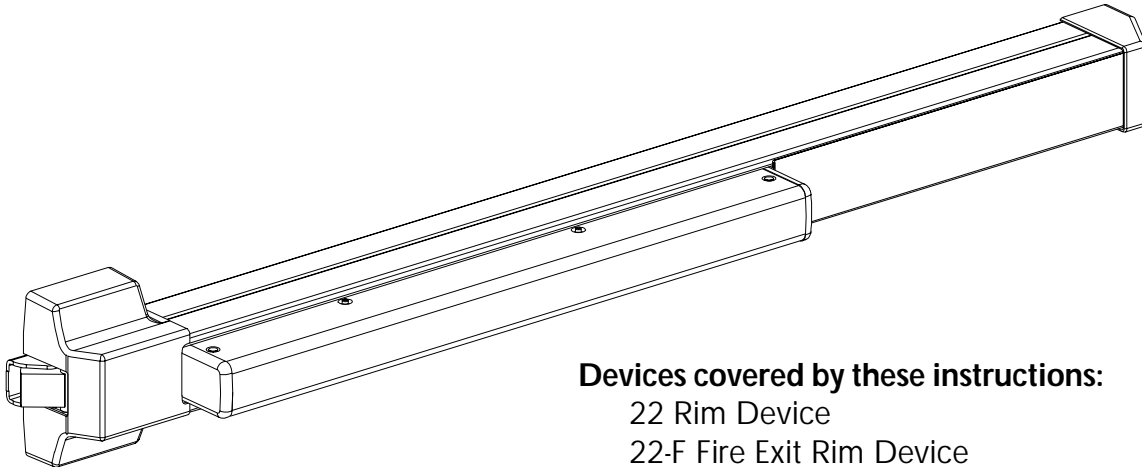


# VON DUPRIN<sup>®</sup>

## Installation Instructions

### 22 Rim Device



**Devices covered by these instructions:**

- 22 Rim Device
- 22-F Fire Exit Rim Device

#### **BEFORE STARTING INSTALLATION**

1. Check hardware schedule for strikes, fasteners, and other special requirements.
2. Check carton label for trim, strikes, options, and order number.
3. Read all instructions, including instructions provided with any options used: trim, alarm kit, glass bead kit, latch guard kit, and rod guard kit.
4. Gather special tools required:
  - #10-24 tap
  - #25 drill bit
  - 1/8" dia. drill bit
  - 1/4" dia. drill bit
  - 13/32" dia. drill bit
  - Hacksaw
  - 7/8" dia. hole saw

This product is covered by the following patent numbers:  
3,767,238 4,167,280 4,427,223 4,437,693 4,466,643

# GENERAL INFORMATION

Review pages 2 and 3 so you can identify the hardware and understand the terminology used in the instructions.

See page 10 for the "Metric Conversion Table" if needed.

These exit devices can be installed on the door widths listed below:

Device Size	Code/Standard Requirement	Door Size
Standard 3' (32")	NFPA101	24-3/4" to 36"
Standard 4' (44")	NFPA101	30-3/4" to 48"



## NOTE

Dogging panic device during high traffic periods will increase life of device. To dog, depress pushbar and turn hex key one-quarter turn clockwise.

# MAINTENANCE

Von Duprin 22 exit devices are designed and built to be maintenance free; however, such factors as installation, severity of use, environmental conditions, and changes in the condition of the door opening may require that maintenance and/or device adjustment be performed. The following guidelines are recommended to the building owner to insure proper device operation:

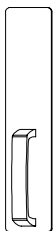
1. Check device operation for smooth operation periodically.
2. Check strikes (keeper) and latches to insure they are secure.
3. Check latches and other moving parts for binding or sluggish operation due to dirt or chemical buildup. Clean parts with soap and water and then lubricate with graphite-based or silicone lubricants. Do not use petroleum-based lubricants.

# OUTSIDE TRIM

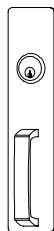
No outside trim supplied for EO (exit only) application



**Escutcheon**  
(optional for EO application)



**DT**  
(pull when dogged)



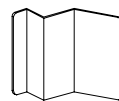
**NL**  
(key retracts latch bolt)



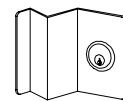
**TP**  
(key locks thumbpiece)



**TP-BE**  
(thumbpiece; unlocked)



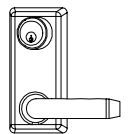
**DT**  
(pull when dogged)



