

# INSTALLATION INSTRUCTIONS

## CRL JACKSON 2085E ELECTRIC LATCH RETRACTION CONCEALED VERTICAL ROD PANIC EXIT DEVICE



---

Phone: (800) 421-6144 • Fax: (866) 921-0531  
crlaurence.com • usalum.com • crl-arch.com

---

# ORDER OF ASSEMBLY AND INSTALLATION

Parts Identification ..... 03 - 04

Door Preparation ..... 05

Layout Selection ..... 06 - 09

Door Hardware Installation ..... 10 - 15

    Insert Rod and Case ..... 10

    Install Mortise Cylinder Lock And Mounting Pad (Optional) ..... 11

    Install Exterior Locking Lever Trim (Optional) ..... 12

    Install 2085E Exit Device..... 13

    Operations Check..... 14

Frame Preparation and Strike Installation ..... 15 - 16

Door Hardware Adjustments..... 17 - 20

    Upper Latch and Bottom Bolt Adjustments ..... 17

    Manual Check and Operations Check ..... 18

Connecting The Electrical/Electrical Schematics..... 19 - 21

Connecting Electrical Components ..... 22 - 23

    Connecting The Wires ..... 22

    Armored Door Loop Installation..... 23

Package Parts Available ..... 24

## TOOLS REQUIRED

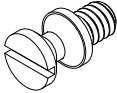
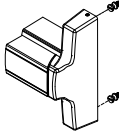
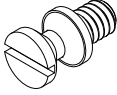
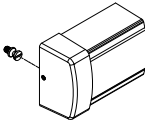

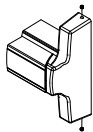

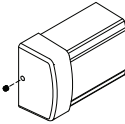

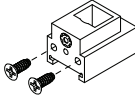

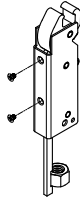
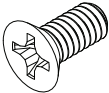
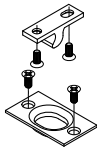

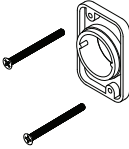

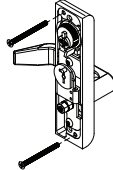
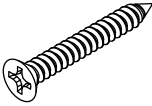
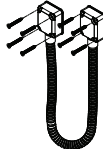
- |  |                                 |
|--|---------------------------------|
| Drill Bits: 1/8", 9/32", 5/16", 7/32", | Framing Square                  |
| 5/8", 11/16", 1-3/8"                   | Masking Tape                    |
| Taps: 1/4-20, 10-32, 8-32              | Center Punch                    |
| Tape Measure                           | Round Metal File                |
| Saw Horses                             | Flat Metal File                 |
| Cordless Drill                         | Jigsaw With Metal Cutting Blade |
| Phillips Head Screw Driver             | Straight Edge                   |

**NOTE:** Any modifications, other than those specified in this document, could result in this product's failure to meet UL safety ratings and void the manufacturer's warranties.


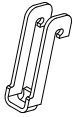
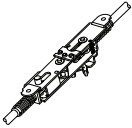
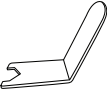


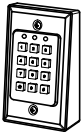
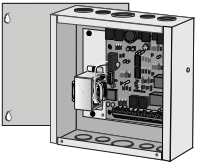
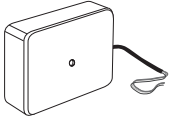
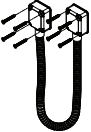
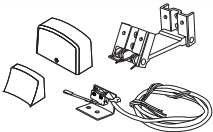
The rapidly changing technology within the architectural aluminum products industry demands that C.R. Laurence/U.S. Aluminum reserve the right to revise, discontinue, or change any product line, specification, or electronic media without prior written notice.

**NOTE:** Dimensions in parentheses ( ) are millimeters unless otherwise noted.

## PARTS IDENTIFICATION

FASTENERS PROVIDED					USED WITH
CALL OUT	QTY.	FASTENER	FASTENER DESCRIPTION	PART	PART NUMBER AND DESCRIPTION
Ⓐ	2		1/4"-20 x 1/4" Shoulder Stud Screws		302617 and 302619 Active Head Assembly
Ⓐ	1		1/4"-20 x 1/4" Shoulder Stud Screw		301266 Base End Cap Package
Ⓑ	2		1/4"-20 x 5/16" Set Screw		302617 and 302619 Active Head Assembly
Ⓑ	1		1/4"-20 x 5/16" Set Screw		301266 Base End Cap Package
Ⓒ	2		#10 x 1/2" FH Self Tapping Screw		30320 Bottom Bolt Guide Assembly
Ⓓ	2		#10-32 x 1/4" FH Machine Screw		301311 Top Latch Assembly
Ⓔ	4		#10-32 x 3/8" Machine Screw		301345 Top and Bottom Strike Package
Ⓕ	2		#8-32 x 2" FH Machine Screw		30821J Optional Mortise Cylinder Mounting Pad
Ⓖ	2		#10-32 x 2-1/8" FH Machine Screw		8500LV01 and 8500LV02 Optional Exterior Trim with Lever Assembly
Ⓗ	8		#8 x 1-1/4" Flat Head Sheet Metal Screw		Optional MLDL101 Armored Door Loop Kit

## PARTS IDENTIFICATION

PARTS LIST			
CALL OUT	PART	PART NO.	DESCRIPTION
①		DL2170	Optional 1" Single Mortise Cylinder
②		30799	Actuator Link included in 2085E Head Assembly Hardware Package 302607
③		301287J	Rod and Case Assembly - 7/0
④		30PBAW	Adjustment Wrench included in 30320 Bottom Bolt Guide
⑤		301347 301348	Optional 12" and 24" Top Rod Extender
⑥		301552PKG	Rod Silencers (12 PKG.)
⑦		MLDK83N	Programmable Digital Keypad
⑧		302616 301420	Power Supply for Electrified Panic Exit Devices See Pages 19-21 for correct Power Supply
⑨		301406PSC	24VDC Power Supply Converter Module
⑩		MLDL101	Optional MLDL101 Armored Door Loop Kit
⑪		302989	Signal Switch Kit

## DOOR PREPARATION

### REMOVE DOOR AND PREPARE PER TEMPLATE

1. Place the door horizontally on the stands interior side up.
2. Mark the stile centerlines 1-1/8" (28.6) from the inside edge. (**Fig. 1**)
3. Mark the corresponding layouts on to the stile using the vertical centerlines at the specified height. (**Fig. 2**)

