

# 1400 SERIES CONCEALED VERTICAL EXIT DEVICE INSTALLATION INSTRUCTIONS



TABLE

Dimension	Backset	Nominal Door Opening Width			
		30" (762mm)	36" (914mm)	42" (1067mm)	48" (1219mm)
X	1.05" (27mm)	27.25" (692mm)	33.25" (845mm)	39.25" (997mm)	45.25" (1149mm)



- Follow the installation instructions carefully. Improper installation may damage the door, the product and may affect its functionality.
- These installation instructions may be used to install device on 1-3/4" thick doors. For thicker doors, consult your supplier.
- Refer to instructions in section "M" on page 2 for adjusting the pushpad length.

## A. DOOR, HEADER AND THRESHOLD PREPARATION

### A.1 STILE PREPARATION (Marking):

- Determine the exit device pushbar centerline height (H) and mark on the door stile.

- Mark the backset vertical centerline on door stile at the pushbar height (refer to figure 5 & 6) and the latch vertical centerline at top & bottom latch position (refer to figure 2).

- If outside cylinder is to be used, mark the cylinder horizontal and backset centerline on the door exterior stile (refer to figure 3 & 2).

- Using the provided templates H, I, J & K (if applicable), align with pencil lines and stick to aluminum frame. Make necessary cut-outs and countersunk holes where shown, as per figure 2.

