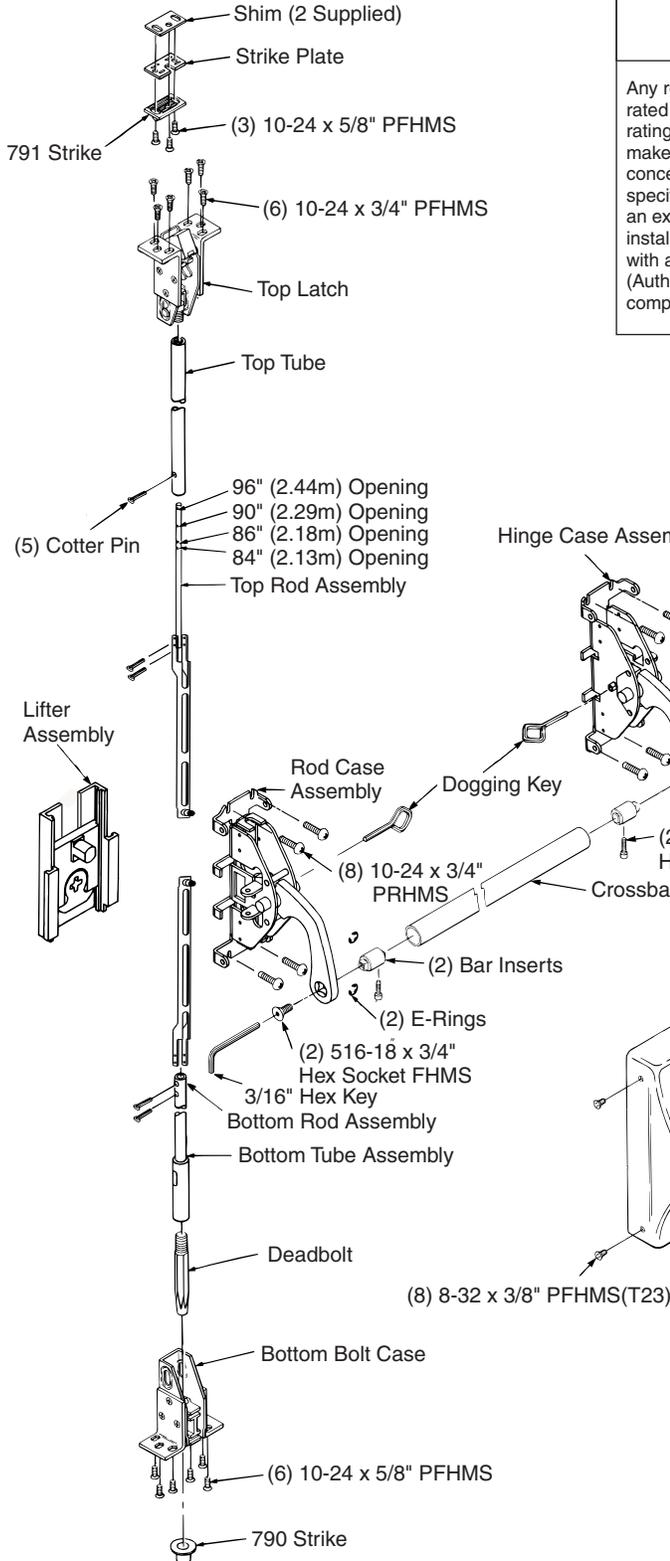




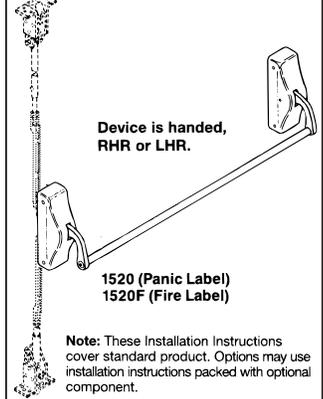
1520(F) Concealed Vertical Rod Exit Devices Installation Instructions



Attention Installer

Any retrofit or other field modification to a fire rated opening can potentially impact the fire rating of the opening, and Yale Locks & Hardware makes no representations or warranties concerning what such impact may be in any specific situation. When retrofitting any portion of an existing fire rated opening, or specifying and installing a new fire-rated opening, please consult with a code specialist or local code official (Authority Having Jurisdiction) to ensure compliance with all applicable codes and ratings.

Packed For Reinforced Metal Doors. Optional Sex Nuts Required For Unreinforced Metal Doors.



Outside Trim

Lifter for 620F or 630F Series Trim supplied when outside trim is packed with the device.

Dogging

Feature to hold bolts retracted and crossbar depressed, for push-pull door operation.

To Dog Device
Set Rod Case Retractor and Hinge Case Retractor, as follows:

1. Hold crossbar depressed.
2. Insert dogging key.
3. Turn key 1/4 turn clockwise.

(Not a feature of fire labeled devices.)

ABBREVIATION	FASTENER DESCRIPTION
PPH"AB"SMS	PHILLIPS PAN HEAD TYPE "AB" SHEET METAL SCREW
PFHUMS	PHILLIPS FLAT HEAD UNDER CUT MACHINE SCREW
PFHMS	PHILLIPS FLAT HEAD MACHINE SCREW
PRH"AB"SMS	PHILLIPS ROUND HEAD TYPE "AB" SHEET METAL SCREW
PTH"AB"SMS	PHILLIPS TRUSS HEAD TYPE "AB" SHEET METAL SCREW
PPHMS	PHILLIPS PAN HEAD MACHINE SCREW
PFH"AB"SMS	PHILLIPS FLAT HEAD TYPE "AB" SHEET METAL SCREW

