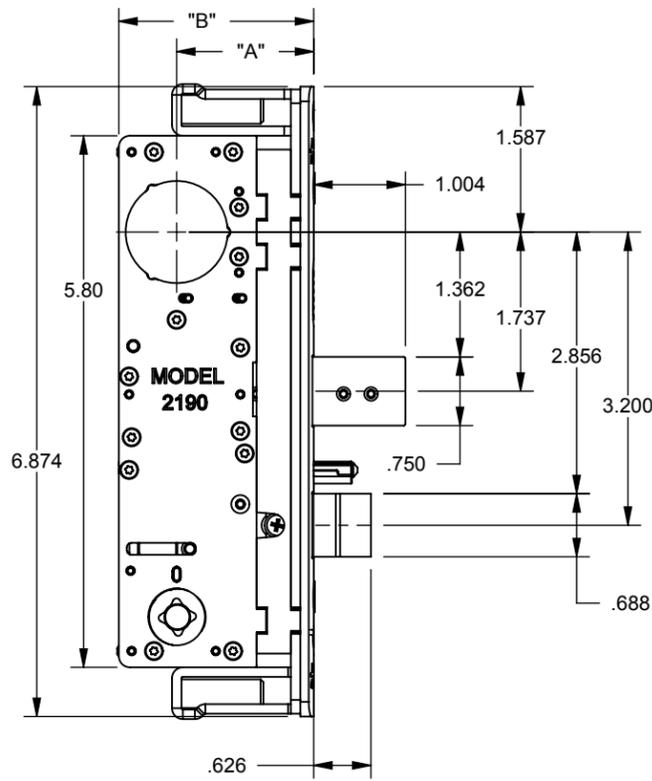
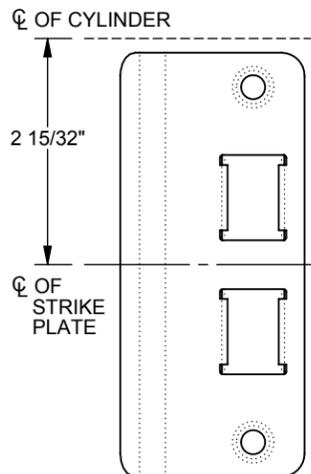