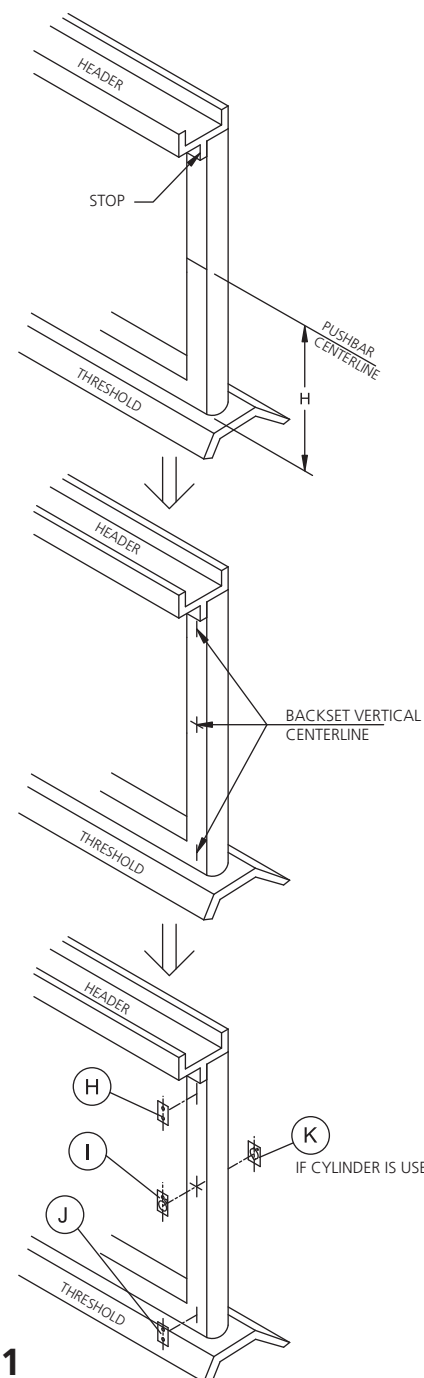
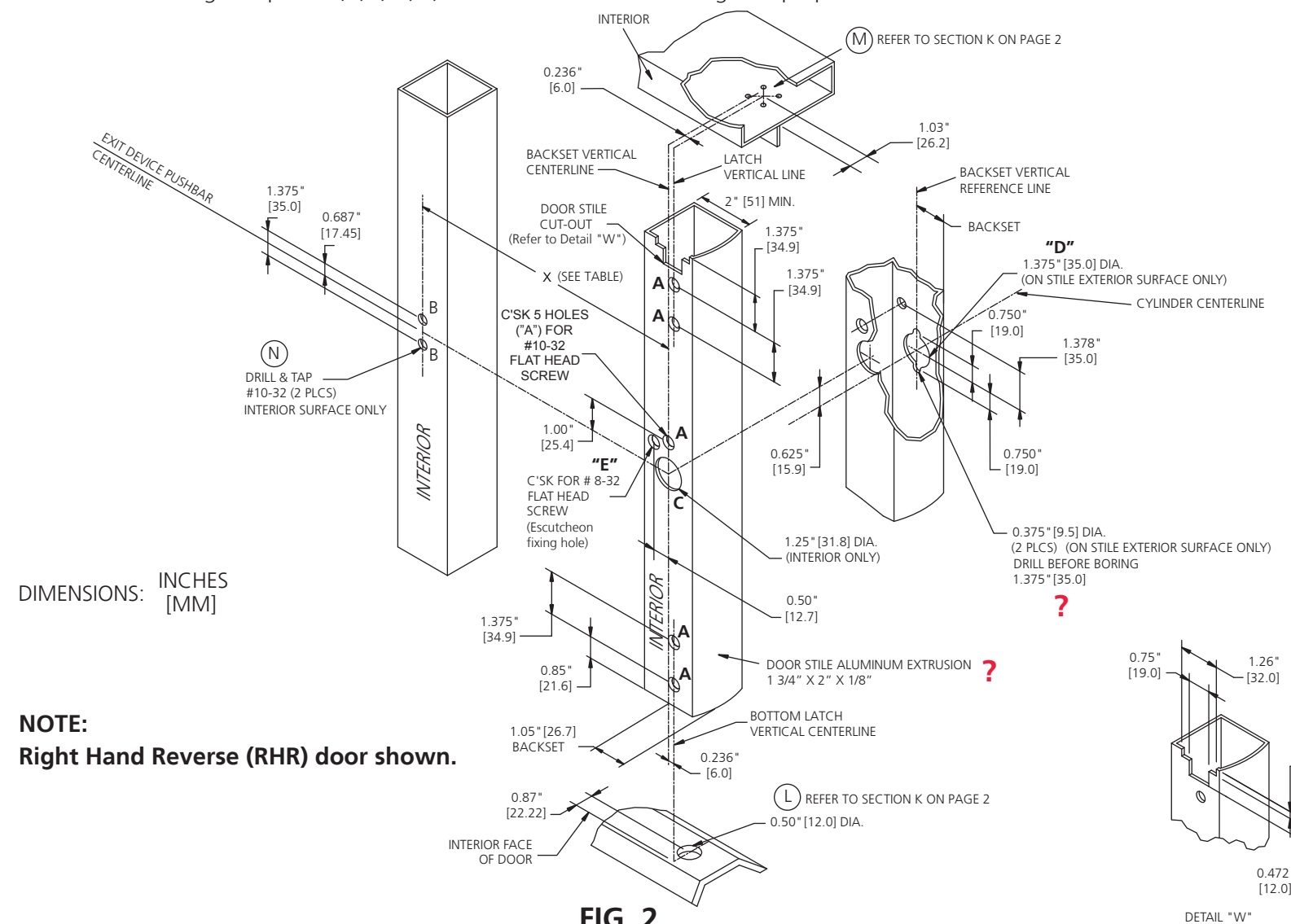


FIG. 1

### A.2 DOOR STILE, HEADER & THRESHOLD PREPARATION:

- Make cutout "C" and drill and countersink five #10-32 holes ("A") along stile (on interior surface only) as shown.
- Drill & tap two #10-32 holes ("B") for the pushbar endcap mounting bracket.
- Prepare stile for exterior cylinder mounting (if applicable) per drawing dimensions as shown. When fitting exterior escutcheon, drill hole "D" and hole "E" to suit #10-32 screw, through both sides of stile. Countersink interior only.
- Make door stile cutout per detail "W"

Refer to cutting Template H, I, J, K, L, M & N for assistance during stile preparation.



