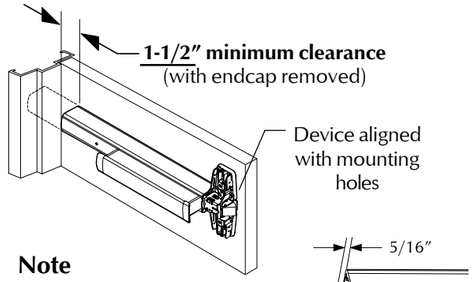
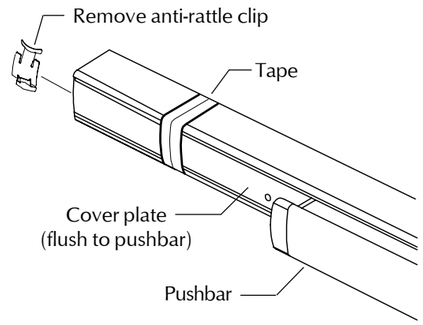
CUT DEVICE

1 Measure amount to cut off device.

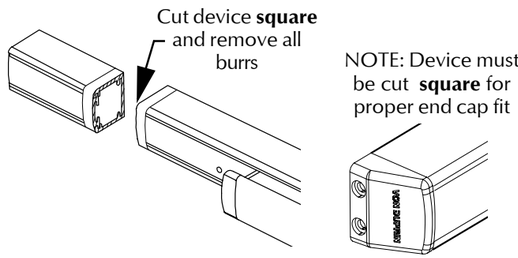


Note
If 5/8″ diameter wire access hole has been predrilled in door, cut device 5/16″ from center of hole.

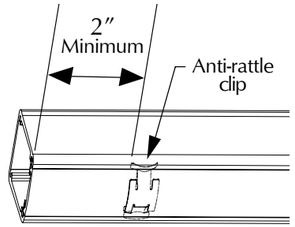
2 Tape and mark area being cut.



3 Cut device square.



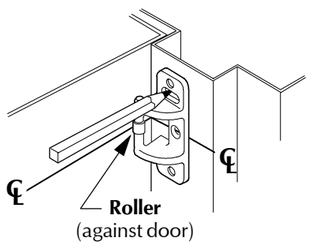
4 Slide anti-rattle clip into device.

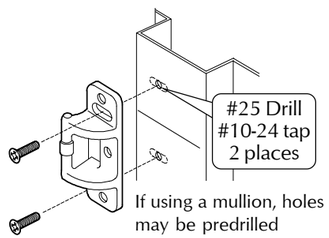


911373-00

499F STRIKE INSTALLATION

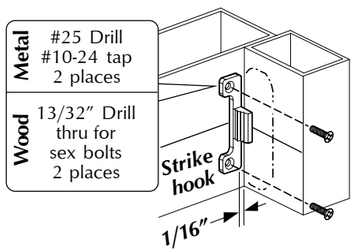
1 Prepare and install screws through 2 strike slots.

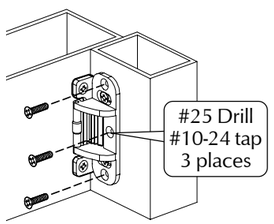




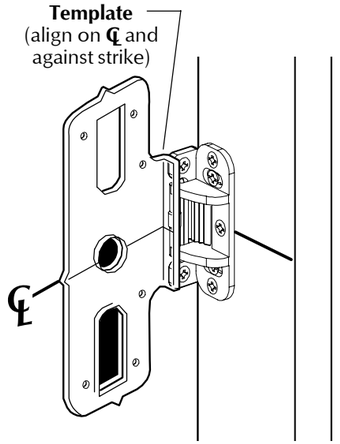
If using a mullion, holes may be predrilled

