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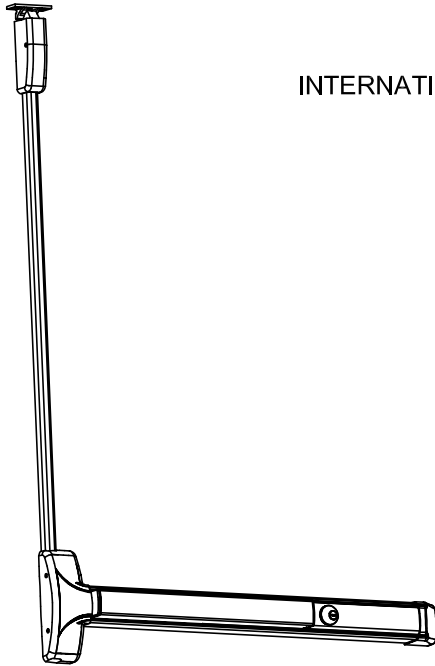
**INSTALLATION INSTRUCTIONS FOR
ADVANTEx® SURFACE VERTICAL ROD 20/21/50/51 SERIES, F20/F21/F50/F51 SERIES
and "W" models (Weatherized)**

ADVANTEx® Surface Vertical Rod

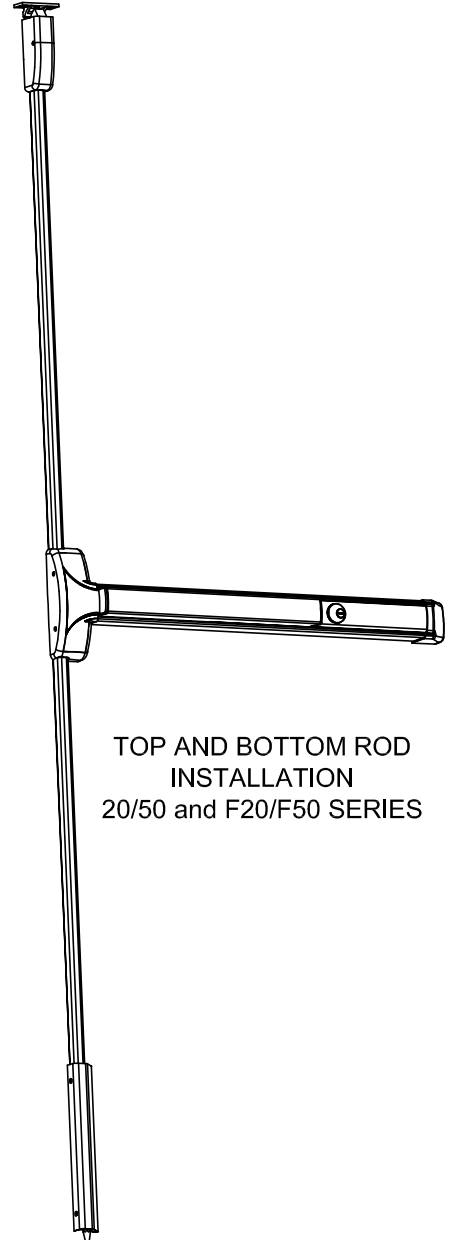
Dwg #: 101559 (SS)
104690 (AL)

U.S. PATENT NUMBERS:
6009732
6205825B1
6532777B2

INTERNATIONAL PATENT NUMBER:
PCT6009732

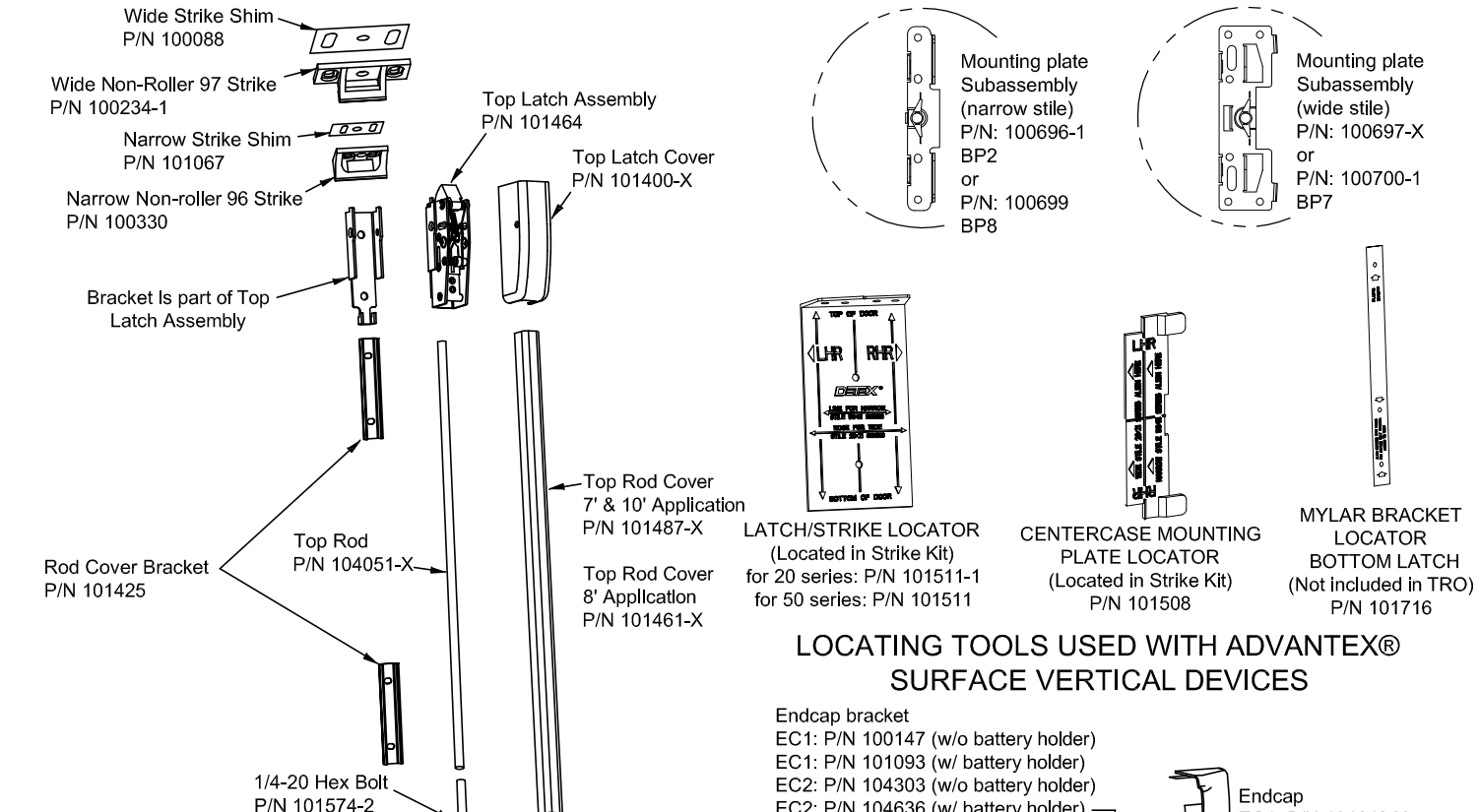


TRO - TOP ROD ONLY INSTALLATION
21/51 and F21/F51 SERIES

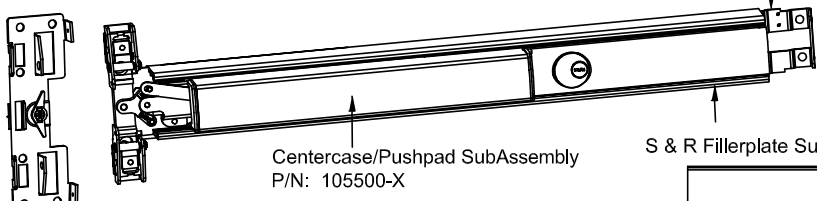
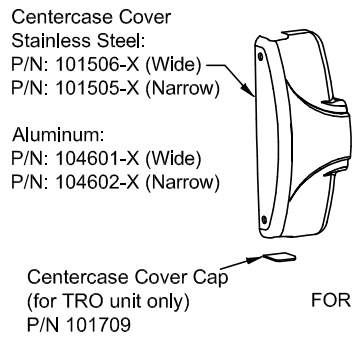
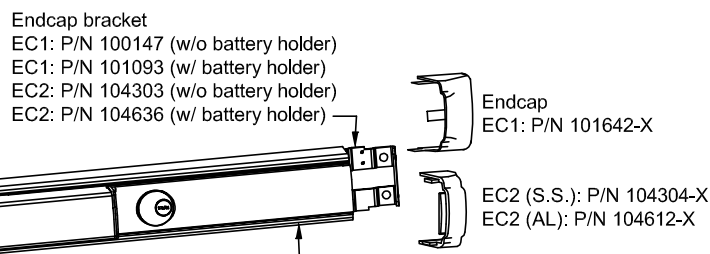


TOP AND BOTTOM ROD
INSTALLATION
20/50 and F20/F50 SERIES

Owner's Copy

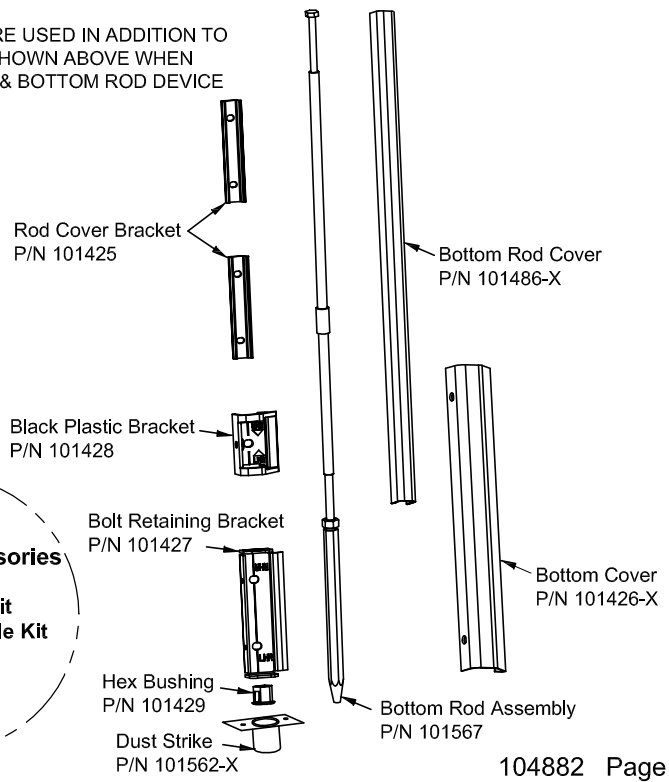


LOCATING TOOLS USED WITH ADVANTEX® SURFACE VERTICAL DEVICES



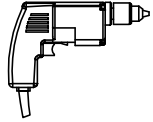
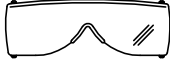



