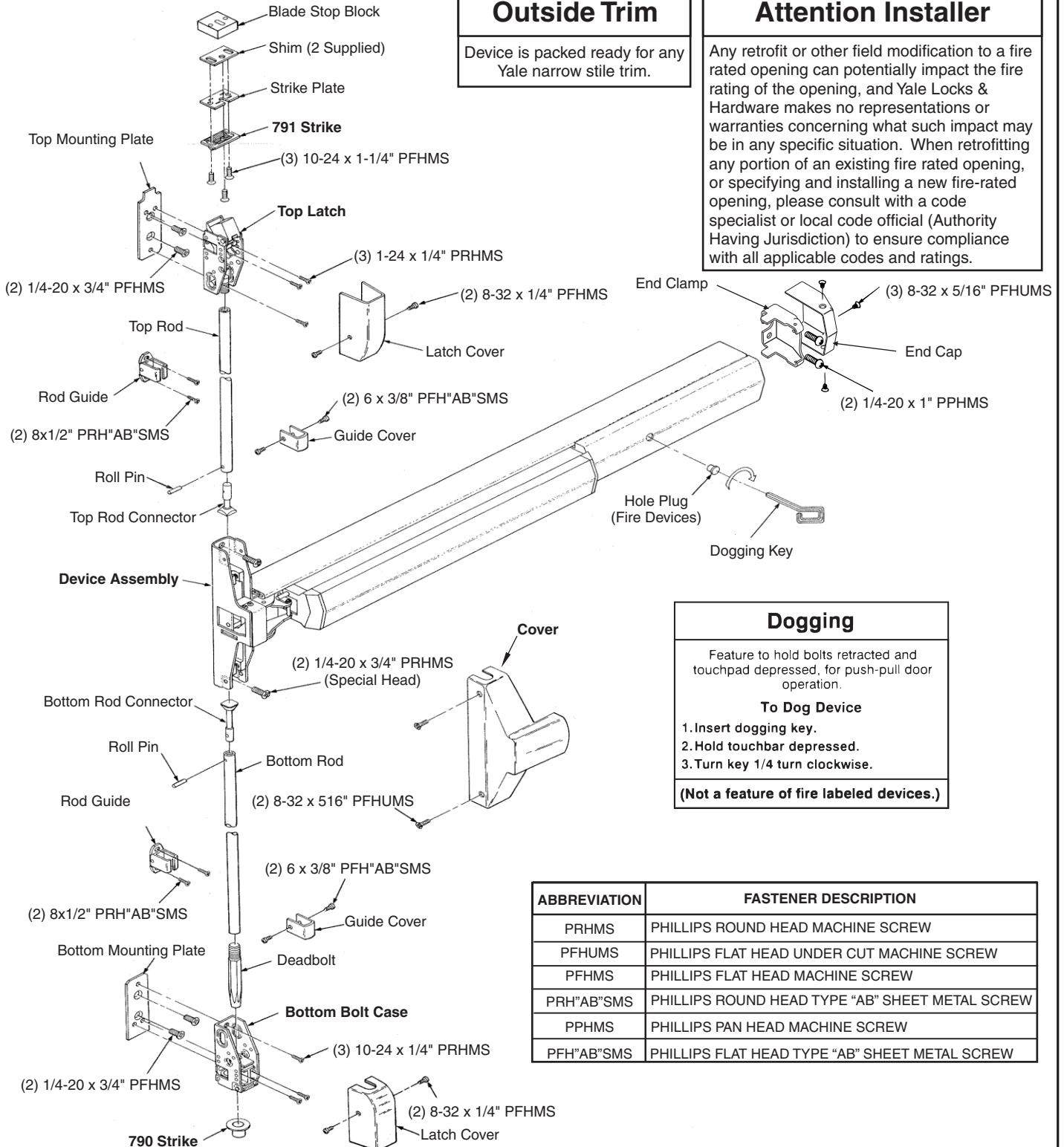# Yale®

7210 Surface Vertical Rod Exit Device
Installation Instructions

Outside Trim

Device is packed ready for any Yale narrow stile trim.

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.

Blade Stop Block
Shim (2 Supplied)
Strike Plate
791 Strike
(3) 10-24 x 1-1/4" PFHMS
Top Mounting Plate
Top Latch
(3) 1-24 x 1/4" PRHMS
(2) 1/4-20 x 3/4" PFHMS
(2) 8-32 x 1/4" PFHMS
Top Rod
Latch Cover
Rod Guide
(2) 6 x 3/8" PFH"AB"SMS
(2) 8x1/2" PRH"AB"SMS
Guide Cover
Roll Pin
Top Rod Connector
Device Assembly
Hole Plug (Fire Devices)
Dogging Key
Cover
(2) 1/4-20 x 3/4" PRHMS (Special Head)
Bottom Rod Connector
Roll Pin
Bottom Rod
Rod Guide
(2) 8-32 x 516" PFHUMS
(2) 6 x 3/8" PFH"AB"SMS
(2) 8x1/2" PRH"AB"SMS
Guide Cover
Bottom Mounting Plate
Deadbolt
Bottom Bolt Case
(3) 10-24 x 1/4" PRHMS
(2) 1/4-20 x 3/4" PFHMS
790 Strike
(2) 8-32 x 1/4" PFHMS
Latch Cover

