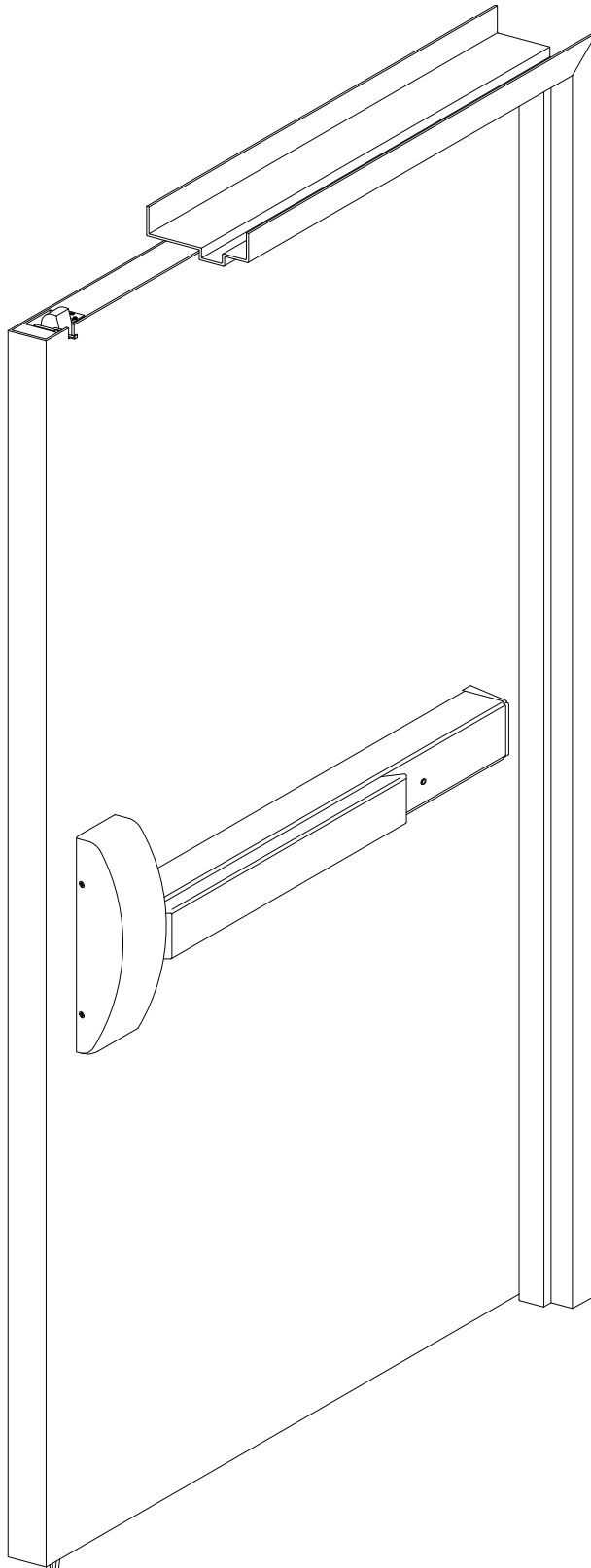
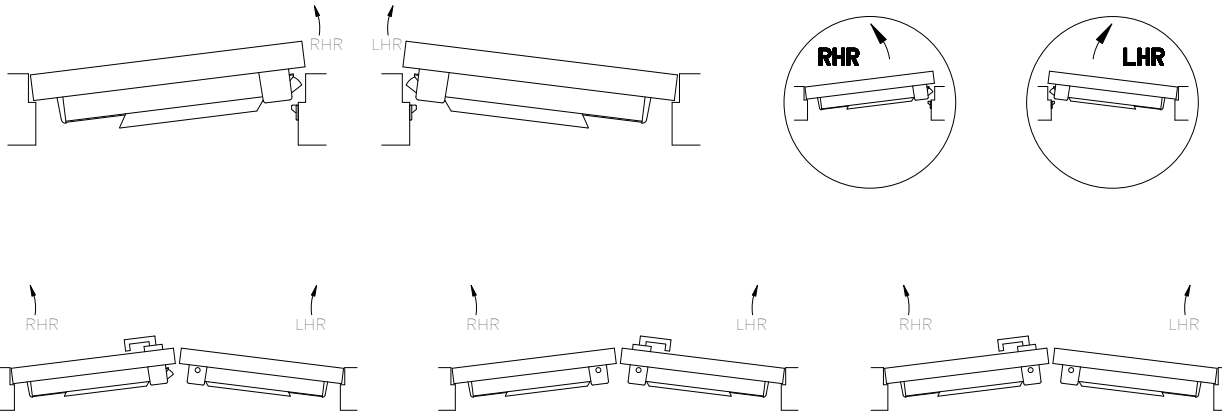


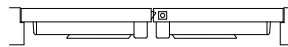
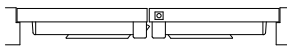
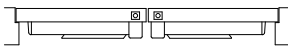
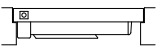
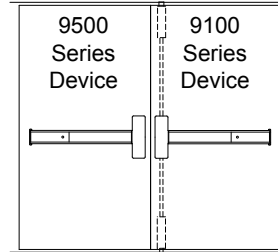
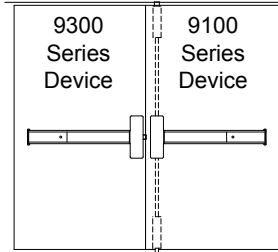
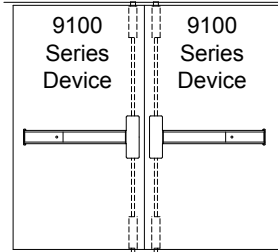
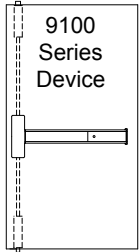
# 9100/F9100 SERIES CONCEALED VERTICAL ROD EXIT DEVICE



# HANDING

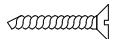
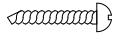
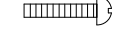
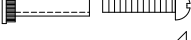
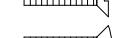




# TYPICAL INSTALLATIONS



# SCREW CHART

⊕ All Screws Are Phillips Head

-  F.H.P.T.S. — Flat Head Phillips Tapping Screw
-  R.H.P.T.S. — Round Head Phillips Tapping Screw
-  R.H.P.M.S. — Round Head Phillips Machine Screw
-  R.H.P.M.S. — Round Head Phillips Machine Screw x Thru Bolt
-  F.H.P.M.S. — Flat Head Phillips Machine Screw
-  O.H.P.M.S. — Oval Head Phillips Machine Screw
-  F.H.P.U.C.M.S. — Flat Head Phillips Undercut Machine Screw

## 1 Installation

Read the entire instruction sheet prior to installation.

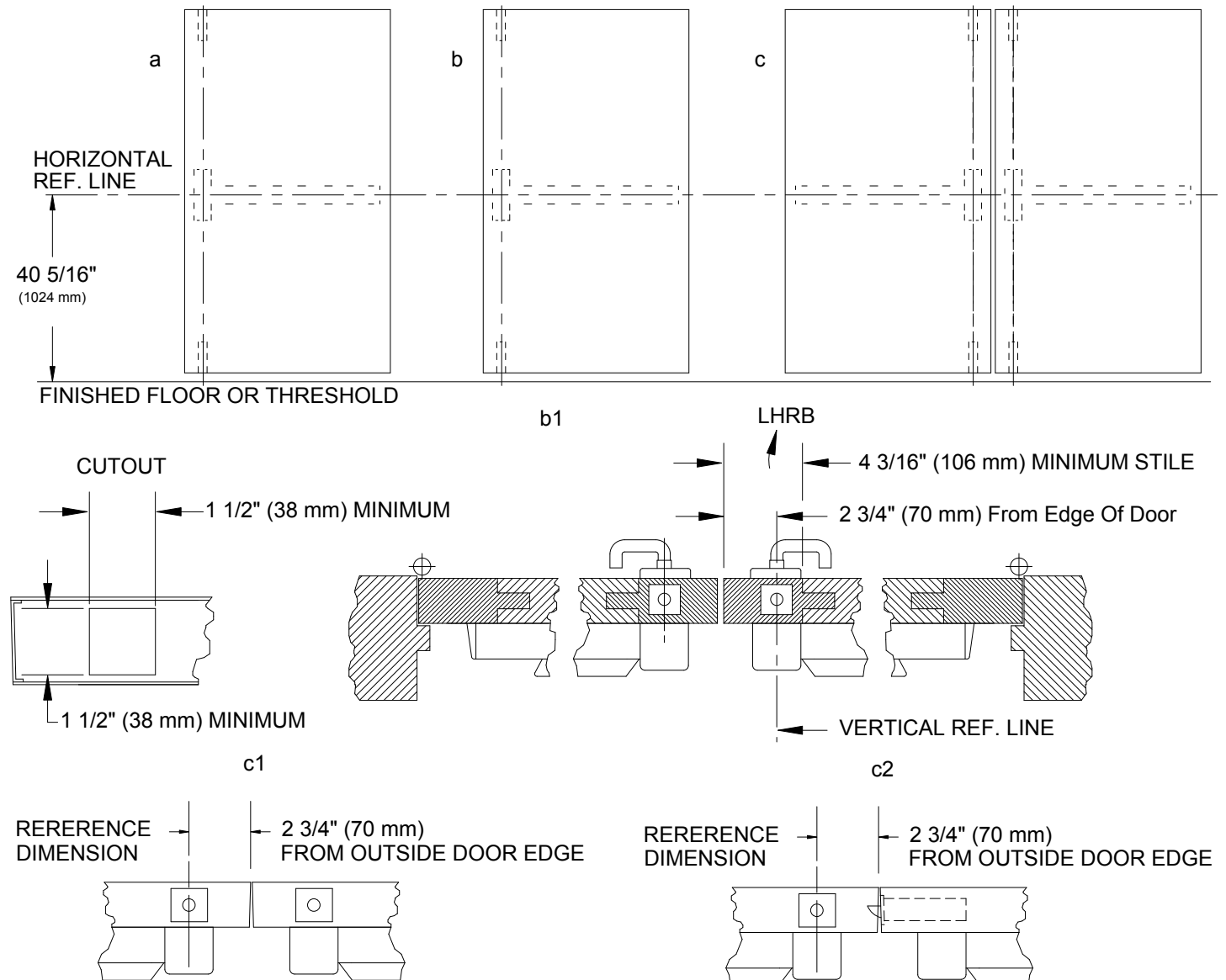
Before Installing Hardware:

1. Device should be installed and preliminary adjustments made prior to hanging door(s) in frame. (Door typically lying on saw horses at this time).
2. Verify door width, with carton label for correct exit device length.
3. For hand reversal of chassis assembly see Step 3.
4. For hand reversal of trim assembly see Step 4.

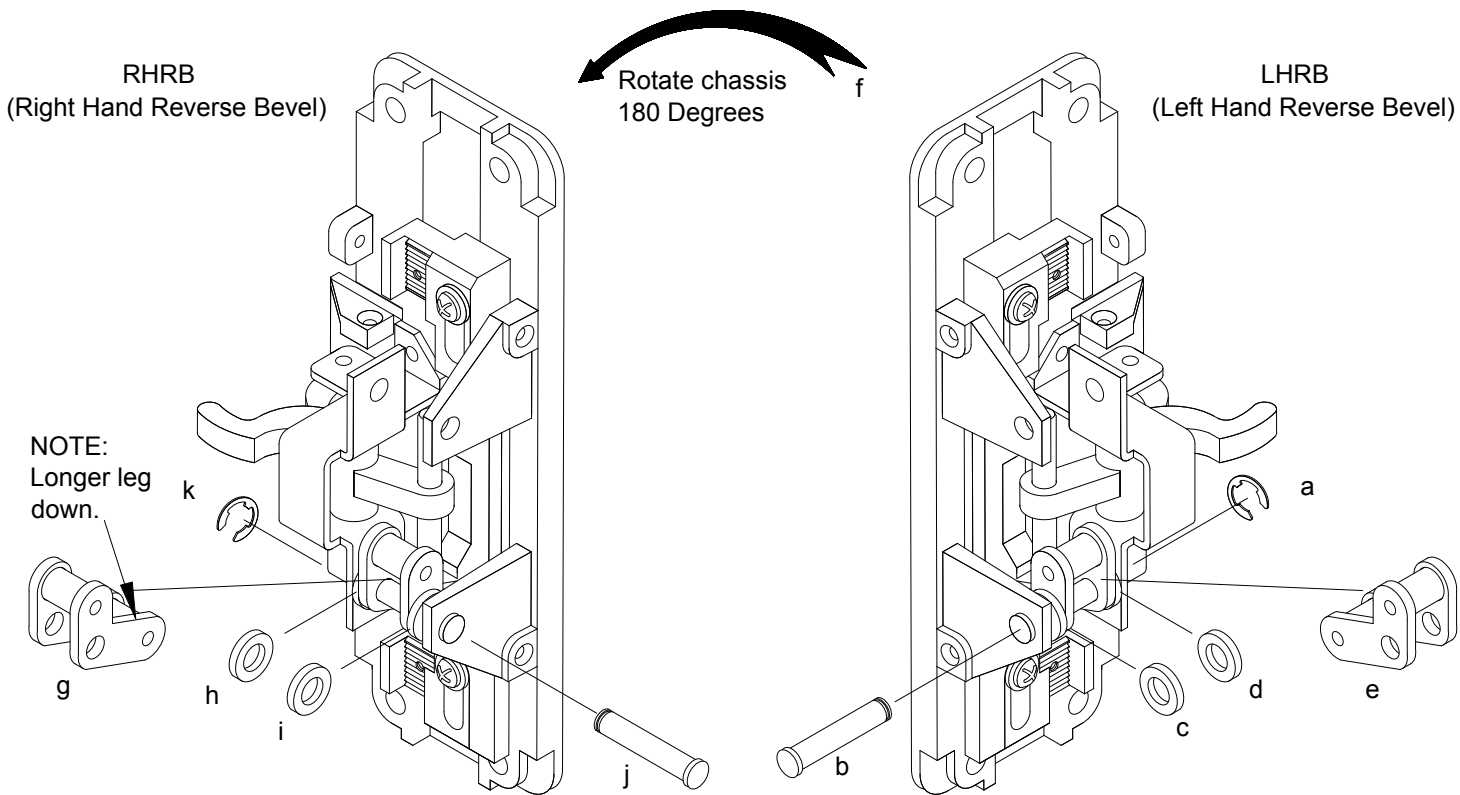
Note: If device is to be installed over glass lite panels, shim kit may be required, order No. GK9000.

Note: Device shipped standard for 8' (2438 mm) high door opening. For doors up to but not over 10' (3048 mm) order "ETR" (Extended to rod) device.

## 2 Door preparation



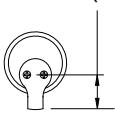
3 If hand reversal of chassis is required follow steps below in alphabetical sequence.



