

XX SERIES THREE POINT LATCH PANIC & FIRE EXIT DEVICES

FALCON®

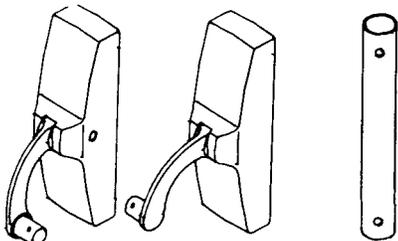
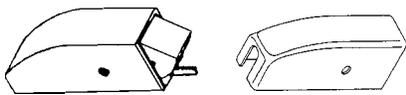
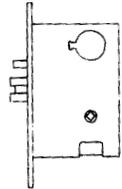
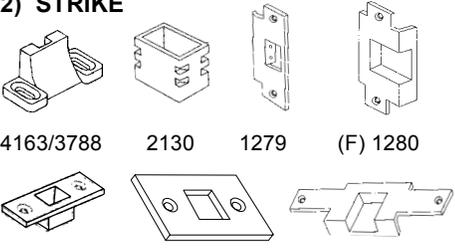
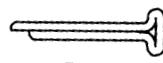
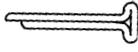
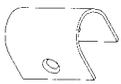
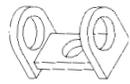
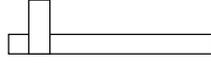
F-XX-TPL XX-TPL
D-1060-B
Date: 05-29-2015

INSTALLATION INSTRUCTIONS

1 PARTS CHECK

- 1) MAKE SURE THE CORRECT DEVICE IS BEING USED, AND IS THE CORRECT HANDING (SEE PAGE #15 FOR REVERSING INSTRUCTIONS).
- 2) MAKE SURE ALL NEEDED PARTS ARE ON HAND.

NOTE: LIST DOES NOT REFLECT ALL POSSIBLE APPLICATIONS.

<p>1) (F) XX-TPL DEVICE AND CROSSBAR</p>  <p>NOTE: DEVICE IS FIELD REVERSIBLE</p>	<p>4) LATCHES & BOTTOM BOLTS</p> <p>TOP LATCH BOTTOM BOLT</p> 	<p>6) MORTISE LOCK</p>  <p>NOTE: MORTISE LOCK IS FIELD REVERSIBLE</p>																																	
<p>2) STRIKE</p>  <p>4163/3788 2130 1279 (F) 1280</p> <p>2126A 4155 1281</p> <table border="0"> <tr> <td>FIRE</td> <td>TOP</td> <td>3788</td> </tr> <tr> <td></td> <td>MIDDLE</td> <td>1279</td> </tr> <tr> <td>OPT.</td> <td>MIDDLE</td> <td>F1280</td> </tr> <tr> <td></td> <td>BOTTOM</td> <td>2130</td> </tr> <tr> <td>PANIC</td> <td>TOP</td> <td>4163</td> </tr> <tr> <td></td> <td>MIDDLE</td> <td>1279</td> </tr> <tr> <td></td> <td>BOTTOM</td> <td>2130</td> </tr> <tr> <td>OPT.</td> <td>BOTTOM</td> <td>4155</td> </tr> <tr> <td>OPT.</td> <td>BOTTOM</td> <td>2126A</td> </tr> <tr> <td>OPT.</td> <td>MIDDLE</td> <td>1280</td> </tr> <tr> <td>OPT.</td> <td>MIDDLE</td> <td>1281</td> </tr> </table> <p>(F)18-TPL</p>	FIRE	TOP	3788		MIDDLE	1279	OPT.	MIDDLE	F1280		BOTTOM	2130	PANIC	TOP	4163		MIDDLE	1279		BOTTOM	2130	OPT.	BOTTOM	4155	OPT.	BOTTOM	2126A	OPT.	MIDDLE	1280	OPT.	MIDDLE	1281	<p>5) SCREW PACK FOR PANIC DEVICE</p> <p>DOGGING KEY (1 QTY) </p> <p>#10x1-1/4" FPHSMS (6 QTY (2 FINISHED)) </p> <p>#10x1-1/4" PPHSMS (12 QTY) </p> <p>1/8"x1" COTTER KEY (1 QTY) </p> <p>ROD GUIDE COVER (2 QTY) </p> <p>ROD GUIDE BRACKET (2 QTY) </p> <p>ROD GUIDE INSERT (2 QTY) </p> <p>#8-32x1/4" UFPHMS (4 FINISHED) </p> <p>#12-24x1/4" UFPHMS (4 FINISHED) </p> <p>LIFT FINGER (1 QTY) </p> <p>#10-24x1/2" FPHMS w/NYLON PATCH (1 QTY) </p>	<p>7) SCREW PACK FOR FIRE DEVICE</p> <p>#10-24x3/4" FPHMS (6 QTY) </p> <p>#10-24x3/4" PPHSMS (12 QTY) </p> <p>1/8"x1" COTTER KEY (1 QTY) </p> <p>ROD GUIDE COVER (2 QTY) </p> <p>ROD GUIDE BRACKET (2 QTY) </p> <p>ROD GUIDE SUPPORT (2 QTY) </p> <p>#8-32x1/4" UFPHMS (4 FINISHED) </p> <p>#12-24x1/4" UFPHMS (4 FINISHED) </p> <p>LIFT FINGER (1 QTY) </p> <p>#10-24x1/2" FPHMS w/NYLON PATCH (1 QTY) </p>
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<p>3) VERTICAL RODS (LENGTHS FOR 7'0" OPENINGS)</p> <p>TOP ROD= 35"</p> <p>BOTTOM ROD = 36-1/2" (WITH DEAD BOLT)</p>																																			