BACKSET	"A" DIM.	"B" DIM.
1-1/8"	1.12	1.76
1-1/2"	1.50	2.13

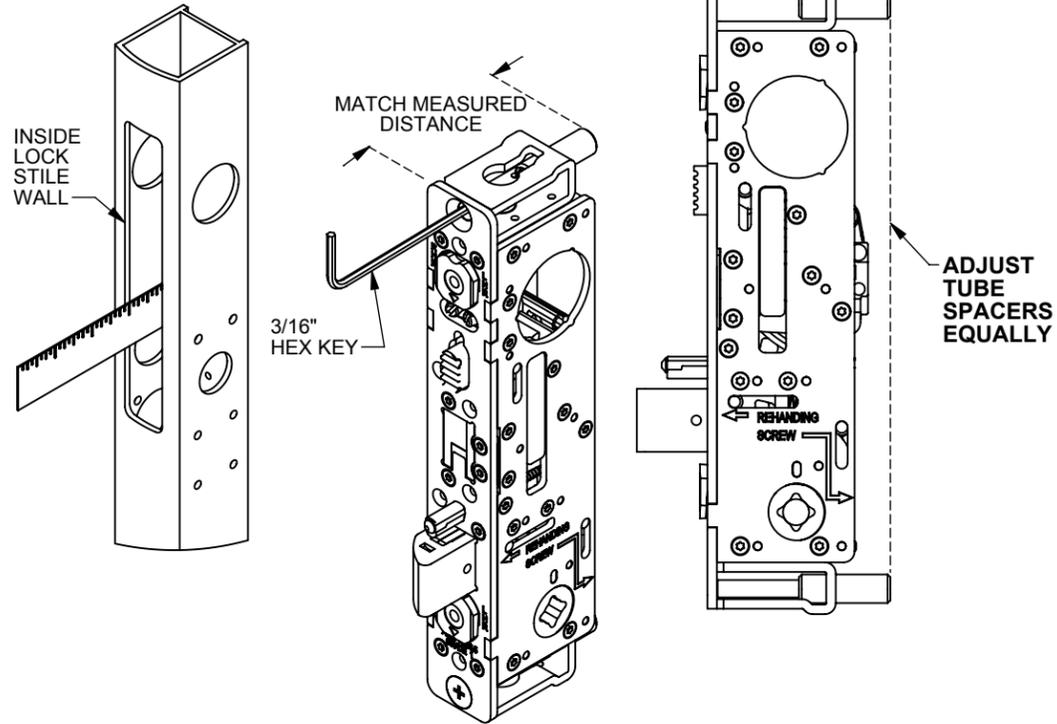


STRIKE PLATES ARE SHOWN AT FRONT SIDE FOR CLARITY



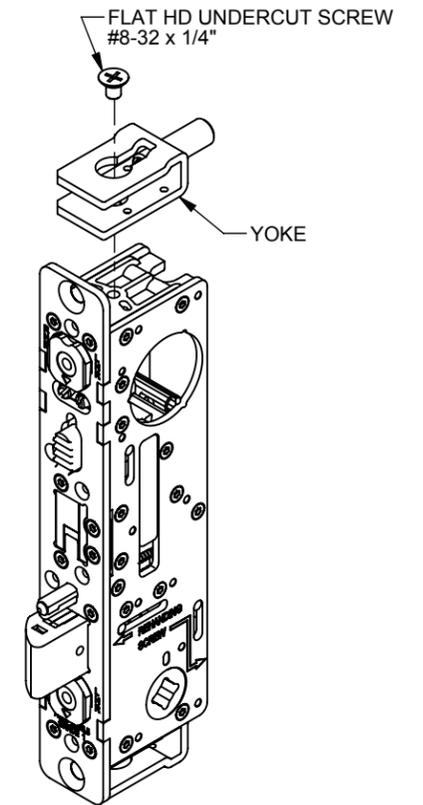
#### 4 FOR TRADITIONAL MOUNTING INSTALLATIONS

- MEASURE THE DEPTH FROM THE BACK OF THE LOCK STILE TO THE INSIDE WALL OF THE LOCK STILE.
- MATCH THE DISTANCE FROM THE FACE OF MOUNTING PLATE TO END OF BOTH TUBE SPACERS.
- USE 3/16" HEX KEY FOR FINE ADJUSTMENT.



#### 5 FOR MOUNTING TAB INSTALLATIONS

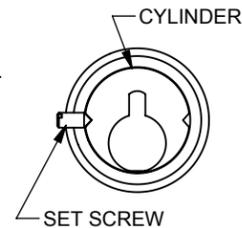
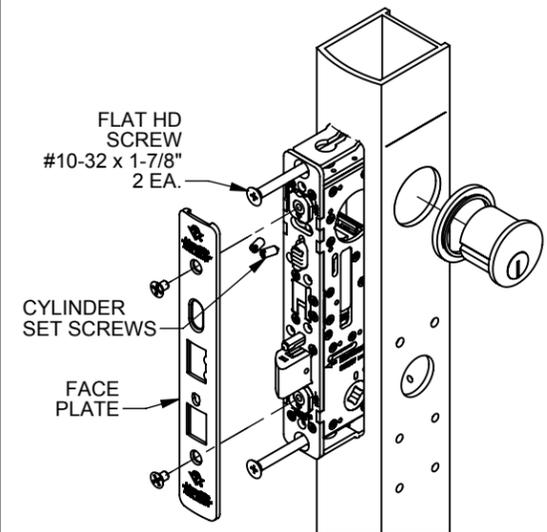
- REMOVE TOP AND BOTTOM FLAT HEAD UNDERCUT SCREW #8-32 x 1/4" AS SHOWN. THEN REMOVE YOKE. (MOUNTING TABS NOT INCLUDED).



#### 6 INSTALLING LOCK TO THE BACK OF THE STILE

- INSERT LOCK ASSEMBLY INTO LOCK STILE THRU CUTOUT.
- INSTALL AND FASTEN TWO (2) FLAT HEAD SCREWS #10-32 x 1-7/8" TO SECURE THE LOCK ASSEMBLY ON STILE.