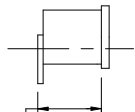
4 Handing of trim, and cylinder specifications and installation.

Note: For specific trim functions, cylinder type, and handing information; see additional instructions packed with trim.

21/32" (17 mm) min



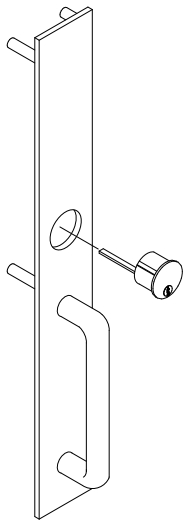
1 1/8" (29 mm) min



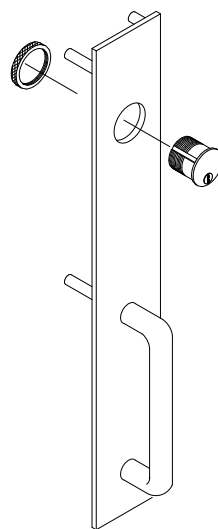
5/16" (8 mm) - 11/32" (9 mm)



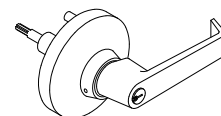
Standard "V" Trim



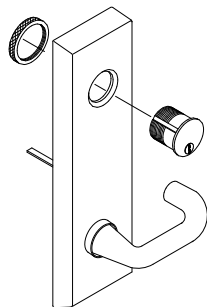
Standard "T" Trim



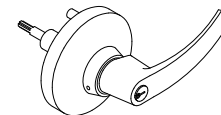
Standard "R" Trim



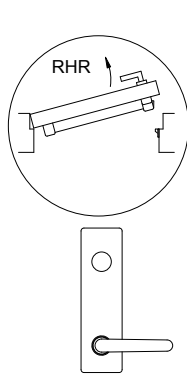
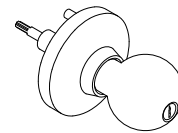
Standard "Y" Trim



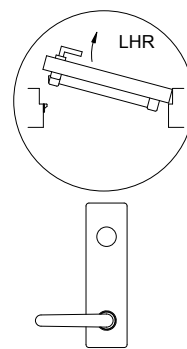
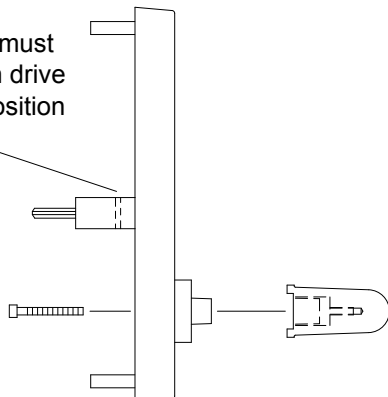
Standard "C" Trim



Standard "K" Trim

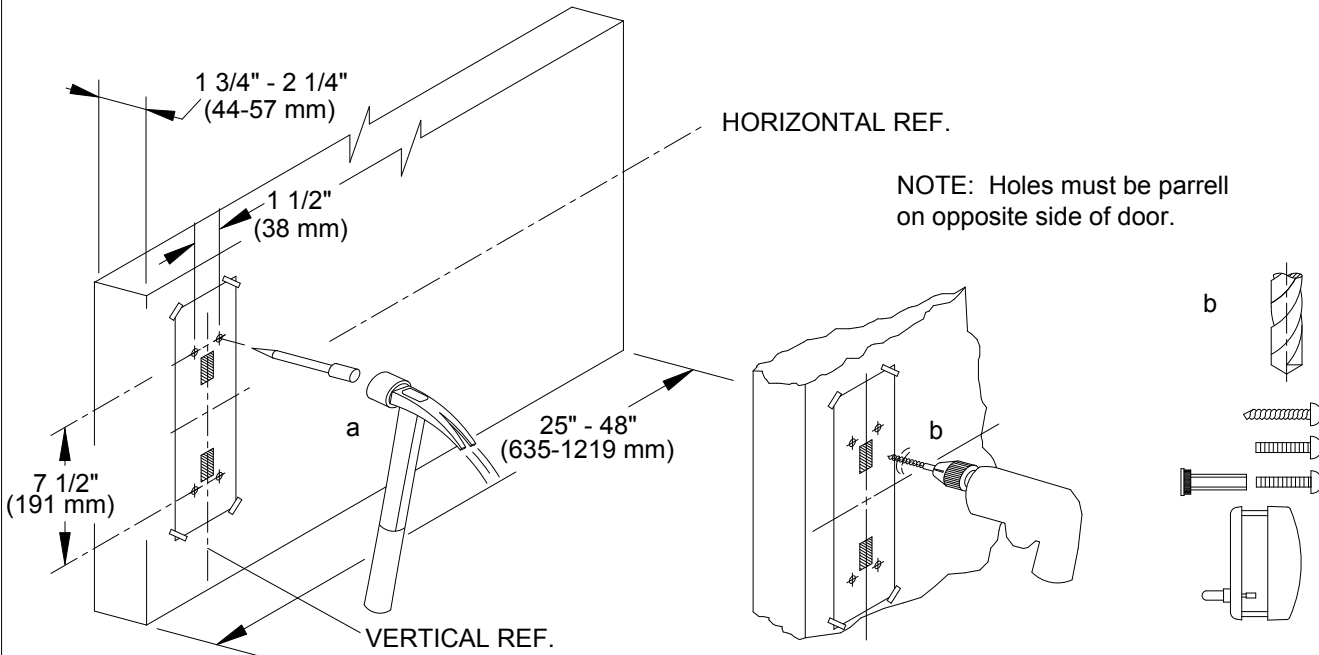


NOTE: Spindle must be installed with drive pin in vertical position as shown.



5 Refer to carton label for model and trim number prior to drilling.

Refer to Template T9100, located at rear of instruction booklet for specific hole locations, drill size and screw sizes.

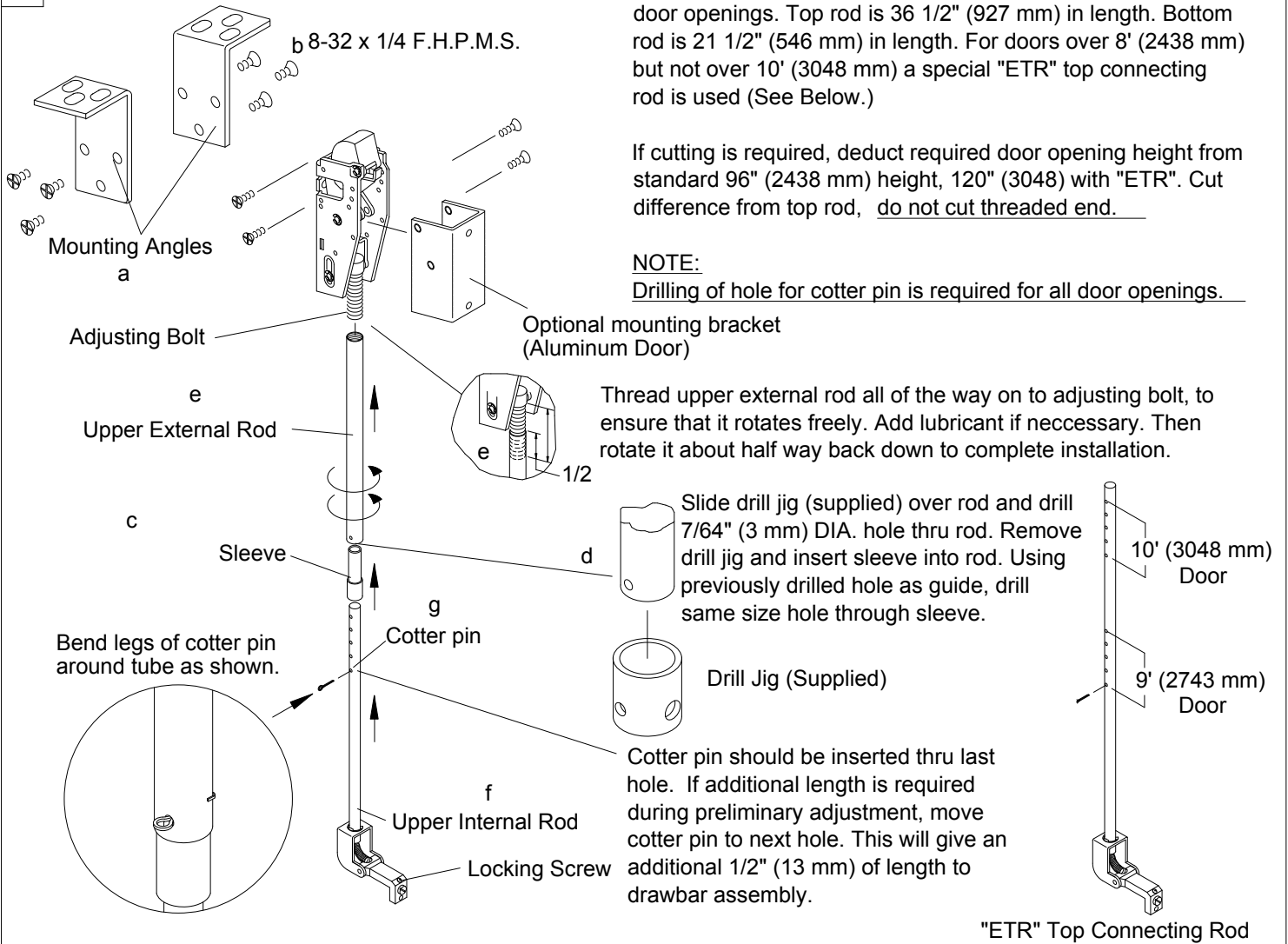


6 Top latch mounting bracket and drawbar assembly

Top and bottom rods are shipped standard for 8' (2438 mm) door openings. Top rod is 36 1/2" (927 mm) in length. Bottom rod is 21 1/2" (546 mm) in length. For doors over 8' (2438 mm) but not over 10' (3048 mm) a special "ETR" top connecting rod is used (See Below.)

If cutting is required, deduct required door opening height from standard 96" (2438 mm) height, 120" (3048) with "ETR". Cut difference from top rod, do not cut threaded end.

**NOTE:**  
Drilling of hole for cotter pin is required for all door openings.



7 Bottom slide bolt or latch mounting bracket and drawbar assembly

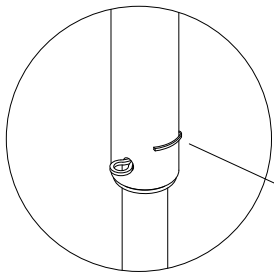
Top and bottom rods are shipped standard for 8' (2438 mm) door openings. Top rod is 36 1/2" (927 mm) in length. Bottom rod is 21 1/2" (546 mm) in length.

If cutting is required, deduct required door opening height from standard 96" (2438 mm) height. Cut difference from top rod, do not cut threaded end.

Bottom rod should not have to be cut, unless horizontal reference line is moved down from recommended 40 5/16" (1024 mm) height.

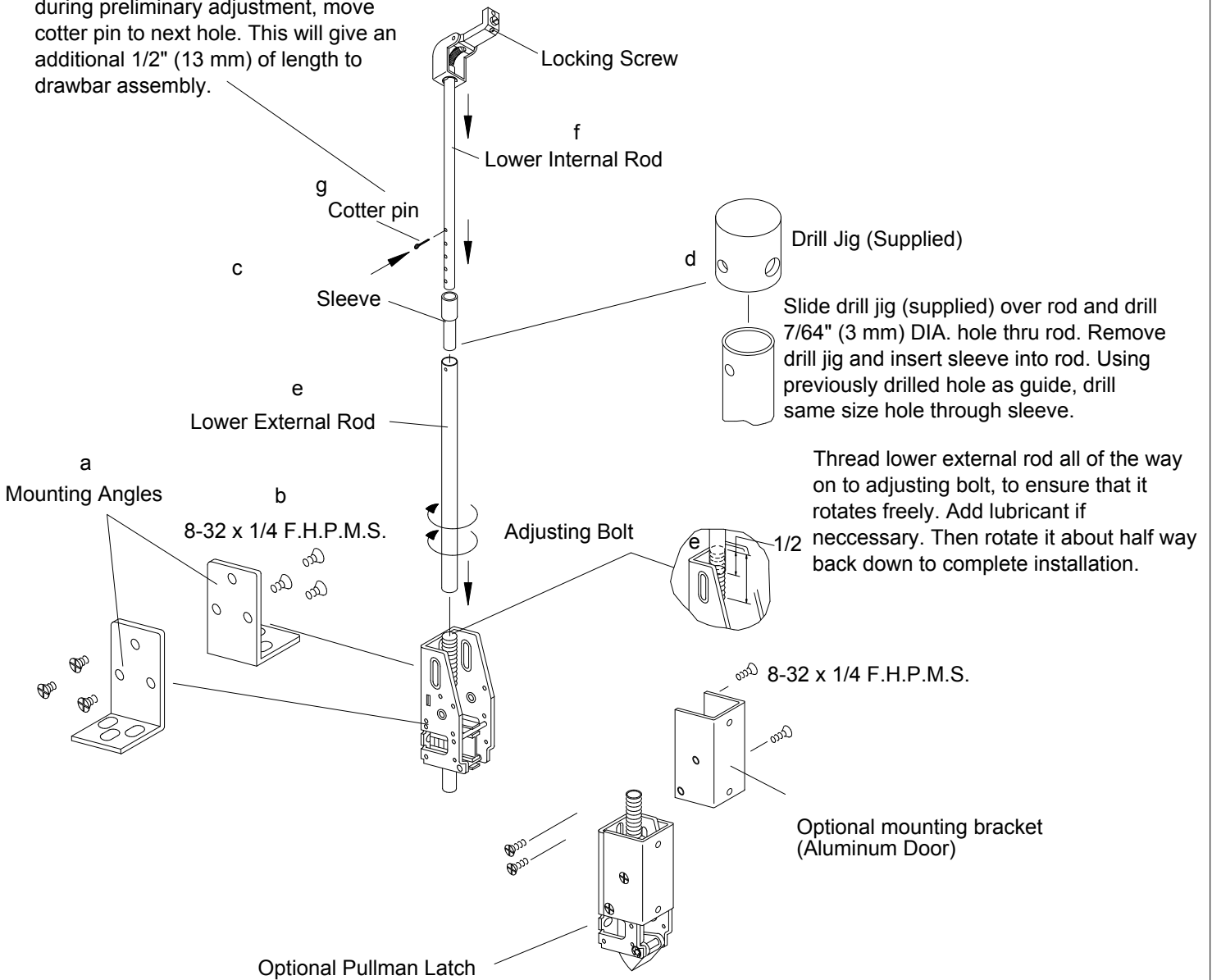
**NOTE:**

Drilling of hole for cotter pin is required for all door openings.