**NL**  
(key retracts latch bolt)

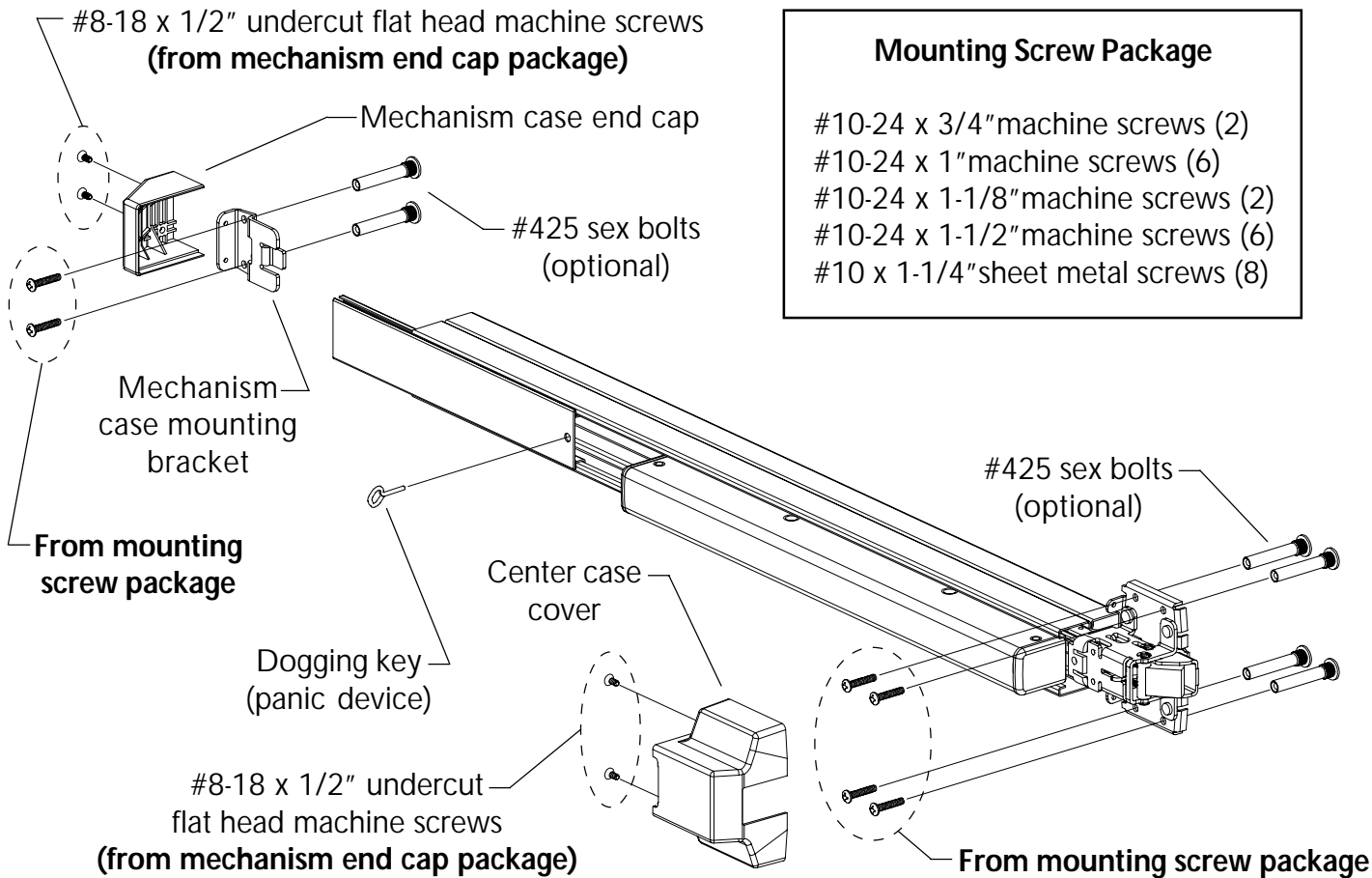


**K**  
(key locks knob)



**L**  
(key locks lever)

# 22/22-F PARTS LIST

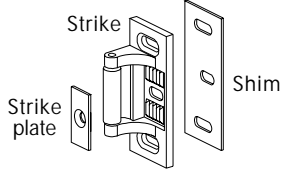


- Mounting Screw Package**

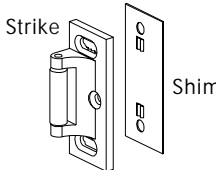
  - #10-24 x 3/4" machine screws (2)
  - #10-24 x 1" machine screws (6)
  - #10-24 x 1-1/8" machine screws (2)
  - #10-24 x 1-1/2" machine screws (6)
  - #10 x 1-1/4" sheet metal screws (8)

## Strike Packages

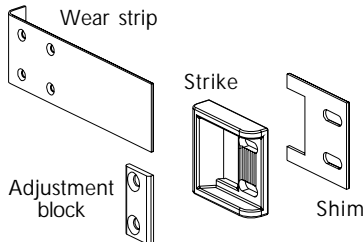
- 299 Strike Package (panic device)**
- #10-24 x 3/4" machine screws (3)
  - #10 x 1-1/2" wood screws (3)



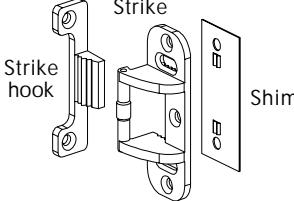
- 299F Strike Package (fire exit device, single door)**
- #10-24 x 3/4" machine screws (3)
  - #10 x 1-1/2" wood screws (3)



- 1409/1439 Strike Package (1409 shown) (panic device, aluminum frame, 1/2" blade stop)**
- #10-12 x 10-24 x 1-1/4" combination screws (2)
  - Flat head drive rivets (4)



- 499F Strike Package (fire exit device, double door)**
- #10-24 x 3/4" machine screws (7)



