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INSTALLATION INSTRUCTIONS FOR ADVANTEX[®] SURFACE VERTICAL ROD



Surface Vertical Rod Exit Device

27 Series

for Medium to Wide Stile Hollow Metal door applications

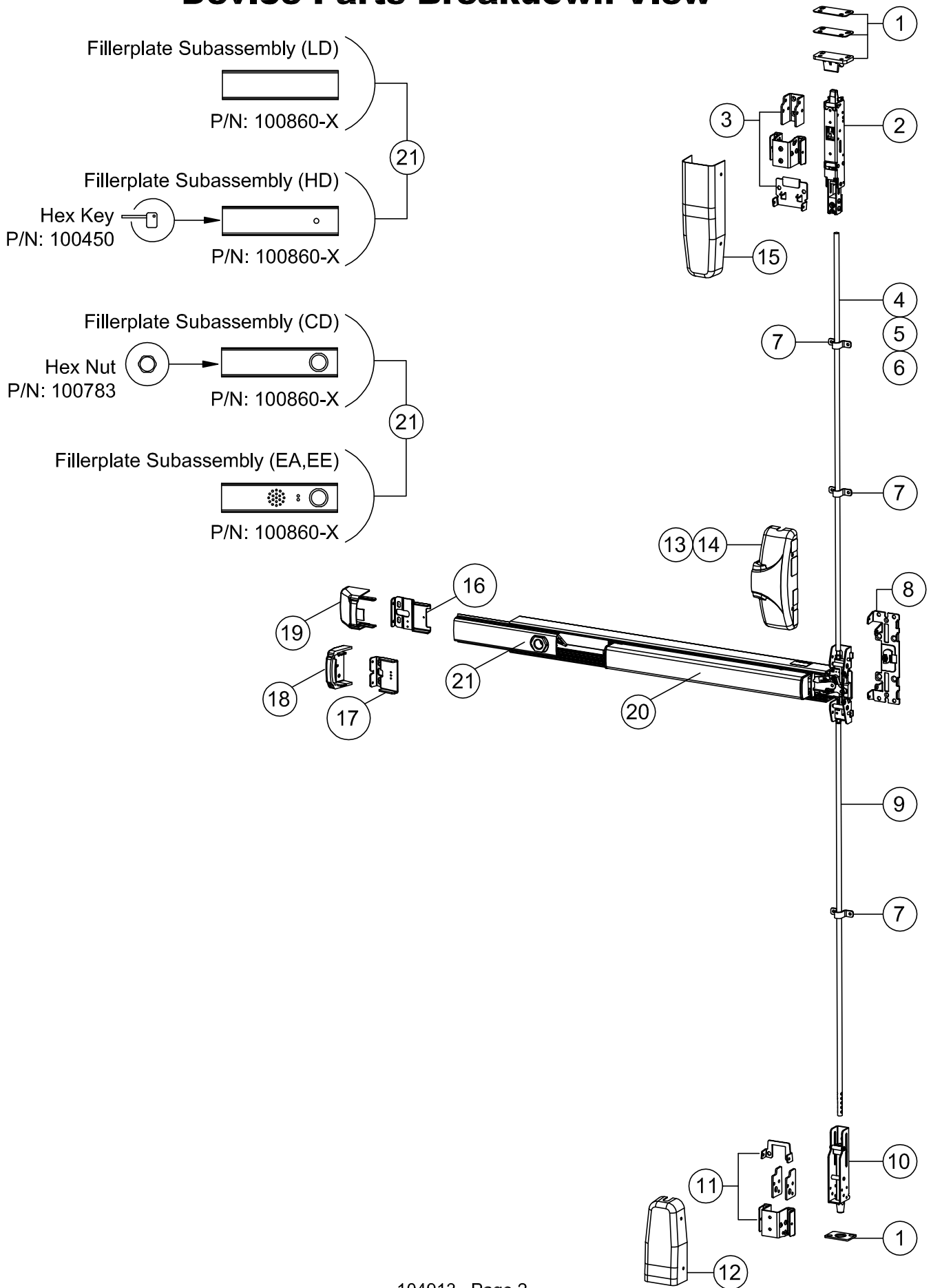
Drawing no. 106400

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For device installation videos,
scan QR code or go to detex.com



Device Parts Breakdown View

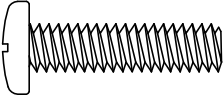
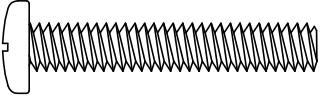





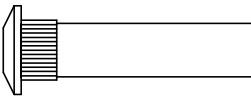
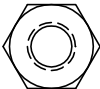


Device Parts Breakdown Part Numbers

ITEM	DESCRIPTION	Fire	Panic Non-fire	PART NUMBER
		QTY	QTY	
1	Strike kit, ADV 27	1	1	106405-1
2	Top latch assembly, FEMA, SVR	0	1	105984-3
	Top latch assembly, FEMA, SVR, Fire	1	0	105984-4
3	Top latch mounting kit	1	1	106407-1
4	Top rod, SS, 7'	1	1	104051-3
	Top rod, SS, 8'			104051-4
5	Top rod, ADV 27, Latch side, 10'	1	1	106445
6	Top rod, ADV 27, Device side, 10'	1	1	106446
7	Rod guide kit, ADV 27 (3 rod guide)	1	1	104073-4
8	Backplate assembly, wide BP11 (03 cam)	1		104171-1
	Backplate assembly, wide BP13 (03 cam)		1	104171-2
9	Bottom rod, V50	1	1	103544
10	Bottom bolt assembly, SVR, FEMA	1	1	106140
11	Bottom latch mounting kit, ADV 27	1	1	106408-1
12	Cover, bottom latch, SVR, FEMA	1	1	106148-X
13	Cover, centercase, wide, SVR, SS	1	1	106141-X
14	Cover, centercase, wide, SVR, 628	1	1	104640-13
	Cover, centercase, wide, SVR, 693			104640-14
	Cover, centercase, wide, SVR, 695			104640-15
15	Cover, top latch, SVR, FEMA	1	1	106147-X
16	Endcap mounting bracket, EC1			100147
17	Flush endcap mounting bracket, EC2	1	1	104303
18	Flush endcap, EC2, AL	1	1	104612-X
	Flush endcap, EC2, AL, FC			104686-X
	Flush endcap, EC2, SS			104304-X
	Flush endcap, EC2, SS, FC			104317-X
19	Endcap assembly, EC1, SS	1	1	101642-X
	Endcap assembly, EC1, SS, FC			102095-X
20	S&R Centercase/Pushpad assy	1	1	105500-X
21	S & R Fillerplate subassembly	1	1	100860-X

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

Hardware Table for BASIC device mounting.
Additional hardware is provided per the device configuration in kit form and is addressed on the appropriate pages as required

Fastener Table		
Device Mounting Hardware		
Hardware style & size	Description	Used on
	1/4-20 x 1" PPHMS P/N: 100980	Used to install backplate & endcap bracket to door
	1/4-20 x 1-1/2" PPHMS P/N: 100954	Used to install backplate & endcap bracket on 2" or greater door thickness with Trim and/or sex nuts
	10-24 x 1/4" PPHMS P/N: PP-5304-104	Used to secure device centercase to backplate
	10-24 x 5/16" PTHMS P/N: 106432-305	Used to install bottom and top latch covers to latch assemblies
	10-32 x 5/16" PFHUMS P/N: 101632-X	Used to install endcap to endcap bracket (Multiple finishes included)
	6-32 x 3/8" PFHUMS P/N: 100162-X	Used to install centercase cover to backplate (Multiple finishes included)
	#14 Lockwasher P/N: PP-5067-25	Lockwashers used with screws A or B
	1/4-20 X 1.60 Sex nut P/N: 105274-X	Used to install backplate and endcap bracket to door If using sex nuts with TRIM: Drill 9/32 hole through interior door face. Drill 1/2 hole through exterior door face. If using sex nuts without TRIM: Drill 3/8 hole through exterior door face.
	Jam nut P/N: PP-5064-3	Used to secure top and bottom rods

Tools Required

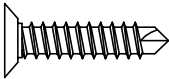
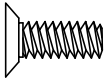
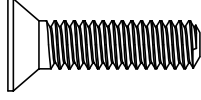
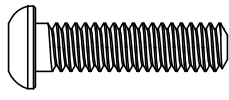

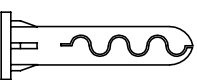
Power Drill
 Level
 Screw Drivers
 Tape Measure
 Safety Glasses

Pencil
 Center Punch
 Drill Bit Set
 Hammer
 Tap Wrench

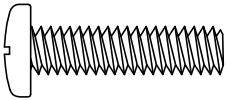
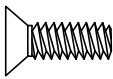
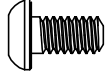

Pliers
 Hack Saw (Chopsaw preferred)
 Hex Wrench - 1/8 & 5/32
 Masonary Bits - 3/16", 1/4", 5/16", 7/8", & 1"

Fastener Tables


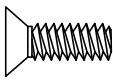
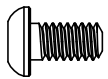
Strike Mounting Hardware

