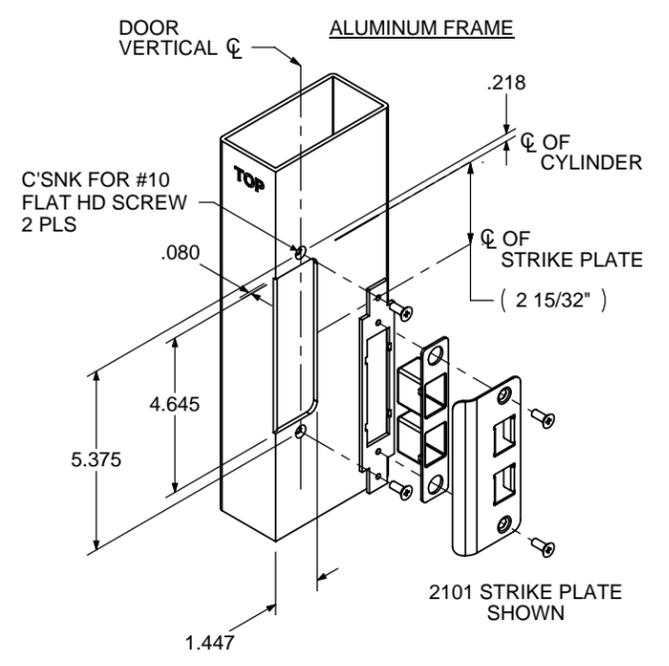


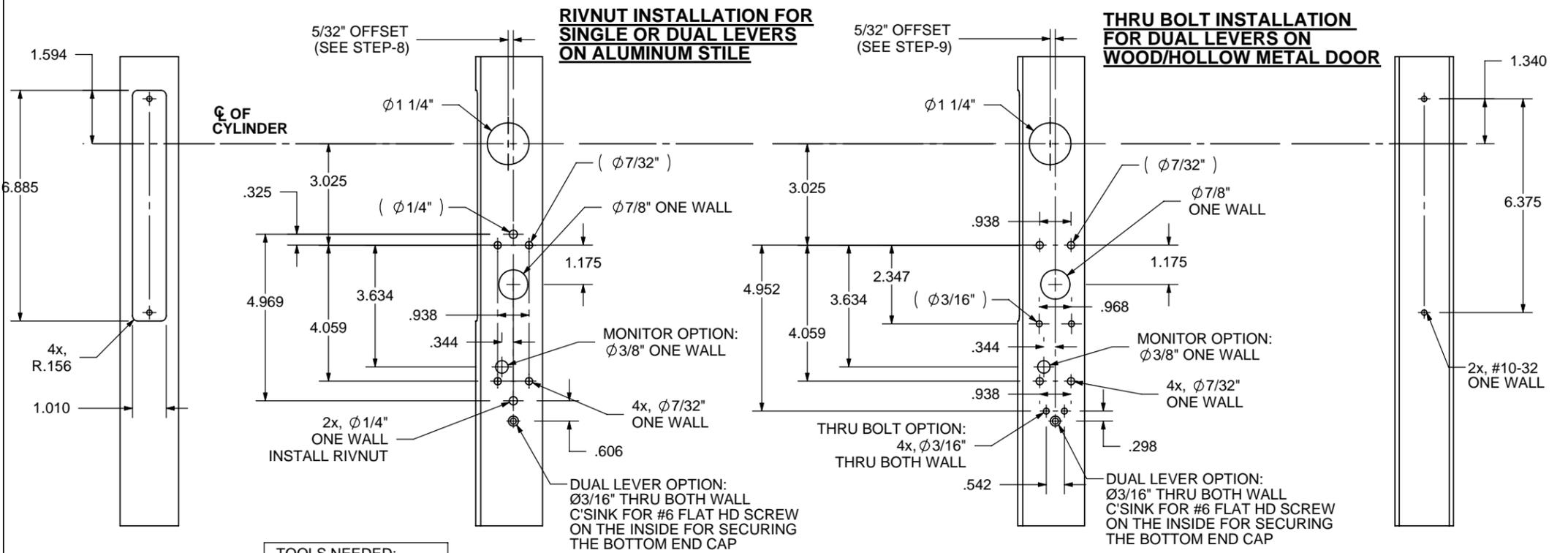
1 STILE PREPARATION

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.

