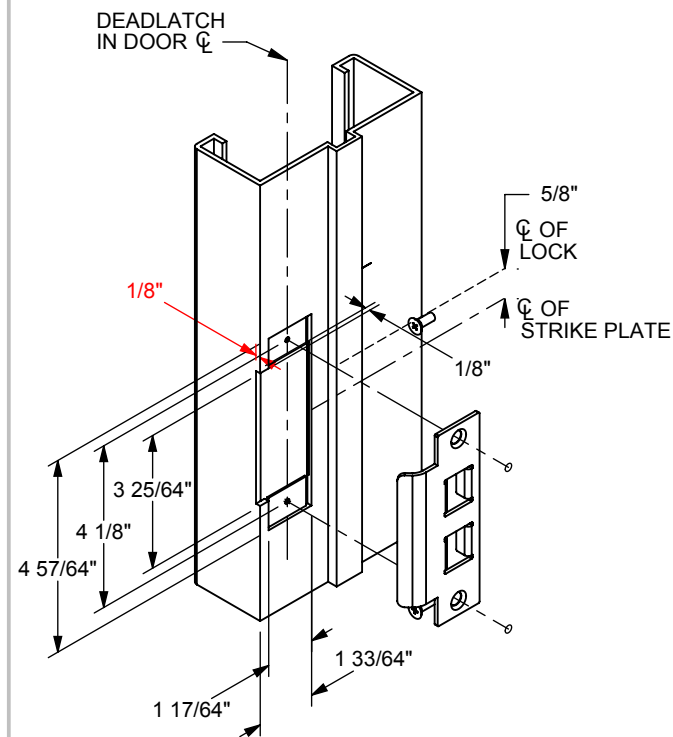


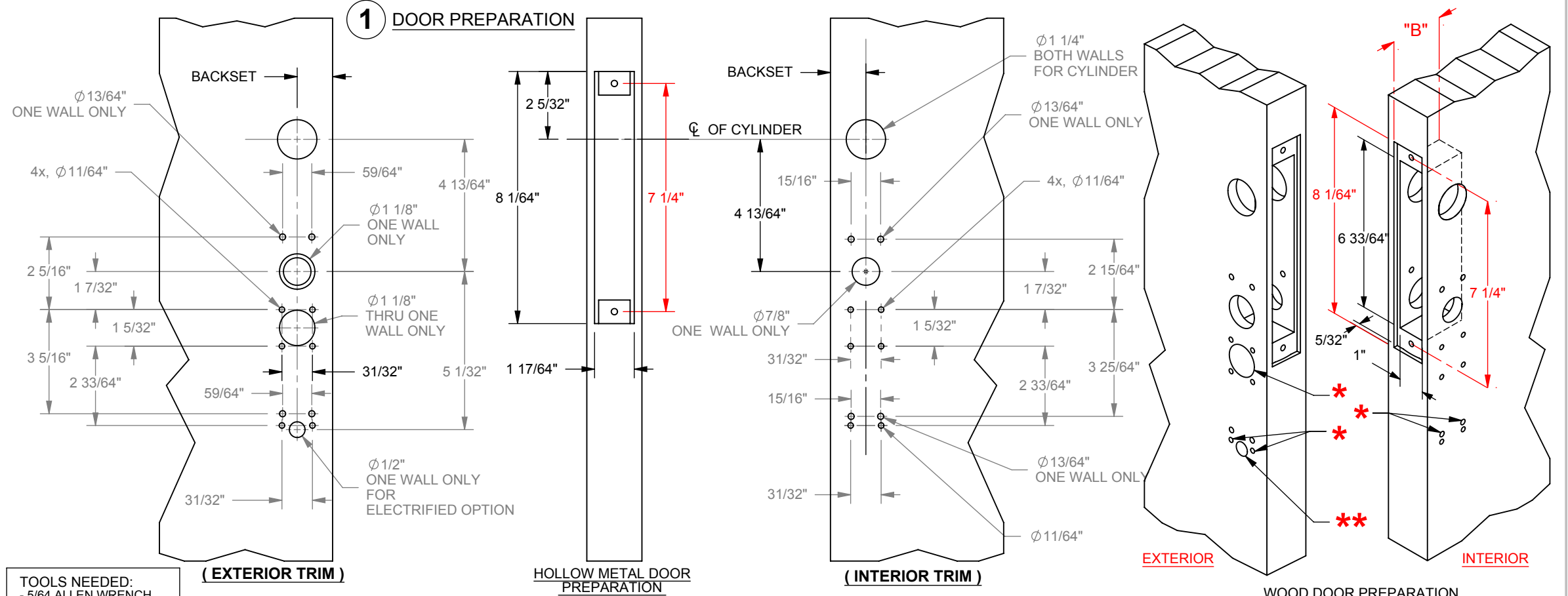
STRIKE PREPARATION HOLLOW METAL FRAME



INSTALLATION OF STRIKE

MOUNT STRIKE ONTO JAMB AND FASTEN WITH #10 FLAT HEAD SCREWS AS SHOWN.