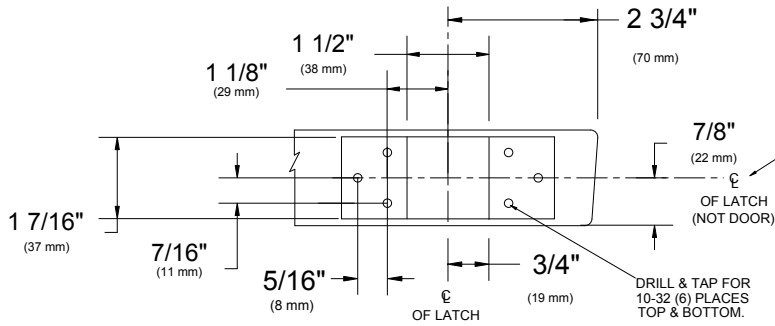
Bend legs of cotter pin around tube as shown.

Cotter pin should be inserted thru last hole. If additional length is required during preliminary adjustment, move cotter pin to next hole. This will give an additional 1/2" (13 mm) of length to drawbar assembly.



8 Installation of top latch and drawbar assembly

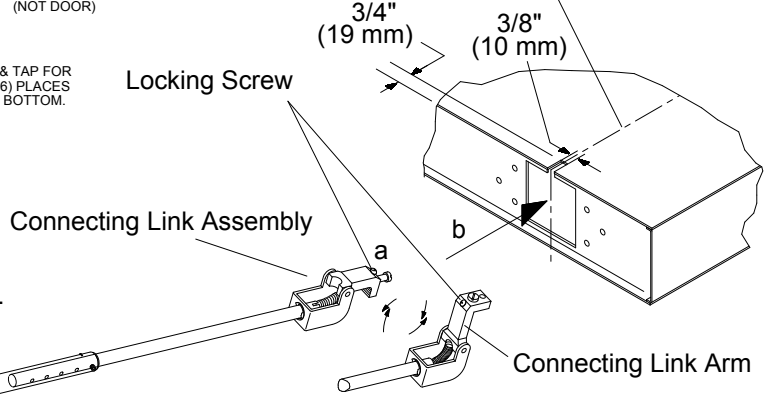
TOP VIEW OF DOOR  
Door Cutout (Top & Bottom)



MAINTAIN DIMENSION FROM INSIDE FACE OF DOOR.

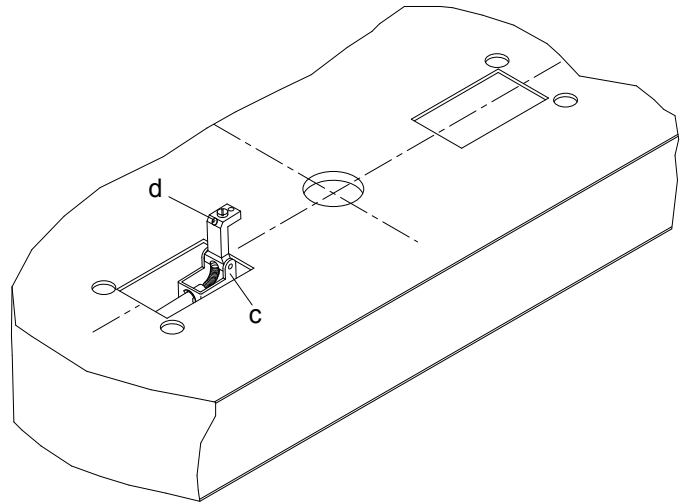
Vertical Reference Line

- a Loosen locking screw in upper drawbar assembly as shown. Connecting link arm should move up and down freely.
- b With connecting link arm in down position, guide upper drawbar assembly down through opening in top of door.

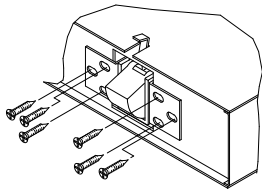


Upper Drawbar Assembly

- c As connecting link arm nears cutout in face of door, insert finger through cutout and guide connecting link through.
- d Holding connecting link in full up position, tighten locking screw as shown.

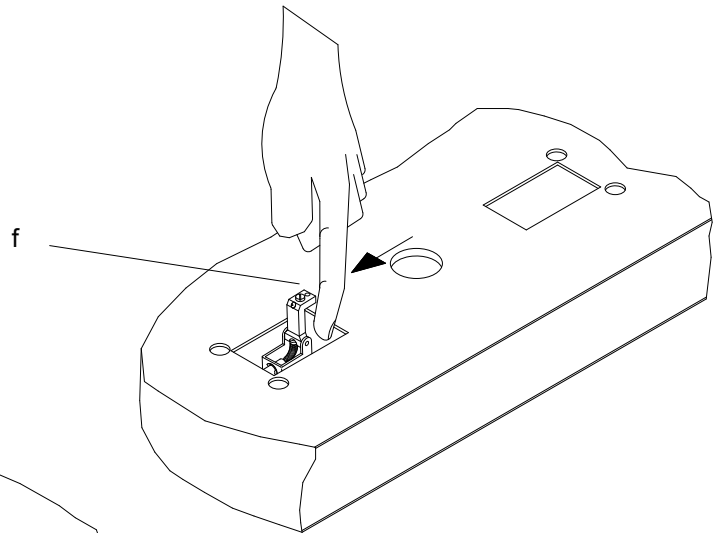
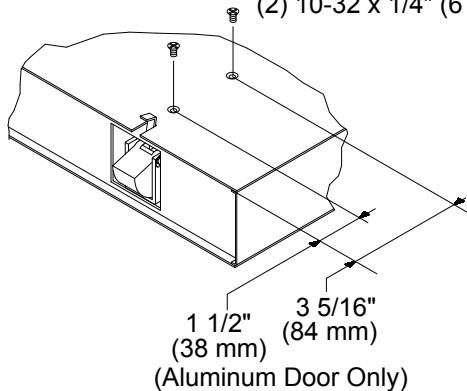


e



Attach Mounting Bracket  
With (6) 10-32 x 3/8" F.H.P.M.S.  
Or (6) #10 x 1" (25 mm) F.H.P.T.S.  
For Wood Doors.

(Optional Aluminum Door Bracket)  
Attach mounting bracket with  
(2) 10-32 x 1/4" (6 mm) F.H.P.M.S.

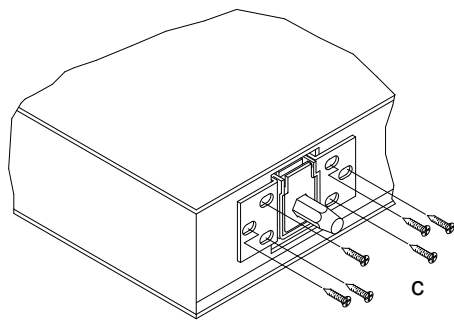
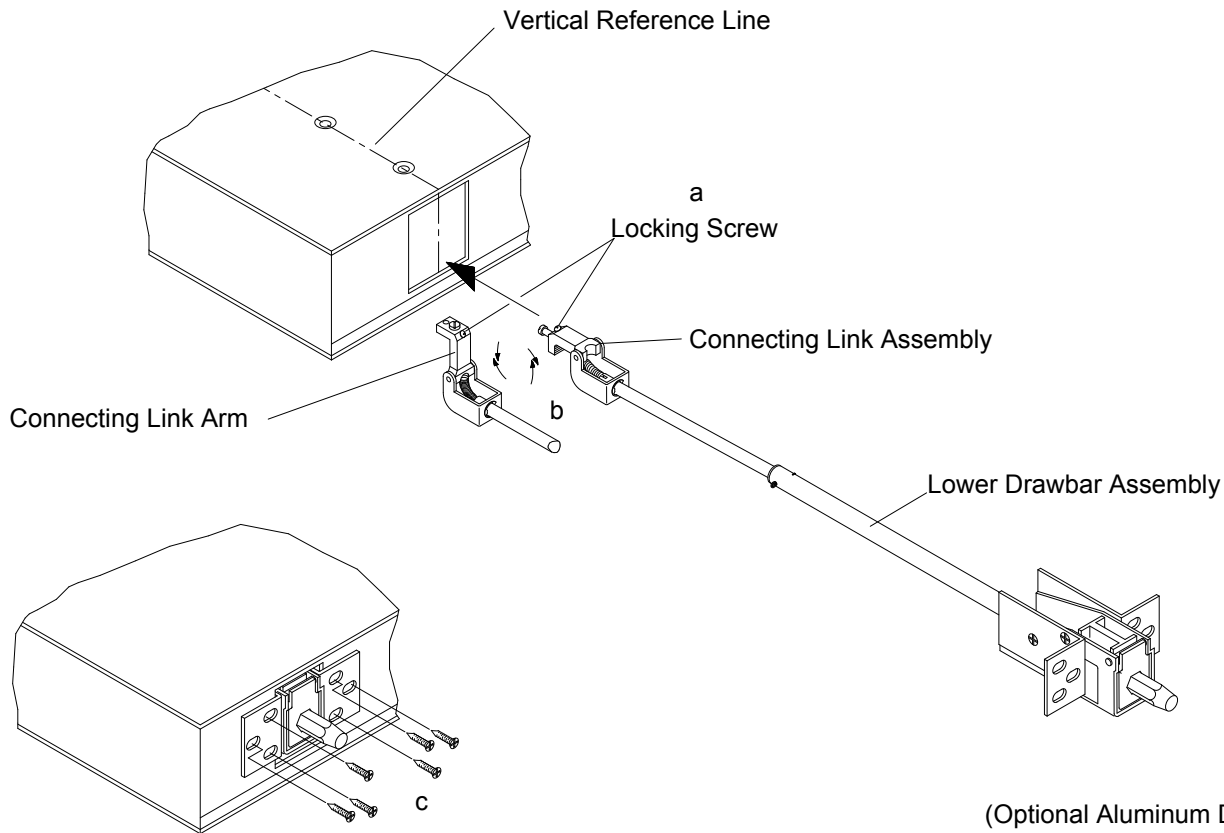


Push up on bottom of drawbar assembly.  
Top latch should retract and remain retracted,  
captured by tripping lever.

Proceed to next page.

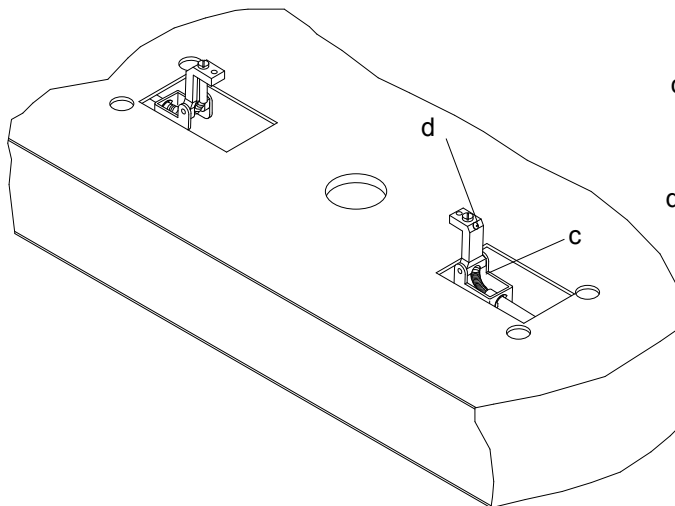
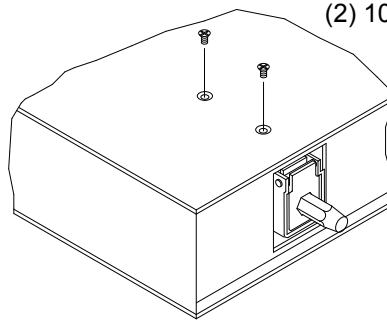
9 Installation of bottom latch and drawbar assembly

- a Loosen locking screw in lower drawbar assembly as shown. Connecting link arm should move up and down freely.
- b With connecting link arm in down position, guide lower drawbar assembly up through opening in bottom of door.



Attach Mounting Bracket  
With (6) 10-32 x 3/8" F.H.P.M.S.  
Or (6) #10 x 1" (25 mm) F.H.P.T.S.  
For Wood Doors.

(Optional Aluminum Door Bracket)  
Attach mounting bracket with  
(2) 10-32 x 1/4" (6 mm) F.H.P.M.S.

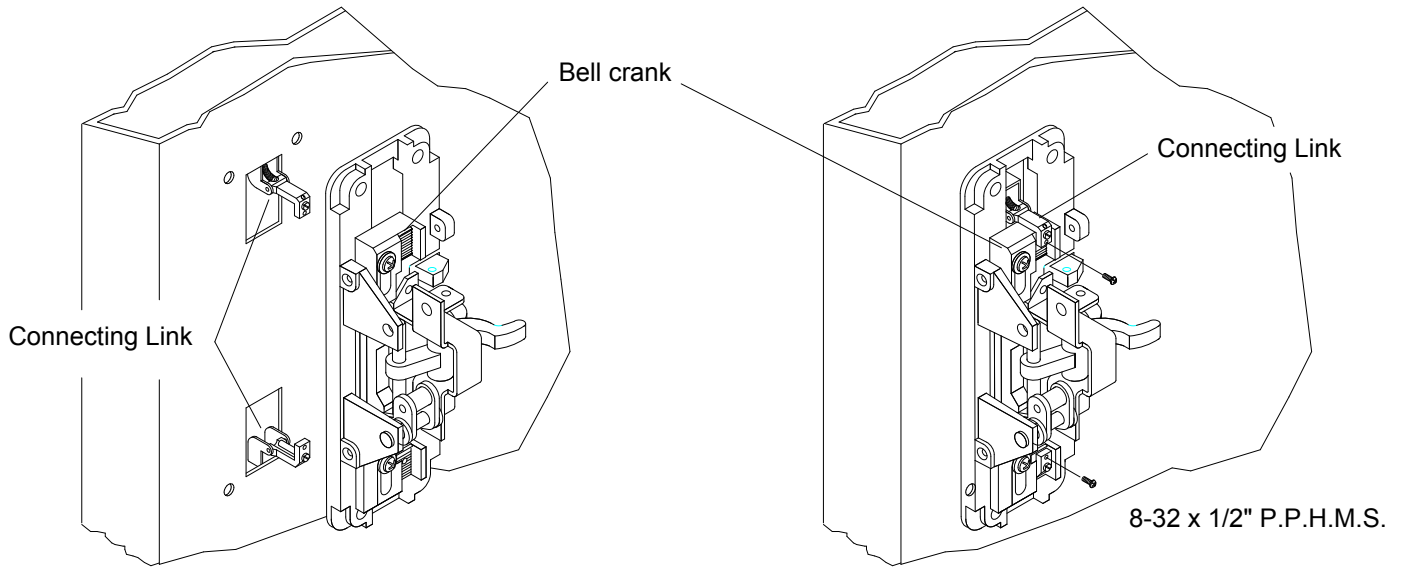


- c As connecting link arm nears cutout in face of door, insert finger through cutout and guide connecting link through.
  - d Holding connecting link in full up position, tighten locking screw as shown.
- Both connecting links should be in the up right position at this time, secured by locking screws.