End Clamp
(3) 8-32 x 5/16" PFHUMS
End Cap
(2) 1/4-20 x 1" PPHMS

Dogging

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

To Dog Device
1. Insert dogging key.
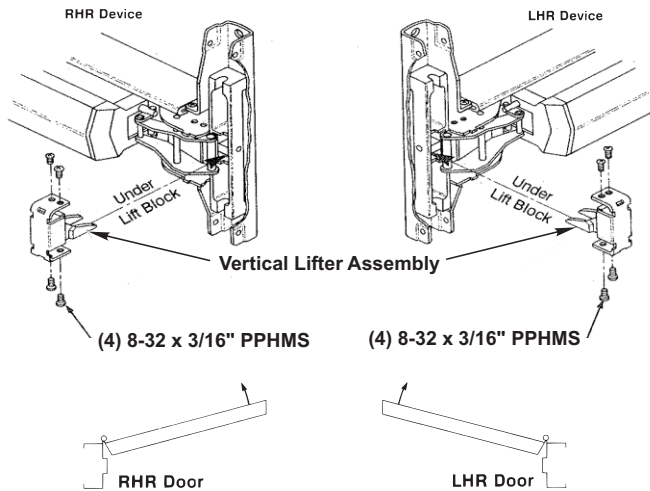2. Hold touchbar depressed.
3. Turn key 1/4 turn clockwise.

(Not a feature of fire labeled devices.)

ABBREVIATION	FASTENER DESCRIPTION
PRHMS	PHILLIPS ROUND HEAD MACHINE 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
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.

To Change Hands	**Maintenance**

RHR Device   LHR Device

Under Lift Block

Vertical Lifter Assembly

(4) 8-32 x 3/16" PPHMS   **(4) 8-32 x 3/16" PPHMS**

RHR Door   LHR Door

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).
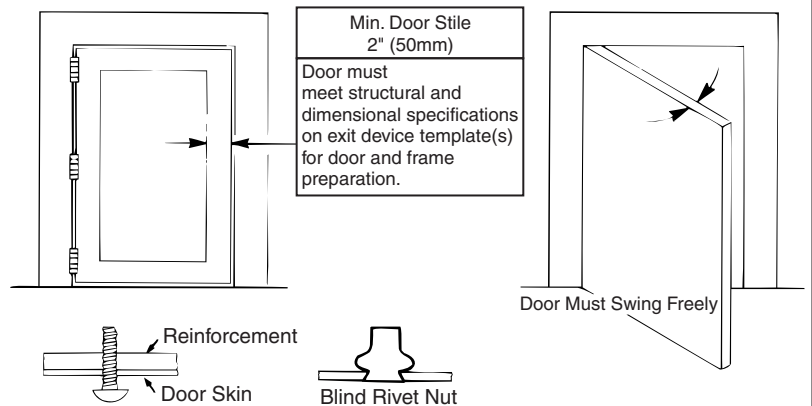
Check Before Starting

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 & Hardware.
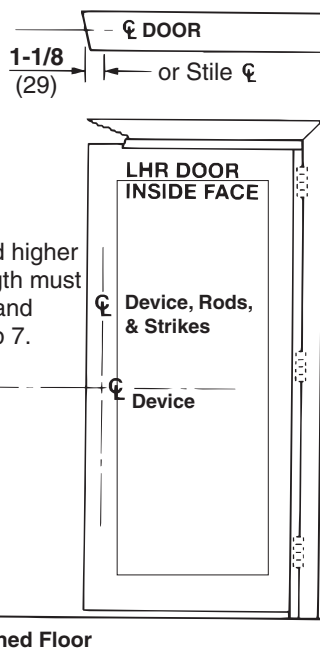

Min. Door Stile 2" (50mm)

Door must meet structural and dimensional specifications on exit device template(s) for door and frame preparation.

Door Must Swing Freely

Reinforcement

Door Skin

Blind Rivet Nut

1. Mark Door

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 in Step 7.

Single Door or Pair without Mullion

Ç DOOR

1-1/8
(29)   or Stile Ç

LHR DOOR INSIDE FACE

Ç **Device, Rods, & Strikes**

Ç **Device**

39-15/16
(1014)

Finished Floor

2. Prepare Door, Frame & Sill

A. Locate "Device Template" aligning VERTICAL REFERENCE and HORIZONTAL REFERENCE lines on door and template. Tape template to door face.

B. Locate "Top Latch", "Top Strike", "Bottom Case" and "Bottom Strike" templates, aligned on centerline of Device, Rods and Strikes on door. Tape templates in place.

C. Locate and tape Trim Template to door.
(See instructions packed with Trim.)
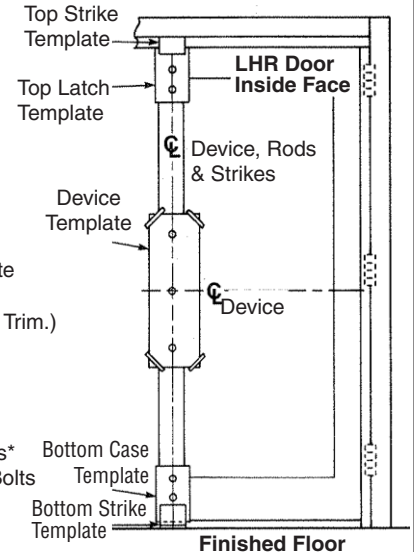
D. Spot and prepare holes:

Device and Bolt Case Plates:
Each (2) 1/4-20 Machine Screws*
or (2) 3/8" (10) dia Sex Nuts & Bolts

(*) Metal reinforced door only.