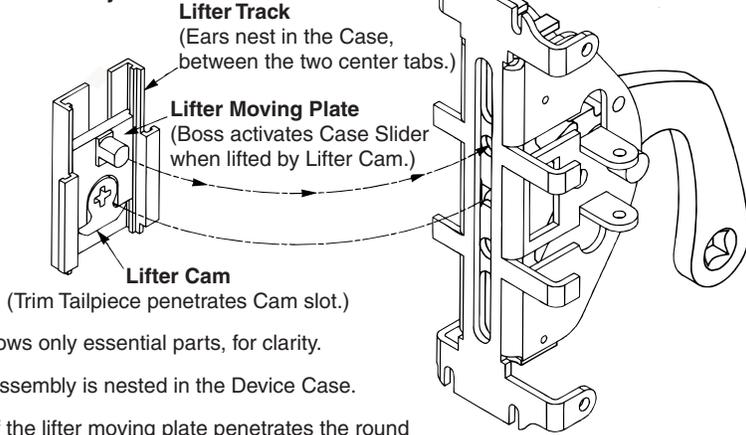
All dimensions are in inches (mm) unless otherwise noted.



Prepare Device for Trim

Maintenance

Omit for exit only function, with or without dummy trim.



Drawing shows only essential parts, for clarity.

The Lifter Assembly is nested in the Device Case.

The boss of the lifter moving plate penetrates the round hole above the case slider center.

The Device Case seats over the door face, with the Lifter Assembly projecting thru the door cutout surface and into the door cavity.

Note that rod connector (with stud) works in the cavity between the lifter track and the door (hook lifter track behind rod connector).

1. Periodically remove covers and coat mechanisms with a silicone base lubricant. This is particularly required in corrosive environments for proper product function.
2. Check mounting fasteners periodically. Retighten if found loose. Apply screw locking compound (available at automotive part stores) or change part fasteners if screws continue to back out.
3. Periodic checks (and adjustments) of strikes are required to compensate for changes in the opening (e.g. door sagging).

Check Before Starting

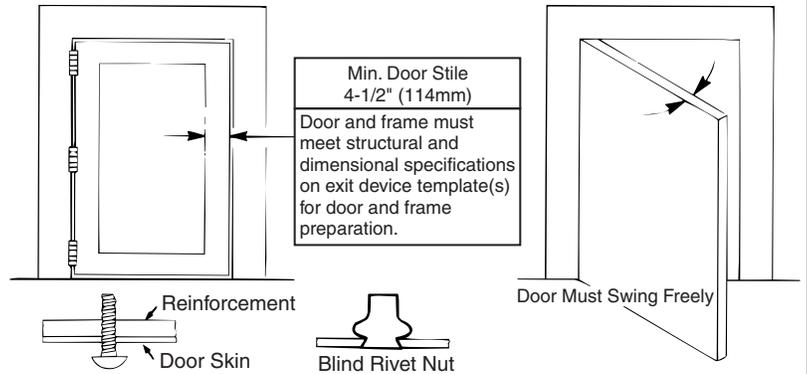
Unreinforced Doors or Frames

Doors and Frames with walls having a structural thickness (metal skin plus reinforcement or solid hardwood) to engage less than (3) full screw threads are considered unreinforced.

Unreinforced Doors: Use SNB (sex nuts and bolts).

Unreinforced Frames: Use Blind Rivet Nuts.

Recommended fasteners for unreinforced openings are not necessarily supplied by Yale Locks and Hardware.



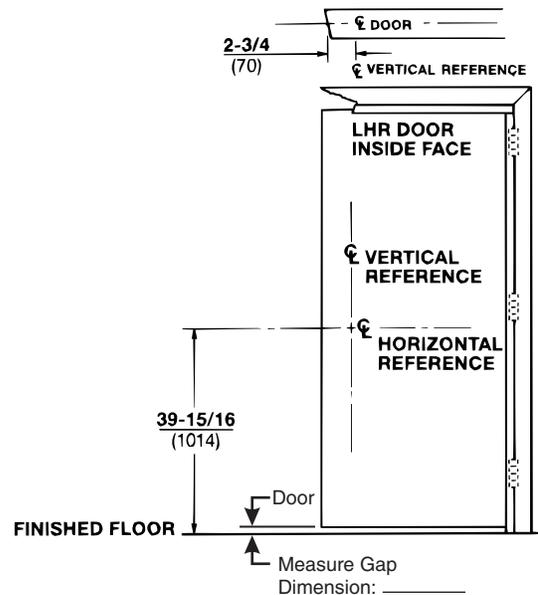
1. Mark Door

Single Door or Pair without Mullion

Locate and Mark Horizontal and Vertical Reference Centerlines as shown.

LHR door shown. Preparation is typical for both door hands.

Caution: If device is mounted higher or lower than shown, rod length must change. Lengthen or cut top and bottom rods as shown on Step 3.



2

2. Prepare Door, Frame & Sill

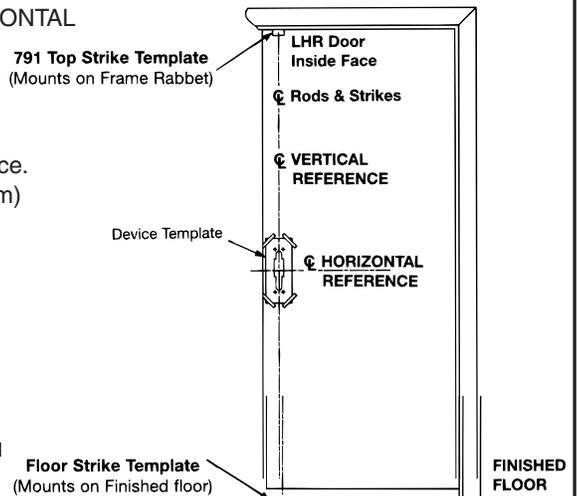
- Locate "Device Template" aligning VERTICAL REFERENCE and HORIZONTAL REFERENCE lines on door and template. Tape template to door face.
- Extend centerline of Rods and Strikes from "Device Template" to door top and bottom, on door face.
- Locate "791 Top Strike" and "Bottom Strike" templates, aligning on centerline of Rods and Strikes on door. Tape templates in place.
- Locate and tape Trim Template to door. (See instructions packed with Trim)
- Spot and prepare holes:

Device: (4) 1/4-20 Machine Screws (reinforced door), or
(4) 3/8 (9.50) Dia. Sex Nuts & Bolts (all others).