	#10 x 1" self-cutting PFH P/N: 100109	Used to install bottom strike to floor (used with anchors, two styles of anchor included)
	10-24 x 1/2" PFHUMS P/N: 100112-108	Used to install bottom strike to floor (alternate)
	1/4-20 x 1" FHSCMS 5/32 Socket HD P/N: 105774-5	Used to secure top strike to header
	1/4-20 x 1" BHSCMS 5/32 Socket HD P/N: 105846-7	Used to install top strike to header
	Anchor P/N: 101129-1	1/4 pilot hole Used to install bottom strike to floor
	Alligator Anchor P/N: 102642-6	5/16 pilot hole Used to install bottom strike to floor

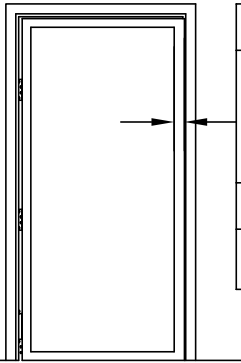
Top Latch Mounting Kit Hardware

Screw style & size	Description	Used on
	1/4-20 x 1" PPHMS P/N: 100980	Used to install latch cover tabs, saddle, and top latch support to door
	10-24 x 1/2" PFHMS P/N: 105622-108	Used to install top latch anchor to door
	10-24 x 3/8" BHSCMS 1/8 Socket HD P/N: 106434-106	Used to install latch saddle, anchor, & top latch assembly together
	10-24 x 1/4" BHSCMS 1/8 Socket HD P/N: 106434-104	Used to install latch saddle to top latch assembly

Bottom Latch Mounting Kit Hardware

Screw style & size	Description	Used on
	1/4-20 x 1" PPHMS P/N: 100980	Used to install bottom cover bracket, saddle, & latch cover tabs to door
	10-24 x 1/2" PFHMS P/N: 105622-108	Used to install bottom latch to door
	10-24 x 3/8" BHSCMS 1/8 Socket HD P/N: 106434-106	Used to install latch saddle to bottom latch assembly

!!!CHECK BEFORE STARTING!!!

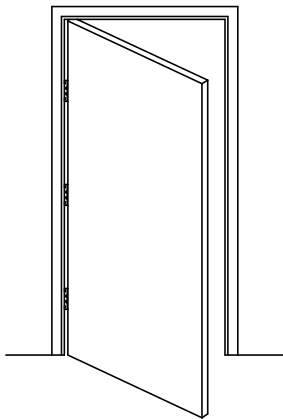
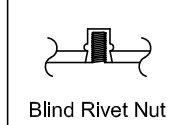
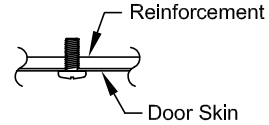


Wide Stile (Surface Strike)
Minimum door stile 4-1/2" (114 mm). Template drawings provide door and frame structural and dimensional specifications for door and frame preparation.
Narrow Stile
Minimum door stile 2" (51mm)

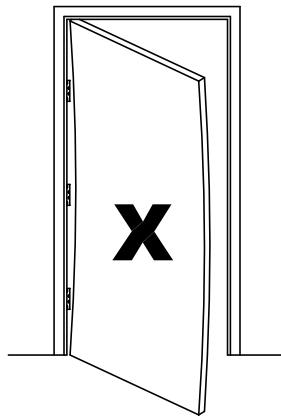
Doors and frames with walls having a structural thickness (metal skin plus reinforcement, or solid wood) to engage less than (3) full screw threads, are considered unreinforced for hardware.

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

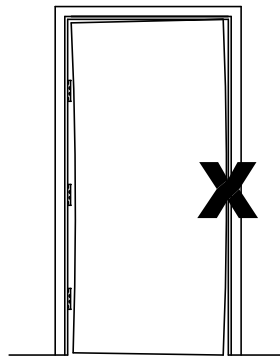
Reinforced door or frame engages at least (3) screw threads.



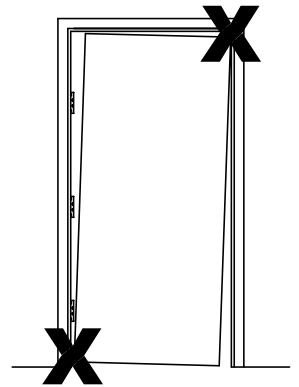
Door Must Swing Freely



Door Must Not be Warped



Door Must Not Bind



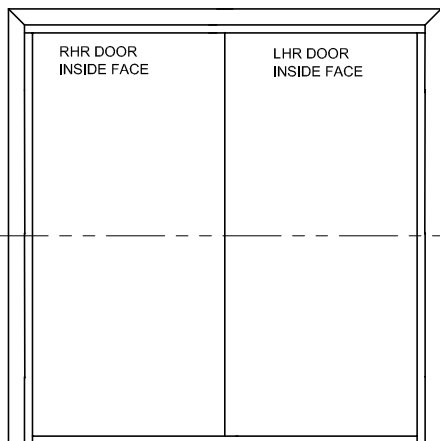
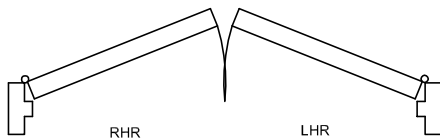
Door Must Not Sag

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.



☉ HORIZONTAL REFERENCE
40" RECOMMENDED
FINISHED FLOOR

USE TEMPLATES PROVIDED WITH DEVICE

STEP 1: PREP DOOR

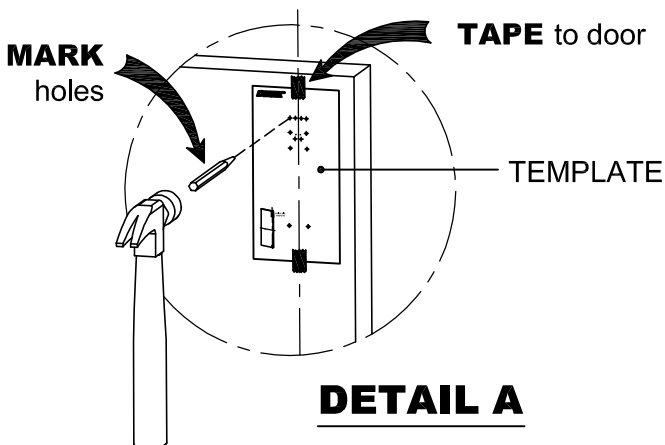
- 4 MARK, DRILL, & TAP** holes for top latch assembly. Use **TEMPLATE** provided (P/N 106448) **SEE DETAIL A**

- 2 MARK** vertical centerline for 2-3/4 BACKSET

- 3 MARK, DRILL, & TAP** holes for backplate. Use **TEMPLATE** provided (P/N 106447)

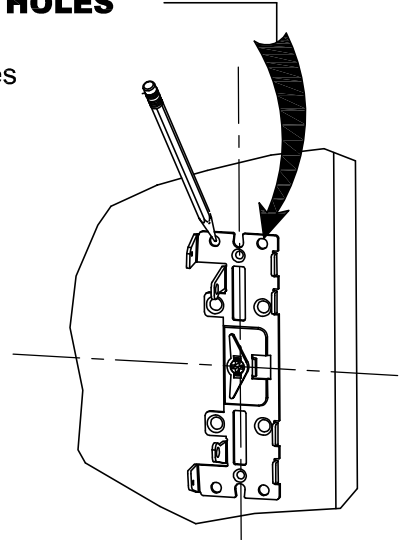
- 1 RECOMMENDED MARK** centerline for unit 40 inches from finished Floor

- 5 MARK, DRILL, & TAP** holes for bottom latch assembly. Use **TEMPLATE** provided (P/N 106449)

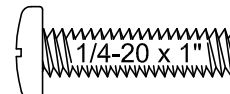


STEP 2: INSTALL MOUNTING PLATE

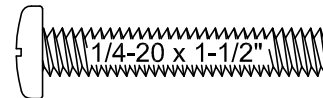
- 1 BACKPLATE HOLES**
4 places
Follow templates



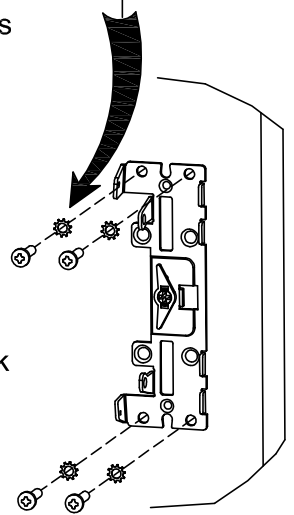
- 2 INSTALL** backplate with (4) lockwashers & (4) screws



OR

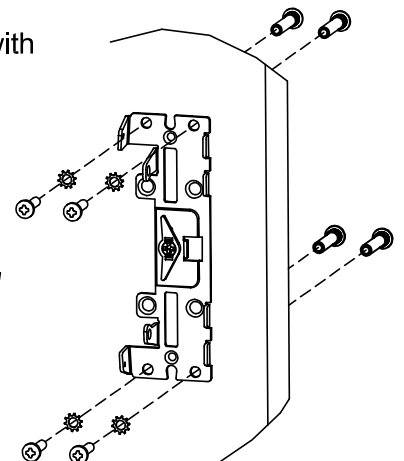
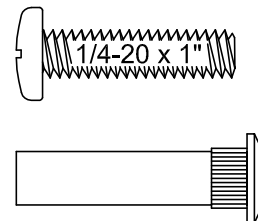