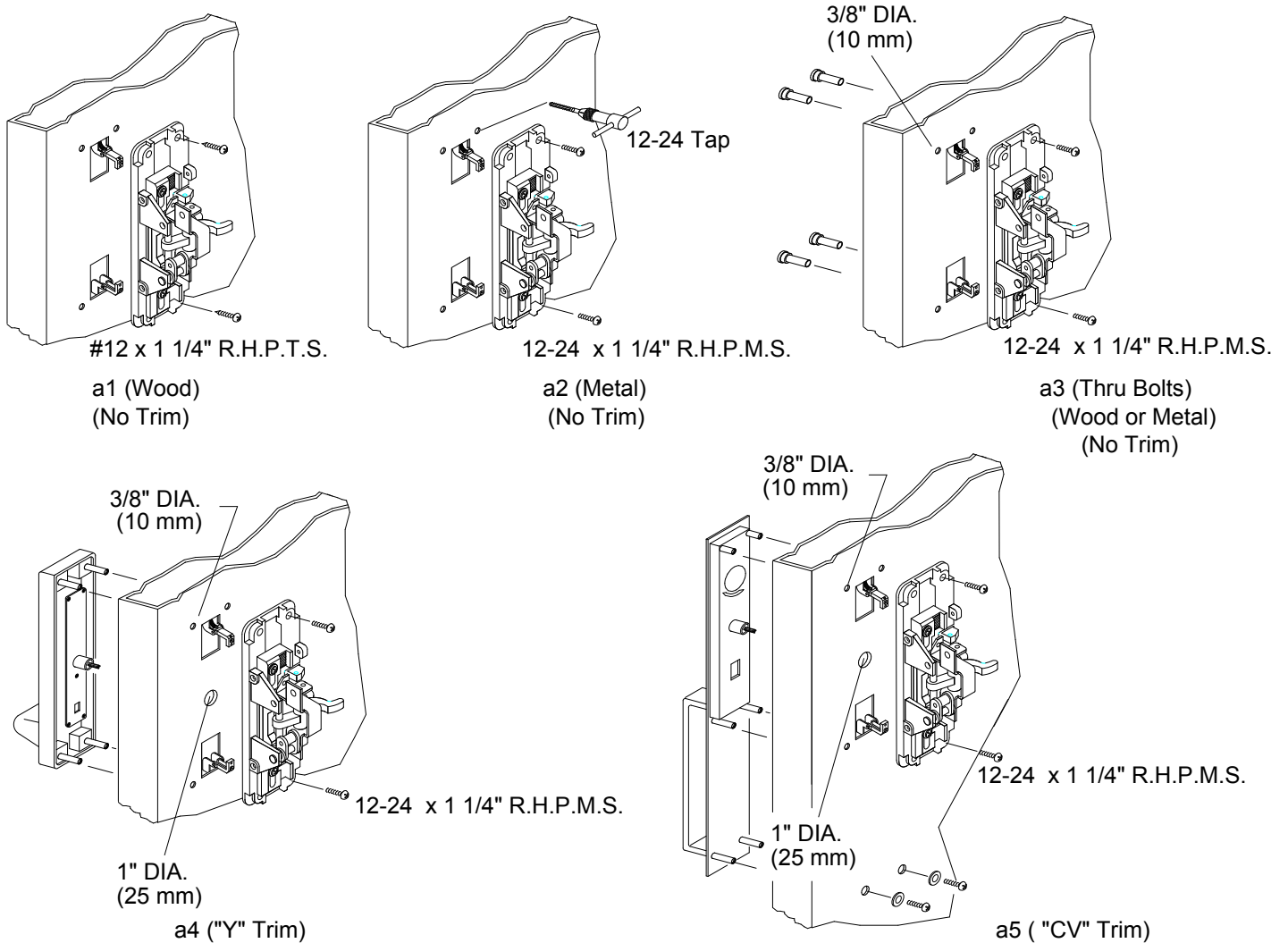
10 Chassis installation. If using GK9000 install shims under chassis at this time

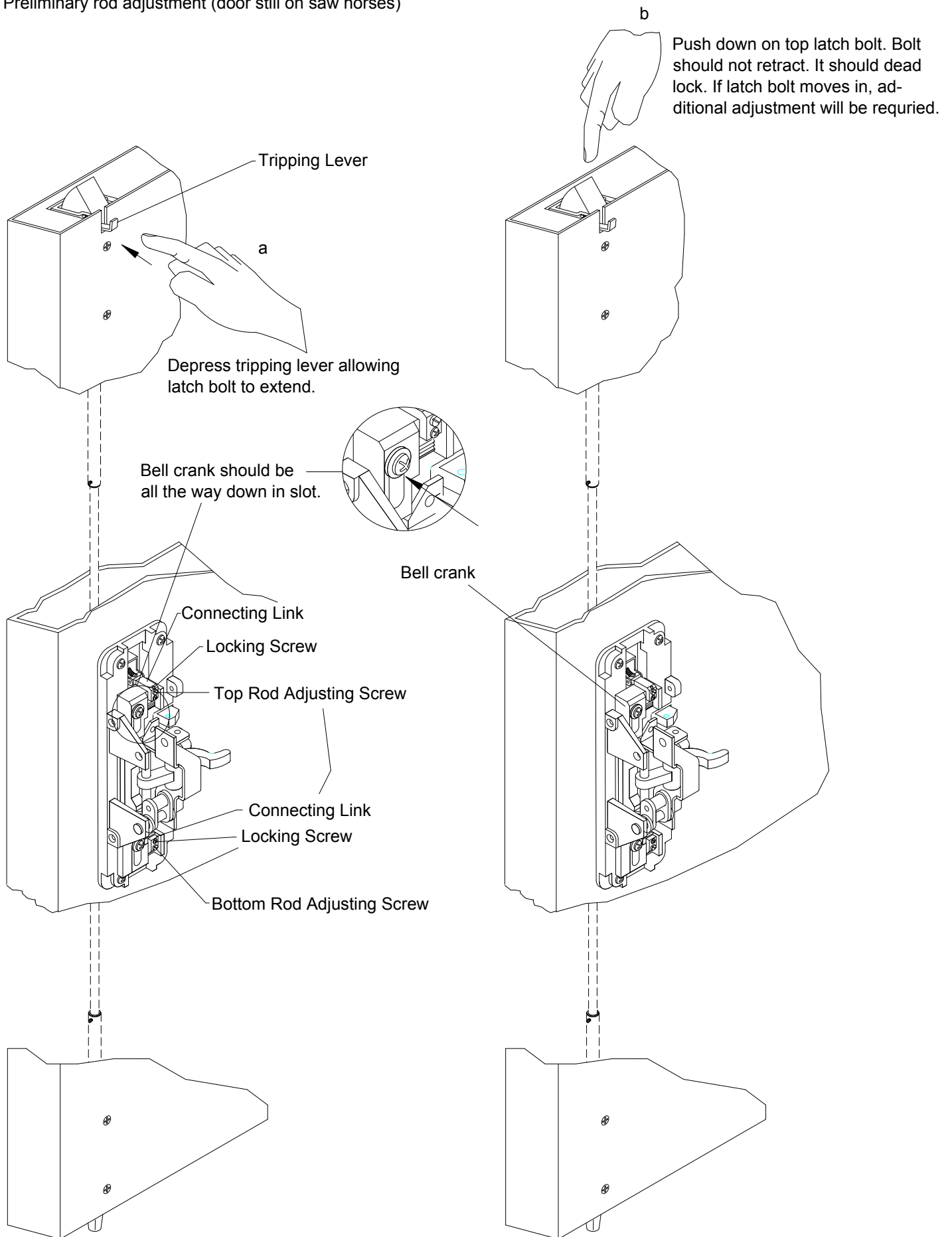
Detailed chassis installation



Guide top connecting link through cutout in top chassis assembly. Slide bell crank up if necessary and guide bottom connecting link through cutout in bottom of chassis. Attach connecting links to bell crank with (2) 8-32 x 1/2" (13 mm) P. P. H. M. S.

Proceed to mount chassis to door using one of the proper methods shown below.



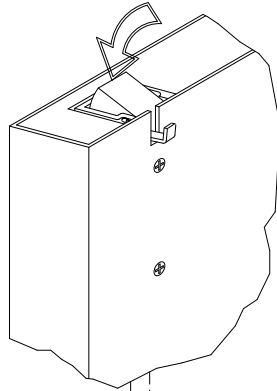


(continued on following page)

12 Preliminary rod adjustment (continued): If latch bolt dead latched proceed to next page.

NOTE: If outside trim is being used adjust rod to function properly with it.

If latch bolt was able to be depressed, top rod is too long and will have to be adjusted. Follow steps below.



a Loosen locking screw in top connecting link. No. 2 phillips head screwdriver required.

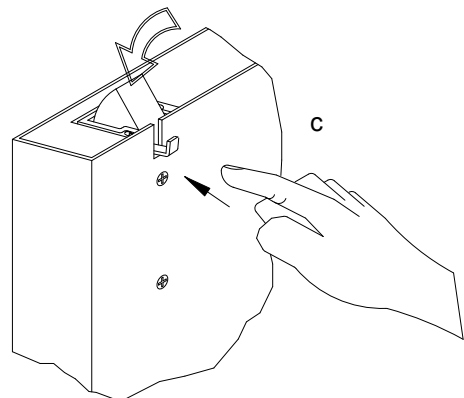
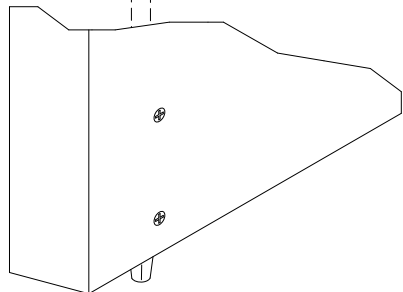
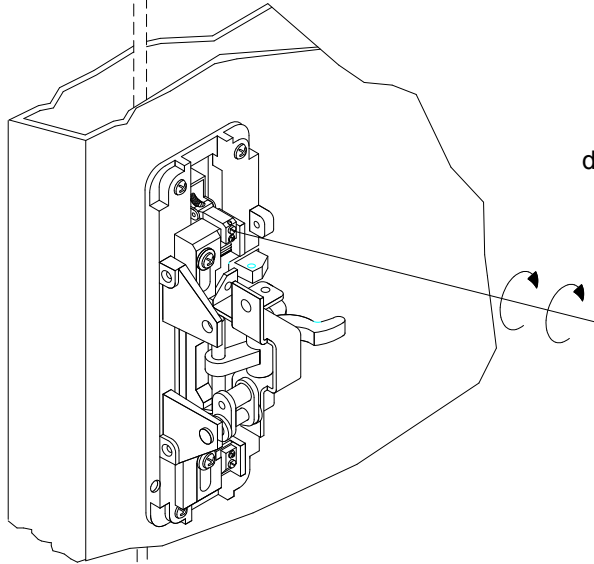
b Rotate adjusting screw clockwise (right) to shorten rod assembly. Medium flat blade screwdriver required.

c Recheck adjustment after each half turn on adjusting screw. Do this by attempting to push in on top latch bolt and then pushing in on tripping lever to release bolt. Adjust only until dead latching of top latch bolt is achieved. (Latch bolt will not retract when pushed.)

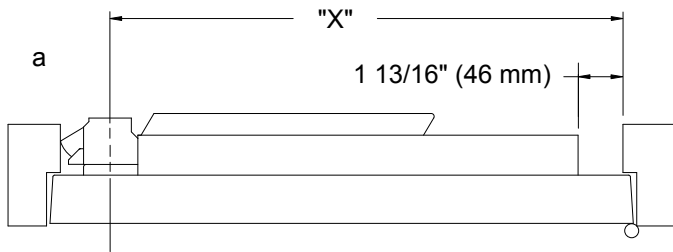
d Tighten locking screw when complete.

NOTE:

Check outside trim operation and make adjustments in the same manner as before, except use outside trim function instead of touch bar assembly to retract the latchbolts.



13 Cutting touch bar to length

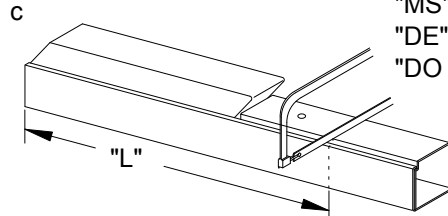
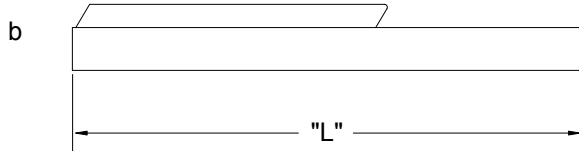


SIZE A:  
Will fit 48" (1219 mm) door opening without cutting.  
Can be cut to fit a 34" (864 mm) minimum door opening.  
SIZE B:  
Will fit 36" (914 mm) door opening without cutting.  
Can be cut to fit a 28" (711 mm) minimum door opening.  
SIZE C:  
Will fit 30" (762 mm) door opening without cutting.  
Can be cut to fit a 25" (635 mm) minimum door opening.