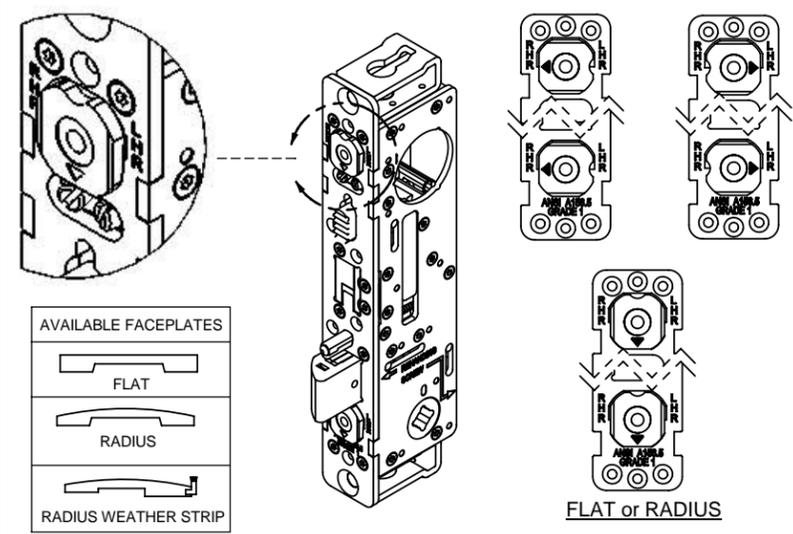


- TOOLS NEEDED:**
- 5/64 ALLEN WRENCH
 - 3/32 ALLEN WRENCH
 - 1/8 ALLEN WRENCH
 - 5/32 DRILL BIT (.156 Ø)
 - 3/16 DRILL BIT (.187 Ø)
 - 1/4 DRILL BIT (.250 Ø)
 - 7/32 DRILL BIT (.218 Ø)
 - 1/4 DRILL BIT (.250 Ø)
 - 7/8 DRILL BIT (.875 Ø)
 - 1-1/4 DRILL BIT (1.25 Ø)

- MARK A VERTICAL REFERENCE LINE 5/32" BEHIND THE BACKSET CENTER LINE.
- APPLY STICK ON TEMPLATE OVER CYLINDER BACKSET CENTER LINE. REFERENCE 5/32" OFFSET TO CLEAR STOP ON FRAME.
- CENTER PUNCH ALL HOLES.
- DRILL HOLES AT CENTER PUNCH LOCATIONS. REMOVE TEMPLATE.
- INSTALL 2190 AND 4600 PER INSTALLATION INSTRUCTIONS.

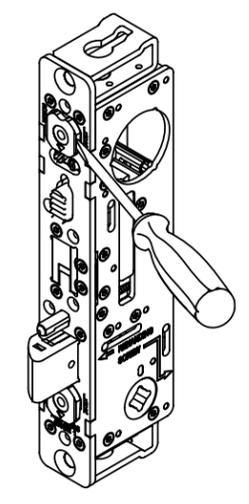
2 BEVEL TABS ADJUSTMENT

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



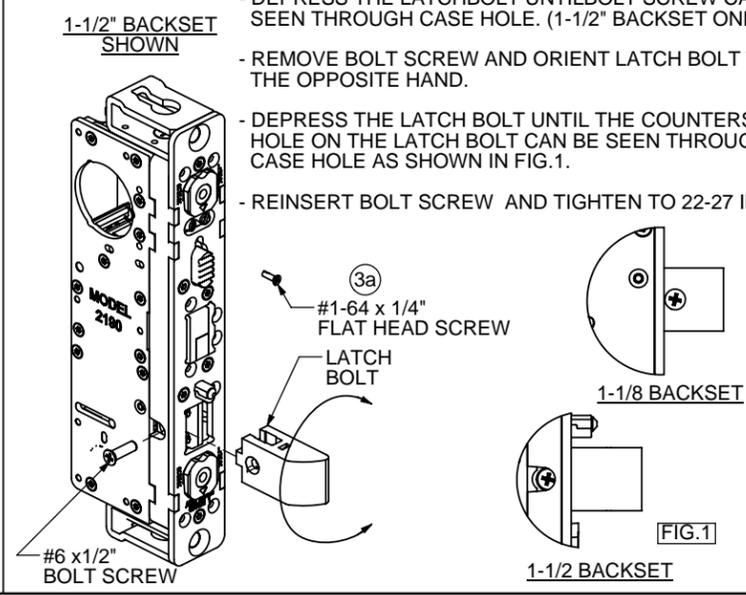
FOR RADIUS FACEPLATE WITH WEATHERSEAL ONLY!

