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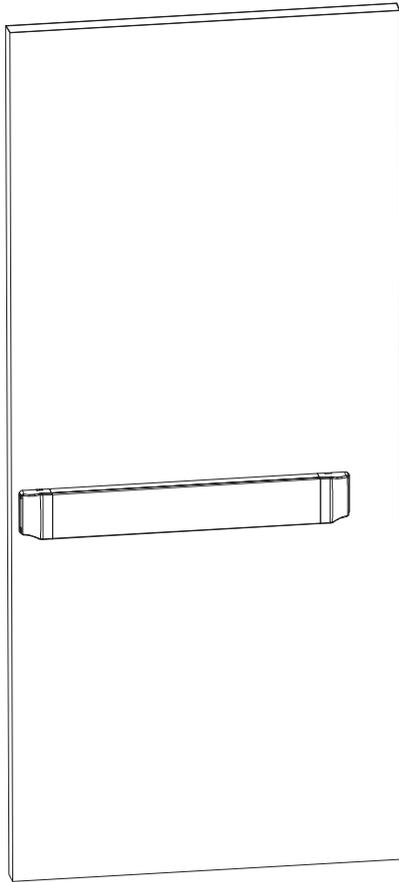
Recessed Exit Device

QEL94/9547

VON DUPRIN®

FOR DEVICES SOLD PRIOR TO DEC. 2014

Installation Instructions



▲ WARNING

Install in accordance with instructions or device will not function.

▲ CAUTION

For less bottom rod (LBR) devices, do not cover the door gap at the auxiliary fire latch with a door edge guard or similar product. If edge guard is installed, remove it.

Devices covered by these instructions:

- QEL94/9547/48 Concealed Vertical Rod Device (Panic and Fire)
- QEL94/9547-LBR Concealed Vertical Rod Device (Fire)

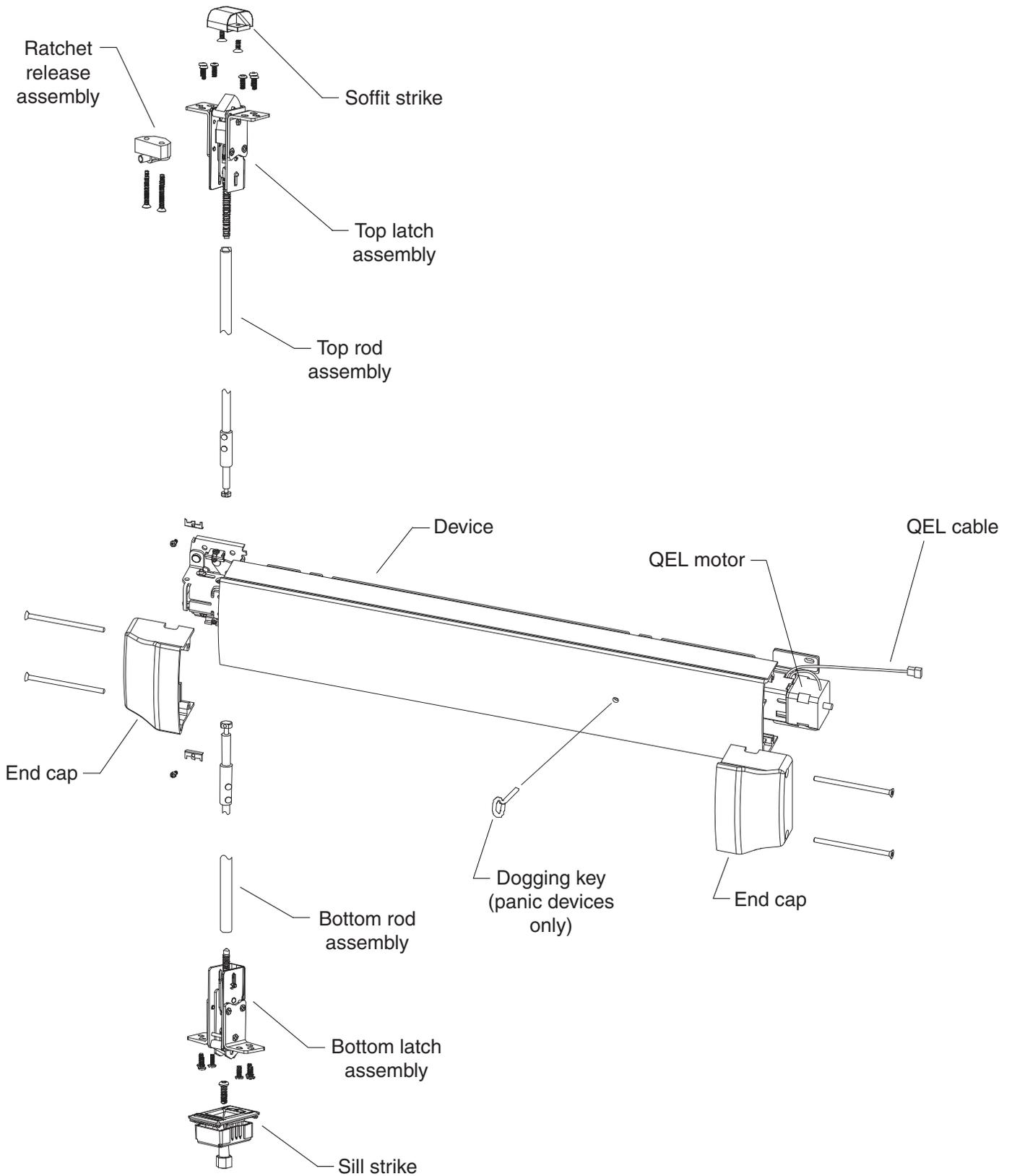
Read All Warnings Before Starting Installation!

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Customer Service
 1-877-671-7011 www.allegion.com/us

PARTS



GENERAL INFORMATION

The QEL94/9547 Exit Device is designed to provide reduced pushpad projection and a unique appearance by embedding the device into the face of the door.

These instructions assume that a factory-prepared door and frame are being used.

Before starting installation, review "Warnings," "Parts," "Specifications," and "Tools Needed."