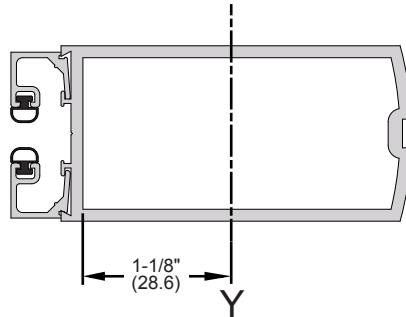


FIG. 1

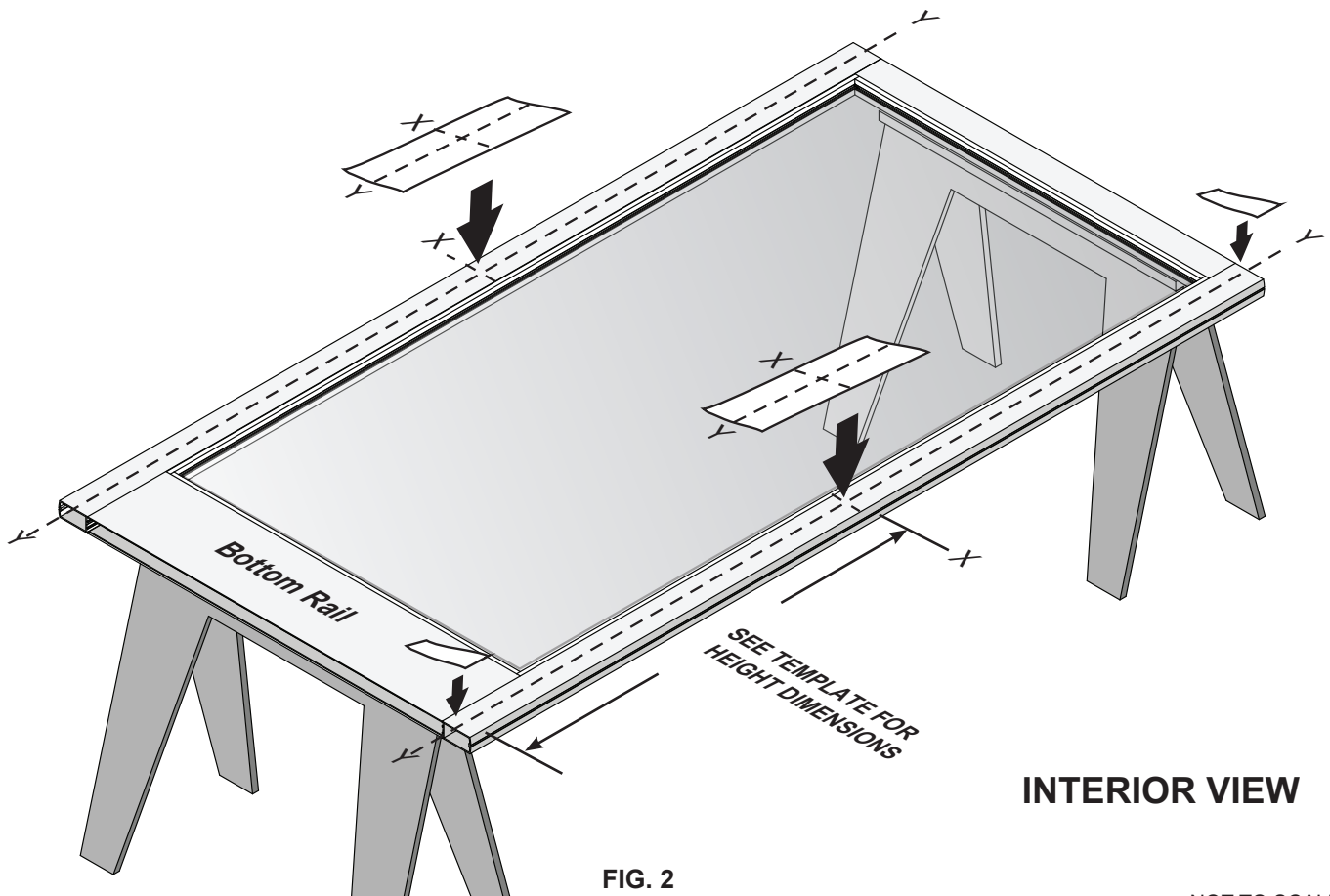


FIG. 2

INTERIOR VIEW

NOT TO SCALE

# DOOR PREPARATION – LAYOUT SELECTION

## 2085E EXIT DEVICE INSTALLATION - ACTIVE STILE

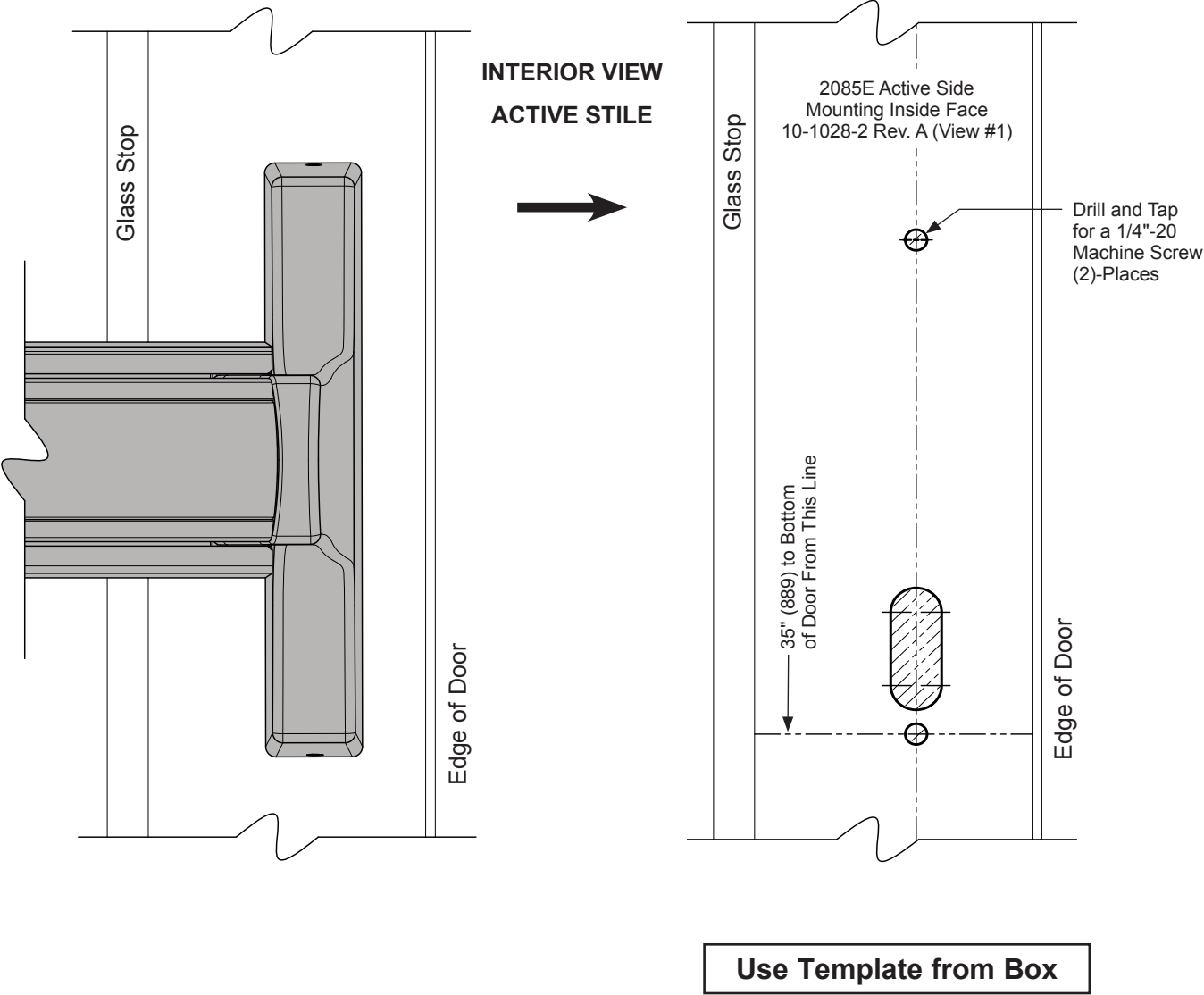


FIG. 3

NOT TO SCALE

# DOOR PREPARATION – LAYOUT SELECTION

## 2085E EXIT DEVICE INSTALLATION - INACTIVE STILE

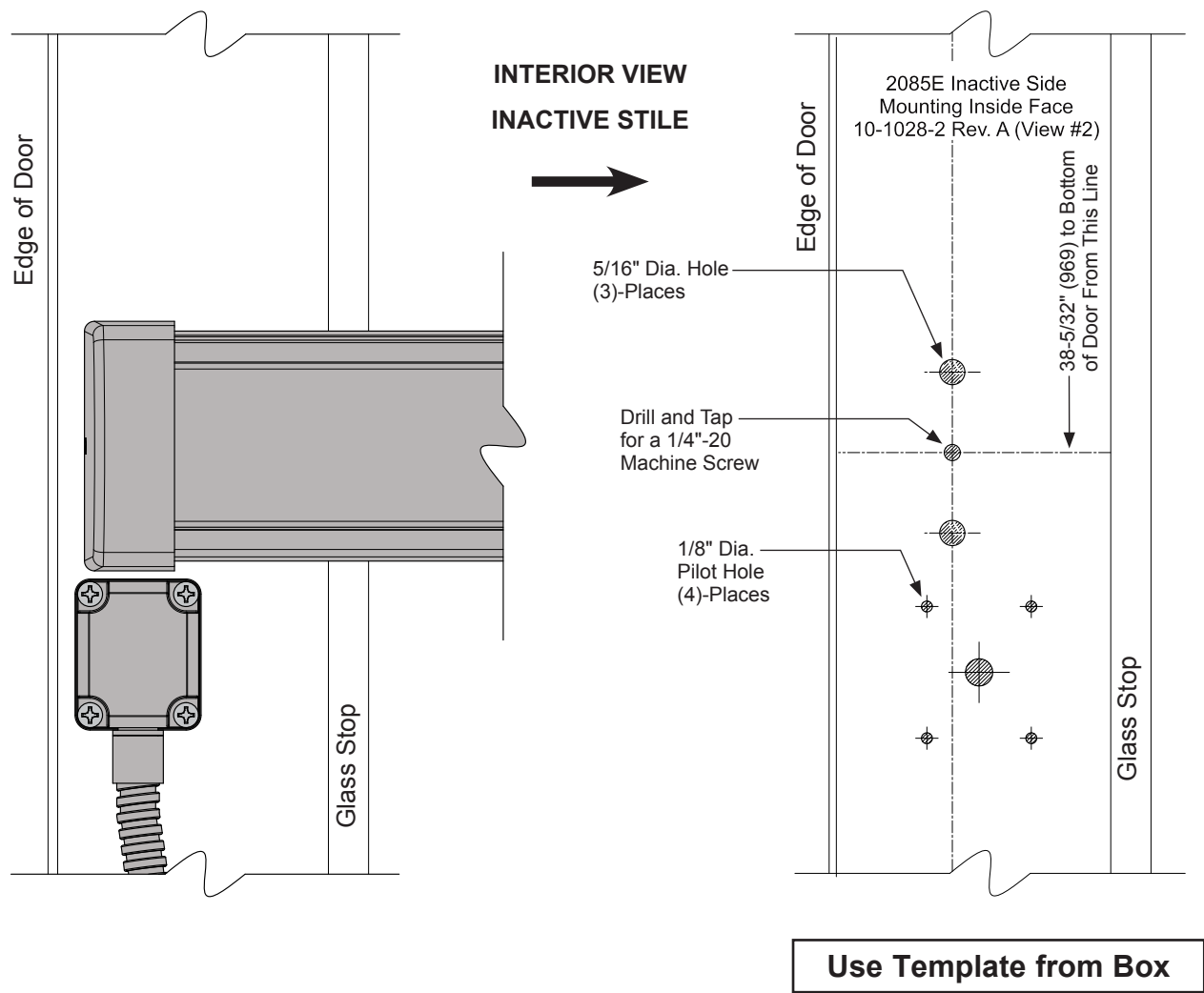


FIG. 4

NOT TO SCALE

DOOR PREPARATION – LAYOUT SELECTION

2085E EXIT DEVICE INSTALLATION WITH LOCK CYLINDER AND MOUNTING PAD

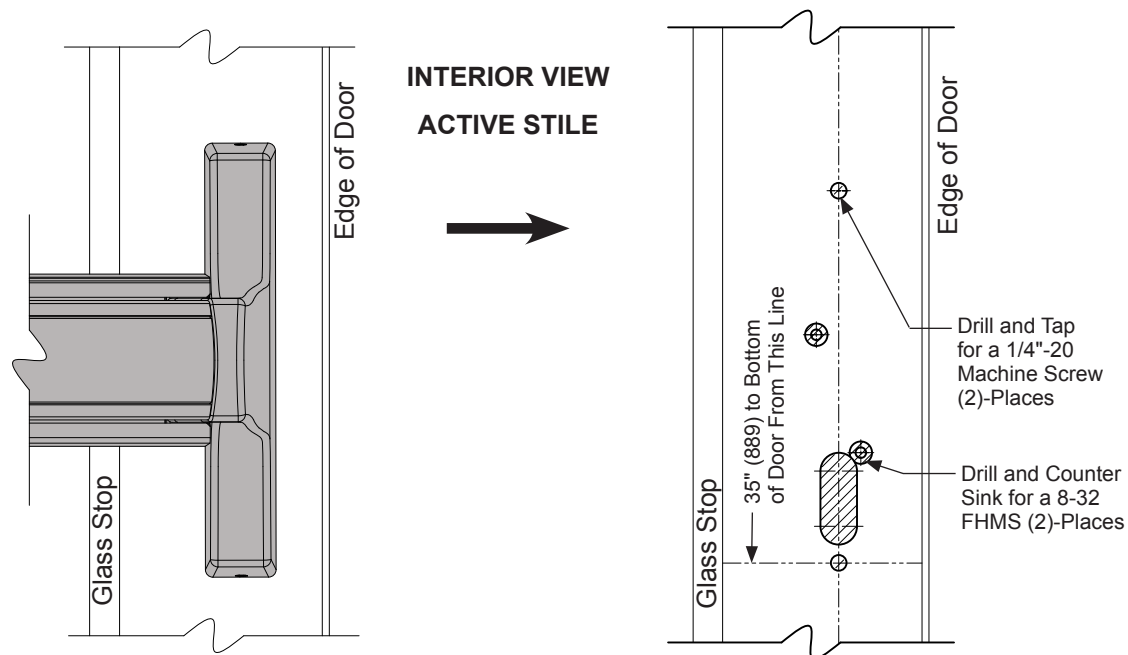


FIG. 5

Use Template from Box

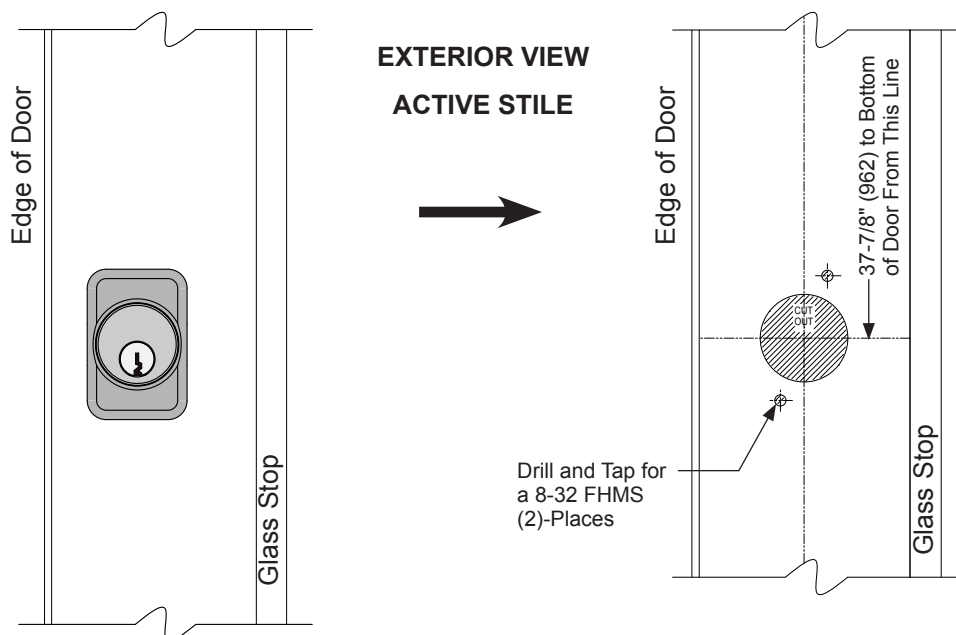


FIG. 6

Use Template from Box

NOT TO SCALE



DOOR PREPARATION – LAYOUT SELECTION

2085E EXIT DEVICE INSTALLATION WITH EXTERIOR LOCKING LEVER TRIM

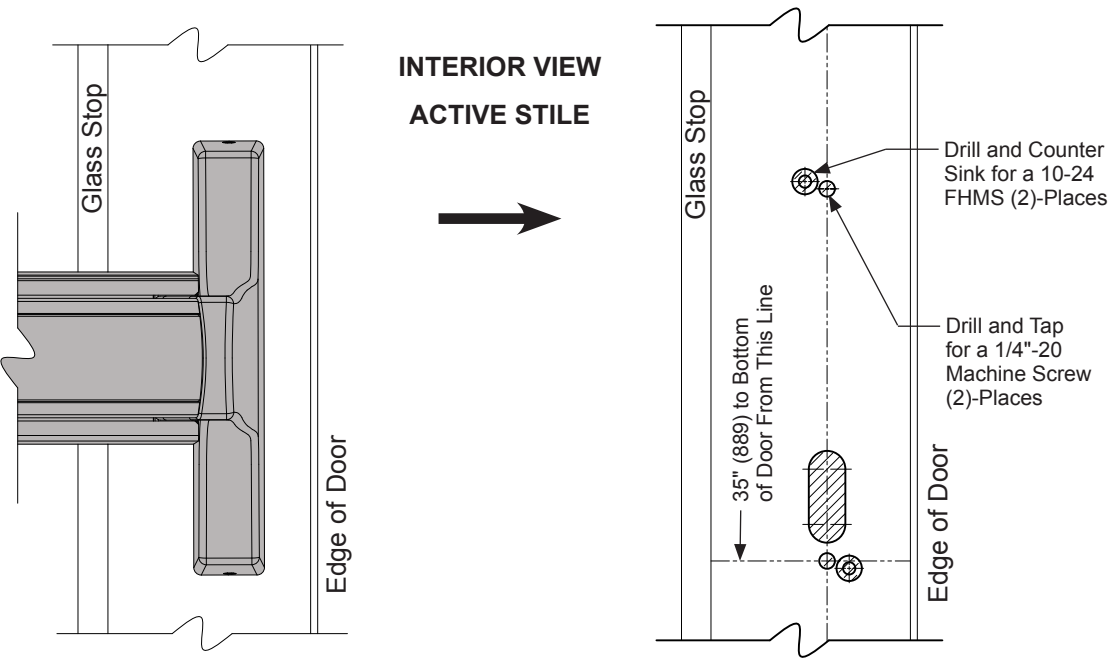


FIG. 7

Use Template from Box

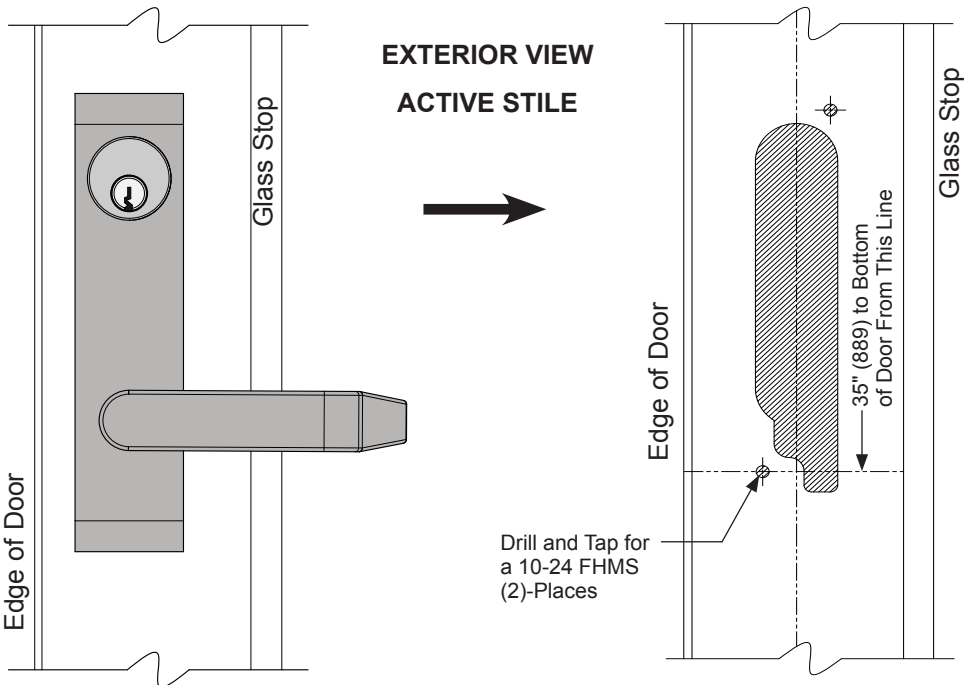


FIG. 8

Use Template from Box

NOT TO SCALE

## DOOR HARDWARE INSTALLATION (CONTINUED)

### INSERT ROD AND CASE

1. Insert the panic device rod and case assembly into active stile (Fig. 9).