1 DOOR PREPARATION



TOOLS NEEDED:
 - 5/64 ALLEN WRENCH
 - 3/32 ALLEN WRENCH
 - 1/8 ALLEN WRENCH
 - #9 DRILL BIT (.196 Ø)
 - #16 DRILL BIT (.177 Ø)
 - 7/8 DRILL BIT (.875 Ø)
 - 1-1/8 DRILL BIT (1.125 Ø)

- APPLY STICK ON TEMPLATE OVER CYLINDER BACKSET CENTER LINE.
 NOTE: EACH TEMPLATE IS LABELED FOR OUTSIDE OR INSIDE TRIM.
 - CENTER PUNCH ALL HOLES.
 - DRILL HOLES AT CENTER PUNCH LOCATIONS. REMOVE TEMPLATE.
 - INSTALL 2290 PER INSTALLATION INSTRUCTIONS.

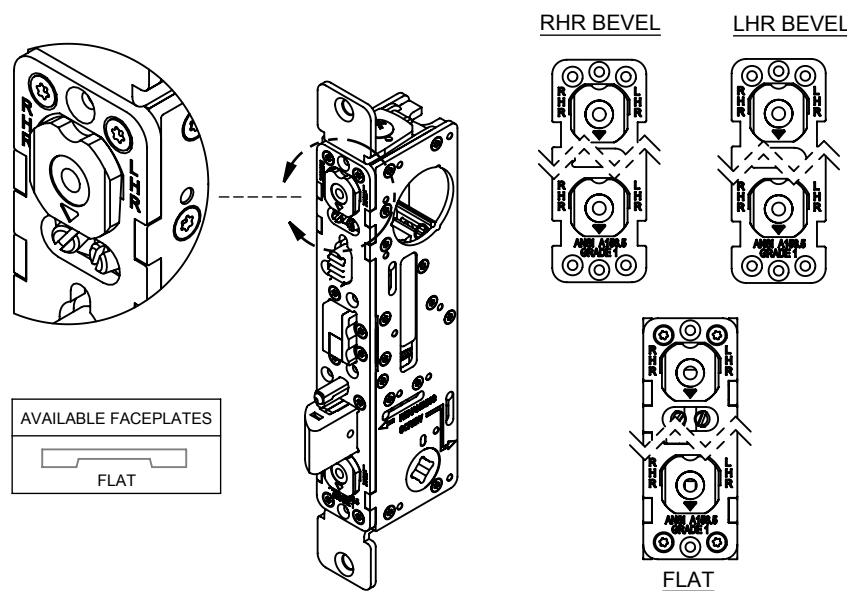
WOOD DOOR PREPARATION

* .50 DEEP
 ** 1.00 DEEP

BACKSET	"B" DIM.
1-1/8"	1.80
1-1/2"	2.17

2 BEVEL TABS ADJUSTMENT

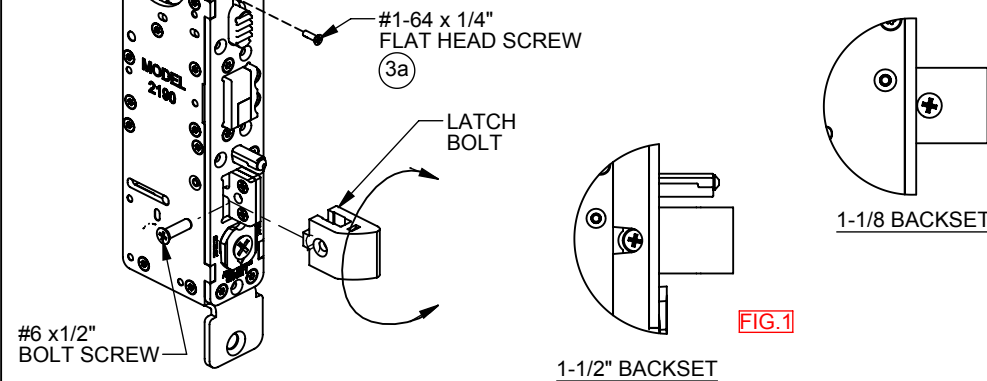
- ROTATE BEVEL TABS TO DESIRED HANDING.
 USING THE BEVEL ADJUSTMENT ALLOWS THE FLAT FACEPLATE TO WORK IN BEVEL STILES



3

TO CHANGE THE HANDING ON LATCH BOLT:

- DEPRESS THE LATCHBOLT UNTIL BOLT SCREW CAN BE SEEN THROUGH CASE HOLE. (1-1/2" BACKSET ONLY).
- REMOVE BOLT SCREW AND ORIENT LATCH BOLT TO THE OPPOSITE HAND.
- DEPRESS THE LATCH BOLT UNTIL THE COUNTERSINK HOLE ON THE LATCH BOLT CAN BE SEEN THROUGH THE CASE HOLE AS SHOWN IN FIG.1.
- REINSERT BOLT SCREW AND TIGHTEN TO 22 - 27 IN-LB.