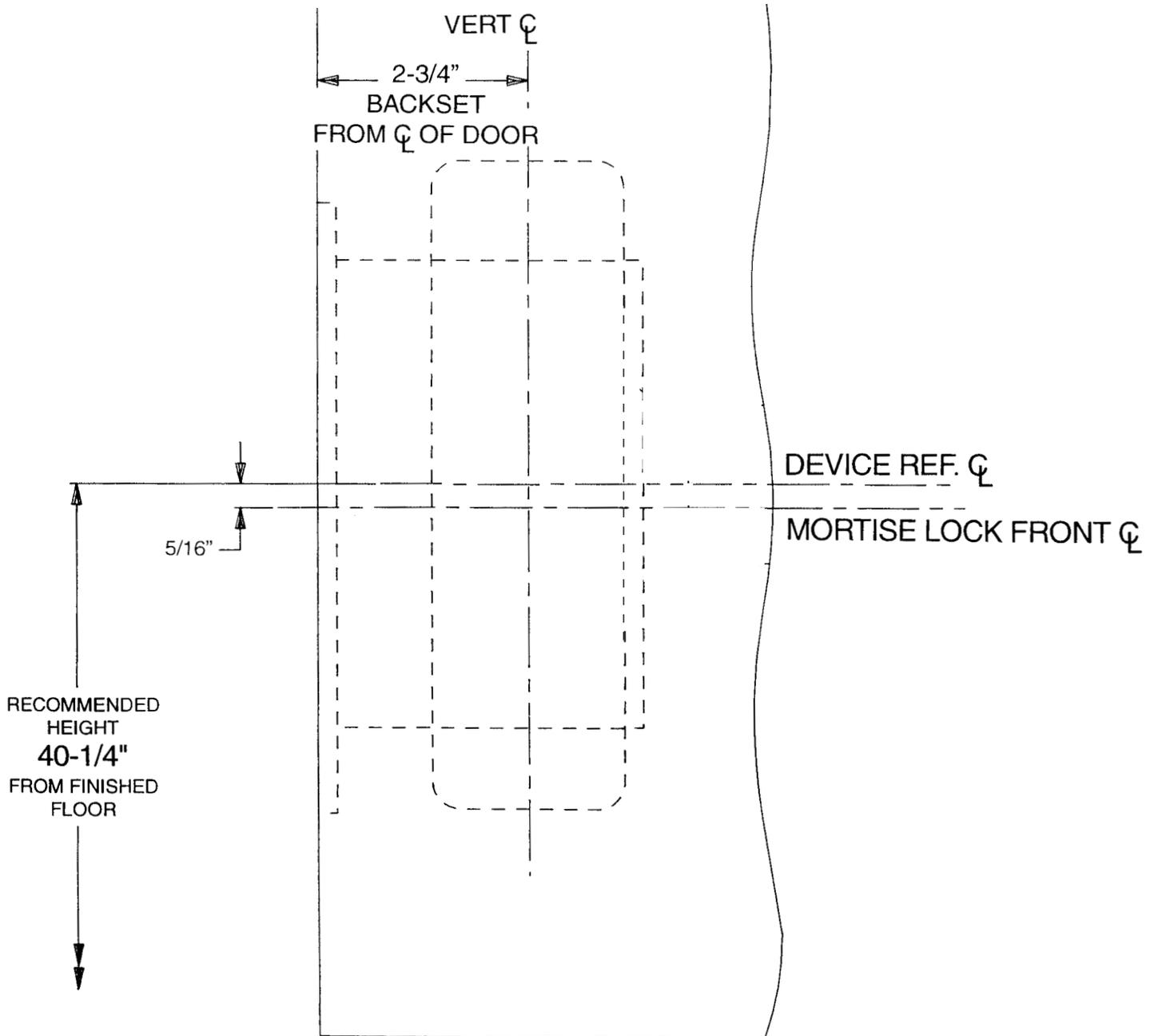
- 3) EDGE OF DOOR SHOULD BE PREPARED FOR MORTISE LOCK (SEE PAGE #7).
- 4) FRAME SHOULD BE PREPARED TO RECEIVE MORTISE STRIKE (SEE PAGE #7).
- 5) MAKE SURE OUTSIDE TRIM (IF BEING USED) HAS BEEN PROVIDED AND IS THE CORRECT HANDING.



