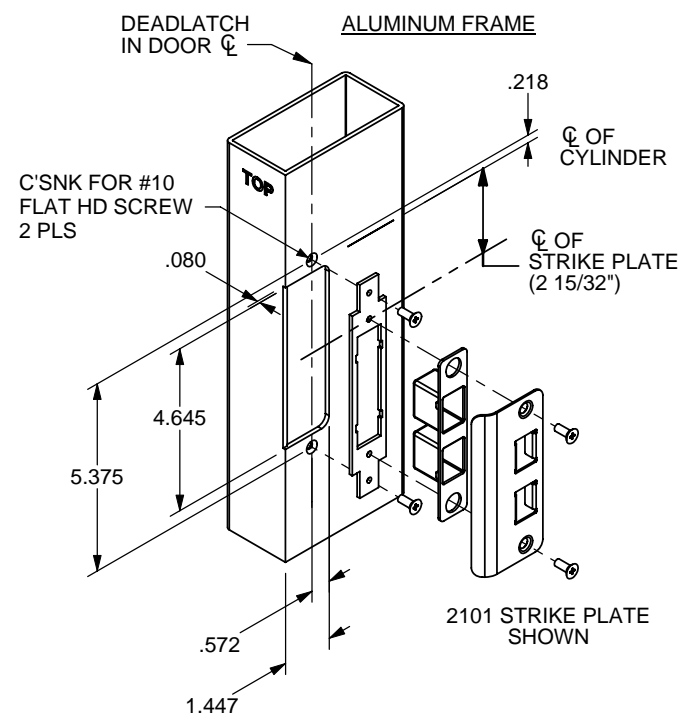


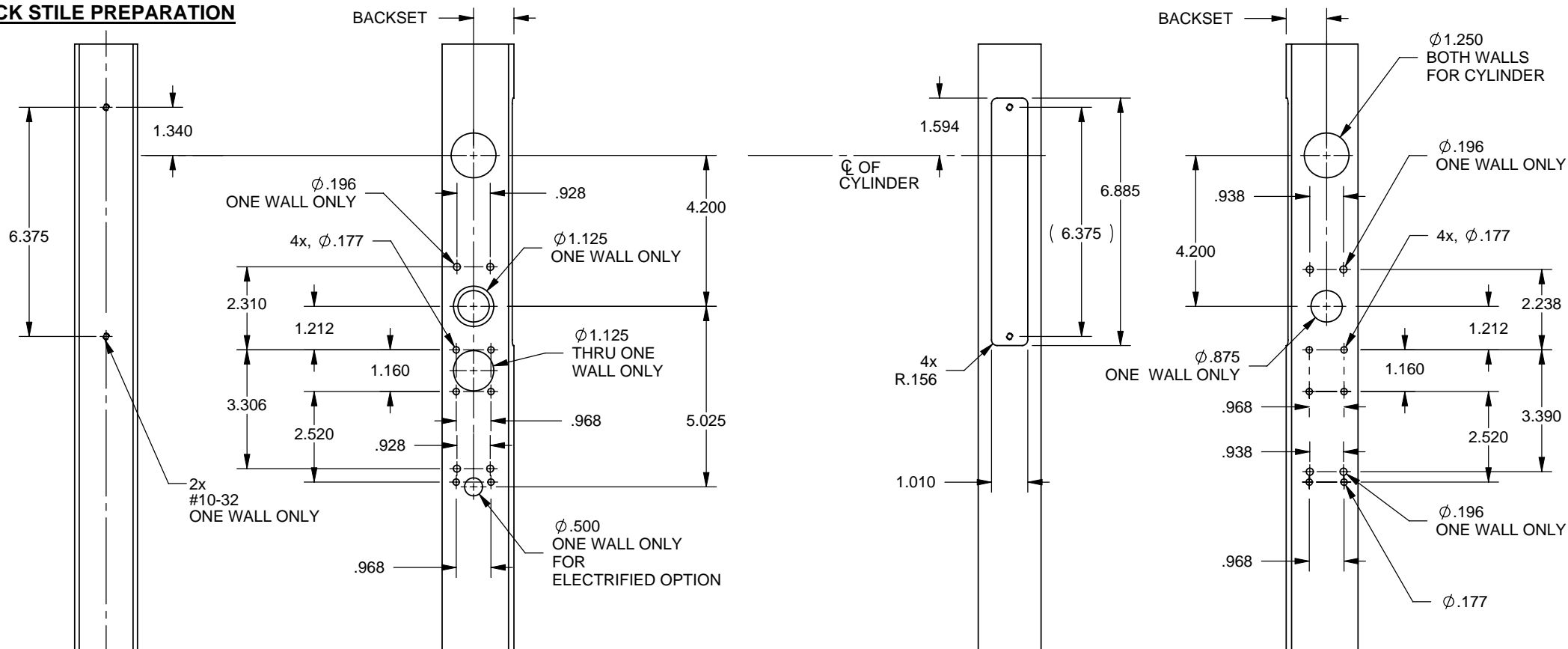
1 STRIKE PREPARATION



INSTALLATION OF STRIKE

- INSERT MOUNTING BACK PLATE BEHIND JAMB AND FASTEN WITH #10 FLAT HEAD SCREWS.
- INSERT TRIM BOX WITH 2101 STRIKE PLATE AND FASTEN WITH #10 FLAT HEAD SCREWS TO BACK PLATE AS SHOWN.

LOCK STILE PREPARATION

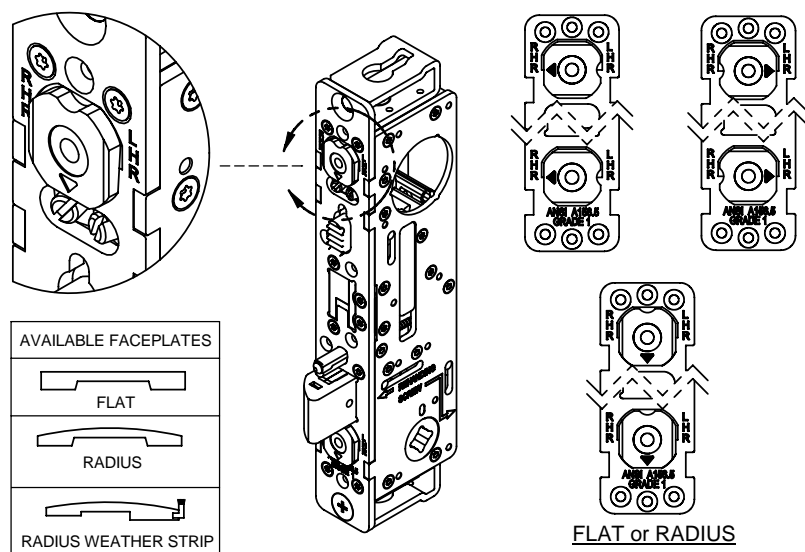


- TOOLS NEEDED:
- 5/64 ALLEN WRENCH
 - 3/32 ALLEN WRENCH
 - 1/8 ALLEN WRENCH
 - #9 DRILL BIT (.196 ϕ)
 - #16 DRILL BIT (.177 ϕ)
 - 7/8 DRILL BIT (.875 ϕ)
 - 1-1/8 DRILL BIT (1.125 ϕ)

- 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 2190 PER INSTALLATION INSTRUCTIONS.

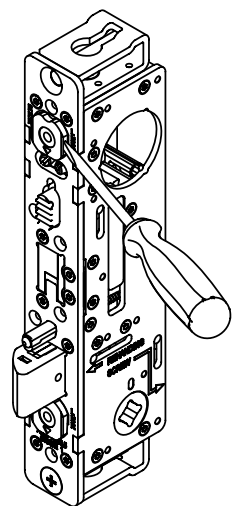
2 BEVEL TABS ADJUSTMENT

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



FOR RADIUS FACEPLATE WITH WEATHERSEAL ONLY!

