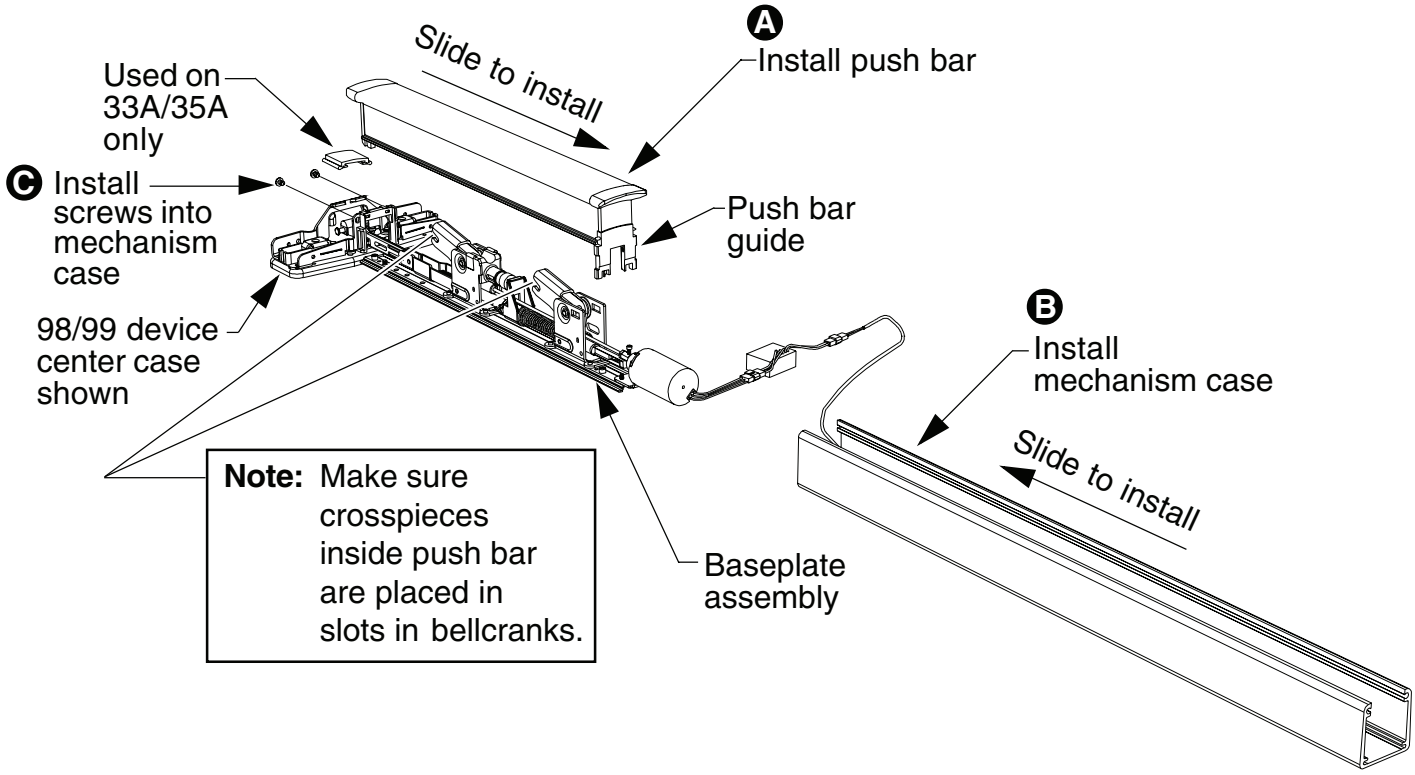
Note: Remember to install screws connecting centercase to baseplate that were removed in Step 4.