2 DOOR LAYOUT

(NOTE: FOR FACTORY PREPARED DOORS, VERIFY LAYOUT.)

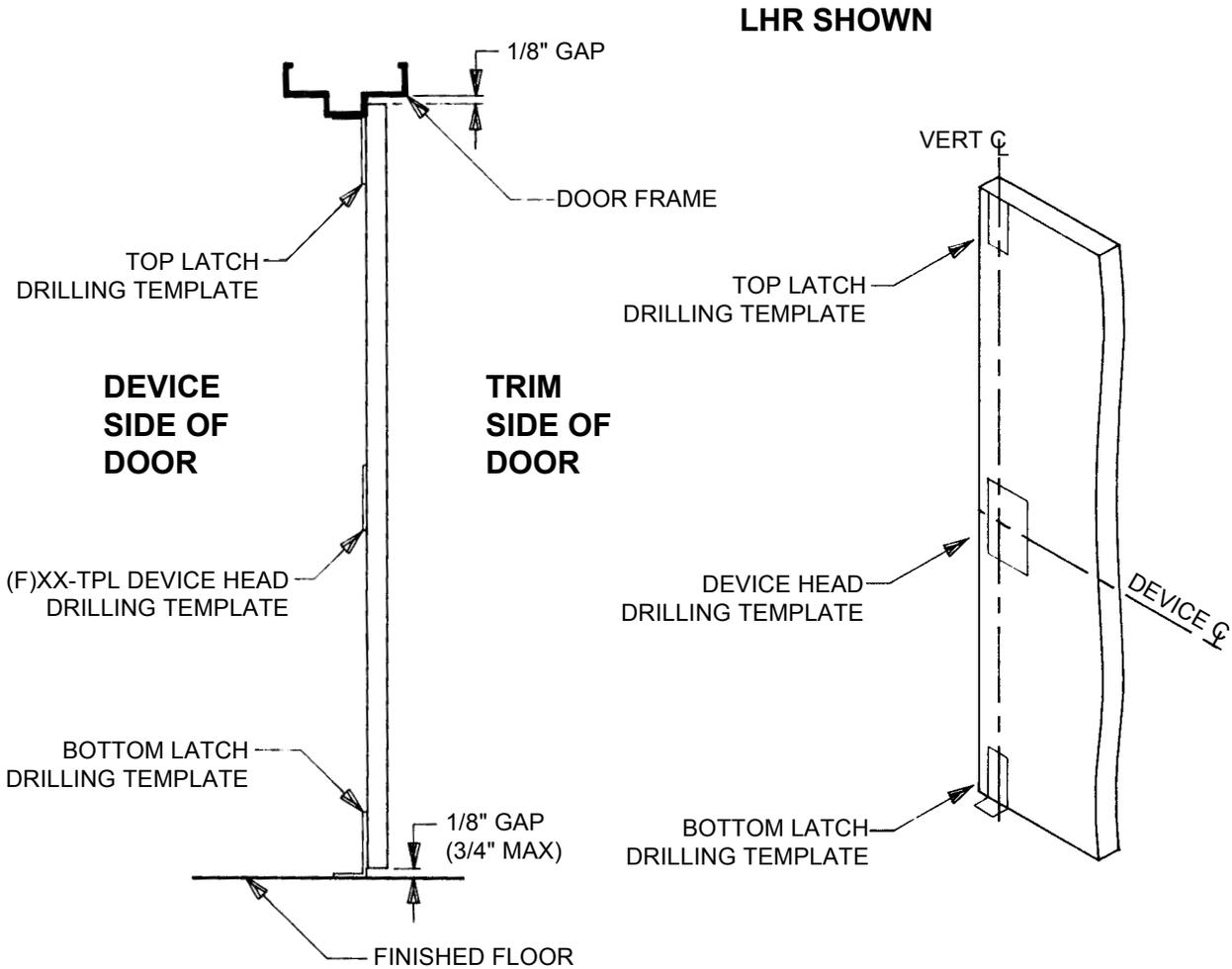
- 1) DOOR MUST BE FITTED AND HUNG PROPERLY BEFORE PROCEEDING.
- 2) MARK VERTICAL \mathcal{C} AND DEVICE REF. \mathcal{C} ON DOOR AND FRAME (SEE FIGURES & CHART BELOW).