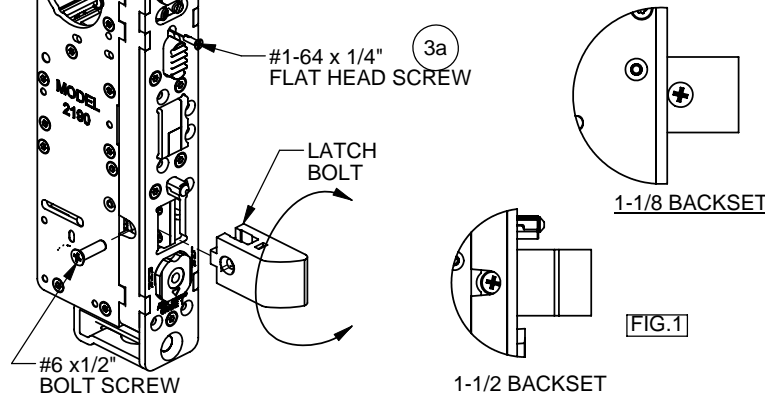
- WITH A SMALL FLAT HEAD SCREWDRIVER, PRY OFF BEVEL TABS AS SHOWN.



3 TO CHANGE THE HANDING ON LATCH BOLT:

1-1/2" BACKSET SHOWN

- 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.



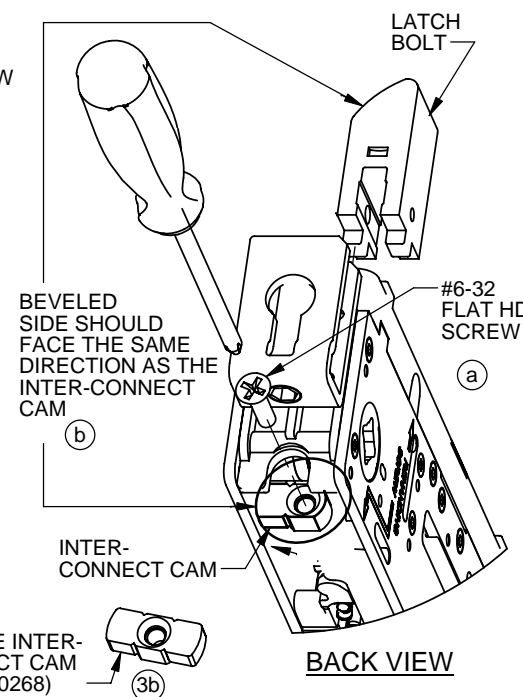
- YOU WILL ALSO HAVE TO RE-ORIENT THE INTER-CONNECT CAM:
- a) LOOSEN THE #6-32 FLAT HEAD SCREW AT THE BOTTOM OF THE LOCK.
- b) ROTATE THE INTER-CONNECT CAM TO THE SAME DIRECTION AS THE LATCH BOLT BEVEL. RETIGHTEN THE #6-32 FLAT HEAD SCREW TO COMPLETE THE OPERATION.

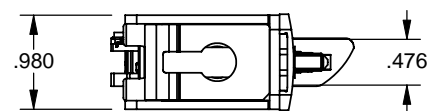
3a TO BLOCK HOLDBACK FEATURE:

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

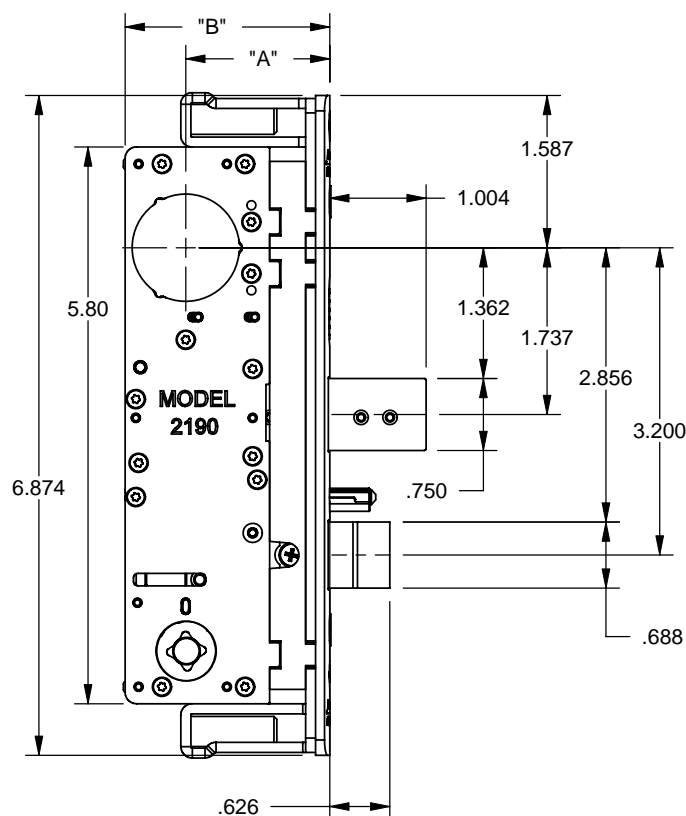
3b FOR APPLICATIONS THAT REQUIRE RETRACTION OF THE DEADBOLT AND DEADLATCH FROM BOTH SIDES OF THE DOOR. REMOVE THE INTER-CONNECT CAM, AND INSTALL THE OPTIONAL DOUBLE INTER-CONNECT CAM.

DOUBLE INTER-CONNECT CAM (P/N 27-0268)

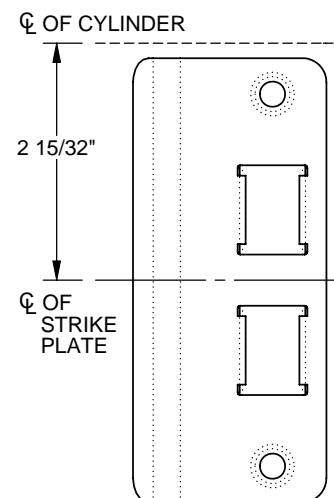




BACKSET	"A" DIM.	"B" DIM.
1-1/8"	1.12	1.76
1-1/2"	1.50	2.13

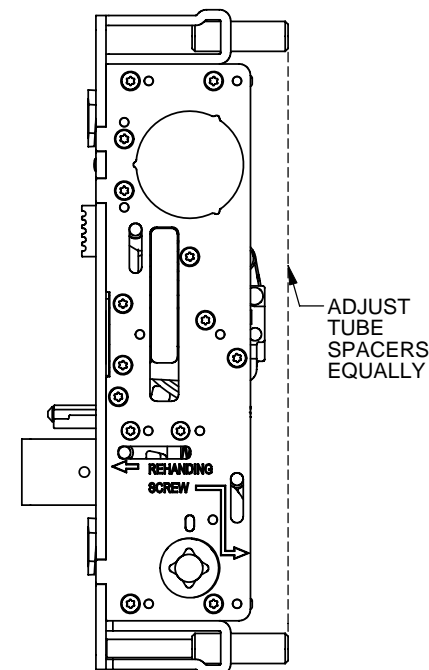
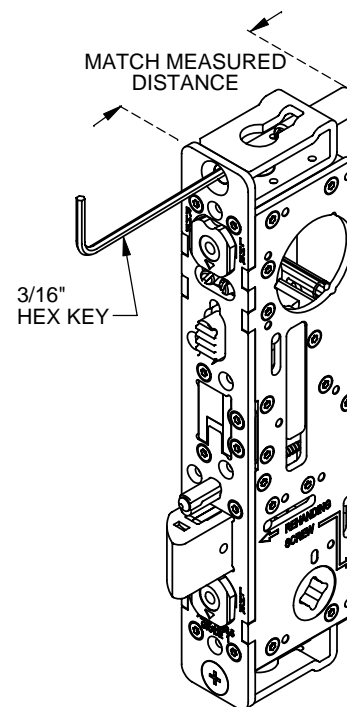
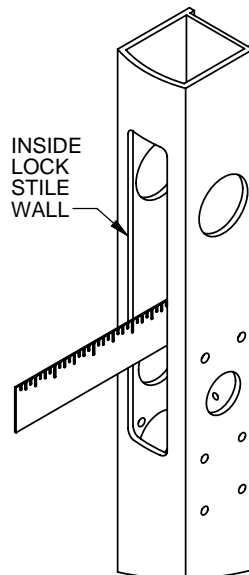