2 Install strike hook and additional strike screws.





3 Template aligns as shown.



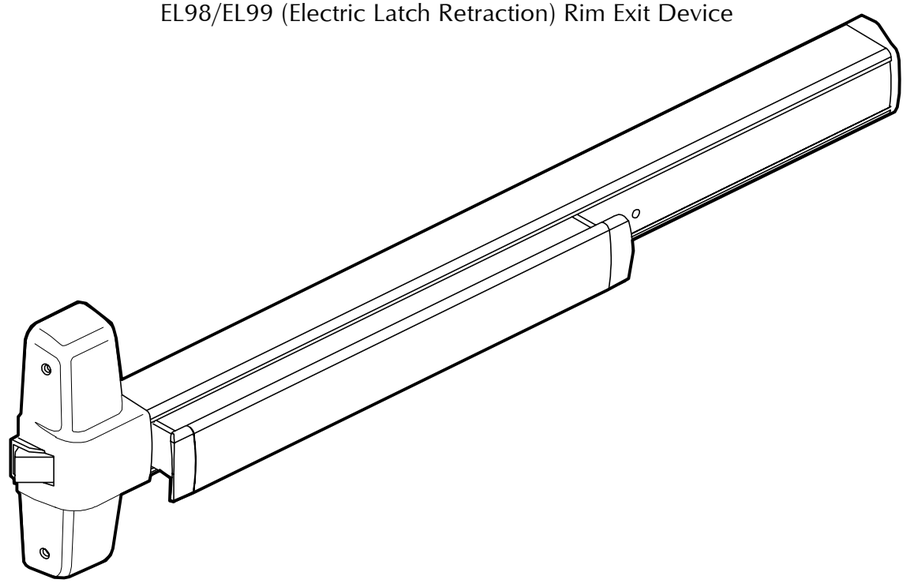
VON DUPRIN®

Installation Instructions

The Quiet One®

98/99 Series Rim Exit Device

Devices covered by these instructions:
98/99 Rim Exit Device
98/99-F (Fire) Rim Exit Device
CD98/CD99 (Cylinder Dogging) Rim Exit Device
98-2/99-2 (Double Cylinder) Rim Exit Device
EL98/EL99 (Electric Latch Retraction) Rim Exit Device



Please give these instructions to building owner after device is installed

This product is covered by the following patent numbers:

3,767,238 4,427,223
3,854,763 4,466,643
4,167,280 4,741,563

Special tools needed:

5/64″ hex wrench
#10-24 tap
5/8″ spade drill (99-F wood door)
Drill bits: #25, 1/8″, 1/4″, 5/16″, 3/8″, 13/32″

Index:

IR Security & Safety
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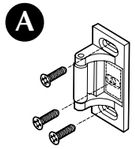
SCREW CHART

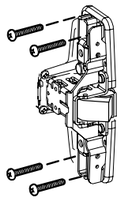
A



#10-24 X 3/4″ — Metal frame

#10 X 1-1/2″ Wood screw — Wood frame

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)

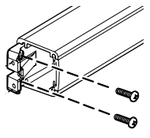
#10 X 1-1/4″ Wood screw — Surface mount (wood)

- 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)

C

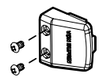


#10-24 X 3/4″ — Surface mount or Sex bolts (1-3/4″ door)

#10-24 X 1-1/8″ — Sex bolts (2-1/4″ door)

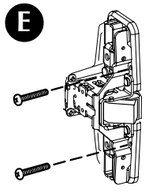
#10 X 1-1/4″ Wood screw — Surface mount (wood)

D



#10-16 X 3/8″ Thread cutting — End cap screw

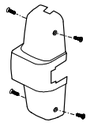
E



#10-24 X 1″ — Surface mount (metal)

#10 X 1-1/4″ Wood screw — Surface mount (wood)

F



#8-18 X 3/8″ Thread cutting — Cover screw

OPTIONAL EQUIPMENT - CONTINUED

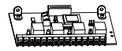
EL WIRING

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

EL Solenoid — Potted circuit board — Black, Black

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, guage, and distances.
2. Check for latch bolt binding caused by improper strike installation, warped door, etc.

