![DETEX logo]

Detex Corporation, 302 Detex Drive, New Braunfels, Texas 78130-3045
830-629-2900 / 800-729-3839 / Fax 800-653-3839 / Text photos only: 830-481-6433 / INTERNET: www.detex.com

INSTALLATION INSTRUCTIONS FOR ADVANTEX® SURFACE VERTICAL ROD

Drawing: 106400

Surface Vertical Rod Exit Device 27 Series

for Medium to Wide Stile Hollow Metal door applications

Should you have a Question/Problem with your Detex device please call Detex Technical Support from the job site at 1-800-729-3839 and choose option 2 on our menu. Please do not return the product to the distributor.

For WARRANTY information,
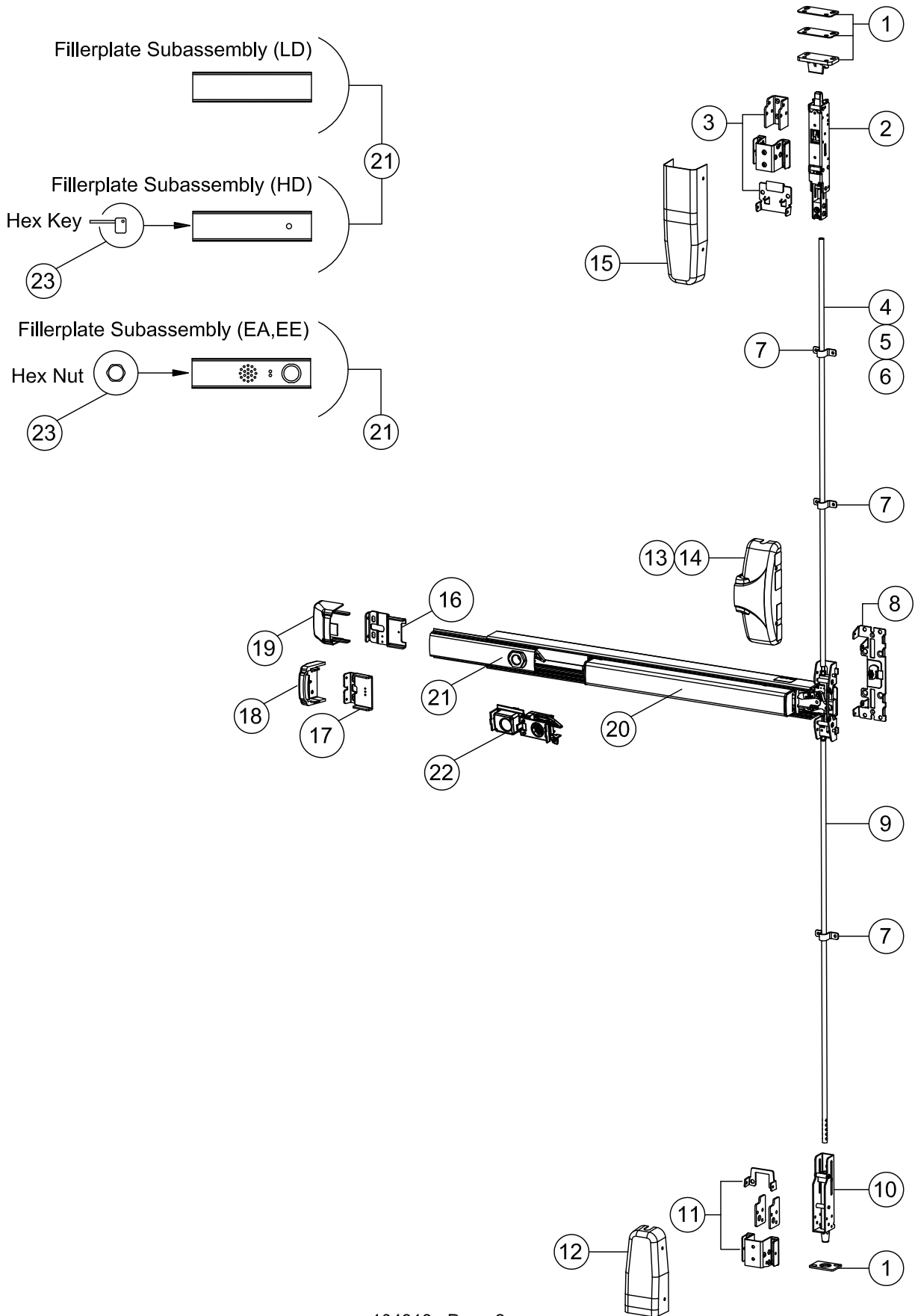**scan code below or**
go to www.detex.com/warranty

For device installation videos,
scan code below or
go to www.detex.com/videos

[**Owner's Copy**]

Device Parts Breakdown View

Fillerplate Subassembly (LD)

Fillerplate Subassembly (HD)

Hex Key

Fillerplate Subassembly (EA,EE)

Hex Nut
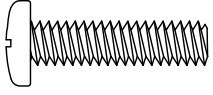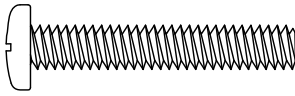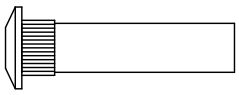
Device Parts Breakdown Part Numbers

ITEM	DESCRIPTION	QTY	PART NUMBER
1	Strike kit, ADV 27	1	106405-1
2	Top latch assembly, FEMA, SVR, Fire	1	105984-4
3	Top latch mounting kit	1	106407-1
4	Top rod, SS, 7'	1	104051-3
	Top rod, SS, 8'		104051-4
5	Top rod, ADV 27, Latch side, 10'	1	106445
6	Top rod, ADV 27, Device side, 10'	1	106446
7	Rod guide kit, ADV 27 (3 rod guide)	1	104073-4
8	Backplate assembly, wide BP11	1	104171-1
	Backplate assembly, wide BP13 (03 cam)	1	104171-2
9	Bottom rod, V50	1	103544
10	Bottom bolt assembly, SVR, FEMA	1	106140
11	Bottom latch mounting kit, ADV 27	1	106408-1
12	Cover, bottom latch, SVR, FEMA	1	106148-9
13	Cover, centercase, wide, SVR, SS	1	106141-9
14	Cover, centercase, wide, SVR, 628	1	104640-13
	Cover, centercase, wide, SVR, 693		104640-14
	Cover, centercase, wide, SVR, 695		104640-15
15	Cover, top latch, SVR, FEMA	1	106147-9
16	Endcap mounting bracket, EC1	1	100147
17	Flush endcap mounting bracket, EC2	1	104303
18	Flush endcap, EC2, SS	1	104304-9
	Flush endcap, EC2, SS, FC		104317-9
19	Endcap assembly, EC1, SS	1	101642-9
	Endcap assembly, EC1, SS, FC		102095-9
20	S & R Centercase Pushpad LD-RHR	1	105500-146
	S & R Centercase Pushpad EE-ER-RHR		105500-63
	S & R Centercase Pushpad ER-EX-RHR		105500-147
21	S & R Fillerplate subassembly, LD	1	100860-161
	S & R Fillerplate subassembly, HD		100860-162
	S & R Fillerplate subassembly, CD-EA		100860-163
	S & R Fillerplate subassembly, CD-EE		100860-164
22	Dogging assembly, CD-EA	1	100744-2
	Dogging assembly, CD-EE		105035-2
23	Hex Key molded	1	100450
	Hex Nut cylinder		100783

* 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

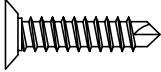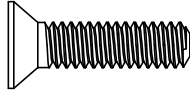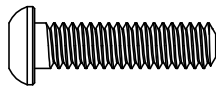| Hardware style & size	Description	Used on
	1/4-20 x 1" PPHMS P/N: 100980	Used to install backplate & endcap bracket to door
	1/4-20 x 1-1/2" PPHMS P/N: 100954	Used to install backplate & endcap bracket on 2" or greater door thickness with Trim and/or sex nuts
	10-24 x 1/4" PPHMS P/N: PP-5304-104	Used 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: 101632-4	Used to install endcap to endcap bracket (Multiple finishes included)
	6-32 x 3/8" PFHUMS P/N: 100162-306	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: 105274-9	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
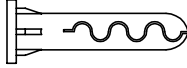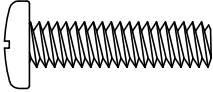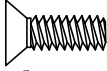
Power Drill	Pencil	Pliers
Level	Center Punch	Hack Saw (Chopsaw preferred)
Screw Drivers	Drill Bit Set	Hex Wrench - 1/8 & 5/32
Tape Measure	Hammer	Masonary Bits - 3/16", 1/4", 5/16",
Safety Glasses	Tap Wrench	7/8", & 1"