3a

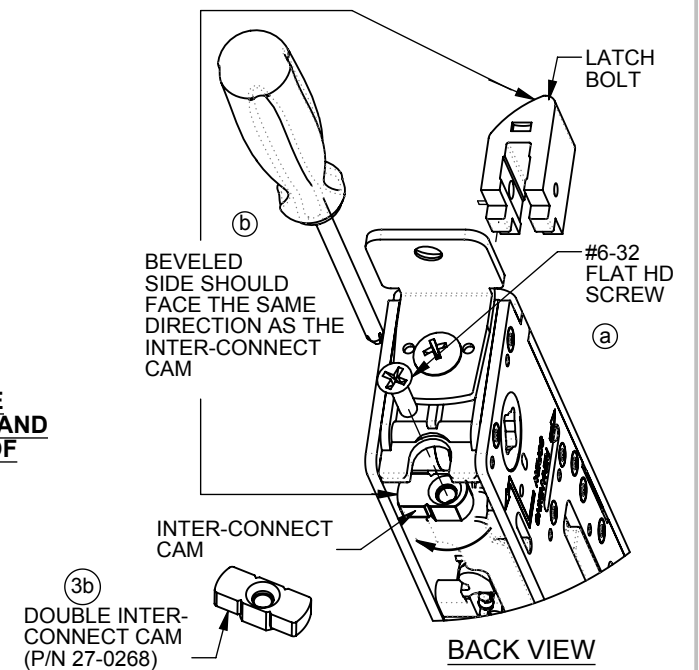
TO BLOCK HOLDBACK FEATURE

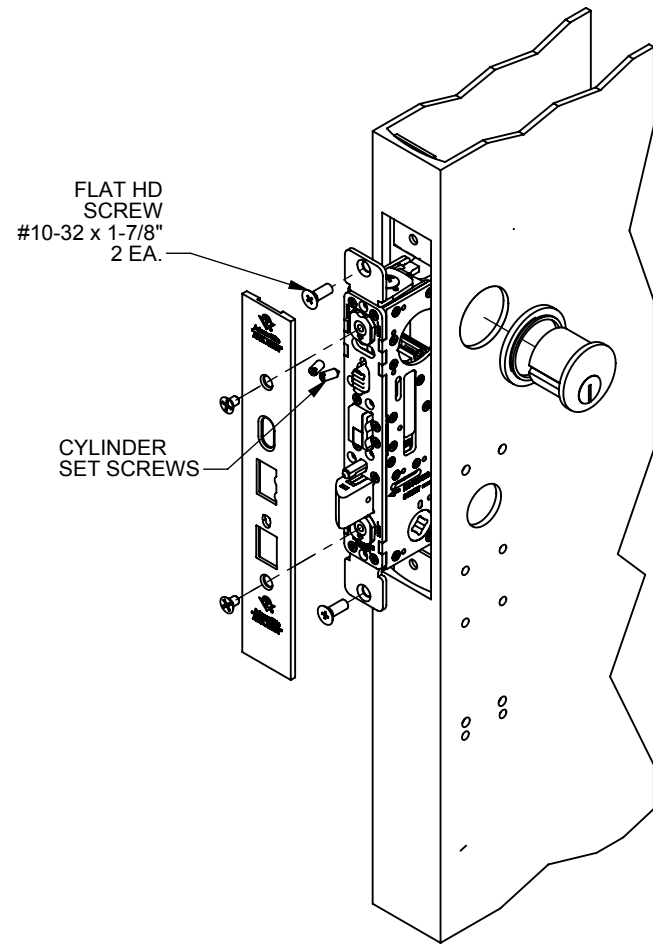
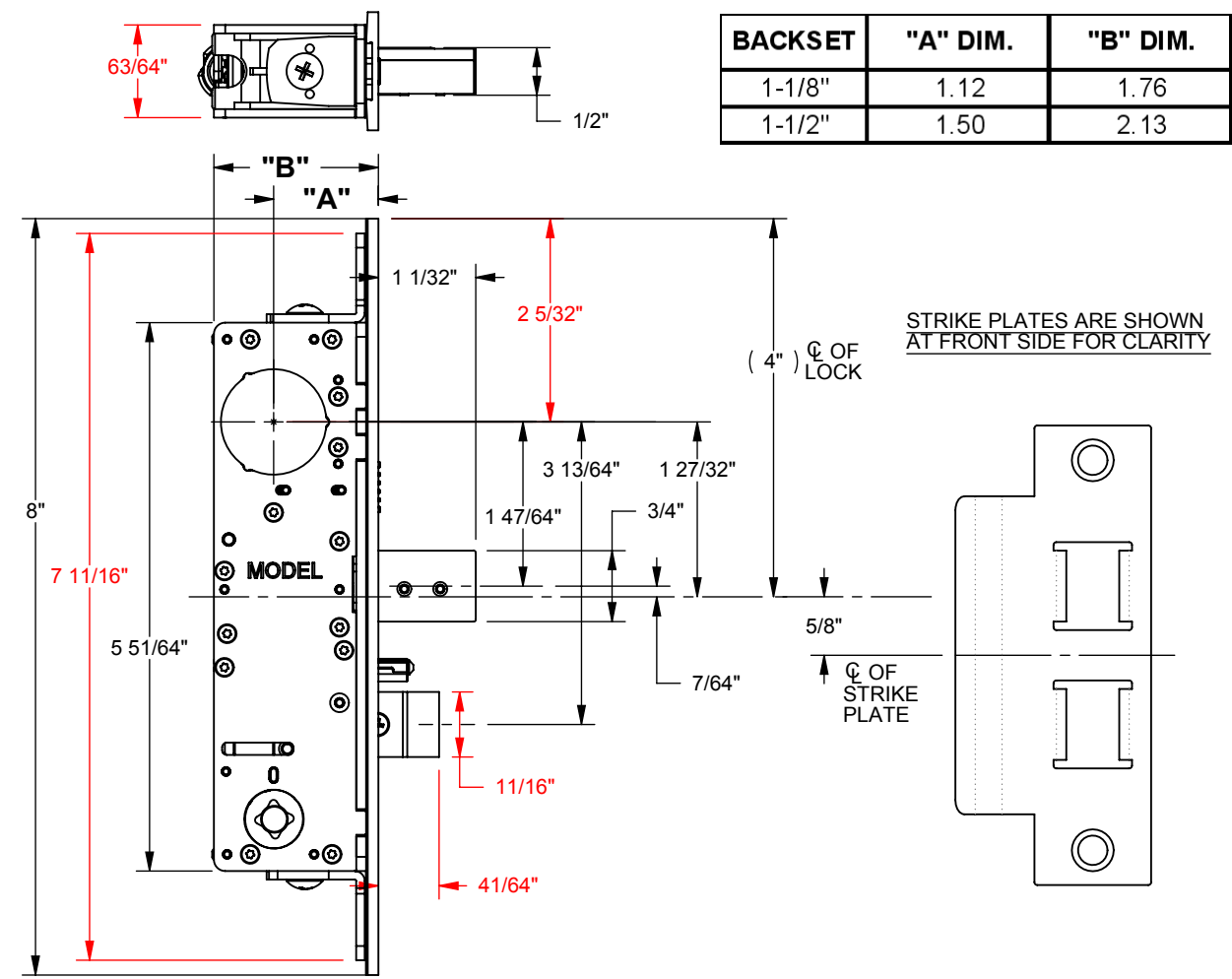
- INSERT #1-64 x 1/4" FLAT HEAD SCREW INTO CASE AS SHOWN BEFORE INSTALLING IN DOOR.

3b

FOR APPLICATION THAT REQUIRE RETRACTION OF THE DEADBOLT AND DEADLATCH FROM BOTH SIDES OF DOOR.

- REMOVE THE INTER-CONNECT CAM, AND INSTALL THE OPTIONAL DOUBLE INTER-CONNECT CAM.





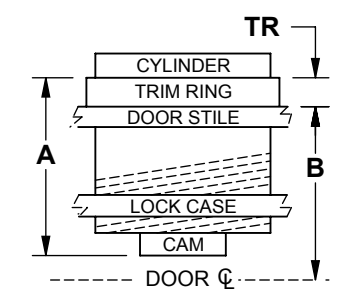
INSTALLING LOCK TO THE BACK OF THE DOOR

- 4 - INSERT LOCK ASSEMBLY INTO DOOR THRU CUTOUT.
- INSTALL AND FASTEN TWO (2) FLAT HEAD SCREWS #10-32 x 1-7/8" (OR #12, WOOD SCREW, P/N# 29-0271) TO SECURE THE LOCK ASSEMBLY ON DOOR.
- 5 - INSTALL CYLINDER AND SECURE WITH SET SCREWS.
- INSTALL FACE PLATE.