Top Strike: (2) 10-32 Machine Screws;

Bottom Strike: 5/8" (16) dia x 3/4 (19) deep hole

Top Strike Template

LHR Door Inside Face

Top Latch Template

Ç Device, Rods & Strikes

Device Template

Ç Device

Bottom Case Template

Bottom Strike Template

Finished Floor

2

3. Clear Raised Door Molding

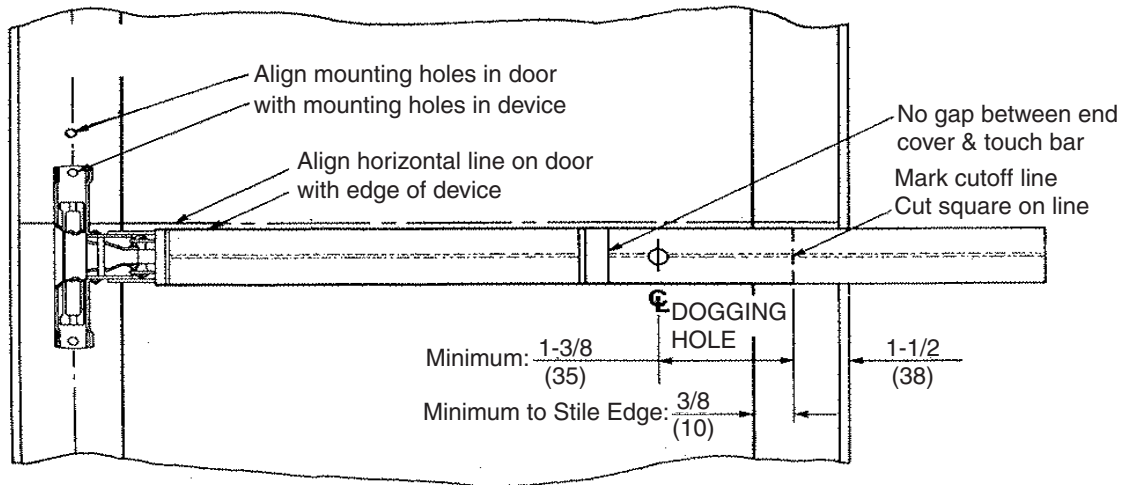**Device must seat flush on door surface, or on shims that keep it parallel to door face.**

Longer mounting screws needed when more than (2) shim kits are used.

One Shim Kit #724N per 1/8" (3mm) of raised molding.
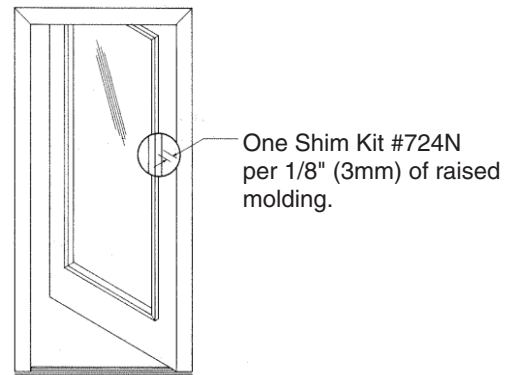
4. Size Device

Device must be field cut to size, unless standard opening and device are 36" (0.91m) or 48" (1.22m).

LHR DOOR (Door Open) INSIDE FACE

Align mounting holes in door with mounting holes in device

Align horizontal line on door with edge of device

No gap between end cover & touch bar

Mark cutoff line
Cut square on line

DOGGING HOLE

Minimum: 1-3/8 (35)

Minimum to Stile Edge: 3/8 (10)

1-1/2 (38)

5. Install Device

A. Mount Trim (Follow instructions packed with Trim).

B. Seat Bar in place (Projecting C-Cam boss must penetrate into door hole). Fasten Device Head (2 PRHMS or SNB).

C. Set Bar level. Locate End Clamp holes.

D. Prepare End Clamp mounting holes. Mount End Clamp. (2 #1/4-20 PRHMS or 3/8" (10) dia SNB)

Device Screws (Bolt to door reinforcement, sex nuts, or trim studs)

1/2 (13)

1-1/4 (32)
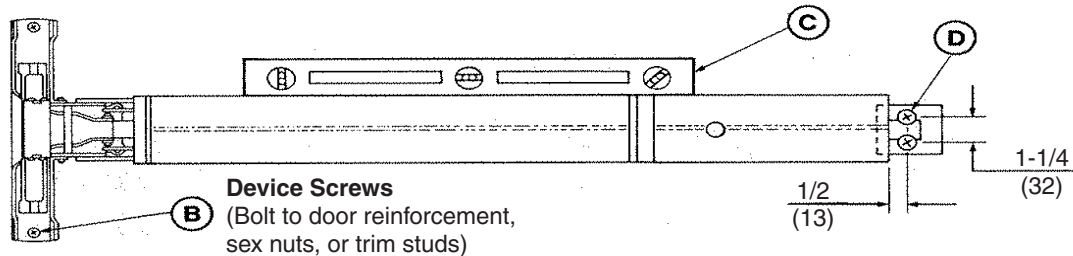
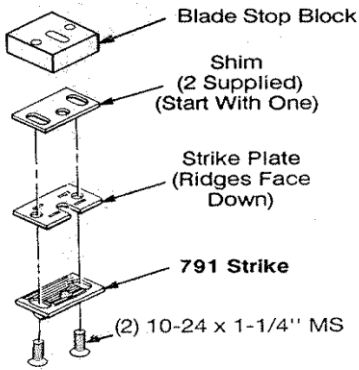E. Check Slide Action (Slide Travel ≅ 9/16" (14).