# INSTALLATION

## 1 For single door, prepare frame for 299, 299F, 1409/1439 strike.

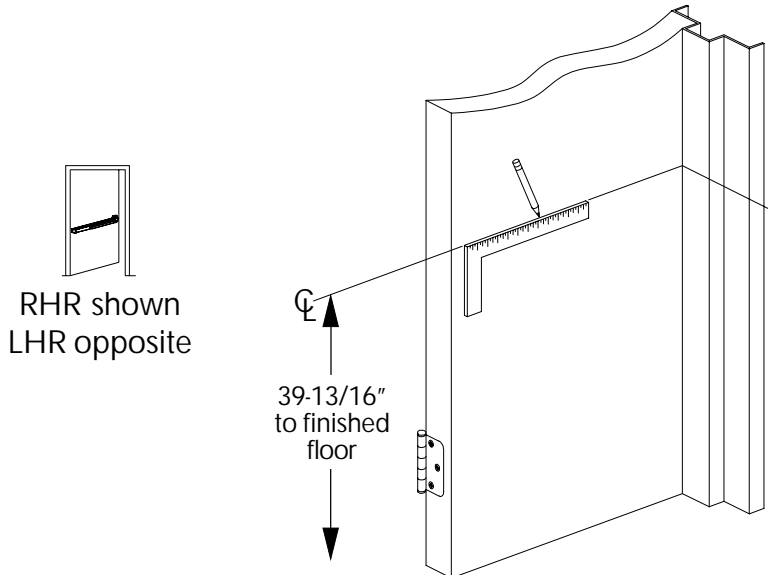
1.1. Mark centerline  $\mathcal{C}$  location as shown in Figure 1-1.

1.2. **For 299 or 299F strike:** Tape strike template to frame aligned with center line  $\mathcal{C}$  as shown in Figure 1-2. Mark and prepare mounting holes per template.

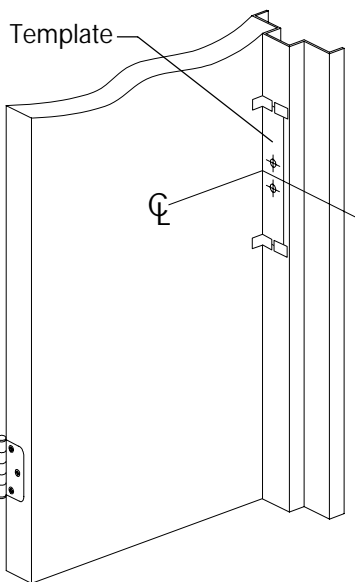
**NOTE**

For double door, mullion is already prepared for 499F strike. Skip this step and go to Step #2.

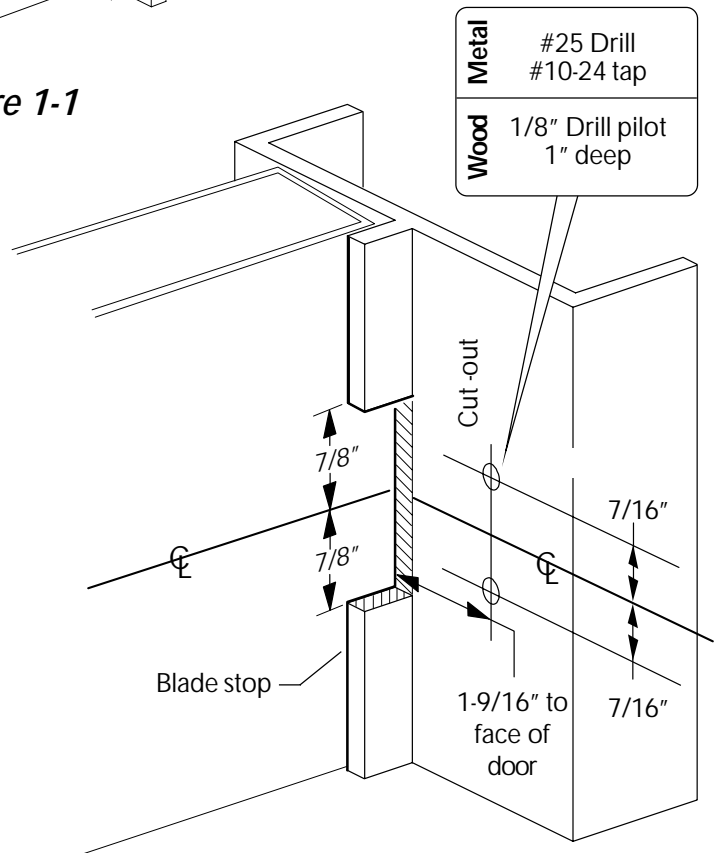
**For 1409/1439 strike:** Prepare frame as shown in Figure 1-3.