Note:
1-1/2 screws to be used on 2" thick or greater doors with TRIM



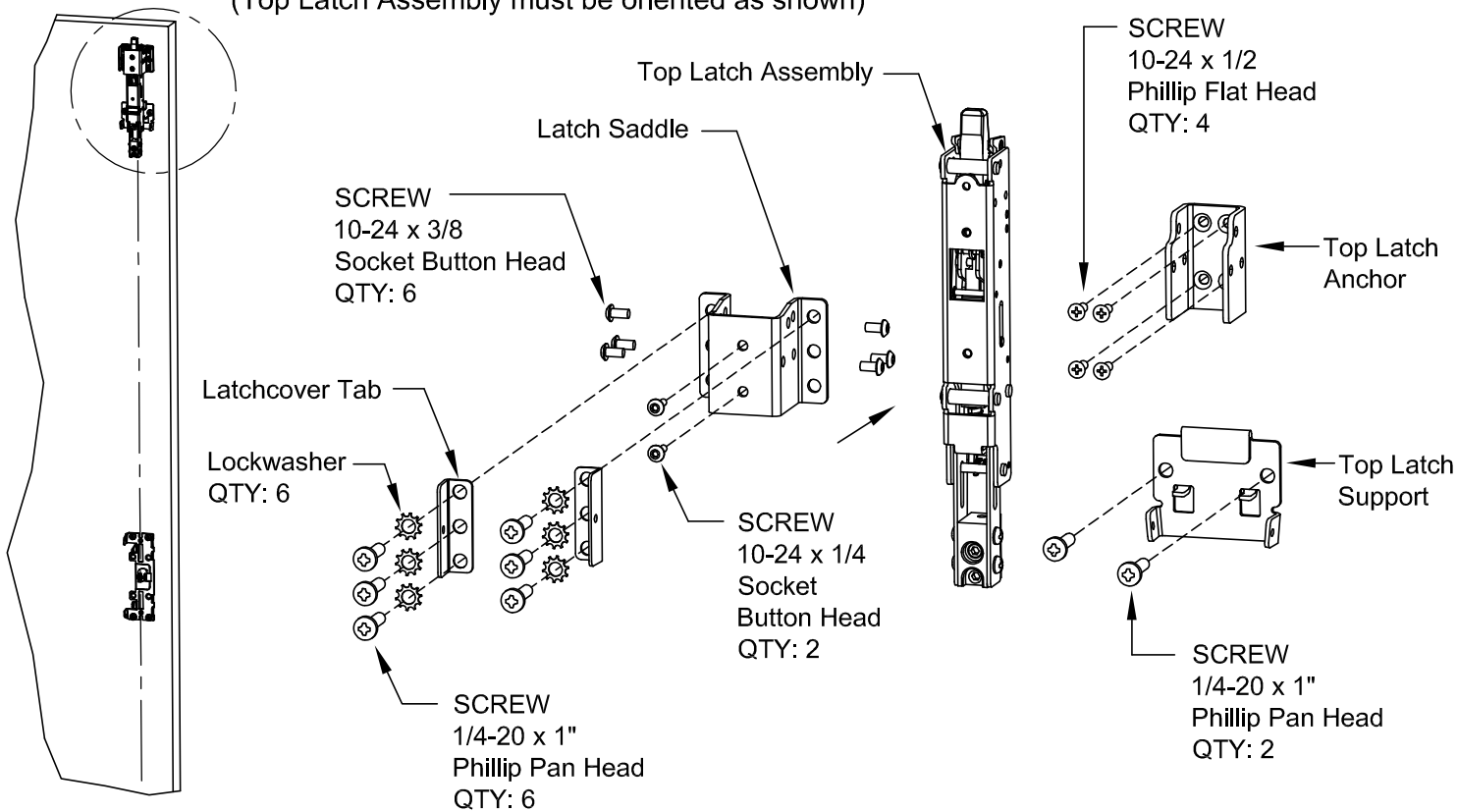
IF SEX NUTS WERE ORDERED

- INSTALL** backplate with
(4) #14 lockwashers
(4) 1/4-20 x 1" screws
(4) sex nuts



STEP 3: INSTALL TOP LATCH ASSEMBLY

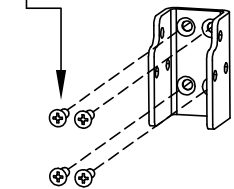
(Top Latch Assembly must be oriented as shown)



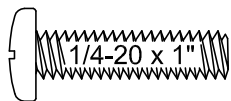
1

Install top latch anchor with (4) flat head screws

10-24 x 1/2



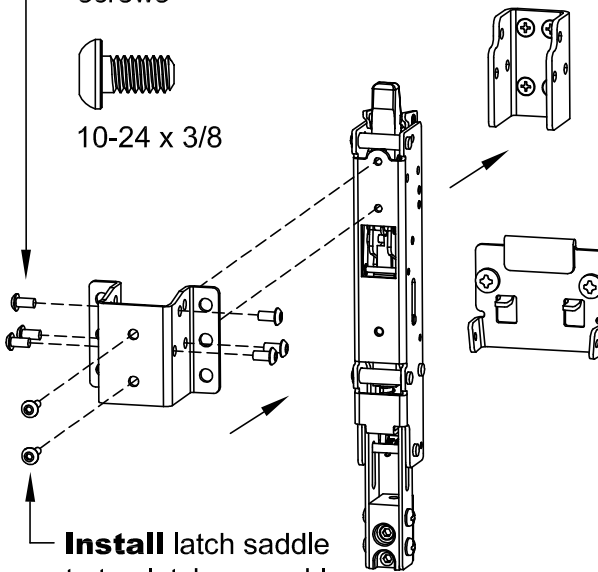
Install top latch support with (2) 1/4-20 x 1" screws



2

Install latch saddle to top latch anchor with (6) 10-24 x 3/8 socket button head screws

10-24 x 3/8

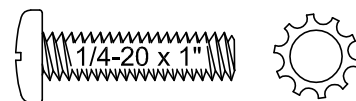


Install latch saddle to top latch assembly with (2) 10-24 x 1/4 socket button head screws

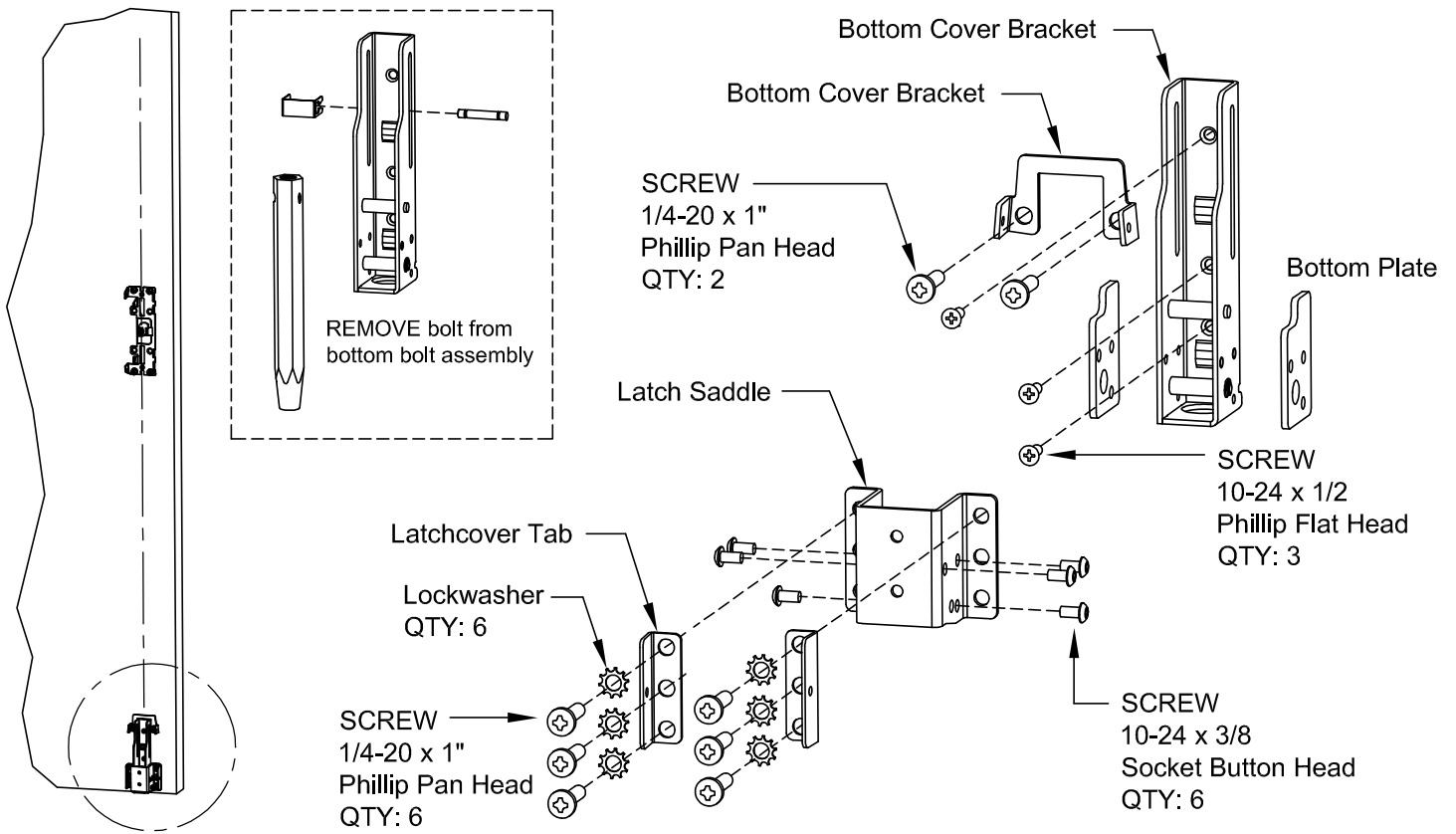
10-24 x 1/4

3

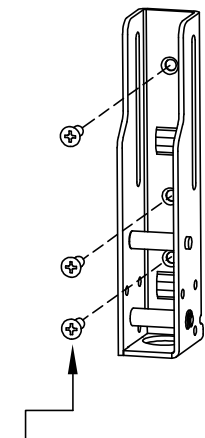
Install latchcover tabs with (6) 1/4-20 x 1" screws and (6) lockwashers