1. Depress touchbar (slide should move up). Release touchbar (slide should fall back to original rest position).
2. Activate trim (slide should move up). Release trim actuator (slide should fall back to rest position).
3. Depress touchbar, turn dogging key clockwise (bar must remain depressed, slide must remain in up position). Turn dogging key counterclockwise (bar

should extend, slide should fall back to rest position).

NOTE: When resulting operation is faulty, check first for visible binding or interference. If there is no apparent reason for the fault, remove item from the door and recheck its operation before assuming that it is defective.

F. Tighten all mounting screws.

3

An ASSA ABLOY Group brand

ASSA ABLOY

6. Set Latches, Strikes and Guides

Top Strike Detail

- Blade Stop Block
- Shim (2 Supplied) (Start With One)
- Strike Plate (Ridges Face Down)
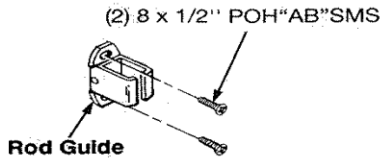- **791 Strike**
- (2) 10-24 x 1-1/4'' MS

NOTE: Reserve third screw for Step 8.

Blade Stop Mount shown. When Formed Stop is used, omit Blade Stop Block and mount Strike with 5/8'' long screws (in 791 Strike Pack).
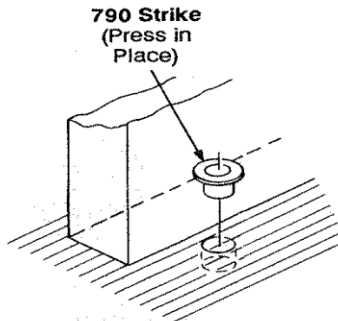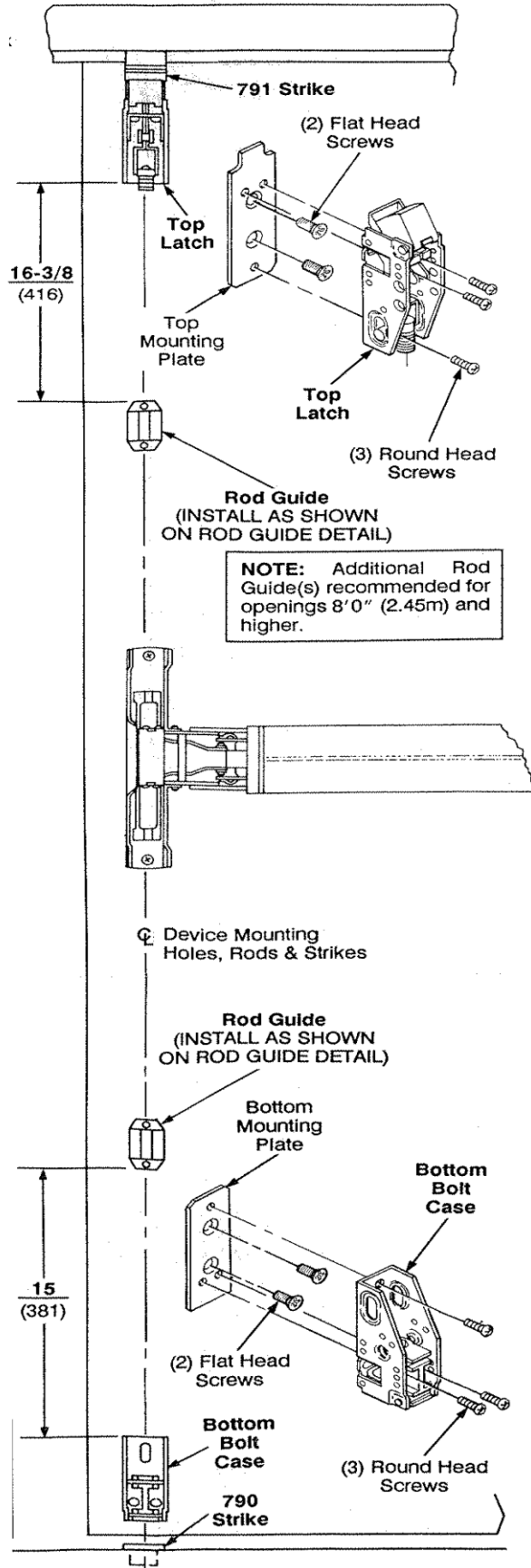
Rod Guide Detail

(Typical 2 Places)

(2) 8 x 1/2'' POH"AB"SMS

Rod Guide

- Locate Rod Guide as dimensioned. Spot (2) mounting holes.
- Prepare holes. .140 (3.50) dia. inside face.
- Mount Guide.

Bottom Strike Detail

790 Strike (Press in Place)

Note: Bottom Bolt will retract to 1/8" (3mm) above Floor Strike. Floor covering in the door path must be laid out accordingly.