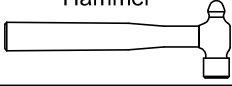

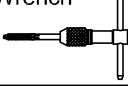




TRO - TOP ROD ONLY INSTALLATION
SOME FIRE RATED DOORS MAY USE TRO.
REFER TO DOOR MANUFACTURER.
FOR THESE APPLICATIONS, POPPER INSTALLATION REQUIRED
See Fig. 27

PARTS BELOW ARE USED IN ADDITION TO TRO PARTS SHOWN ABOVE WHEN INSTALLING TOP & BOTTOM ROD DEVICE



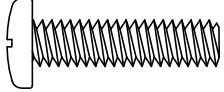


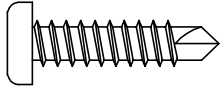
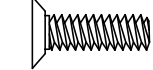


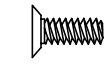
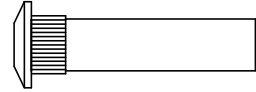

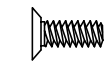
See **Optional Accessories** For:
- Glass Bead Kit
- Armored Cable Kit
- Sex Nuts
- Tamper Kit
- Key Stop Kit

*** Note: Parts listed above will vary according to product configuration. Mortise cylinder available as an option. Standard Yale type cam required. See Mortise cylinder installation page.**

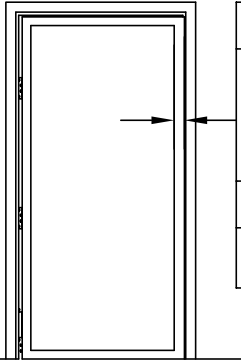
Tools Required				
Power Drill 	Safety Glasses 	Tape Measure 	Pencil 	Center Punch 
Hammer 	Screw Drivers - Phillips, Small Flat 	Tap Wrench 	Pliers 	Level 
Chopsaw preferred	Hex Wrench - 5/32" 		Masonry Bits - 1", 5/16" 3/16" 	

S.S. Device hardware kit: p/n 101564-X
 Aluminum Device hardware kit: p/n 105724-X
 97 Strike kit: p/n 100855-3
 96 Strike kit: p/n 100855-4
 (Look for letter designation throughout instruction when screws are called for)

Fastener Table

	screw style & size	description	used on
(A)	  lockwasher used with screws A	1/4-20 x 1" PPHMS	Strike, Mounting plate & Endcap mounting bracket (metal / aluminum doors)
(B)		1/4-20 x 1/4" PPHMS	Centercase to backplate mounting holes
(C)		#14 x 1" PPH self-drilling	Strike, Mounting plate & Endcap mounting bracket (wood doors) (alternate for metal / aluminum doors)
(D)		10-24 x 5/8" PFHUMS	99 strike center mount hole (metal door)
(E)		#10 x 1" self-cutting PFHU	99 strike center mount hole (wood door)
(G)	 (multiple finishes included)	10-32 x 5/16" PFHUMS	Endcap to endcap bracket
(H)	 (multiple finishes included)	6-32 x 3/8" PFHUMS	Centercase cover to backplate
(J)	 (optional)	#1/4-20 Sexnut	Recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors used on mounting plate and endcap mounting holes
(L)		#10 x 1" PPH	Used on Rod Cover Brackets
(M)	 (multiple finishes included)	8-32 x 5/16" PFHUMS	Top & Bottom latch covers

!!!CHECK BEFORE STARTING!!!

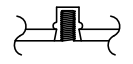
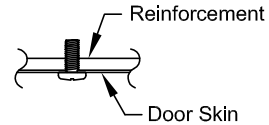


Wide Stile (Surface Strike)
Minimum door stile 4-1/2" (114 mm). Template drawings provide door and frame structural and dimensional specifications for door and frame preparation.
Narrow Stile
Minimum door stile 2" (51mm)

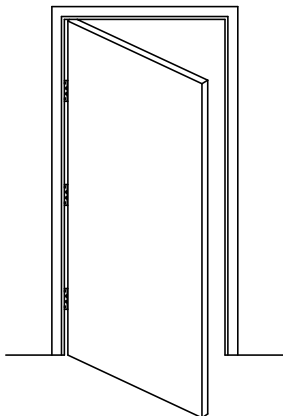
Doors and frames with walls having a structural thickness (metal skin plus reinforcement, or solid wood) to engage less than (3) full screw threads, are considered unreinforced for hardware.

Unreinforced Doors: Use Sex Nuts and Bolts
Unreinforced Frames: Use Blind Rivet Nuts (see sketch)
Fasteners for unreinforced openings are not supplied by Detex.

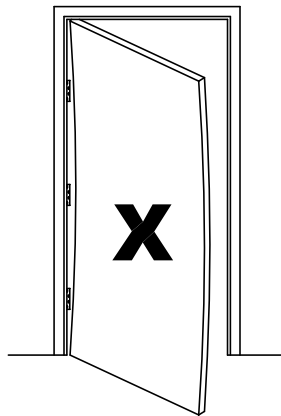
Reinforced door or frame engages at least (3) screw threads.



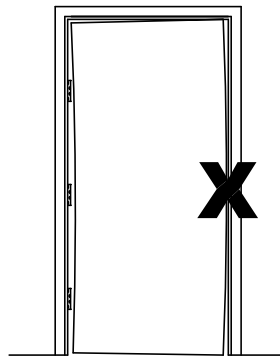
Blind Rivet Nut



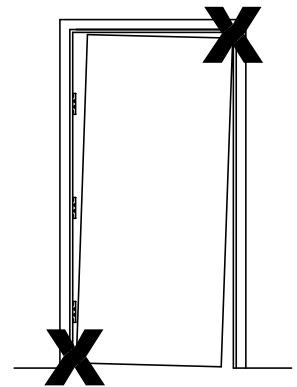
Door Must Swing Freely



Door Must Not be Warped



Door Must Not Bind

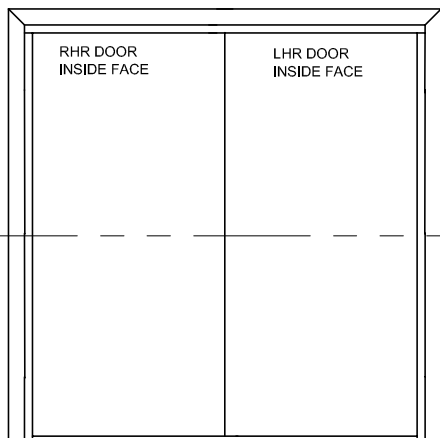
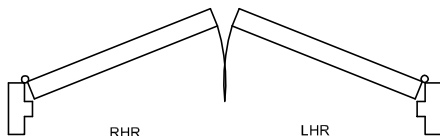


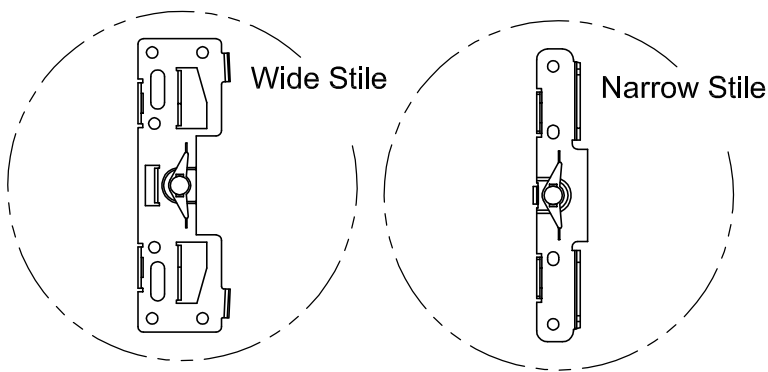
Door Must Not Sag

NOTE: 750mm MAXIMUM DOOR WIDTH OPENING FOR EUROPE FOR 36" DEVICE
1000mm MAXIMUM DOOR WIDTH OPENING FOR EUROPE FOR 48" DEVICE
THE SAFETY FEATURES OF THIS PRODUCT ARE ESSENTIAL TO IT'S COMPLIANCE WITH EN 1125.
NO MODIFICATION OF ANY KIND, OTHER THAN THOSE DESCRIBED IN THESE INSTRUCTIONS ARE PERMITTED.

WHEN PLACING EXIT DEVICES ON EXISTING DOORS, DETEX OFFERS SVR REINFORCEMENT KIT #101063 TO STRENGTHEN THE TOP & BOTTOM BOLT INSTALLATION

NOTE: LOCAL CODES MAY REQUIRE THROUGH BOLTING. SEX NUTS ARE **NOT** INCLUDED WITH THIS DEVICE. SEX NUTS CAN BE PURCHASED SEPARATELY. Detex provides optional kits for Advantex, see Appendix C.





MOUNTING PLATES SHOWN ABOVE FOR USE WITH LEVER TRIM
(supplied with Trim)

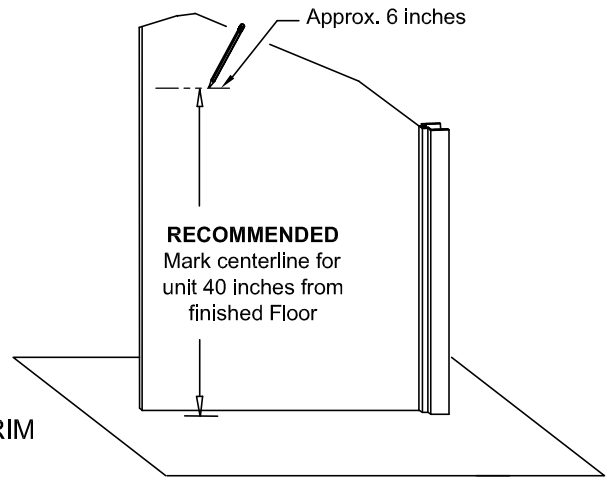
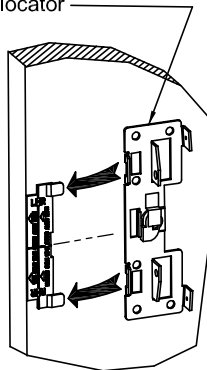


FIG. 1

RETROFIT NOTE: DO NOT RE-USE OLD MOUNTING PLATE!

