



Surface Vertical Rod Exit Device

Series 22 | FL22 | 22LBR | FL22LBR (reversible)

Installation Instructions

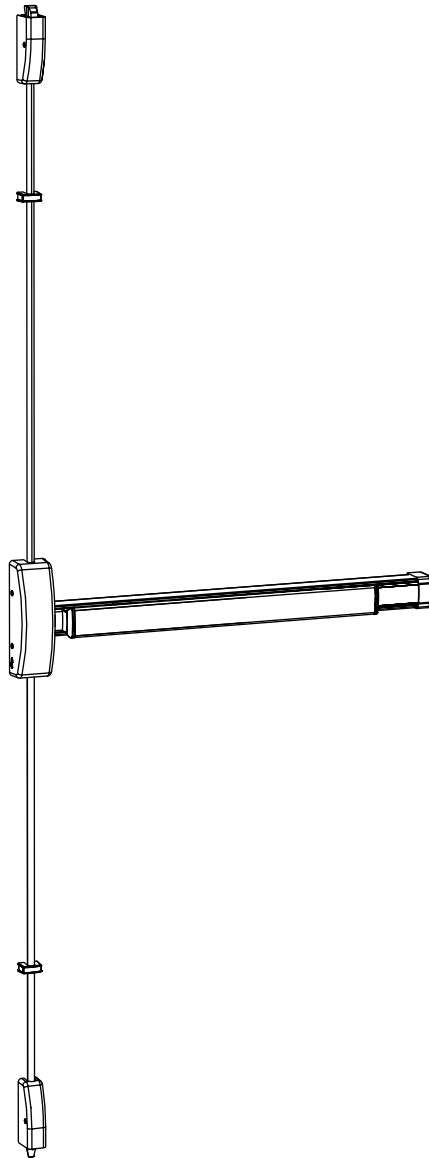


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1 Important safety information

1.1 Safety warnings

1.1.1 Safety instructions: To reduce risk of injury or damage, carefully read and follow safety warnings, cautions and notices provided.

1.1.2 Safety warnings: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **WARNING**

1.1.3 Safety cautions: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

 **CAUTION**

1.1.4 Notice: Indicates information considered important but not directly hazard-related.

NOTICE

- Protect inside of device from metal shavings.

2 Technical specifications

2.1 Tools needed

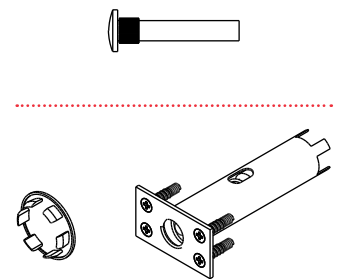
Phillips head screwdriver	Level	Drill bits: #25, 1/4", 3/8", 5/16", 5/8", #7, 9/32", 9/16", 1", 3/32", 3/4", #36	Hacksaw
Flat head screwdriver	Drill	Hole saw: 1-3/8", 1-3/16", 1-3/4", 1-1/8"	Tap: #10-24, 1/4-20, #6-32

2.2 Important information

For fire exit devices series FL22 and FL22LBR:

Sex bolts or through bolts are required for composite (wood, plastic and steel covered), wood core, sheet metal and hollow metal doors without reinforcement unless door manufacturer has an alternate mounting method. Fire doors with steel reinforcement, mount devices with machine screws.

NOTE: Fire rated device with less bottom rod applications must use fire bolt.