$$TR^* = A - B$$

* TOLERANCE: $\pm .060$

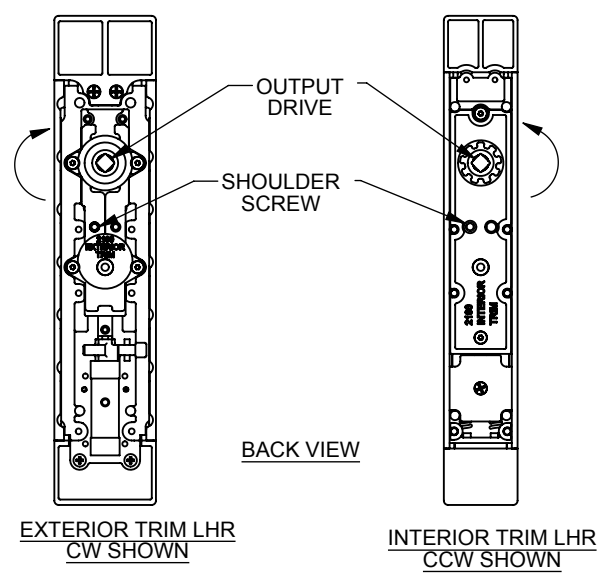
"TR" is trim ring length
"A" is cylinder height (less shoulder but including cam)
"B" is one-half of door thickness



6 HANDING CONFIGURATION FOR 2290 TRIM

- THE OUTPUT DRIVE FOR THE EXTERIOR TRIM IS SHIPPED FROM THE FACTORY IN A CLOCKWISE ROTATION AND THE INTERIOR TRIM IS SHIPPED WITH A COUNTER-CLOCKWISE ROTATION. TO CHANGE THE OUTPUT DRIVE ROTATION, FOLLOW THESE STEPS:
1. REMOVE THE SHOULDER SCREW WITH A 5/64" ALLEN WRENCH.
 2. REINSTALL SHOULDER SCREW ON THE OPPOSITE SIDE.

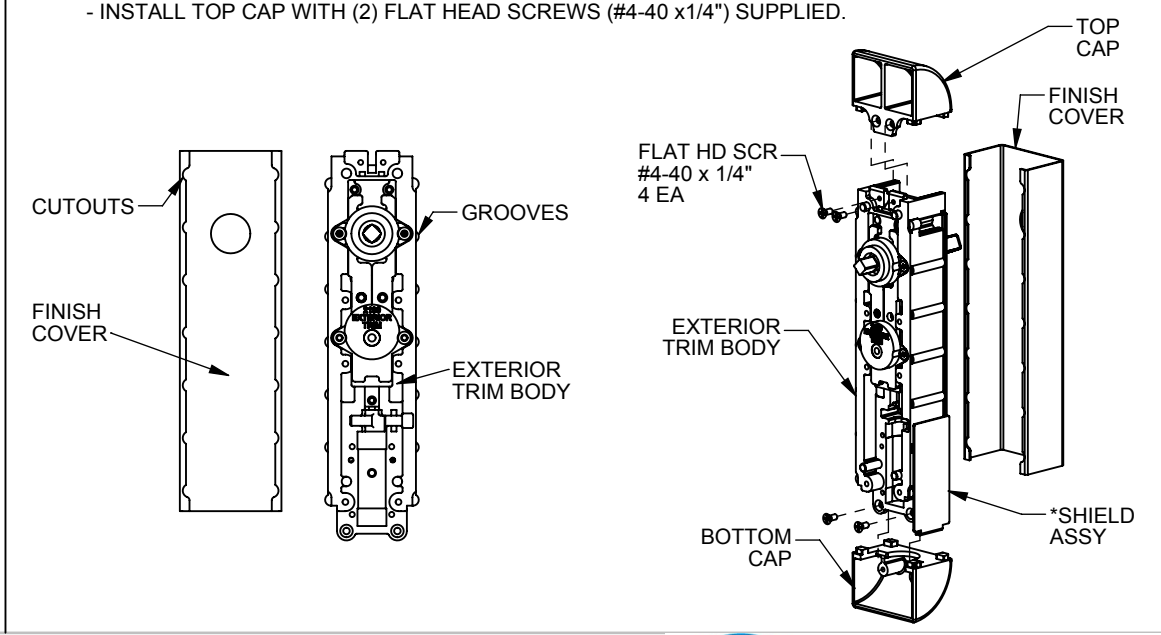
REFER TO THE CHART BELOW FOR REHANDING THE TRIM AS NEEDED.