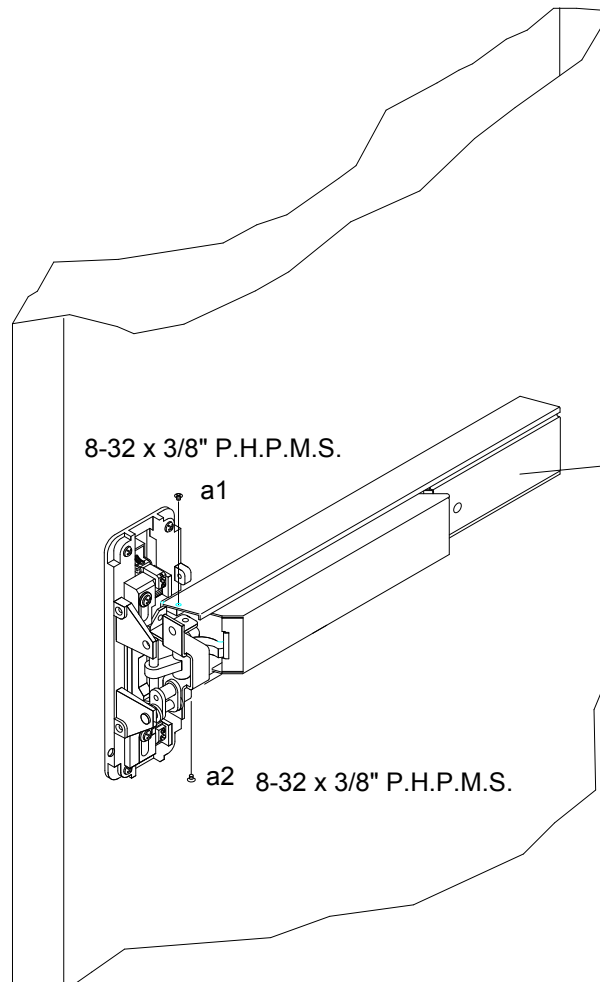
**IMPORTANT**

NOTE: Use caution when cutting touchbar to size on units with "ES", "MS", "BPA", "BPAR", "LM", "MD", "DE" or "DWA" options.  
**"DO NOT CUT WIRES."**

"L" = "X" - 2 1/2" (64 mm)



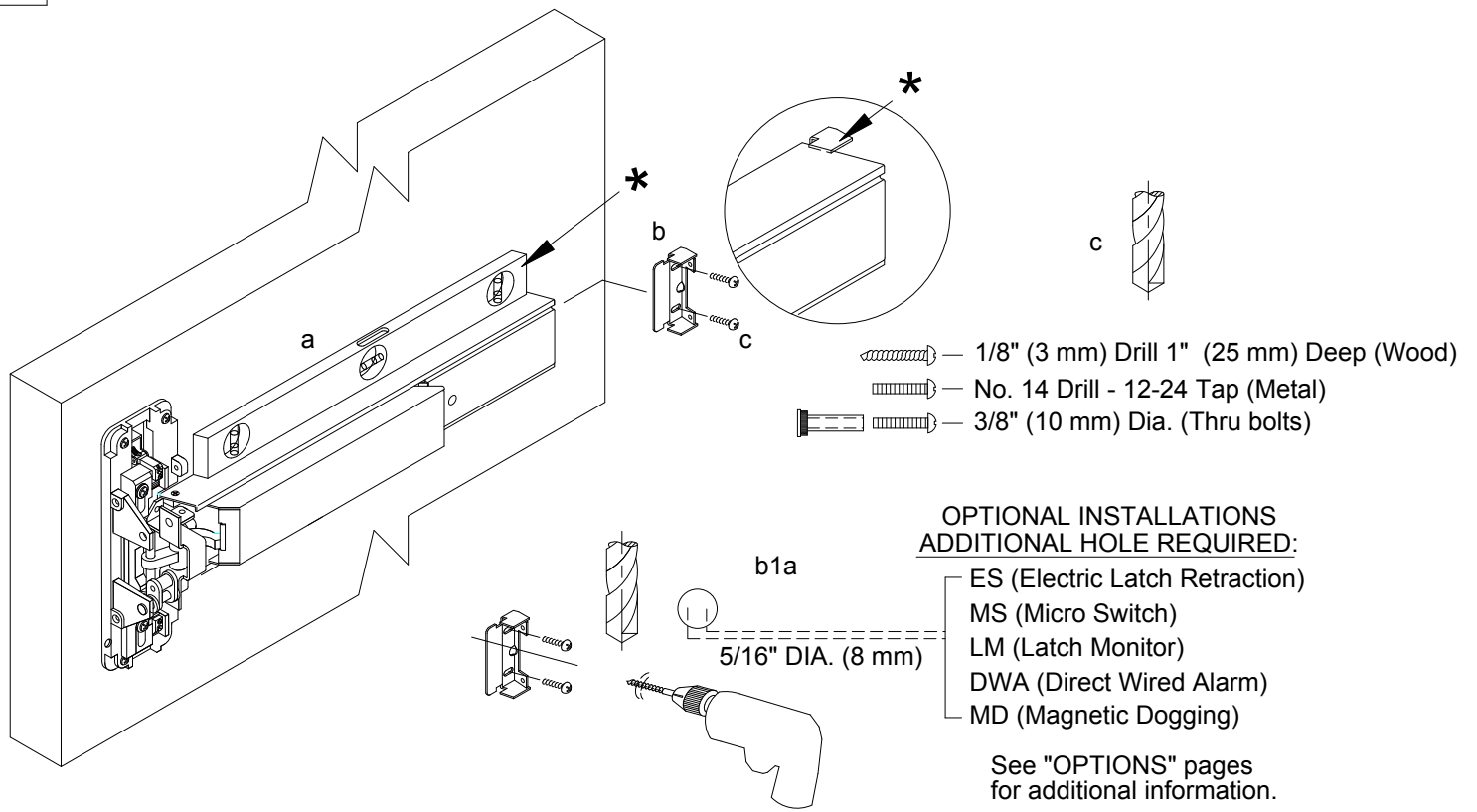
14 Installation of touch bar to chassis



NOTE:  
Chassis screws are shipped in chassis assembly.

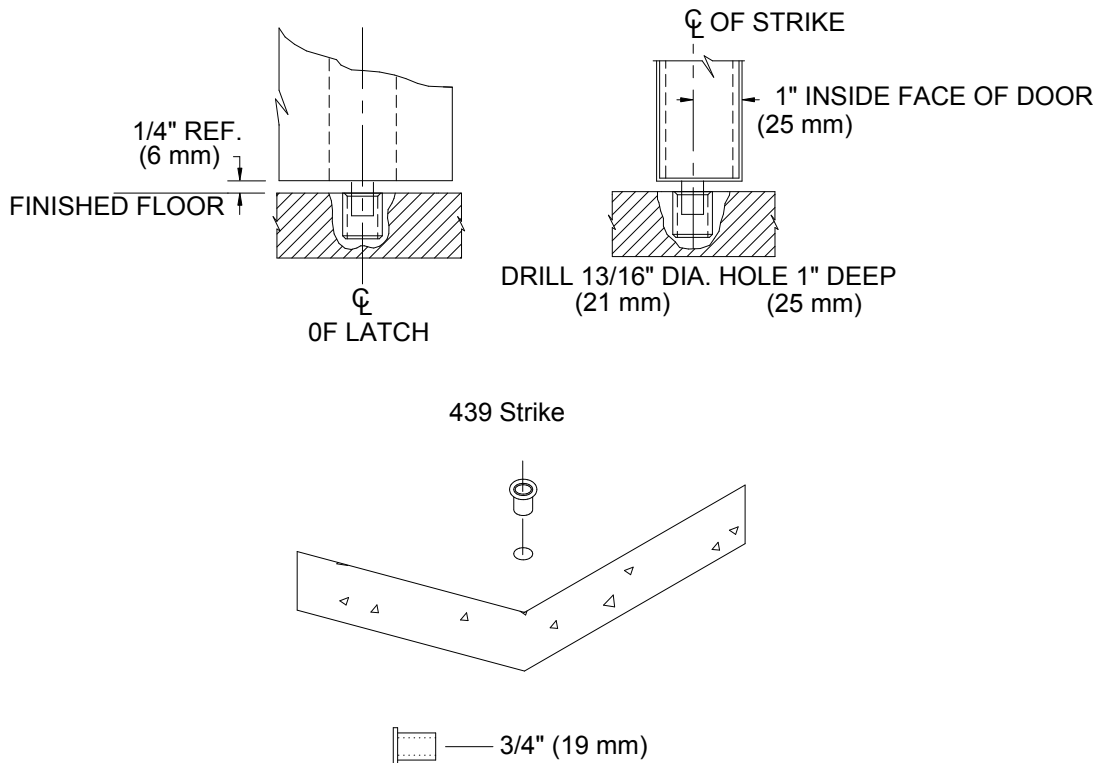
NOTE:  
For optional "Filler" installations see "Options" pages at rear.

15 Standard installation of end cap mounting bracket

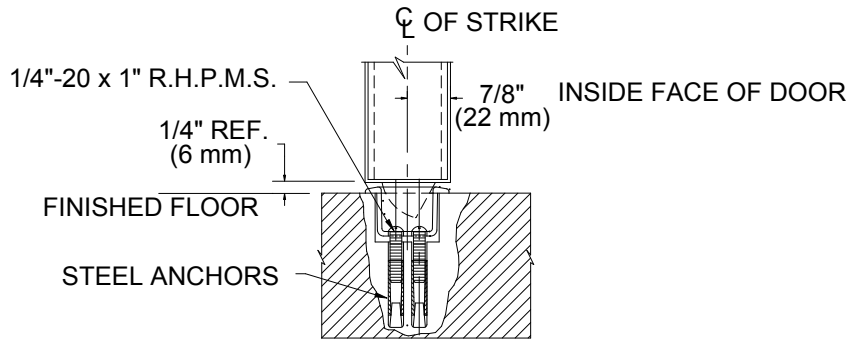
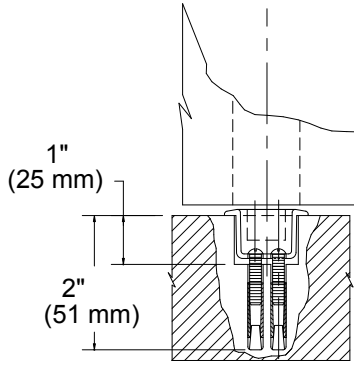


16 Hang door in frame

17 Standard 439 strike installation: Optional bottom strikes on following page

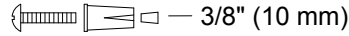
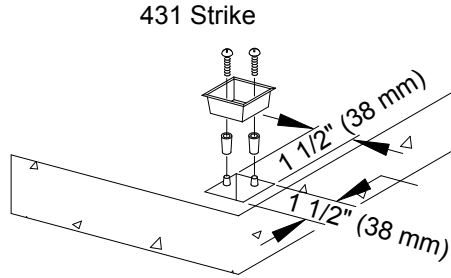


18 Optional pullman latch No. 431 strike installation

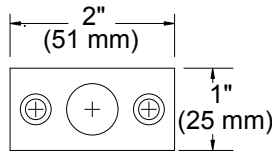


3/8" Dia. (10 mm) hole  
x 2" (51 mm) Deep  
(2) Places

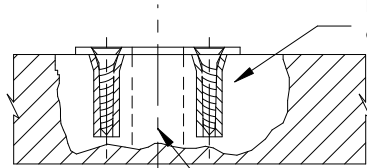
NOTE: 1 5/16" (33 mm) Min. to 1 5/8" (41 mm) Max.  
Square cut out for recessed strike, 1" (25 mm)  
Deep.



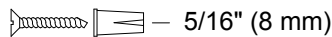
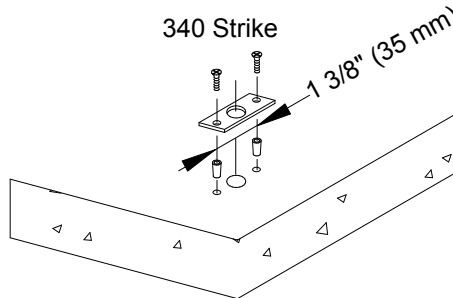
19 Optional side bolt No. 340 strike installation



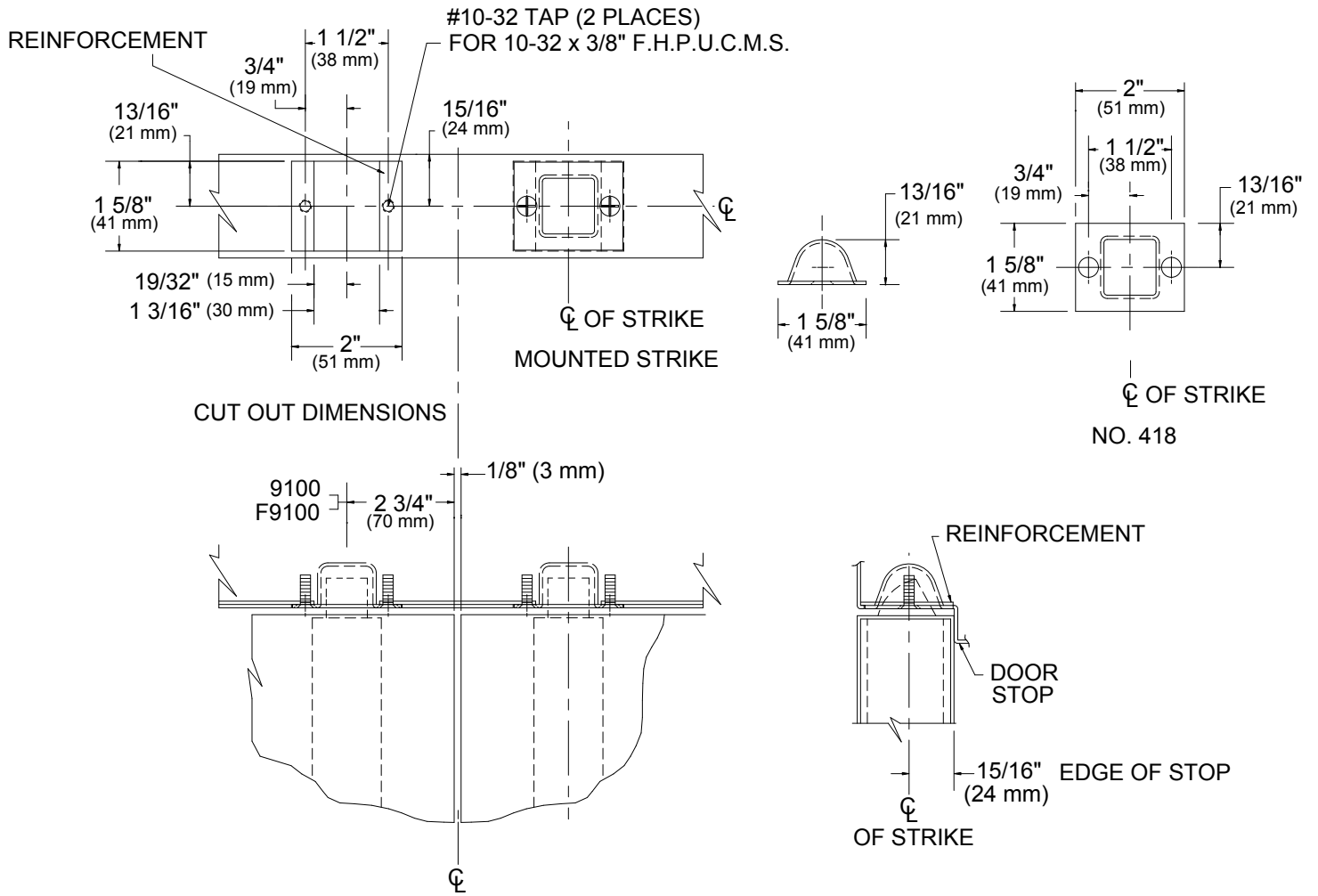
FOR SURFACE STRIKE  
DRILL (2) 5/16" (8 mm)  
DIA. HOLES X 1" (25 mm)  
DEEP FOR LEAD ANCHORS  
& 12 X 1" F.H.P.T.S.