**Figure 1-1**



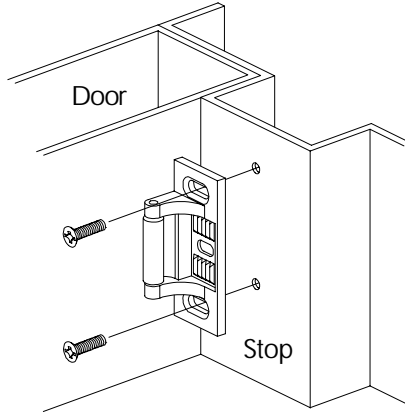
**Figure 1-2. 299 or 299F Strike**



**Figure 1-3. 1409/1439 Strike**

**2 Install strike. Use TWO SCREWS ONLY at this time.**

**299 (shown)  
or 299F Strike**

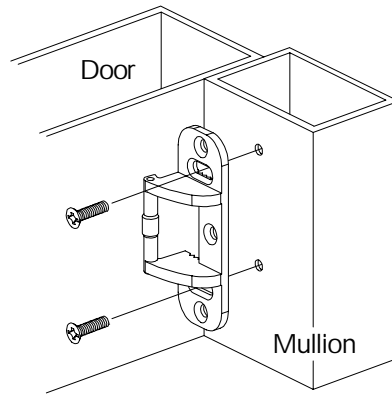


**Use screws from 299/299F  
strike package**

#10-24 flat head machine  
for metal frame

#10 flat head wood  
for wood frame

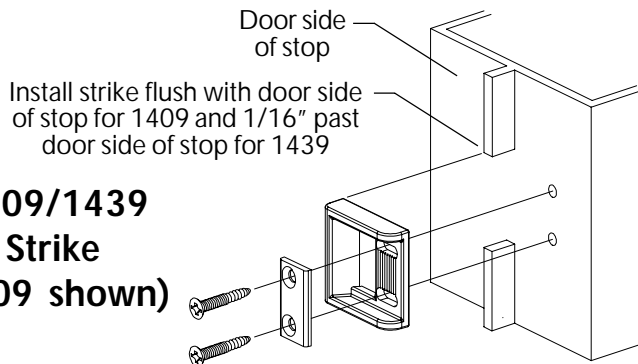
**499F Strike**



**Use screws from 499F  
strike package**

#10-24  
flat head machine

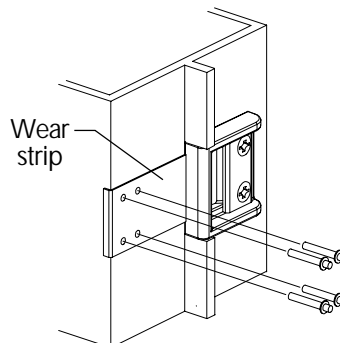
**1409/1439  
Strike  
(1409 shown)**



**Use screws from  
1409/1439 strike package**

#10-12 x 10-24 oval  
head combination

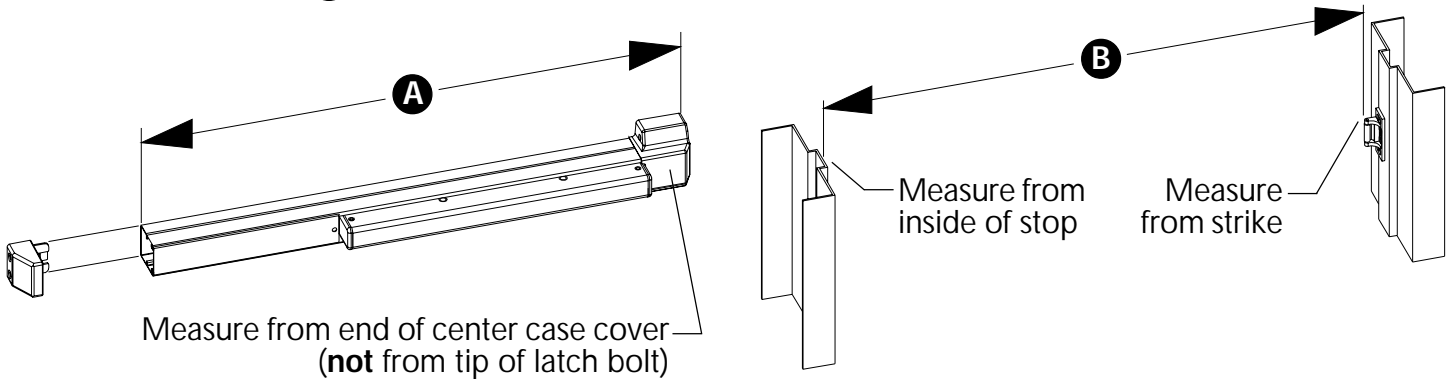
**1409/1439  
Wear Strip**



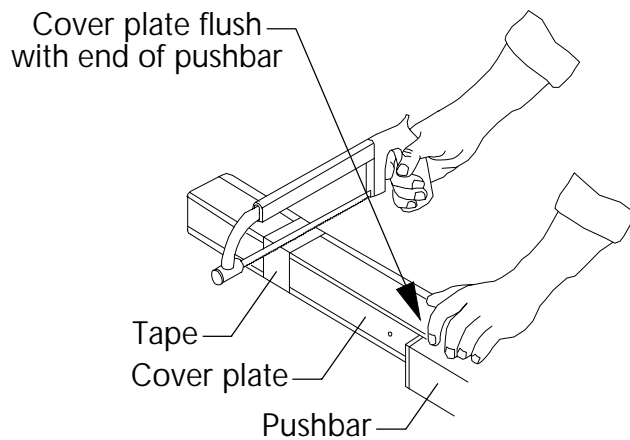
1. Center wear strip on strike as shown.
2. Mark and drill 1/8" dia. holes (4 places).
3. Install wear strip with flat head drive rivets (4 places) from 1409/1439 strike package.