2. Align actuator pin through the slotted cut-out on interior face of Active Stile, fastening with (A) (2) 1/4"-20 x 1/4" shoulder stud screws. (Fig. 10)
3. Adjust the bottom and top bolts, to extend 1/2" past the bottom stile.
4. Install the top latch case assembly using (D) (2) #10 x 1/4" FH self threading screws at the top of the active door stile. The (2) holes face the interior side.
5. Install the bottom bolt guide assembly using (C) (2) #10 x 1/2" FH self threading screws at the bottom of the active door stile. The (2) holes face the interior side of stile.
6. Attach (A) (1) 1/4"-20 x 1/4" Shoulder Stud Screw on the Inactive Stile.

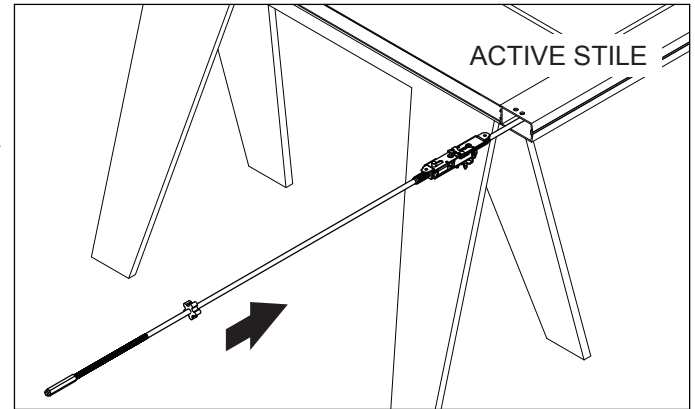


FIG. 9

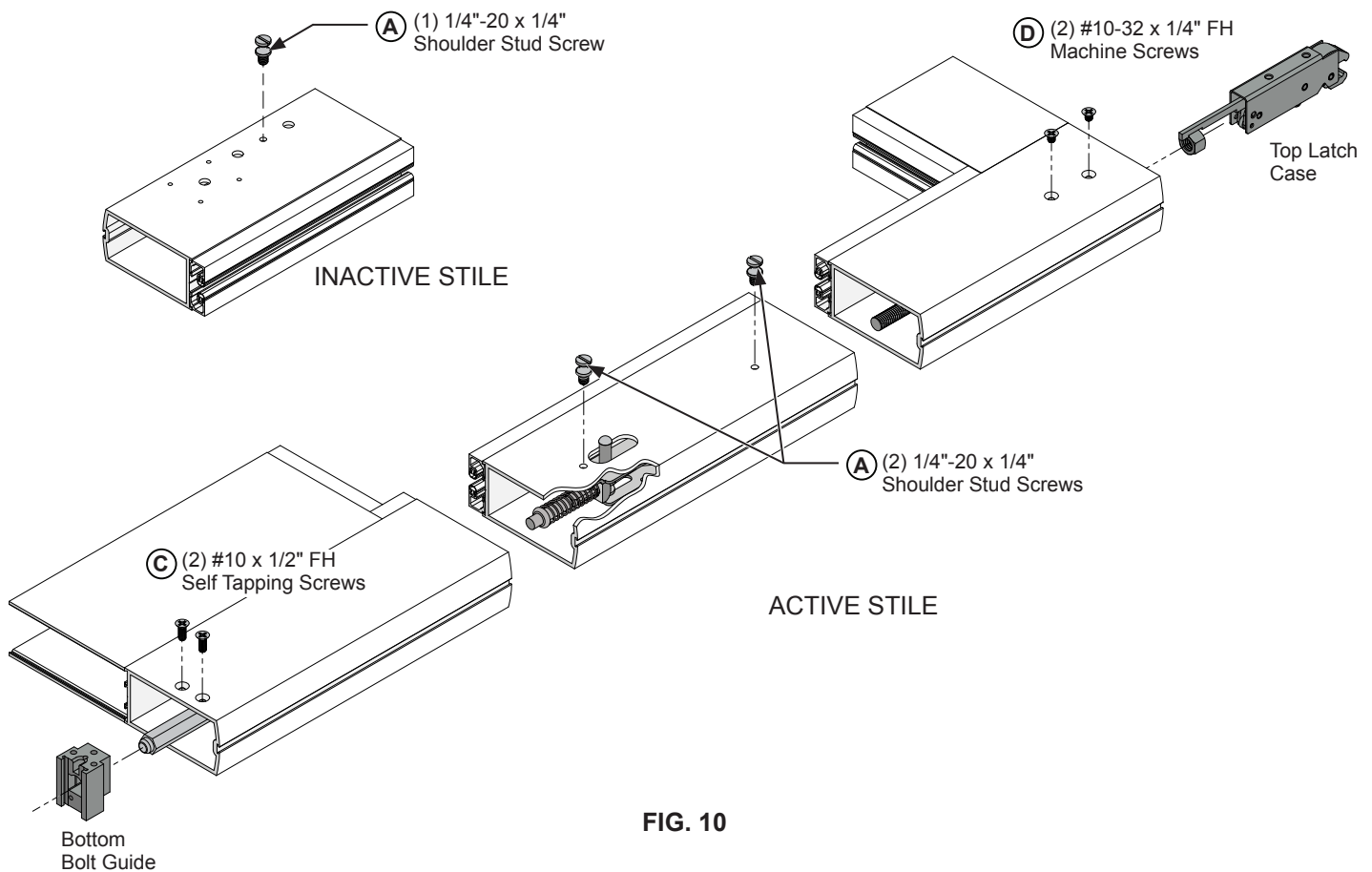


FIG. 10

NOT TO SCALE

## DOOR HARDWARE INSTALLATION (CONTINUED)

### INSTALL OPTIONAL MORTISE CYLINDER LOCK AND MOUNTING PAD

**NOTE:** Lock and Mounting Pad must be installed before attaching exit device.

Attach the Mortise Cylinder Lock to the Mounting Pad and secure it with the Lock Ring, using (F) (2) #8 x 2" Flat head screws provided.