DIMENSIONS: INCHES [MM]

NOTE:  
Right Hand Reverse (RHR) door shown.

FIG. 2

## C. PUSHBAR, LATCHES, HEADER STRIKE (REFER TO PAGE 2) ? AND VERTICAL ROD INSTALLATION

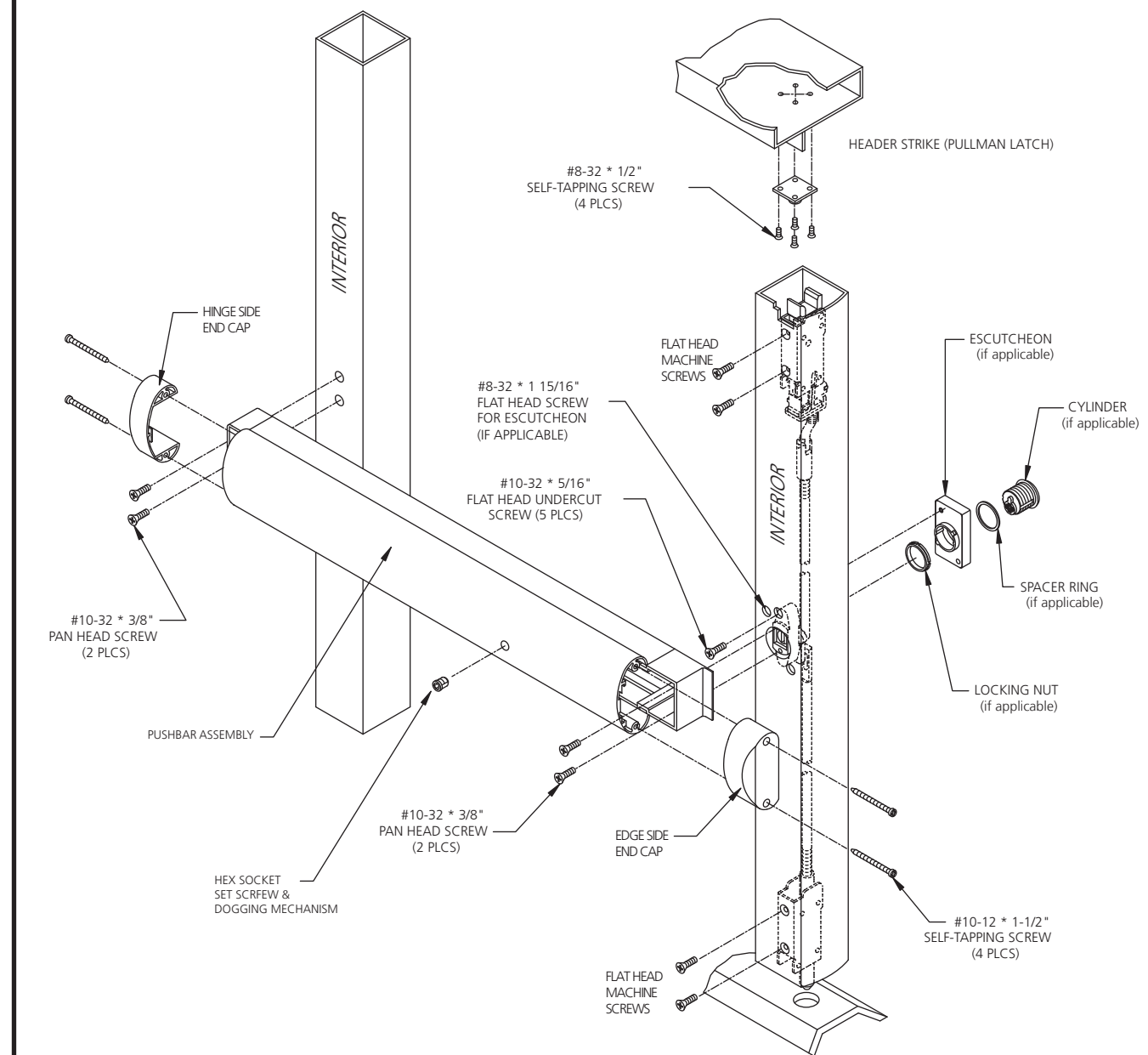


FIG. 3

## B. HANDING AND BACKSET

### B.1 EXIT DEVICE HANDING

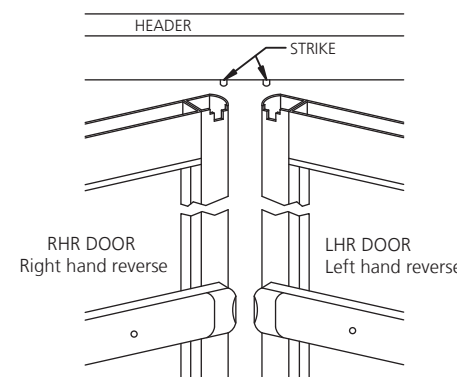


FIG. 4

This exit device is non-handed and can be installed in either left hand reverse (LHR) or right hand reverse (RHR) doors, without any modification.

Follow provided installation instruction for mounting on RHR or LHR doors.