2.3 Measurements

2.3.1 All dimensions are given in inches [millimeters].

2.4 Overview and parts list

Fig. 1

- A** Strike shim
- B** Top strike S300 or S301
- C** Flat head screw
#10 x 3/4" MS or #10 x 1" SMS
- D** Pan head screws
1/4-20 x 3/4" MS or #14 x 1" SMS
- E** Top latch
- F** Oval head screws
1/4-20 x 1/2" MS or #14 x 1" SMS
- G** Flat head screws
#8-32 x 3/8"
- H** Latch cover
- I** Rod pin
- J** Spring clip

- K** Rod guide
- L** Oval head screws
#10-24 x 1-1/2" MS or #10 x 1-1/2" SMS
- M** Rod guide strap
- N** Top rod
- O** Oval head screws
#10-24 x 1" MS or #10 x 1" SMS
- P** Touchbar assembly
- Q** Mounting bracket
- R** Pan head screws
#10-24 x 1/2" MS or #10 x 1" SMS
- S** Flat head screws
#10-24 x 3/8" MS
- T** End cap
- U** Hex dogging key
(Dogging not permitted on series FL22 & FL22LBR)

- V** Bottom rod
- W** Rod guide
- X** Oval head screws
#10-24 x 1-1/2" MS or #10 x 1-1/2" SMS
- Y** Rod guide strap
- Z** Flat head screws
#8-32 x 3/8" MS
- AA** Cover
- BB** Rod pin
- CC** Spring clip
- DD** Oval head screws
1/4-20 x 1/2" MS or #14 x 1" SMS
- EE** Latch cover
- FF** Flat head screws
#8-32 x 3/8" MS
- GG** Bottom latch
- HH** Flat head screws
- II** Bottom strike S460

Bottom strike screws & anchors	QTY.
1/4-20 x 1/2" flat head MS	2
# 1 4 x 1" flat head SMS	2
Anchor, plastic plug	2
Drop-in anchor, 1/4-2 0	2

3 Device preparation

3.1 Changing handing (if necessary)

Fig. 2, Fig. 3, Fig. 4, Fig. 5

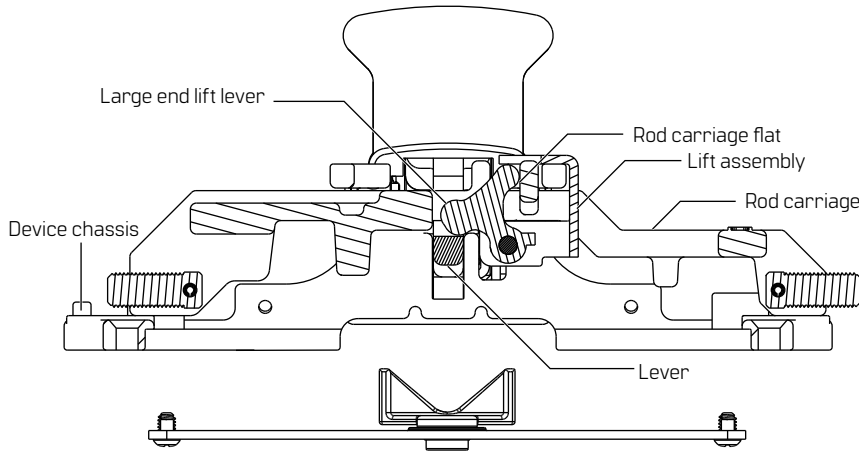


Figure 2 RHRB shown

NOTE: When installing backplate, assembly cam must be under lever.

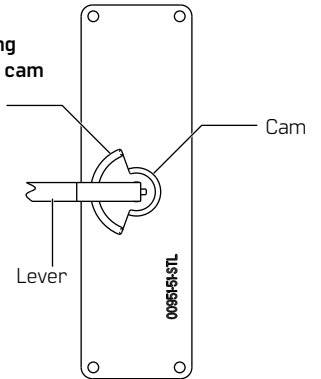


Figure 3 Backplate assembly for 22 series devices

- 3.1.1 Remove backplate assembly [4 screws].
- 3.1.2 Place device on a bench so that device chassis is off edge.
- 3.1.3 Remove lift assembly [2 screws].
- 3.1.4 Slide rod carriage end marked TOP toward lever. Rod carriage will begin to fall, as shown in Fig. 4.