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



3 TO CHANGE THE HANDING ON LATCH BOLT:

- 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:

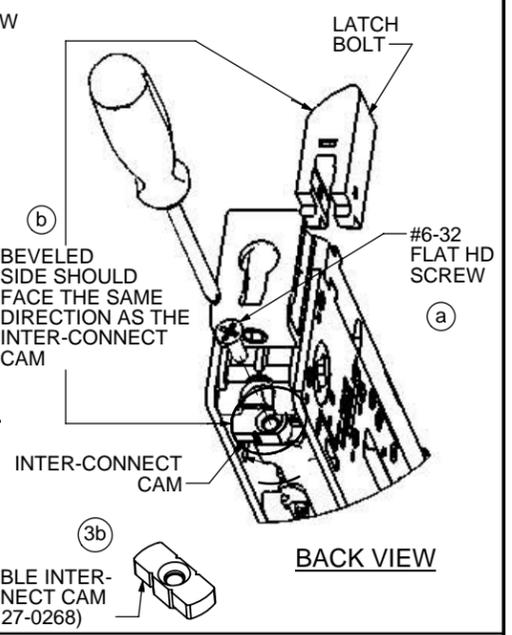
- LOOSEN THE #6-32 FLAT HEAD SCREW AT THE BOTTOM OF THE LOCK.
 - ROTATE THE INTER-CONNECT CAM TO THE SAME DIRECTION AS THE LATCH BOLT BEVEL.
- RETIGHTEN THE #6-32 FLAT HEAD SCREW TO COMPLETE THE OPERATION.

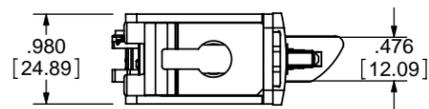
3a TO BLOCK HOLDBACK FEATURE

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

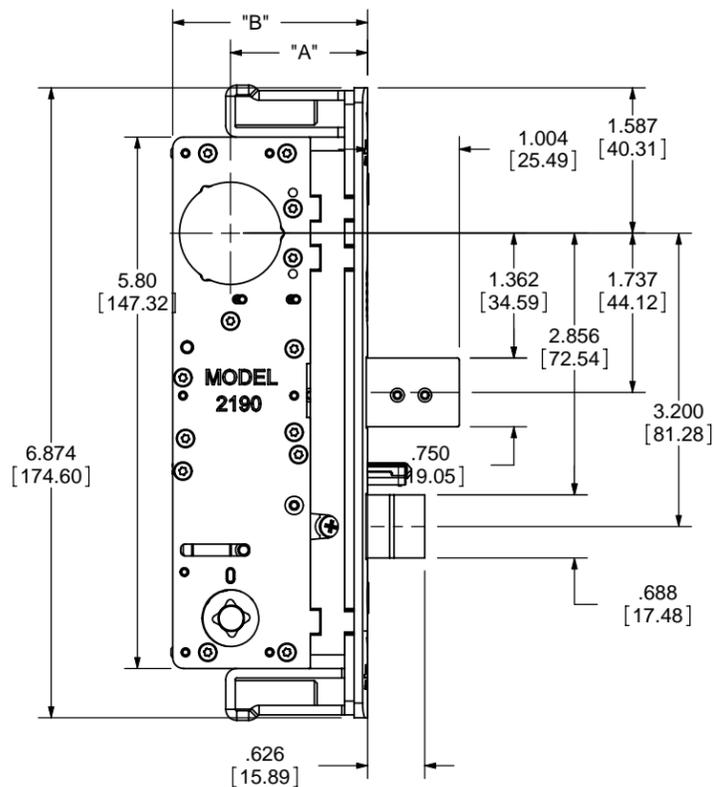
3b FOR APPLICATION THAT REQUIRE RETRACTION OF THE DEADBOLT AND DEADLATCH FROM BOTH SIDES OF THE DOOR.