EL ADJUSTMENT PROCEDURE

A. Check for proper function:
1. Make sure device is not dogged.
2. Depress pushbar and make sure latch bolts retracts and extends fully (see Figure 3).
3. Electrically energize solenoid and hold.
4. Check latch bolt(s) for full retraction (must clear strike (see Figure 3).
5. Release solenoid and check latch bolt extension (see Figure 3).
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 4):
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.

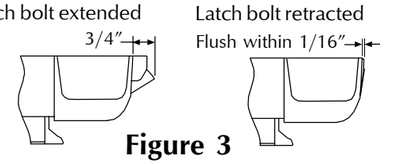


Figure 3

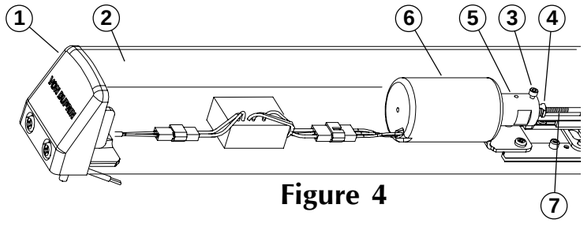


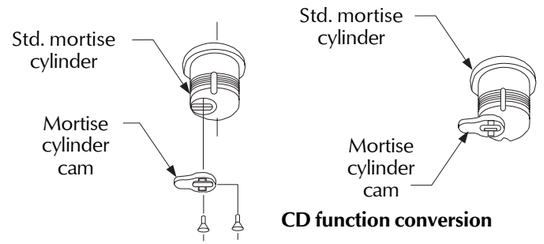
Figure 4

D. Solenoid adjustment if dogging rod adjustment is too **short** (see Figure 4):
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.

OPTIONAL EQUIPMENT

CD (CYLINDER DOGGING)

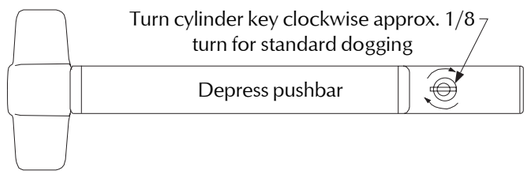
1. Remove mortise cylinder cam and reinstall in reverse (Figure 1).
2. Insert key and rotate cam to install the cylinder to the cover plate (Figure 2).
3. Remove key to slide cover plate in position in the mechanism case.



CD function conversion

Figure 1

Dogging procedure



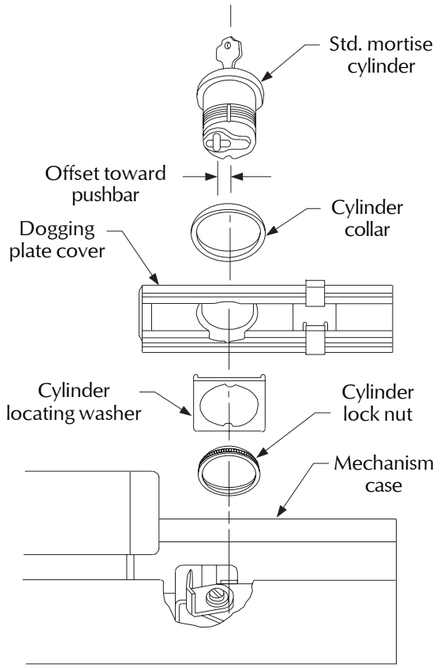
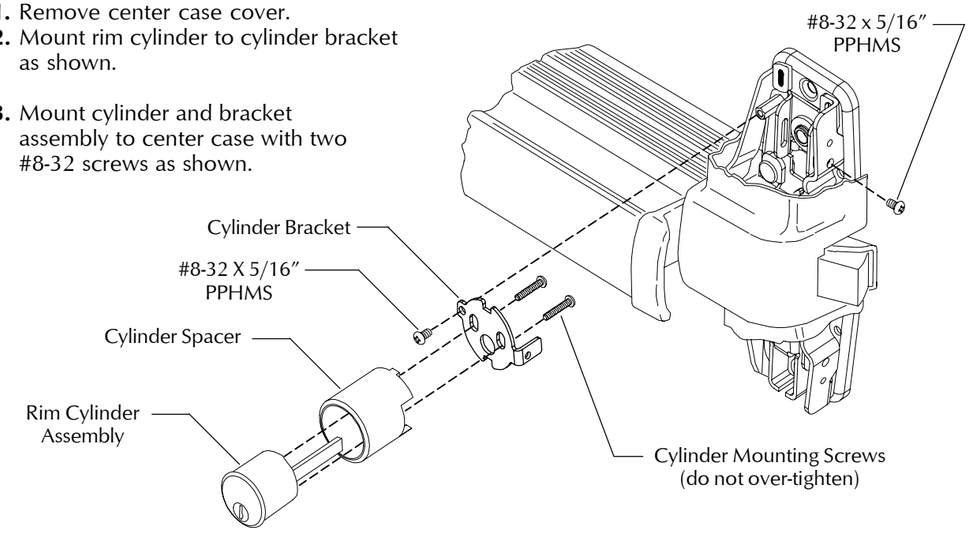