Fastener Tables

Strike Mounting Hardware

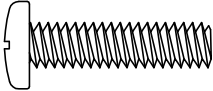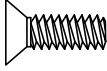|		
	#10 x 1" self-cutting PFH P/N: 100109	Used to install bottom strike to floor (used with anchors, two styles of anchor included)
	10-24 x 1/2" PFHUMS P/N: 100112-108	Used to install bottom strike to floor (alternate)
	1/4-20 x 1" FHSCMS 5/32 Socket HD P/N: 105774-5	Used to secure top strike to header
	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!!!
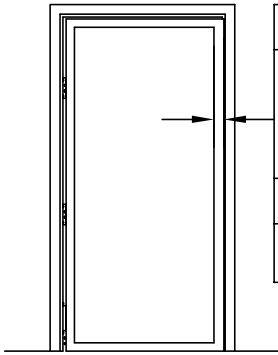
Wide Stile (Surface Strike)
Minimum door stile 4-1/2" (114 mm). Template drawings provide door and frame structural and dimensional specifications for door and frame preparation.
Narrow Stile
Minimum door stile 2" (51mm)

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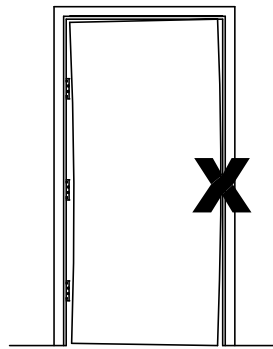
Unreinforced Doors: Use Sex Nuts and Bolts
Unreinforced Frames: Use Blind Rivet Nuts (see sketch)
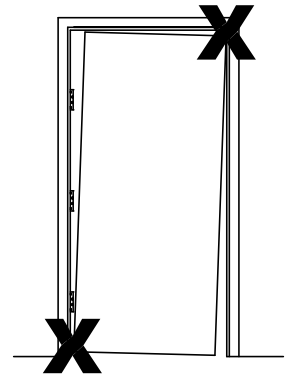Fasteners for unreinforced openings are not supplied by Detex.

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

Reinforcement

Door Skin

Blind Rivet Nut
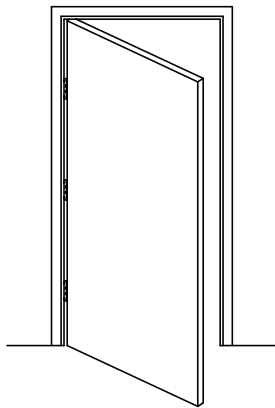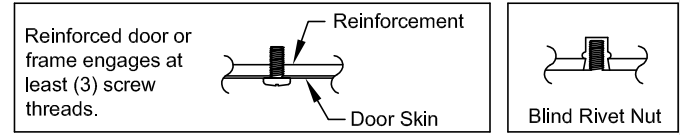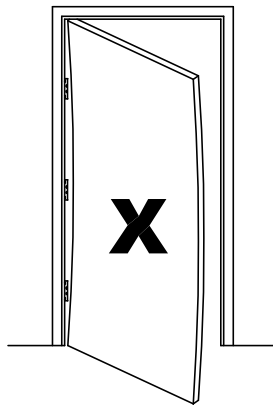
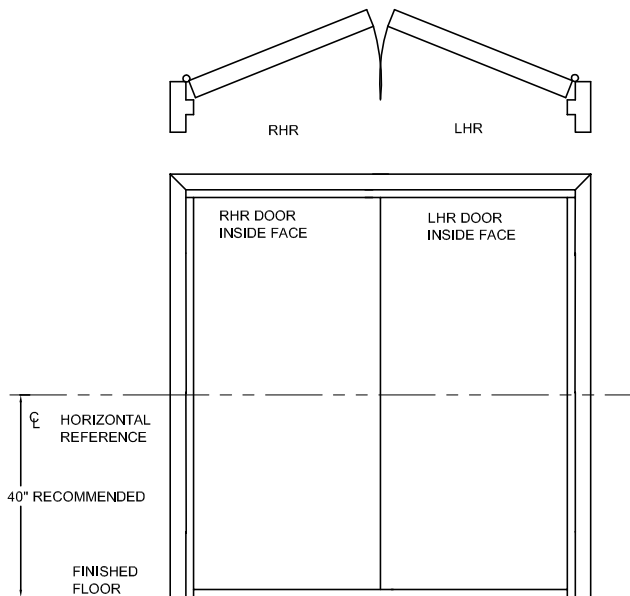Door Must Swing Freely　　　Door Must Not be Warped　　　Door Must Not Bind　　　Door Must Not Sag

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.

RHR　　　LHR

RHR DOOR
INSIDE FACE

LHR DOOR
INSIDE FACE

℄ 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

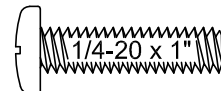**5** **MARK**, **DRILL, & TAP** holes for bottom latch assembly. Use TEMPLATE provided **(P/N 106449)**

MARK holes

TAPE to door

TEMPLATE
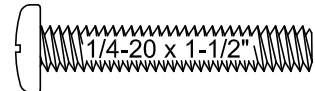
DETAIL A
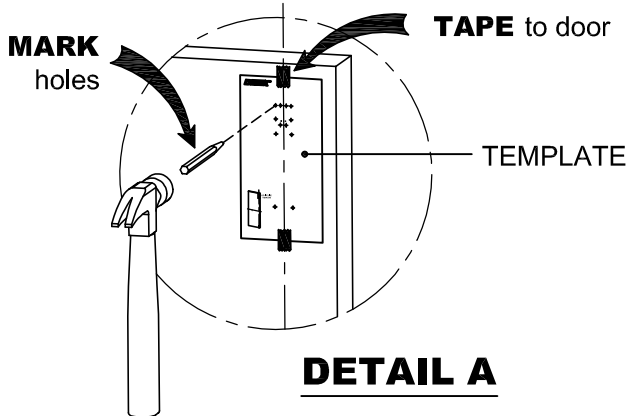
STEP 2: INSTALL MOUNTING PLATE

1 **BACKPLATE HOLES** 4 places Follow templates
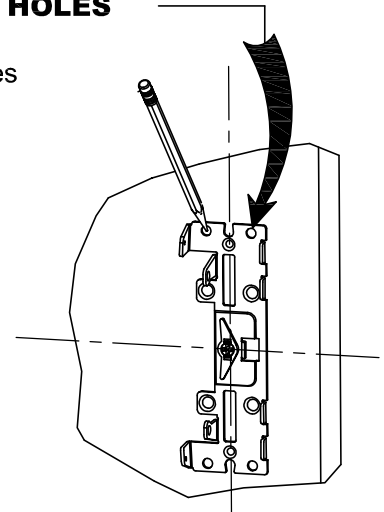
2 **INSTALL** backplate with (4) lockwashers & (4) screws
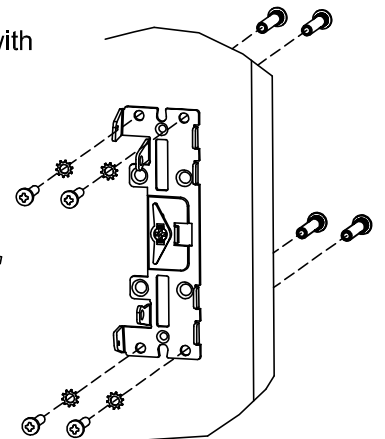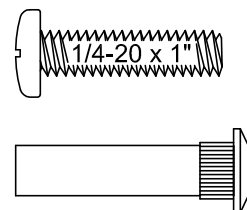
1/4-20 x 1"

OR

1/4-20 x 1-1/2"