- 3.1.5 Rotate rod carriage until it falls out.
- 3.1.6 Insert bottom end of rod carriage into opposite side of chassis, as shown in Fig. 5.
- 3.1.7 With lever in square hole, rotate rod carriage 90° so it is in same position as step 3.1.4.
- 3.1.8 Push up and slide rod carriage onto chassis.
- 3.1.9 Insert lift assembly into rod carriage, making sure that large end of lift lever is on top of lever and other end is against rod carriage flat.
- 3.1.10 Attach with two screws.
- 3.1.11 Secure backplate assembly with four screws.

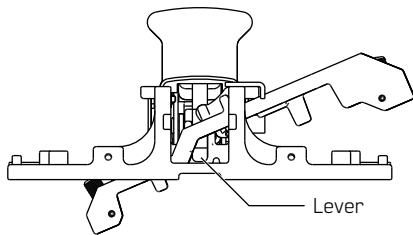


Figure 4 Rod carriage

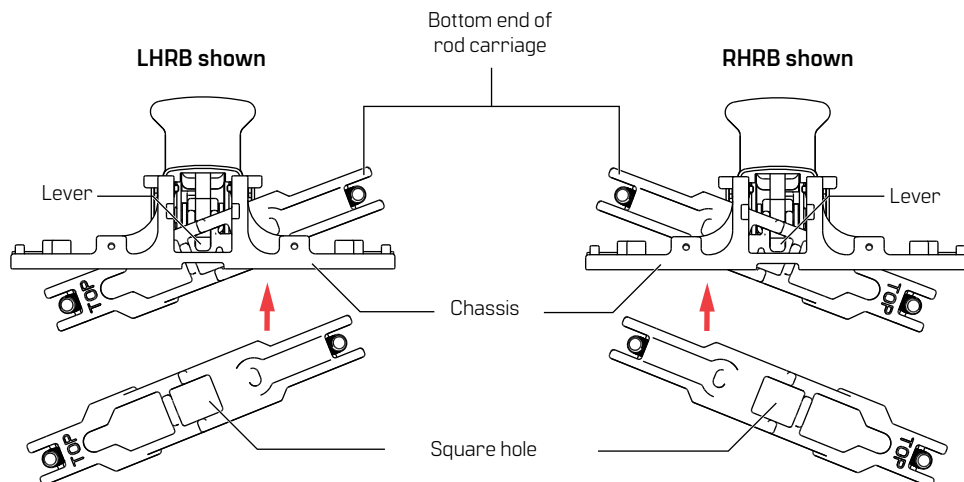


Figure 5 Lift lever

3.2 Cutting device (if necessary)

Fig. 6, Fig. 7

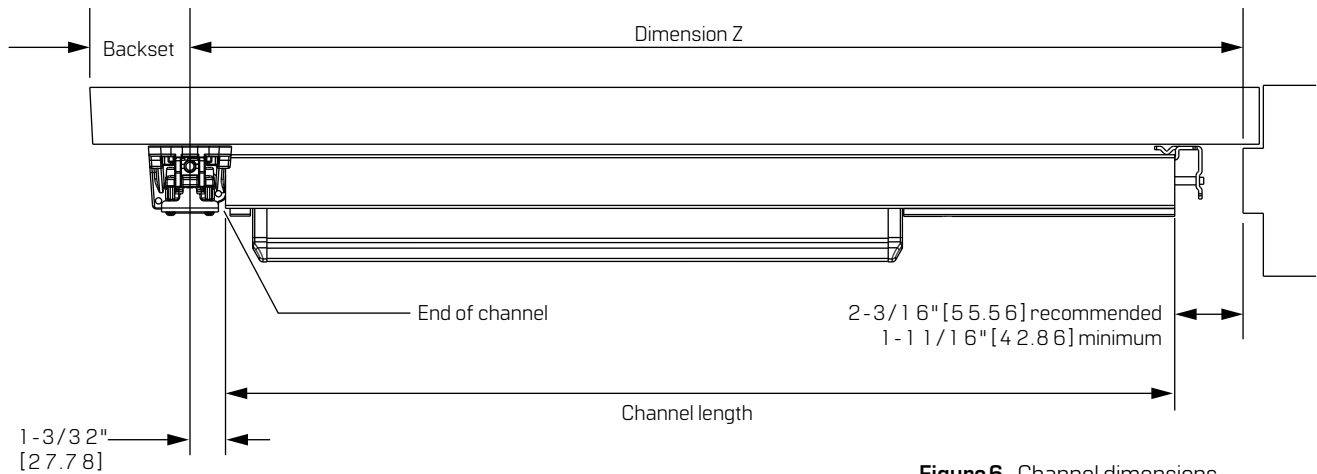


Figure 6 Channel dimensions

3.2.1 Determine proper channel length by subtracting 3 - 1/4" [82.55] from dimension Z.

3.2.2 Mark cut-off point.

NOTE: Hinge side filler must be all the way inside of channel.

3.2.3 Cut off channel and hinge side filler and deburr.

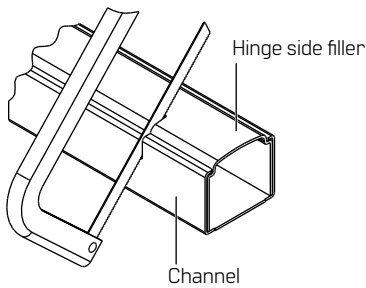


Figure 7 Cutting device

NOTICE

Protect inside of device from metal shavings.

NOTICE

If device is equipped with ALK, CD, DE, or DS refer to instruction sheet listed below prior to cutting device.

ALK	Alarm kit	T93642
CD	Cylinder dogging	T93616
DE	Delayed egress	T93654
DS	Door position	T93668

4 Installation instructions

4.1 Prepping door

Fig. 8

4.1.1 Circle trim number, if specified, at various locations for hole B on trim template.

4.1.2 Mark horizontal centerline on inside face of door $39-15/16"$ [1014.4] from finished floor.

NOTE: Continue horizontal centerline to outside face of door if trim is specified.

4.1.3 Mark vertical centerline per backset indicated at lock side on full height of door and carry it onto underside of door stop.

NOTE: If trim is specified, mark vertical centerline at lock side using backset dimension on outside face of door.

NOTE: Vertical centerlines on both sides of door should be same dimension from edge of door.

4.1.4 Tape lock stile case, top latch and bottom latch templates, and trim template if trim specified, to door so that centerlines on templates line up with centerlines on door.

4.1.5 Mark centers and drill required holes as indicated on templates.

$39-15/16"$ [1014.4]
to finished floor

NOTICE

For LBR device, omit prep for bottom latch. For FL22LBR devices, see fire bolt installation sheet T93637.