- **791 Strike**
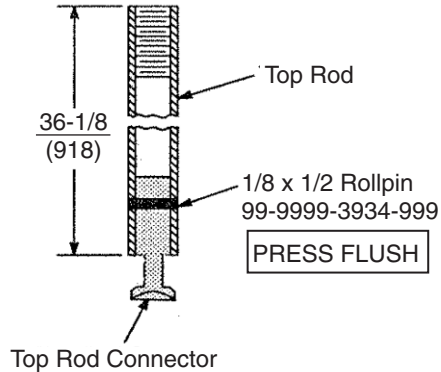- (2) Flat Head Screws
- **Top Latch**
- Top Mounting Plate
- **Top Latch**
- (3) Round Head Screws

16-3/8 (416)

Rod Guide (INSTALL AS SHOWN ON ROD GUIDE DETAIL)

NOTE: Additional Rod Guide(s) recommended for openings 8'0" (2.45m) and higher.

Device Mounting Holes, Rods & Strikes

Rod Guide (INSTALL AS SHOWN ON ROD GUIDE DETAIL)

- Bottom Mounting Plate
- **Bottom Bolt Case**

15 (381)

(2) Flat Head Screws

Bottom Bolt Case

(3) Round Head Screws

790 Strike

ASSA ABLOY

7. Prepare Rods

Top Rod

Ready for 84" (2134) Openings

Openings Under 84" (2134)
For Top Rod cutoff length, deduct OPENING HEIGHT from 84" (2134).

Example:
Opening = 80" (2032)
84" (2134) - 80" (2032) = 4" (102)
Top Rod must be cut 4" (102).

Openings Over 84" (2134)
For Top Rod additional length, deduct 84" (2134) from OPENING HEIGHT.

Example:
Opening = 99" (2515)
99" (2515) - 84" (2134) = 15" (381)
Top Rod must be lengthened 15" (381).

36-1/8
(918)

Top Rod

1/8 x 1/2 Rollpin
99-9999-3934-999
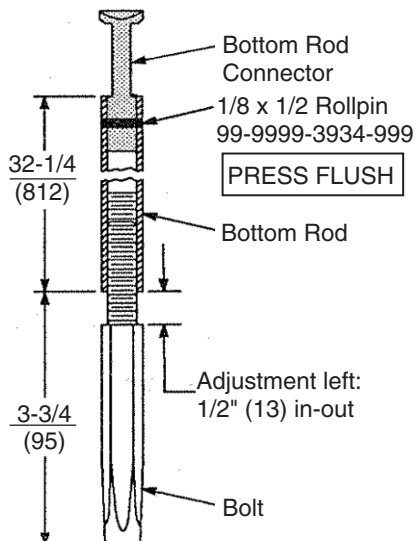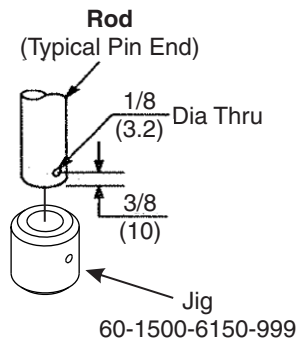
PRESS FLUSH

Top Rod Connector

To Lengthen Rods

• Use Rod Extension(s) to extend Rod to length needed or longer (2", 6", or 12" Rod Extensions available).

• Cut excess length from end of rod with pin hole.

• Apply screw locking compound* to Rod Extension(s) male threads. Thread Extension(s) until seated tight over Rod.

　　(*)Available at automotive parts store.

To Cut Rods

• Cut from end with pin hole. NEVER CUT THREADED END.

• Press Jig until it bottoms over Rod.

• Drill 1/8" (3) dia. hole thru, 3/8" (10) from end of Rod.

Rod
(Typical Pin End)

1/8
(3.2) Dia Thru

3/8
(10)

Jig
60-1500-6150-999

Bottom Rod

Ready for 39-15/16" (1014) Floor to Device Center

Bottom Rod Connector

1/8 x 1/2 Rollpin
99-9999-3934-999

PRESS FLUSH

Bottom Rod

32-1/4
(812)

Adjustment left:
1/2" (13) in-out

3-3/4
(95)