Note: 1-1/2 screws to be used on 2" thick or greater doors with TRIM
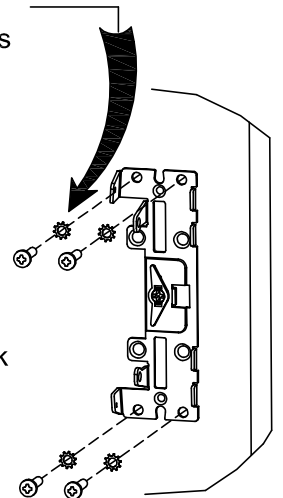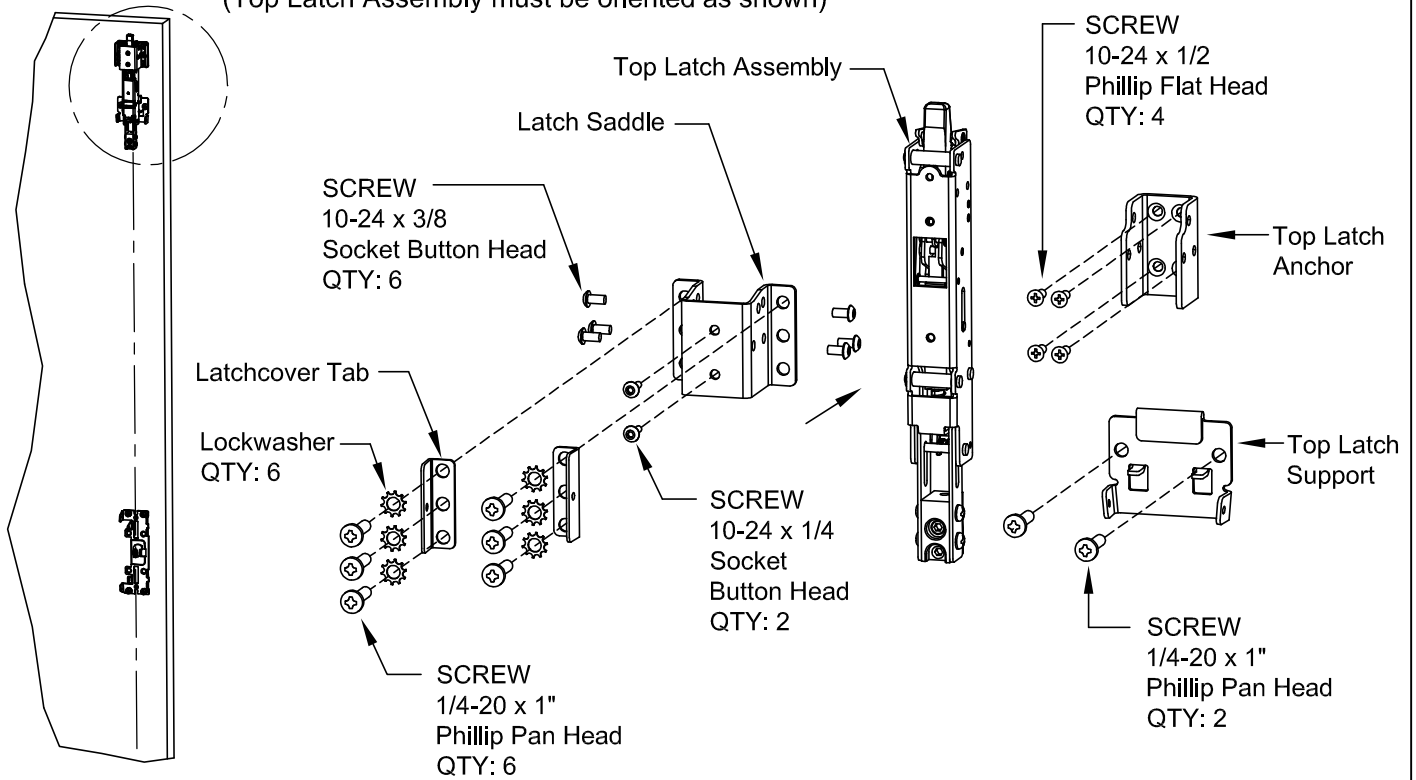
IF SEX NUTS WERE ORDERED

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

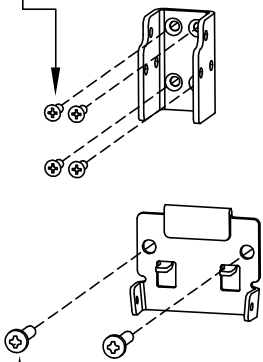1/4-20 x 1"

STEP 3: INSTALL TOP LATCH ASSEMBLY
(Top Latch Assembly must be oriented as shown)

SCREW
10-24 x 1/2
Phillip Flat Head
QTY: 4

Top Latch Assembly

Latch Saddle

SCREW
10-24 x 3/8
Socket Button Head
QTY: 6

Top Latch Anchor

Latchcover Tab

Lockwasher
QTY: 6

Top Latch Support

SCREW
10-24 x 1/4
Socket
Button Head
QTY: 2

SCREW
1/4-20 x 1"
Phillip Pan Head
QTY: 2

SCREW
1/4-20 x 1"
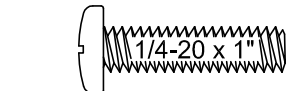Phillip Pan Head
QTY: 6

1

Install top latch anchor with (4) flat head screws

10-24 x 1/2

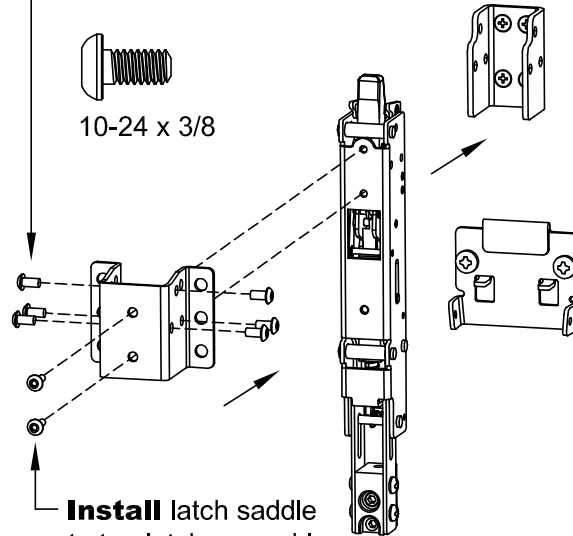**Install** top latch support with (2) 1/4-20 x 1" screws

1/4-20 x 1"