Slide centercase mounting
plate in place on centercase
locator



NOTE:
Centercase mounting plate
located in filler/trim carton

FIG. 2

Mark 4 (A) holes for mounting
screws (2 top & 2 bottom)

Align **EDGE**
of locator
with edge
of door

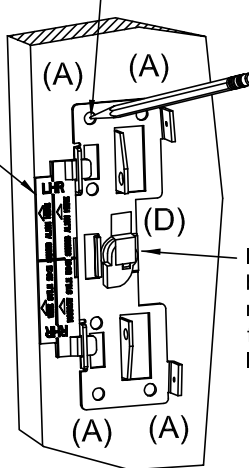


FIG. 3A
WIDE STILE

Mark 2 (A) holes for mounting
screws (1 top & 1 bottom)

Align **INSIDE
CORNER**
of
locator with
edge of door

If trim is used, peel
back label from cam,
mark (D) center hole
for tailpiece, replace
label

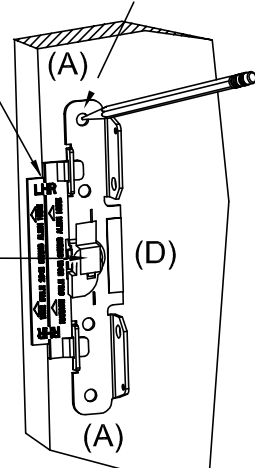


FIG. 3B
NARROW STILE

NOTES:

Plastic locators are provided with an extra 1/2" flap to allow better centering of the device on the stile or can be used when installing 1/2" Astragal to give equal backset from the door edge.

IF OUTSIDE TRIM IS USED, REFER TO OUTSIDE TRIM INSTRUCTIONS NOW.

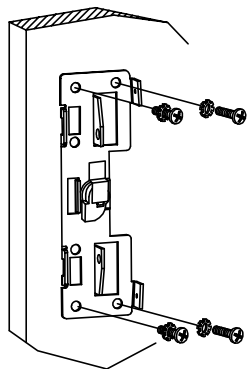


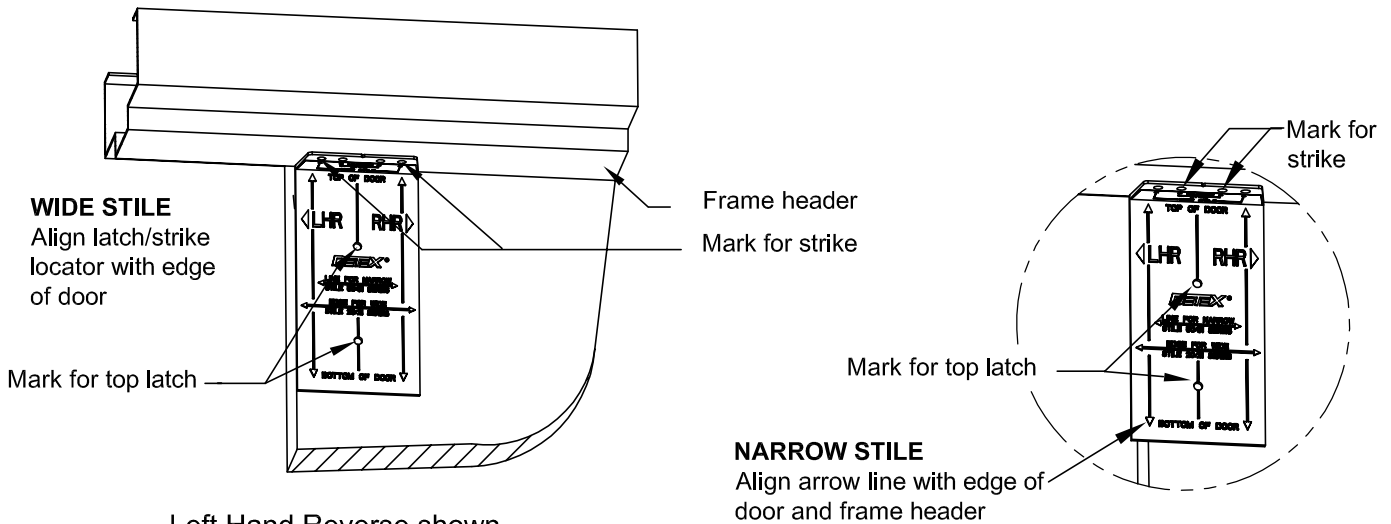
FIG. 3C

Mounting plate holes (4) & Strike holes (2)

For (A) screws drill #7 holes.

For (C) screws no pilot holes needed.

For (J) drill 3/8" holes.



Left Hand Reverse shown

FIG. 4

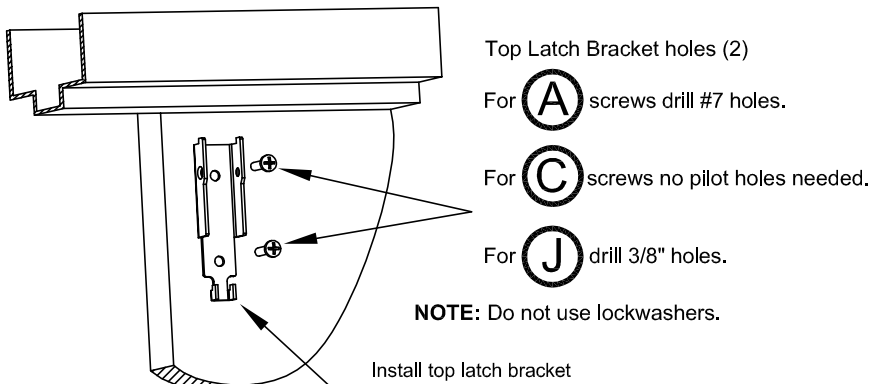


FIG. 5A

NOTE: Top latch bracket, latch assembly and cover are shipped as a unit. Disassemble to obtain the respective parts for installation

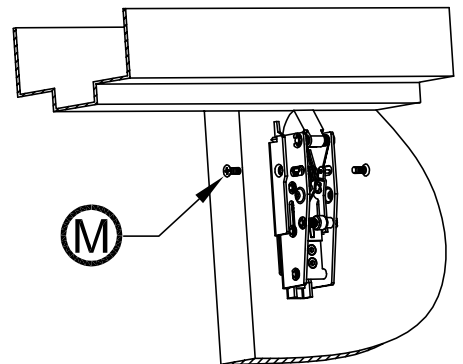


FIG. 5B

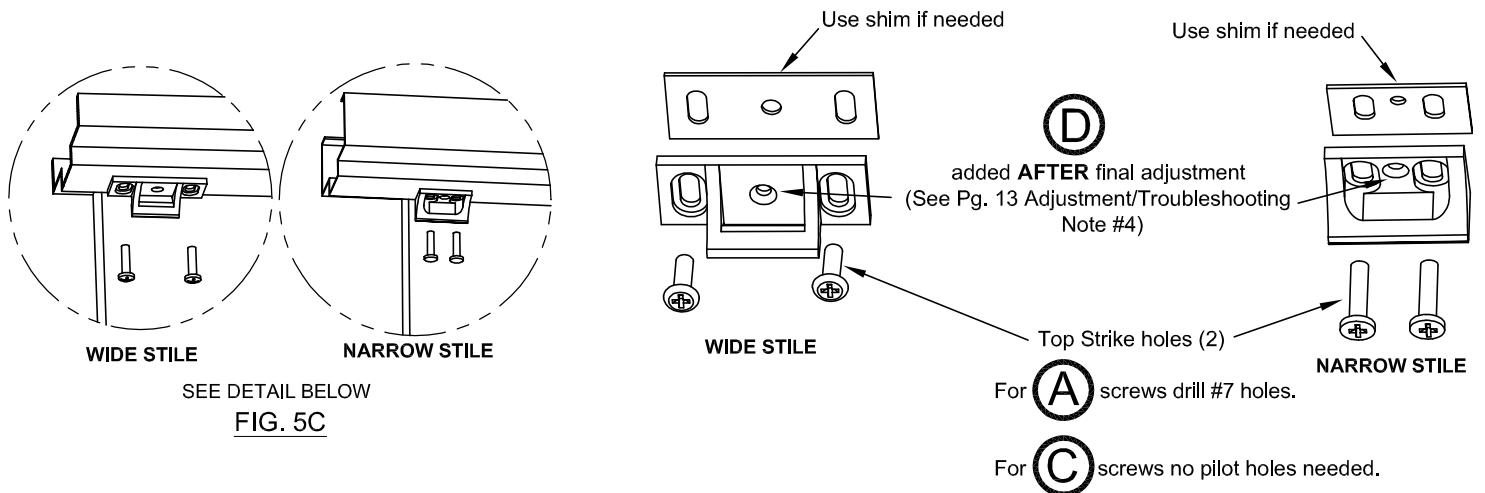


FIG. 5C
DETAIL

NOTE: IF TRO DEVICE, SKIP THIS PAGE AND CONTINUE WITH INSTALLATION

WIDE STILE
Locator placement

NARROW STILE
Locator placement

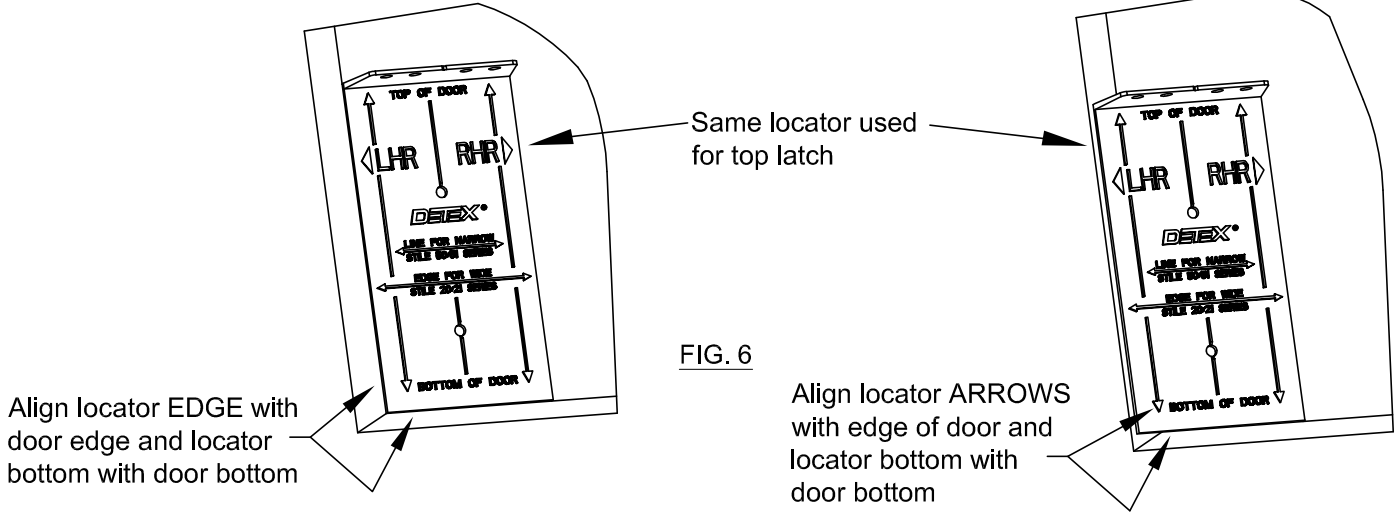


FIG. 6

1. Align two bottom holes of mylar bracket locator to previously marked hole locations.
2. Adhere mylar bracket locator to door (locator may remain permanently in place).
3. Drill through top hole of mylar bracket locator.
4. Drill holes for bottom bolt bracket.