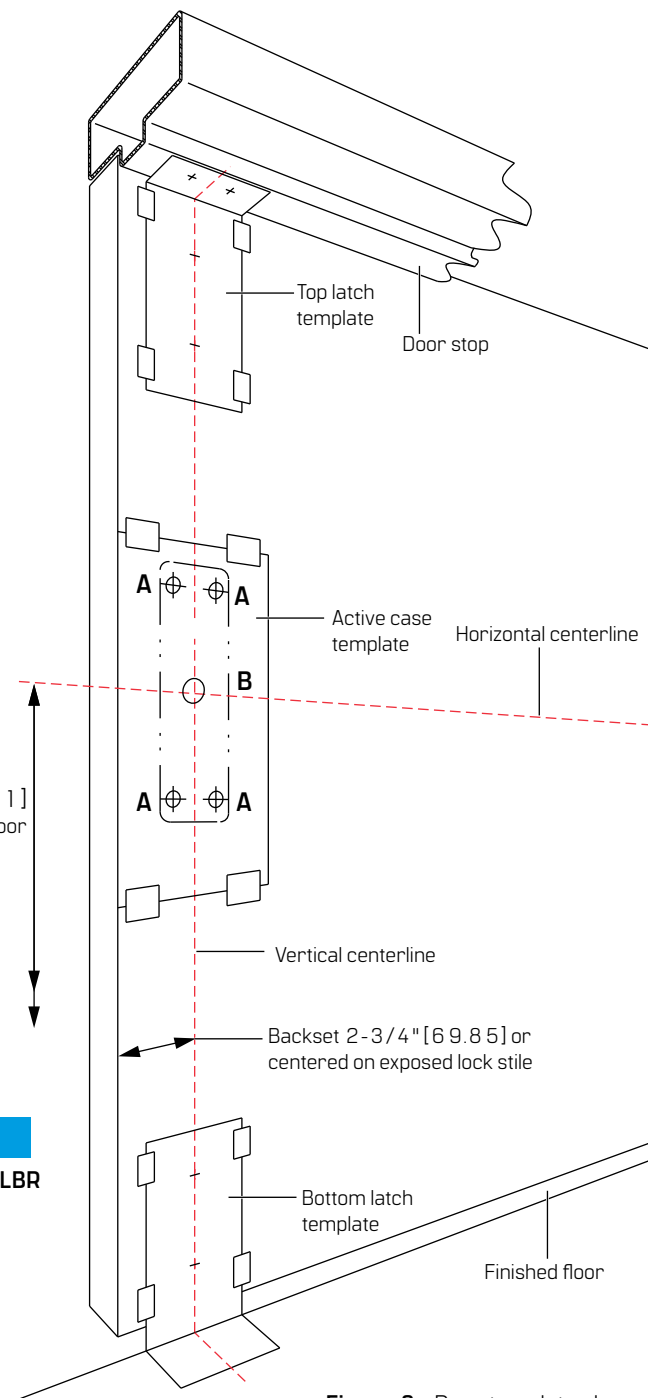
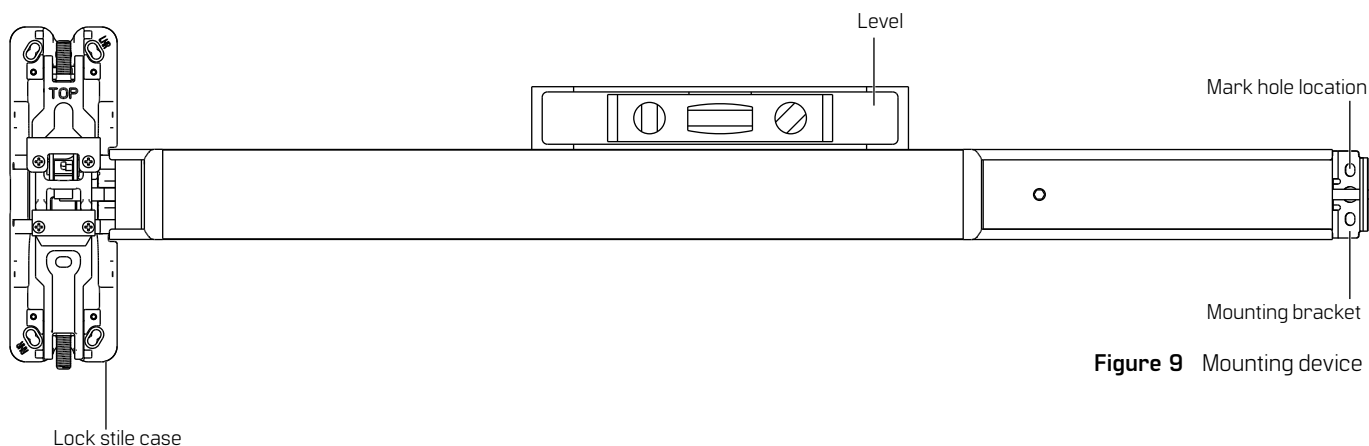


Figure 8 Door template placement

4.2 Installing device

Fig. 9, Fig. 10, Fig. 11



NOTE: If trim is specified, see trim installation instructions packaged with trim. If exit device has electrical or other options, see specific option instructions packaged in exit device carton.