STEP 4: INSTALL BOTTOM BOLT ASSEMBLY



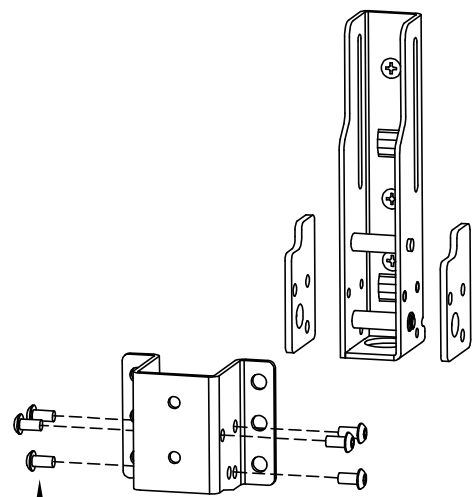
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Install bottom latch with (3) 10-24 x 1/2 flat head screws



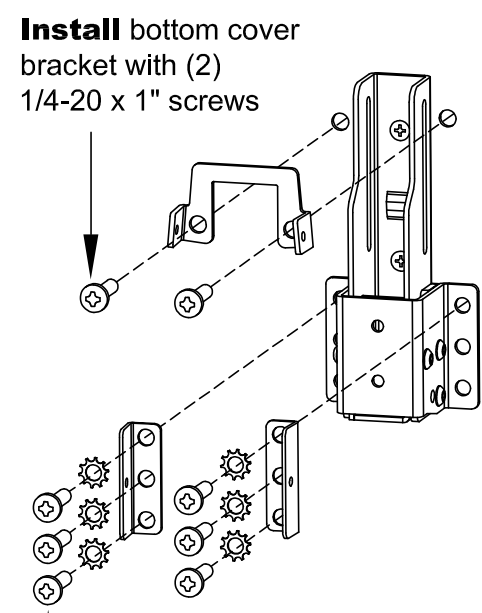
2



Install latch saddle to bottom latch assembly with (6) 10-24 x 3/8 socket button head screws

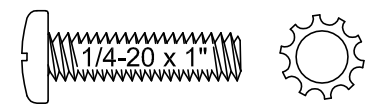


3

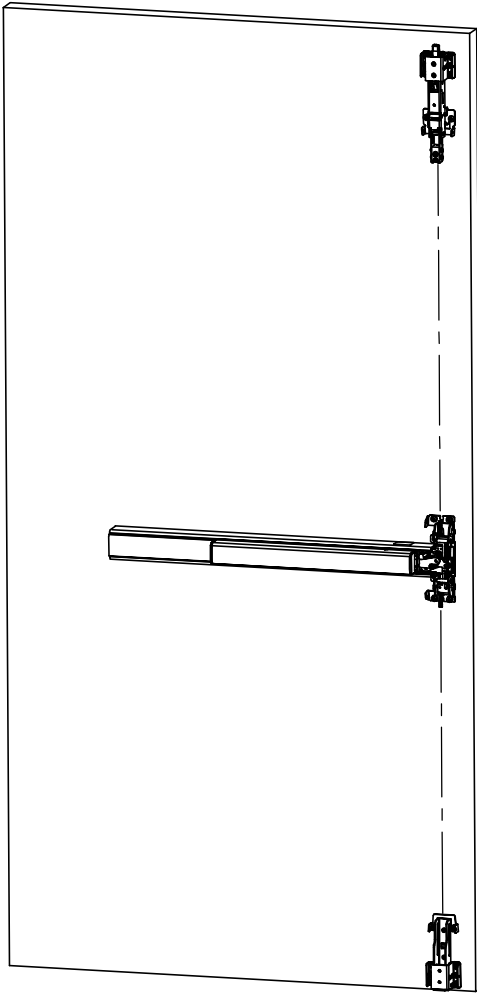


Install bottom cover bracket with (2) 1/4-20 x 1" screws

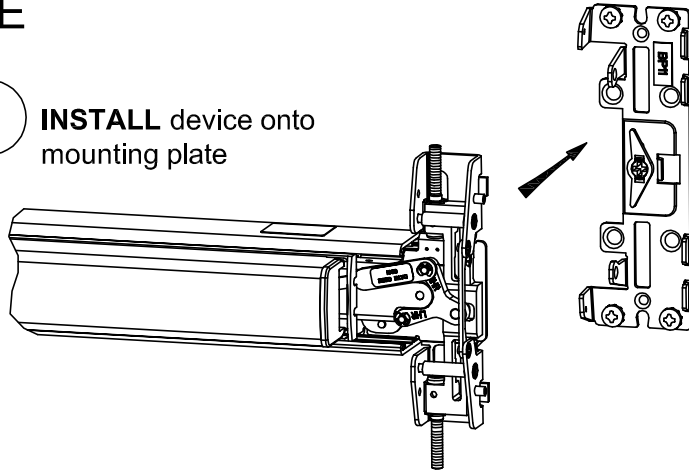
Install latchcover tabs with (6) 1/4-20 x 1" screws and (6) lockwashers



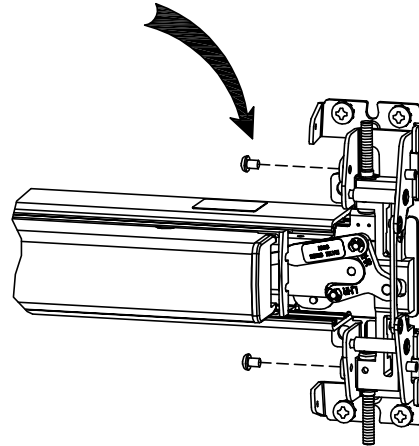
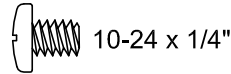
STEP 5: INSTALL DEVICE



1 INSTALL device onto mounting plate



2 SECURE device to mounting plate with (2) 10-24 x 1/4" screws

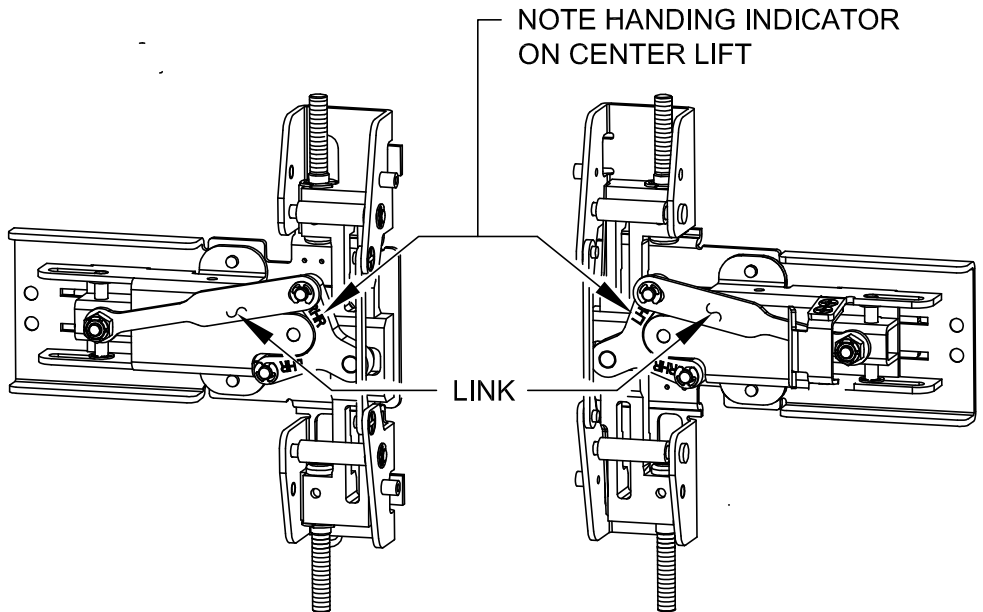


LINK SHOULD ALWAYS BE IN TOP POSITION

1. 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.)
2. Verify carriage moves up and down smoothly when pushpad is depressed and released.