Bolt

To Lower Device
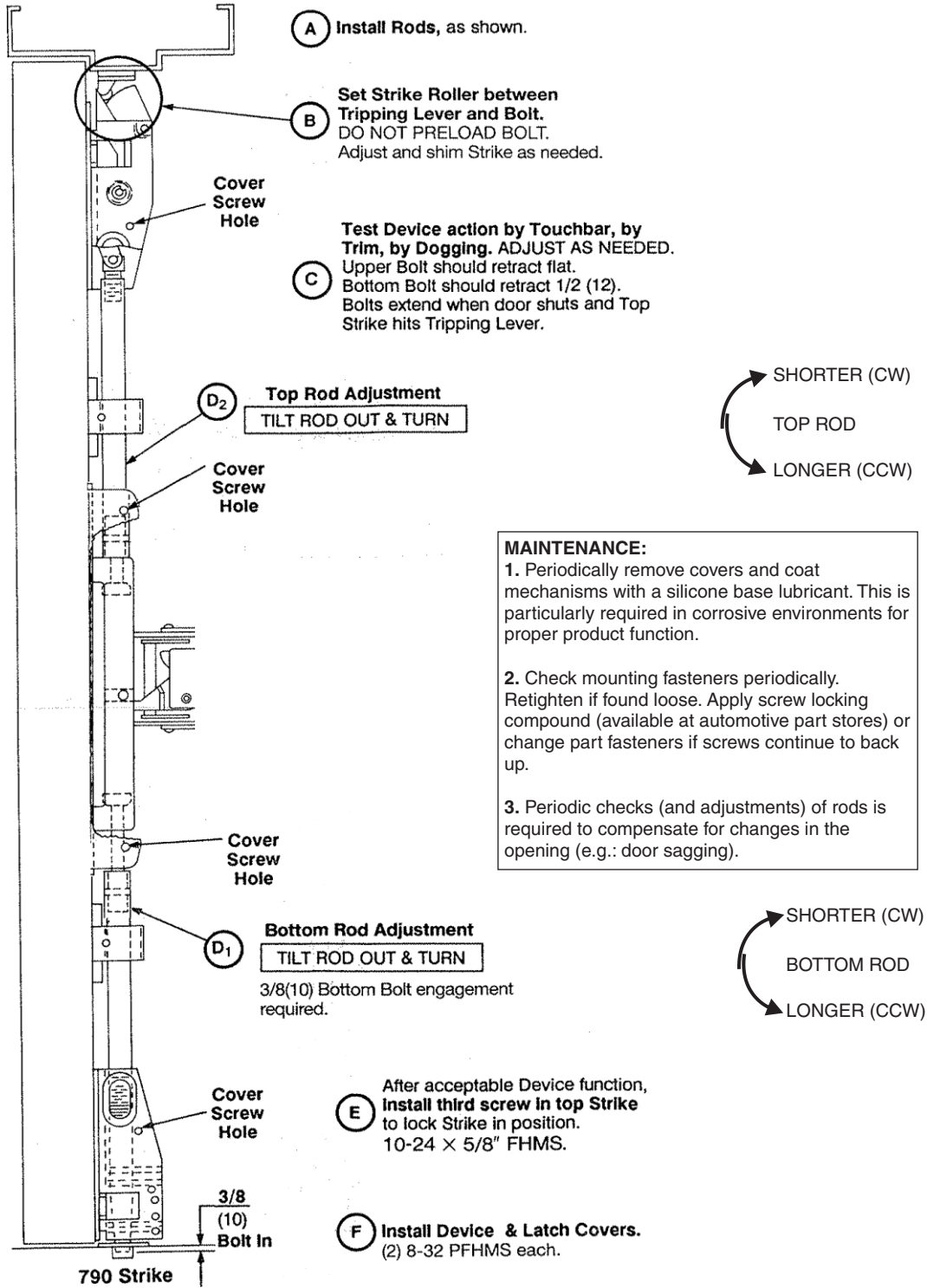**A.** Bottom Rod cutoff length is distance that device was lowered below 39-15/16" (1014).
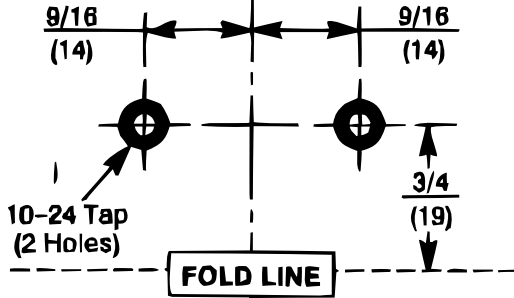**B.** Add to Top Rod a length equal to the Bottom Rod cut.

Example:
Device at 36" (914) from floor.
39-15/16" (1014) - 36" (914) = 3-15/16" (100)
The Bottom Rod must be cut 3-15/16" (100).
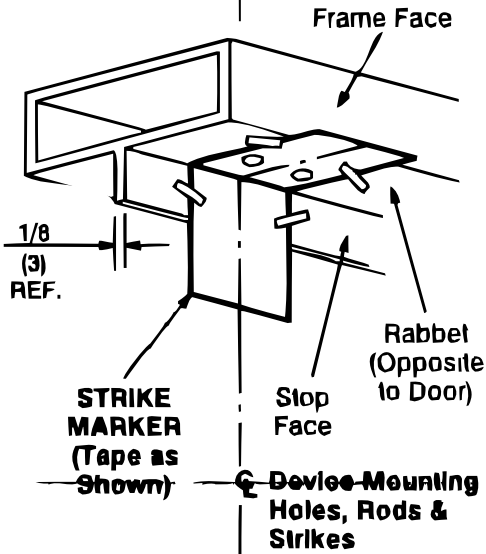The Top Rod must be lengthened 3-15/16" (100).

5

8. Complete Installation

A Install Rods, as shown.

B Set Strike Roller between Tripping Lever and Bolt. DO NOT PRELOAD BOLT. Adjust and shim Strike as needed.

Cover Screw Hole

C Test Device action by Touchbar, by Trim, by Dogging. ADJUST AS NEEDED. Upper Bolt should retract flat. Bottom Bolt should retract 1/2 (12). Bolts extend when door shuts and Top Strike hits Tripping Lever.

D₂ Top Rod Adjustment

TILT ROD OUT & TURN

Cover Screw Hole

SHORTER (CW)

TOP ROD

LONGER (CCW)

MAINTENANCE:
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 up.