Figure 2

99-2 (DOUBLE CYLINDER)

1. Remove center case cover.
2. Mount rim cylinder to cylinder bracket as shown.
3. Mount cylinder and bracket assembly to center case with two #8-32 screws as shown.



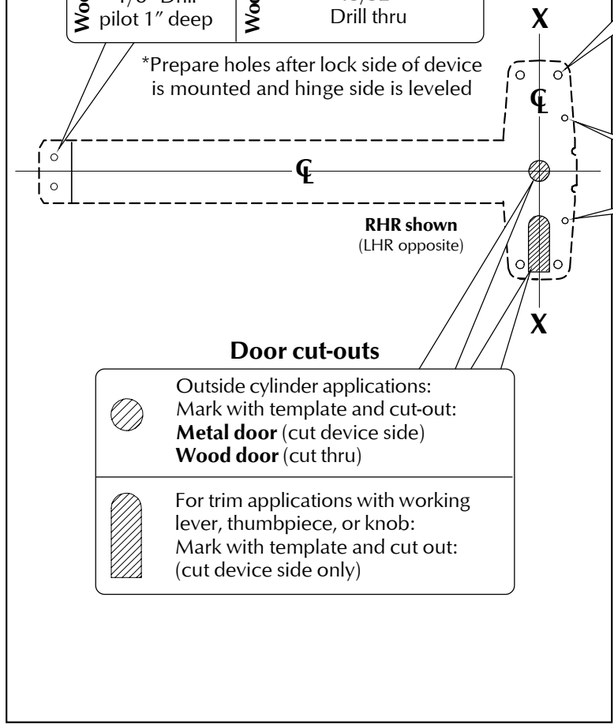
PREPARATION CHART

Go to instructions on next page before using preparation chart

*End cap bracket - 2 holes

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

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



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)

Center case - 4 holes

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

Center case - 2 support holes

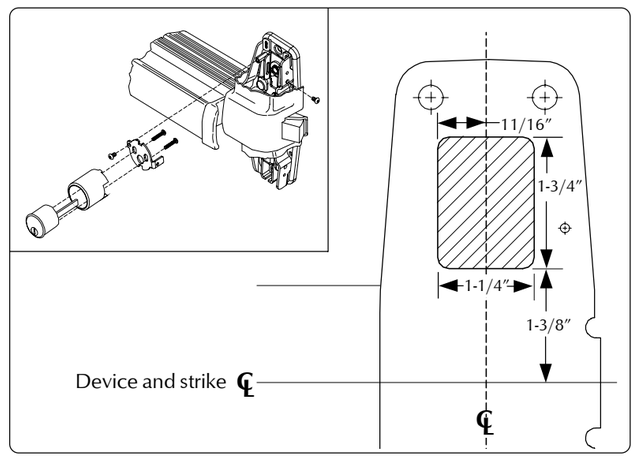
Metal	#25 Drill #10-24 tap
Wood	1/8″ Drill pilot 1″ deep