For **(A)** screws drill #7 holes.

For **(C)** screws no pilot holes needed.

For **(J)** drill 3/8" holes.

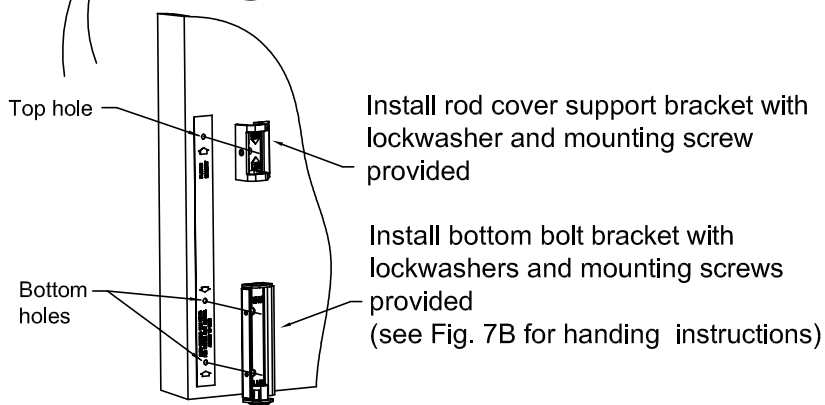


FIG. 7A

NOTE: Handing of bottom bolt bracket is reversible by removing hex bushing and placing in opposite end

Push flanges in, then push hex bushing out to remove

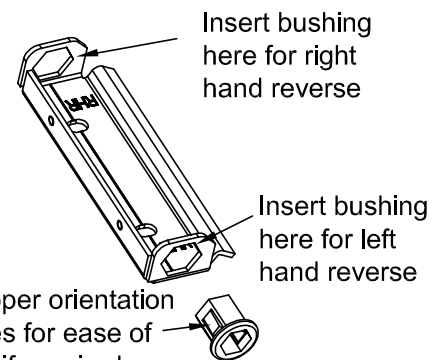
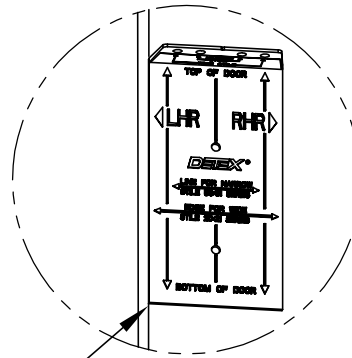
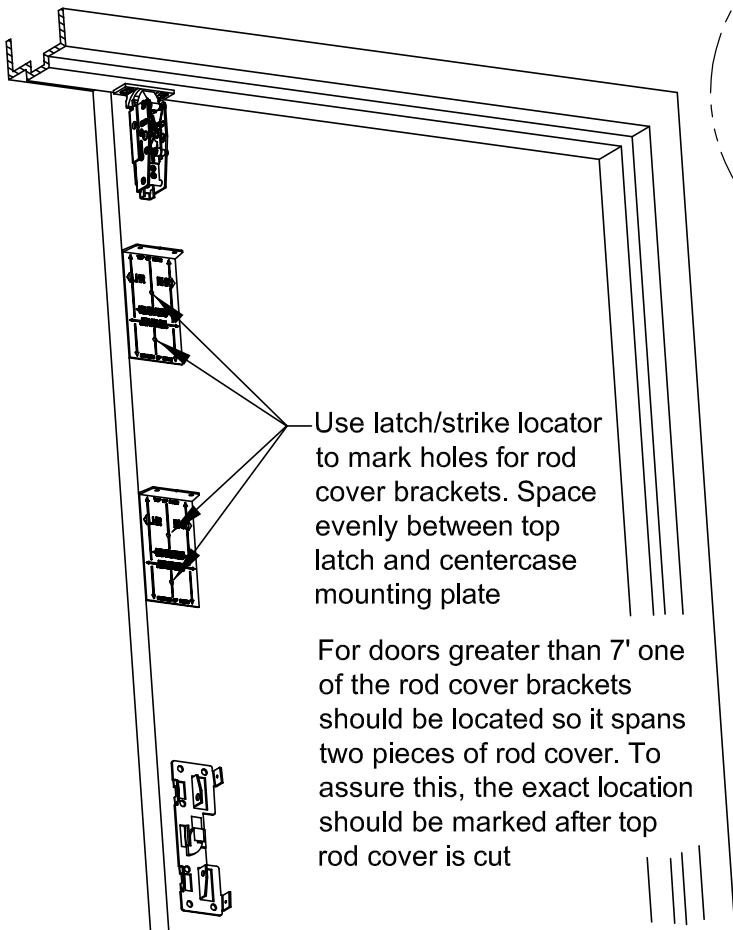
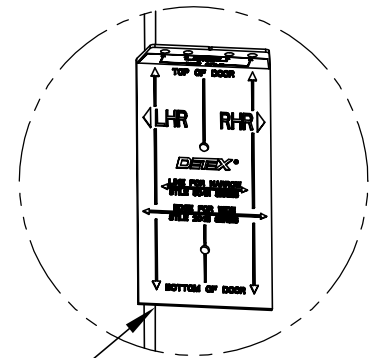


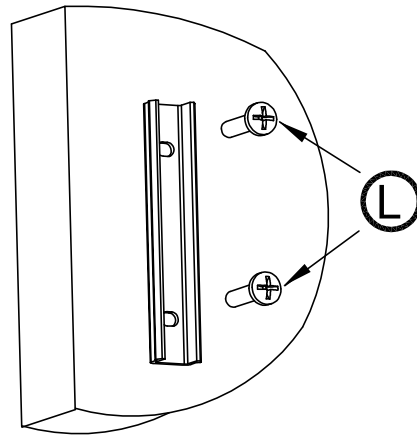
FIG. 7B



WIDE STILE
locator placement.
Edge of locator in line with door edge.



NARROW STILE
locator placement.
Arrows in line with door edge.



Disregard step shown below if TRO device is being installed

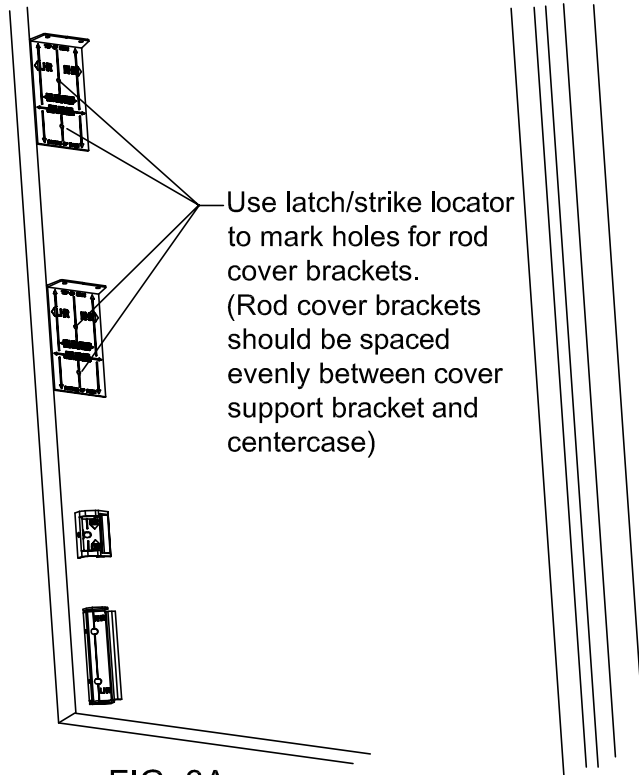


FIG. 8A

FIG. 8B
INSTALL ROD COVER BRACKET

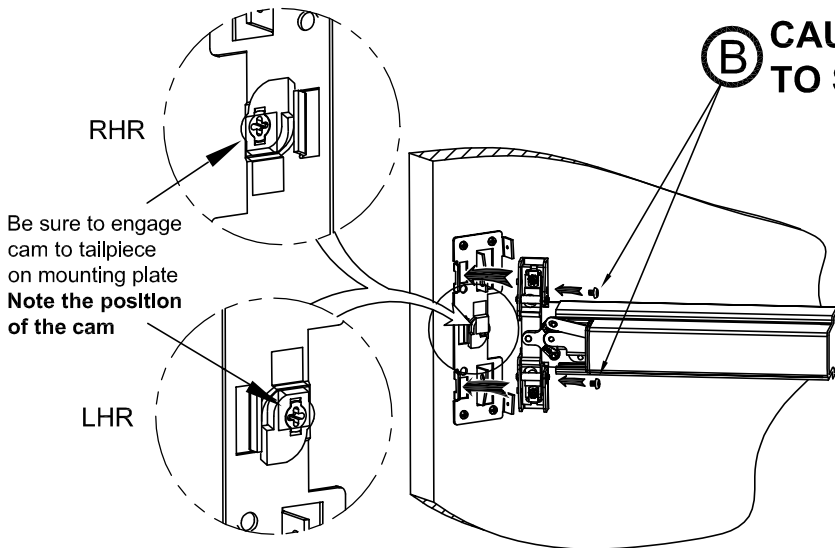


FIG. 9A

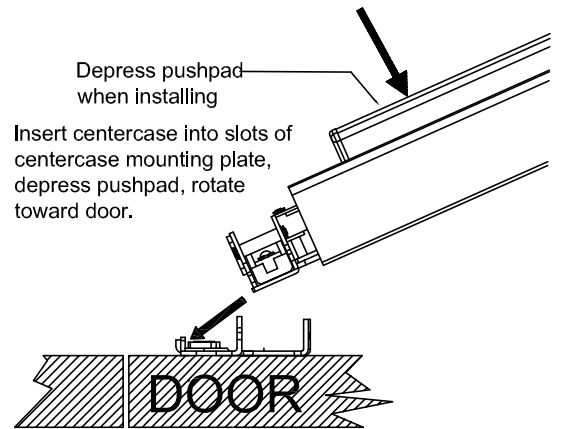
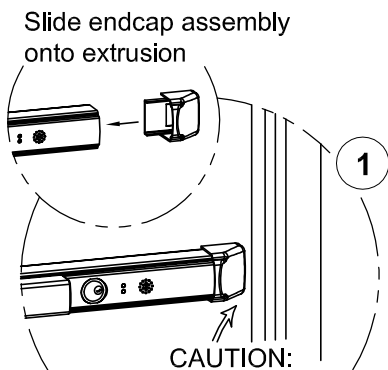


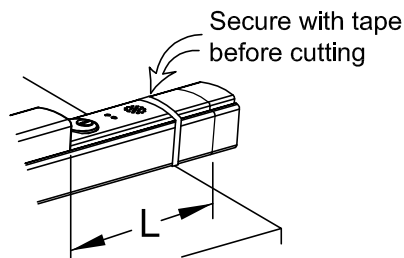
FIG. 9B

CHECKING FOR DEVICE CLEARANCE (Cut-Off procedure if required)



CAUTION:
Check for device and door frame clearance.
If no cut-off needed, proceed to the next page.