### B.2 SINGLE DOOR BACKSET CAN BE DETERMINED AS BELOW

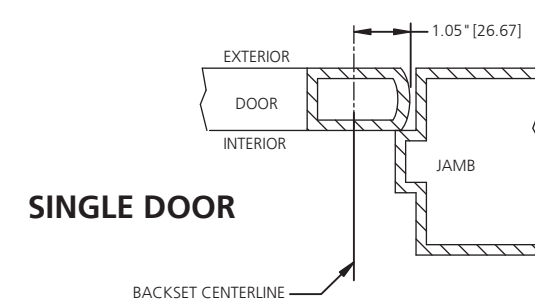


FIG. 5

### B.3 DOUBLE DOOR BACKSET & DOOR STILE EXTRUSION TYPES

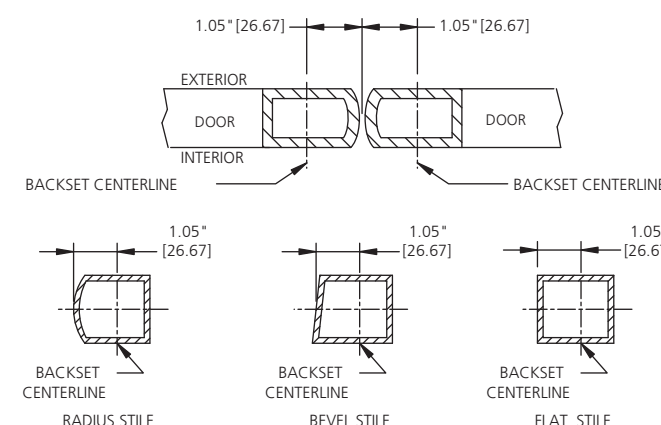
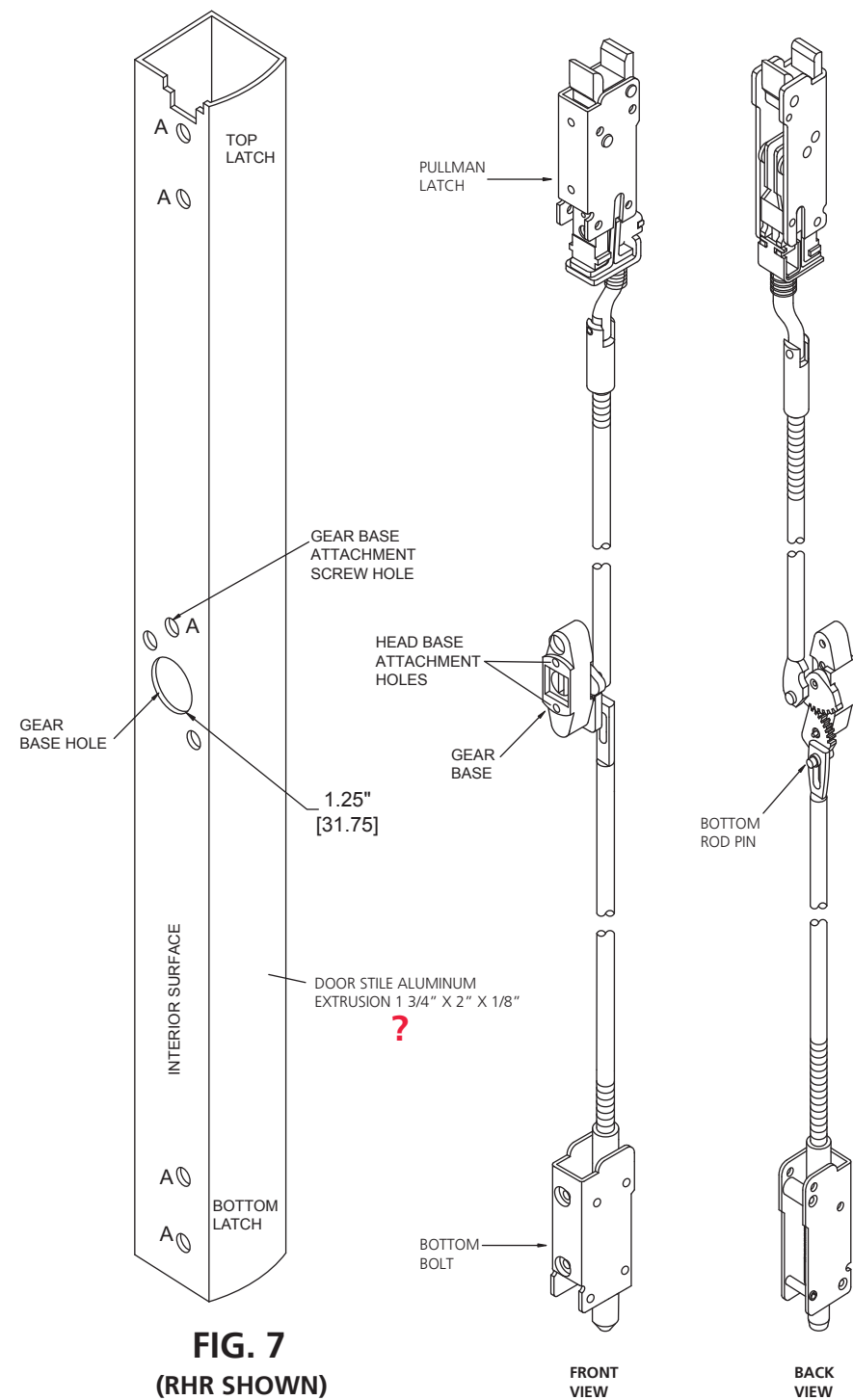


FIG. 6

Note: backset should be measured from centerline of door.

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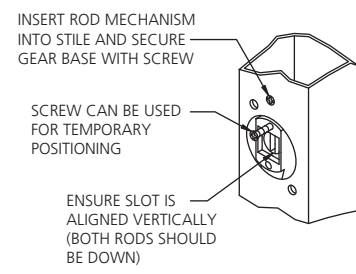
## D. GEAR BASE, PULLMAN LATCH & BOTTOM BOLT POSITIONING:



**FIG. 7**  
(RHR SHOWN)

Having prepared the door stile, the pullman latch and bottom bolt must be positioned approximately at the threaded end of vertical rod (top & bottom) respectively before insertion into the door stile aluminum extrusion. Making reference to Fig.7, lay rod mechanism on interior surface of door stile. Locate the zinc die cast gear base in 1.25" hole and ensure the rods are fully inserted. Thread top pullman latch and bottom bolt onto vertical rods. Approximate positioning is adequate at this stage. 10mm vertical adjustment is possible with the pullman latch. Using allen key provided, ensure this adjustment range is centered (leaving 5mm above & below). This will allow maximum adjustment for the next procedure.