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

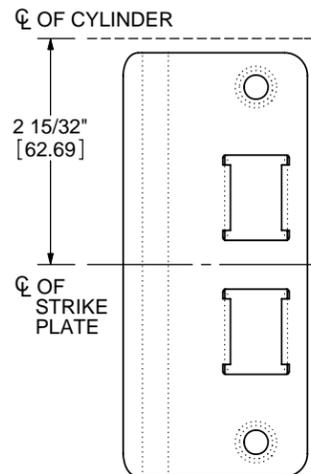




BACKSET	"A" DIM.	"B" DIM.
1-1/8"	1.12	1.76
1-1/2"	1.50	2.13

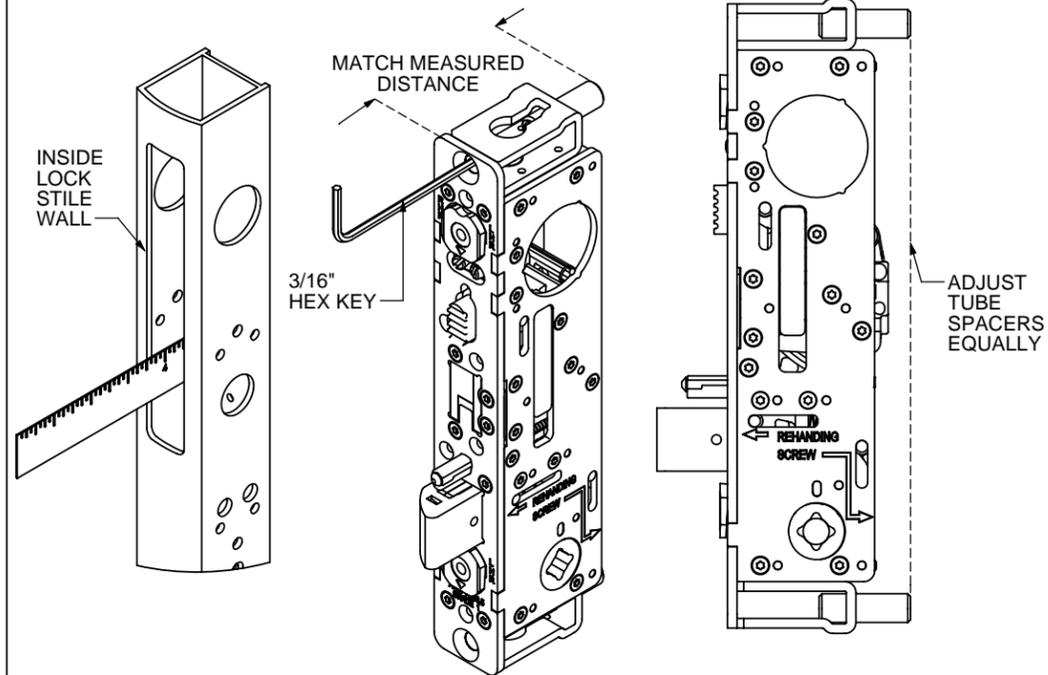


STRIKE PLATES ARE SHOWN AT FRONT SIDE FOR CLARITY



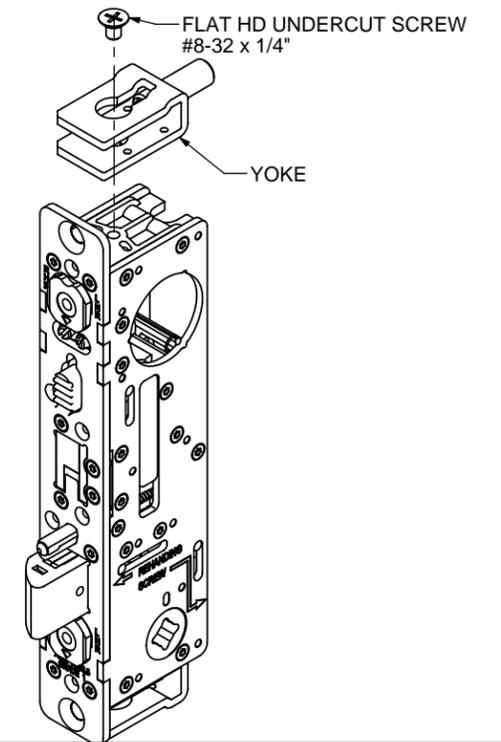
4 FOR TRADITIONAL MOUNTING INSTALLATIONS

- 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.