NOTE: FOR FACTORY PREPARED DOORS, USE MORTISE LOCK FRONT \mathcal{C} TO FIND DEVICE REF. \mathcal{C} .

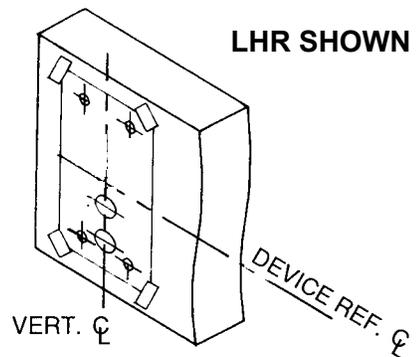
3 DOOR & HARDWARE PREPARATION

- 1) CHOOSE CORRECT DRILLING TEMPLATES FROM DRILLING TEMPLATE (DT-1060).
- 2) TAPE DRILLING TEMPLATE ON DOOR USING VERTICAL ϕ AND DEVICE REF. ϕ (REFER TO 2).

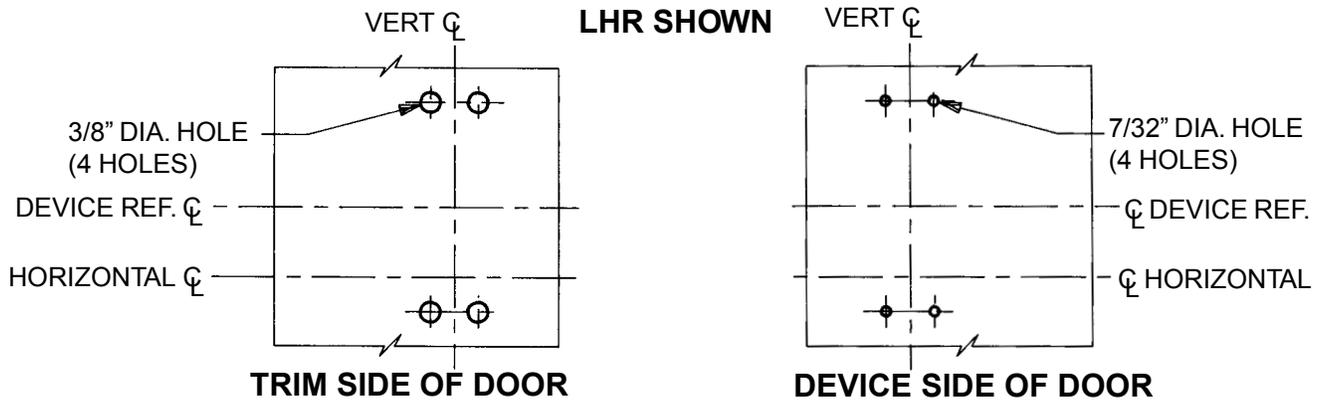


- 3) PREPARE HOLES FOR DEVICE, STRIKE AND LATCHES. FOR DEVICES WITH TRIM FUNCTIONS, PREPARE THE HOLE(S) ON THE DEVICE TEMPLATE DESCRIBED IN THE CHART BELOW. AFTER DRILLING HOLES, REMOVE THE DRILLING TEMPLATE.