SPECIFICATIONS

Mechanical

- Vertical rods adjustable for doors 6'8" to 8' tall
- Rods for 10' doors are available upon request
- Pushpad projection (depressed) 1 $\frac{1}{8}$ " to 1 $\frac{1}{4}$ "

Electrical Load

- Voltage: 1.4 A inrush (0.5 sec)
- Current: 0.14 A holding
2.0 A calibrate (3 sec, one time)

TOOLS NEEDED

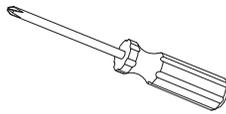
These are the tools needed for installing a QEL94/9547 into a factory-prepared door and frame.



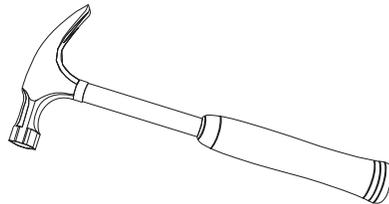
1/2" drill bit



7/64" hex key



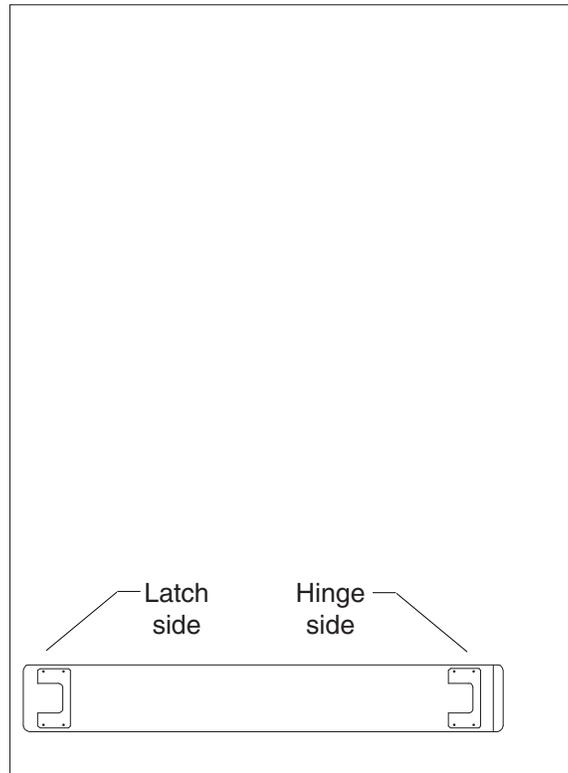
Phillips screwdriver



Hammer

1 PREPARE DOOR FOR TRIM (SKIP THIS STEP IF NOT USING TRIM)

Drill through the four mounting holes and trim access hole at the latch side of the cutout. **See trim installation instructions for hole sizes and locations.**



2 PREPARE HOLE FOR RATCHET RELEASE PLUNGER

- Determine stop height (Figure 2-1), then mark center of hole on device side of door (Figure 2-2).
- Drill a $\frac{1}{2}$ " diameter hole where marked through device side of door **only**.

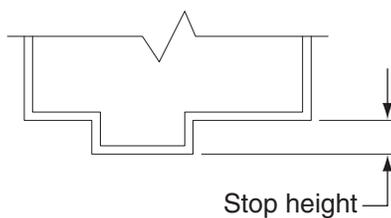


Figure 2-1

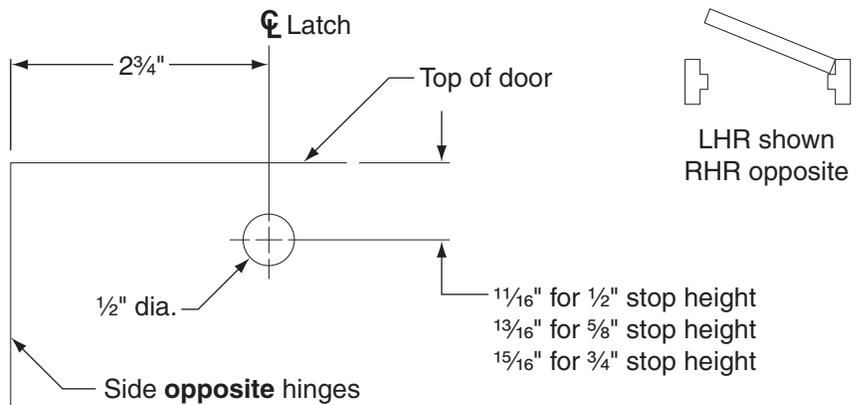


Figure 2-2

3 WIRE LX SWITCH (LX DEVICES ONLY)

- Connect field wiring to frame side of power transfer (Figure 3-1).
- See LX switch wiring information (Figure 3-2) for switch configuration.
- Connect LX switch wiring to door side of power transfer using crimp connectors. Unused wires should be insulated separately.