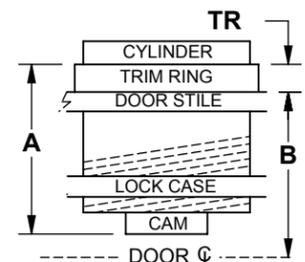
- #### 7
- INSTALL CYLINDER AND SECURE WITH SET SCREWS.
  - INSTALL FACE PLATE.



**TR\* = A - B**

\* TOLERANCE: ±.060

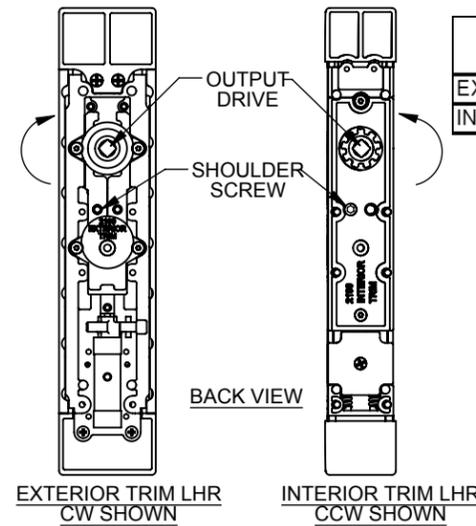
"TR" is trim ring length  
 "A" is cylinder height (less shoulder but including cam)  
 "B" is one-half of door thickness



#### 8 HANDING CONFIGURATION FOR 2190 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.

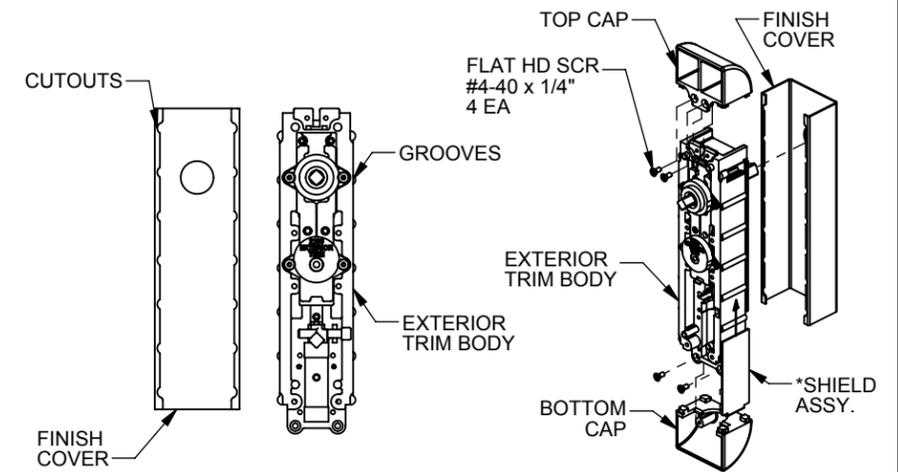
REFER TO THE CHART BELOW FOR REHANDING THE TRIM AS NEEDED.