DEVICE FUNCTION	DRILLING TEMPLATE HOLES
(F)XX-TPL-N	B
(F)XX-TPL-KE	A,B
(F)XX-TPL-LE	A,B

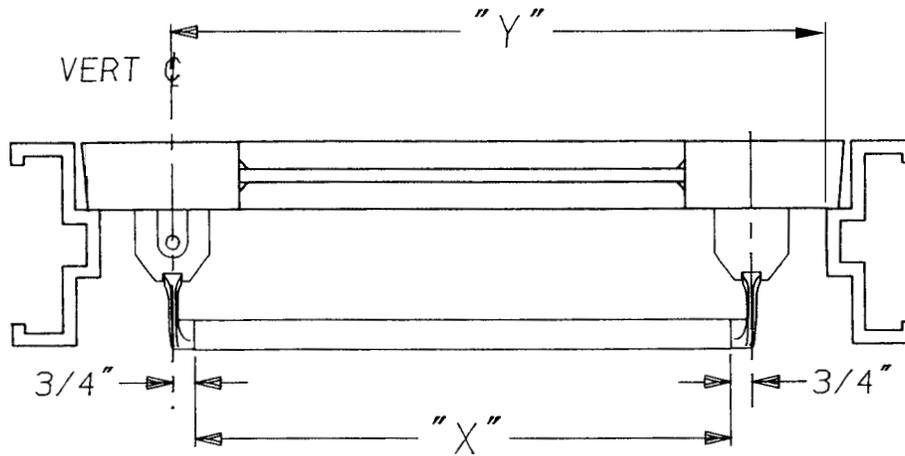


4) IF USING OUTSIDE TRIM, PREPARE DOOR USING SEPARATE TRIM DIRECTION SHEET. FOR SEXBOLT INSTALLATIONS, DRILL 3/8" DIAMETER HOLES ON TRIM SIDE OF DOOR ONLY (SEE DIAGRAM BELOW).



5) DETERMINE CROSSBAR LENGTH.

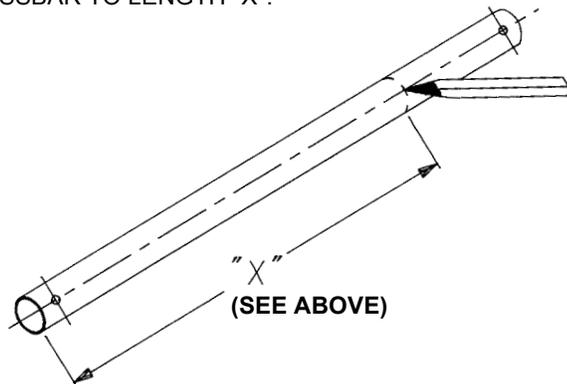
- A) MEASURE DISTANCE BETWEEN VERTICAL CL AND EDGE OF DOOR.
- B) CALCULATE CROSSBAR LENGTH "X" USING FORMULA BELOW.



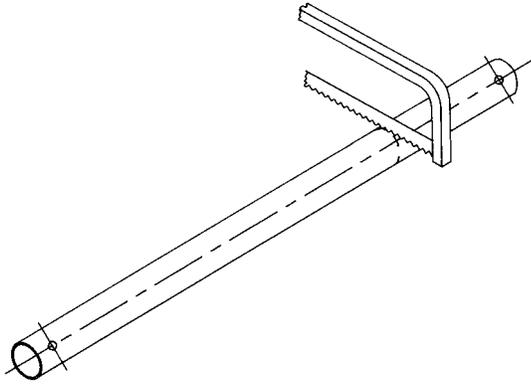
$$"X" = "Y" - 3-3/4"$$

6) IF CROSSBAR IS LONGER THAN "X", CUT THE CROSSBAR TO THE CORRECT LENGTH.

- A) MARK CROSSBAR TO LENGTH "X".