2

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

10-24 x 3/8

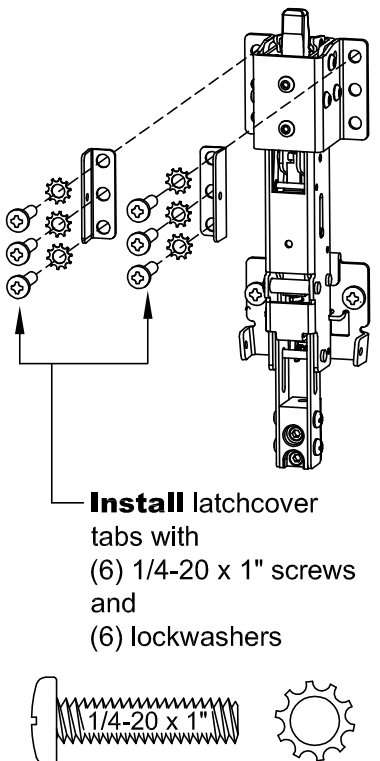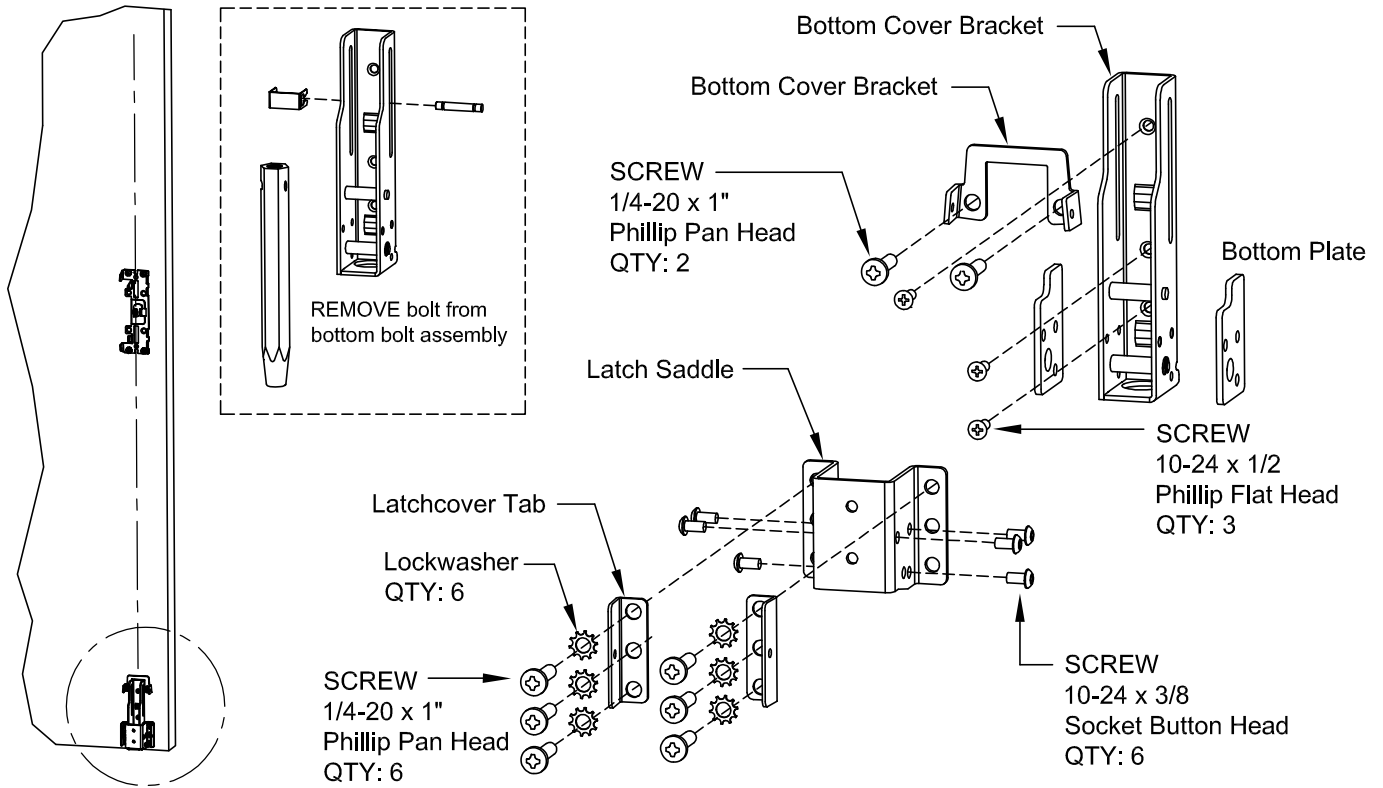**Install** latch saddle to top latch assembly with (2) 10-24 x 1/4 socket button head screws

10-24 x 1/4

3

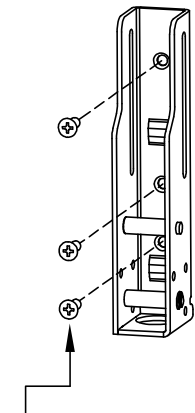**Install** latchcover tabs with (6) 1/4-20 x 1" screws and (6) lockwashers

1/4-20 x 1"

STEP 4: INSTALL BOTTOM BOLT ASSEMBLY

Bottom Cover Bracket

Bottom Cover Bracket

SCREW
1/4-20 x 1"
Phillip Pan Head
QTY: 2

REMOVE bolt from
bottom bolt assembly

Bottom Plate

SCREW
10-24 x 1/2
Phillip Flat Head
QTY: 3

Latch Saddle

Latchcover Tab

Lockwasher
QTY: 6

SCREW
1/4-20 x 1"
Phillip Pan Head
QTY: 6

SCREW
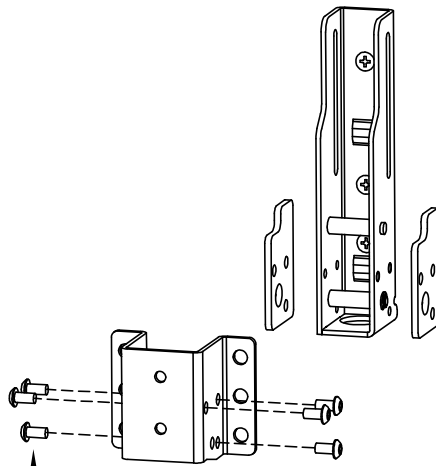10-24 x 3/8
Socket Button Head
QTY: 6

1

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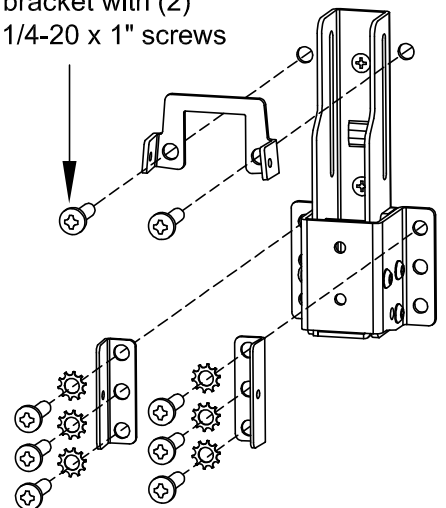flat head screws

10-24 x 1/2

2
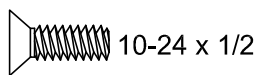
Install latch saddle
to bottom latch assembly
with (6) 10-24 x 3/8
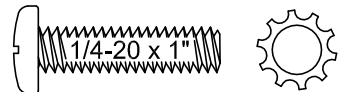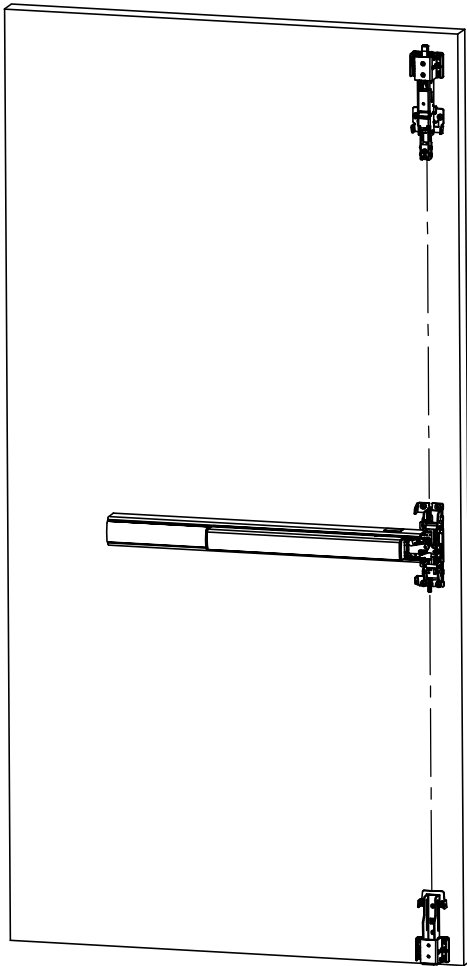socket button head screws

10-24 x 3/8
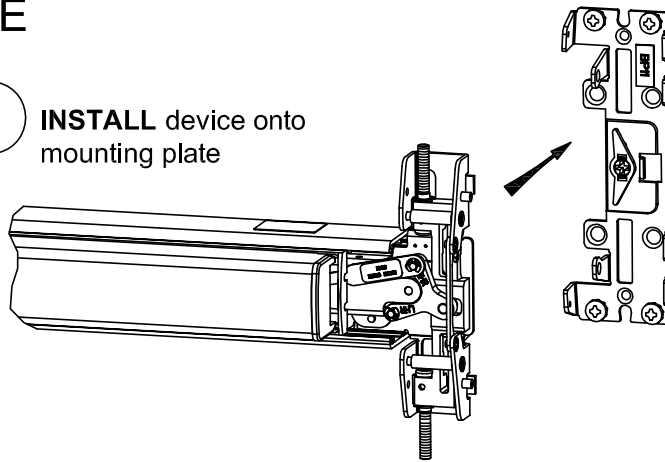
3

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

1/4-20 x 1"

STEP 5: INSTALL DEVICE

1 INSTALL device onto mounting plate

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

10-24 x 1/4"
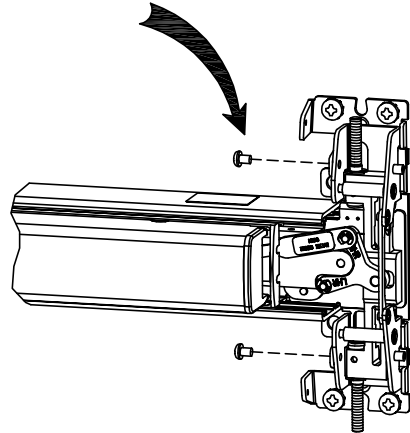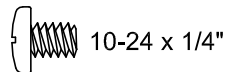
LINK SHOULD ALWAYS BE IN TOP POSITION