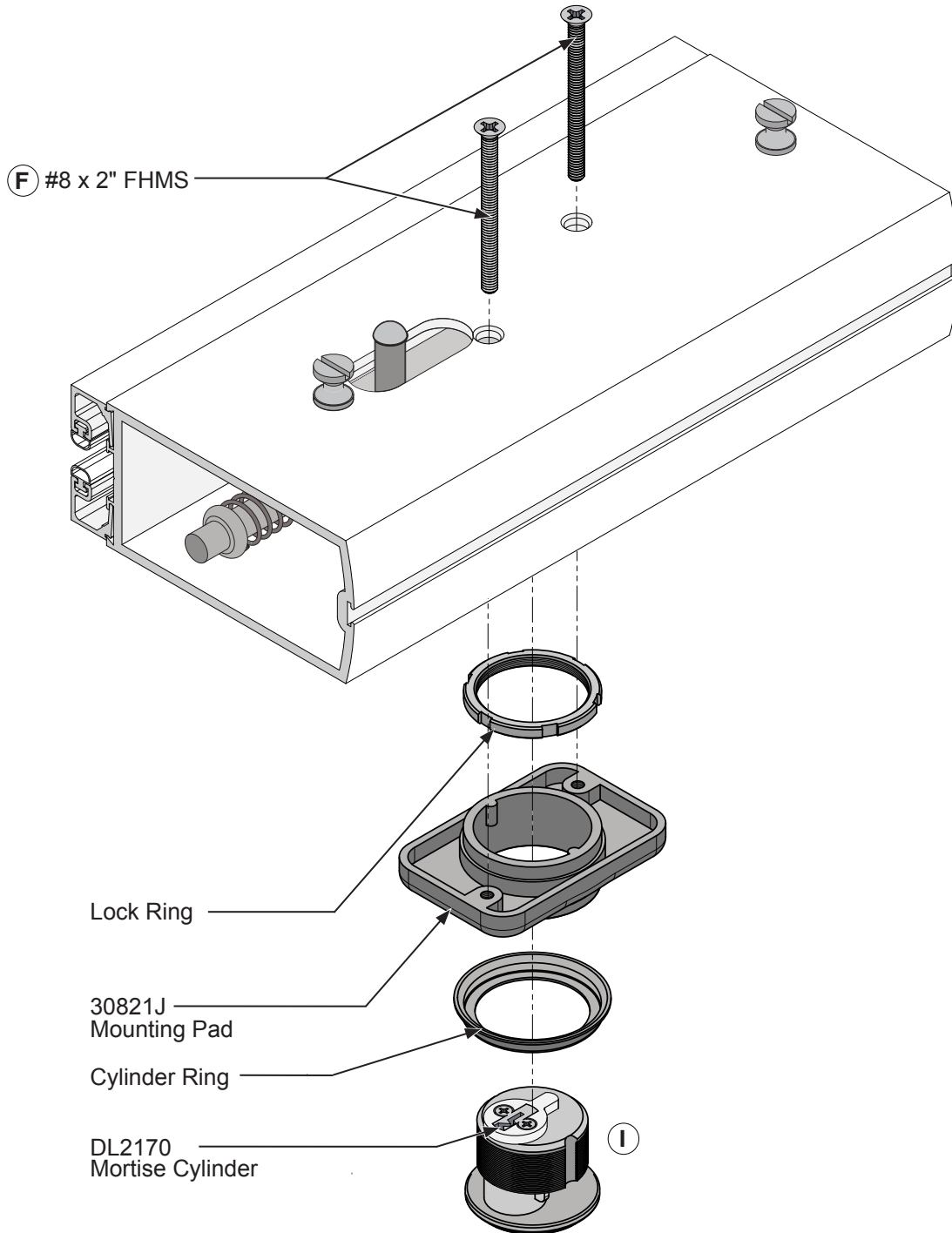


FIG. 11

NOT TO SCALE

## DOOR HARDWARE INSTALLATION (CONTINUED)

### INSTALL OPTIONAL EXTERIOR LOCKING LEVER TRIM

**NOTE:** Exterior trim must be installed before attaching exit device.

Attach the exterior trim to the active stile with ⓐ (2) #10 x 2-1/8" FHMS.

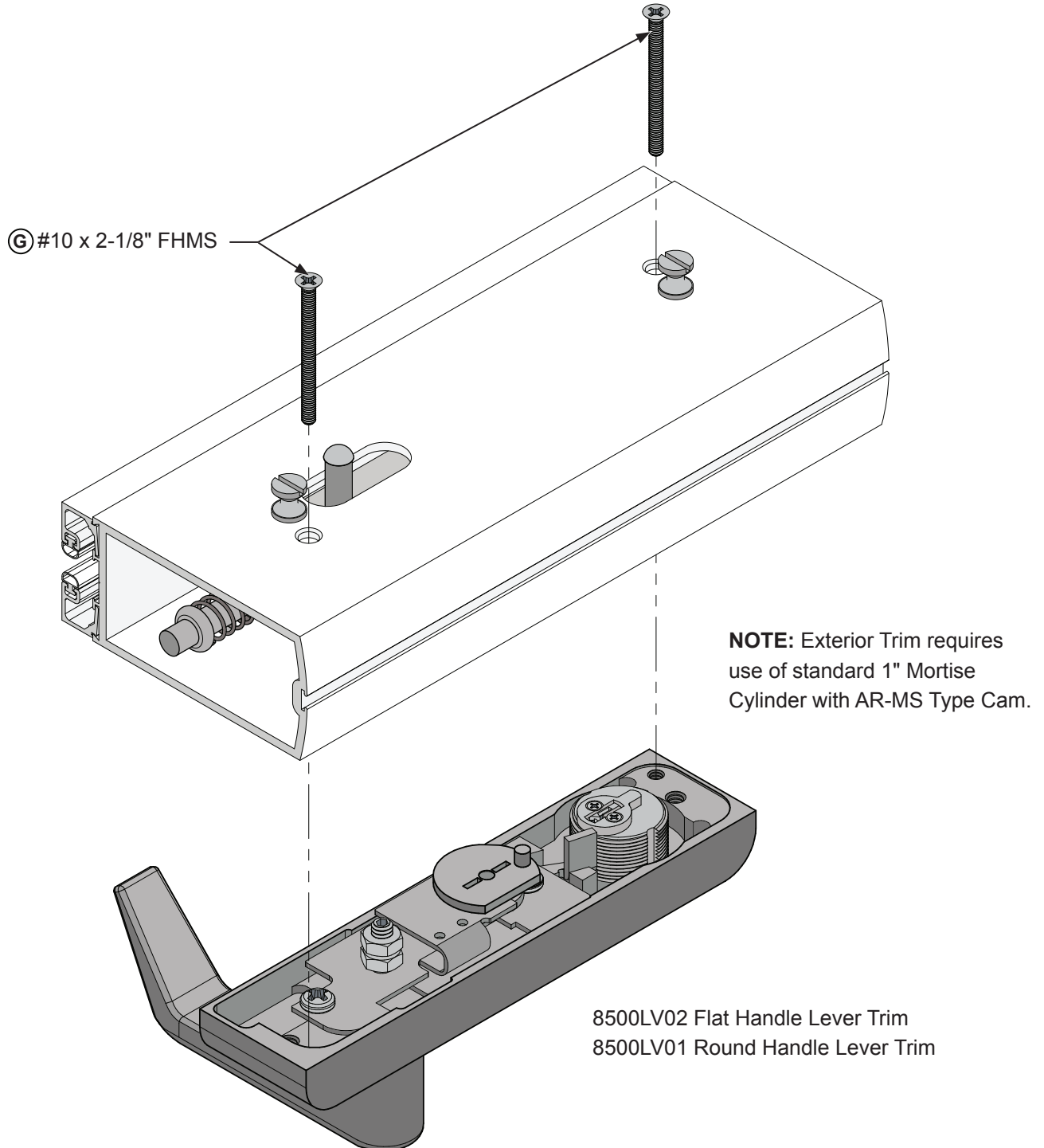


FIG. 12

NOT TO SCALE

## DOOR HARDWARE INSTALLATION (CONTINUED)

### INSTALL 2085E EXIT DEVICE

1. Insert the wires through the 5/16" Dia. hole on the inactive stile.
2. Install the exit device on the door stiles as you feed the wires through the upper 5/16" hole. Tighten the (B) (3) 1/4"-20 x 5/16" set screws and on each side of the door stiles. (Fig. 15)
3. Pull the wires back through the lower 5/16" Dia. hole located below the exit device. (Fig. 14)

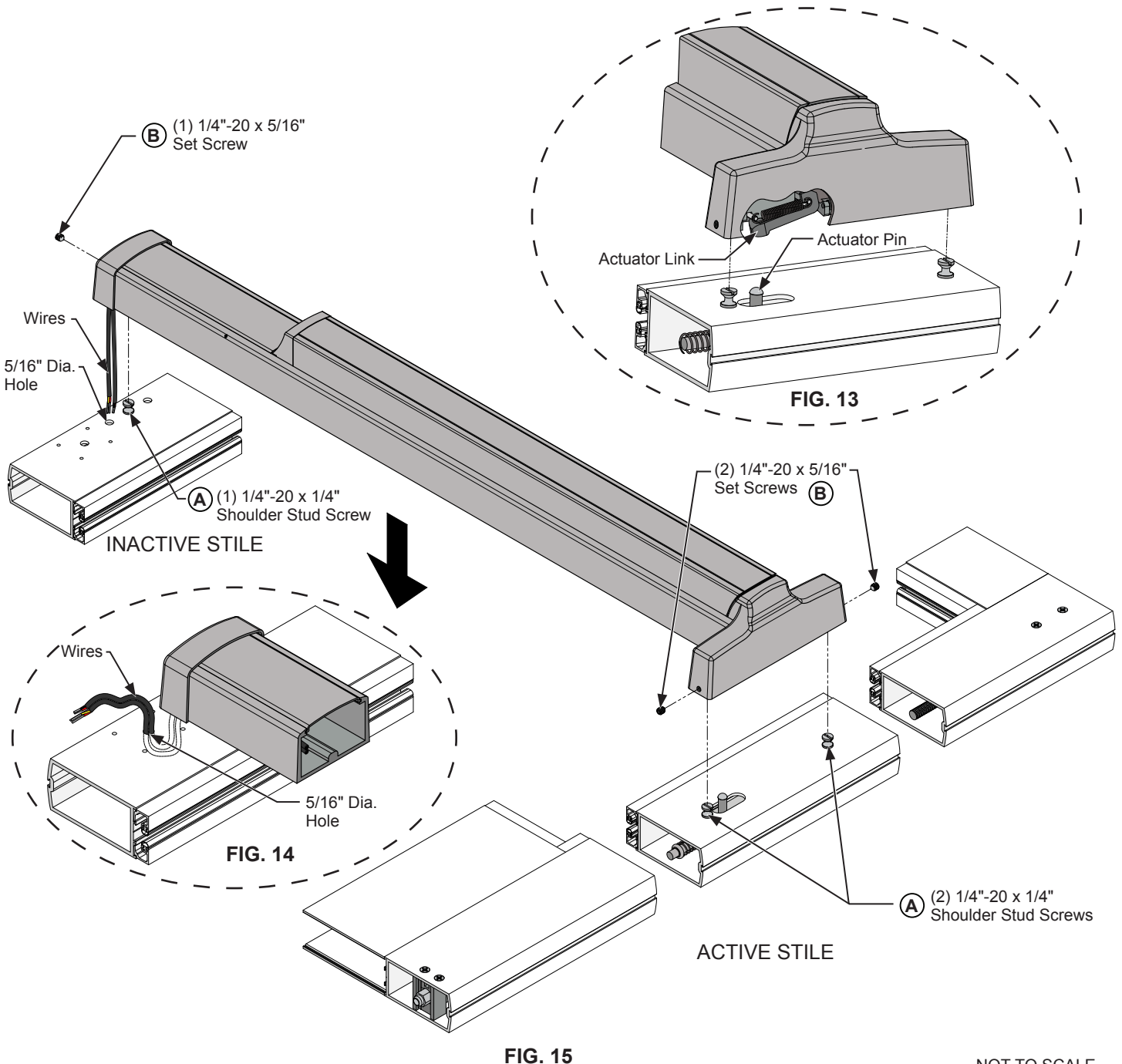


FIG. 15

NOT TO SCALE

## DOOR HARDWARE INSTALLATION (CONTINUED)

### OPERATIONS CHECK INSTRUCTIONS

#### OPERATIONS CHECK:

1. Depress the push bar to assure free movement of the rod and case assembly. Both upper and bottom bolts should activate to the open position. The upper bolt should drop into the open position.
2. The bottom bolt should fully retract. If the bolts fail to operate as described, review the actuator link and actuator pin and make sure the actuator link engages the actuator pin. **(Fig. 13)**

## FRAME PREPARATION

### RE-ATTACH DOOR TO FRAME

1. Make sure that the panic exit device is in the dogged position. Both the upper and bottom latches must clear the frame. Re-attach the door to the frame.
2. With the door in place and in the closed position, mark the center line locations on the header and threshold of both the upper and bottom latches.
3. Finish the header and threshold preparation using the layout drawings on page 18.