### 3 Cut device if necessary.

3.1. Device length **A** must be at least 1-1/2" shorter than **B**.



3.2. If necessary, cut device so **A** is at least 1-1/2" shorter than **B**.

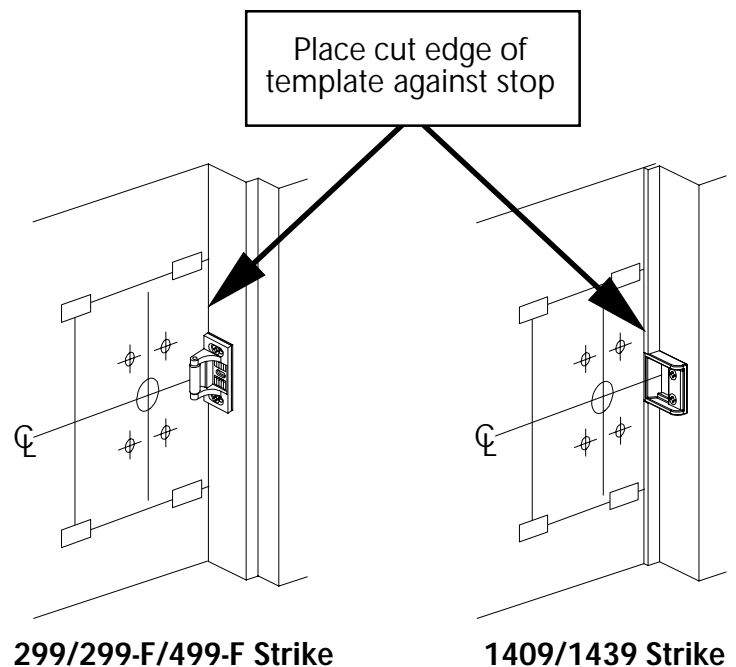


#### NOTE

If using ALK exit alarm option, install ALK cover plate before cutting device.

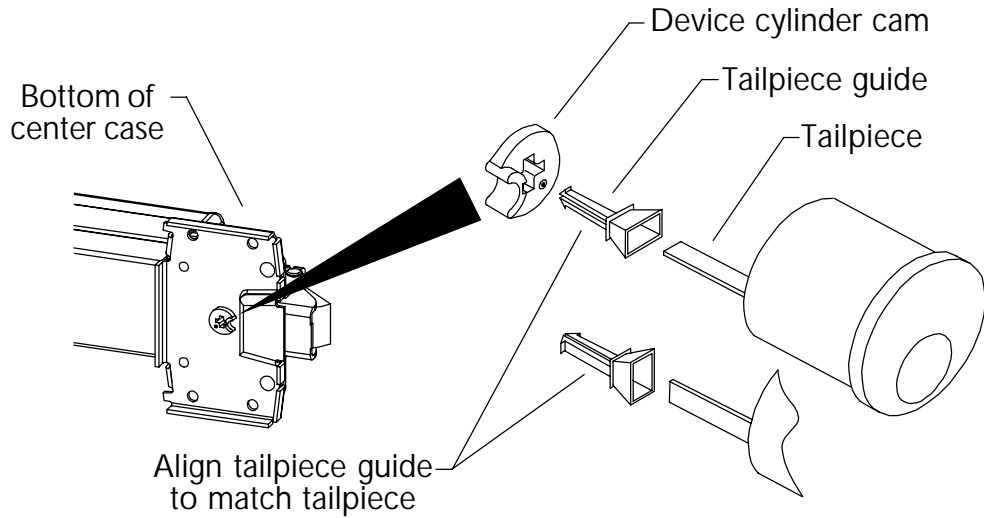
### 4 Prepare door for device.

- 4.1. Cut center case template for 1409/1439 strike or for 299/299F/499F strike.
- 4.2. Tape center case template to inside of door aligned with center line  $\mathcal{C}$  as shown.
- 4.3. Mark and prepare holes per template.
- 4.4. Prepare door for outside trim (see trim instructions).

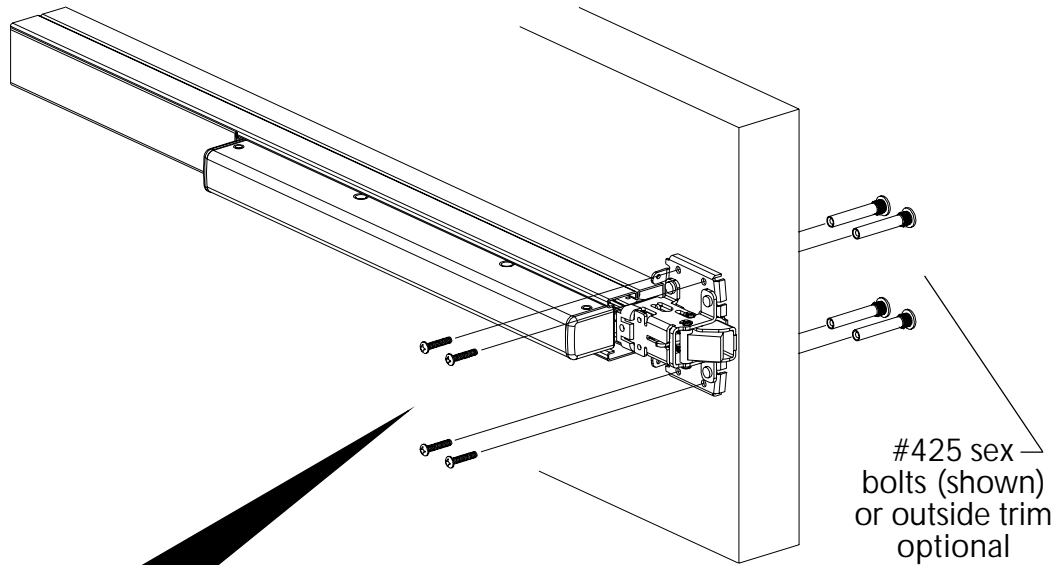


## 5 Install device to door at center case.

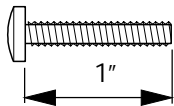
5.1. If using cylinder in trim, install tailpiece guide (packaged with trim) in device.



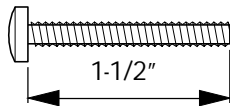
5.2. Install device to door at center case.