STRIKE PLATES ARE SHOWN AT FRONT SIDE FOR CLARITY



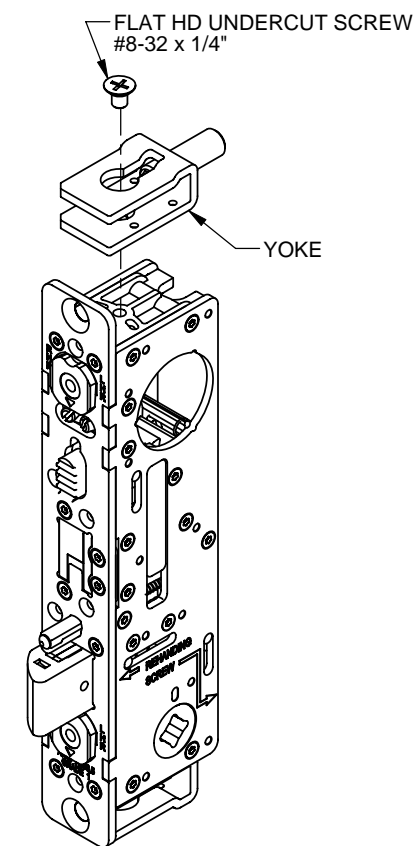
4 FOR TRADITIONAL MOUNTING INSTALLATIONS

- 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

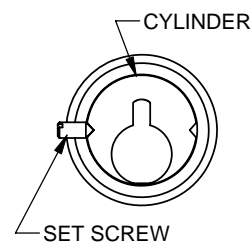
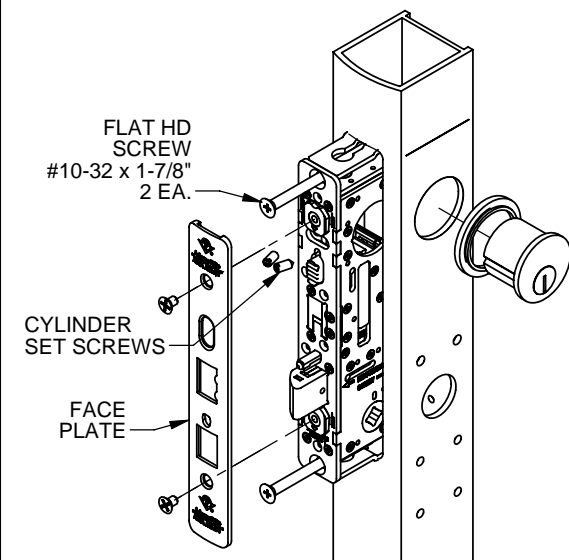
- REMOVE TOP AND BOTTOM FLAT HEAD UNDERCUT SCREW #8-32 x 1/4" AS SHOWN. THEN REMOVE YOKE. (MOUNTING TABS NOT INCLUDED).



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.

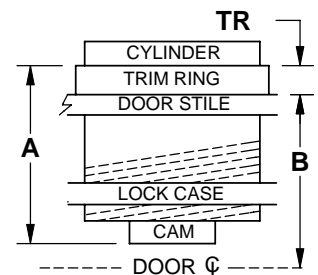
- 7 - INSTALL CYLINDER AND SECURE WITH SET SCREWS.
- INSTALL FACE PLATE.