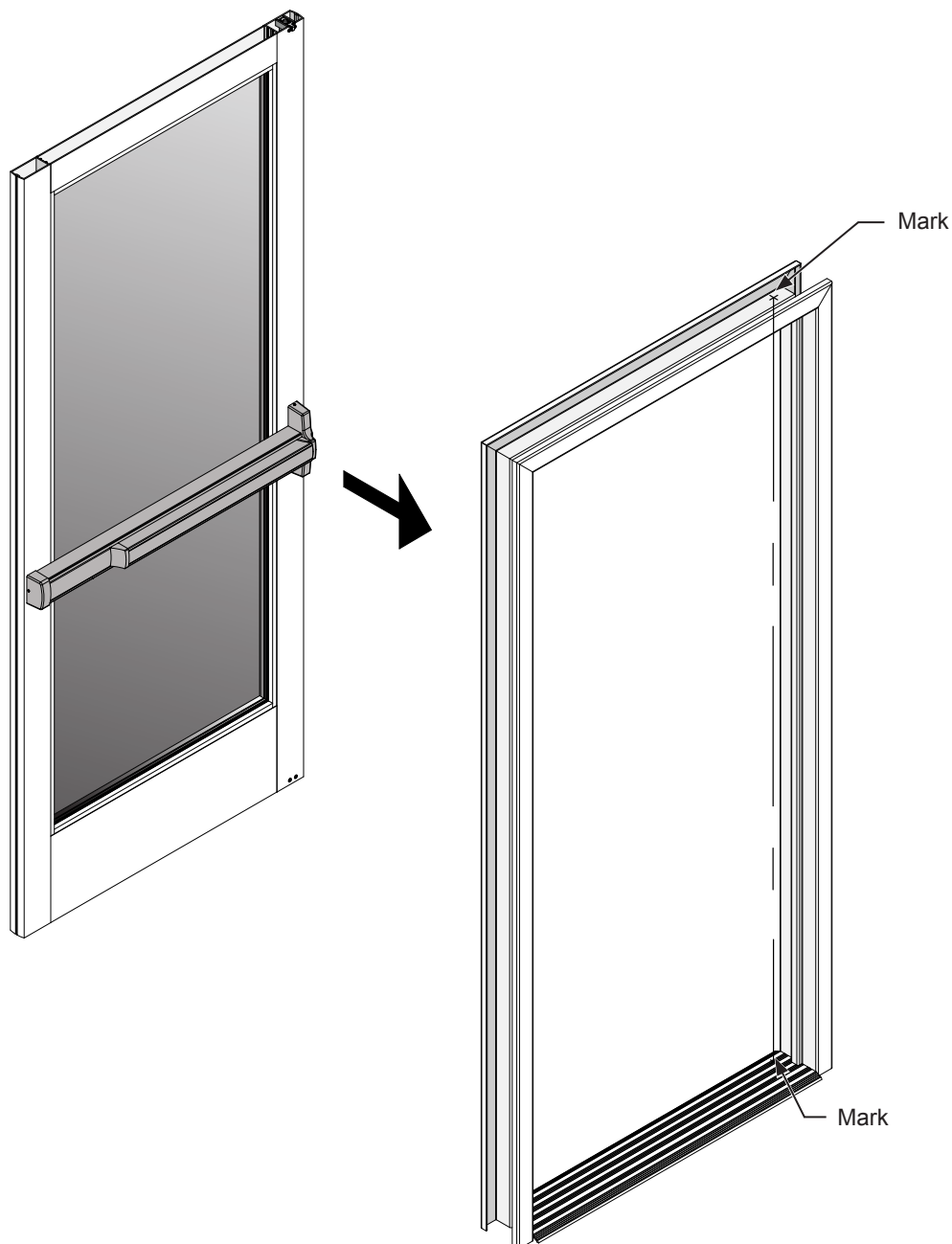


FIG. 16

NOT TO SCALE

## FRAME PREPARATION (CONTINUED)

### ATTACH UPPER STRIKE

Drill and tap for (E) (2) 10-32 x 3/8" FHMS on the mark made in step 2 of the frame preparation on page 15.

Attach the upper strike to header using (E) (2) 10-32 x 3/8" FHMS. (Fig.17)

### ATTACH BOTTOM STRIKE

Cut out a 1" long x 13/16" wide hole and Drill and tap for (E) (2) 10-32 x 3/8" FHMS on the mark made in step 2 of the frame preparation on page 15. Attach the bottom strike centering on the mark. (Fig. 18)

### PREPARE THE NON-ACTIVE DOOR JAMB SIDE

Drill a 5/16" Dia. hole and Drill (4) 1/8" Dia. pilot holes. (Fig 19)

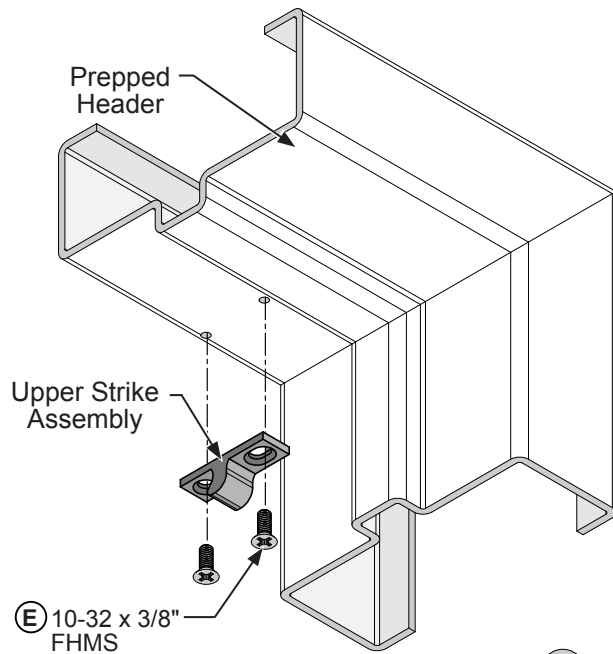


FIG. 17

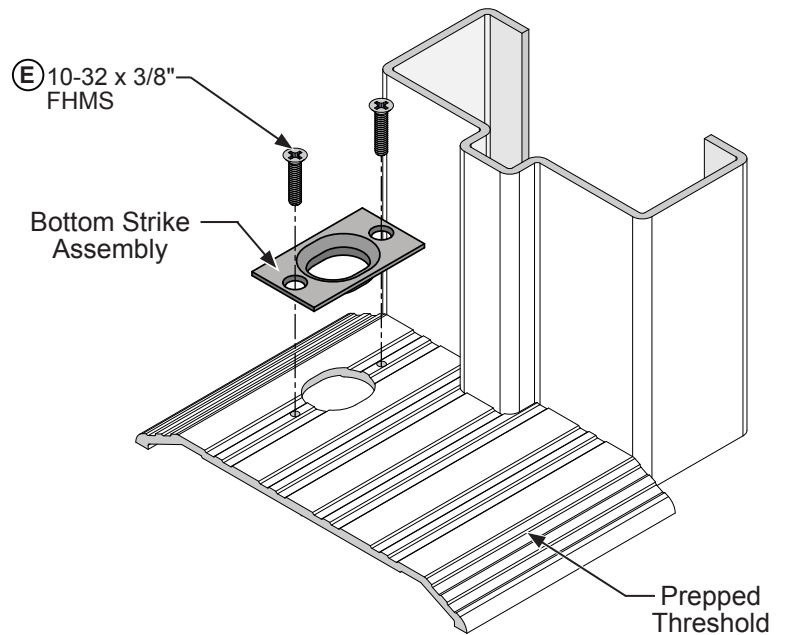


FIG. 18

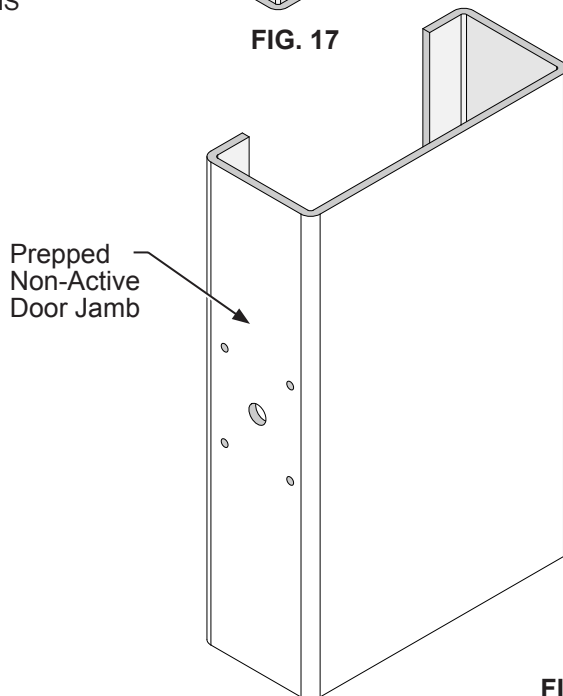
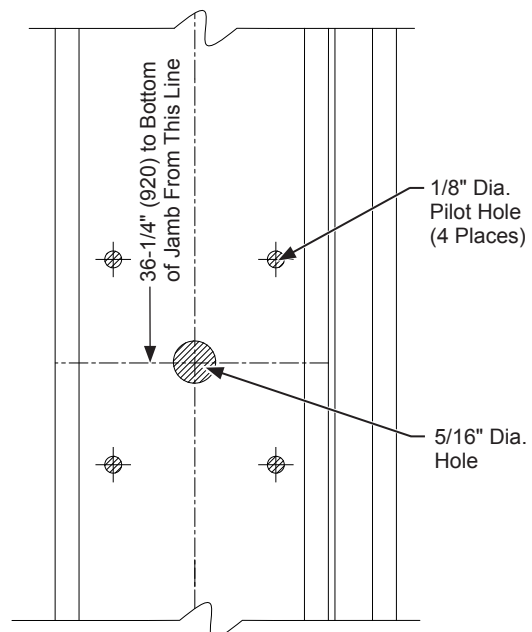


FIG. 19



NOT TO SCALE



## DOOR HARDWARE ADJUSTMENTS

### UPPER LATCH:

1. The door must be in the open position and the push bar must be in the dogged position to complete the following adjustments.
2. Remove the (D) (2) 10-32 x 1/4" flat head machine screws at the top of the active door stile. Adjust the top latch into the open position. **(Fig. 20)** Rotate the top latch case until the mounting holes on the latch case are off-center to the countersunk holes on the active stile. **(Fig. 21)** Re-attach and secure the latch case with the (2) (D) 10-32 x 1/4" flat head machine screws.