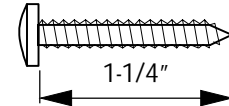
### Use screws from device mounting screw package



#10-24 pan head machine for metal door surface mount, sex bolts on 1-3/4" door, or outside trim on 1-3/4" door

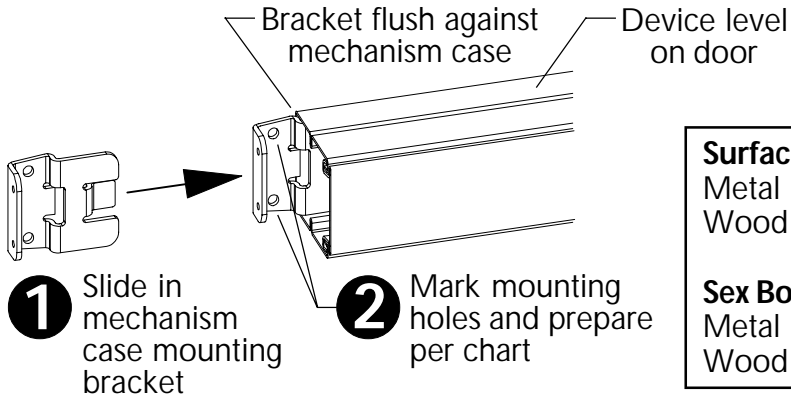


#10-24 pan head machine for sex bolts on 2-1/4" door or outside trim on 2-1/4" door



#10-24 pan head sheet metal for wood door surface mount

**6 Install mechanism case mounting bracket and mechanism case end cap.**

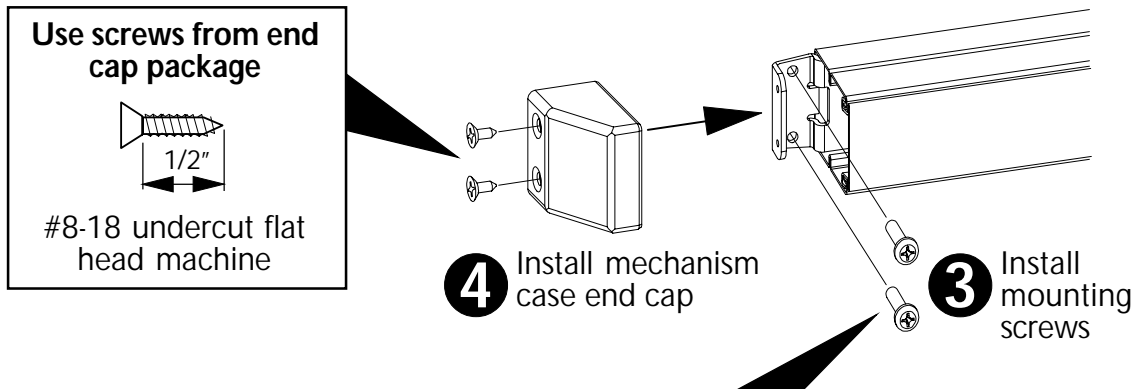


**Surface Mount**

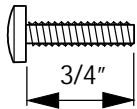
Metal Door: #25 drill and #10-24 tap inside  
 Wood Door: 1/8" pilot drill, 1" deep, inside

**Sex Bolts**

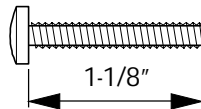
Metal Door: 1/4" drill inside, 13/32" drill outside  
 Wood Door: 13/32" drill thru



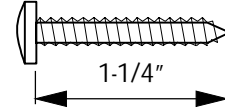
**Use screws from device mounting screw package**



#10-24 pan head machine for metal door surface mount or sex bolts on 1-3/4" door

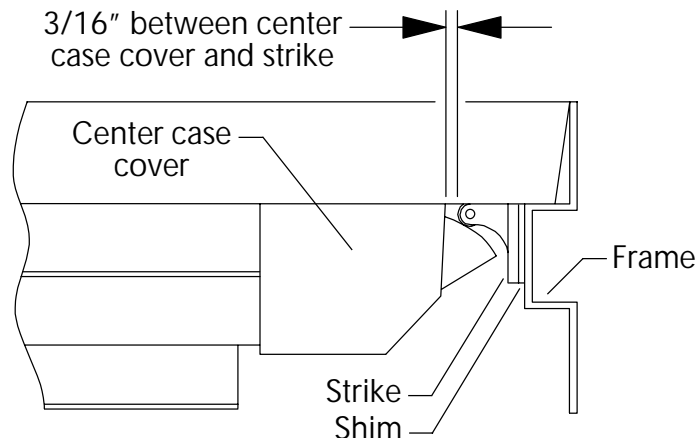


#10-24 pan head machine for sex bolts on 2-1/4" door



#10-24 pan head sheet metal for wood door surface mount

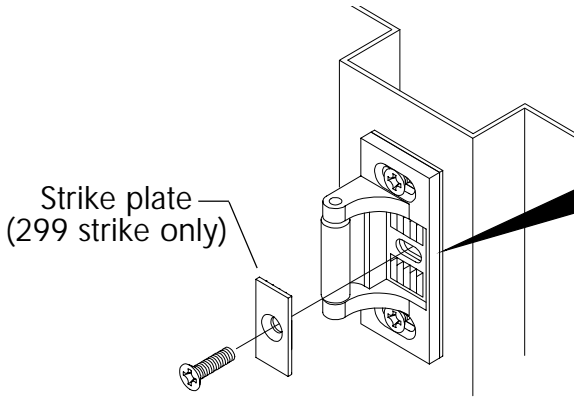
**7 If necessary, add strike adjusting shim under strike for 3/16" dimension shown.**