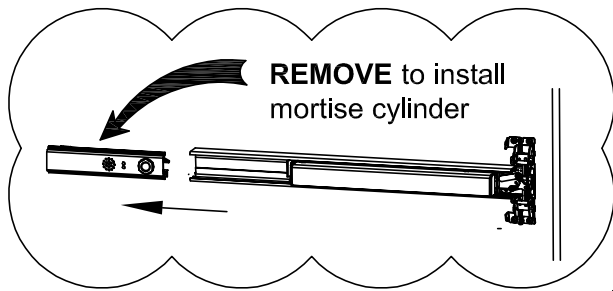
Right Hand Reverse (RHR)

Left Hand Reverse (LHR)



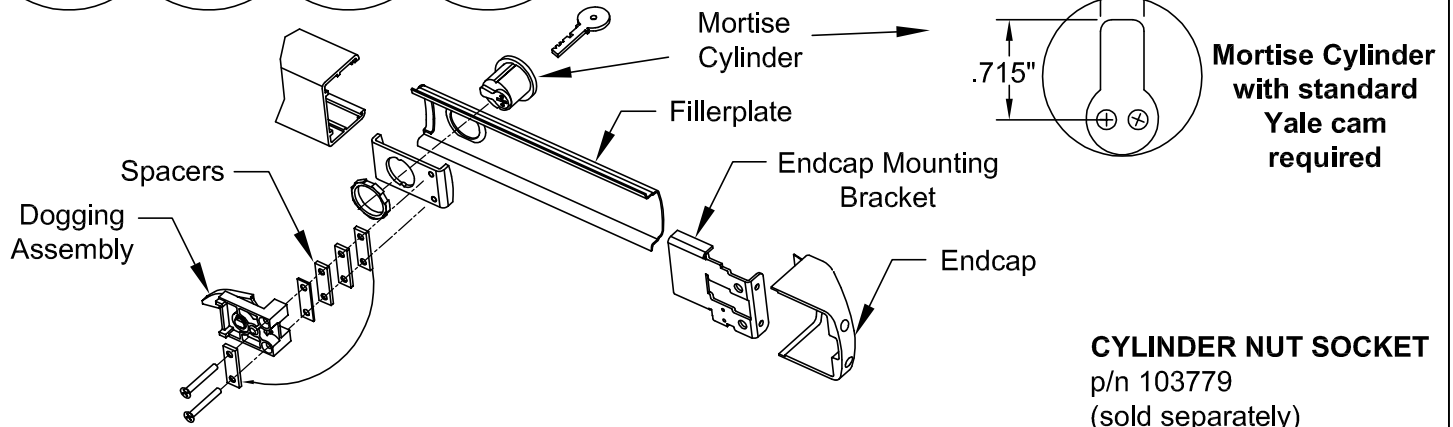
NOTE HANDING INDICATOR ON CENTER LIFT

STEP 6a: INSTALL MORTISE CYLINDER, IF REQUIRED

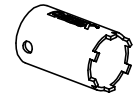


MORTISE CYLINDER INSTALLATION

CD (Cylinder Dogging)



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. Fasten the (2) screws to the rest of the assembly.

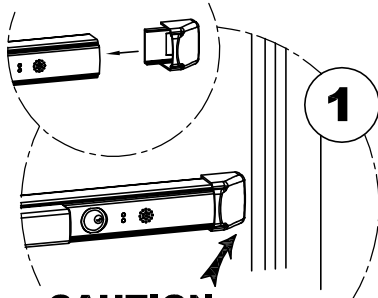
NOTE: The key should easily turn in both directions.

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

STEP 6b: CHECKING FOR DEVICE CLEARANCE

(Cut-Off procedure if required)

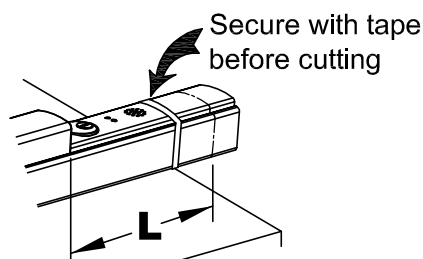
Slide endcap assembly
onto extrusion



CAUTION:

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

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



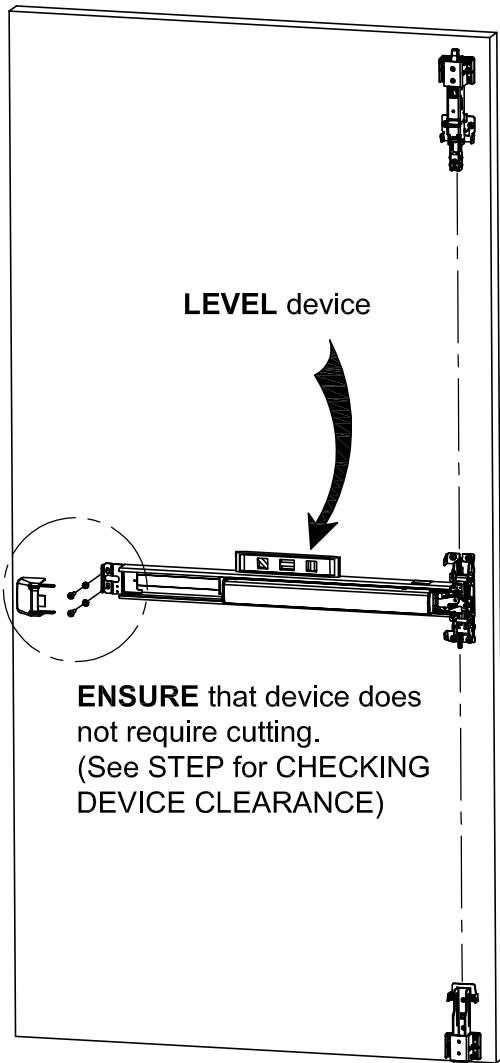
Minimum Fillerplate Length

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

For aluminum Advantex finish cutdown applications:

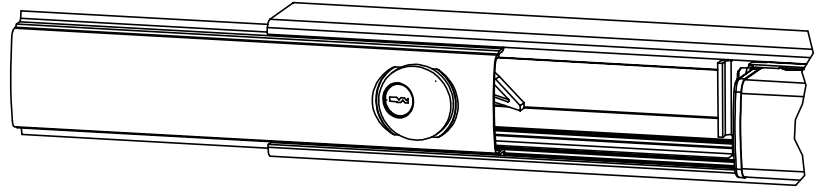
After cutting, the baseplate extrusion can be reversed to place the cut end inside the head cover. To do so, loosen the setscrew inside the aluminum baseplate extrusion and slide extrusion out, reverse, & slide back in. Tighten setscrew.

STEP 7: INSTALL ENDCAP BRACKET and ENDCAP

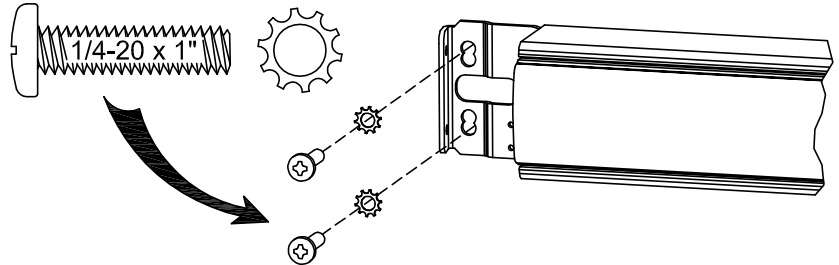


1 LEVEL device before drilling endcap bracket holes

2 INSTALL slide-in-filler if it has been previously removed

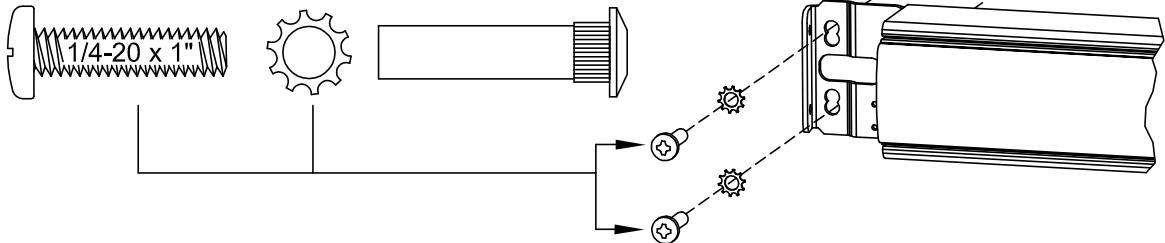


3 MARK, DRILL, & TAP
Drill #7 for 1/4-20 machine screws
INSTALL endcap bracket with
(2) lockwashers
(2) 1/4-20 x 1" screws

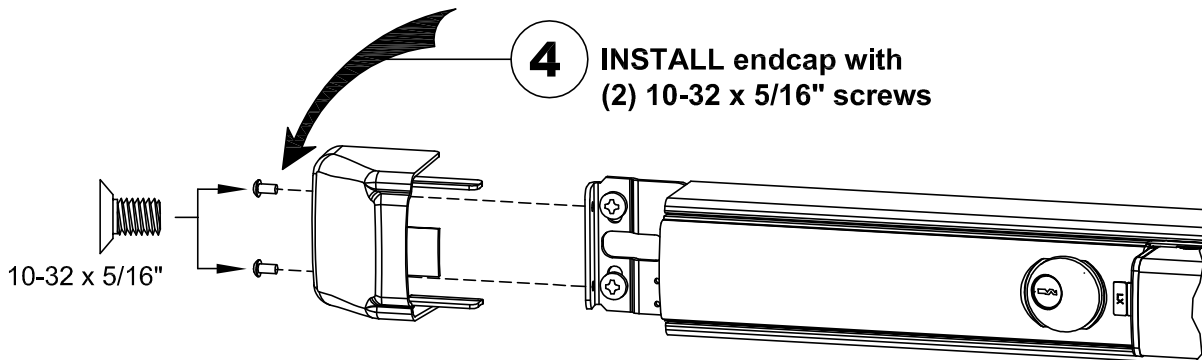


IF SEX NUTS WERE ORDERED

INSTALL endcap bracket with
(2) #14 lockwashers
(2) 1/4-20 x 1" screws
(2) sex nuts