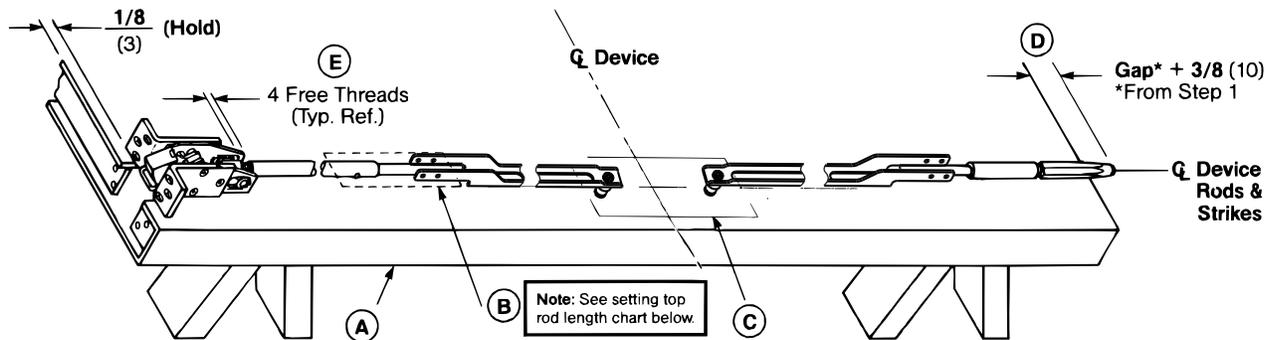
Top Strike: (2) 10-24 Machine Screws

Bottom Strike: $\frac{5}{8}$ dia. x $\frac{3}{4}$ deep hole.
(16) (19)

Note: Auxiliary door maker is included to verify correct door preparation. Reinforced doors and frames, with factory made cutouts, are recommended.

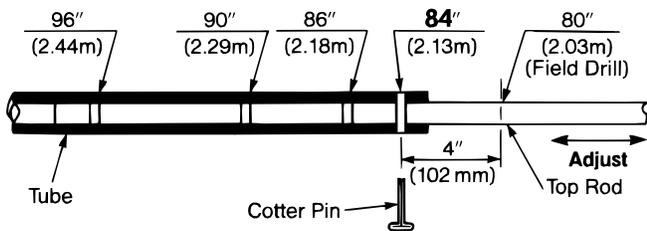


3. Rod Assembly & Preliminary Adjustment

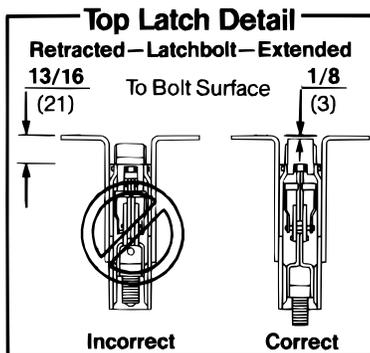


Setting Top Rod Length

Opening Height



For Opening Heights over 96" (2.44m) lengthen Top Rod with Rod Extensions between Rod Tube and Top Latch. Seat Extension tight on Tube. Adjust to precise Rod length by positioning Cotter Pin hole in Rod, as needed.

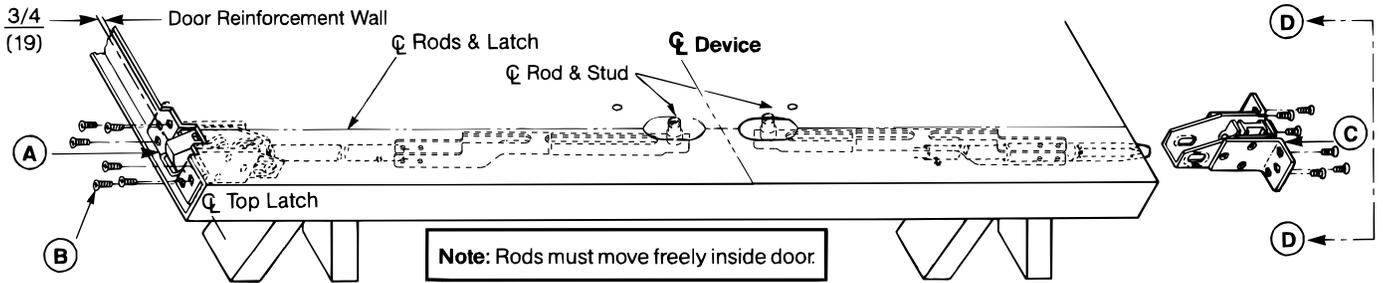
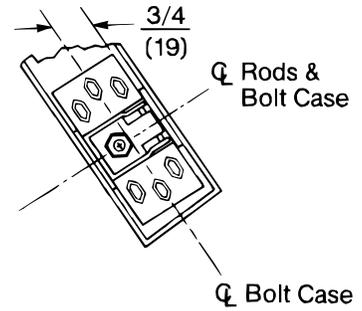


- Set door flat, device side up (Do not hang until step 8.)
- Assemble Top Rod (See "Setting Top Rod Length" detail at right).
- Tape or clamp Installation Gauge (80-8415-0029-000) to door, as shown. (Gauge aligns with Horizontal and Vertical Reference lines.)
- Position Bottom Rod with stud in Gauge bottom hole. Thread Bolt to length shown.
- Position Top Rod with stud in Gauge top hole. Thread top latch (with bolt extended) to tube, till assembly may be positioned as shown.