### BOTTOM BOLT:

1. The door must be in the closed position and the push bar must be in the un-dogged position to complete the following adjustments. **(Fig. 22)**
2. Depress the push bar, The bottom rod will retract and the latch will move to the unlocked position. **(Fig. 20)** With the latch in this position adjust the bottom bolt using the adjustment wrench (L) included. **(Fig. 23)**

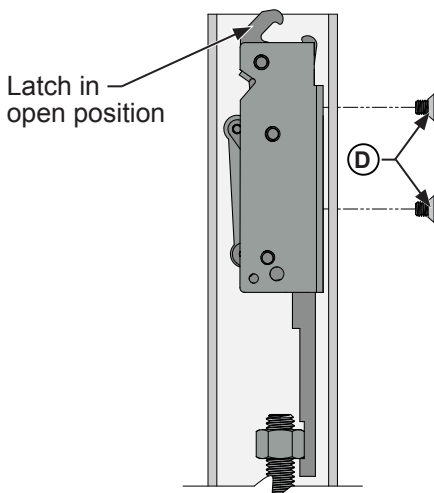


FIG. 20

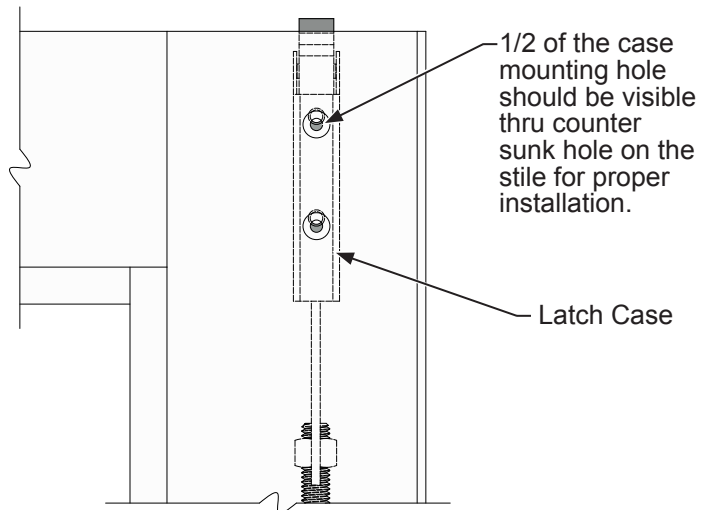


FIG. 21

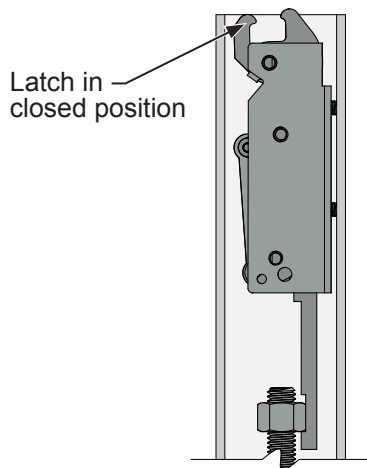


FIG. 22

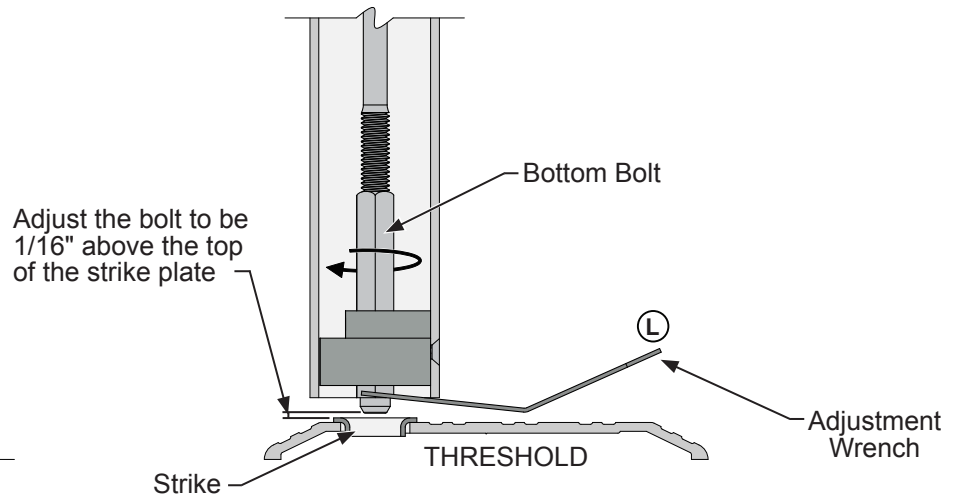


FIG. 23

NOT TO SCALE

## DOOR HARDWARE ADJUSTMENTS (CONTINUED)

### MANUAL CHECK:

Release the Pushbar and manually position the upper latch to the locked position.  
The bottom bolt will extend.

### OPERATIONS CHECK:

Depress the push bar. The bottom bolt should retract to the bottom edge of the door stile. The upper latch will return to the open position. **(Fig. 20)**

**\*\*Important:** If the upper latch returns to the open position with the push bar being partially depressed, or if the upper latch does not go to the open position when the push bar is fully depressed, repeat the procedure and the adjustment steps on page 17. The upper and lower latch might need to be adjusted again.  
**(Fig. 23)**

[Once the wires are properly attached to the power supply you need to feed the wires through the 5/16" Dia. hole on the non-active door jamb. **(Fig. 27)**]

## CONNECTING THE ELECTRICAL

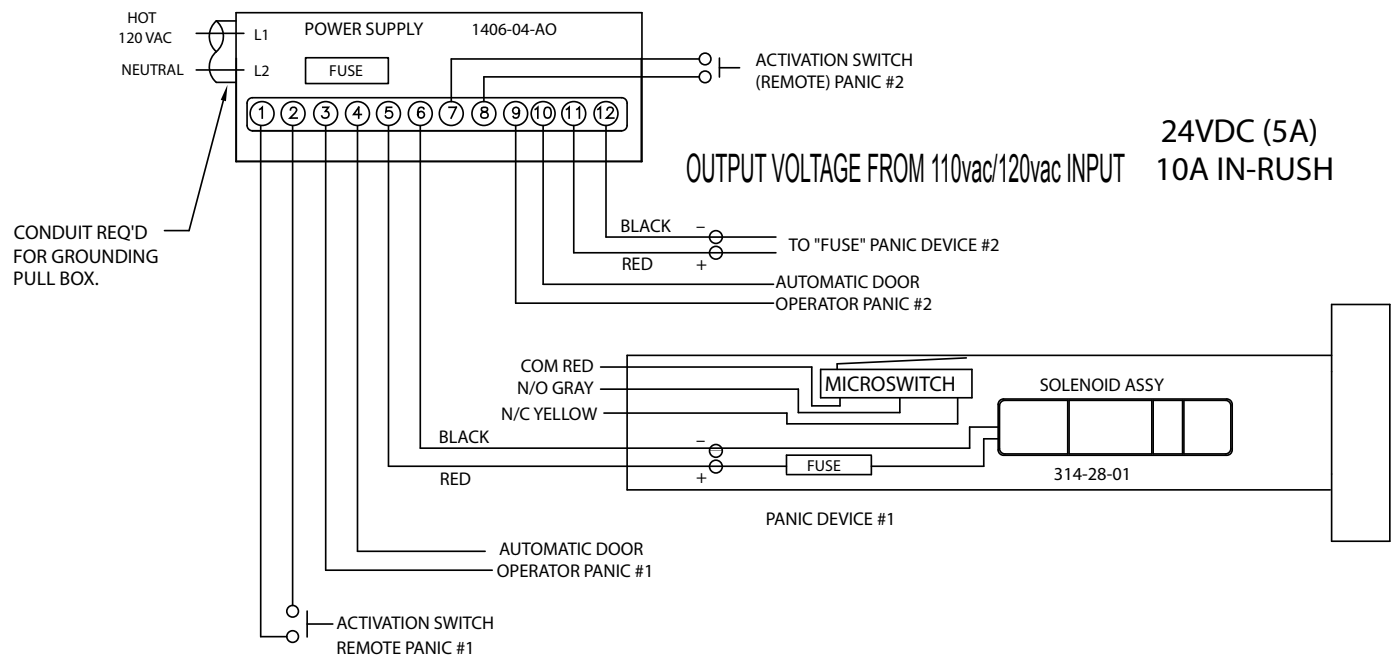
### POWER SUPPLY NO. 302616/1406

### ELECTRICAL SCHEMATIC

**NOTE:** Used with all Jackson 20E Series Electrified Solenoid Latch Retraction Panic Devices Manufactured prior to August 15, 2016.

For use with Motorized Latch Retraction manufactured after August 15, 2016, see page 20.

For Power Supply No. 301420 used with Motorized Latch Retraction, See page 21.



#### NOTES

- 1.) WHEN CONTACTS OF TIME CLOCK OR OVERRIDE SWITCH CLOSE. EXIT DEVICE LATCH BOLTS WILL CLOSE.
- 2.) —○— DENOTES A FIELD WIRE CONNECTION.
- 3.) RECOMMENDED WIRE Ga FROM POWER SUPPLY TO PANIC:
  - 16 Ga UP TO 40'
  - 14 Ga UP TO 60'
  - 12 Ga UP TO 100'

FIG. 24

NOT TO SCALE

## CONNECTING THE ELECTRICAL (CONTINUED)

### 1406/1426 24VDC POWER SUPPLY MODULE MODEL 1406/1426-PSM-24VDC

The 1406/1426-PSM-24VDC Power Supply Module converts device output voltage from Jackson 302616, ACSI Series 1406 supplies to a filtered, regulated 24VDC output for use with Jackson Series 20E Motor Drive Electric Latch Retraction Exit Devices. Up to two devices can be connected to the module's regulated output.

#### Installing the Module

The power supply module can simply be placed inside the enclosure on the bottom side at the locations shown in Figures 25. Vent holes must face upward, as indicated in Figure 25, to allow for maximum heat dissipation.