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

LINK
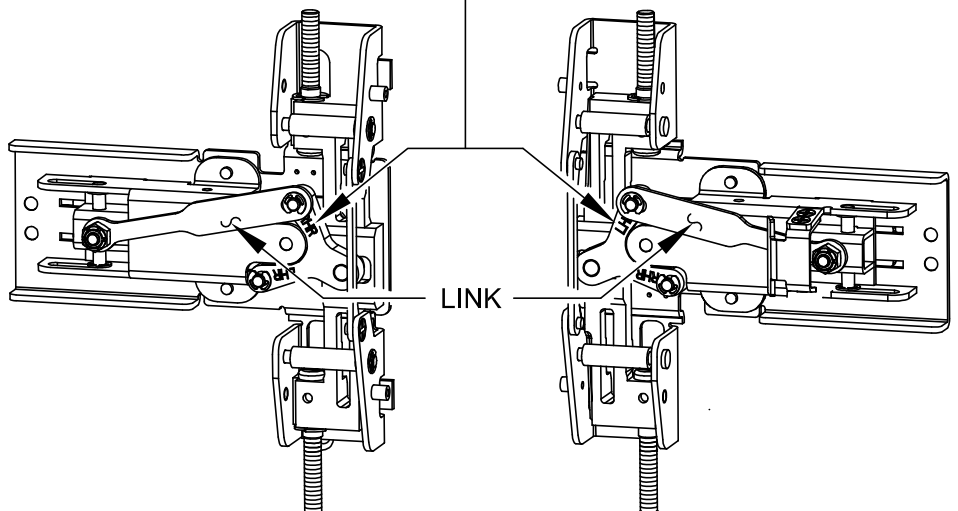
STEP 6a: INSTALL MORTISE CYLINDER, IF REQUIRED

REMOVE to install mortise cylinder

MORTISE CYLINDER INSTALLATION
CD (Cylinder Dogging)

Mortise Cylinder

Fillerplate

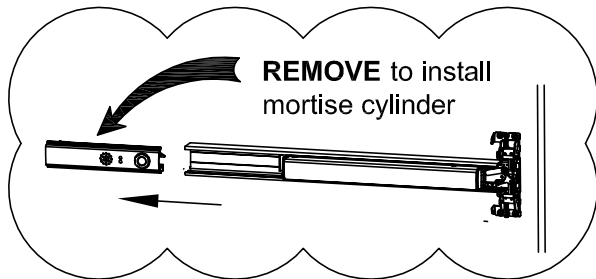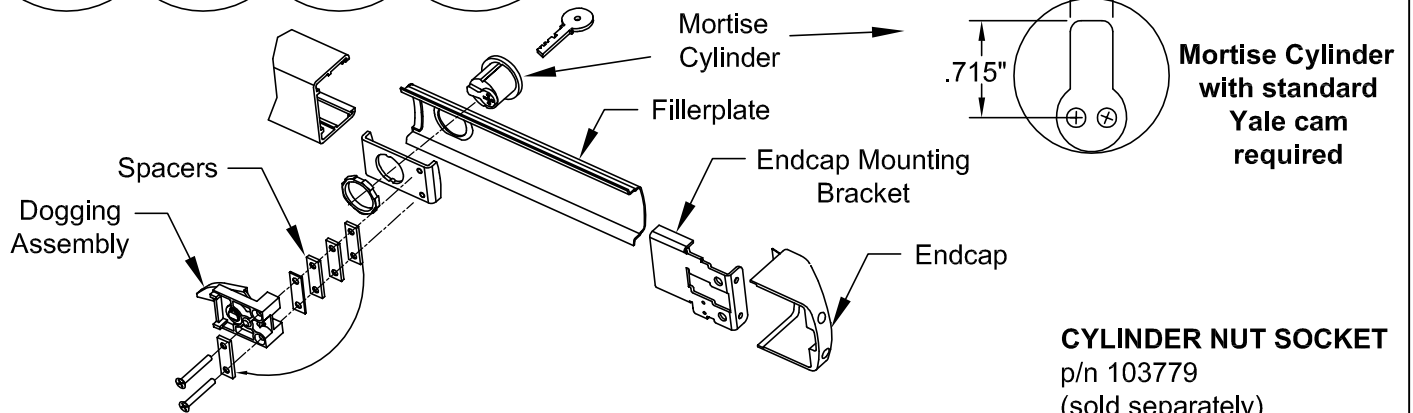Spacers

Dogging Assembly

Endcap Mounting Bracket

Endcap

.313"

.715"

Mortise Cylinder with standard Yale cam required

CYLINDER NUT SOCKET
p/n 103779
(sold separately)

Follow steps "a" through "g" for CD installations
a. Remove endcap and endcap mounting bracket.
b. Remove fillerplate.
c. Remove and discard shipping insert and nut. Loosen (2) screws from dogging assembly.
d. Install mortise cylinder (sold separately) with large hex nut provided.
e. 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.
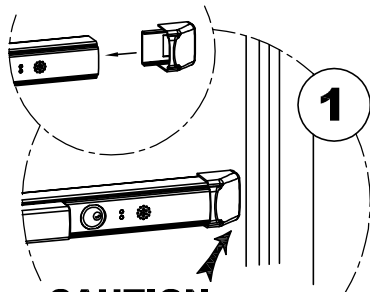**NOTE: The key should easily turn in both directions.**
f. Rotate key counterclockwise
g. Assembly complete. Continue with Panic Hardware instruction.
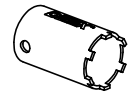
STEP 6b: CHECKING FOR DEVICE CLEARANCE
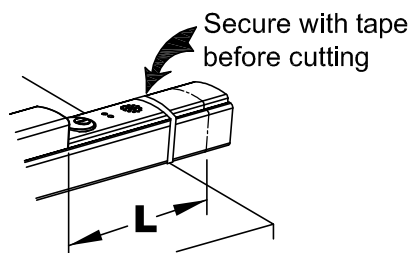## (Cut-Off procedure if required)

Slide endcap assembly onto extrusion

1

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

Secure with tape before cutting

L

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

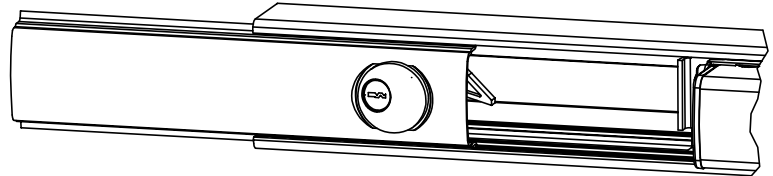For aluminum Advantex finish cutdown applications:
After cutting, the baseplate extrusion can be reversed to place the cut end inside the head cover. To do so, loosen the setscrew inside the aluminum baseplate extrusion and slide extrusion out, reverse, & slide back in. Tighten setscrew.

STEP 7: INSTALL ENDCAP BRACKET and ENDCAP
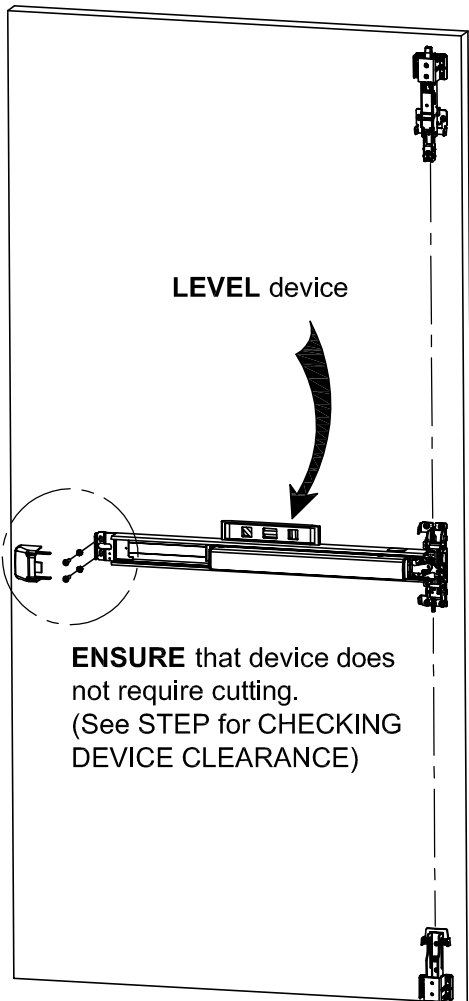
(1) **LEVEL** device before drilling endcap bracket holes