- For Factory Preset Opening Heights** (shown) go to step 4. **Note:** Factory Preset Rod holes are for device case center positioned at 39-15/16" (1014 mm) from finished floor.
- For Other Opening Heights** (80"/2.03 m shown) locate Rod hole from closest preset location (e.g. for 80" opening, rod must be 4" shorter than for 84". Pin hole is positioned as shown on detail drawing.)
- Drill 1/8" (3.00 mm) hole thru Rod.
- Adjust Rod-Tube length to line up correct pin holes (84" opening shown). Assemble with Cotter Pin.

4. Install Rods

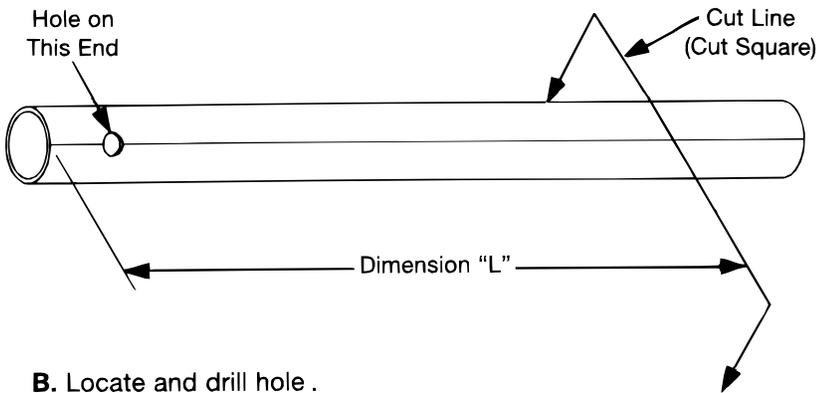
- Insert Top Rod and Latch Assembly into door. Position Top Latch centered on given centerlines (see drawing).
- Prepare Top Latch mounting holes and attach with (6) 10-24 FHMS.
- Insert Bottom Rod and Bolt Assembly into door. Position Bolt Case to allow free Bolt passage (see drawing).
- Prepare Bolt Case mounting holes and attach with (6) 10-24 FHMS.



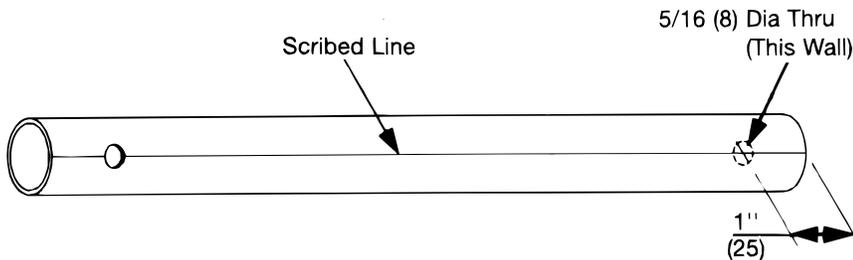
5. Prepare Crossbar

Crossbar Length (L) = Door Opening Width - 6-1/4" L = DOW-159mm

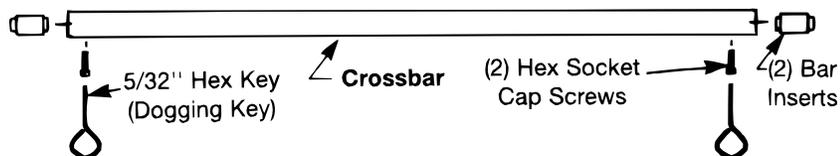
- Cut bar to required length.



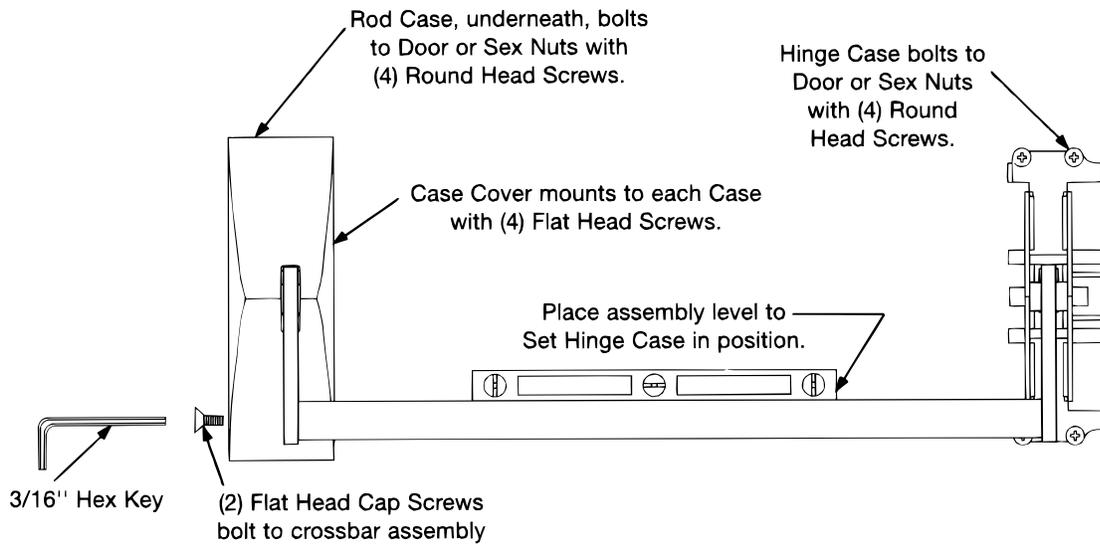
- Locate and drill hole.