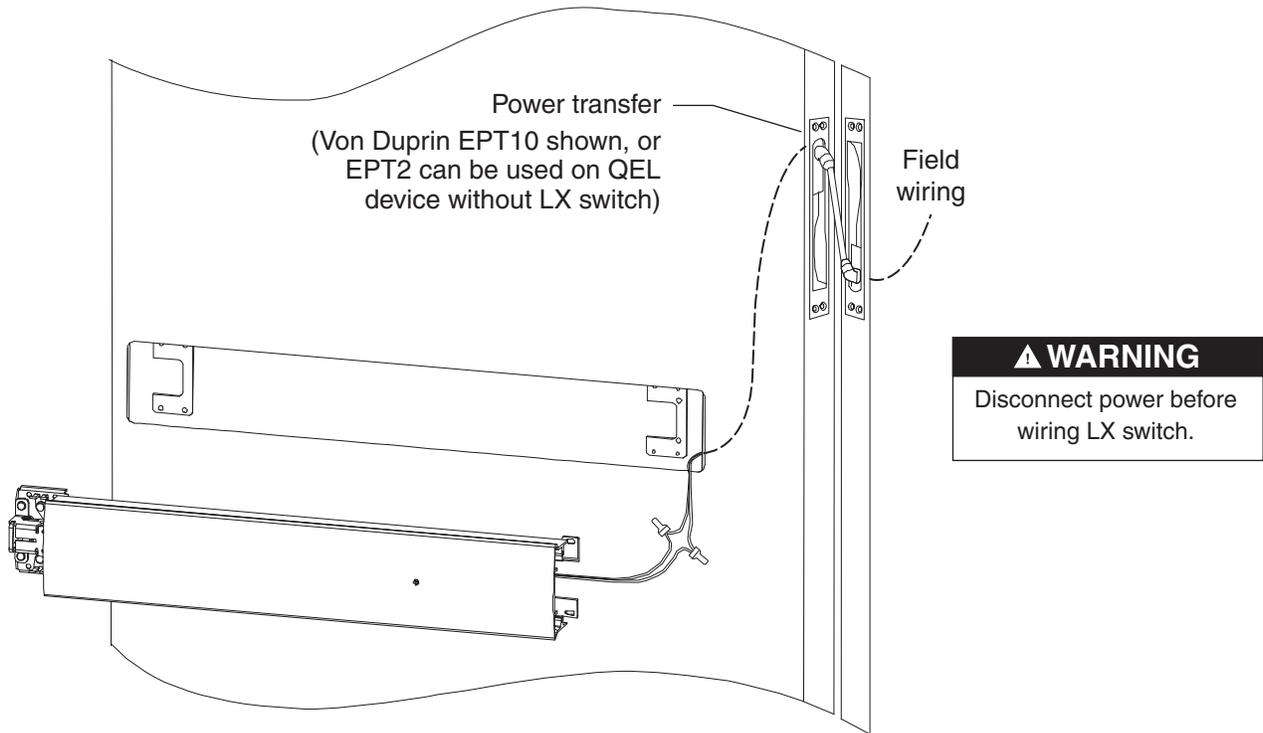


Figure 3-1

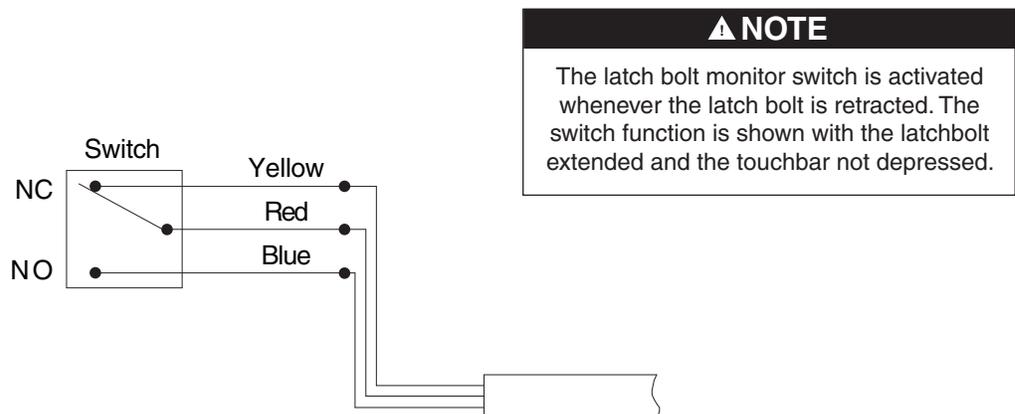


Figure 3-2

4 MOUNT DEVICE ON DOOR

- Mount device on door using supplied mounting screws (Figure 4-1).
- Center device in pocket, leaving an even gap all around the device.
- If outside trim is used, bolt through to trim (see Figure 4-2 and trim installation instructions).

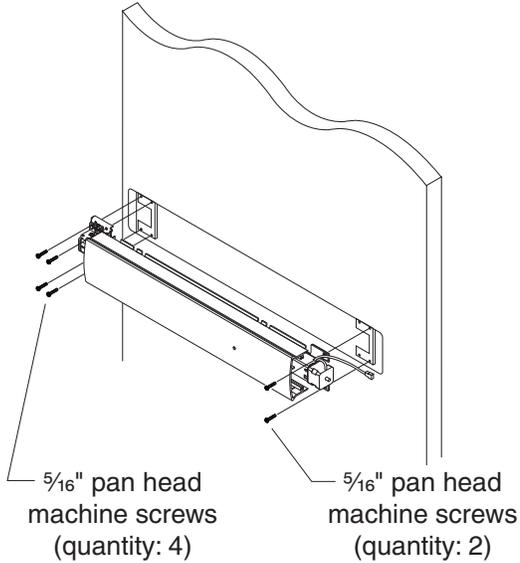


Figure 4-1

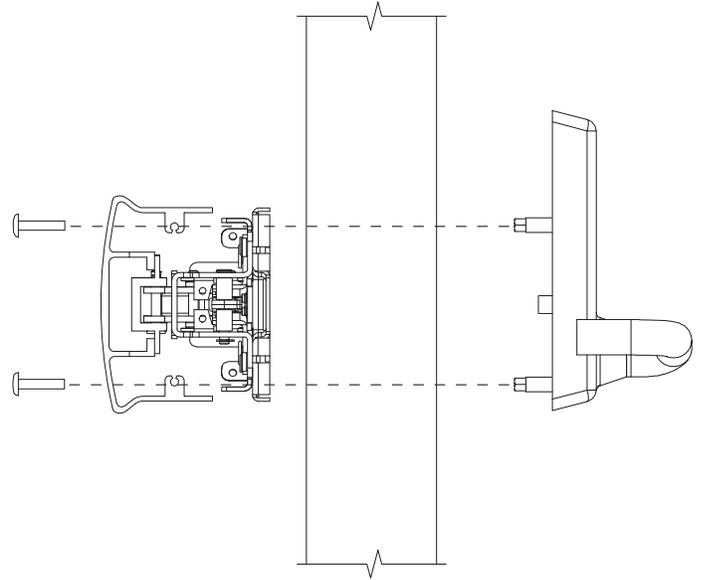
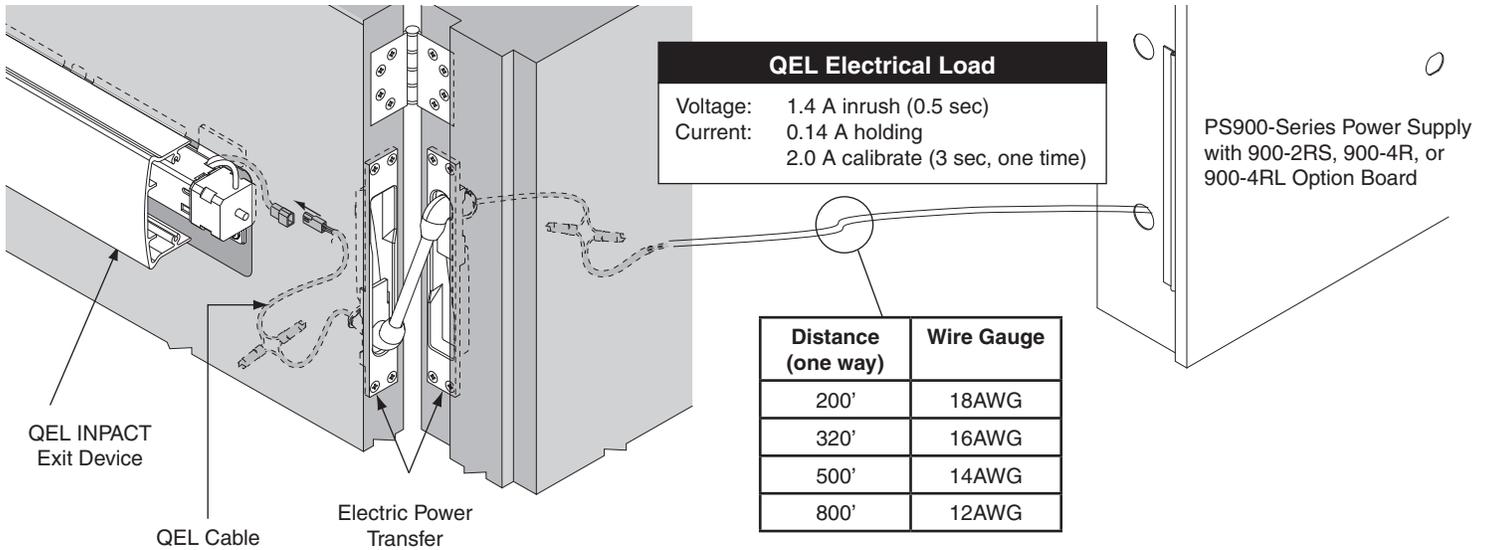