TRIM	HANDING -RHR	HANDING - LHR
	SPINDLE ROTATION	
EXTERIOR	COUNTER-CLOCKWISE	CLOCKWISE
INTERIOR	CLOCKWISE	COUNTER-CLOCKWISE

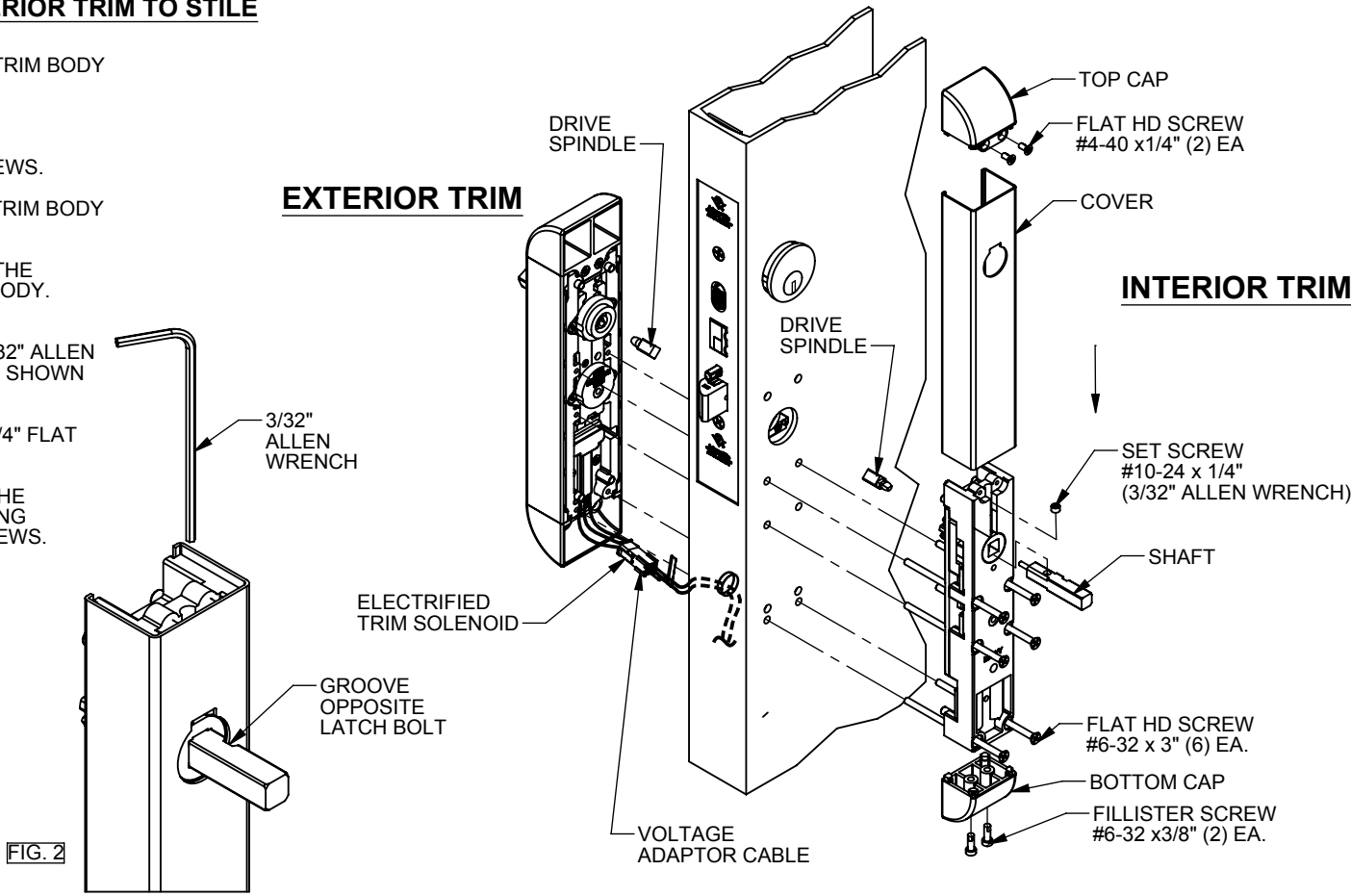
7 ASSEMBLE EXTERIOR TRIM

- SLIDE THE FINISH COVER ONTO BODY. THE COVER HAS CUTOUTS THAT FIT OVER THE GROOVES ON THE BODY.
- INSTALL BOTTOM CAP WITH (2) FLAT HEAD SCREWS (#4-40 x 1/4") SUPPLIED.
- * FOR EXTERIOR TRIM WITH ELECTRIFIED OPTION. INSERT THE SHIELD ASSY BETWEEN THE COVER AND THE EXTERIOR BODY BEFORE INSTALLING THE BOTTOM CAP.
- INSTALL TOP CAP WITH (2) FLAT HEAD SCREWS (#4-40 x 1/4") SUPPLIED.