6 Reassemble device.

33/35 Device

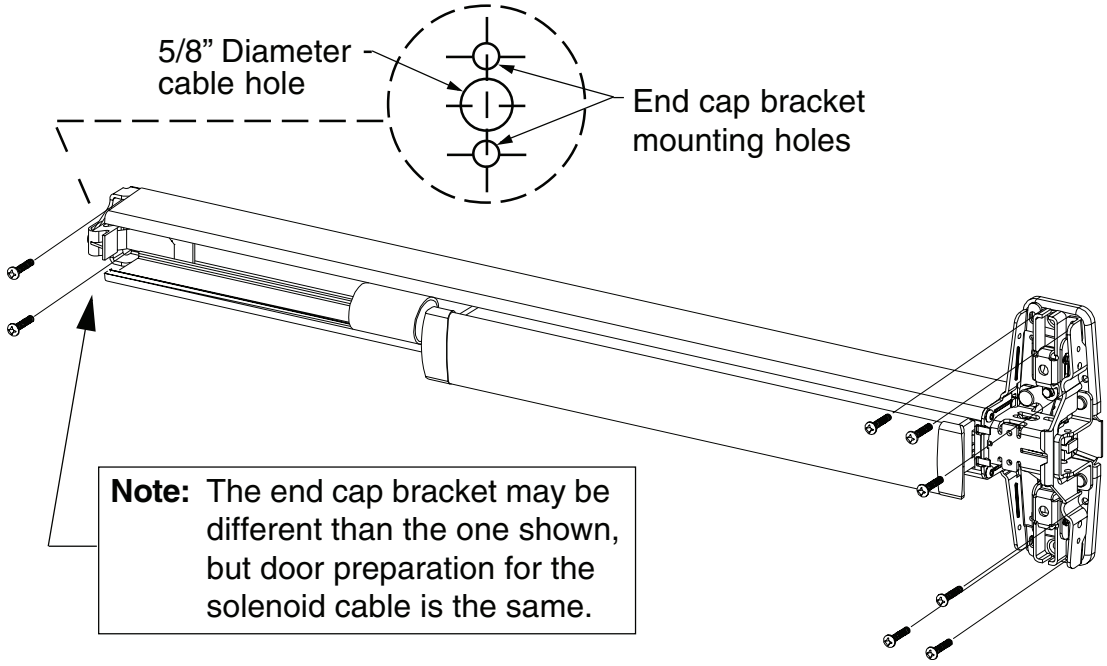


33A/35A & 98/99 Device

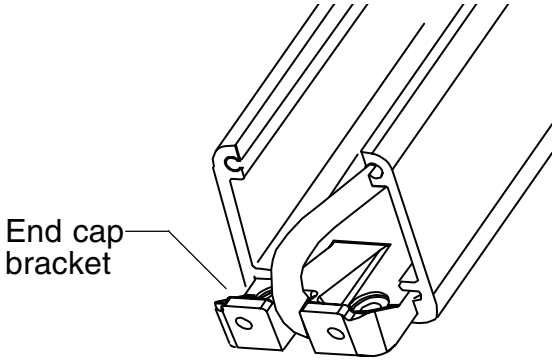


7 Drill solenoid cable hole and install device to door.

A. Drill 5/8” diameter hole in door centered between end cap bracket mounting holes.
B. Deburr hole.
C. Reattach device and trim to door.