For 98-F/99-F (fire) wood door

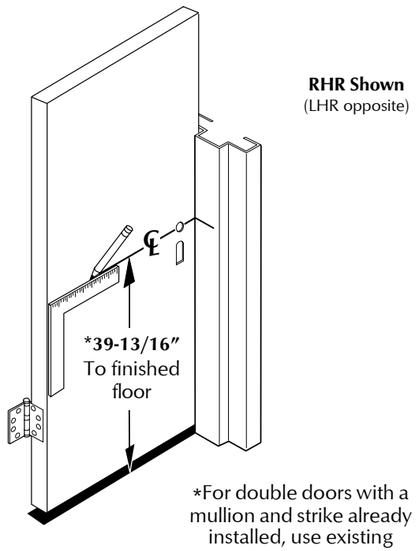
#825 Sex bolts (2) required

Wood or composite	3/8″ Drill thru	1/16″
	5/8″ Spade drill 1/16″ Deep outside	

CUT-OUT FOR 99-2 "DOUBLE CYLINDER" OPTION



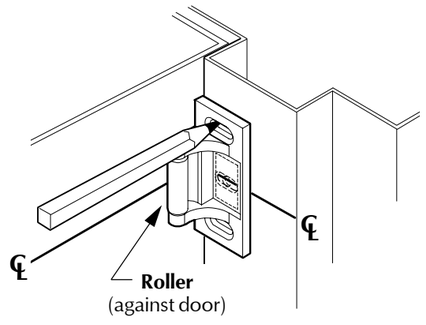
1 Draw horizontal device and strike center line (℄).



*For double doors with a mullion and strike already installed, use existing strike center line.

2 Align strike on ℄ and mark the two slotted holes.

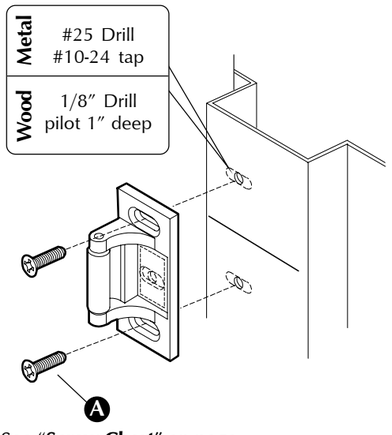
299/299F Strike



For **499F strike,** see back cover of this instruction.

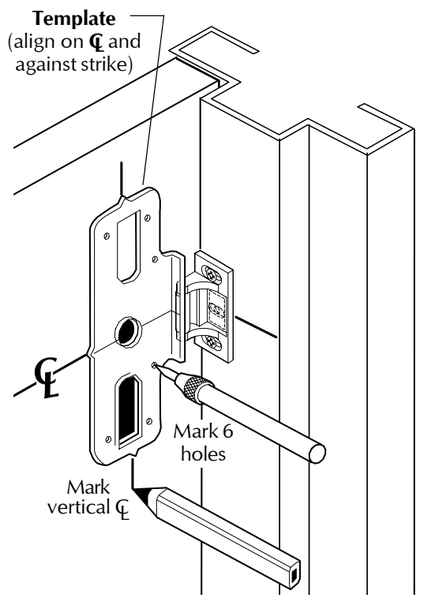
3 Prepare 2 holes and install a screw thru each slot.

299/299F Strike



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

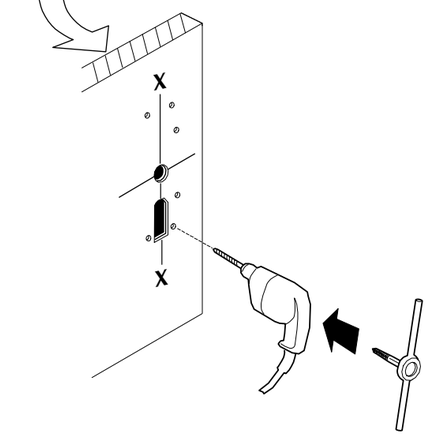
4 Position template against strike and on ℄ and mark door.