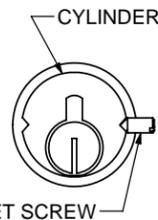
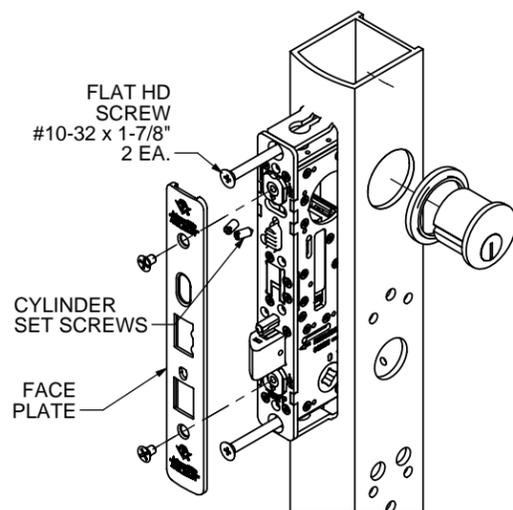
5 FOR MOUNTING TAB INSTALLATIONS

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

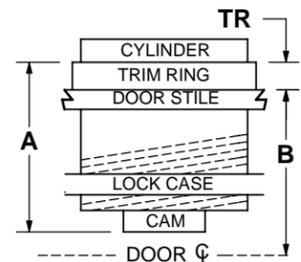


INSTALLING LOCK TO THE BACK OF THE STILE

- 6** - 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.

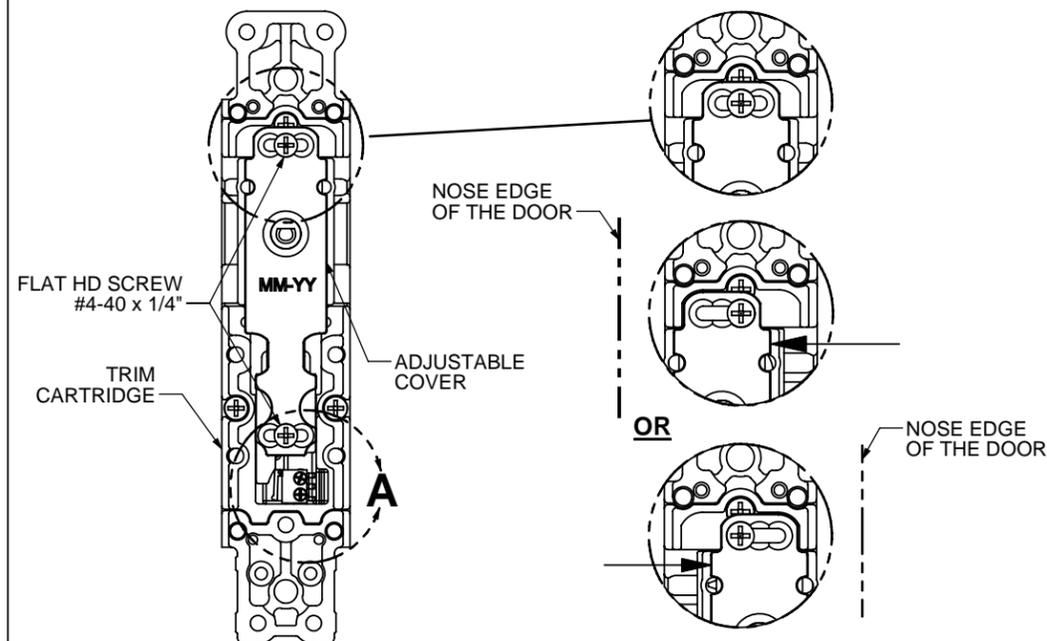


TR* = A - B
* TOLERANCE: ±.060
"TR" is trim ring length
"A" is cylinder height (less shoulder but including cam)
"B" is one-half of door thickness



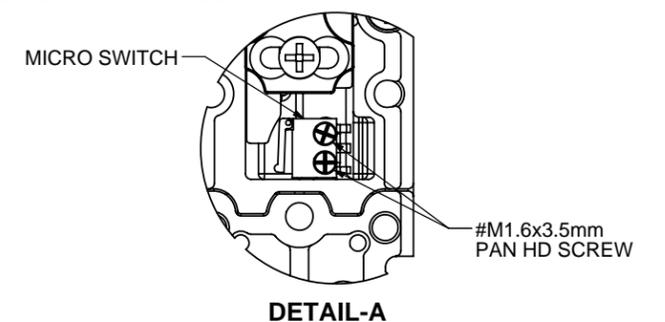
8 ADJUSTABLE BACKSET (5/32") TO OFFSET ESCUTCHEON.

- LOOSEN THE TWO #4-40 FLAT HEAD SCREW SECURING THE ADJUSTABLE COVER ON THE BACK OF THE TRIM CARTRIDGE UNTIL YOU CAN SLIDE THE ADJUSTABLE COVER UNDER THE SCREW HEAD.
- PUSH THE ADJUSTABLE COVER TOWARD THE NOSE EDGE OF THE DOOR UNTIL IT STOPS.
- RE-TIGHTEN THE TWO #4-40 FLAT HEAD SCREW DOWN TO SECURE THE ADJUSTABLE COVER IN PLACE.