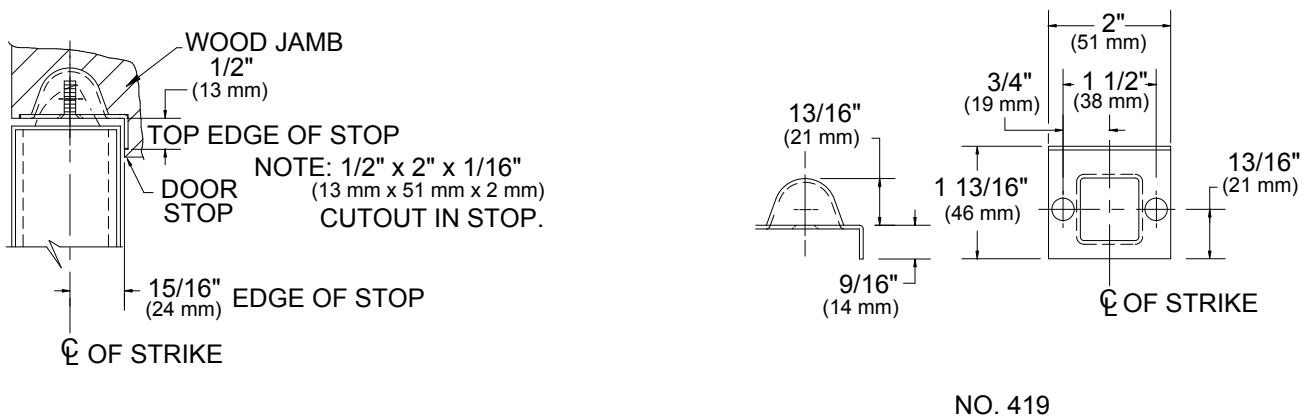
NOTE: DRILL 5/8" (16 mm)  
DIA. HOLE 1/2"  
(13 mm) DEEP MINIMUM.



20 Standard No. 418 top strike installation

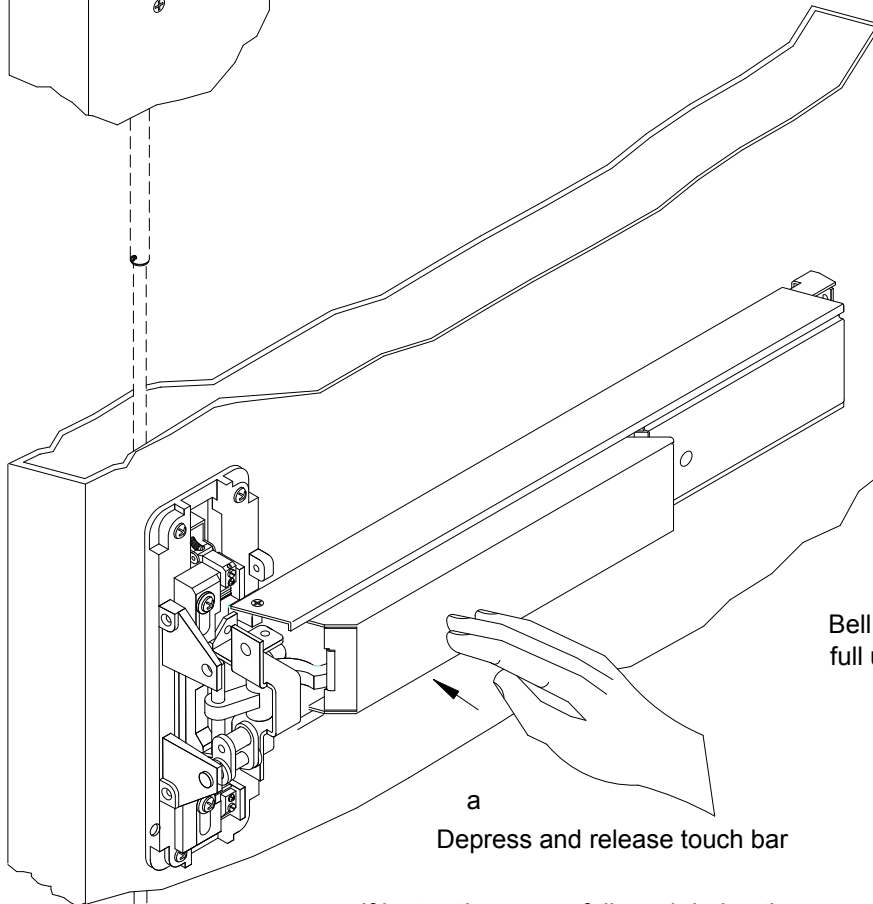
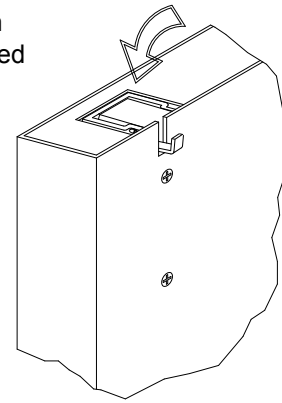
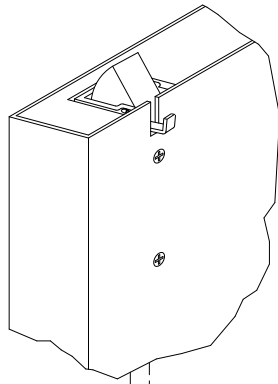


21 Optional prep for No. 419 top strike in wood frame



Door to be blocked open to check adjustments.

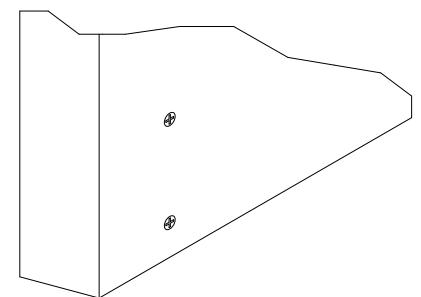
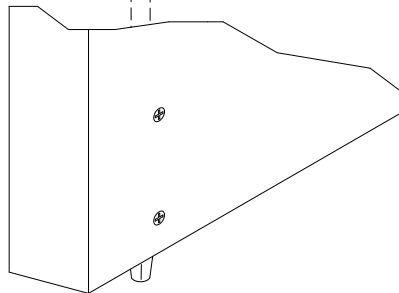
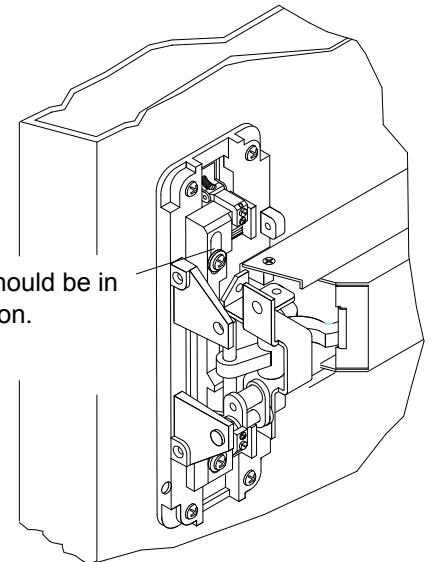
Top latch must go fully in and remain in the retracted position, held by the tripping lever.



Bell crank should be in full up position.

a  
Depress and release touch bar

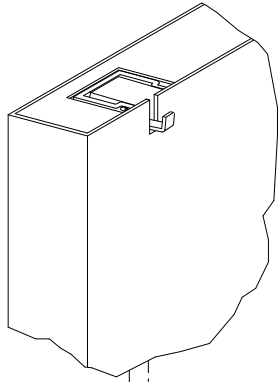
If instructions were followed during the preliminary adjustment steps, the top latch should remain retracted. You may only have to adjust the bottom latch.



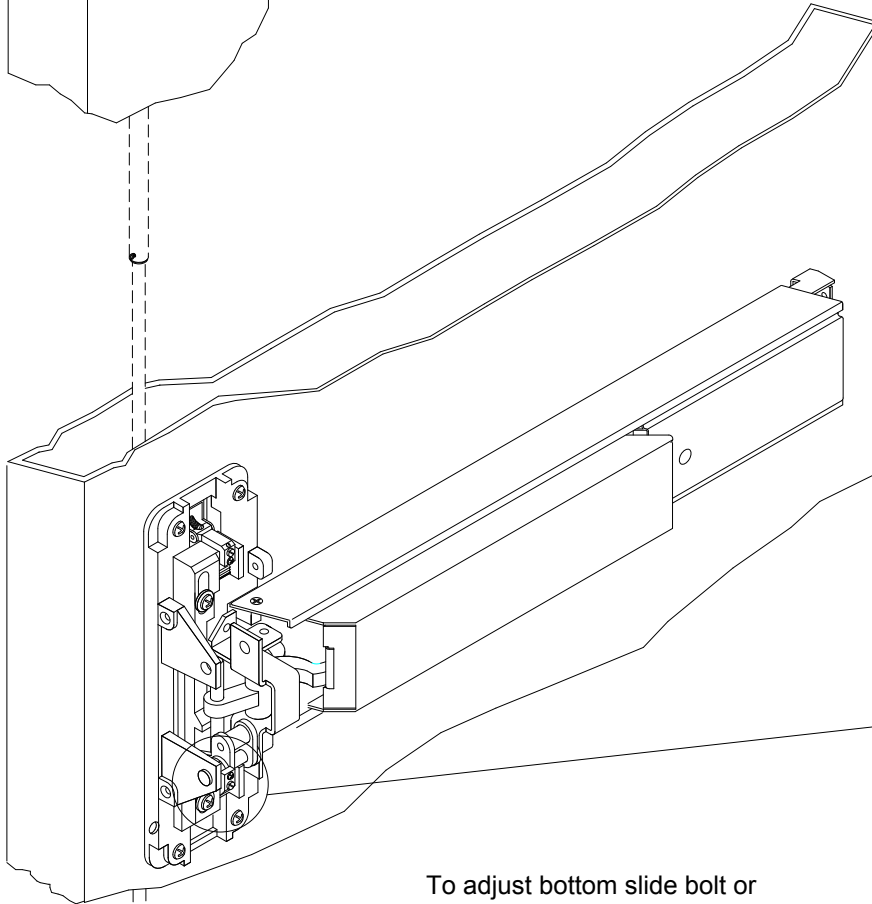
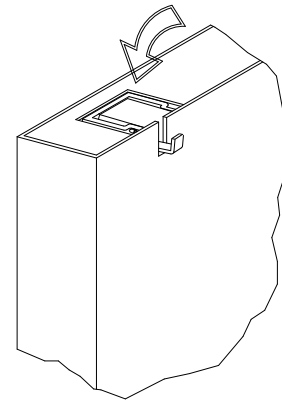
Bottom slide bolt or pullman latch should be flush across bottom of door and bracket.



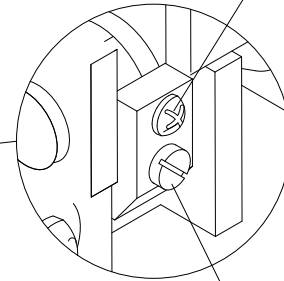
Door to be blocked open to check adjustments.



Top latch and rod assembly **MUST** always be adjusted first. If latch remained retracted and dead latches when tripping lever is tripped, you may proceed to adjust the bottom latch if required.



Locking screw



Adjusting screw

To adjust bottom slide bolt or latch follow steps below.

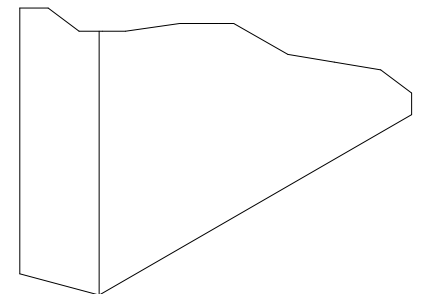
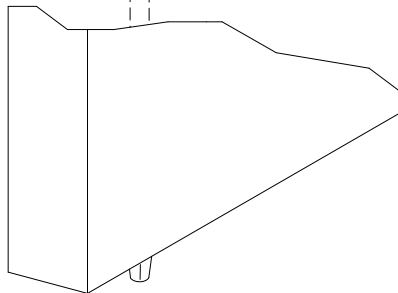
Top latch should be in the captured or retracted position.

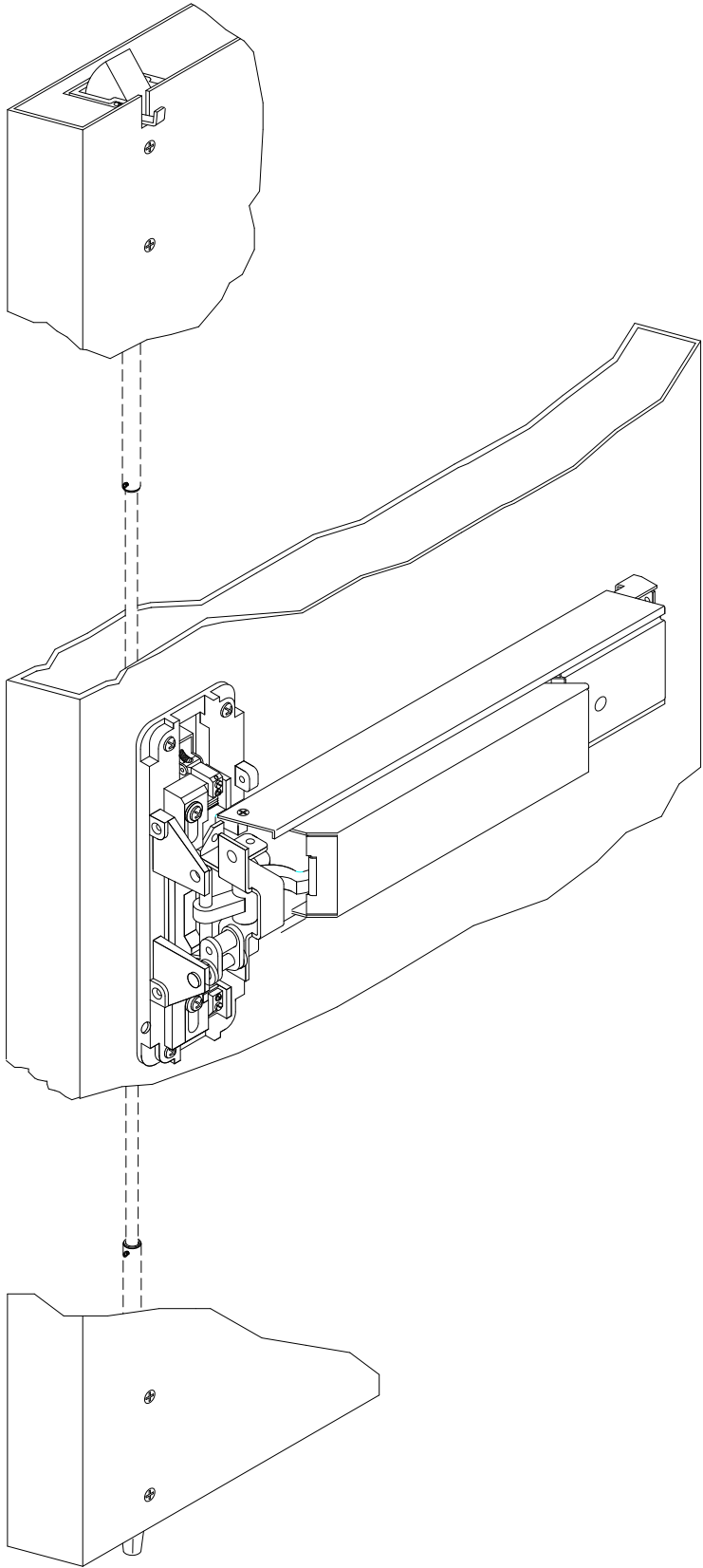
Loosen locking screw on bottom connecting link assembly.