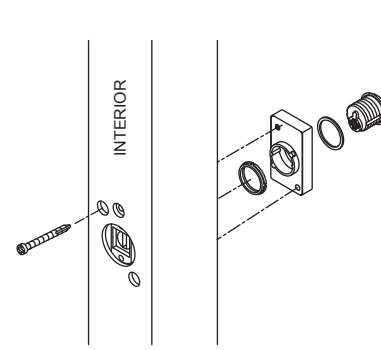
## E. ATTACHMENT OF VERTICAL ROD MECHANISM TO DOOR STILE:



**FIG. 8**  
(REF TEMPLATE "I")

1. Insert rod assembly into extrusion and locate the die-cast gear base in the 1.25" dia. hole. The screw can be temporarily used for ease of positioning. Ensure Pullman latch is free to slide up & down prior to insertion.
2. Using a #10-32 x 5/16" screw, fix the gear base to the door stile aluminum extrusion.
3. Remove retainer spring.

## F. INSTALLATION OF EXTERIOR ESCUTCHEON & CYLINDER (if required):



**FIG. 9**  
(REF TEMPLATES "I" & "K")

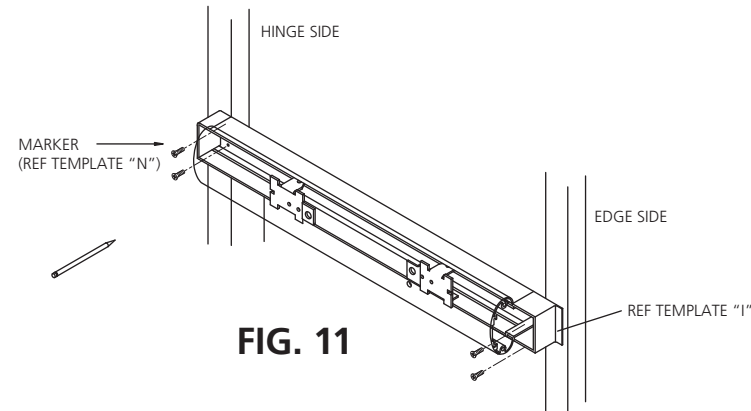
Assemble cylinder and escutcheon, using supplied locknut and spacer rings.

Install exterior escutcheon and cylinder using two #10-32 x 2" flat head screw

Note: Escutcheon fixing hole when viewed on the stile from the interior side of door is always to the left of the backset centerline.

Ensure cylinder cam engages with the bottom rod pin without interference.

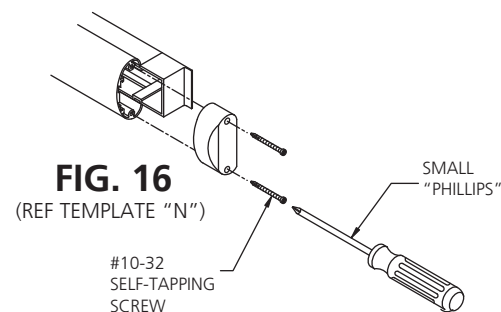
## G. PUSHBAR ASSEMBLY MOUNTING INSTRUCTIONS:



**FIG. 11**

1. Temporarily attach bar head base to the door edge side of the door. Attach pushbar head base to gear base using two (2) #10-32 pan head screws
  2. Using a level, align bar and mark 2 holes for the endcap mounting bracket (refer to template "N") on the hinge side of door.
  3. Remove bar assembly, drill & tap 2 holes for #10-32 screws.
  4. Finally, fix bar assembly in position.
- Note: Pushbar can remain attached to mounting bar during this procedure.