**NOTE:** Used with Jackson 20E Series Electrified Motorized Latch Retraction Panic Devices Manufactured after August 15, 2016, only when powered by Power Supply model No. 302616/1406

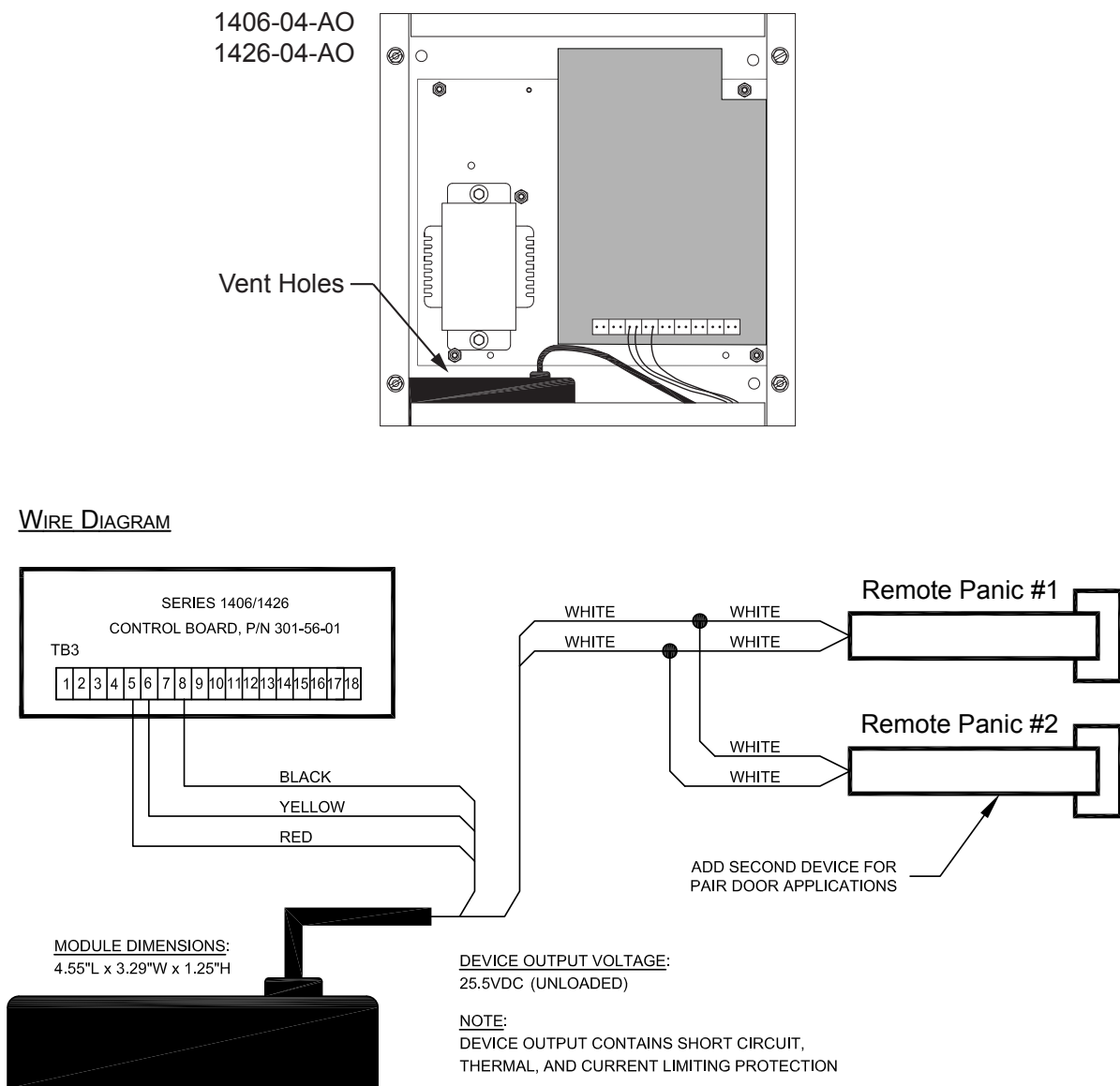


FIG. 25

NOT TO SCALE

# CONNECTING THE ELECTRICAL (CONTINUED)

## POWER SUPPLY NO. 301420

### ELECTRICAL SCHEMATIC

**NOTE:** Used with Jackson 20E Series Electrified Motorized Latch Retraction Panic Devices Manufactured after August 15, 2016.

For Solenoid Latch Retraction Manufactured before August 15, 2016, See Page 19.

#### SPECIFICATIONS:

INPUT VOLTAGE: 120VAC/240VAC, 50/60Hz  
 AC CURRENT: 900mA/120VAC, 600mA/240VAC  
 OUTPUT VOLTAGE: 24VDC FILTERED, REGULATED  
 OUTPUT CURRENT: 2.0A  
 OUTPUT POWER: 48W  
 PROTECTION: OVERLOAD, OVER VOLTAGE, SHORT CIRCUIT

USE INSTALLATION  
 INSTRUCTIONS  
 II - 1400-5

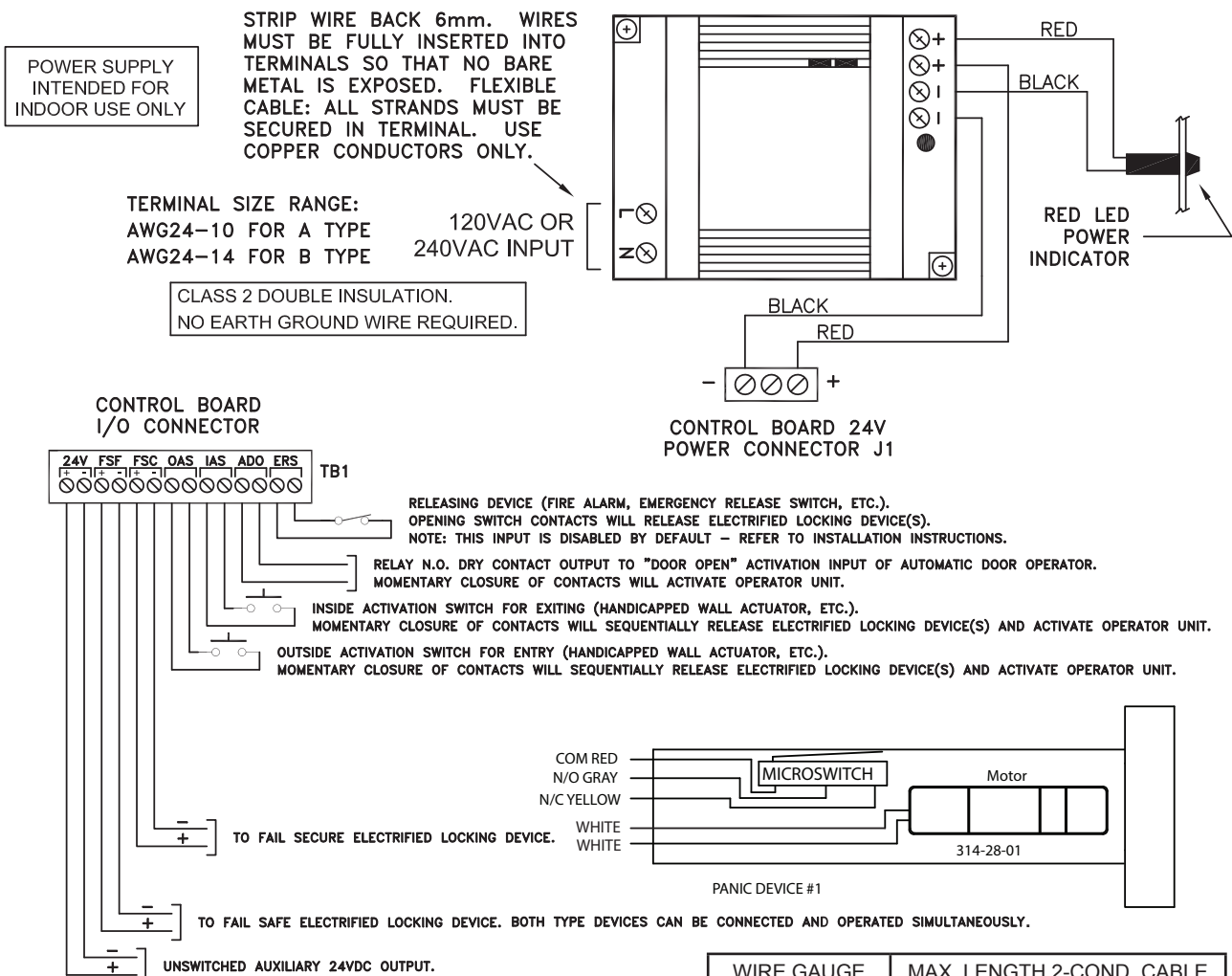
ACCESS CONTROL POWER SUPPLY  
 CLASS 2 OUTPUTS

SECURITY



LISTED  
 EQUIPMENT  
 4M73

MFG. DATE:



#### NOTES:

- 1.) The sum of all outputs cannot exceed 2 AMPS.
- 2.) When contacts of time clock or override switch close.
- 3.) —○— Denotes a Field Wire Connection.
- 4.) Recommended Wire Ga. from Power Supply to Panic:

WIRE GAUGE	MAX. LENGTH 2-COND. CABLE
22	70 FEET
20	110 FEET
18	180 FEET
15	280 FEET
14	450 FEET
12	720 FEET

FIG. 26

NOT TO SCALE

## CONNECTING ELECTRICAL COMPONENTS

### CONNECTING THE WIRES

After preparing non-active door jamb shown. **(Fig.19, Page 16)** Route the wires through the the hole on the door jamb. **(Fig. 27)** Next feed the wires through the Armored Door Loop, and secure the Armored Door Loop to the door jamb using **(H)** (4) #8 x 1-1/4" FHSMs. **(Fig. 28)**

Once you have secured the Armored Door Loop connect the wires from the Armored Door Loop to the exit device wires using Twist-On Wire connectors. **(Fig.28)**