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

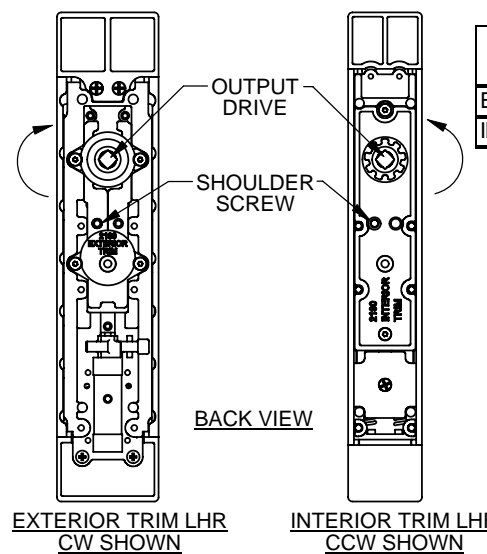


8 HANDING CONFIGURATION FOR 2190 TRIM

- 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.

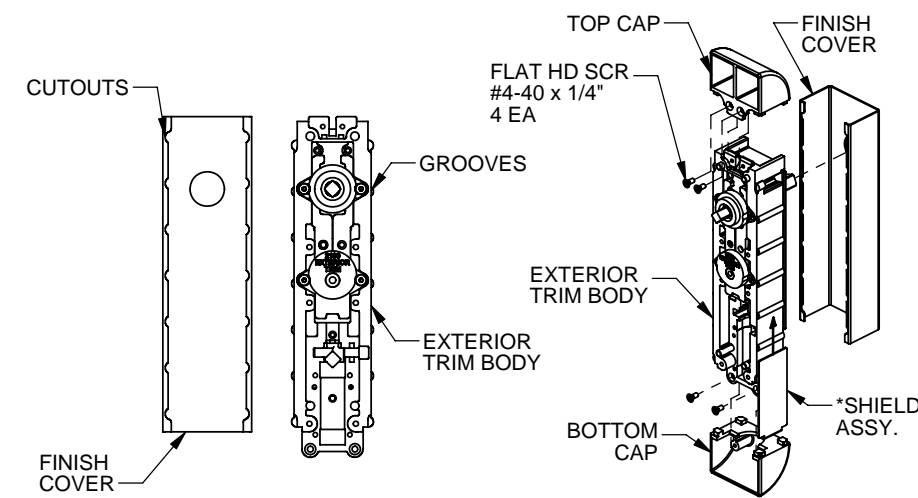
REFER TO THE CHART BELOW FOR REHANDING THE TRIM AS NEEDED.