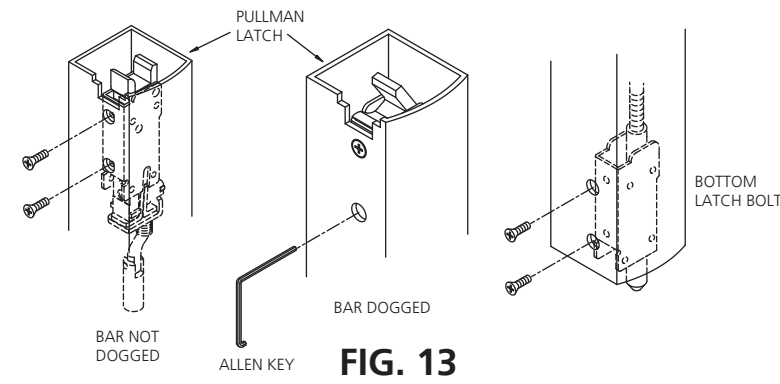
## H. END CAP INSTALLATION



**FIG. 16**  
(REF TEMPLATE "N")

Attach both endcaps using #10-12 screws. Endcap with U.L. mark must be installed on the door edge end.

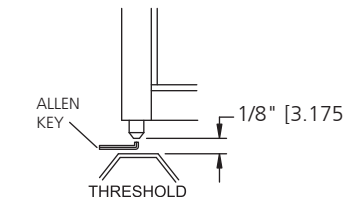
## I. ATTACHMENT OF PULLMAN LATCH AND BOTTOM BOLT TO DOOR STILE:



**FIG. 13**

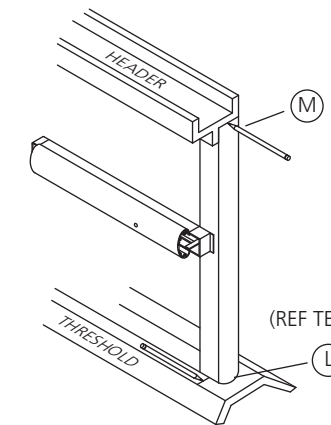
## J. BOTTOM BOLT FINE ADJUSTMENT:

1. Lock the pushbar using the dogging mechanism provided allen-key.
2. The bottom bolt is capable of vertical adjustment after installation. Using allen-key provided, loosen locking screw in bottom bolt. Rotate bolt either up or down (as required), until vertical distance from base of bolt to threshold is 1/8". Finally, tighten locking screw. Total adjustment range is 9mm.



**FIG. 12**

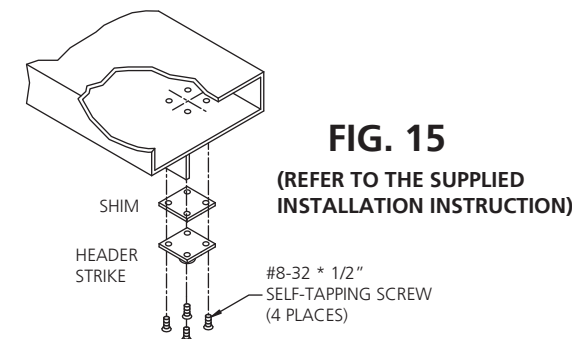
## K. HEADER FRAME & THRESHOLD PREPARATION:



**FIG. 14**  
(REF TEMPLATE "M" AND "L")

1. With door mounted on frame (Fig.14), mark backset centerline on threshold and on the header (refer to fig 2 & 3 on sheet 1).
2. Mark closed position of the door on header and threshold.
3. Using the cutting template M provided, align with markings on header and drill 4 holes for #8-32 self tapping screws.
4. Using the cutting template L provided, align with markings on threshold and drill 0.50" hole.

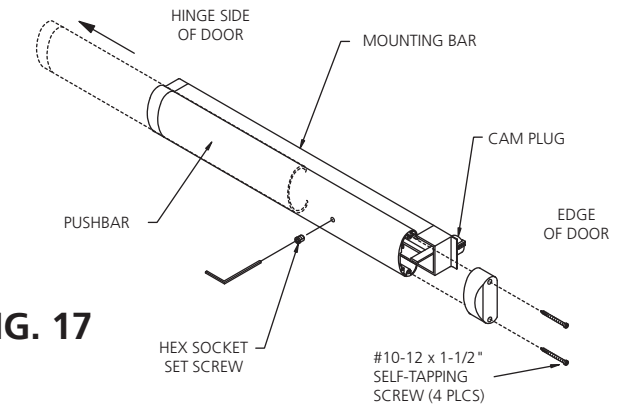
## L. HEADER STRIKE INSTALLATION:



**FIG. 15**  
(REFER TO THE SUPPLIED INSTALLATION INSTRUCTION)

1. Fix strike to header frame using four #8-32 x 1/2" self-tapping screws. Arrow should point towards door stop.
2. Clearance between top of door and header is usually 1/8". If greater than 1/8", shims should be used when installing strike.
3. Strike can be rotated if slight mis-alignment between strike and latch occurs.

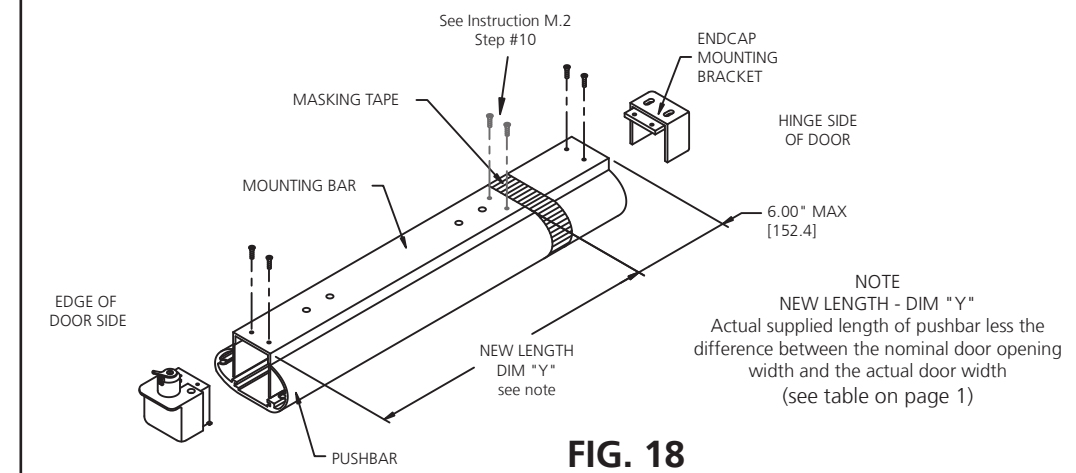
## M. PUSHBAR LENGTH ADJUSTMENT & INSTALLATION PROCEDURES: (IF REQUIRED)



**FIG. 17**

### M.1 PUSHBAR SEPARATION:

1. Remove two #10 x 1-1/2" screws from the endcap nearest to the door edge side.
2. Using provided allen-key, remove hex socket set screw from the pushbar.
3. Gently slide pushbar towards hinge side of door until free from the mounting bar.



**FIG. 18**

### M.2 ADJUSTMENT OF PUSHBAR LENGTH FOR NON-STANDARD DOOR WIDTHS:

1. Place device with pushbar facing down. Protect pushbar surface.
2. Remove two screws from endcap mounting bracket at the hinge side of the door.
3. Detach the endcap mounting bracket.
4. Determine the new pushbar length (dimension "Y") as per note in Fig. 18.
5. Fully depress bar and lock using the dogging mechanism provided allen-key.
6. Apply masking tape in area of cut-off.
7. Mark new pushbar length on masking tape.
8. Saw off excess length (hinge side of door).
9. Remove tape and deburr.
10. Drill two new holes for endcap mounting bracket and fix into position.

### M.3 PUSHBAR ASSEMBLY:

1. Ensure head cap nearest the door edge is removed from the pushbar. Endcap at hinge side of the door should be in position.
2. Slide the pushbar onto mounting bar over the first linkage nearest to the hinge side of the door. Slide past second linkage and continue to slide bar towards the door edge. Bar should "snap" into place once fully seated.
3. Using provided allen-key, insert hex socket set screw through hole in the pushbar and tighten. This ensures bar is rigidly fixed to hinge mechanism.
4. Fix the door edge side endcap into position.