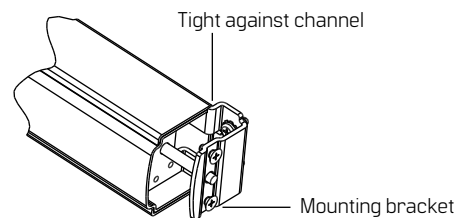
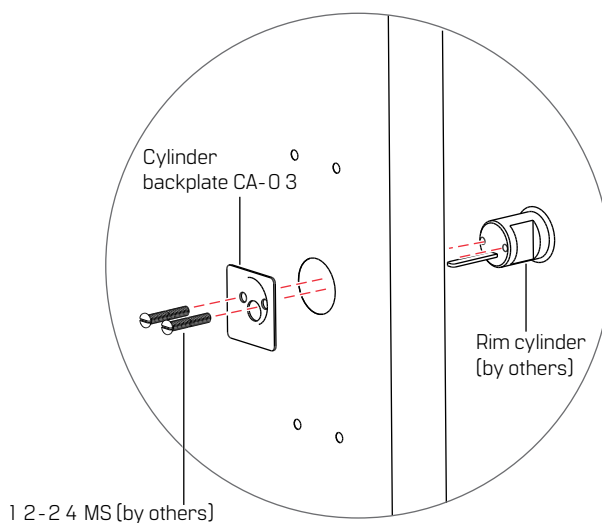
4.2.1 Lock stile case mounting:

- **Device with trim:** See trim instructions.
- **Cylinder only:** Install cylinder with cylinder backplate. Make sure tailpiece is extending 1/4" [6.35] to 5/16" [7.93] from inside face of door. Insert tailpiece into cam in lock stile case and mount it to door with four screws.
- **Exit only:** Mount lock stile case to door with four screws.