- Assemble Crossbar.

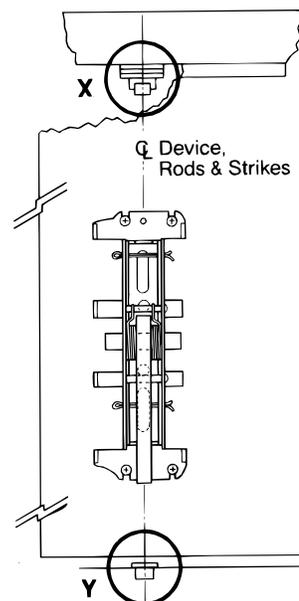
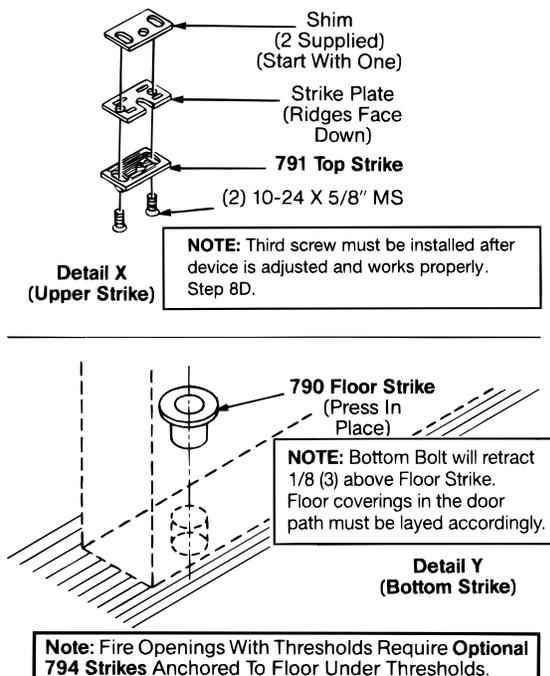


6. Mount Device

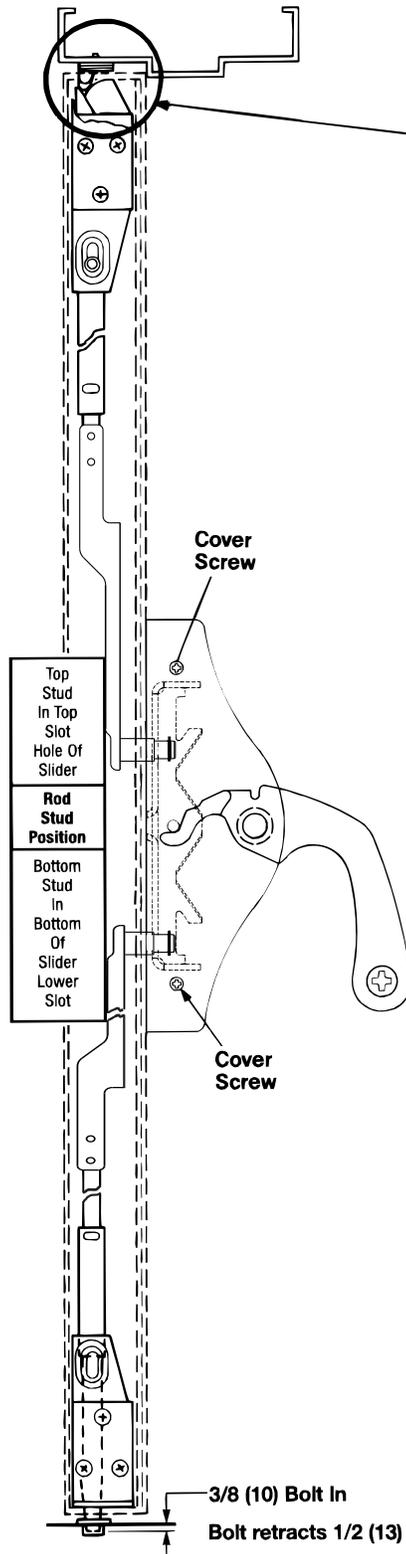


- A. Install Trim (See "Device Preparation for Trim", front page, and instructions packed with Trim.)
- B. Mount Rod Case to tapped door, trim studs or sex nuts. Note: Rod connectors work between Rod Case and Trim Lifter channel. Rod studs pass thru Rod Case Slider (Top Stud at bottom of top slot, Bottom Stud into bottom slot). Retain Studs in place with "E" Rings supplied.
- C. Install Rod Case Cover with (4) flat head screws.
- D. Install Crossbar, inserted into Rod Case and Hinge Case arm grooves. Use crossbar and level to position Hinge Case as a template.
- E. Locate and prepare holes for (4) Hinge Case mounting screws, as follows:
Reinforced Door, 1/4-20 Machine Screws
Unreinforced Door, 3/8(9.50) diameter SNB.
- F. Mount Hinge Case with (4) round head screws, and Cover with (4) flat head screws.
- G. Reassemble Crossbar.
- H. Check for smooth operation by crossbar, by trim, by dogging. Rods must move freely. Top latchbolt must retract fully, and remain retracted until deadlocking level is depressed. Bottom bolt should retract not less than 1/2".

7. Install Strikes



7. Complete Installation



A Hang Door, true, plumb, and free to swing.

B Set Strike Roller between Tripping Lever and Bolt. DO NOT PRELOAD BOLT. Shim as needed for zero door rattle.

C Test Device action by Crossbar, by Trim, AND by Dogging. Both bolts should retract, permitting free door swing. Upper Bolt should retract flat. Bottom Bolt should retract 1/2(12). Bolts remain retracted until door shuts and Top Strike hits Tripping Lever.