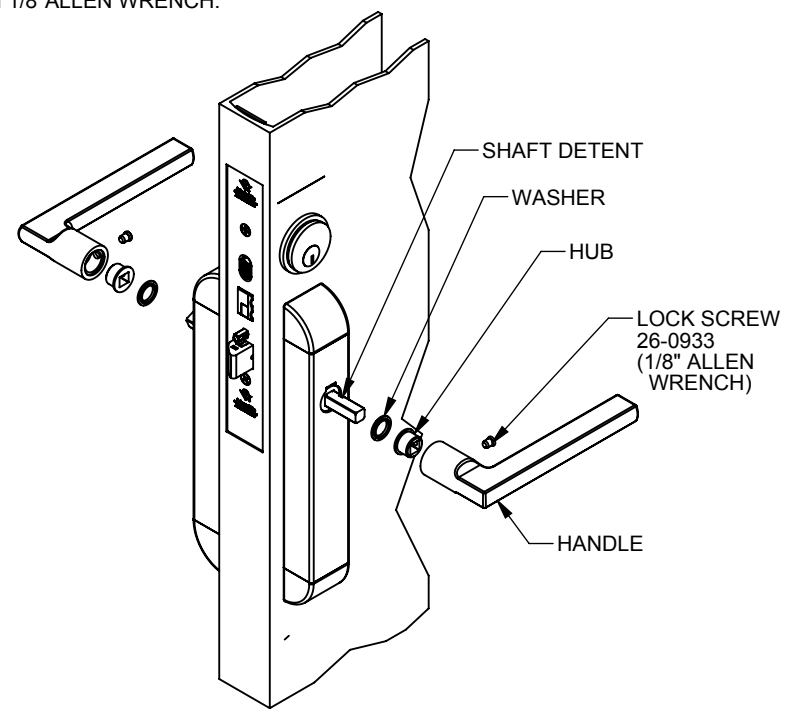
8 INSTALLING INTERIOR & EXTERIOR TRIM TO STILE

- INSERT DRIVE SPINDLE INTO EACH TRIM BODY PRIOR TO MOUNTING.
- MOUNT THE EXTERIOR TRIM AND INTERIOR TRIM BODY TO THE STILE USING (6) #6-32 x 3" FLAT HEAD SCREWS.
- SLIDE THE COVER ONTO INTERIOR TRIM BODY FROM THE TOP.
- INSERT SHAFT THRU THE HOLE ON THE COVER AND THE OUTPUT ON TRIM BODY. THE GROOVE ON THE SHAFT FACES OPPOSITE THE LATCH BOLT. TIGHTEN THE SET SCREW WITH A 3/32" ALLEN WRENCH TO SECURE THE SHAFT AS SHOWN IN FIG. 2.
- INSTALL TOP CAP USING (2) #4-40 x1/4" FLAT HEAD SCREWS .
- PUSH THE COVER UP FLUSH WITH THE TOP CAP. INSTALL BOTTOM CAP USING (2) #6-32 x 3/8" FILLISTER HEAD SCREWS.



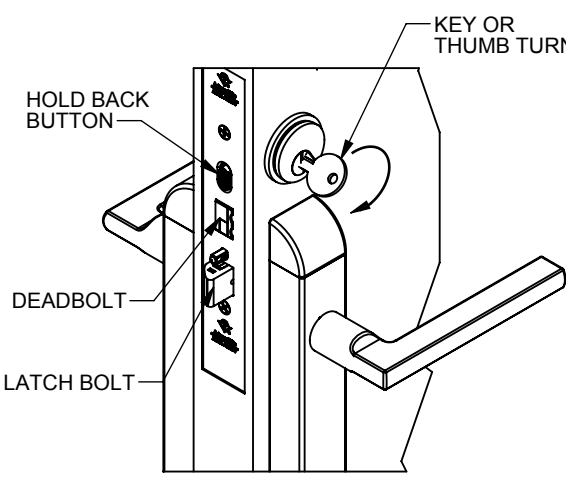
9 INSTALLING HANDLE (INTERIOR / EXTERIOR)

- INSERT WASHER THEN INSERT HUB OVER SHAFT. ON HANDLES 2290-01, 2290-02, 2290-03, THE HUB IS FACTORY INSTALLED. REMOVE LOCK SCREW WITH 1/8" ALLEN WRENCH AND PROCEED TO NEXT STEP.
 - INSTALL HANDLE OVER THE HUB WITH THE HOLE ALIGNED WITH THE HOLE ON THE HUB.
- NOTE: THE SHAFT DETENT SHOULD BE ALIGNED WITH THE LOCKING SCREW.
- MOVE THE HANDLE IN UNTIL IT IS AGAINST THE TRIM COVER.
 - FASTEN THE LOCK SCREW 26-0933 TO SECURE THE HANDLE WITH 1/8" ALLEN WRENCH.