4.2.2 Insert mounting bracket into touch bar assembly tight against channel.

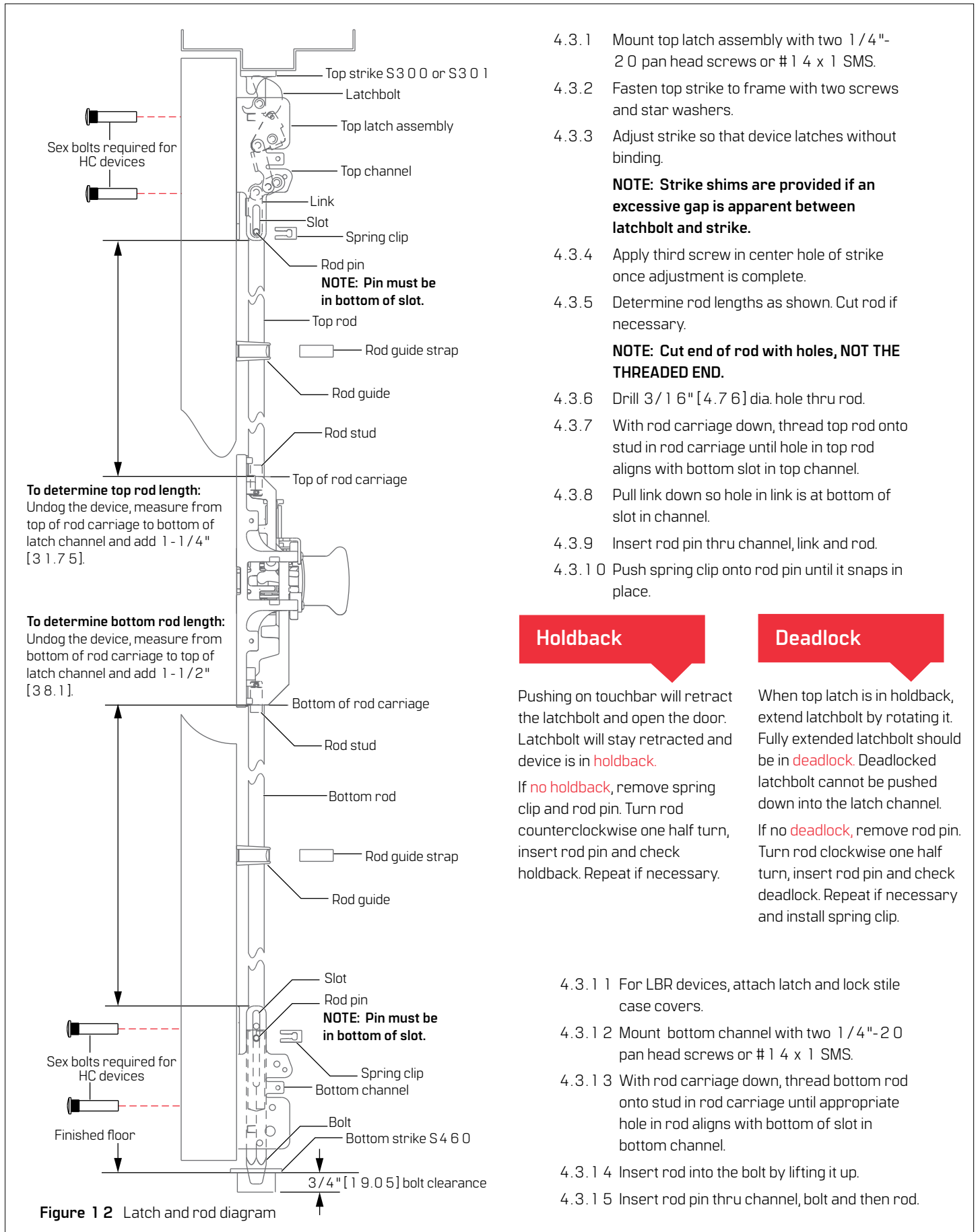
4.2.3 Level device, mark and drill two holes for #10 sheet metal screws or #10-24 machine screws.

4.2.4 Fasten mounting bracket to door and attach endcap with two flat head screws.



4.3 Installing latches and rods

Fig. 1 2



- 4.3.1 Mount top latch assembly with two 1/4"-2 0 pan head screws or # 1 4 x 1 SMS.
- 4.3.2 Fasten top strike to frame with two screws and star washers.
- 4.3.3 Adjust strike so that device latches without binding.
NOTE: Strike shims are provided if an excessive gap is apparent between latchbolt and strike.
- 4.3.4 Apply third screw in center hole of strike once adjustment is complete.
- 4.3.5 Determine rod lengths as shown. Cut rod if necessary.
NOTE: Cut end of rod with holes, NOT THE THREADED END.
- 4.3.6 Drill 3/1 6" [4.7 6] dia. hole thru rod.
- 4.3.7 With rod carriage down, thread top rod onto stud in rod carriage until hole in top rod aligns with bottom slot in top channel.
- 4.3.8 Pull link down so hole in link is at bottom of slot in channel.
- 4.3.9 Insert rod pin thru channel, link and rod.
- 4.3.1 0 Push spring clip onto rod pin until it snaps in place.

Holdback

Pushing on touchbar will retract the latchbolt and open the door. Latchbolt will stay retracted and device is in **holdback**.
If **no holdback**, remove spring clip and rod pin. Turn rod counterclockwise one half turn, insert rod pin and check holdback. Repeat if necessary.

Deadlock

When top latch is in holdback, extend latchbolt by rotating it. Fully extended latchbolt should be in **deadlock**. Deadlocked latchbolt cannot be pushed down into the latch channel.
If **no deadlock**, remove rod pin. Turn rod clockwise one half turn, insert rod pin and check deadlock. Repeat if necessary and install spring clip.