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

LEVEL device

ENSURE that device does not require cutting.
(See STEP for CHECKING DEVICE CLEARANCE)

(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
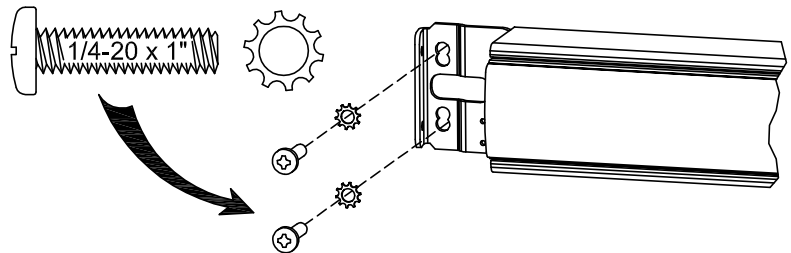
1/4-20 x 1"

IF SEX NUTS WERE ORDERED

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

1/4-20 x 1"

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

10-32 x 5/16"
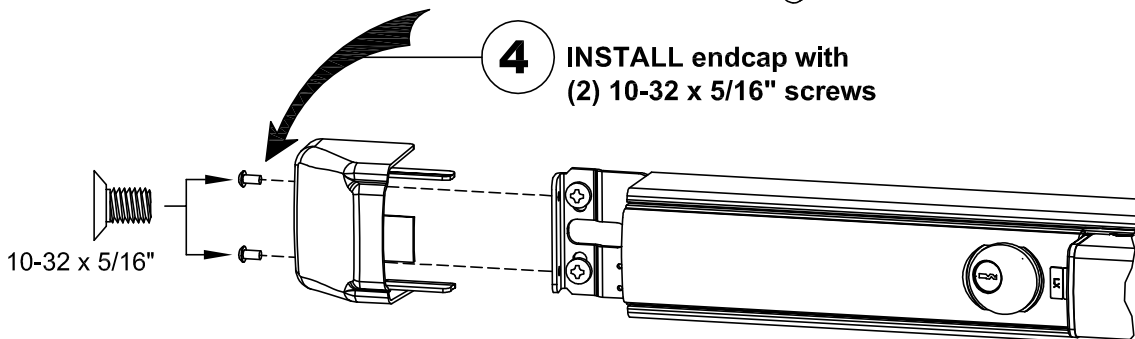
STEP 8: MEASURE AND CUT TOP ROD LENGTH, if needed
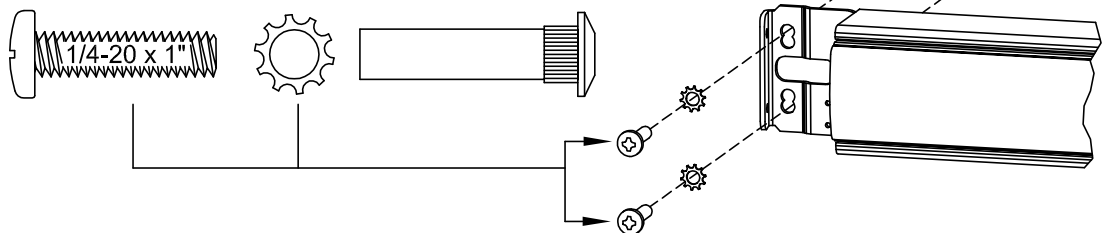
LATCH should be in →
EXTENDED position before measuring

B

B

CUT ROD TO LENGTH = Dimension "B" + 1-1/4"

Cut solid end of rod

DIM "A"
40" reference
Device CENTERLINE height
from finished floor

STEP 9: INSTALL TOP ROD

(1) **INSTALL** jam nut

(2) **RETRACT** top latch by **PUSHING** connector block
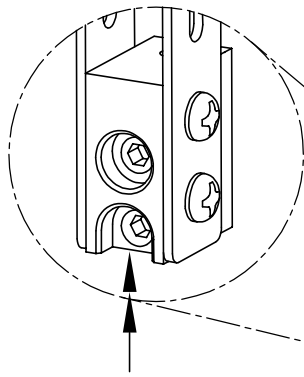
PUSH connector block to RETRACT top latch
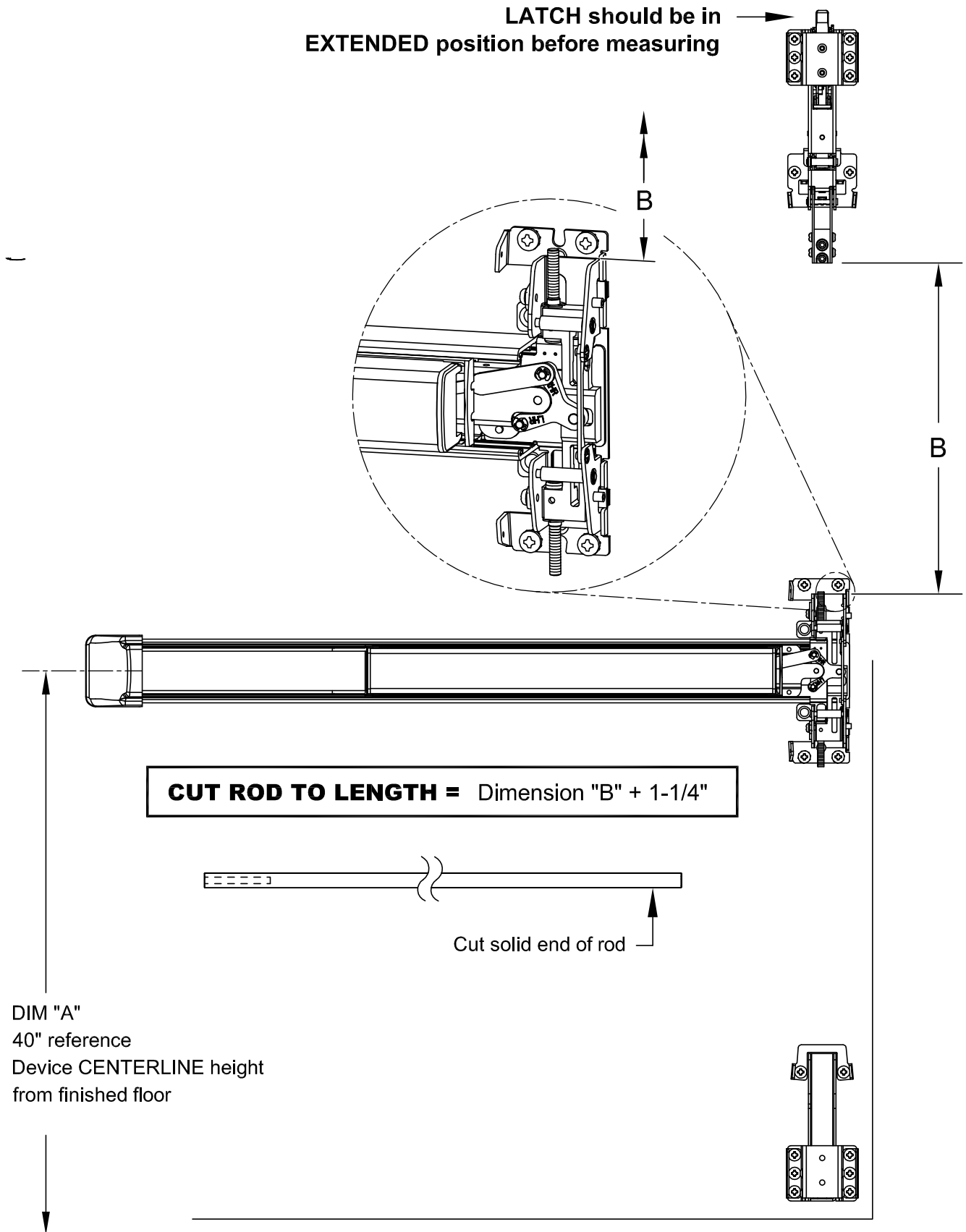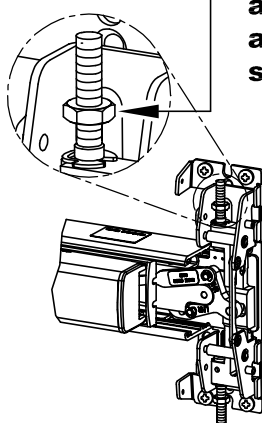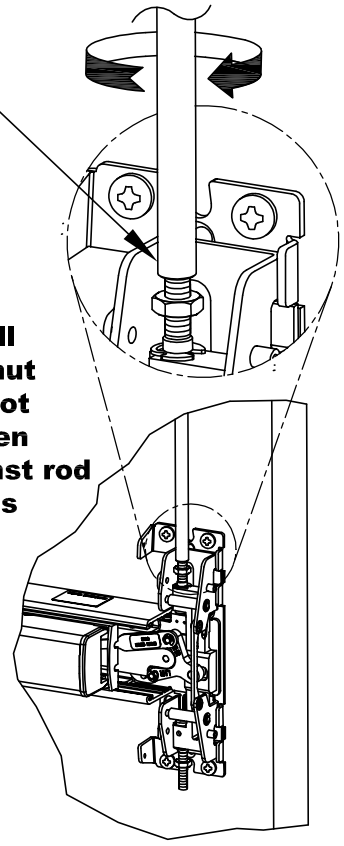
(3) **INSERT** top rod into CONNECTOR BLOCK