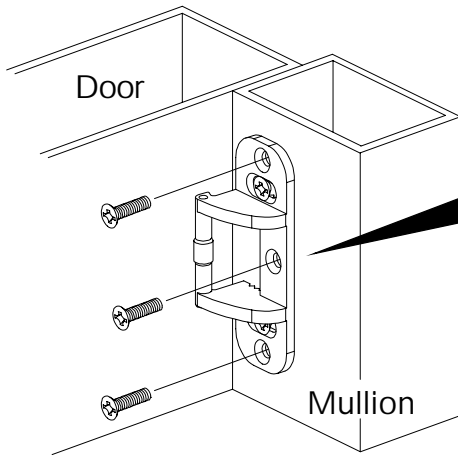
**8 Prepare remaining strike mounting holes and install screws.**

**299 or 299F Strike**



<p><b>Metal frame:</b> #25 drill and #10-24 tap, #10-24 flat head machine</p> <p>3/4"</p>	<p><b>Wood frame:</b> 1/8" drill x 1" deep #10 flat head wood</p> <p>1-1/2"</p>
<p><b>Use screw from 299/299F strike package</b></p>	

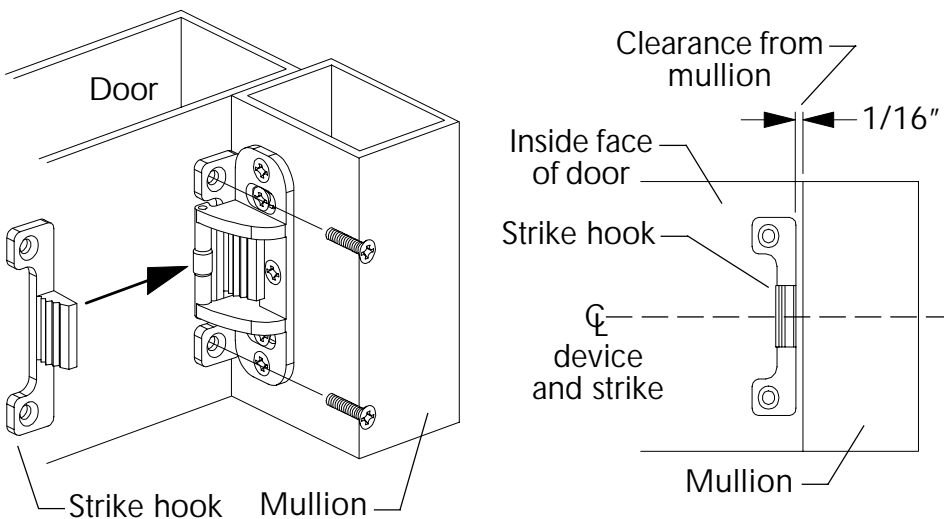
**499F Strike**



<p>#25 drill and #10-24 tap, #10-24 flat head machine</p> <p>3/4"</p>
<p><b>Use screws from 499F strike package</b></p>

**499F Strike Hook**

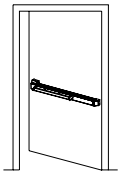
**Center strike hook on device 1/16" from mullion.**



<p><b>Metal door:</b> #25 drill and #10-24 tap, #10-24 flat head machine</p> <p>3/4"</p>
<p><b>Use screws from 499-F strike package</b></p>
<p><b>Wood door (#425 sex bolts):</b> 1/4" drill inside, 13/32" drill outside</p>

Metric Conversion Table											
inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
1/16	2	7/16	11	1	25	1-9/16	40	30-3/4	781	44	1118
1/8	3	1/2	13	1-1/16	27	1-11/16	43	32	813	48	1219
3/16	5	5/8	16	1-1/8	29	1-3/4	45	36	914		
1/4	6	3/4	19	1-1/4	32	2-1/4	57	39-11/16	1008		
13/32	10	7/8	22	1-1/2	38	2-3/4	629	39-13/16	1011		

**STRIKE TEMPLATE**  
 Refer to Step 1 (p. 4)  
 when using this template  
 Template to scale  
 (dimensions in inches)



**LHR**

5/8"

1-1/16"

☒

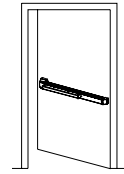
1-1/16"

**Prepare holes 2 places:**  
**Metal frame:**  
 #25 drill and #10-24 tap  
**Wood frame:**  
 1/8" drill x 1" deep

Cut strike template along  
 this line and place on stop  
 with this edge against door

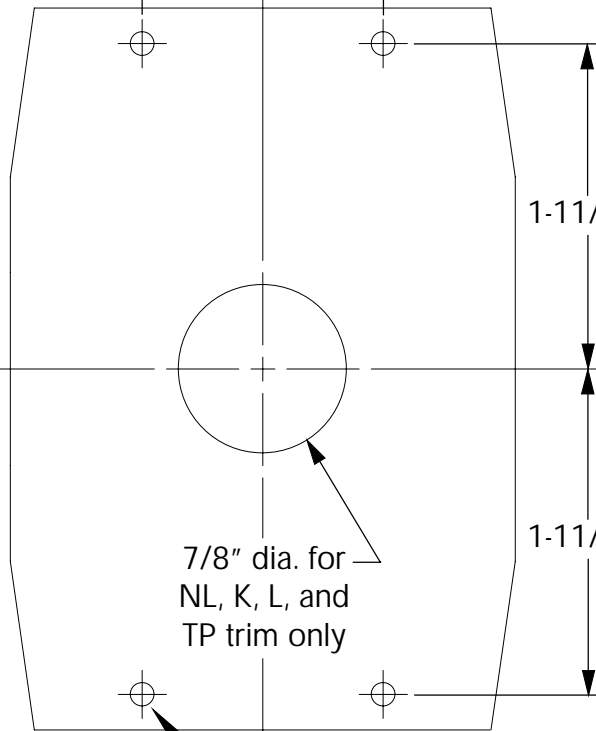
☒ device

**CENTER CASE TEMPLATE**  
 Refer to Step 4 (p. 6)  
 when using this template  
 Template to scale  
 (dimensions in inches)