5 Prepare lock side of door for device and trim.

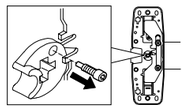
See "**Preparation Chart**" on page 3 for drill, tap, and cut-out information

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



6 If using an outside cylinder, check NL drive screw and install tailpiece guide.

NL drive screw

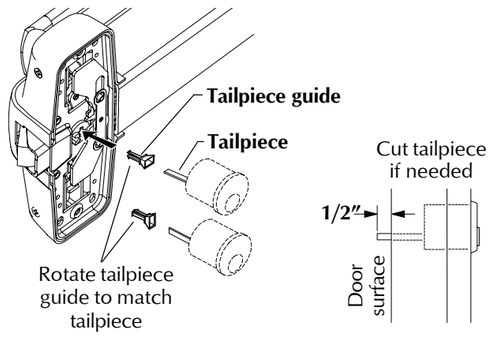


Note: When the NL drive screw is left in back of device, the outside cylinder will function only as a Night Latch.

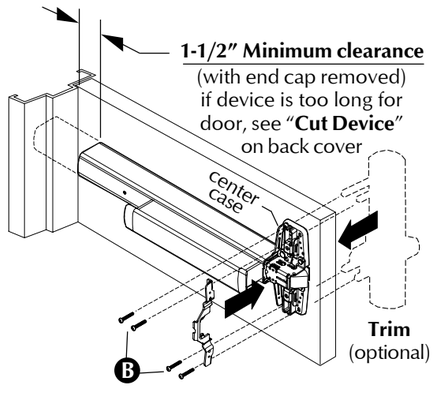
When installing trim that has a functional lever, knob, or thumb piece AND an outside cylinder to lock and unlock the trim, remove NL drive screw from back of device.

DO NOT remove NL drive screw for the following application:
NL, EO, DT, TP-2, L-2, and K-2 trims or with 98/99-2 (double cylinder).

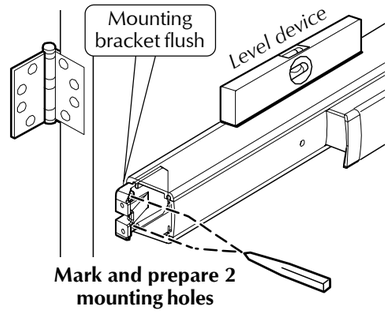
With **"BE"** trim, device may need rehanded. Look for instructions on back of trim.



7 Install trim (if using) and secure device center case to door.

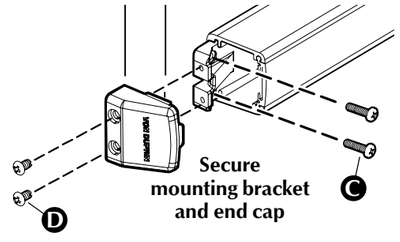


8 Install mounting bracket and end cap.

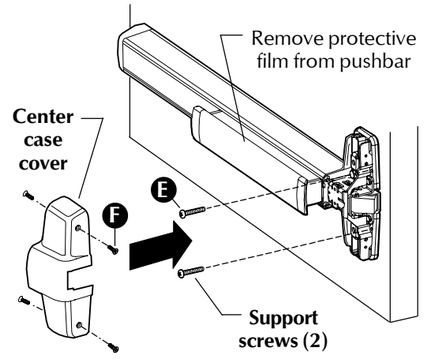


Mark and prepare 2 mounting holes

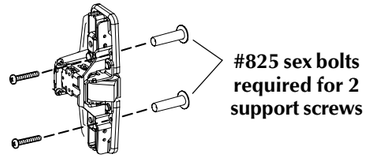
See "**Preparation Chart**" on page 3 for preparation



9 Install 2 support screws, and center case cover.



For **98F/99F (fire rated)** devices on wood or composite door:



10 Adjust and secure strike.

299/299F Strike