9 OPTIONAL MONITORING SWITCH INSTALLATION

INSTALLED MONITOR SWITCH AS SHOWN IN DETAIL-A WITH TWO M1.6x.35mm PAN HEAD SCREW.

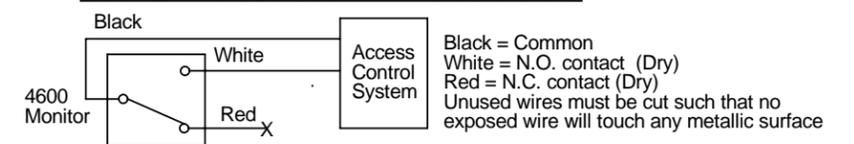


MONITOR WIRING INSTRUCTIONS

MONITORED TRIM CONTAINS AN INTERNALLY MOUNTED SWITCH. THIS SWITCH IS ACTIVATED WHEN THE HANDLE IS ROTATED TO UNLOCK POSITION. ALL UNUSED LEADS FROM THE MONITOR SWITCH MUST BE TERMINATED.

- Common contact - Black
- Normally Open contact (N.O.) - White
- Normally Closed contact (N.C.) - Red
- Maximum switching current - 0.1 Amps @ 125 VAC (choose N.O. or N.C. for monitoring)

EXAMPLE WIRING DIAGRAM WITH N.O. MONITORING



11 INSTALLING TRIM TO STILE

- INSERT DRIVE SPINDLE INTO EACH TRIM BODY PRIOR TO MOUNTING.
- MOUNT THE TRIM BODY TO THE STILE USING (2) #10-32 x 7/8" FLAT HEAD SCREWS.
- **INSERT 3/16"x9/16" DOWEL PIN AS SHOWN TO LOCK HANDLE FOR DUMMY HANDLE OPTION.
- SLIDE THE COVER ONTO THE 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 (1) #6-32 x 1/4" FLAT HEAD SCREWS.

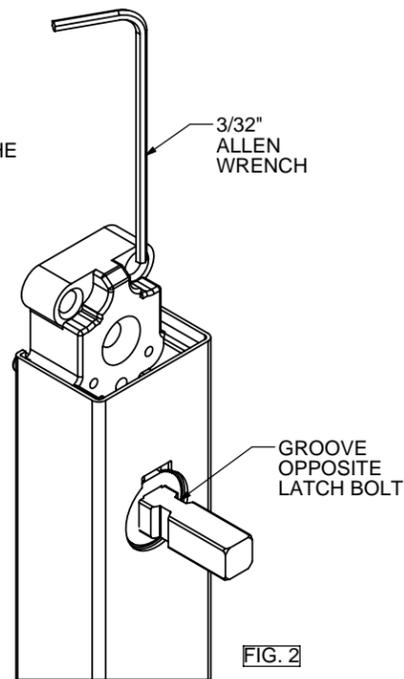
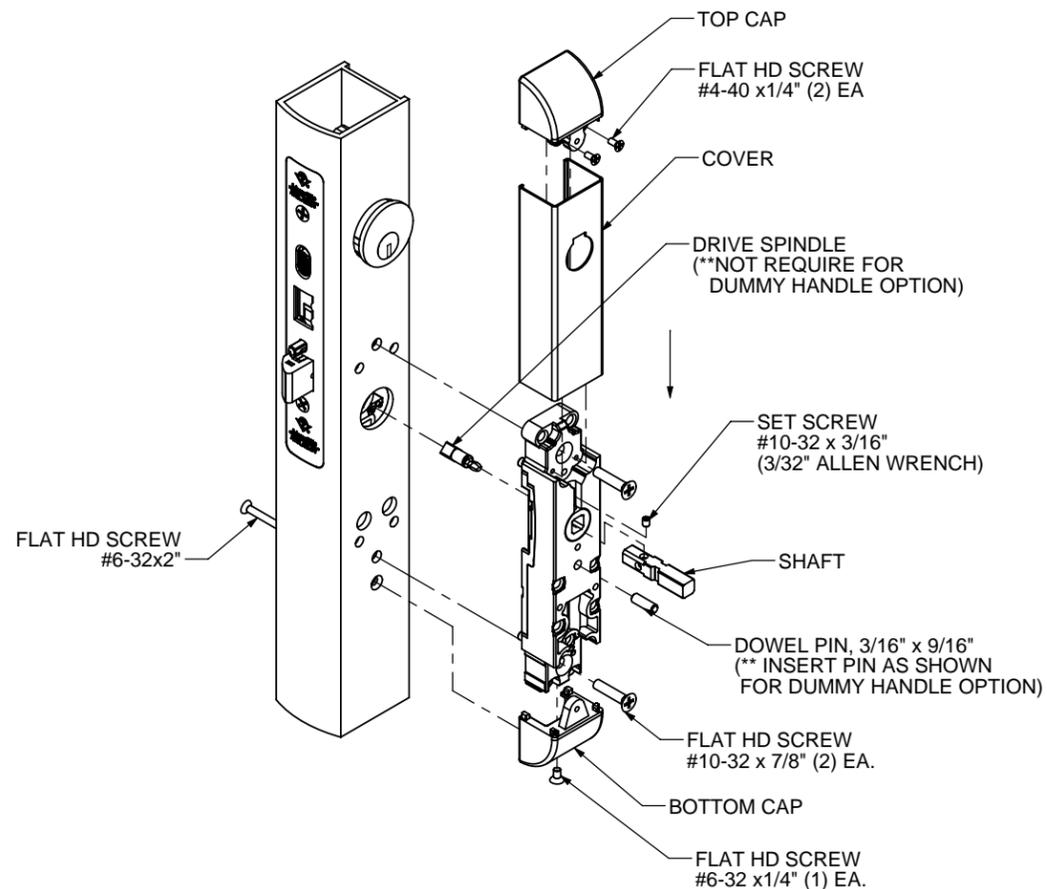