**LHR**

5/8" 5/8"



7/8" dia. for  
 NL, K, L, and  
 TP trim only

1-11/16"

☒

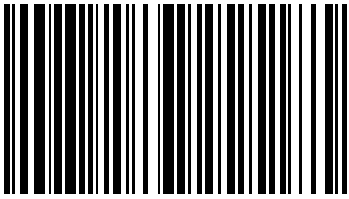
1-11/16"

Cut on this line for 1409/1439 strike

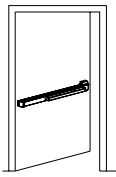
**Prepare holes 4 places:**  
**Surface Application (no outside trim):**  
 Metal door: #25 drill and #10-24 tap inside  
 Wood door: 1/8" drill x 1" deep pilot holes  
**#425 Sex Bolts or Outside Trim:**  
 Metal door: 1/4" drill inside and 13/32" outside  
 Wood door: 13/32 drill thru

For 1409/1439 strike cut center case template along  
 this line and place on door with this edge against stop

For 299/299F/499F strike place center case  
 template on door with this edge against stop

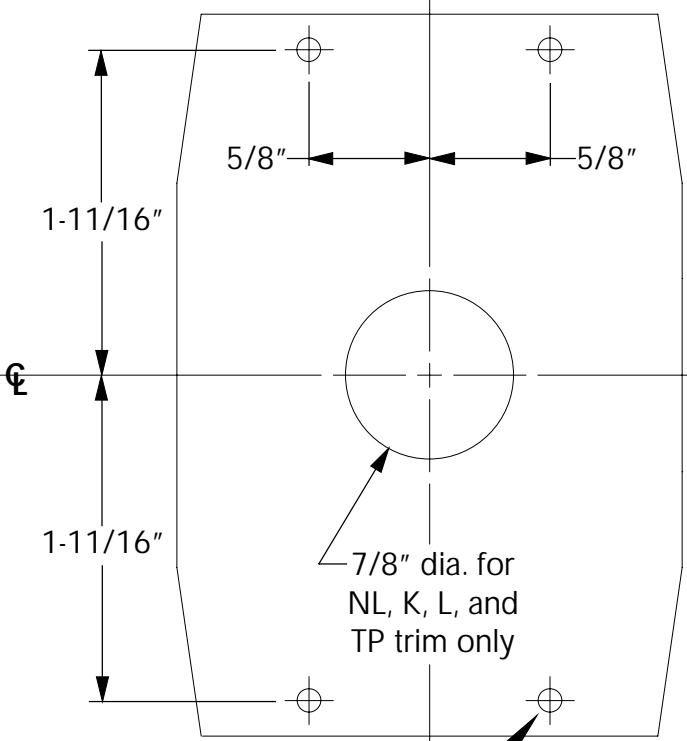


911333-00



RHR

**CENTER CASE TEMPLATE**  
Refer to Step 4 (p. 6)  
when using this template  
Template to scale  
(dimensions in inches)



Prepare holes 4 places:  
**Surface Application (no outside trim):**  
Metal door: #25 drill and #10-24 tap inside  
Wood door: 1/8" drill x 1" deep pilot holes  
**#425 Sex Bolts or Outside Trim:**  
Metal door: 1/4" drill inside and 13/32" outside  
Wood door: 13/32 drill thru

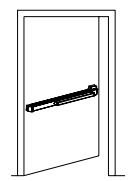
For 1409/1439 strike cut center case template along this line and place on door with this edge against stop

For 299/299F/499F strike place center case template on door with this edge against stop

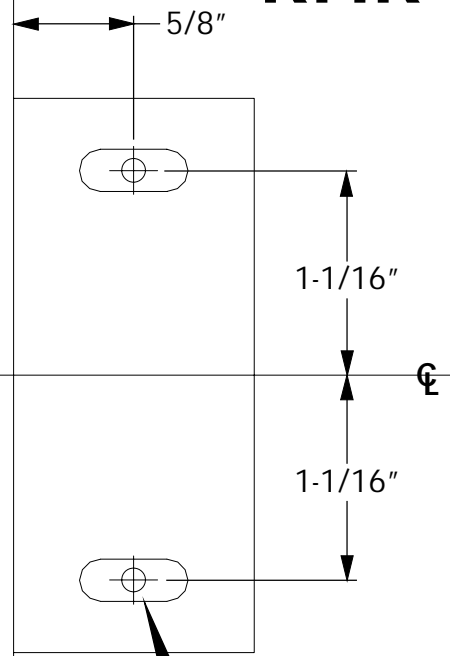
Cut on this line for 1409/1439 strike

☉ device

**STRIKE TEMPLATE**  
Refer to Step 1 (p. 4)  
when using this template  
Template to scale  
(dimensions in inches)



RHR



Prepare holes 2 places:  
**Metal frame:**  
#25 drill and #10-24 tap  
**Wood frame:**  
1/8" drill x 1" deep

Cut strike template along this line and place on stop with this edge against door