Rotate adjusting screw clockwise (right) to shorten and counter-clockwise (left) to lengthen.  
With top latch retracted, adjust bottom rod until slide bolt or latch is flush across the bottom of the door.

Re-tighten the locking screw.

Re-check outside trim operation.





Depress tripping lever allowing latch bolts to extend.

Check to see that top latch is dead latched, bottom bolt or latch extended (Note: If pullman latch is used in place of slide bolt on bottom, it too will dead latch when fully extended and adjusted properly.) and see that bell crank is completely down.

Depress touch bar slowly. Check to see that bell crank is all the way up and latches are fully retracted and remain retracted, held by tripping lever when touch bar is released.

If outside trim is installed, its function must be checked at this time as well. Additional adjustment to rods may be required for proper function of outside trim.

Rotate knob, lever or depress thumb piece. Bell crank should travel upward retracting latches. Latches should be captured by tripping lever when outside trim is released. And dead latch when tripping lever is tripped and latches are extended. If latches do not remain retracted or if top latch does not dead latch when extended, you will have to re-adjust the top rod assembly.

If latch does not dead latch, turn adjusting screw one (1) turn to the right (clockwise) and re-check. Check for dead latch after each turn on adjusting screw.

If latch does not retract fully or is not captured by the tripping lever, turn adjusting screw one (1) turn to the left (counter-clockwise). Re-check after each turn by depressing tripping lever and then operating outside trim.

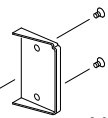
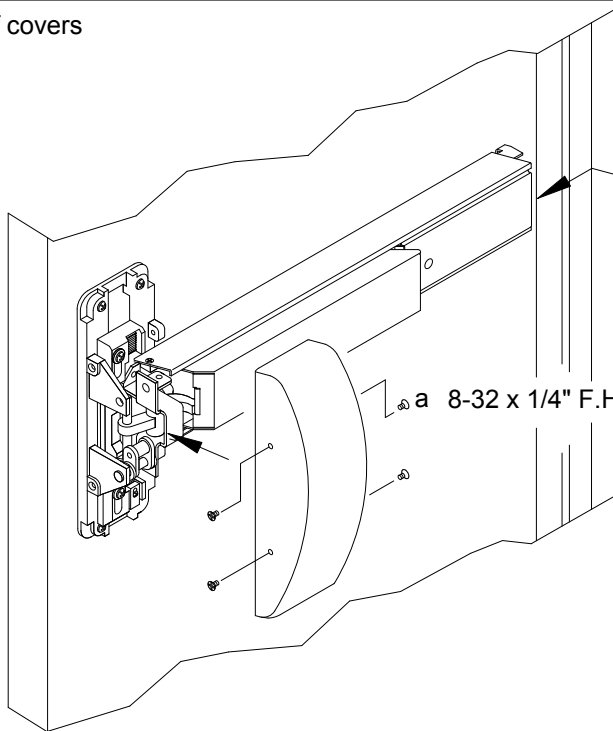
NOTE: Bell crank may not sit in full up position when latches are held retracted after adjustments have been made for outside trim operation.

Once outside trim and inside exit operation are achieved recheck bottom bolt or latch. Re-adjust if necessary.

Close door and check for proper alignment of strikes and alignment of tripping lever with top stop.

Check entrance and exit operation of door and hardware.

25 Installation of covers



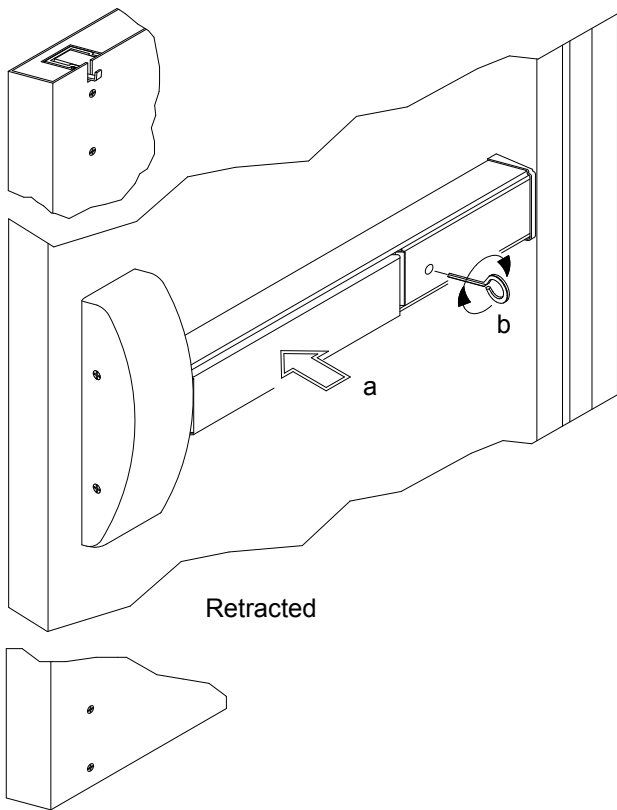
b 8-32 x 1/4" F.H.P.U.C.M.S.

NOTE:

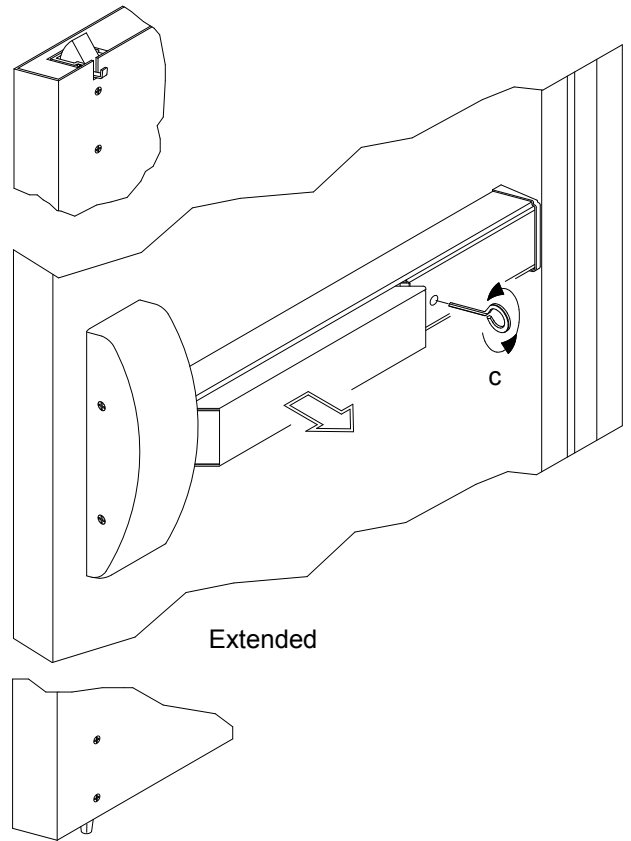
If carton label lists: "ES", "BPA", "BPAR", "DWA", "CD", "MS", "LM", "MD", "DE" or "LM/MS-BP" prefix, see "Options" pages at rear, prior to installing the end cap.

a 8-32 x 1/4" F.H.P.U.C.M.S.

26 Standard hex key dogging



Retracted



Extended

GENERAL MAINTENANCE NOTES:

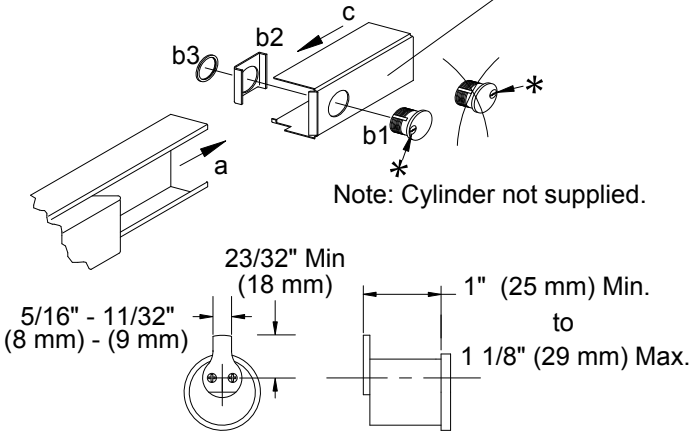
The DORMA 9000 Series Exit Devices are designed to give years of trouble free service, however, depending on the installation, location, climate conditions etc. routine maintenance is recommended in all latch bolt locations. The device should be periodically cleaned and re lubricated to ensure proper function and operation of all moving parts.

# OPTIONS

## "CD" (CYLINDER DOGGING) OPTION:

Cylinder dogging installation instructions & cylinder specifications. (Requires a standard mortise cylinder.)

NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.



Note: Cylinder not supplied.

### Useable Cams

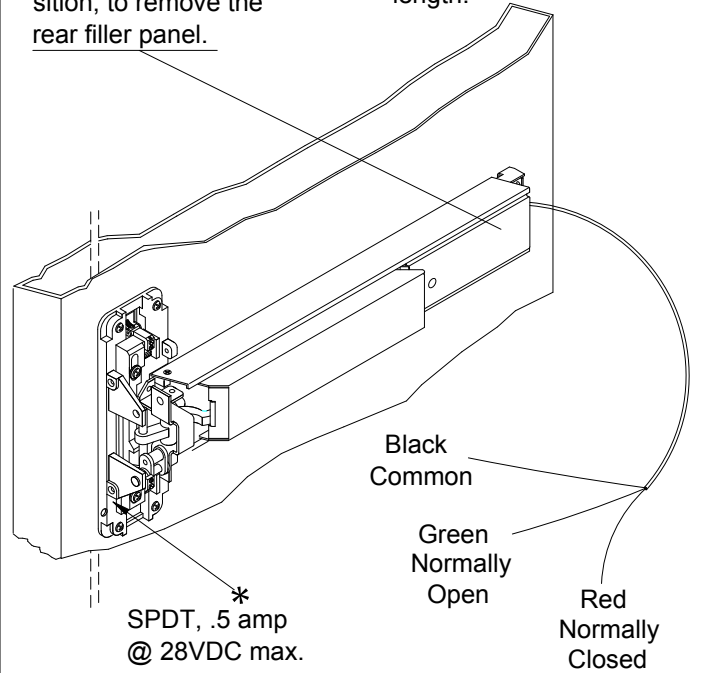
Arrow	001
Assa	Std. (Yale)
Best	C136
Corbin/Russwin	A02
Falcon	12667-3
Ilco/Unican	SC1
Lori	SC1 4200-82-2002 Std.
Sargent	13-0664 or 13-0660
Schlage	001
Yale	2160

## "LM" (LATCH MONITOR) OPTION:

Latch monitor: Monitors movement of latch bolt, with or without depressing of touch bar. Can be wired normally open or normally closed.

NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.

\*NOTE: Use caution when cutting touch bar and rail to length.



## "BPA" & "BPAR" (ALARM) OPTION: (STANDARD INSTALLATION)

BPA: Battery powered alarm, sounds continuous or until disarmed.

BPAR: Battery powered alarm, sounds for 4 minutes, automatically resets.

"Alarm mode set at factory."

### SIZE A:

Will fit 48" (1219 mm) door opening without cutting. Can be cut to fit a 39" (991 mm) minimum door opening.

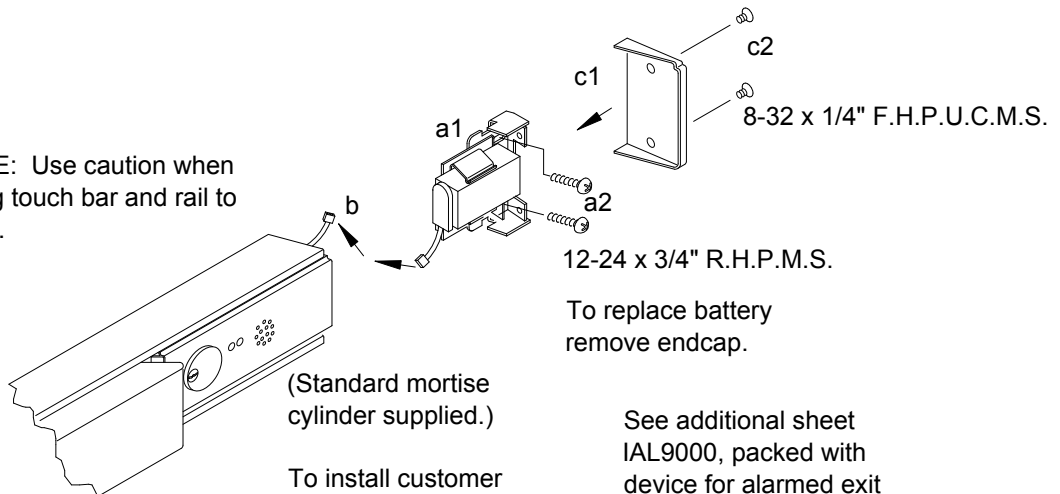
### SIZE B:

Will fit 36" (914 mm) door opening without cutting. Can be cut to fit a 33" (838 mm) minimum door opening.

### SIZE C:

Will fit 36" (914 mm) door opening without cutting. Can be cut to fit a 30" (762 mm) minimum door opening.

\*NOTE: Use caution when cutting touch bar and rail to length.



(Standard mortise cylinder supplied.)

To install customer supplied cylinder, see cylinder dogging option at top of page.

To replace battery remove endcap.

See additional sheet IAL9000, packed with device for alarmed exit device operation.

# OPTIONS

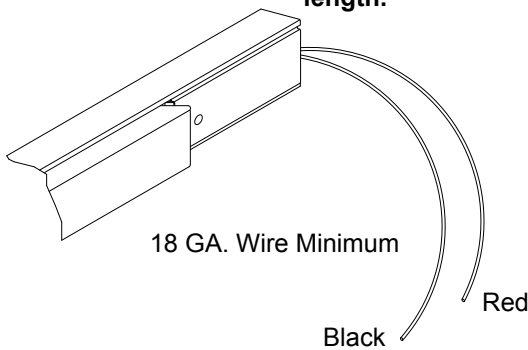
## "ES" (ELECTRIC LATCH RETRACTION) OPTION:

Electrically retracts latchbolt(s) when energized by power supply.