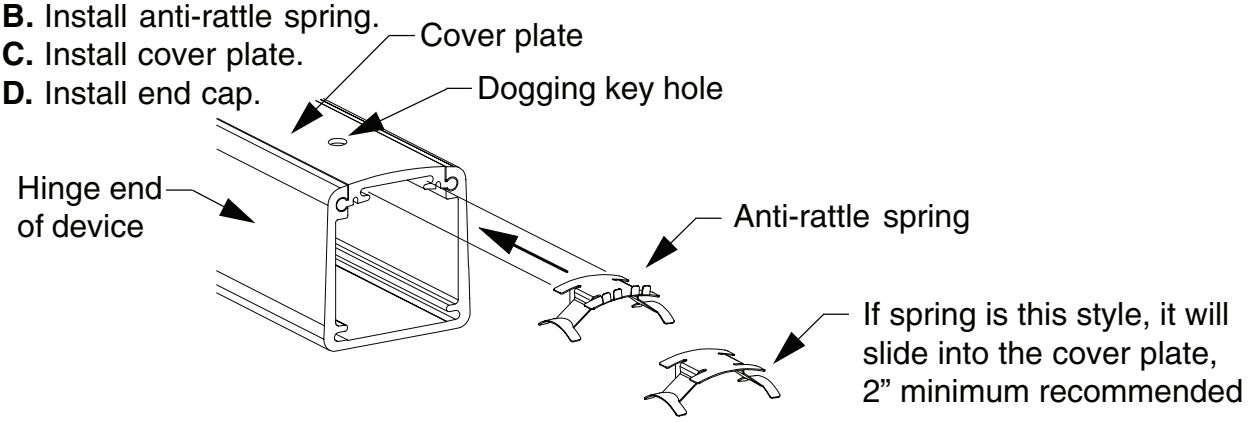


8 Route cable through hole in door.



9 Install cover plate and end cap.

A. If cover plate has a dogging key hole, rotate cover plate so hole is near end cap for standard EL device and near pushbar for HD-EL device.
B. Install anti-rattle spring.
C. Install cover plate.
D. Install end cap.



10 For vertical devices, reattach rods.

Reattach rods in reverse of when they were detached on pages 3 and 4.

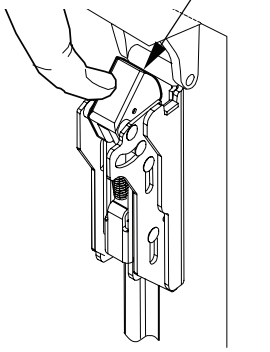
11 Adjust rods as needed on vertical devices (find correct device on page 10 or 11).

9827/9927 Device or 3327A/3527A Device

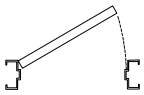
Adjust top and bottom rod (screw rod into or out of latch) until adjusted as shown.
Note: On bottom latch, make sure latch bolt clears floor when door is swung open.

With door closed:

Latch bolt **deadlocked** (will not push in fully)

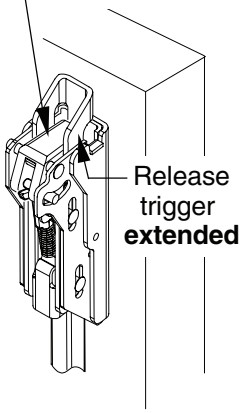


With door open:



Latch bolt stays **retracted**

Release trigger **extended**

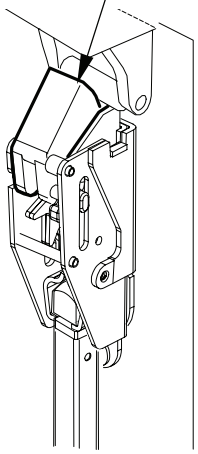


3327/3527 Device

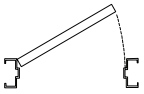
Adjust top and bottom rod (screw rod into or out of center case rod connector) until adjusted as shown.
Note: On bottom latch, make sure latch bolt clears floor when door is swung open.

With door closed:

Latch bolt **fully extended**

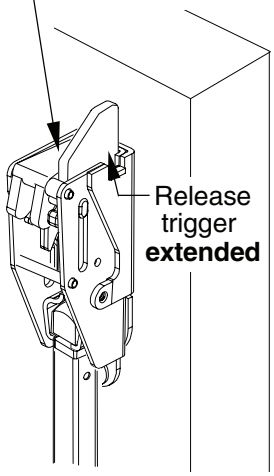


With door open:



Latch bolt stays **retracted**

Release trigger **extended**



11 Continued from page 10.

9847/9947 Device or 3347A/3547A Device

A. Open door and release top latch bolt as shown (Figure 11-1).

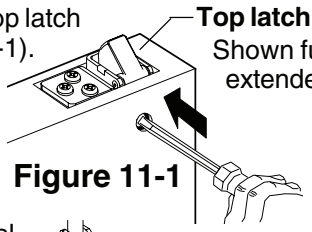


Figure 11-1

B. Loosen bottom locking screw (Figure 11-2).

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

D. Loosen top locking screw.

E. Rotate top adjusting screw clockwise until top latch bolt is fully extended (Figure 11-1).

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

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

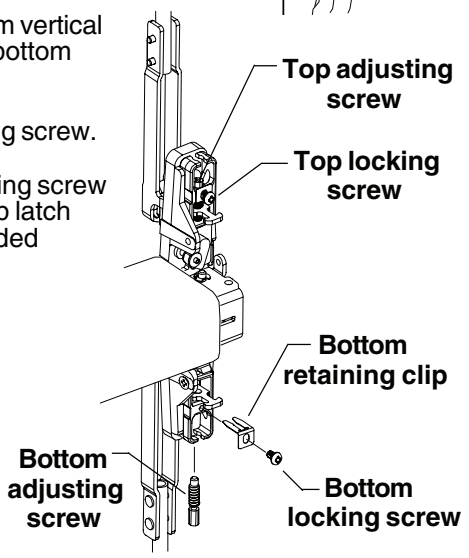


Figure 11-2

H. Depress pushbar and release.

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

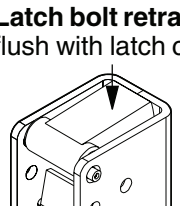


Figure 11-3

J. Install bottom adjusting screw, retaining clip, and locking screw (Figure 11-2).

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

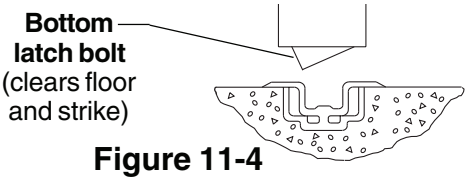


Figure 11-4

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

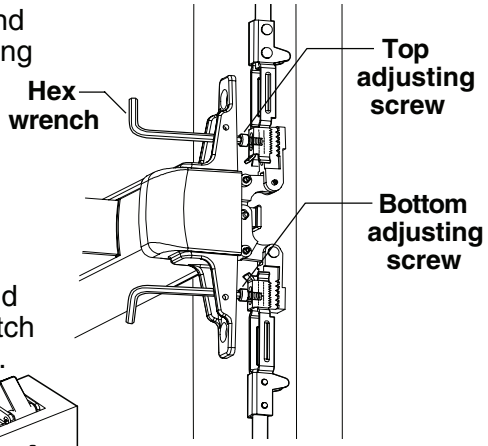
M. Close door and push up on bottom latch bolt to verify it is deadlocked (will not push in fully).

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

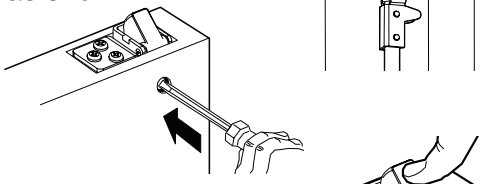
Redo adjustment procedure if :
- Top latch bolt is not held retracted
- Bottom latch bolt does not clear floor and bottom strike

3347/3547 Device

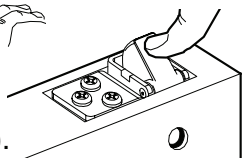
A. Loosen top and bottom adjusting screws.



B. Open door and release top latch bolt as shown.



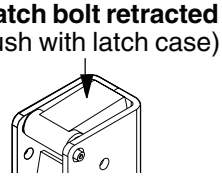
C. Check top latch bolt for deadlocking (latch bolt should not push in fully).



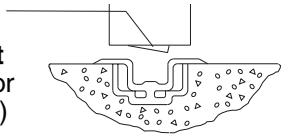
D. With top latch bolt still fully extended and pushbar in full up position (not depressed), tighten top adjusting screw.

E. Depress pushbar and release.

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



G. With top latch bolt still retracted, push bottom latch bolt up until it clears floor and bottom strike and hold it there.