Figure 4-2

5 ROUTE TWO WIRES FROM QEL EXIT DEVICE TO POWER SUPPLY



6 INSTALL TOP LATCH

- Rivet two-piece top rod together. Align holes according to door height (Figure 6-1). Rod length for a 7-foot door is approximately 38½". Top rod sections are longer than bottom rod sections.
- Attach brackets to top latch, then thread rod assembly onto latch (Figure 6-2).
- Slide rod and latch into prep at door top (Figure 6-3), and attach rod to center case (Figure 6-4).
- Fasten latch to door with supplied screws (Figure 6-5).

Door Height	1st Hole	2nd Hole
6'8"	1	B
6'10"	1	A
7'0"	2	A
7'2"	3	A
7'4"	4	A
7'6"	5	A
7'8"	6	A
7'10"	7	A
8'0"	8	A
8'2"	9	A
8'4"	10	A

For door heights between those shown on the chart, use the next door height up. For example, for a 6'11" door, use 7' on the chart.

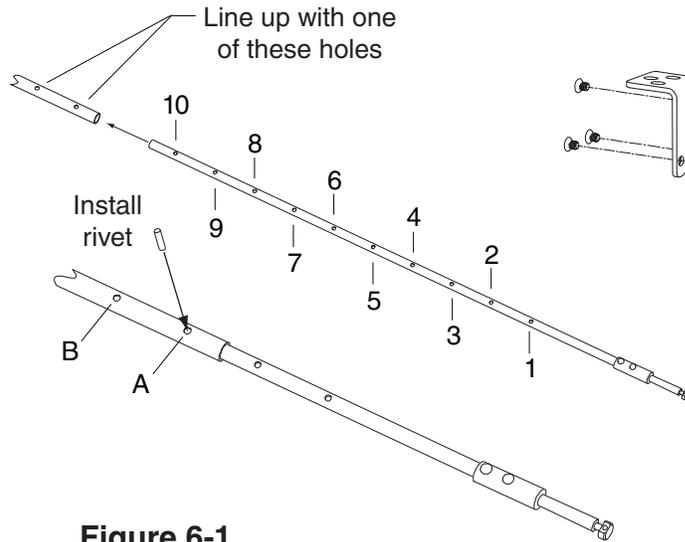


Figure 6-1

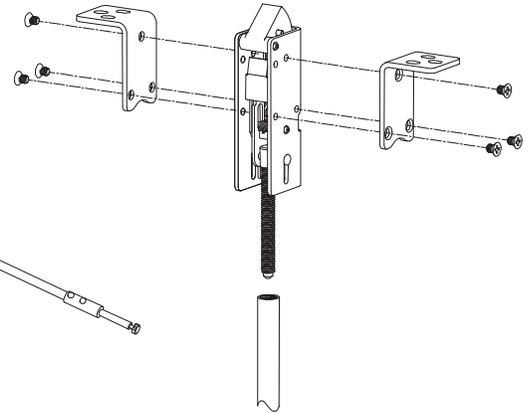


Figure 6-2

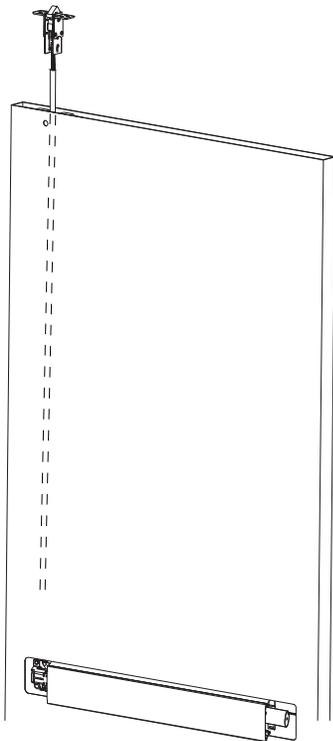


Figure 6-3

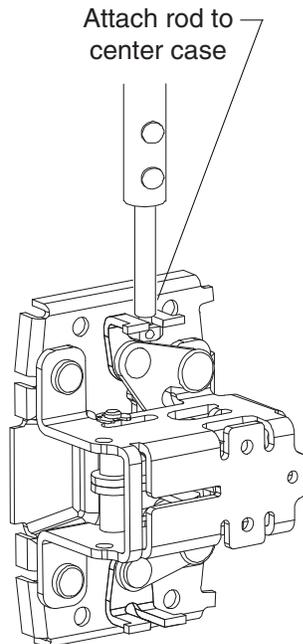


Figure 6-4

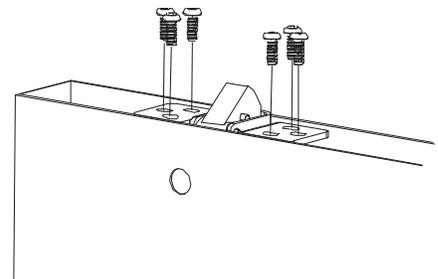
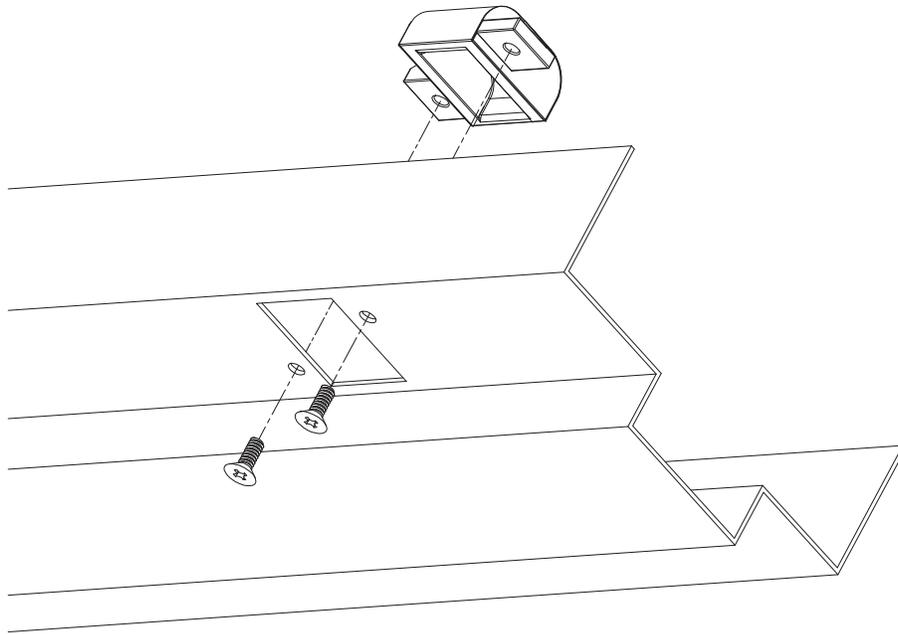


Figure 6-5

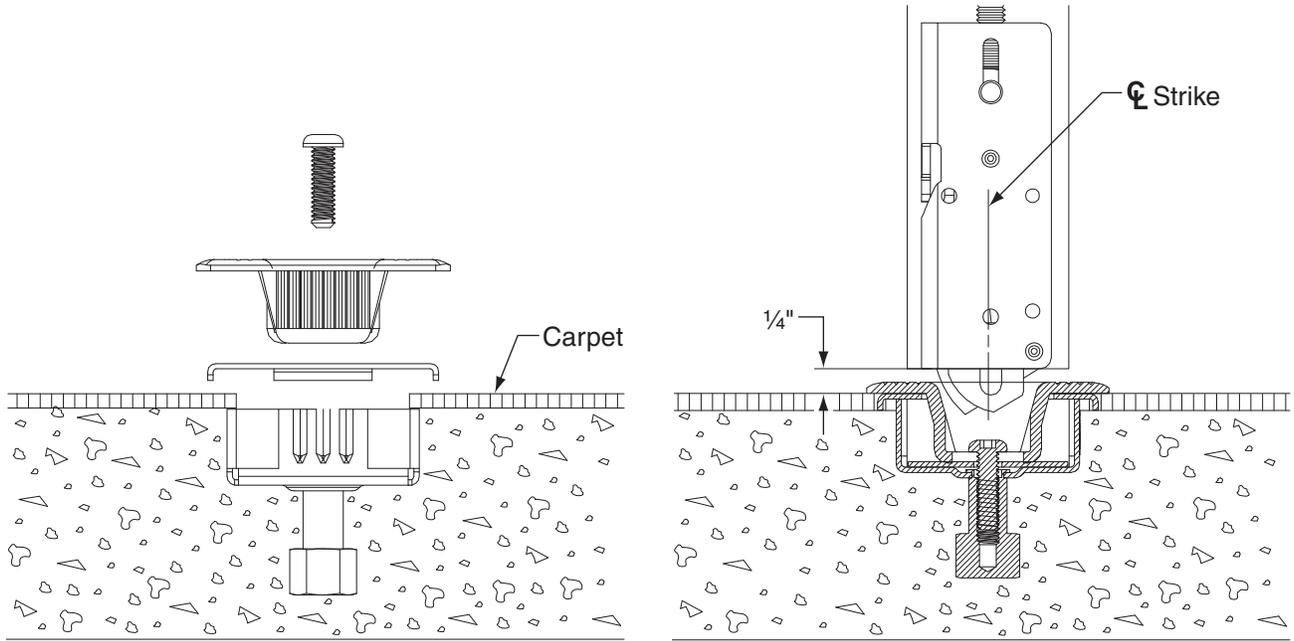
7 INSTALL BOTTOM LATCH (SKIP THIS STEP FOR LBR DEVICES)

- a. Repeat steps 6a through 6d for bottom rod and latch. Use hole 8 for most applications. Approximate rod length is 34½”.
- b. Press pushpad to retract latches.