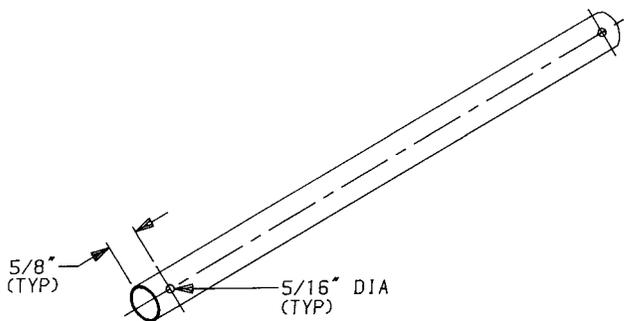


B) CUT CROSSBAR TO MARKED DIMENSION AND REMOVE BURRS.



NOTE: FACTORY RECOMMENDS SAWING RATHER THAN GRIND CUT TO SIZE. GRINDING CAN DAMAGE THE FINISH OF THE DEVICE AND SAWING RESULTS IN LESS DAMAGE TO THE DEVICES'S FINISH.

C) DRILL A 5/16" DIA. HOLE 5/8" FROM THE JUST CUT END OF THE CROSSBAR.



NOTE: HOLE SHOULD BE IN-LINE WITH HOLE AT OPPOSITE END OF THE CROSSBAR.

7) IF DOOR OPENING IS NOT 7'0", DETERMINE TOP ROD LENGTH BASED ON A 40-1/4" DEVICE REF. CL FROM FINISHED FLOOR.

A) FOR DOOR OPENINGS UNDER 7'0":

1) SUBTRACT DOOR OPENING FROM 7'0" OPENING.

2) SUBTRACT ANSWER FROM PART 1 FROM 35" TO DETERMINE TOP ROD LENGTH.

(EXAMPLE: 6'8" OPENING - 7'0"-6'8"= 4", 35"-4"=31" TOP ROD).

B) FOR DOOR OPENINGS ABOVE 7'0":

1) SUBTRACT 7'0" FROM DOOR OPENING.

2) ADD ANSWER FROM PART 1 TO 35" TO DETERMINE TOP ROD LENGTH.

(EXAMPLE: 8'10" OPENING - 8'10"-7'0" = 22", 35"+22"= 57" TOP ROD).

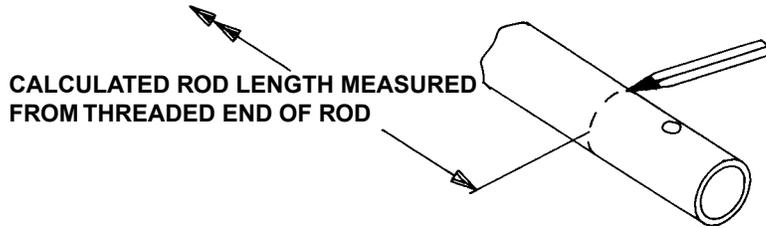
8) MODIFY TOP ROD TO REQUIRED LENGTH.

A) FOR TOP RODS THAT ARE TOO LONG, FOLLOW PROCEDURE BELOW TO CUT ROD TO SIZE.

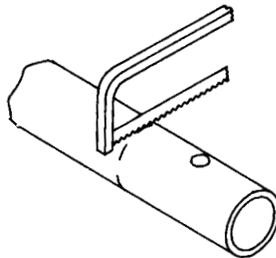
1) MARK RODS TO REQUIRE LENGTH.

NOTE: ROD MUST BE MEASURED FROM THREADED PORTION OF ROD.

DO NOT CUT ROD AT END WITH INTERNAL THREADS.

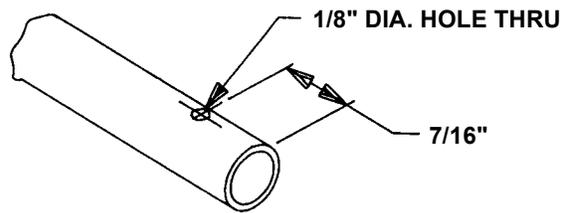


2) CUT ROD AT MARKED LOCATION.



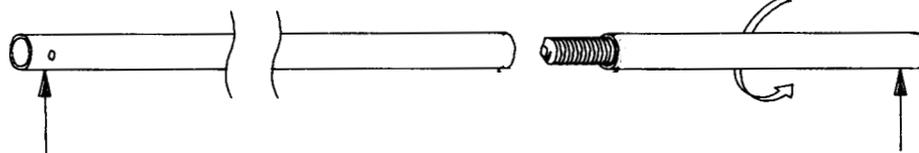
3) DRILL COTTER KEY CONNECTION HOLE.