FIG. 2

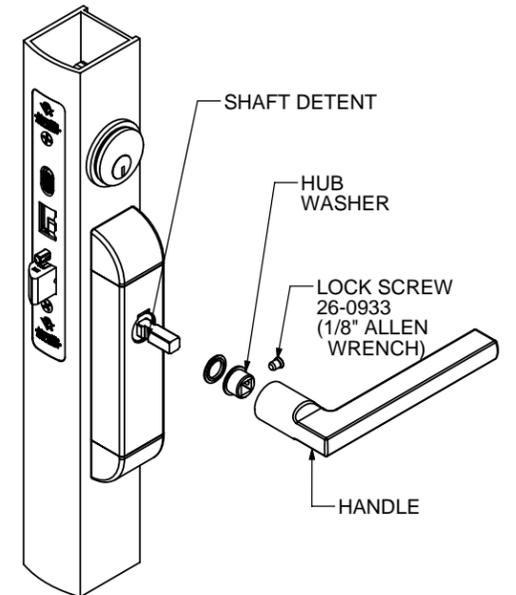
INSTALLING SAFETY SCREW TO SECURE OUTSIDE TRIM

- REPEAT STEP-11.
- INSERT #6-32 x 2" FLAT HEAD SCREW THROUGH 3/16" HOLE (AS SHOWN IN STEP-1 STILE PREP) THROUGH THE STILE AND FASTEN TO THE OUTSIDE BOTTOM END CAP.



12 INSTALLING HANDLE

- INSERT WASHER THEN INSERT HUB OVER SHAFT. ON MODELS 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.