- c. Hang door.

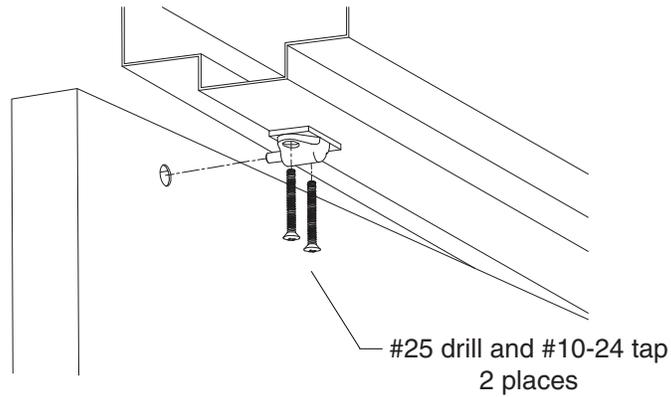
8 INSTALL 338 SOFFIT STRIKE



9 INSTALL SILL STRIKE OR THRESHOLD (SKIP THIS STEP FOR LBR)



10 INSTALL RATCHET RELEASE ASSEMBLY



11 ADJUST TOP ROD

- a. Fully depress and hold pushpad.
- b. Set top latch in fully retracted (hold) position (Figure 11-1).
- c. Push down on center case connector, adjust rod length, and connect top rod (Figure 11-2).
- d. Verify that pushpad projection, when depressed, is between $1\frac{1}{8}$ " and $1\frac{1}{4}$ ". Adjust top rod if necessary: **Lengthening the top rod will reduce pushpad projection when depressed.**
- e. If using trim, verify that the trim fully retracts the top latch. If the trim does not fully retract the top latch, adjust the top rod so it is shorter.
- f. Open door and release latches by inserting a Phillips head screwdriver into the ratchet release plunger hole. Check top latch deadlocking: Top latch should not retract when pressed down.
 - If top latch bolt does not stay fully retracted, shorten top rod (Figure 11-2) and retest.
 - If top latch bolt does not fully extend or deadlock, lengthen top rod (Figure 11-2) and retest.
 - If bottom latch bolt does not stay fully retracted, shorten bottom rod (see Step 12) and retest.
 - If bottom latch bolt does not fully extend, lengthen bottom rod (see Step 12) and retest.