C1 Bottom Rod Adjustment
When Bottom Rod drags on floor but Top Rod remains retracted, bottom rod is too long. Remove Bottom Bolt Case and thread bottom bolt in, as required.

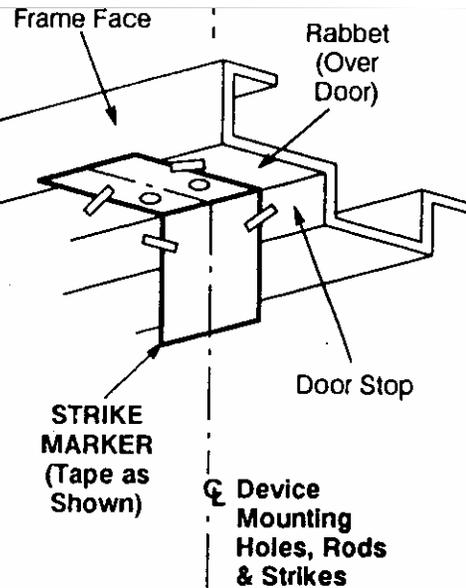
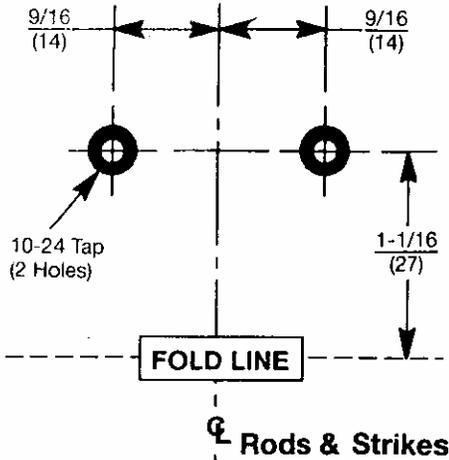
C2 Top Rod Adjustment
When top bolt does not remain retracted, Top Rod is too short. Retrace Steps 3 and 4. Check Device centerline and all rod dimensions carefully.

D After acceptable Device function, install third screw in top Strike to lock Strike in position. 10-24 x 5/8" FHMS.

E Secure Cover Screws.

TAPE TO FRAME RABBET

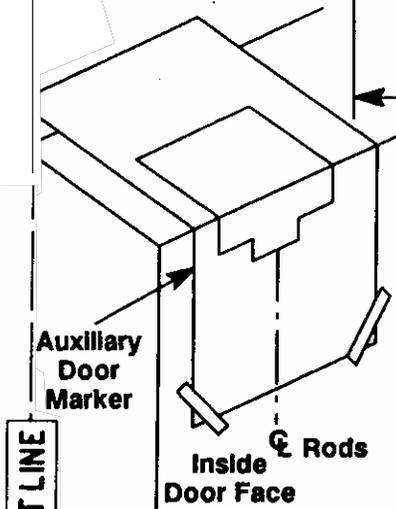
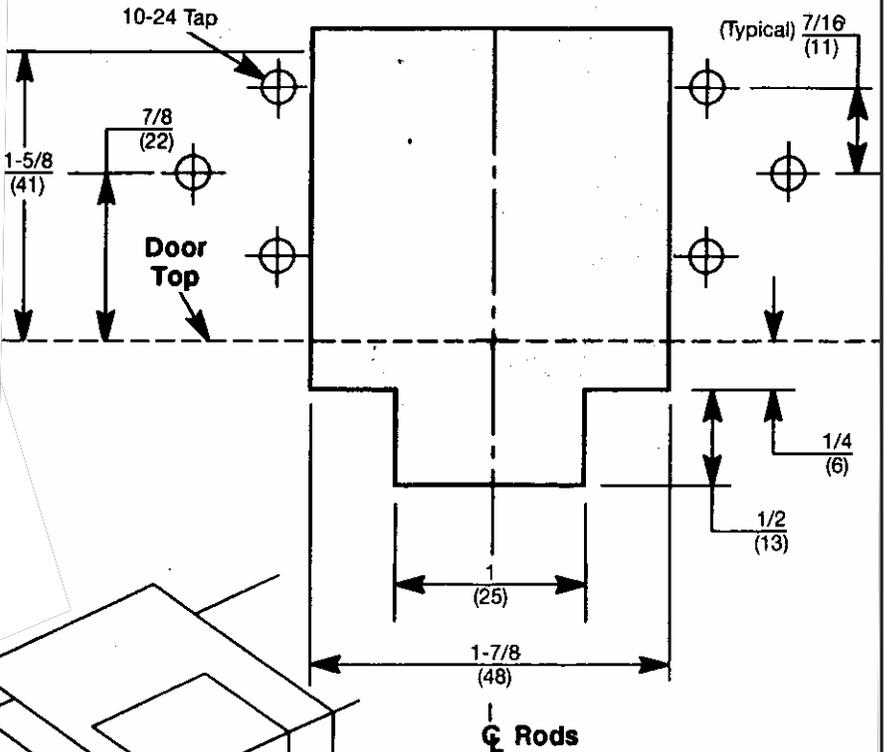
**791 STRIKE
(Top Strike)**



Instructions:

1. Note different prep for Device with Trim and Exit Only.
2. Unreinforced doors and frames require that 10-24 blind rivet nuts (by others) be used to bolt latch cases and strike. Frames and doors are considered not reinforced when strike mounting screws cannot engage (3) full threads.
4. Dimensions are given in inches (mm).
5. **CAUTION:** Office copiers, printers and facsimile machines may change the size of a drawing and make the template inaccurate to use as a door marker.

**AUXILIARY DOOR MARKER
(Top Strike Clearance Cutout
Top & Bottom Latch Mounts)**



- Notes:**
1. 1-1/2 (38) square clear vertical cavity, centered on door and rods, is needed.
 2. Top and bottom latch holes shown for reference. Position latch in place to locate holes.
 3. Fold marker and tape to door face to locate cutout.