2 Cut fillerplate and extrusion STRAIGHT & SQUARE to desired length and deburr



Minimum Fillerplate Length	
Type	Length (L)
LD	2-1/2"
HD/CD	3"

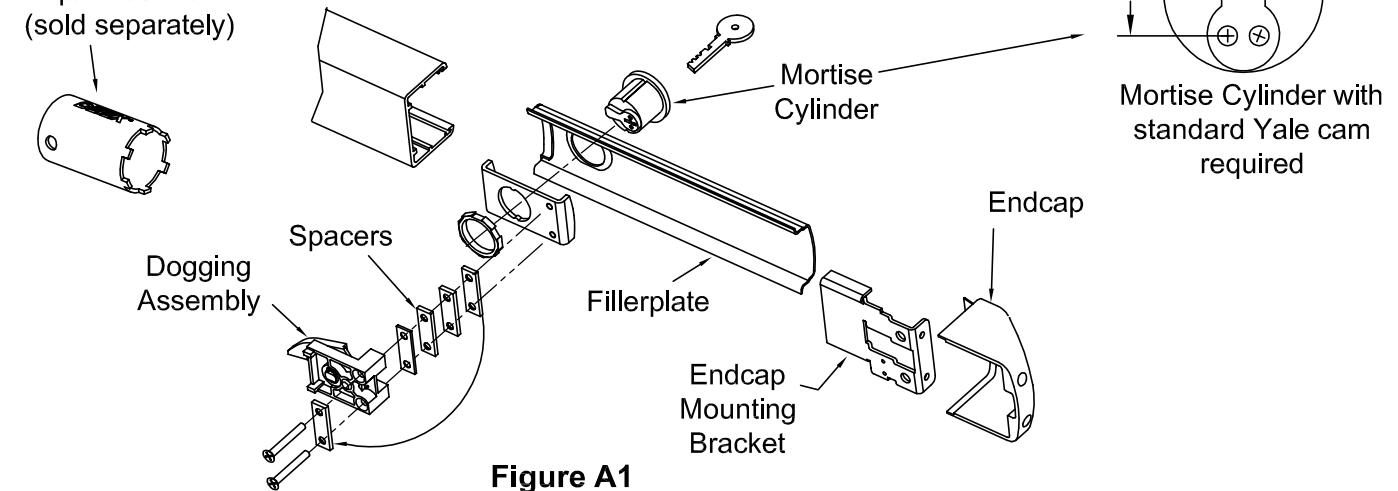
For aluminum Advantex finish cutdown applications:

After cutting, the baseplate extrusion can be reversed to place the cut end inside the head cover. To do so, loosen the setscrew inside the aluminum baseplate extrusion and slide extrusion out, reverse, & slide back in. Tighten setscrew.

MORTISE CYLINDER INSTALLATION

CD (Cylinder Dogging) Cylinder Installation

Cylinder nut socket
p/n 103779
(sold separately)



Follow steps "a" through "g" for CD installations

- Remove endcap and endcap mounting bracket.
- Remove fillerplate.
- Remove and discard shipping insert and nut. Loosen (2) screws from dogging assembly.
- Install mortise cylinder (sold separately) with large hex nut provided.
- Trial fit dogging assembly. If cylinder is too short, remove spacers as necessary and reattach them under the (2) screw heads (See Figure A1). Fasten the (2) screws to the rest of the assembly.

NOTE: The key should easily turn in both directions.

- Rotate key counterclockwise
- Assembly complete. Continue with Panic Hardware instruction.

Level pushpad assembly

Mark and drill holes for endcap bracket.

For **(A)** screws drill #7 holes.

For **(C)** screws no pilot holes needed.

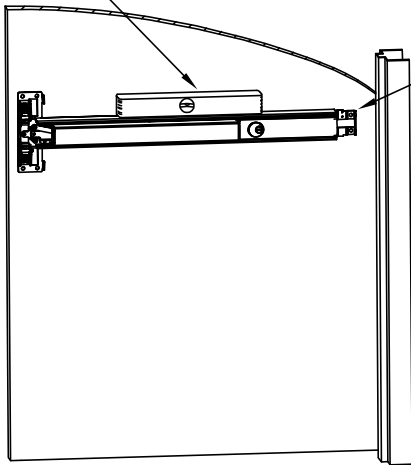


FIG. 11A

Attach endcap to bracket

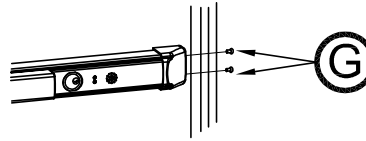


FIG. 11B

NOTE: LINK SHOULD ALWAYS BE IN TOP POSITION

Right Hand Reverse (RHR)

Left Hand Reverse (LHR)

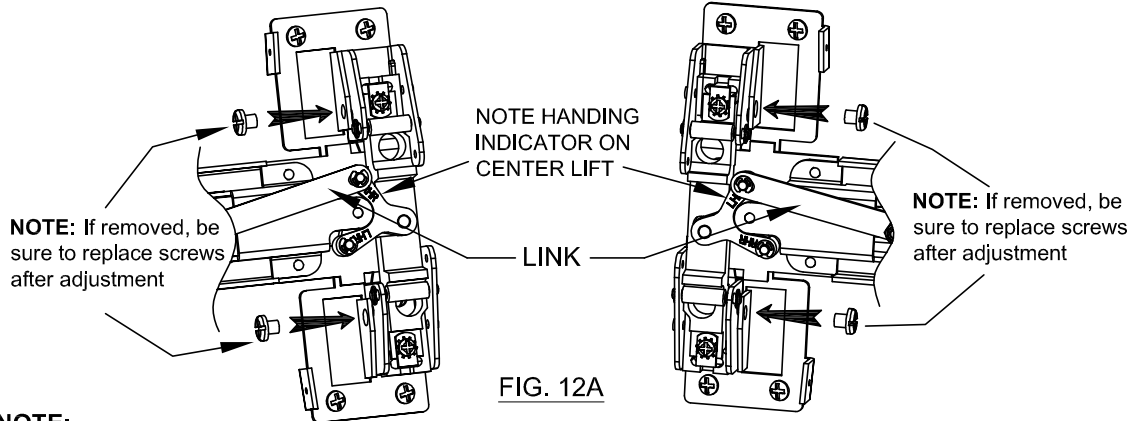


FIG. 12A

NOTE:

If link is not in uppermost position on the centerlift, carefully remove "E" clips and reposition link on top pin of the centerlift and replace "E" clips. (An additional "E" clip is provided on opposite link pin.)

Verify carriage moves up and down smoothly when pushpad is depressed and released.