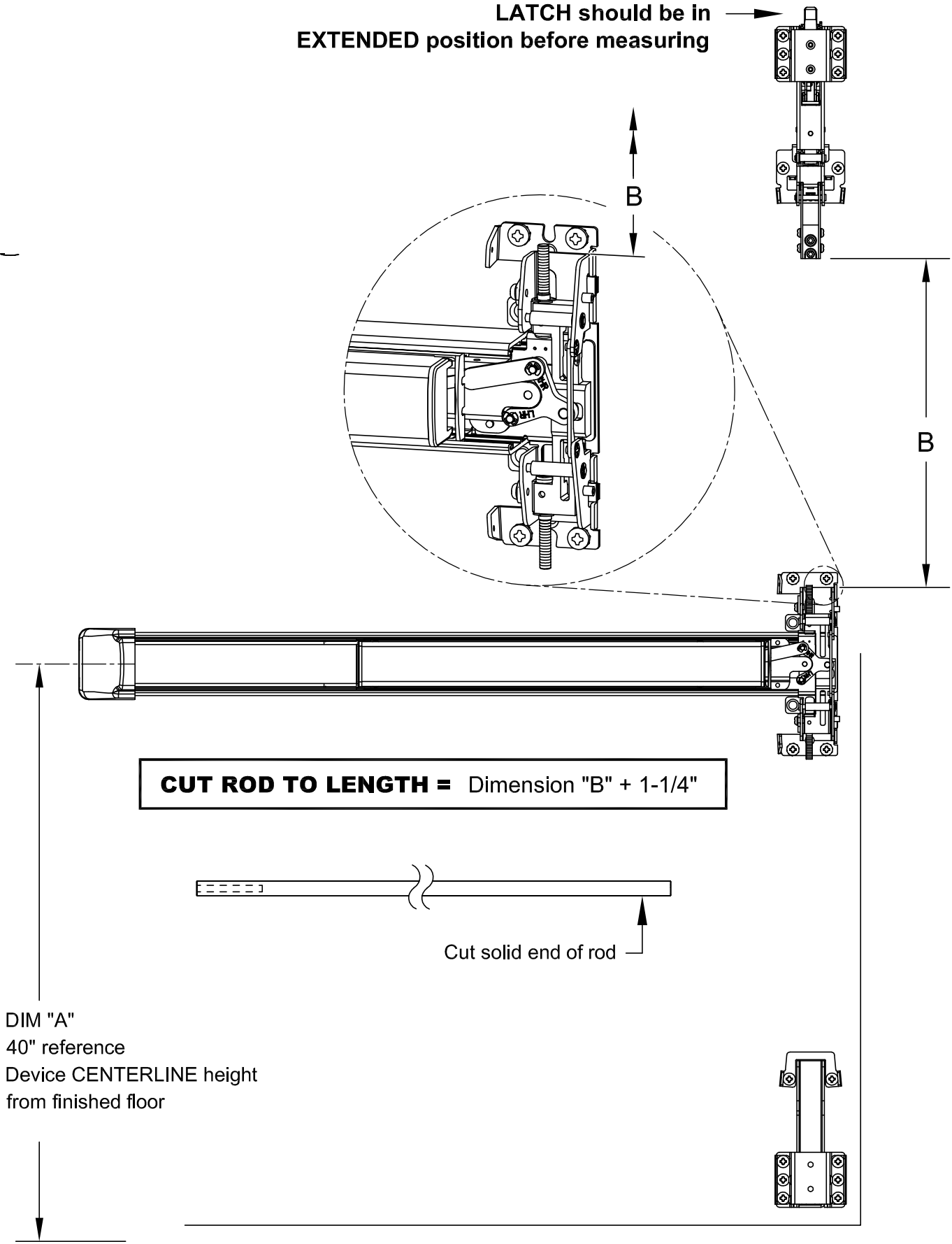


4 INSTALL endcap with
(2) 10-32 x 5/16" screws



STEP 8: MEASURE AND CUT TOP ROD LENGTH, if needed

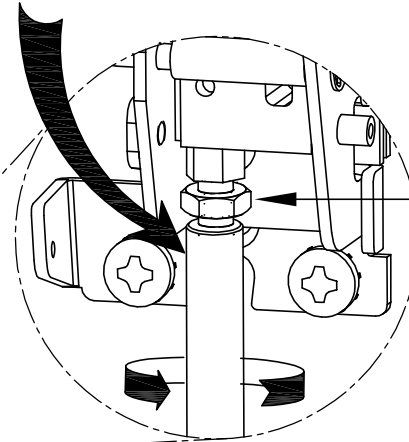
LATCH should be in EXTENDED position before measuring



STEP 11: INSTALL BOTTOM ROD and BOTTOM BOLT

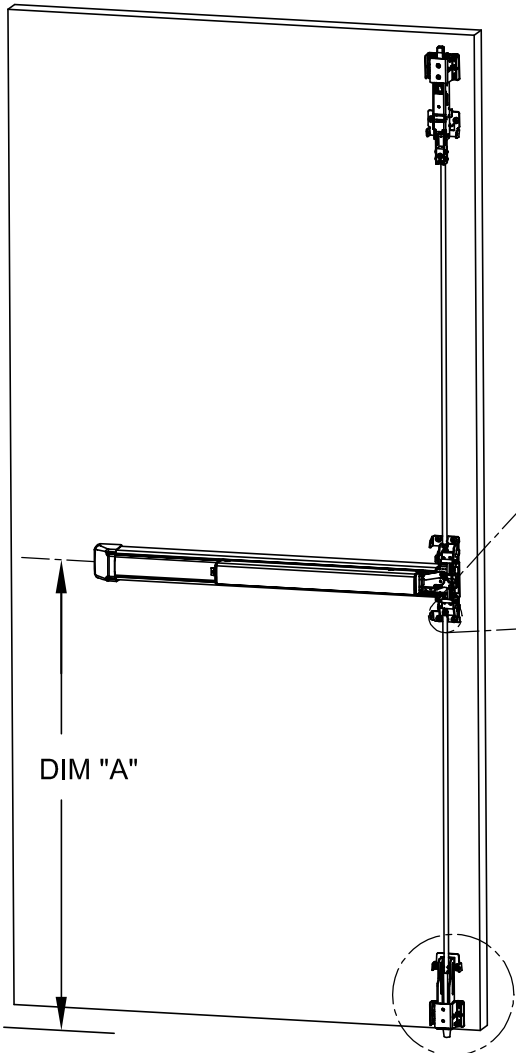
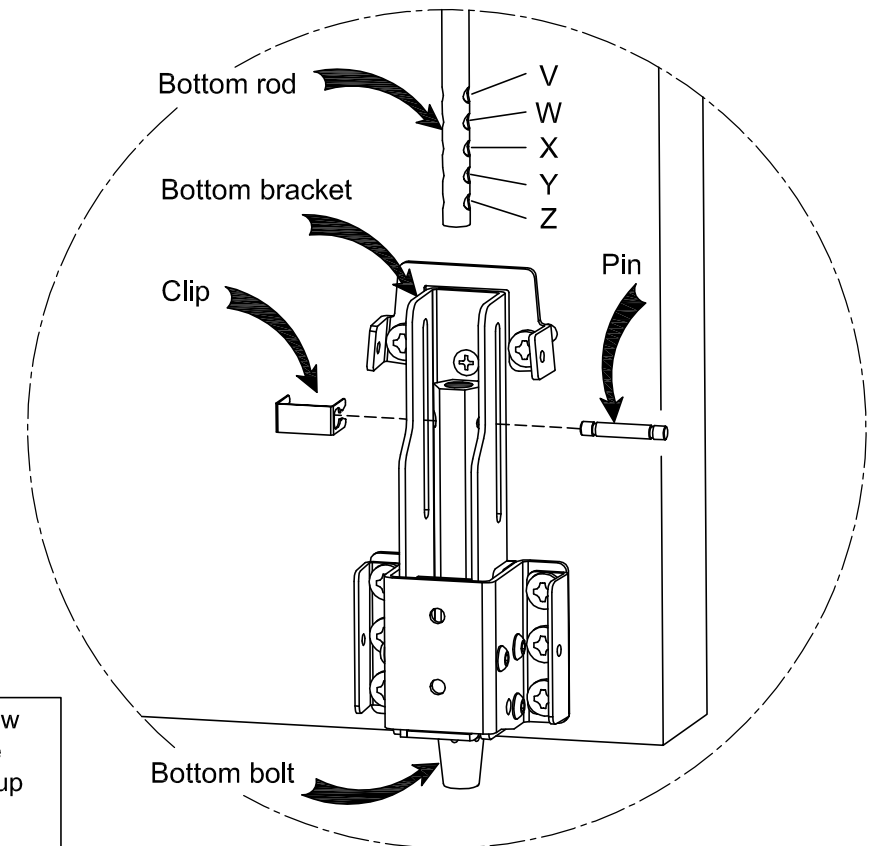
1 **INSTALL** jam nut

2 **ASSEMBLE** bottom rod to threaded bolt. Rotate CCW (Approximately 8 turns)



Install jam nut (Do not tighten against rod at this step)

3 **PLACE** bottom bolt and rod into bracket. **SLIDE** the pin through bracket slots, bolt, and rod hole. **INSERT** pin clip.