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

9 ASSEMBLE EXTERIOR TRIM

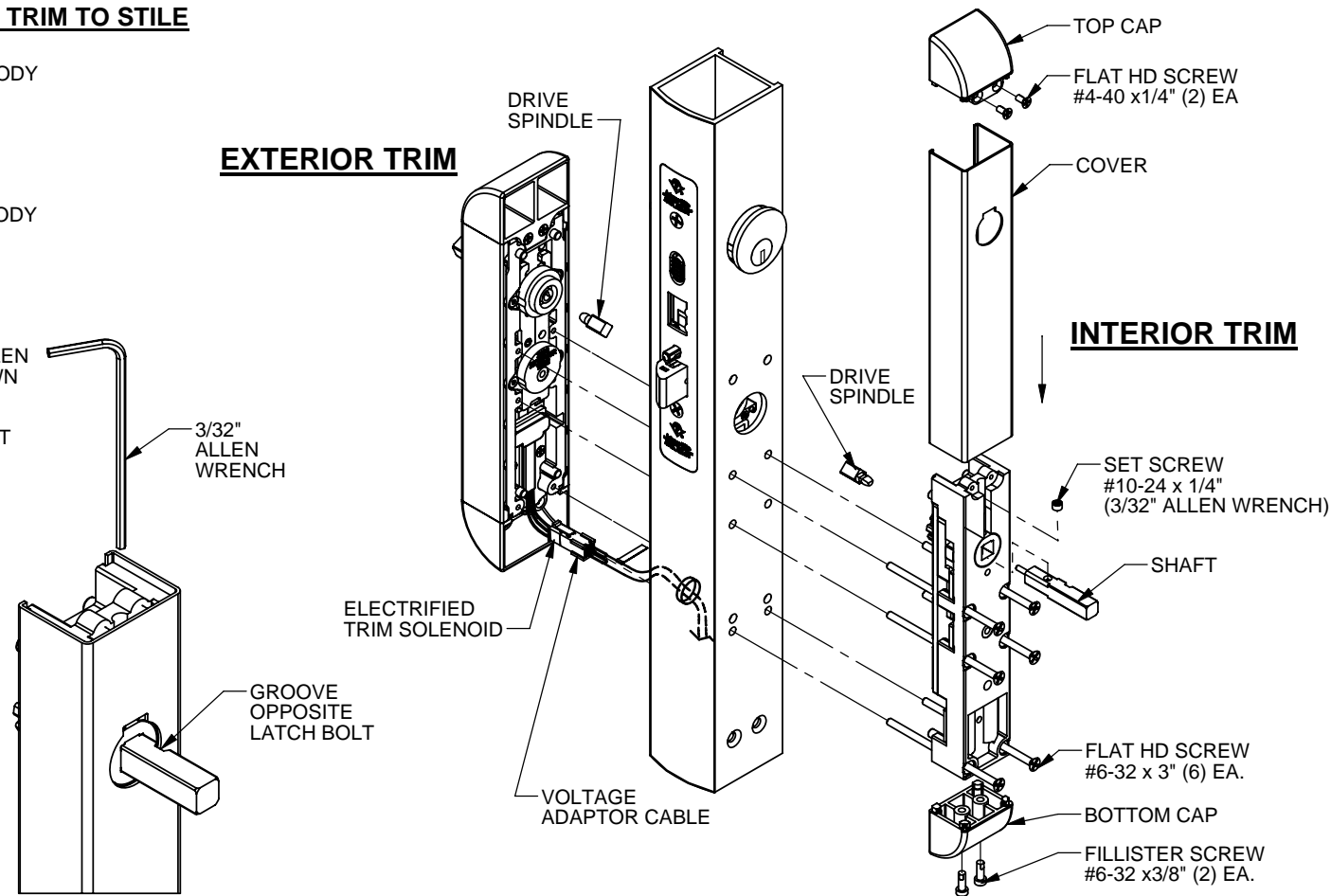
- SLIDE THE FINISH COVER ONTO BODY. THE COVER HAS CUTOUTS THAT FIT OVER THE GROOVES ON THE BODY.
- INSTALL TOP CAP WITH (2) FLAT HEAD SCREWS (#4-40 x 1/4") SUPPLIED.
- *FOR EXTERIOR TRIM WITH ELECTRIFIED OPTION. INSERT THE SHIELD ASSY BETWEEN THE COVER AND THE EXTERIOR TRIM BODY BEFORE INSTALLING THE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