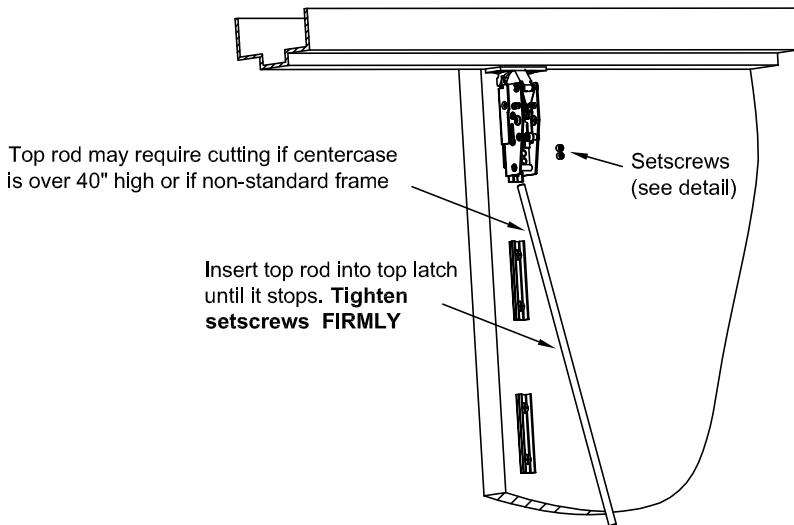


FIG. 12B

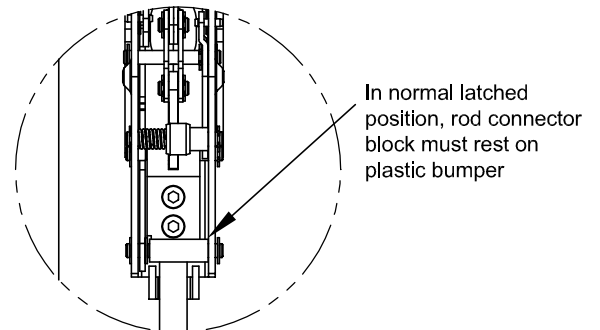


FIG. 12B
DETAIL

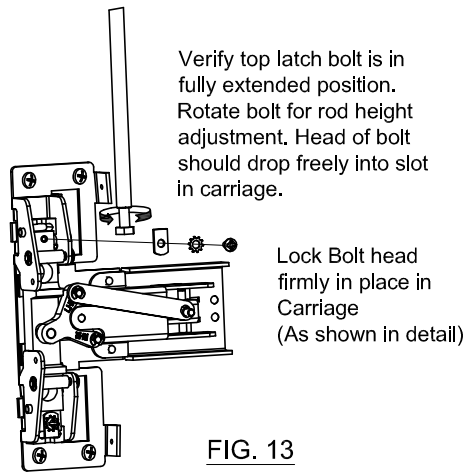


FIG. 13

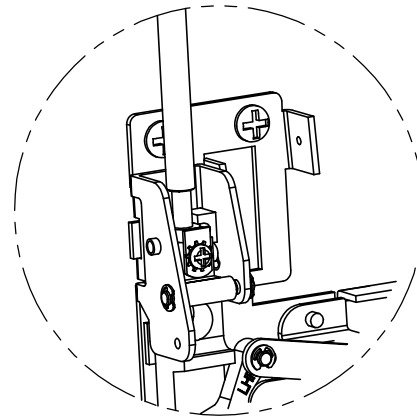


FIG. 13 - Detail

TOP ROD ONLY (TRO)
ADJUSTMENT / TROUBLESHOOTING

TOP LATCH TESTING AND ADJUSTMENT

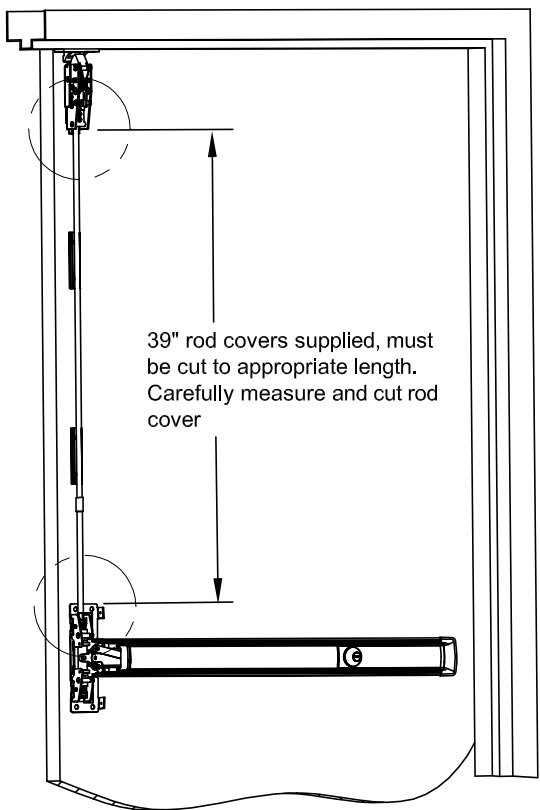
1. Close the door. The holdback lever should engage the backside of the strike, allowing the latchbolt to extend. The device should latch securely and latchbolt should fully project into the strike cavity.
2. Press the pushpad. The latchbolt should retract fully and smoothly from the strike as the door opens.
3. Release the pushpad. The latchbolt should remain retracted until the door is closed.
4. Once the latchbolt operation has been evaluated, the strike should be checked and adjusted to allow the door to be held snug to the frame but allow free movement of the latchbolt during normal operation. When the appropriate position has been set, a third hole should be marked, drilled and tapped for a #10 screw. Lock the strike in position with this third screw. (See Fig. 5C)

NOTE: For centerline heights significantly higher or lower than the specified 40", it may be necessary to use shorter or longer adjustment hexbolts in the rods to effect appropriate adjustment. Additional adjustment screw lengths have been packaged in the hardware kit to provide heights up to 41-1/2" and down to 36-1/2". For some door heights it may be necessary to cut the rod. Be sure to cut the **un-threaded** end.

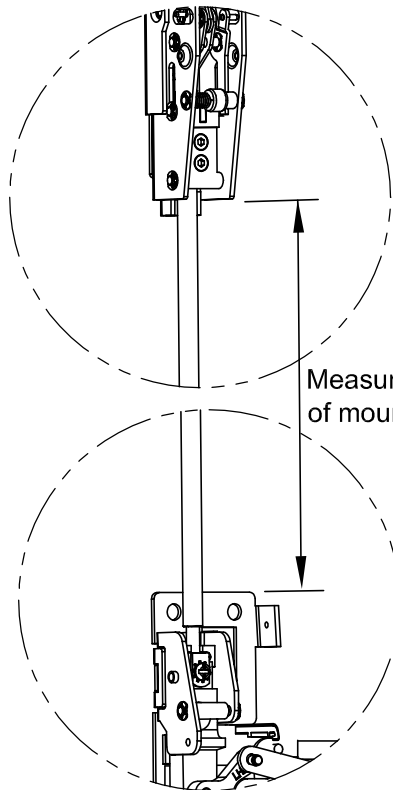
TROUBLESHOOTING

1. **Latchbolt does not completely relatch when closing the door**
Loosen the strike screws and adjust the strike to allow the latchbolt to completely extend into the strike. Tighten the screws and add the third center screw to lock the strike in place.
2. **Latchbolt fails to retract when pushpad is pushed**
Check centercase assembly and verify that the link is attached to the **TOP** post of the centerlift assembly (see Fig. 12A).
3. **Latchbolt is slow or does not completely extend when door closes.**
Check position of rod dampener and move it below rod cover bracket.
Check rod adjustment (Fig 13).
Check centercase, verify that the 1/4-20 x 1/4" screws have been installed (See Fig. 9A).

TOP ROD COVER INSTALLATION



39" rod covers supplied, must be cut to appropriate length. Carefully measure and cut rod cover



Measure from edge of top latch to edge of mounting plate for rod cover length

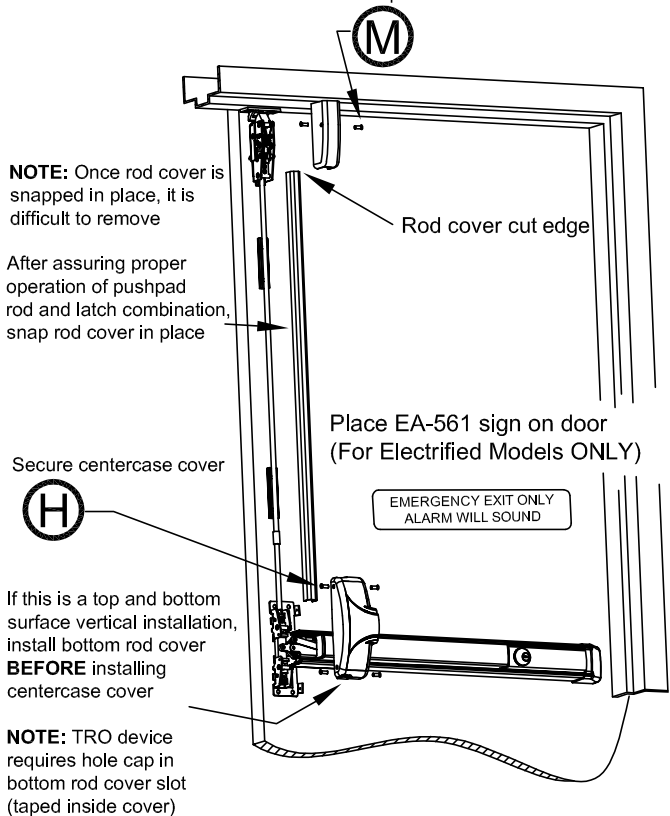
FIG. 14

TOP COVER INSTALLATION FOR DOORS OVER 10 FT TALL

Secure top latch cover

TOP COVER INSTALLATION FOR 7 FT & 8 FT DOORS

Secure top latch cover



NOTE: Once rod cover is snapped in place, it is difficult to remove

After assuring proper operation of pushpad rod and latch combination, snap rod cover in place

Rod cover cut edge

Place EA-561 sign on door (For Electrified Models ONLY)

EMERGENCY EXIT ONLY
ALARM WILL SOUND

Secure centercase cover

If this is a top and bottom surface vertical installation, install bottom rod cover **BEFORE** installing centercase cover

NOTE: TRO device requires hole cap in bottom rod cover slot (taped inside cover)

FIG. 15

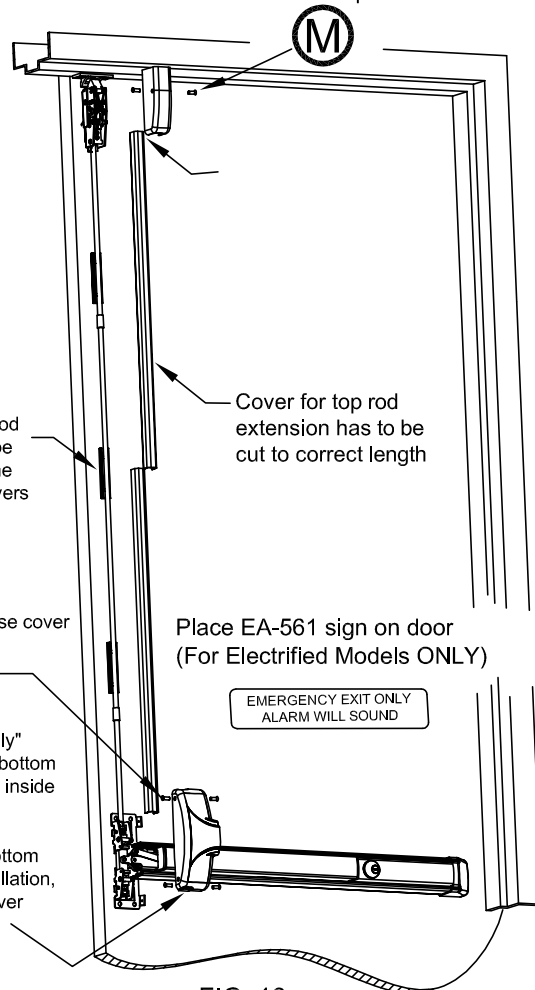
Screws available in brushed chrome, oil rubbed bronze or brushed brass

For doors over 7 ft. a rod cover bracket should be mounted so it spans the gap where two rod covers meet

Secure centercase cover

NOTE: "Top Rod Only" requires hole cap in bottom rod cover slot (taped inside cover)

If this is a top and bottom surface vertical installation, install bottom rod cover **BEFORE** installing centercase cover



Cover for top rod extension has to be cut to correct length

Place EA-561 sign on door (For Electrified Models ONLY)