(4) With push-pad extended, **ASSEMBLE** top rod to threaded bolt. Rotate CW. (Approximately 8 turns)

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

STEP 10: ADJUST & LOCK DOWN TOP ROD

FOR INSTALLATIONS ON DOOR LYING FLAT, simulate component weight by pulling down on top rod toward bottom of door.

VIEW showing top latch released

(1) **RELEASE** the top latch

Holdback bracket

PUSH to release top latch

(2) **ROTATE** rod CCW until top latch just starts to retract. Rotate rod back 2 turns CW.

Top rod should stop inside connector block

(3) Push pushpad down slightly to bottom out rod into connector block, then **TIGHTEN** both set screws.

STEP 11: INSTALL BOTTOM ROD and BOTTOM BOLT

(1) INSTALL jam nut

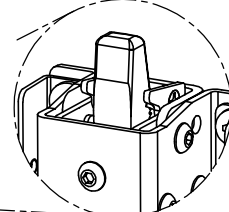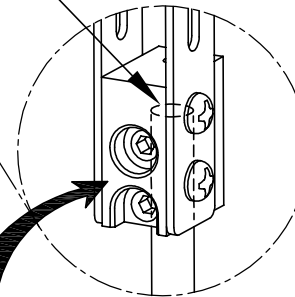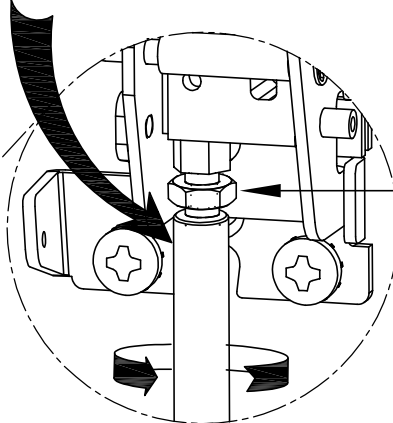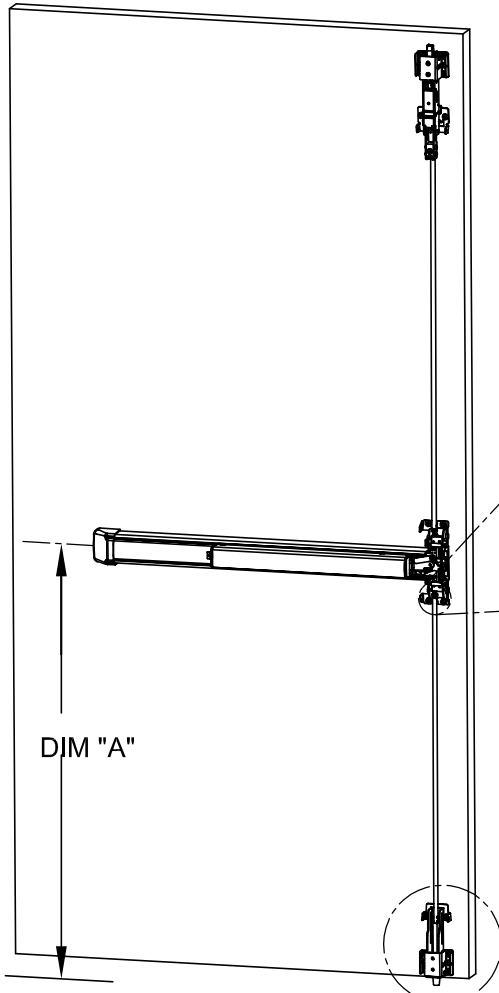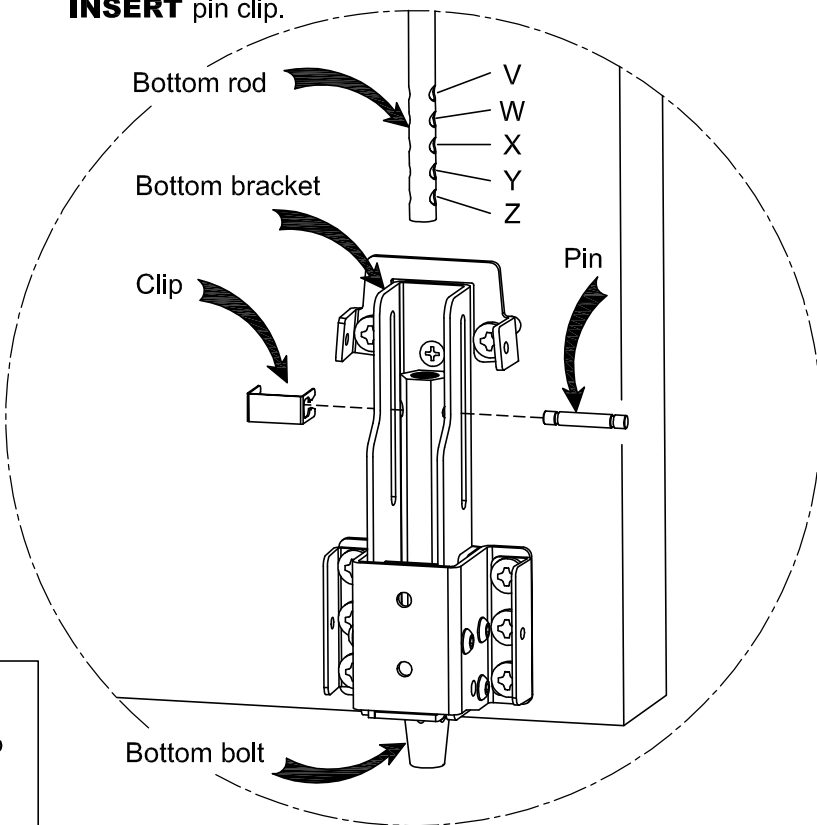**(2) ASSEMBLE** bottom rod to threaded bolt.
Rotate CCW (Approximately 8 turns)

**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.

DIM "A"

Bottom rod

V
W
X
Y
Z

Bottom bracket

Clip

Pin

Bottom bolt

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

Use (1) or (2) SHIMS if needed

TOP STRIKE

SCREW
1/4-20 x 1"
Socket Flat Head
QTY: 2

SCREW
1/4-20 x 1"
Socket Button Head
QTY: 2

1

2-5/16

1-5/32

Drill (#7) & tap
holes for 1/4-20
socket button head
screws, 2 places

FRAME

1-3/4
REF

9/16 from
DOOR FACE

BACKSET
Centerline

DOOR

2-5/16

BACKSET ℄

FRAME STOP
FACE

1-3/4
REF

9/16 from
DOOR
FACE

WEATHER STRIP/
CLOSING GAP
(If applicatble)

DOOR

**VIEW SHOWN
LOOKING UP AT HEADER**

2

Install strike with
(2) 1/4-20 x 1" socket
button head screws

1/4-20 x 1"

View showing
**STRIKE
ORIENTATION**

DOOR

3

1/4-20 x 1"