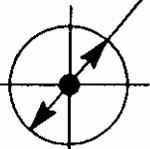
CUT LINE



LHR Door
(Over for RHR Door)

**790 STRIKE
(Floor Strike)**

5/8 (16) Dia. x
3/4 (19) Deep



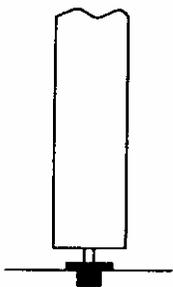
1-1/8
(29)

⊕ **Rods & Strikes**

**INSIDE
DOOR FACE
(Device Side)**

DOOR EDGE

ALIGN WITH DOOR
EDGE AND DOOR
FACE (DEVICE SIDE)



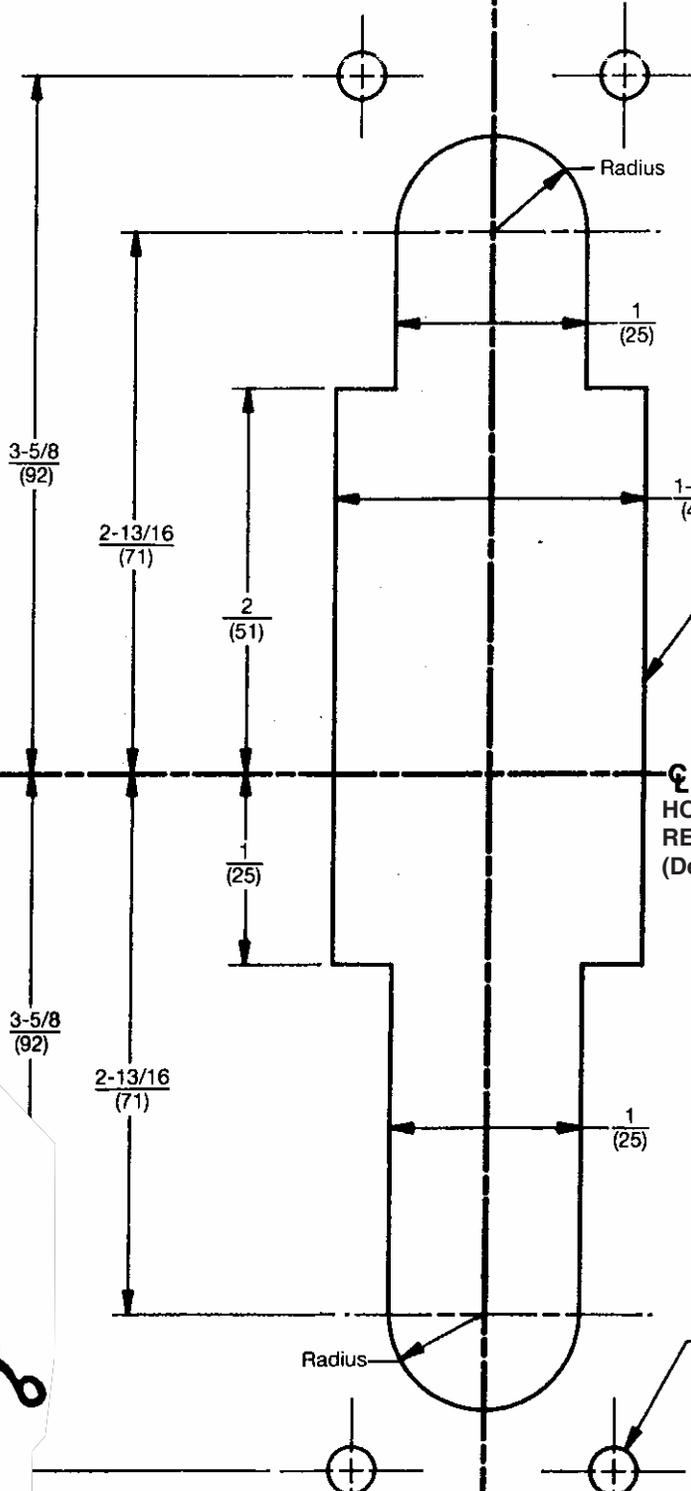
CAUTION:

Office copiers, printers and facsimile machines may change the size of a drawing and make the template inaccurate to use as a door marker.

**Door Inside
Face Surface**

Device with Trim
(For Exit Only, see
other side)

⊕ **VERTICAL
REFERENCE**
(Case, Rods, Strikes
& Cutout)



Trim Cutout
Thru This
Face
(For Exit
Only
see other
side)