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

#### 9 ASSEMBLE EXTERIOR TRIM

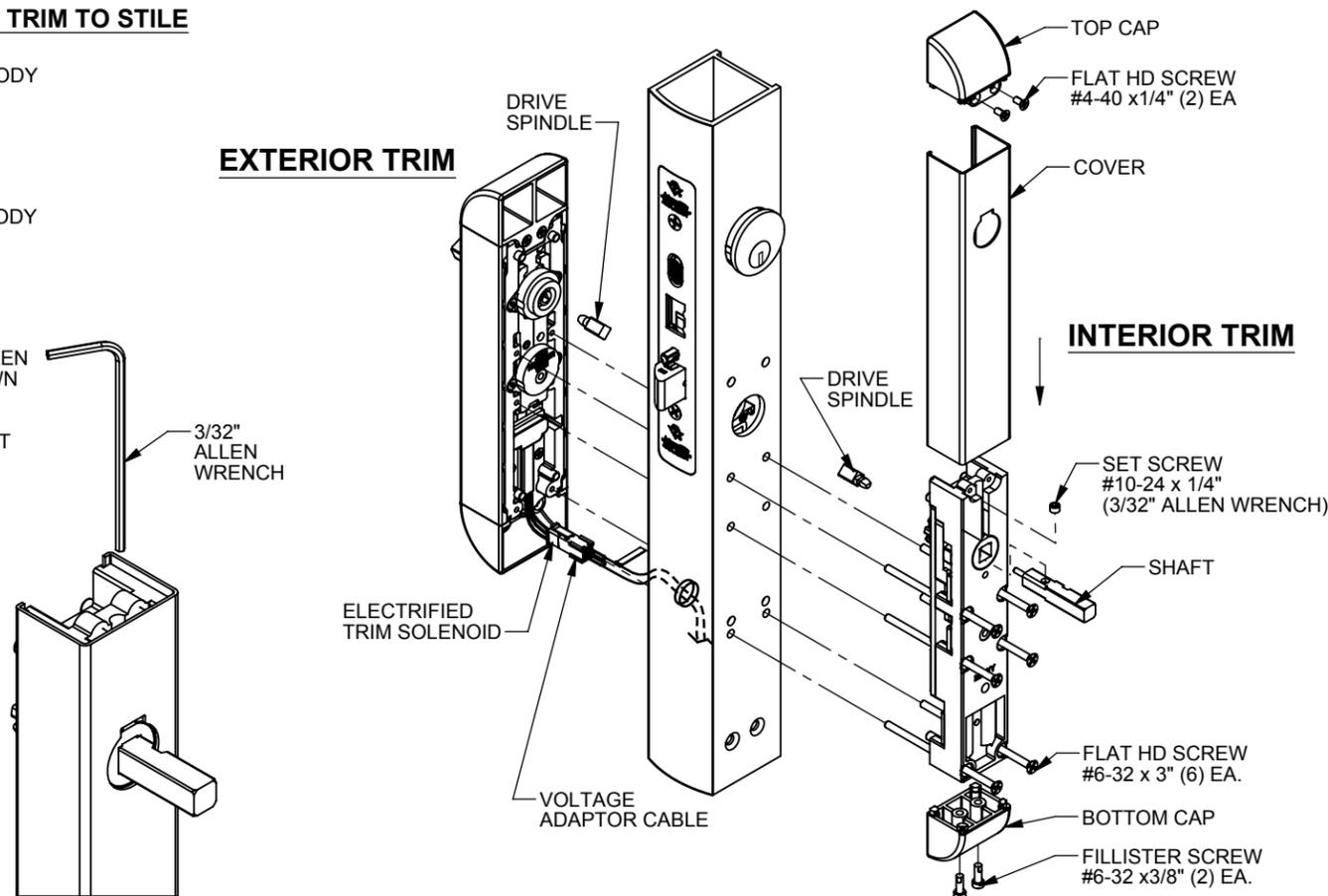
- SLIDE THE FINISH COVER ONTO BODY. THE COVER HAS CUTOUTS THAT FIT OVER THE GROOVES ON THE BODY.
- INSTALL TOP CAP WITH (2) FLAT HEAD SCREWS (#4-40 x 1/4") SUPPLIED.
- \*FOR EXTERIOR TRIM WITH ELECTRIFIED OPTION. INSERT THE SHIELD ASSY BETWEEN THE COVER AND THE EXTERIOR TRIM BODY BEFORE INSTALLING THE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



## 10 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 x 1/4" 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.