MARK, DRILL, & TAP
holes for LOCKING strike. Add
screws **AFTER** final adjustment.
Secure with (2) 1/4-20 x 1" socket
flat head screws

STEP 13: INSTALL BOTTOM STRIKE

1
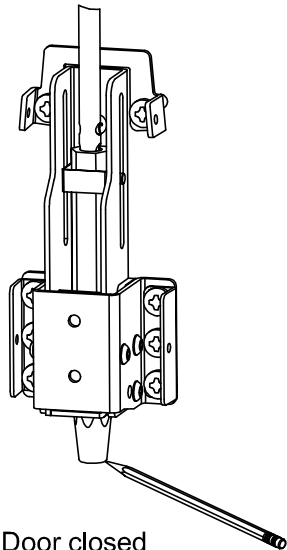
With Door closed
use tip of Bolt to
mark location around bolt
for Bottom Strike

2
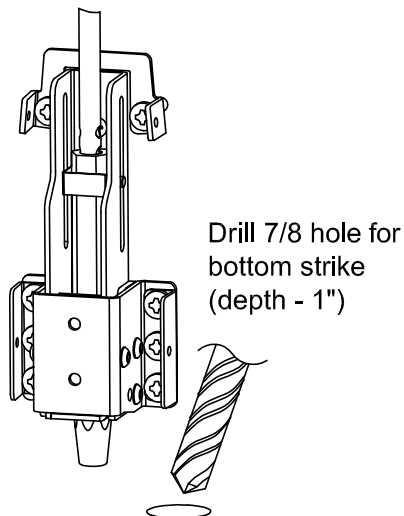
Drill 7/8 hole for
bottom strike
(depth - 1")

ALIGN bottom strike over
drilled hole.
MARK & DRILL two holes
for anchors.
See ANCHOR table below
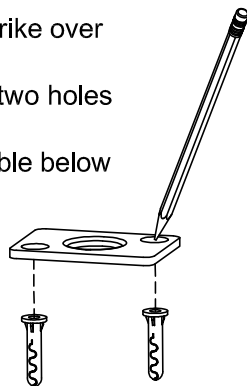
ANCHOR TABLE		
PART NO	DRILL SIZE	MIN HOLE DEPTH
101129-1	1/4"	1"
102642-6	5/16"	1-15/16"

3

SCREW
Self-Cutting
#10 x 1"
QTY: 2

BOTTOM
STRIKE
P/N 105249

#10 x 1"

Anchor
P/N: 101129-1

Alligator Anchor
P/N: 102642-6

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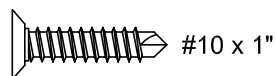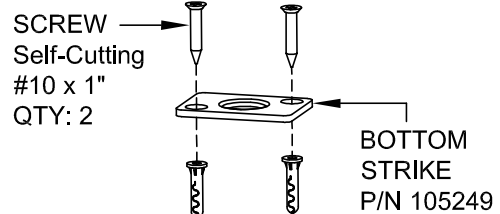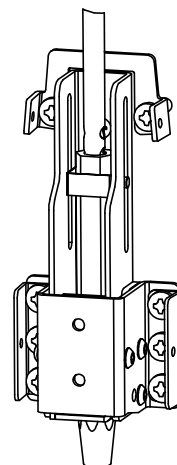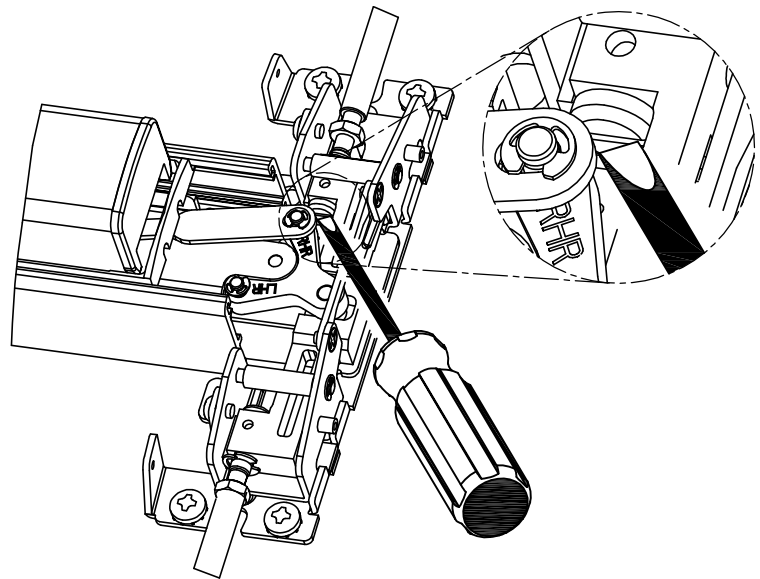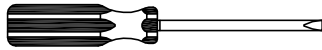
FINE ADJUSTMENT:
Use thread on connector to
obtain fine adjustment.
1 thread turn = Approx. 0.050 inches

BOTTOM ROD ADJUSTMENT

**USE a SLOTTED SCREW DRIVER
for turning ROD CONNECTOR**
Turn CW to shorten rod length
Turn CCW to lengthen rod length
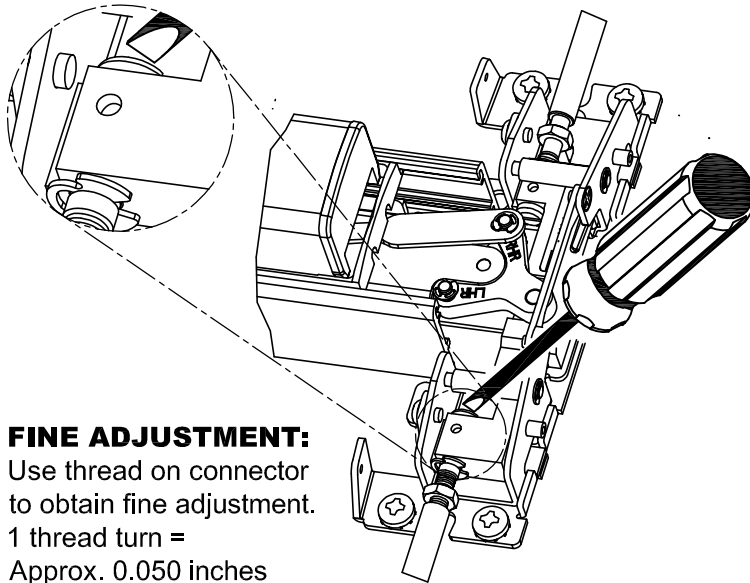
COURSE ADJUSTMENT:
Adjust strike engagement
by using different holes
in rod.

FINE ADJUSTMENT:
Use thread on connector
to obtain fine adjustment.
1 thread turn =
Approx. 0.050 inches
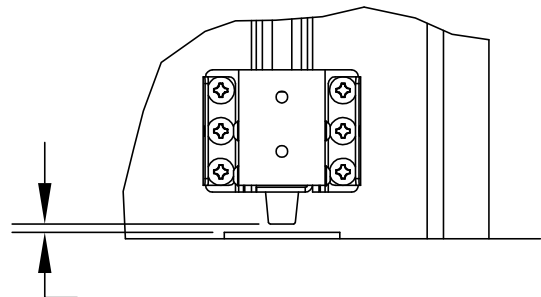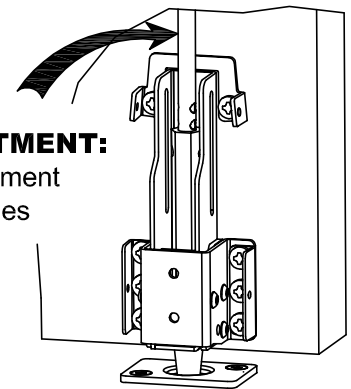
1/16 to 1/8 minimum clearance between
bolt and strike with BOLT RETRACTED
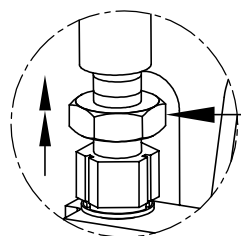
**TIGHTEN TOP & BOTTOM JAM NUTS AGAINST RODS
AFTER FINAL ADJUSTMENT**
Use a 7/16 wrench

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

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

〰〰 10-24 x 5/16"

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

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

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

〰〰 6-32 x 3/8

IMPORTANT
TIGHTEN screws
at this end first

SPACE rod guides evenly
between centercase and
latch assemblies

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

〰〰 10-24 x 5/16"