3. Periodic checks (and adjustments) of rods is required to compensate for changes in the opening (e.g.: door sagging).

Cover Screw Hole

D₁ Bottom Rod Adjustment

TILT ROD OUT & TURN

3/8(10) Bottom Bolt engagement required.

SHORTER (CW)

BOTTOM ROD

LONGER (CCW)

Cover Screw Hole

E After acceptable Device function, Install third screw in top Strike to lock Strike in position. 10-24 × 5/8" FHMS.

3/8 (10) Bolt In

F Install Device & Latch Covers. (2) 8-32 PFHMS each.

790 Strike

TAPE TO FRAME RABBET

9/16 (14)   9/16 (14)

10-24 Tap (2 Holes)

3/4 (19)

FOLD LINE

℄ Rods & Strikes

Frame Face

1/8 (3) REF.

STRIKE MARKER (Tape as Shown)

Stop Face

Rabbet (Opposite to Door)

℄ Device Mounting Holes, Rods & Strikes

791 STRIKE (Top Strike)

CUT LINE

FOLD LINE (Door Top)

Align with ℄ Rods

2-3/4 (70)

A

1-5/16 (33)

A

Notes:

1. "Cutlines" separate different templates.
2. Dimensions are given in inches (mm).
3. **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.
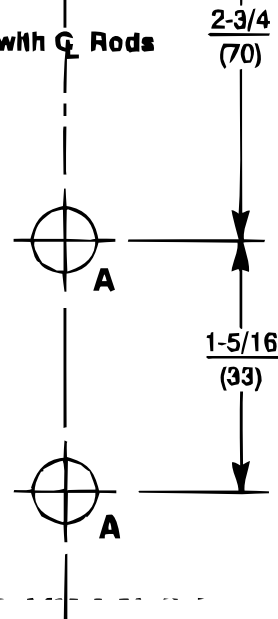
| Door	Fastener	Hole "A"
Metal	Screw	1/4-20 Tap
Hollow Metal & Aluminum	Optional SNB	5/16 (8) Dia Inside Door Face 3/8 (10) Dia Outside Door Face
All Others	SNB	3/8 (10) Dia Thru Door

TAPE TO DOOR

TOP LATCH

7

This page left blank intentionally.

ASSA ABLOY

Align with ℄ Rods

Door	Fastener	Hole "A"
Metal Reinforced	Screw	1/4-20 Tap
Hollow Metal & Aluminum	Optional SNB	5/16 (8) Dia. Inside Door Face
		3/8 (10) Dia. Outside Door Face
All Others	SNB	3/8 (10) Dia. Thru Door

Align with ℄ Rods
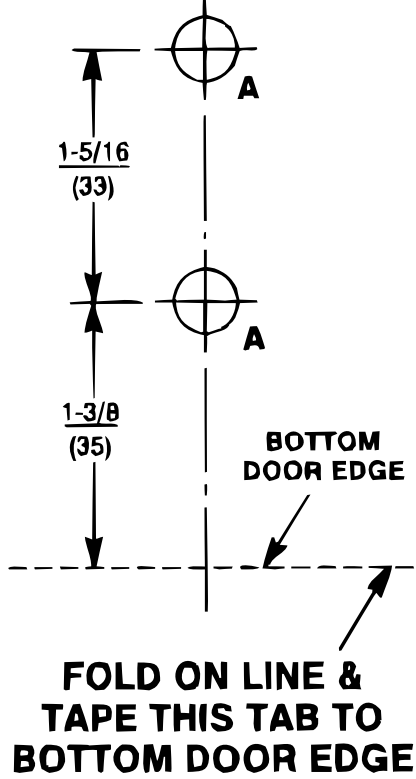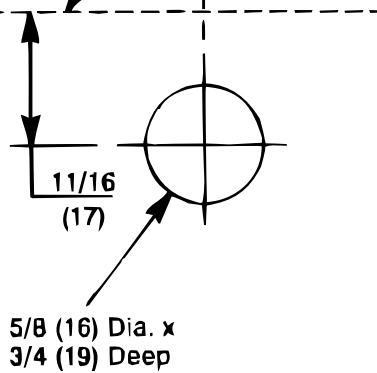
A

1-5/16
(33)

A

1-3/8
(35)

**BOTTOM
DOOR EDGE**

**FOLD LINE
(Floor)**

**FOLD ON LINE &
TAPE THIS TAB TO
BOTTOM DOOR EDGE**

11/16
(17)

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

Notes:

1. "Cutlines" separate different templates.
2. Dimensions are given in inches (mm).
3. **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

CUT LINE

**BOTTOM
BOLT CASE**

790 STRIKE

9

An ASSA ABLOY Group brand

ASSA ABLOY

This page left blank intentionally.