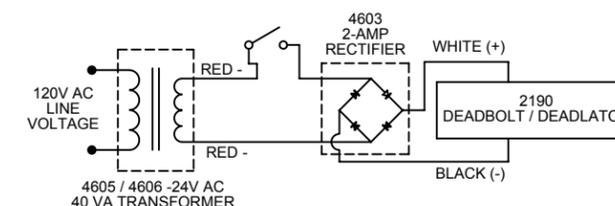
FIG. 2



## ELECTRIFIED TRIM SOLENOID SPECIFICATION

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

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



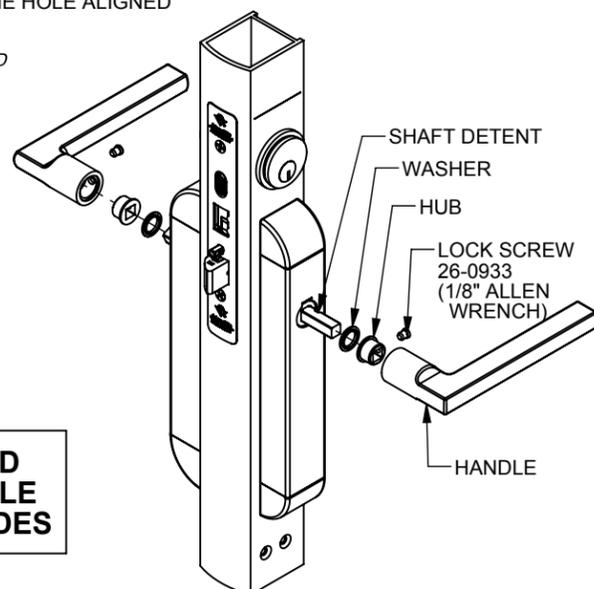
- EXTEND THE WIRE RUN FROM THE POWER SOURCE AND THROUGH THE ACCESS HOLE ON THE EXTERIOR SIDE OF THE STILE.
- ATTACH VOLTAGE ADAPTOR CABLE TO 2190 AS SHOWN.

### 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

## 11 INSTALLING HANDLE (INTERIOR / EXTERIOR)

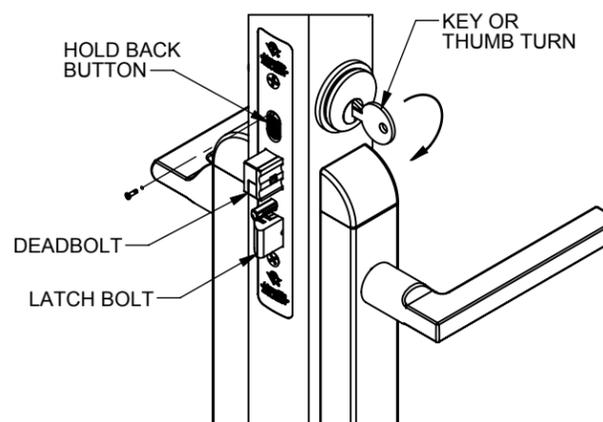
- INSERT WASHER THEN INSERT HUB OVER SHAFT. ON HANDLES 2190-01, 2190-02, 2190-03, THE HUB IS FACTORY INSTALLED. REMOVE LOCK SCREW WITH 1/8" ALLEN WRENCH AND PROCEED TO NEXT STEP.
  - INSTALL HANDLE OVER THE HUB WITH THE HOLE ALIGNED WITH THE HOLE ON THE HUB.
- NOTE: THE SHAFT DETENT SHOULD BE ALIGNED 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.



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

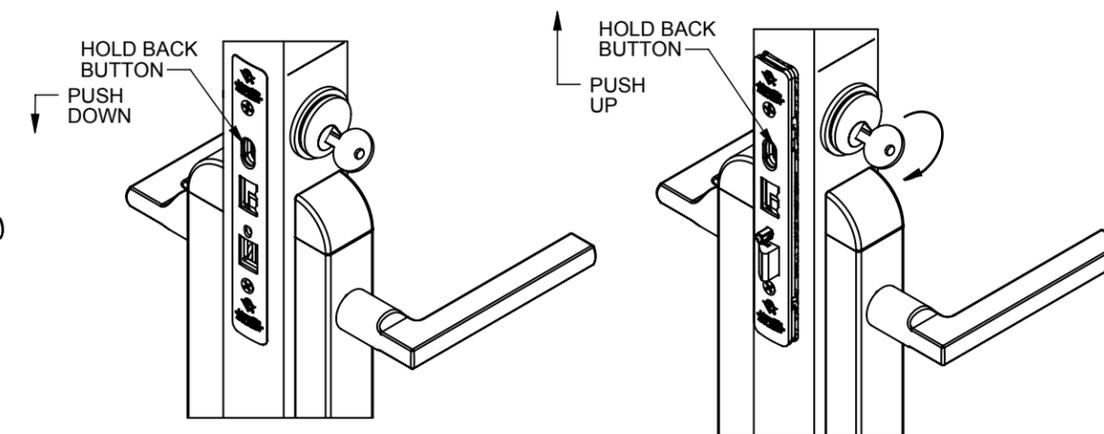
### LATCH HOLD BACK FEATURE

- 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.