Align rod holes with bottom latch (round **DIM A** to nearest value shown)

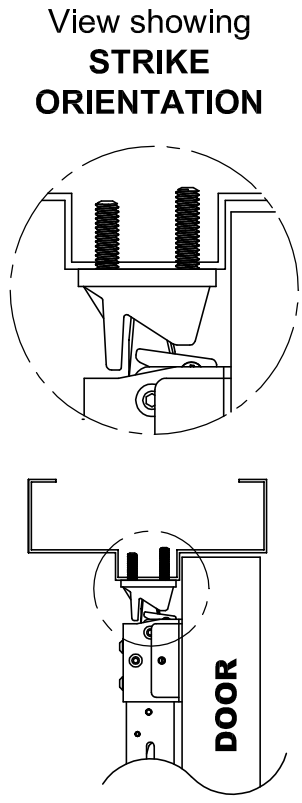
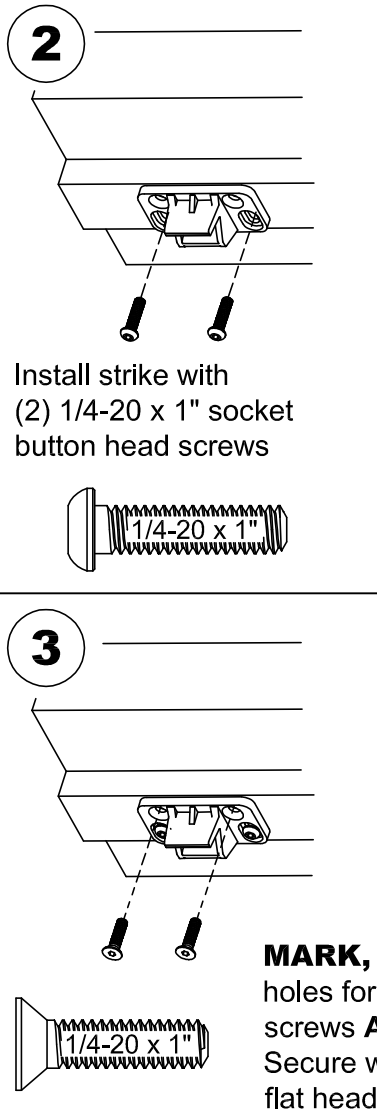
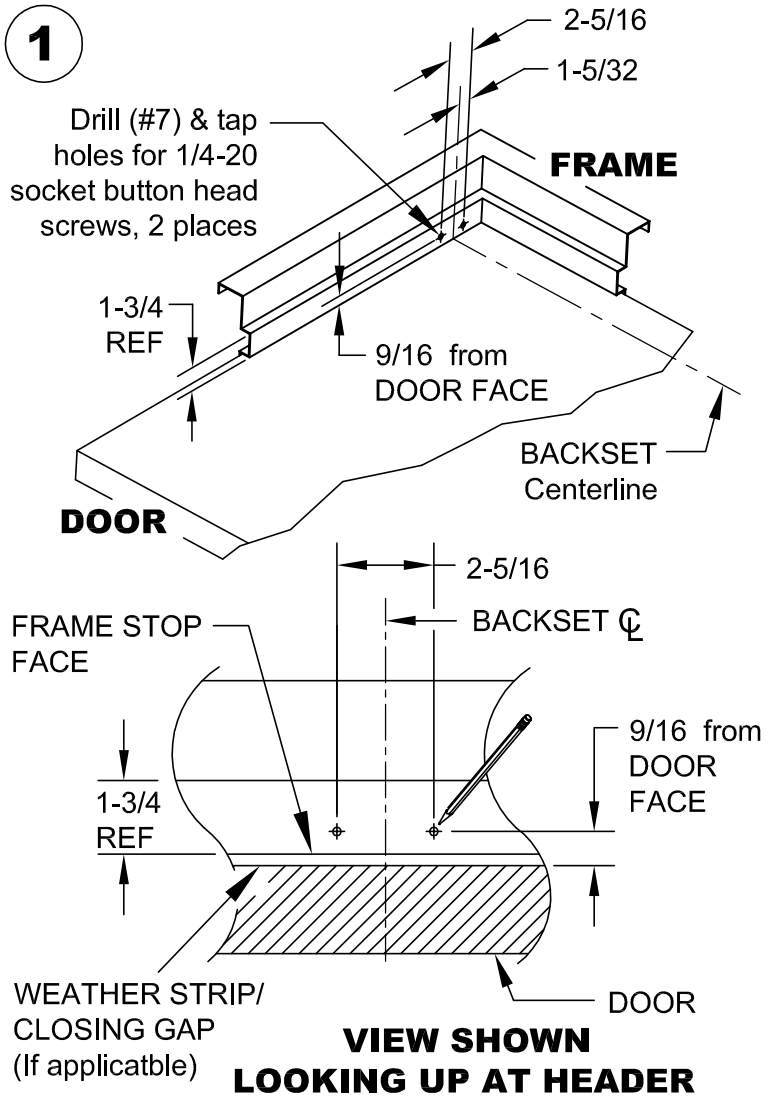
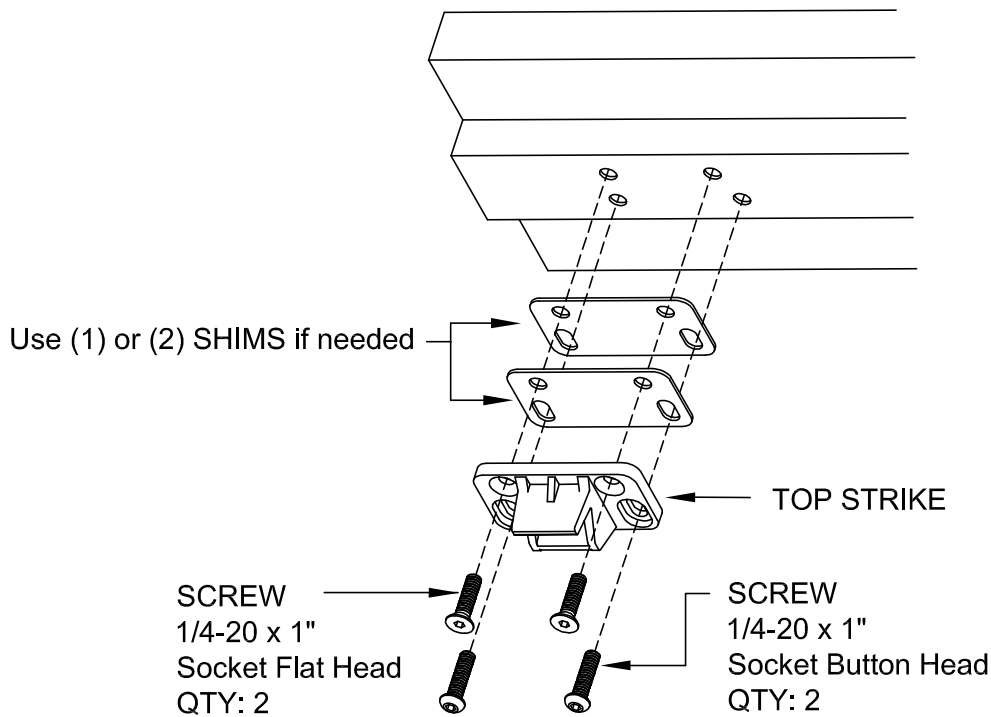
DIM A (device \varnothing at distance from floor)	Bottom Rod use HOLE
39-1/4"	V
39-3/8"	W
40"	X
40-3/8"	Y
40-3/4"	Z

Using **DIM A** as measured in step 8, use chart to determine pinning location.

If **DIM A** is less than 39" from finished floor, a new pin hole must be drilled through rod. Subtract the centerline dimension from 39-1/4" and measure up this distance from hole V. Mark and drill 0.189 diameter hole (#12 drill).
If **DIM A** is more than 41", from floor, call customer service at 1-800-729-3839 for assistance.

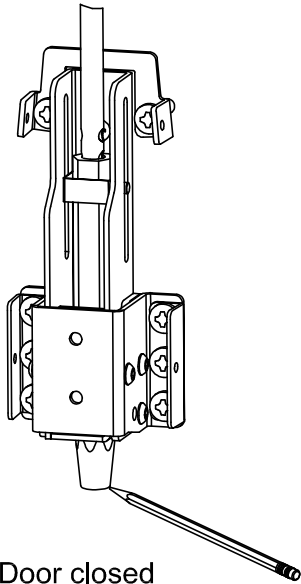
Note: If hole V or W is used (or if new hole is drilled closer to threaded end), trim off UNTHREADED end of rod as needed to allow rod to slide into bottom bolt far enough to pin.