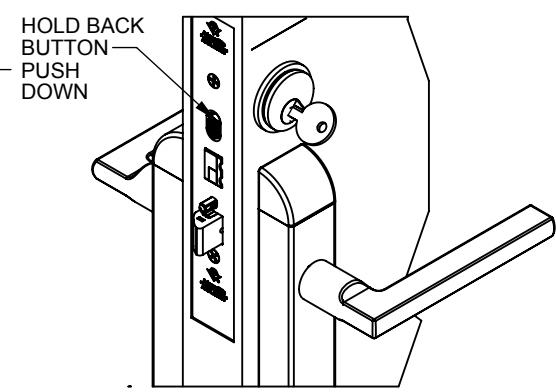
LATCH HOLD BACK FEATURE

- IN THE LOCK POSITION, INSERT KEY, TURN KEY 180° TO RETRACT THE DEADBOLT.
- TURN KEY 315° TO RETRACT THE LATCHBOLT.
- HOLD IN THIS POSITION AND PUSH DOWN THE HOLD BACK BUTTON TO RETAIN LATCHBOLT.
- RETURN KEY TO NEUTRAL POSITION AND REMOVE KEY.



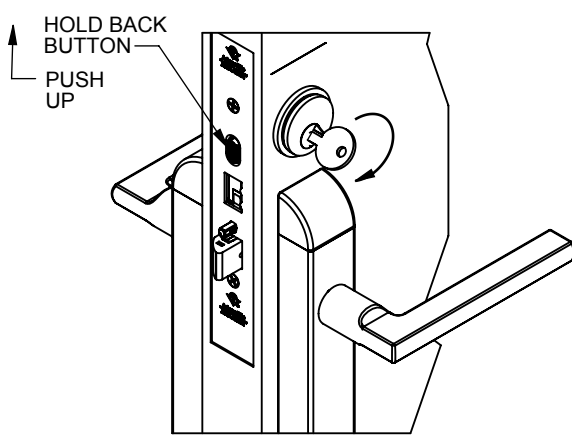
TO RELEASE HOLD BACK

- INSERT KEY, TURN KEY OR THUMB TURN ABOUT 135° AND HOLD.
- PUSH UP THE HOLD BACK BUTTON TO RELEASE THE LATCH BOLT.
- RETURN KEY TO THE NEUTRAL POSITION AND REMOVE KEY.



TEST OPERATION

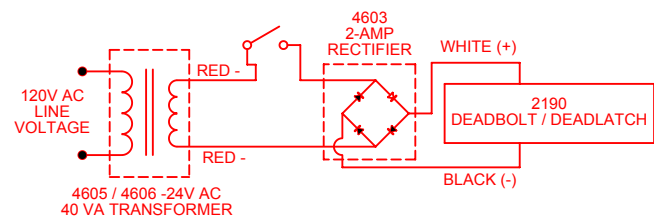
- EXTEND DEADBOLT WITH KEY OR THUMBTURN.
- PUSH DOWN ON INTERIOR LEVER. THE DEADBOLT AND LATCH SHOULD FULLY RETRACT.
- IF LATCH ONLY RETRACTS - REFER TO STEP 4 FOR INTER-CONNECTION CONFIGURATION.
- IF NEITHER RETRACT - REFER TO STEP 11 FOR DRIVE SPINDLE INSTALLATION.
- PUSH DOWN ON EXTERIOR LEVER - THE LATCH ONLY SHOULD RETRACT.



ELECTRIFIED TRIM SOLENOID SPECIFICATION

SOLENOID AVAILABLE VOLTAGES
12V DC CONTINUOUS DUTY,
24V DC CONTINUOUS DUTY.

2190 WIRING DIAGRAM
INTERMITTENT / CONTINUOUS DUTY 12 / 24V DC



- WIRED THE VOLTAGE ADAPTOR CABLE TO THE PROPER POWER SUPPLY THROUGH THE HOLE ON THE STILE.
- CONNECTED THE CABLE TO THE EXTERIOR TRIM SOLENOID BEFORE INSTALLING THE TRIM ONTO THE STILE.

VOLTAGE ADAPTOR CABLE			
P/N#	WIRE COLOR	APPLICATION	SOLENOID CURRENT DRAW
VA7400-12	BLACK	12V DC	0.44 AMPS
VA7400-24	RED	24V DC	0.23 AMPS

PRODUCT MUST BE INSTALLED
ACCORDING TO ALL APPLICABLE
BUILDING AND LIFE SAFETY CODES