LATCH HOLD BACK FEATURE

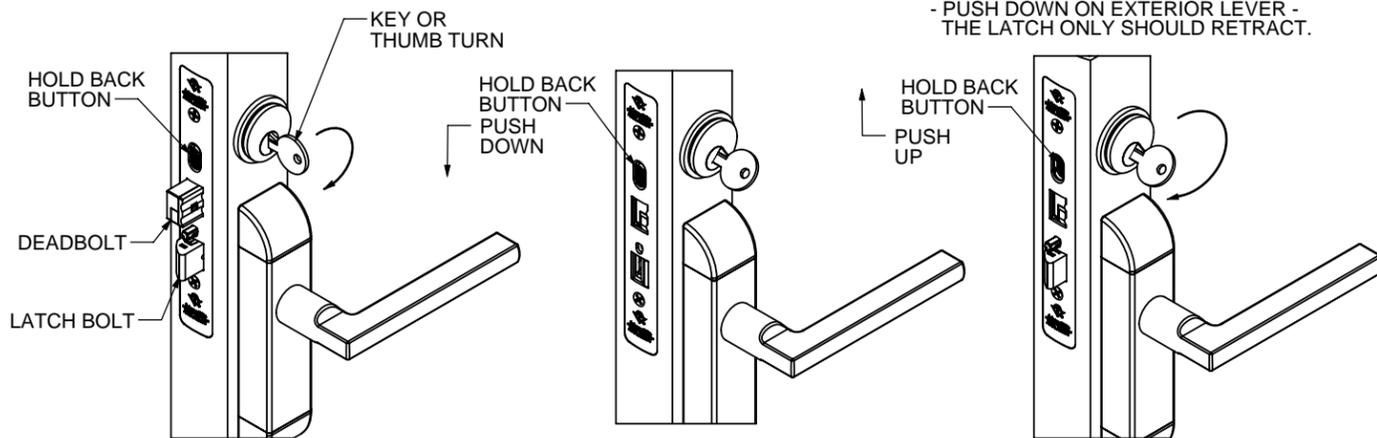
- IN THE LOCK POSITION, INSERT KEY, TURN KEY 180° TO RETRACT THE DEADBOLT.
- TURN KEY 315° TO RETRACT THE LATCHBOLT.
- HOLD IN THIS POSITION AND PUSH DOWN THE HOLD BACK BUTTON TO RETAIN LATCHBOLT.
- RETURN KEY TO NEUTRAL POSITION AND REMOVE KEY.

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.

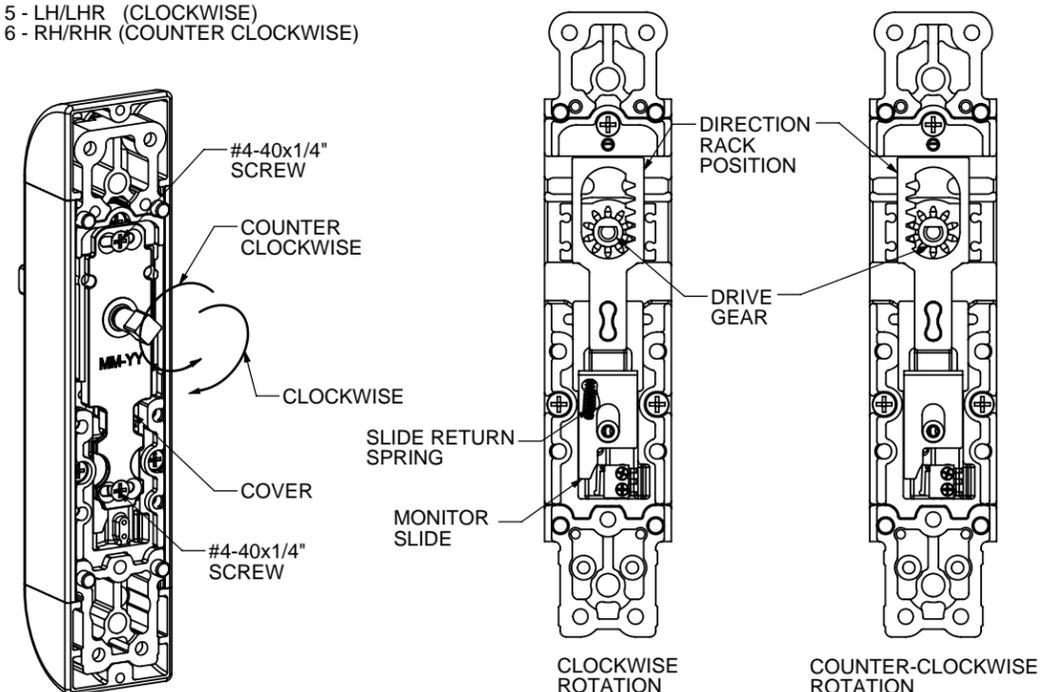
TEST OPERATION

- 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.



HANDING CONFIGURATION:

- 5 - LH/LHR (CLOCKWISE)
- 6 - RH/RHR (COUNTER CLOCKWISE)



INSTRUCTIONS FOR CHANGING THE HANDING

- REMOVE BOTH #4-40x1/4" SCREWS AND THE COVER. (HOLD THE MONITOR SLIDE DOWN TO KEEP IT FROM POPPING OUT OF PLACE BY THE SLIDE RETURN SPRING)
- REMOVE AND FLIP THE DIRECTION RACK. MAKE SURE THE DRIVE GEAR STAY IN THE POSITION AS SHOWN.
- REINSTALL COVER AND SECURE WITH THE TWO #4-40 SCREWS.

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