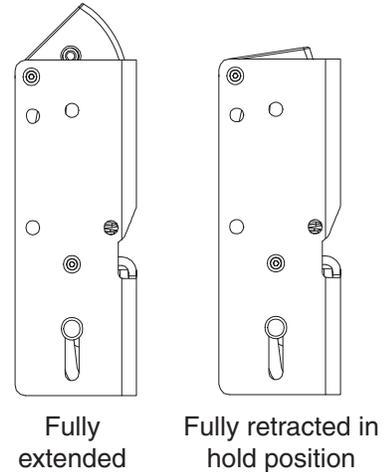


Figure 11-1

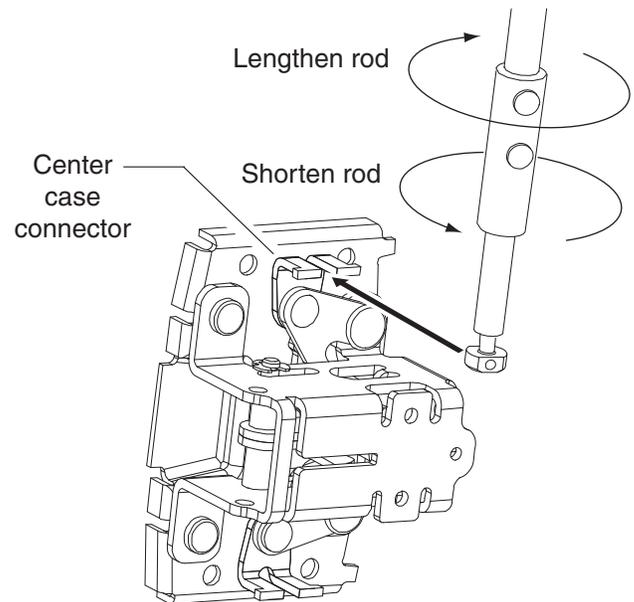
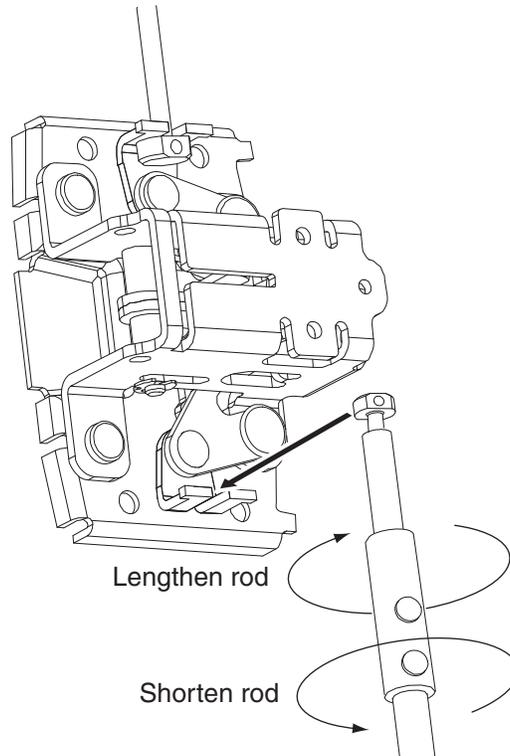


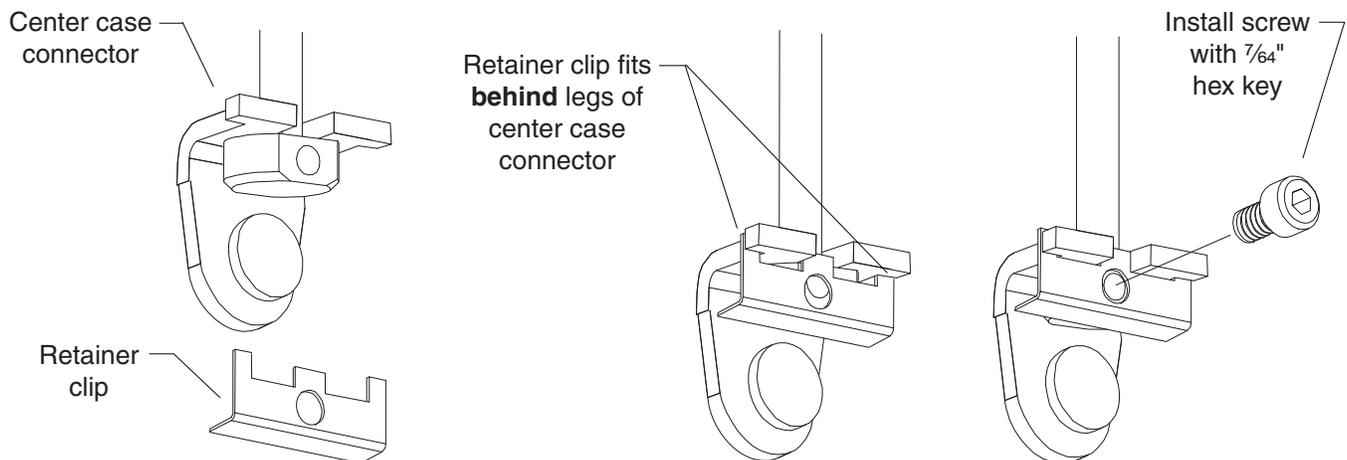
Figure 11-2

12 ADJUST BOTTOM ROD (SKIP THIS STEP FOR LBR DEVICES)

- Fully depress pushpad and release. Top latch should be in retracted position.
- Adjust bottom rod length by rotating rod so latch clears floor when door is open.