EMERGENCY EXIT ONLY
ALARM WILL SOUND

FIG. 16

NOTE: IF TRO DEVICE, SKIP THIS PAGE AND CONTINUE TO EA SWITCH OPTION PAGE

INITIAL ROD ADJUSTMENT

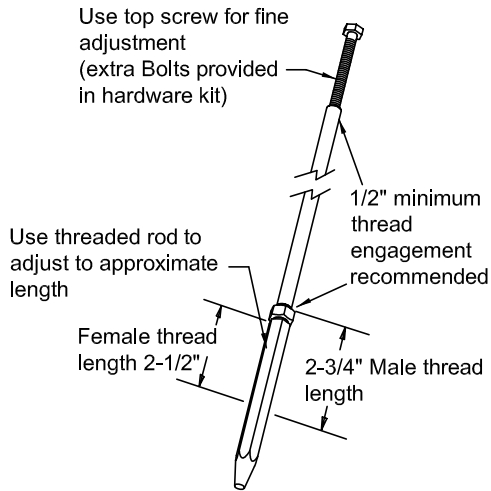


FIG. 17A

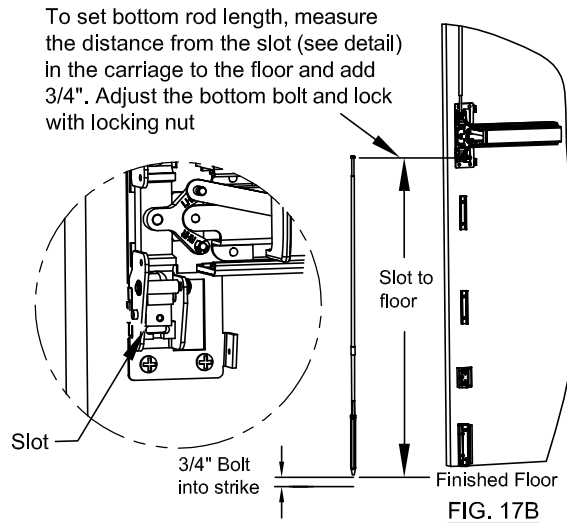


FIG. 17B

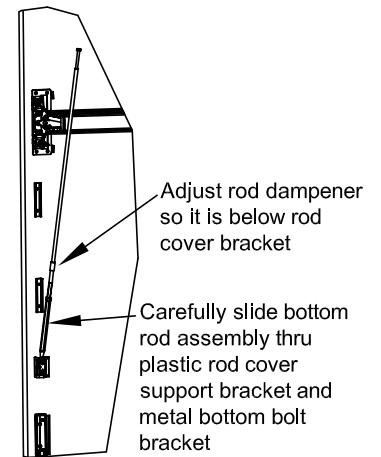


FIG. 17C

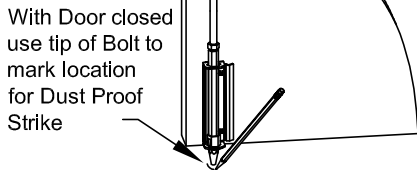


FIG. 18A

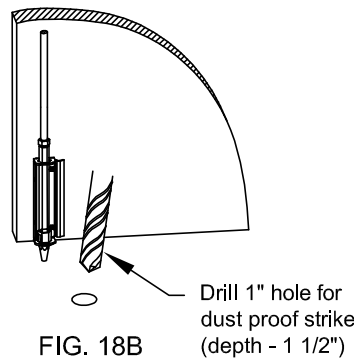


FIG. 18B

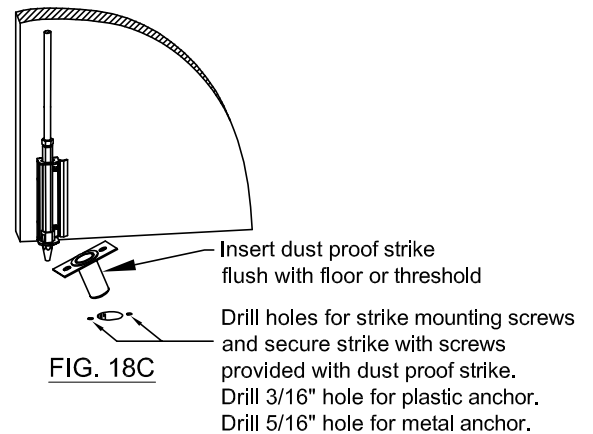


FIG. 18C

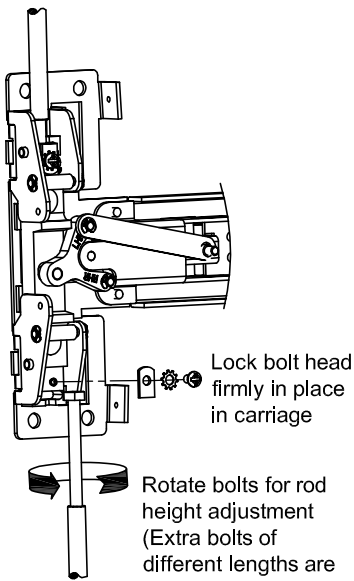


FIG. 19

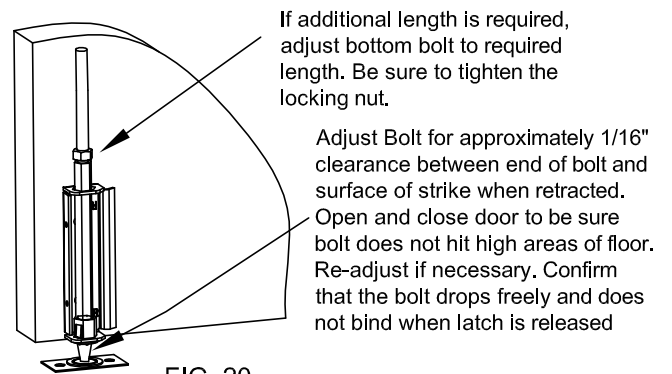


FIG. 20

BOTTOM LATCH Testing and Adjustment Testing

1. Close the door; bolt should drop into the "dust proof strike" as the door moves into the fully closed position.
2. Press the pushpad and open the door. The bottom latch bolt should retract out of the "dust proof strike" and clear the strike by 1/16" to 1/8". Vertical travel of the bolt should be 3/4".
3. Release the pushpad; bolt should remain retracted until the door is closed.

Adjustment

1. If bottom bolt drags the floor or hits edge of dust proof strike:

Loosen bolt retainer in the carriage assembly and pull bolt from carriage. Screw bolt onto bottom rod one or two turns and return it to the carriage. Test door to assure clearance and secure bolt in carriage by tightening bolt retaining plate.

2. If bolt does not completely drop when the latch is released:

Check the bottom bolt bracket and be sure the bolt is aligned in the hexagonal plastic bushing. Proper alignment will allow the bolt to freely drop through the bushing.

BOTTOM ROD COVER INSTALLATION

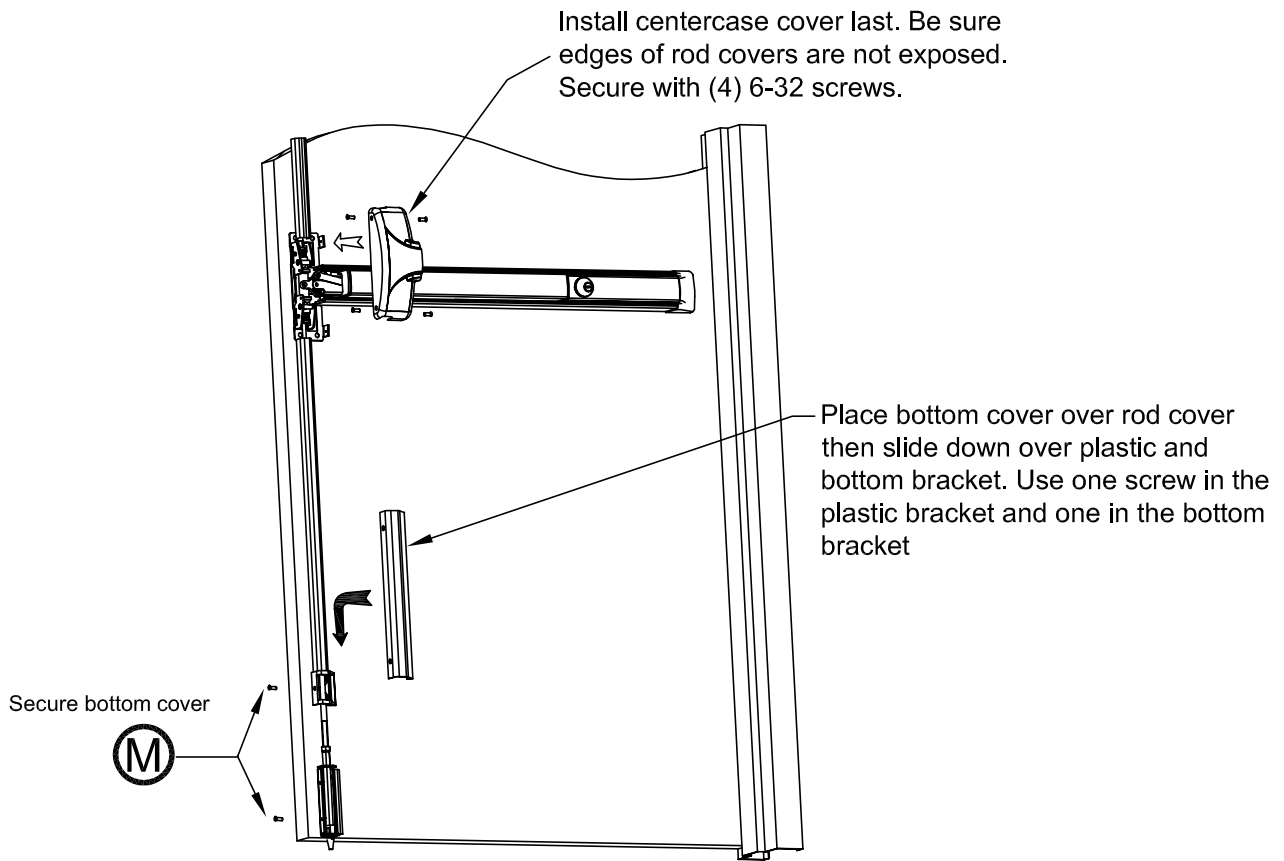
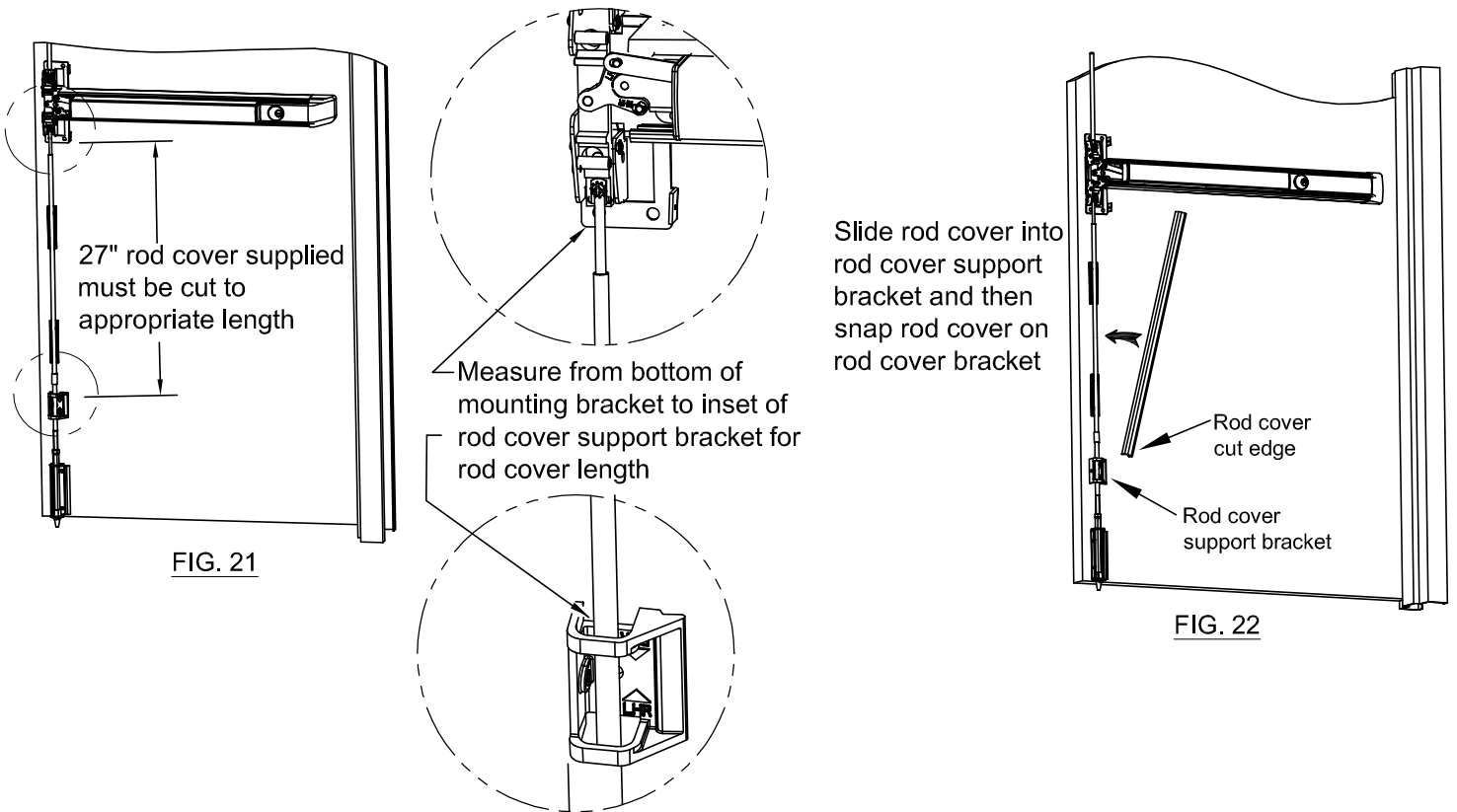