- 4.3.1 1 For LBR devices, attach latch and lock stile case covers.
- 4.3.1 2 Mount bottom channel with two 1/4"-2 0 pan head screws or # 1 4 x 1 SMS.
- 4.3.1 3 With rod carriage down, thread bottom rod onto stud in rod carriage until appropriate hole in rod aligns with bottom of slot in bottom channel.
- 4.3.1 4 Insert rod into the bolt by lifting it up.
- 4.3.1 5 Insert rod pin thru channel, bolt and then rod.

4.3 Installing latches and rods (continued)

Fig. 1 3, Fig. 1 4

4.3.1 6 Place device in holdback by pushing on touchbar. Clearance between bottom of bolt and surface where strike will be mounted should be $1/4"$ [6.3 5].

NOTE: If clearance is not $1/4"$ [6.3 5], remove rod pin and thread rod into rod carriage to achieve $1/4"$ [6.3 5] clearance. Install rod pin and spring clip.

- **For floor application**, center strike around bolt. Mark floor for fasteners, prepare floor according to the type of fastener furnished. Provide clearance in floor for bolt.
- **For threshold application**, center strike around bolt. Provide hole in threshold to accept the bolt. Mark threshold for fasteners. Prepare the threshold according to type of fasteners furnished.

4.3.1 7 Position rod guides midway between latches and lock stile case, centered on rods.

4.3.1 8 Mark, drill and fasten guides with two screws.

4.3.1 9 Snap rod guid straps into position.

4.3.2 0 Attach all covers with screws.

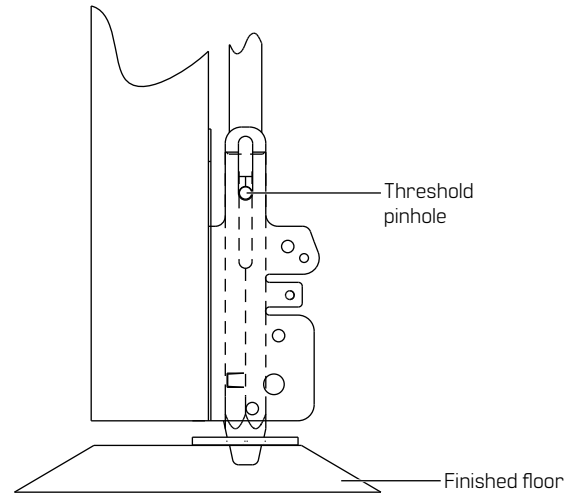


Figure 1 4 Threshold application

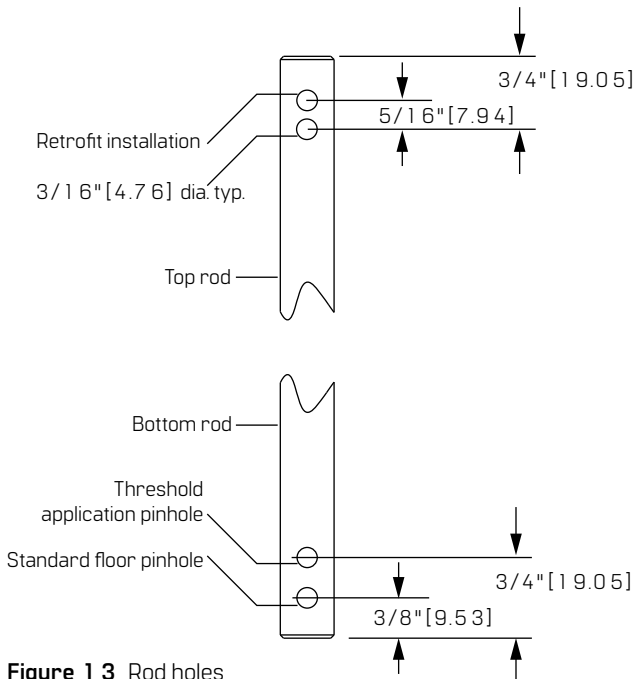


Figure 1 3 Rod holes



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