STEP 12: INSTALL TOP STRIKE



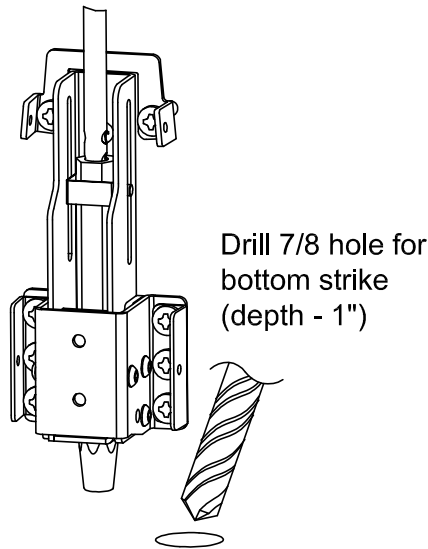
STEP 13: INSTALL BOTTOM STRIKE

1



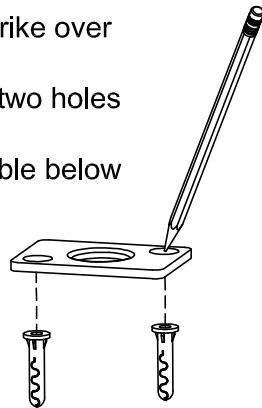
With Door closed use tip of Bolt to mark location around bolt for Bottom Strike

2



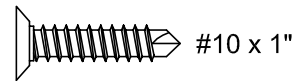
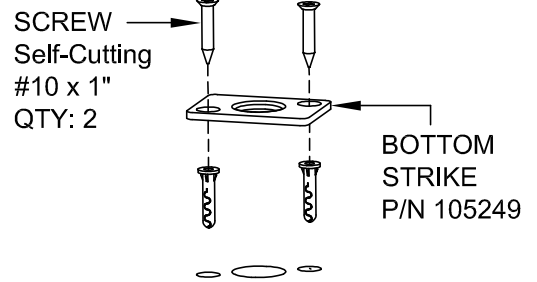
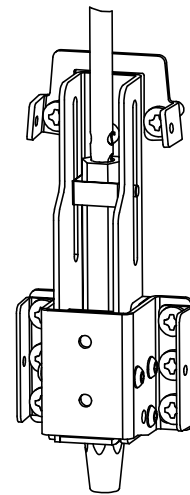
Drill 7/8 hole for bottom strike (depth - 1")

ALIGN bottom strike over drilled hole.
MARK & DRILL two holes for anchors.
 See ANCHOR table below



ANCHOR TABLE		
PART NO	DRILL SIZE	MIN HOLE DEPTH
101129-1	1/4"	1"
102642-6	5/16"	1-15/16"

3

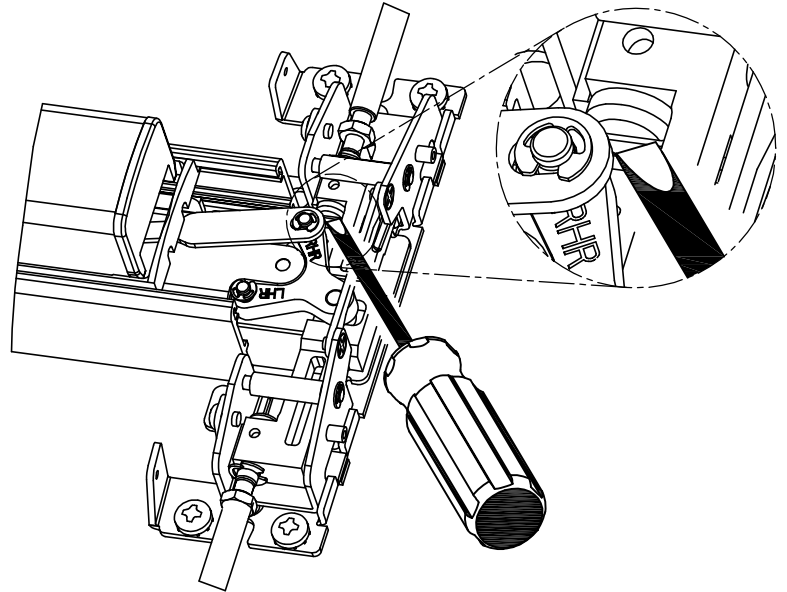
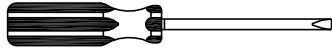


STEP 14: TOP & BOTTOM ROD FINAL ADJUSTMENT

TOP ROD ADJUSTMENT

USE a SLOTTED SCREW DRIVER for turning ROD CONNECTOR

Turn CW to shorten rod length
Turn CCW to lengthen rod length



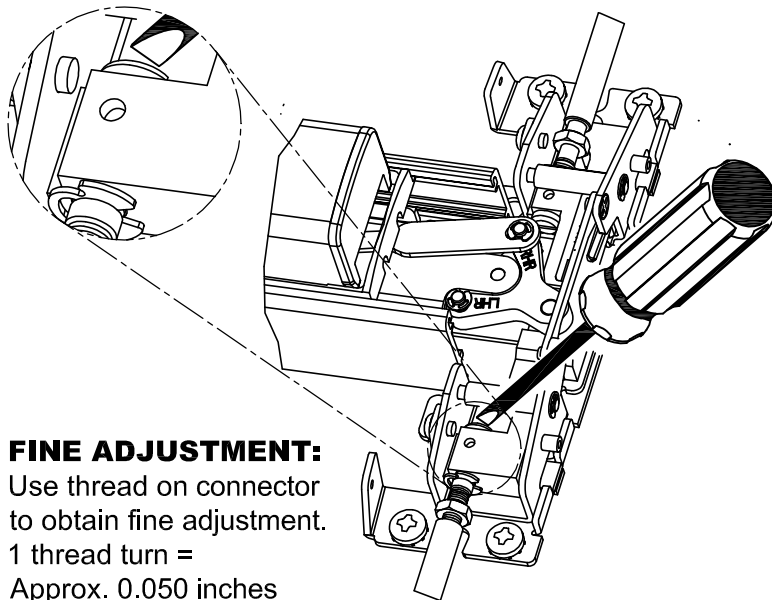
FINE ADJUSTMENT:

Use thread on connector to obtain fine adjustment.
1 thread turn = Approx. 0.050 inches

BOTTOM ROD ADJUSTMENT

USE a SLOTTED SCREW DRIVER for turning ROD CONNECTOR

Turn CW to shorten rod length
Turn CCW to lengthen rod length

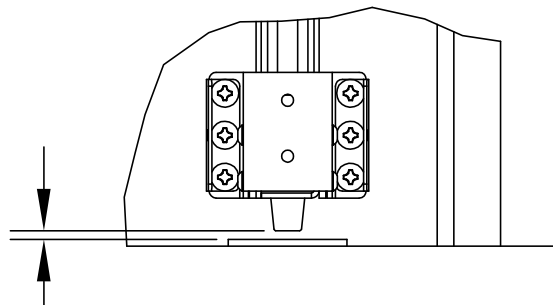
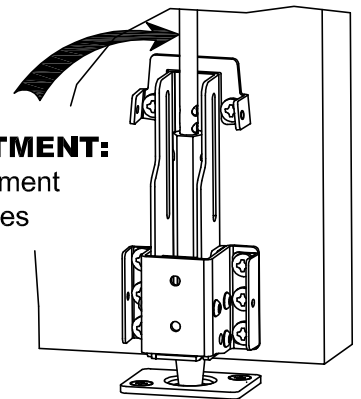


FINE ADJUSTMENT:

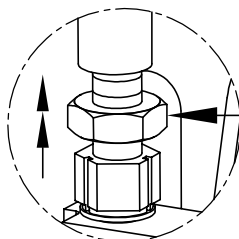
Use thread on connector to obtain fine adjustment.
1 thread turn =
Approx. 0.050 inches

COURSE ADJUSTMENT:

Adjust strike engagement by using different holes in rod.



1/16 to 1/8 minimum clearance between bolt and strike with BOLT RETRACTED



TIGHTEN TOP & BOTTOM JAM NUTS AGAINST RODS AFTER FINAL ADJUSTMENT

Use a 7/16 wrench

TOP LATCH OPERATION

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.

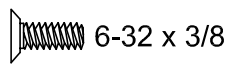
When the appropriate position has been set. Two locking holes should be marked, drilled and tapped for a 1/4-20 socket flat head screw (Step 12, part 3). Lock the strike in position with the two screws (See Step 12, part 3).

DEVICE OPERATION TROUBLESHOOTING

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Device not latching when door closes	Bottom bolt is not properly aligned with bottom strike hole.	Modify bottom strike hole for fit.
	Top strike is not installed or not correctly aligned with the top latch.	Install and/or position strike per instructions.
	Rods improperly adjusted	Adjust rods per instructions.
Latches release, but pushpad will not fully depress	Top rod is too long	Shorten top rod
	Bottom rod is too short	Lengthen bottom rod
Latches are not releasing when pushpad is fully depressed	Top rod is too short	Lengthen top rod
	Bottom rod is too long	Shorten bottom rod

STEP 15: INSTALL DEVICE COVERS AND ROD GUIDES

1 **INSTALL**
centercase cover
with (4) 6-32 x 3/8
flat head screws



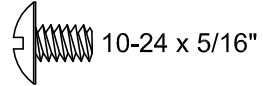
6-32 x 3/8" PFHUMS
P/N: 100162-X

IMPORTANT
TIGHTEN screws
at this end first

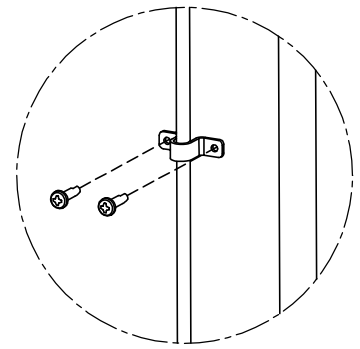
2 **INSTALL**
bottom cover with
(4) 10-24 x 5/16
truss head screws



3 **INSTALL**
top cover with
(4) 10-24 x 5/16
truss head screws



4 **LOCATE, #25 DRILL, & TAP 10-24. INSTALL**
(3) rod guides with
(6) 10-24 x 3/8"
machine screws



SPACE rod guides evenly
between centercase and
latch assemblies