CUT LINE

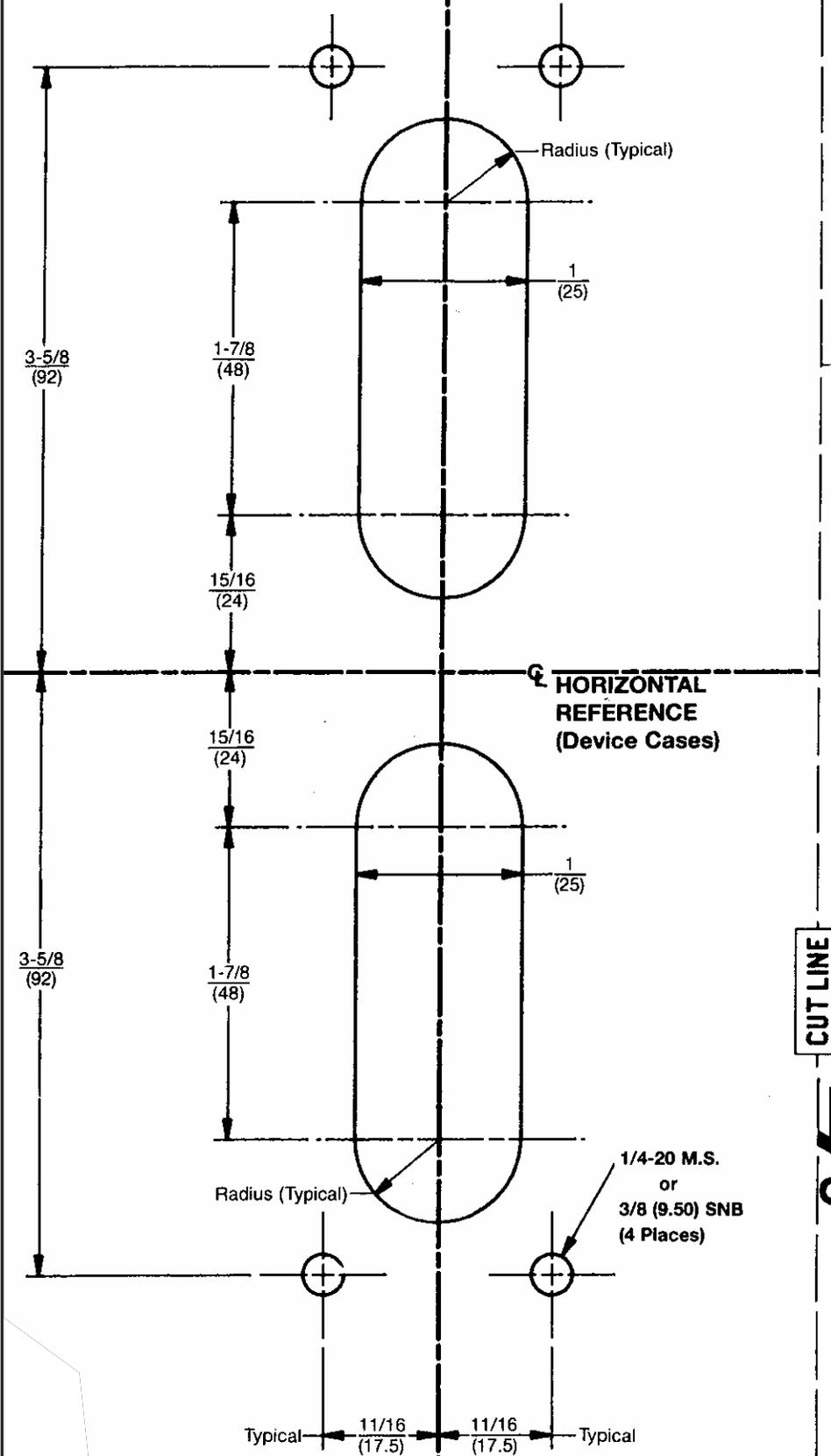


Typical 11/16 (17.5) 11/16 (17.5) Typical

**Door Inside
Face Surface
Exit Only Template**
(For Device with Trim,
see other side)

Ⓞ VERTICAL
REFERENCE
(Case, Rods, Strikes & Cutout)

CAUTION:
Office copiers, printers and facsimile
machines may change the size of a
drawing and make the template
inaccurate to use as a door marker.



CUT LINE

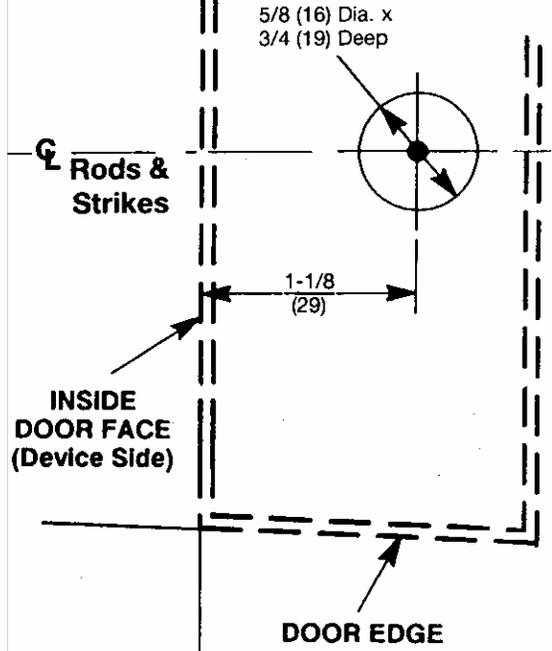


ALIGN WITH DOOR
EDGE AND DOOR
FACE (DEVICE SIDE)

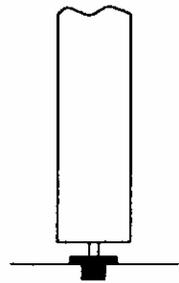
**RHR Door
(Over for LHR Door)**

790 STRIKE (Floor Strike)

CAUTION:
Office copiers, printers and facsimile machines may change the size of a drawing and make the template inaccurate to use as a door marker.



**ALIGN WITH DOOR
EDGE AND DOOR
FACE (DEVICE SIDE)**



CUT LINE



Yale Locks & Hardware

Product Support Tel 800.438.1951 • www.yalelocks.com

Yale Locks & Hardware is a division of Yale Security Inc., an ASSA ABLOY Group company.

Yale® is a registered trademark of Yale Security Inc., an ASSA ABLOY Group company. Other products' brand names may be trademarks or registered trademarks of their respective owners and are mentioned for reference purposes only. These materials are protected under U.S. copyright laws. All contents current at time of publication.

Yale Security Inc. reserves the right to change availability of any item in this catalog, its design, construction, and/or its materials.
Copyright © 1995, 2013, Yale Security Inc., an ASSA ABLOY Group company.

All rights reserved. Reproduction in whole or in part without the express written permission of Yale Security Inc. is prohibited.