ASSA ABLOY

Door Inside
Face Surface
(Device Seat)
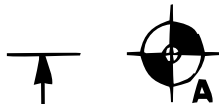
Ⓛ VERTICAL REFERENCE
Device Mounting
Holes, Rods & Strikes

| HOLE	DOOR/FRAME	FASTENER	PREPARATION
A	Metal Reinforced	1/4 - 20 PRHMS	Drill: #7 (.201" dia.) Tap: 1/4 - 20
	All others	1/4 - 20 SNB	3/8" (9.50 mm) dia thru door

$\frac{3/4}{(19)}$ Dia. x

$\frac{1/4}{(6)}$ Deep
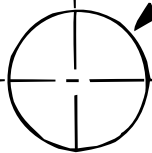
$\frac{3\text{-}5/8}{(92)}$

Ⓛ HORIZONTAL
REFERENCE & DEVICE

$\frac{3\text{-}5/8}{(92)}$
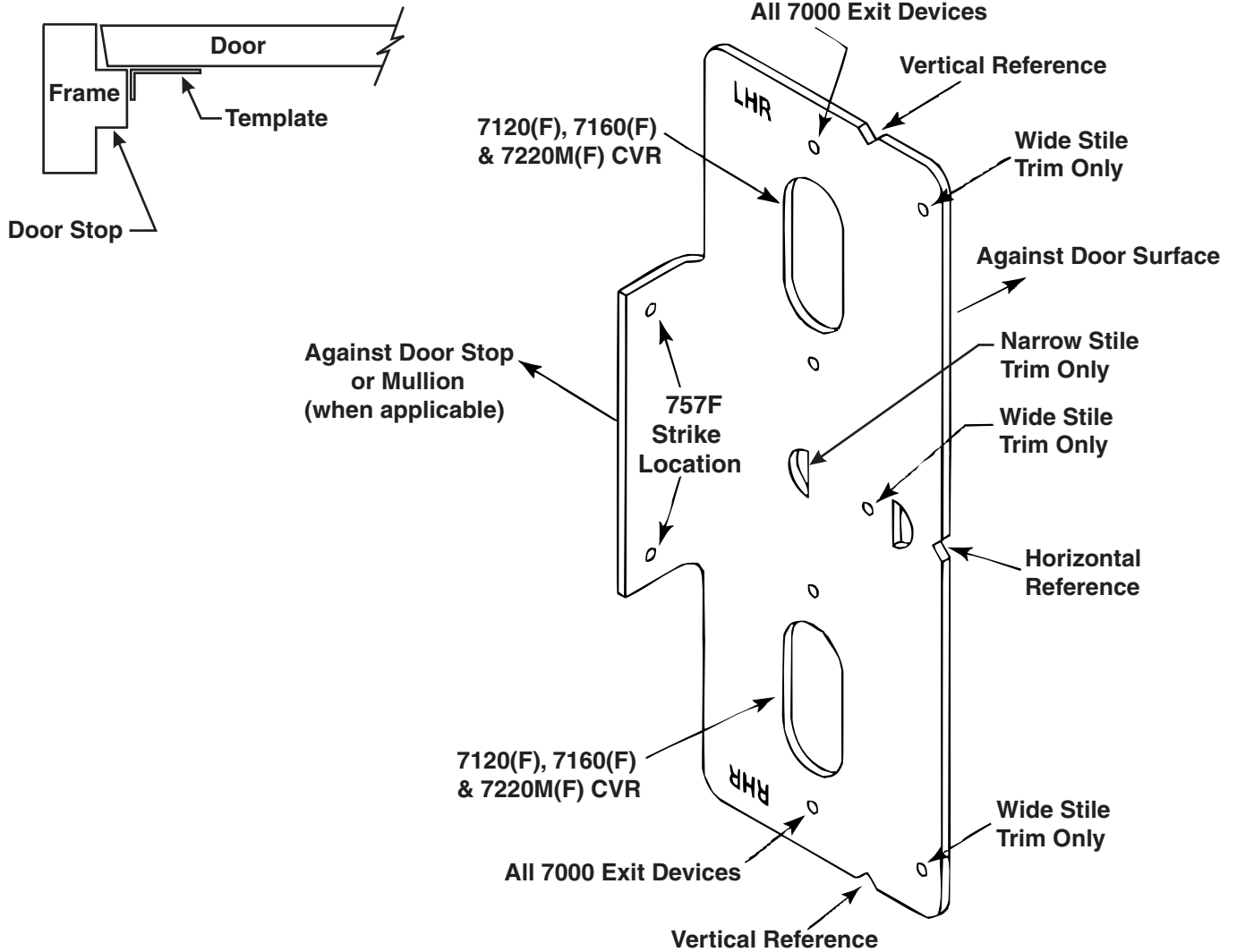
Instructions:

1. Not for 7210M(F) Series.

2. Unreinforced frames (total wall thickness less than 1/8 (3.2) require) that 10-24 blind rivet nuts (by others) be used to bolt strike.

3. Dimensions given in inches (mm).

4. **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.

ASSA ABLOY
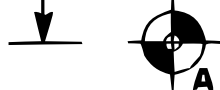
This page left blank intentionally.

ASSA ABLOY

Plastic Installation Template

For use in conjunction with instruction sheets packed with exit device.
Holes and slots are identified below by exit device series and trim. Prep door and frame for only those features required for the exit device being installed.

Door

Frame

Template

Door Stop

All 7000 Exit Devices

Vertical Reference

LHR

7120(F), 7160(F) & 7220M(F) CVR

Wide Stile Trim Only

Against Door Surface

Against Door Stop or Mullion (when applicable)

757F Strike Location

Narrow Stile Trim Only

Wide Stile Trim Only

Horizontal Reference

7120(F), 7160(F) & 7220M(F) CVR

RHR

All 7000 Exit Devices

Wide Stile Trim Only

Vertical Reference

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.

80-9472-0010-000 (04-13)

An ASSA ABLOY Group brand

ASSA ABLOY