H. Tighten bottom adjusting screw.

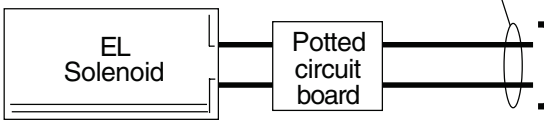
I. Close door and push up on bottom latch bolt to verify it is deadlocked (will not push in fully).

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

Redo adjustment procedure if :
- Top latch bolt is not held retracted
- Bottom latch bolt does not clear floor and bottom strike

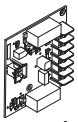
12 Complete wiring.

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

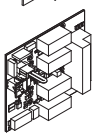


EL WIRING

Solenoid draws 16 A inrush current from PS914.
Solenoid must be wired to a 900-2RS logic board:



If 900-2RS logic board, refer to instructions 44487056.



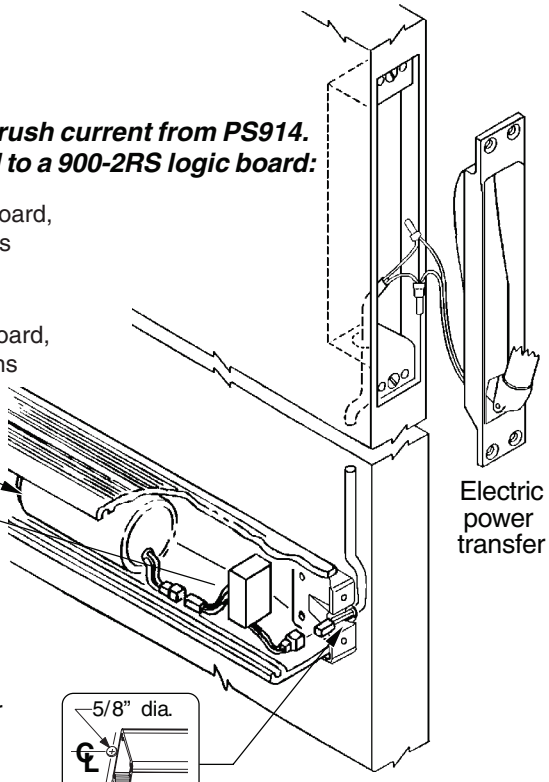
If 900-4RL logic board, refer to instructions 44487080.

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.

Drill 5/8"dia. wire access hole thru device side of door.

13 Adjust EL device for proper function.

A. Check for proper function:
- **1.** Make sure device is not dogged.
- **2.** Depress pushbar and make sure latch bolt(s) retracts and extends fully (see Figure 13-1).
- **3.** Electrically energize solenoid and hold.
- **4.** Check latch bolt(s) for full retraction (must clear strike, see Figure 13-1).
- **5.** Release solenoid and check latch bolt extension (see Figure 13-1).
- **6.** Continue to Section B if device does not function electrically.

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 13-2):
- **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.** Turn 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.

Note: Rim device shown, see pages 10 and 11 for verticals

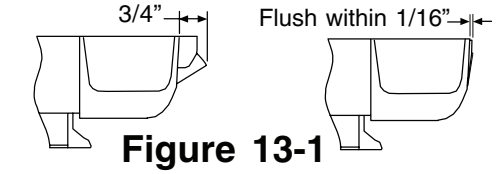


Figure 13-1

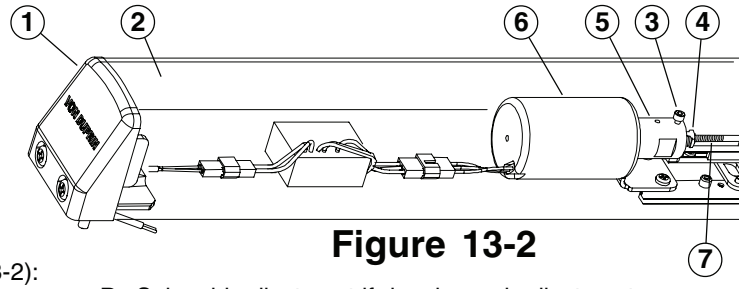


Figure 13-2

D. Solenoid adjustment if dogging rod adjustment is too **short** (see Figure 13-2):
- **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.