**REQUIRES DORMA PS-501 POWER SUPPLY, WILL NOT OPERATE FROM OTHER MANUFACTURES POWER SUPPLIES.**

PS-501 Will operate (2) "ES" 9100 exit devices. By adding a second "ES2" logic card, (2) additional "ES" 9100 exit devices may be used.

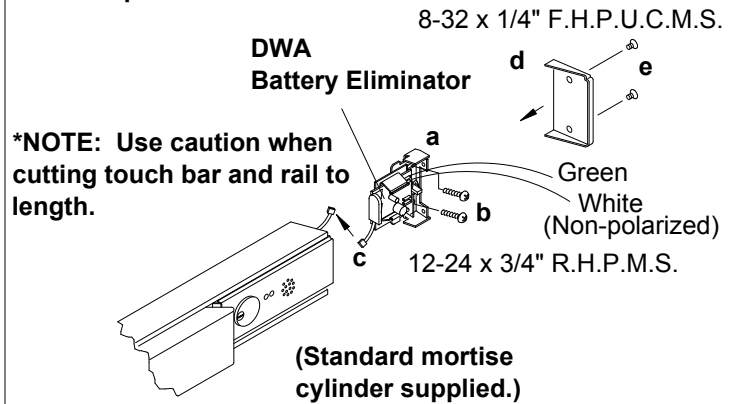
**\*NOTE: Use caution when cutting touch bar and rail to length.**



## "DWA" (DIRECT WIRED ALARM) OPTION:

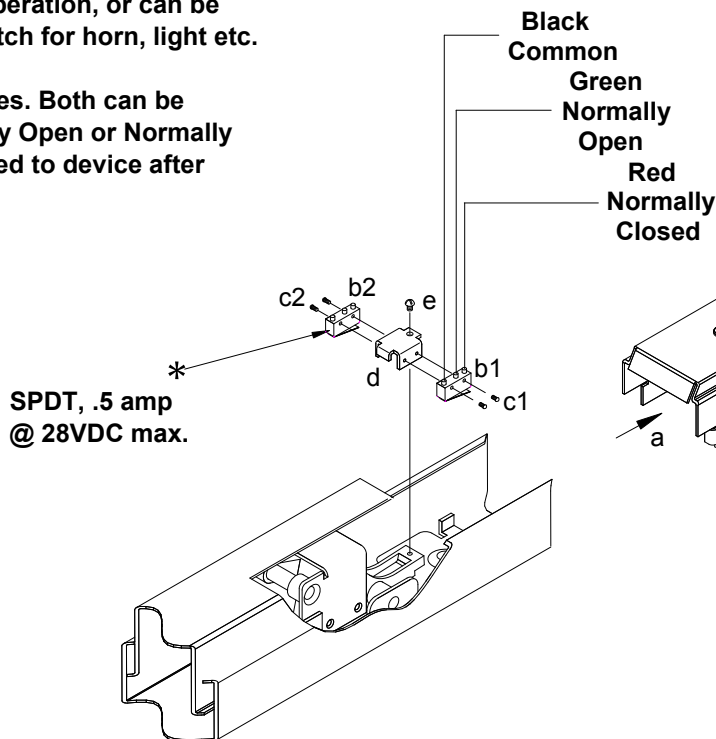
Connected to outside power source. 12-24 Volt AC/DC Power Supply. i.e. DORMA Step down transformer, Contact DORMA for other power supplies available.

See additional sheet IAL9000 packed with device for alarmed exit device operation.



## "MS" (MICRO SWITCH) OPTION:

"MS" option allows monitoring of touch bar during normal operation, or can be used as a signal switch for horn, light etc. Come standard with (2) two micro switches. Both can be wired either Normally Open or Normally Closed. Can be added to device after installation.



**\*NOTE: Touch bar must be in dogged down position, to remove the rear filler panel.**

**\*NOTE: Use caution when cutting touch bar and rail to length.**

# OPTIONS

## "MD" (MAGNETIC DOGGING) OPTION:

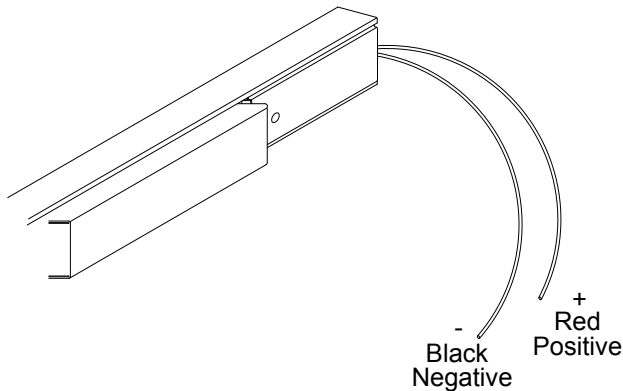
Electrically dogs touch bar when energized by power supply, then depressed. Releases upon interruption of power.

**.25 AMP CURRENT DRAW @ 24VDC**

**REQUIRES DORMA PS-545 POWER SUPPLY CAPABLE OF POWERING 1 - 4 "MD" DEVICES. THE USE OF A POWER TRANSFER (ie ES105) OR AN ELECTRIC HINGE IS RECOMMENDED.**

**FITS "STANDARD" TOUCH BAR AND RAIL ASSEMBLIES ON BOTH THE 5000 AND 9000 SERIES EXIT DEVICES. NOT AVAILABLE ON DEVICES SUCH AS "ES", "DE", "AL" ETC.**

**\*NOTE: Use caution when cutting touch bar and rail to length.**



**MAXIMUM HOLDING FORCE 40# - 60#. IMMEDIATE RELEASE UPON REMOVAL OF POWER.**

Maximum Wire Length From Power Supply To Device In Feet x Wire Gage/Size *				
WIRE FEET	18AWG	16AWG	14AWG	12AWG
	25	50	75	100

\* For wiring to electric hinge or power transfer.

## "DE" (DELAYED EGRESS) OPTION:

**Note: Refer to 9000 Series Installation Instructions for templating and installation of device. These are additional instructions for installation and operation of the "Delayed Egress" unit.**

**85 decibel Alarm - Standard**

**LED Status Indicator - Standard**

**Nuisance Alarm - Standard**

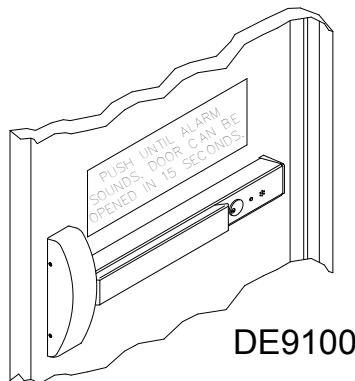
**Key Switch Control - Standard**

**Remote Authorized Egress - Standard**

**Remote Re-arm - Standard**

**Remote Bypass - Standard**

**Door Position Input - Standard**



**REQUIRES DORMA PS-510 POWER SUPPLY.**

**Easily accessible slide in and out electronics.**  
**Meets UL & ANSI/BHMA requirements.**

**SIZE A:**

**Will fit 48" (1219 mm) door opening without cutting.**

**Can be cut to fit a 40 1/2" (1029 mm) minimum door opening.**

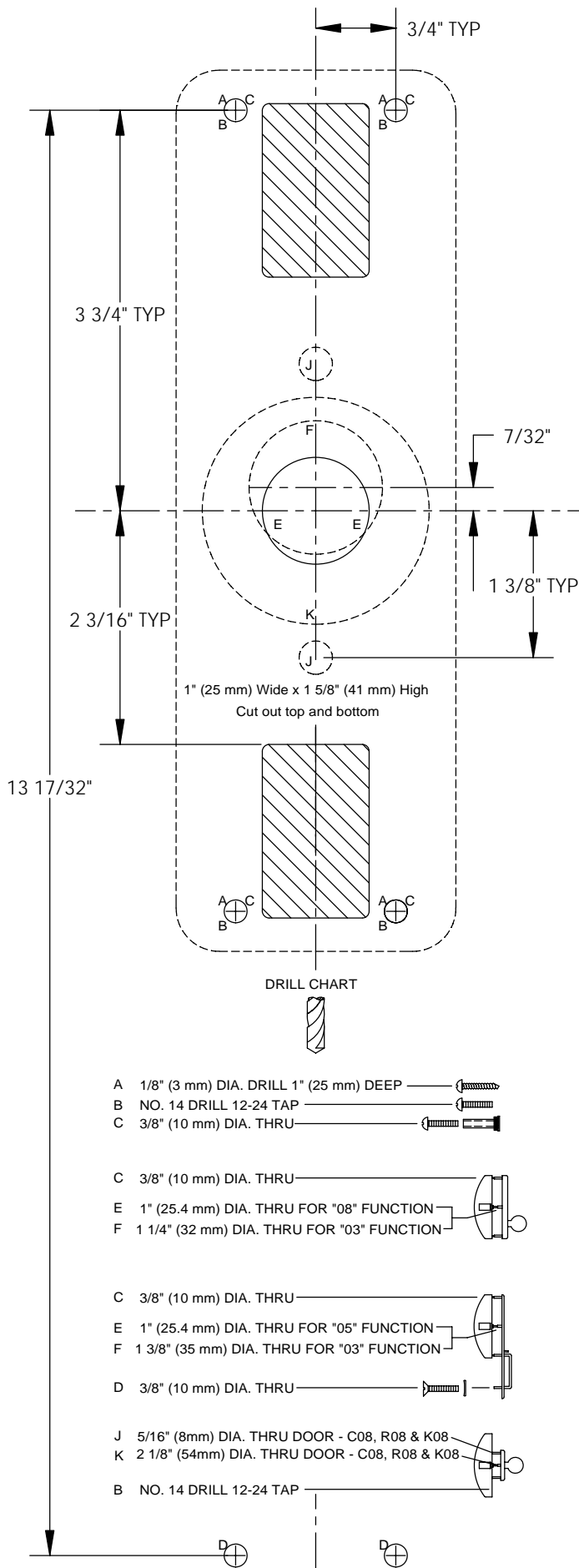
**SIZE B:**

**Will fit 36" (914 mm) door opening without cutting.**

**Can be cut to fit a 34 1/2" (876 mm) minimum door opening.**



INSIDE DOOR PREP

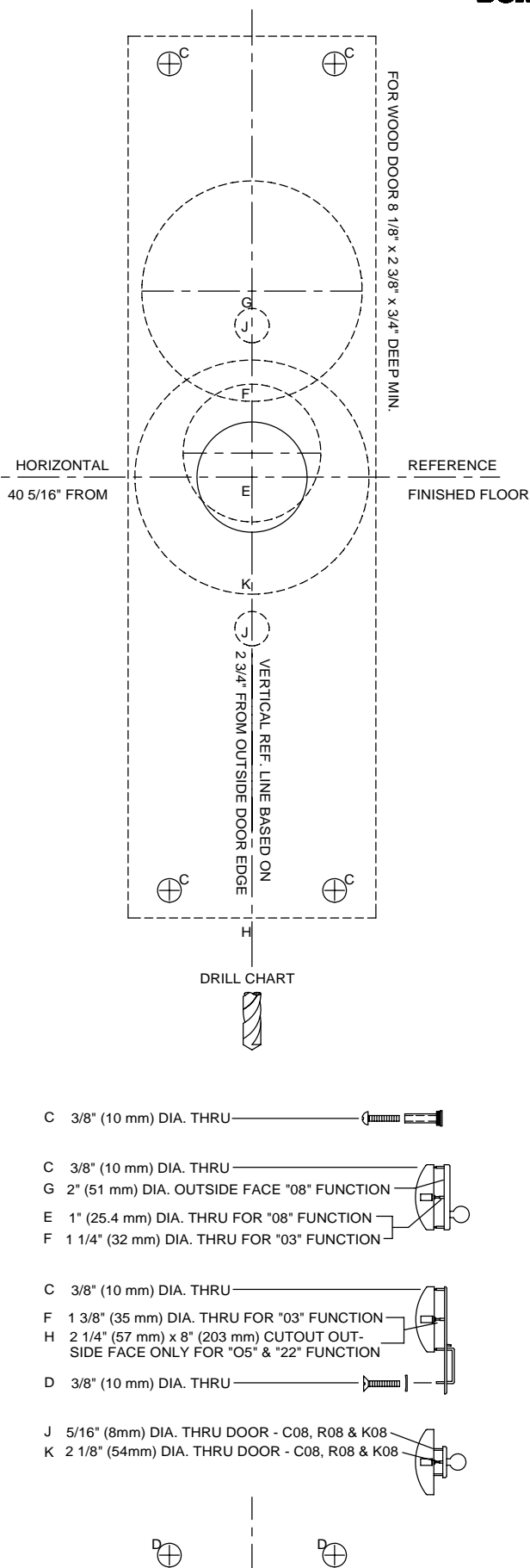


DRILL CHART

- A 1/8" (3 mm) DIA. DRILL 1" (25 mm) DEEP
- B NO. 14 DRILL 12-24 TAP
- C 3/8" (10 mm) DIA. THRU
- C 3/8" (10 mm) DIA. THRU
- E 1" (25.4 mm) DIA. THRU FOR "08" FUNCTION
- F 1 1/4" (32 mm) DIA. THRU FOR "03" FUNCTION
- C 3/8" (10 mm) DIA. THRU
- E 1" (25.4 mm) DIA. THRU FOR "05" FUNCTION
- F 1 3/8" (35 mm) DIA. THRU FOR "03" FUNCTION
- D 3/8" (10 mm) DIA. THRU
- J 5/16" (8mm) DIA. THRU DOOR - C08, R08 & K08
- K 2 1/8" (54mm) DIA. THRU DOOR - C08, R08 & K08
- B NO. 14 DRILL 12-24 TAP

**DO NOT SCALE  
DRAWING**

OUTSIDE DOOR PREP



DRILL CHART

- C 3/8" (10 mm) DIA. THRU
- C 3/8" (10 mm) DIA. THRU
- G 2" (51 mm) DIA. OUTSIDE FACE "08" FUNCTION
- E 1" (25.4 mm) DIA. THRU FOR "08" FUNCTION
- F 1 1/4" (32 mm) DIA. THRU FOR "03" FUNCTION
- C 3/8" (10 mm) DIA. THRU
- F 1 3/8" (35 mm) DIA. THRU FOR "03" FUNCTION
- H 2 1/4" (57 mm) x 8" (203 mm) CUTOUT OUTSIDE FACE ONLY FOR "05" & "22" FUNCTION
- D 3/8" (10 mm) DIA. THRU
- J 5/16" (8mm) DIA. THRU DOOR - C08, R08 & K08
- K 2 1/8" (54mm) DIA. THRU DOOR - C08, R08 & K08