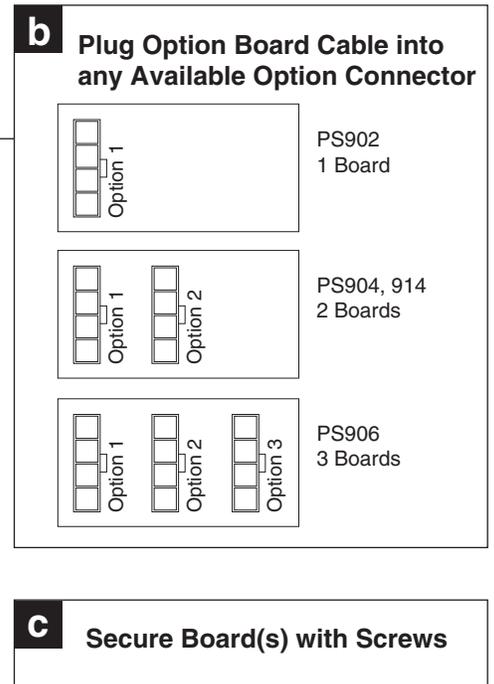
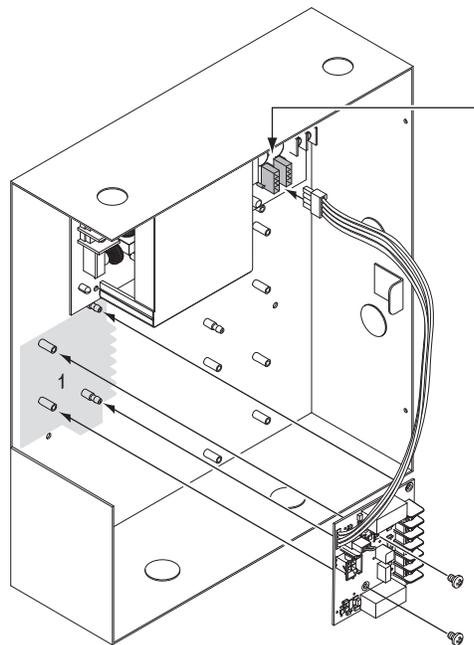
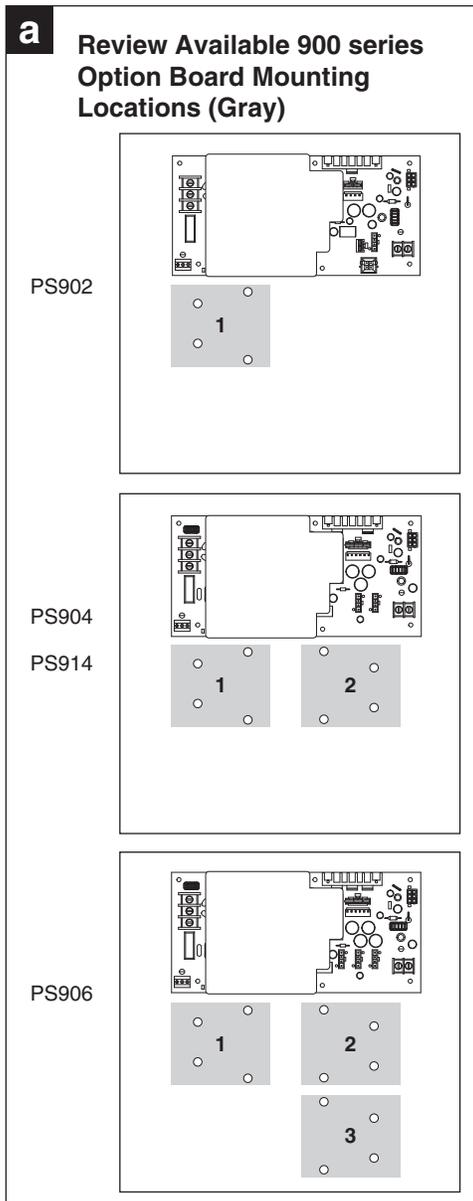
13 INSTALL RETAINER CLIPS ON TOP AND BOTTOM RODS AT CENTER CASE



14 TEST MECHANICAL DEVICE OPERATION

- Fully depress pushpad and push door open.
- Release pushpad. Latch bolts should remain retracted.
- Close door. Latch bolts should fully extend ($\frac{5}{8}'' \pm \frac{1}{16}''$) and engage strikes.