FIG. 23

FIRE RATED TOP ROD ONLY (TRO) DOORS

A door locking popper is required when a fire door utilizes a top latching mechanism only (TRO). The popper is designed to project a spring loaded bolt into the adjacent frame or door in the event of fire. Detex recommends installing the popper in the edge of the door 12" above the threshold or finished floor. **Holes for the popper and plug must be aligned with each other.**

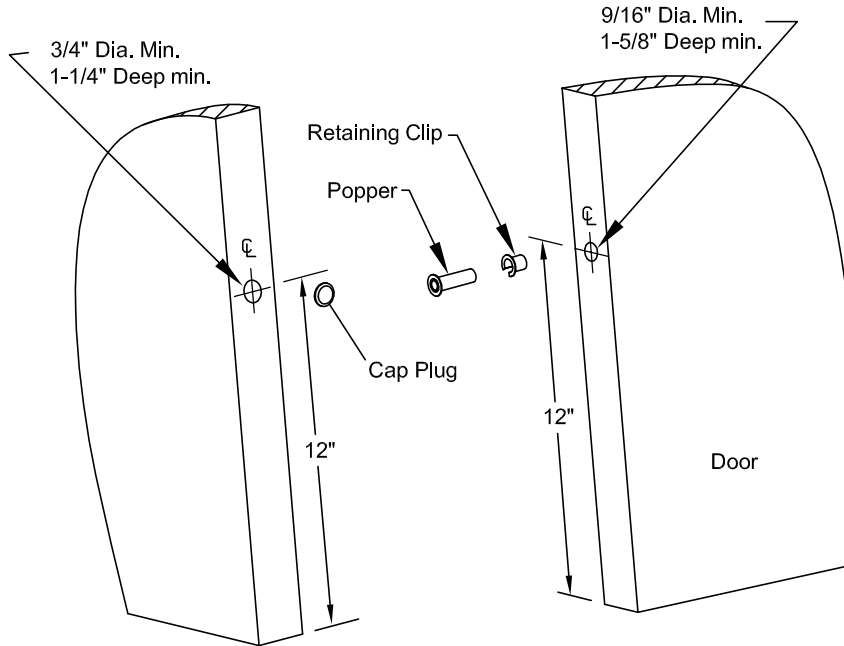


FIG. 27

NOTE: Door/Frame reinforcement is required where popper and cap plug are to be installed.

Narrow Stile Endcap Mounting Plate Fascia (For use on Glass Doors) (not used with EC2 endcap)

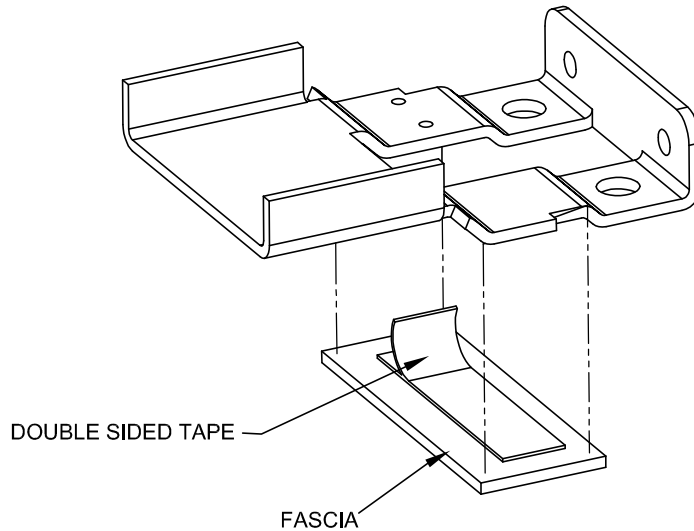


FIG. 28

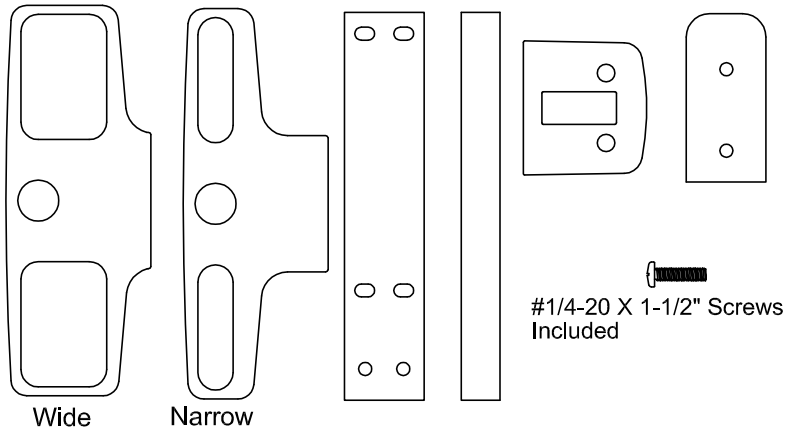
- Remove the endcap mounting bracket.
- Attach the fascia with the adhesive tape as shown in Fig. 28.
- Re-attach the endcap mounting bracket.

Optional Accessories

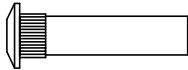
Glass Bead Kit

Catalog No:

- GB3 -20 Series, 7 foot (p/n 101519-4)
- GB4 -21 Series, 7 foot (p/n 101519-1)
- GB5 -50 Series, 7 foot (p/n 101519-14)
- GB6 -51 Series, 7 foot (p/n 101519-11)
- GB7 -20 Series, 8 foot (p/n 101519-5)
- GB8 -21 Series, 8 foot (p/n 101519-2)
- GB9 -50 Series, 8 foot (p/n 101519-9)
- GB10 -51 Series, 8 foot (p/n 101519-12)
- GB11 -20 Series, 10 foot (p/n 101519-6)
- GB12 -21 Series, 10 foot (p/n 101519-3)
- GB13 -50 Series, 10 foot (p/n 101519-16)
- GB14 -51 Series, 10 foot (p/n 101519-13)



Sex Nut



The #1/4-20 kit is available in (4) finishes:

Catalog No: SN1 Brushed Brass BHMA 606 Finish Catalog No:
 SN1 Oil Rubbed Bronze BHMA 613 Finish Catalog No: SN1
 Brushed Chrome BHMA 626 Finish Catalog No: SN1 Stainless
 Steel BHMA 630 Finish

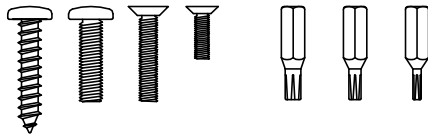
p/n: 101616-X

Tamper Kit

(Security Kit)

Catalog No: SSK2

p/n: 101233-1

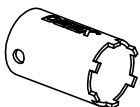


Security Screws

Security Pin TORX® Bits provided

Cylinder nut socket

p/n: 103779



The following Models in the series were evaluated by UL: Controlled Exit Panic Devices; Model 20/21 and 50/51. These devices may be suffixed with 01, 02, 03, 08, 09, or 14 followed by C, CN, D, DN, P, PN, W, or WS followed by BP1, BP2, BP7 or BP8, followed by 605, 606, 611, 612, 613, 625, 626, 628, 629, 630, 693, 695 or 711 followed by the RHR or LHR, followed by EA, which may be followed by LD or CD, followed by 605, 606, 611, 612, 613, 625, 626, 628, 629, 630, 693, 695 or 711 followed by 96 or 97, followed by 36 or 48.