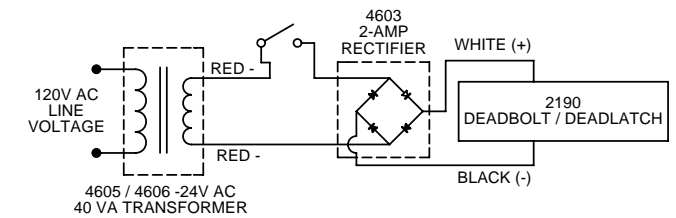
FIG. 2



ELECTRIFIED TRIM SOLENOID SPECIFICATION

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

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



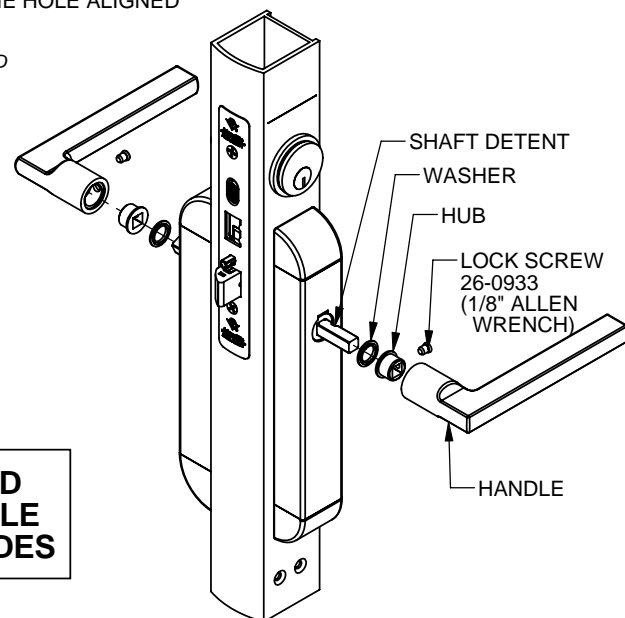
- EXTEND THE WIRE RUN FROM THE POWER SOURCE AND THROUGH THE ACCESS HOLE ON THE EXTERIOR SIDE OF THE STILE.
- ATTACH VOLTAGE ADAPTOR CABLE TO 2190 AS SHOWN.

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)

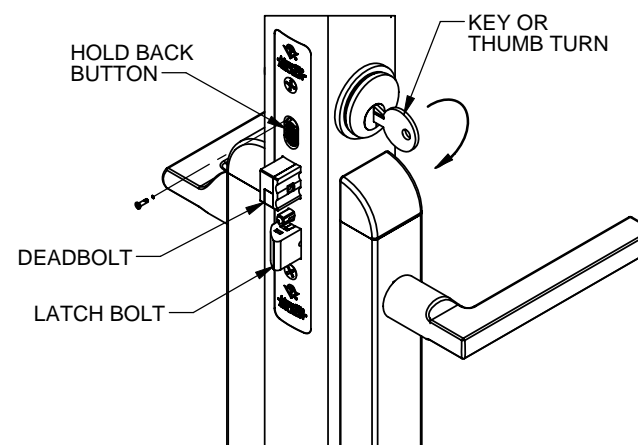
- INSERT WASHER THEN INSERT HUB OVER SHAFT. ON HANDLES 2190-01, 2190-02, 2190-03, THE HUB IS FACTORY INSTALLED. REMOVE LOCK SCREW WITH 1/8" ALLEN WRENCH AND PROCEED TO NEXT STEP.
- INSTALL HANDLE OVER THE HUB WITH THE HOLE ALIGNED WITH THE HOLE ON THE HUB.
- NOTE: THE SHAFT DETENT SHOULD BE ALIGNED WITH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

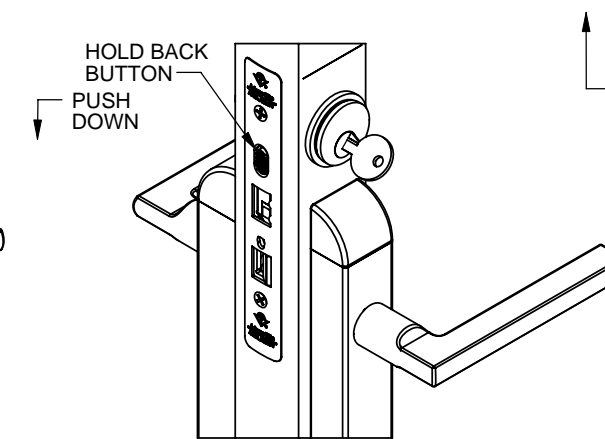
LATCH HOLD BACK FEATURE

- 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.