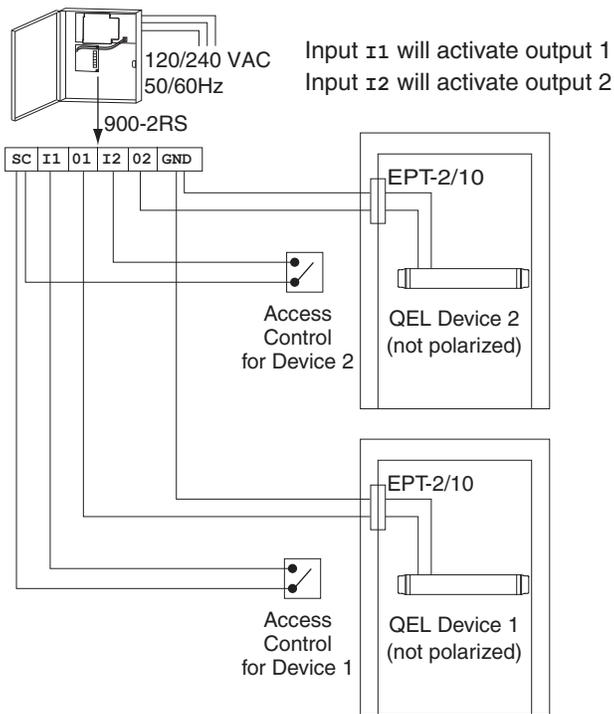
15 INSTALL 900-2RS, 4RL, OR 4R OPTION BOARD(S) INTO POWER SUPPLY



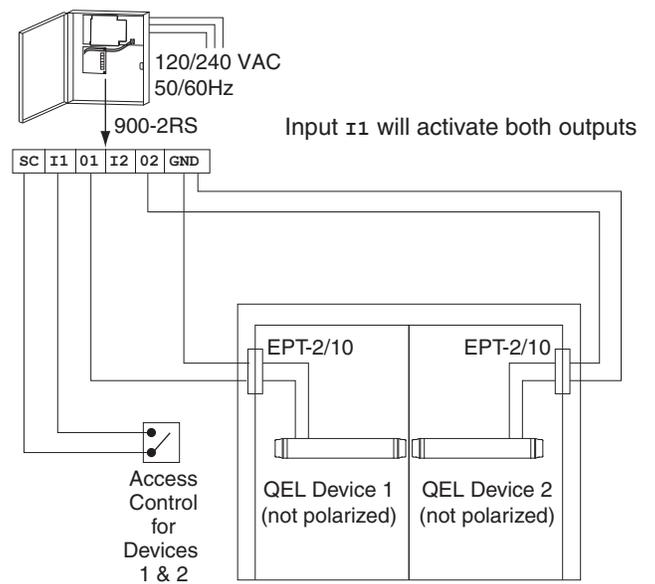
- Notes:**
- 24VDC output setting required when EL or QEL device connected
 - If installing board in location 2 or 3, rotate board 180°
 - The QEL is compatible with an existing 900-2Q board if currently installed.
 - When powering (2) QEL's with a PS902, both cannot be activated at the same time, they must be sequenced.
 - Latchbolt retraction of (2) sequenced QEL's requires more than 1 second to complete.
 - For double door QEL applications with auto operators, it is recommended to use a PS904, 906, or 914 power supply.

16 CONNECT INPUT AND OUTPUT WIRES TO OPTION BOARD, 2RS SHOWN

Individual Mode - Typical Wiring



Sequential Mode - Typical Wiring



Note:
Fail secure output only allowed if approved
by Authority Having Jurisdiction

For other option board wiring diagrams, see the appropriate instruction sheet.

17 APPLY POWER TO POWER SUPPLY. IF 900-BB IS USED, THEN RECONNECT BATTERIES

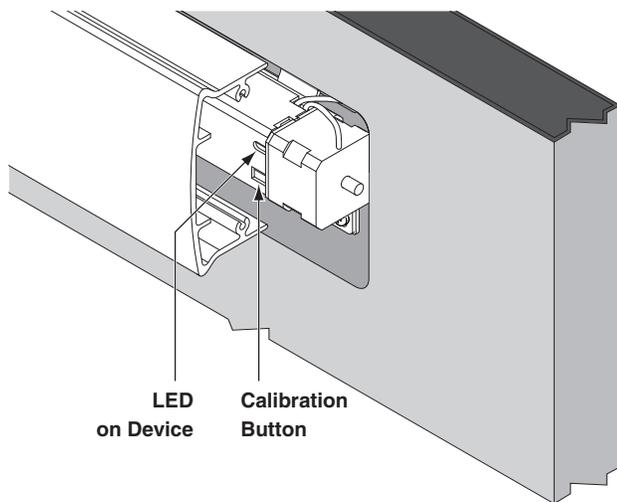
18 CHECK OPERATION

- a. Activate each input and verify all QEL devices operate properly.
NOTE: During the first activation, each device will perform a one time self calibration, which is normal. For best results, power each device separately so that the calibration cycles do not overlap.
- b. If any device does not operate properly, see step 19 for troubleshooting.

19 IF NECESSARY, TROUBLESHOOT OPERATION

Power at the QEL	QEL Response	Condition / Solution
0VDC	LED - Off Latchbolt extended	QEL is not receiving power to operate 1. Problem with power supply or wiring
24VDC	LED - Solid green Latchbolt retracted	Operation normal
	LED - Solid red after latchbolt attempts to retract multiple times	Improper mechanical adjustment or QEL calibration First check mechanical adjustment (on vertical rods or mortise lock devices, if used) and correct adjustments* Calibrate the QEL 1. Apply power and wait until the LED is solid red 2. Momentarily press the calibrate pushbutton (LED will flash green) 3. QEL will go through a retraction sequence to complete calibration, LED will be solid green and latchbolt retracted 4. Remove and reapply power to verify correct operation If the power to the QEL is being controlled by an access control system with momentary unlock, calibrate as follows: 1. Open door completely if using auto operator 2. Press and hold the QEL pushbutton 3. Activate the access control input to unlock the QEL 4. Immediately after the QEL LED turns on green, release the QEL pushbutton 5. The QEL will calibrate (this will look like a fast then a slow pull) 6. Reapply power to verify correct operation
	LED - Flashing green/red Latchbolt is not retracted	Excessive tamper (while power was applied, the pushpad was pulled out at least 3 times) 1. Wait 2 minutes, latchbolt will retract again; OR 2. Remove and reapply power to clear the condition
12 VDC	LED - Solid red after latchbolt attempts to retract multiple times	Power supply is not set for proper voltage output 1. Remove AC from power supply, change it from 12 to 24VDC 2. Apply AC power to power supply and verify proper operation

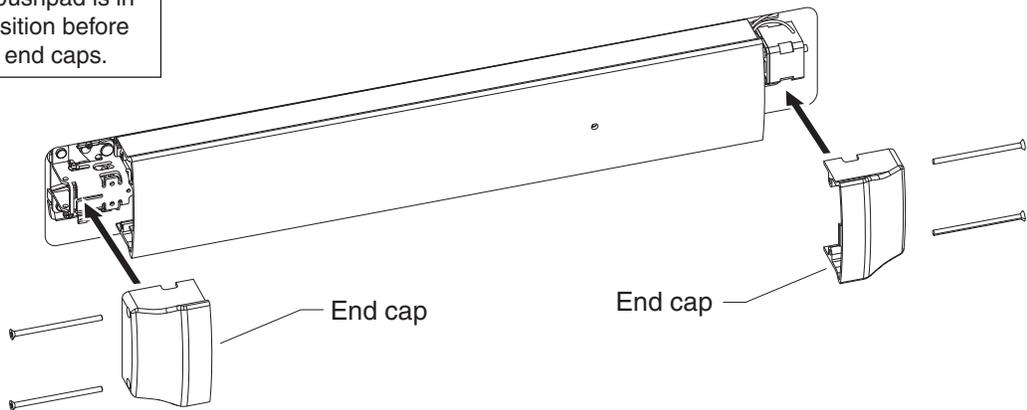
*For information about adjusting exit devices, go to www.vonduprin.com/installation_instruction_library.asp or call Technical Services at 1-877-671-7011



20 INSTALL END CAPS

▲ NOTE

Make sure pushpad is in outward position before installing end caps.



21 INSTALL AUXILIARY FIRE LATCH (LBR DEVICES ONLY)

See installation instructions packaged with auxiliary fire latch kit.