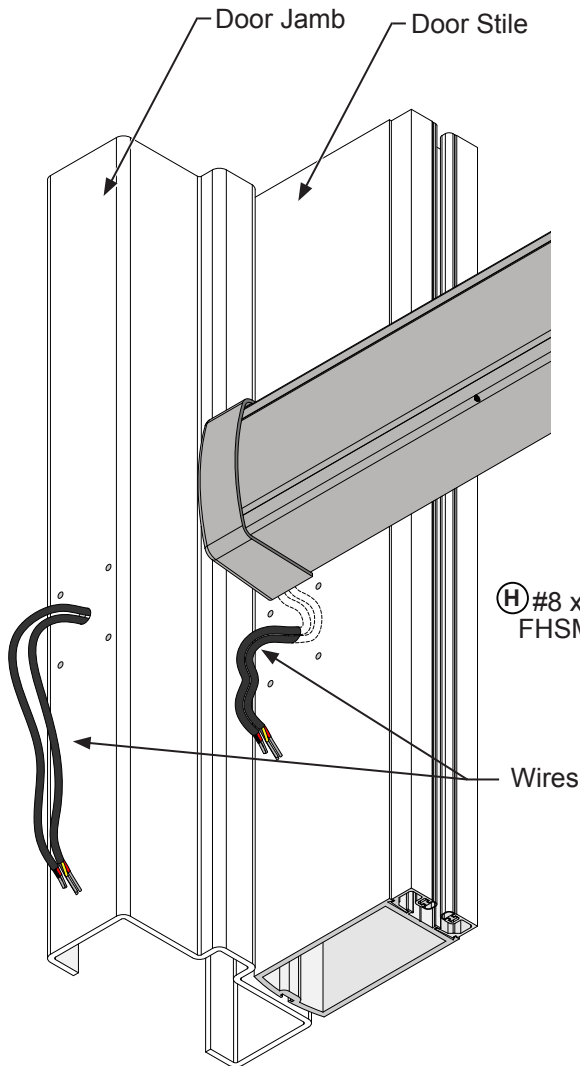


FIG. 27

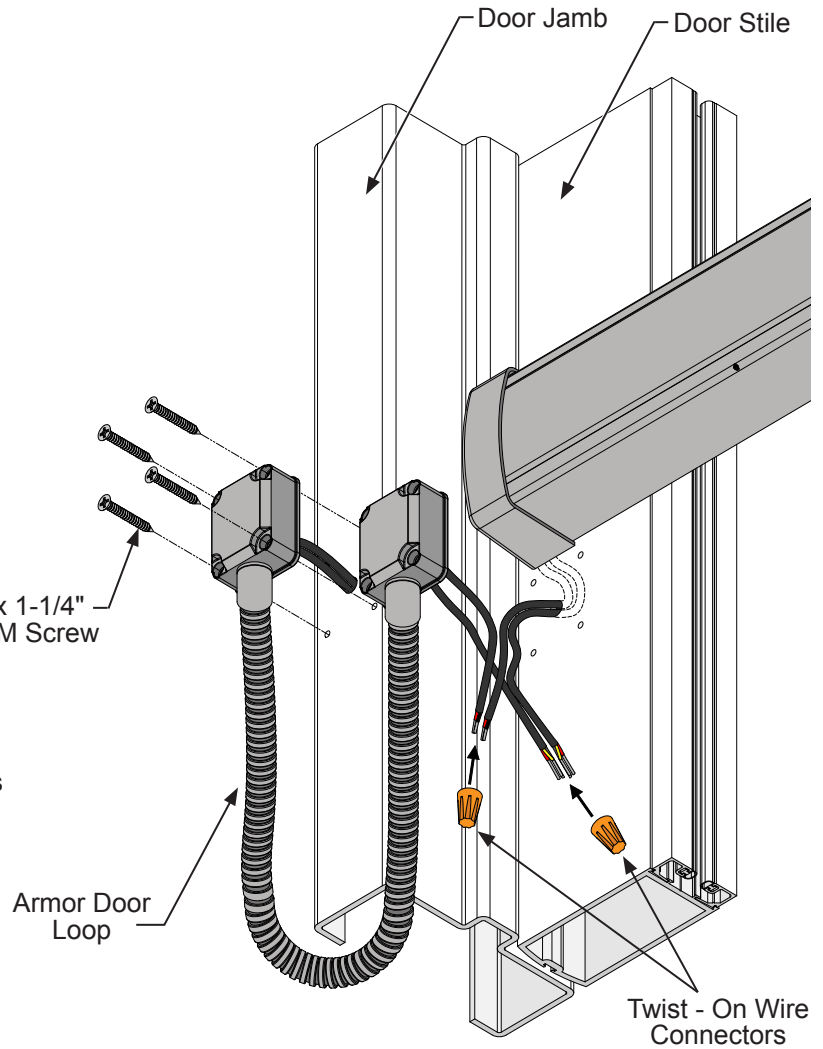


FIG. 28

NOT TO SCALE

## CONNECTING ELECTRICAL COMPONENTS (CONTINUED)

### ARMORED DOOR LOOP INSTALLATION

After the wires are connected, fold the extra wires into the door stile and into the connection box of the Armored Door Loop. (Fig. 29)

Secure the loop to the door stile using (H) (4) #8 x 1-1/4" FHSM Screws. (Fig. 30)

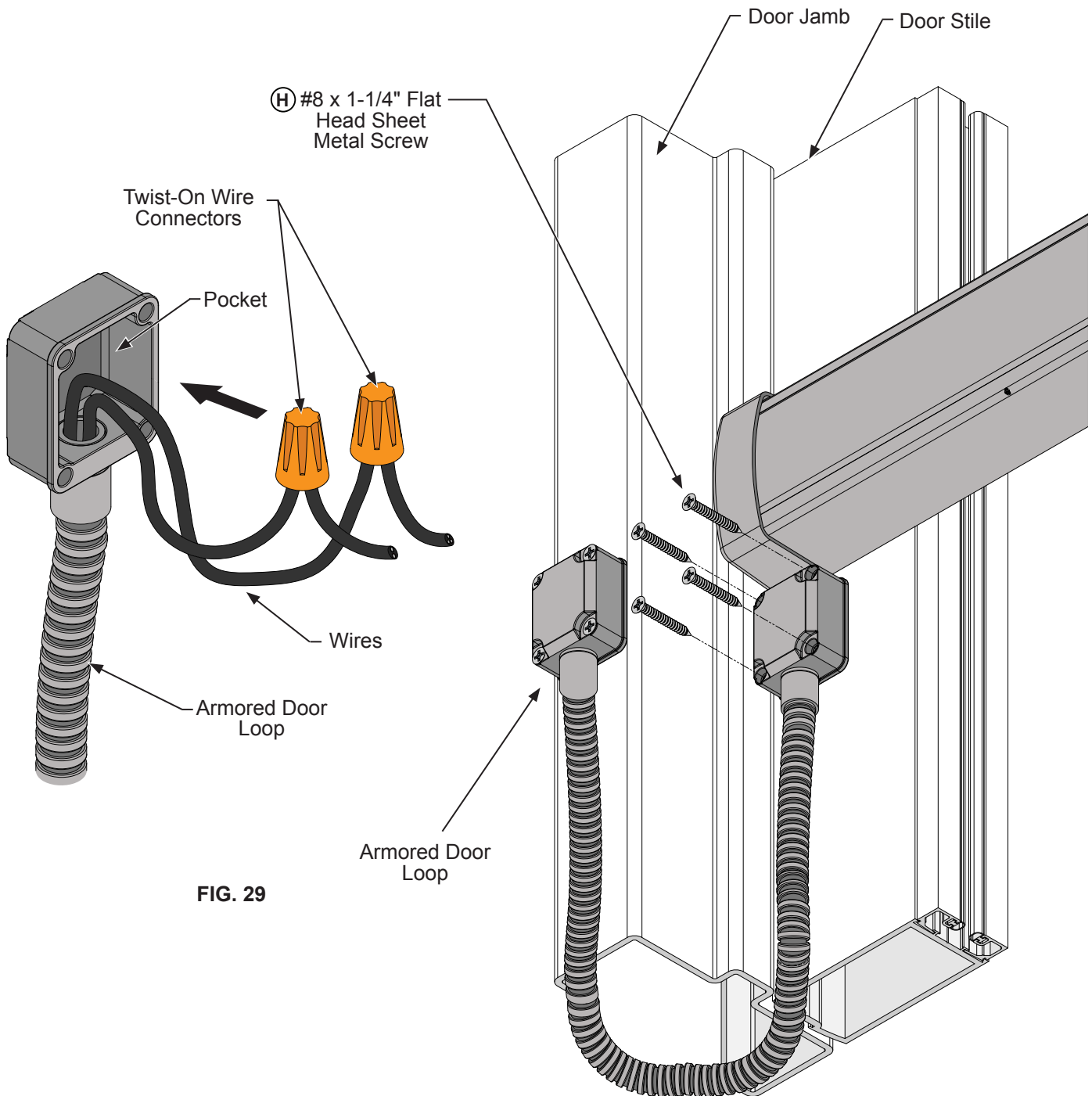
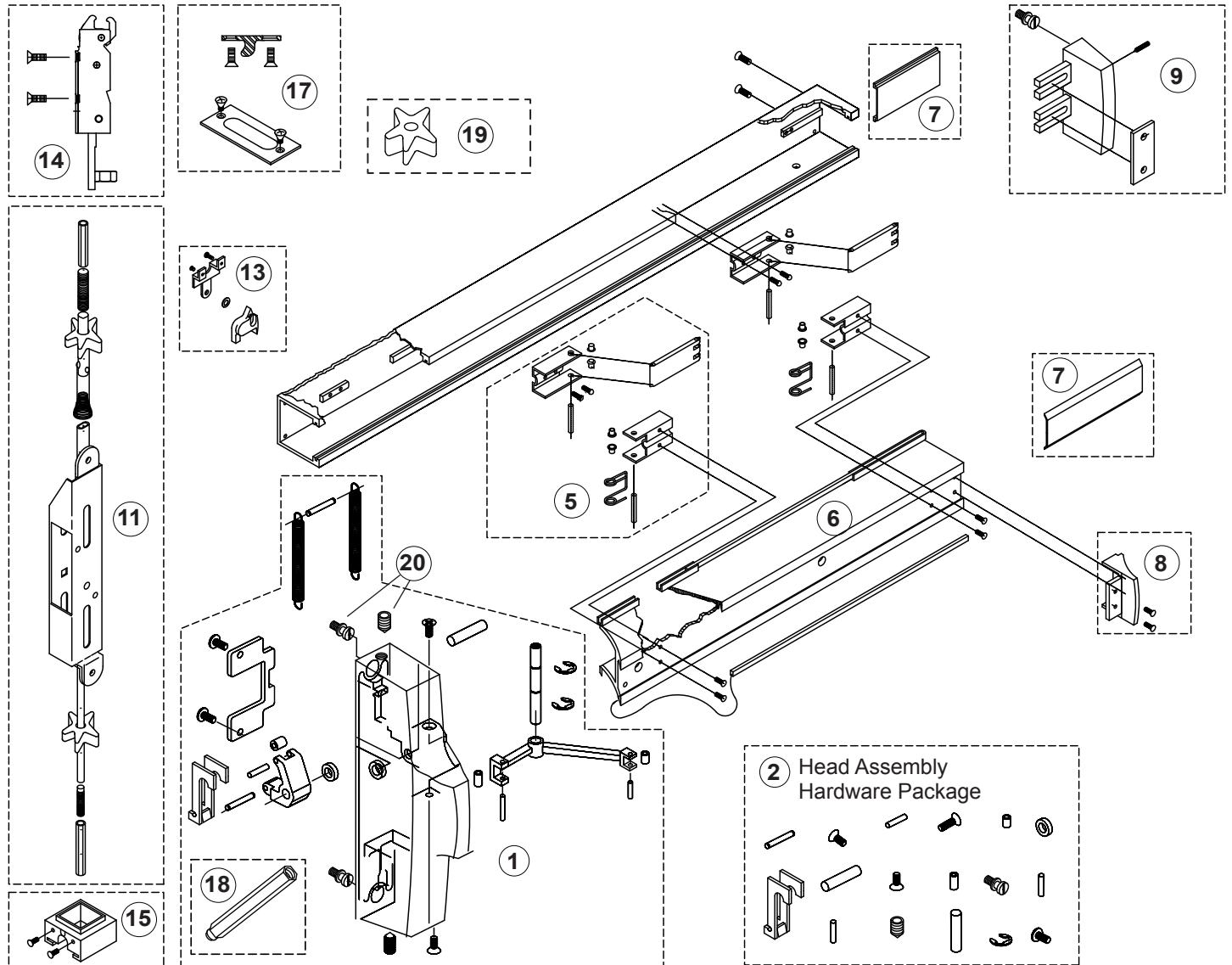


FIG. 29

FIG. 30

NOT TO SCALE

# PACKAGED PARTS AVAILABLE - MECHANICAL ONLY



Assem. No.	Part No.	Description	Assem. No.	Part No.	Description
1	302617	LHRB - Active Head Assembly	14	301311PKG	2085 Top Latch Assembly
Not Shown	302619	RHRB - Active Head Assembly	15	30320	Bottom Bolt Guide Assembly
2	302607	Head Assembly Hardware Pkg.	17	301345	Strike Package-Top and Bottom
5	301064	Control Arm Hardware Package	19	301552PKG	Rod Silencers (12 Pkg.)
6	302480PKG	Push-Pad End Cap Package	18	30763P	Bottom Bolt
7	301063	Base Cover Plate Package	20	30SBKG	Mounting Shoulder Bolt and Set Screw Pkg. (12 Ea.)
8	301265	Push-Pad End Cap Package	Not Shown	30PBAW	Bolt Adjustment Wrench (2 pkg)
9	301266	Base End Cap Package	Not Shown	301347	Top Rod Extension 12"
11	301287J	Standard Rod and Case Assembly	Not Shown	301348	Top Rod Extension 24"
13	30916	Rod and Case Hardware Package			