DRILL 1/8" DIA. HOLE THRU ON VERTICAL ROD 7/16" FROM END OF ROD JUST CUT.



B) FOR RODS THAT ARE TOO SHORT, FOLLOW PROCEDURE BELOW.

1) ATTACH EXTENSION RODS TO THREADED SECTION OF TOP ROD.



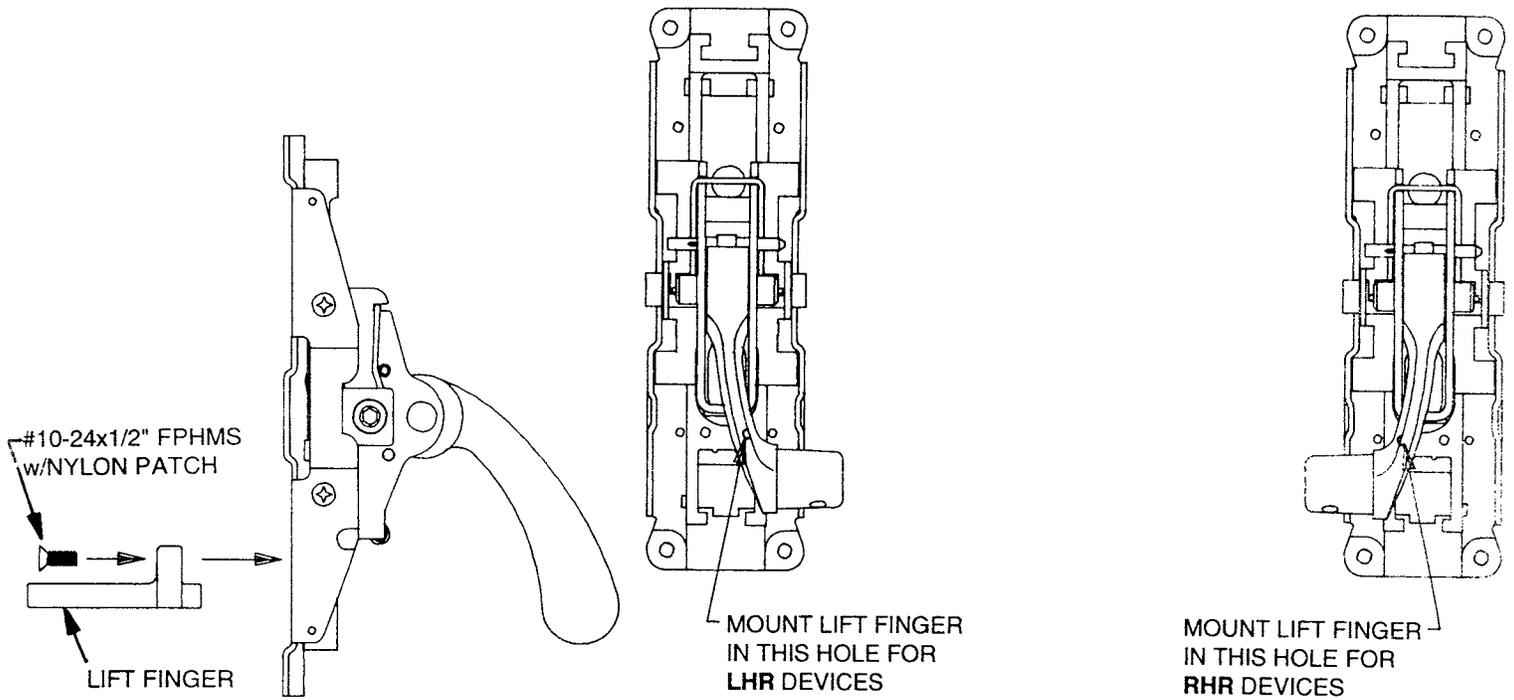
TOP ROD

EXTENSION ROD

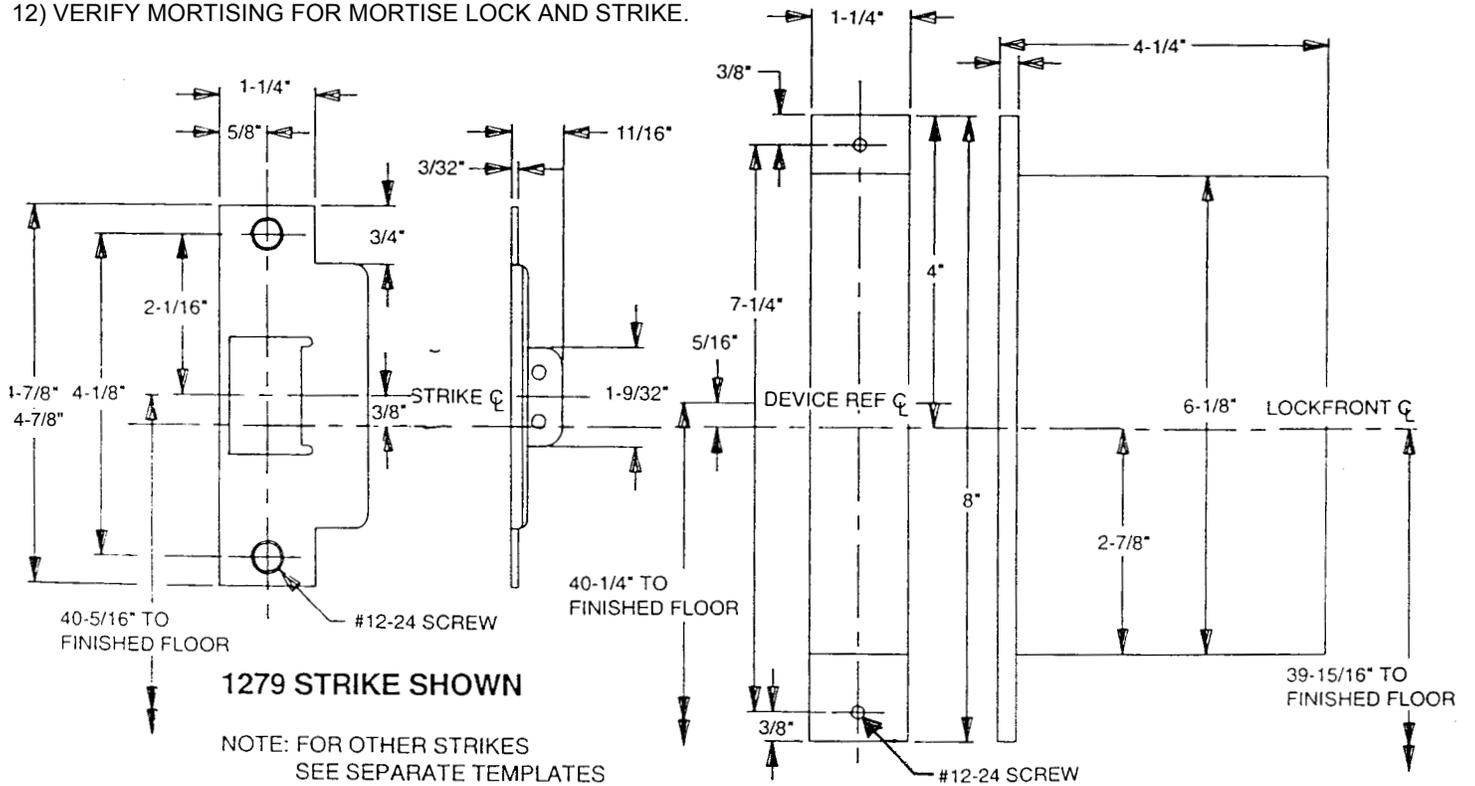
2) FOLLOW INSTRUCTIONS TO MARK, CUT & DRILL TOP ROD (SEE ABOVE).

11) INSTALL LIFT FINGER ONTO SLIDEBAR

- A) PLACE LIFT FINGER INTO RECESS IN SLIDEBAR (ACCESSIBLE THROUGH CUTOUT IN BACK OF CHASSIS).
- B) POSITION LIFT FINGER AS SHOWN FOR HANDING REQUIRED.
- C) ASSEMBLE LIFT FINGER WITH #10-24x1/2" FPHMS WITH NYLON PATCH AND TIGHTEN SECURELY.



12) VERIFY MORTISING FOR MORTISE LOCK AND STRIKE.



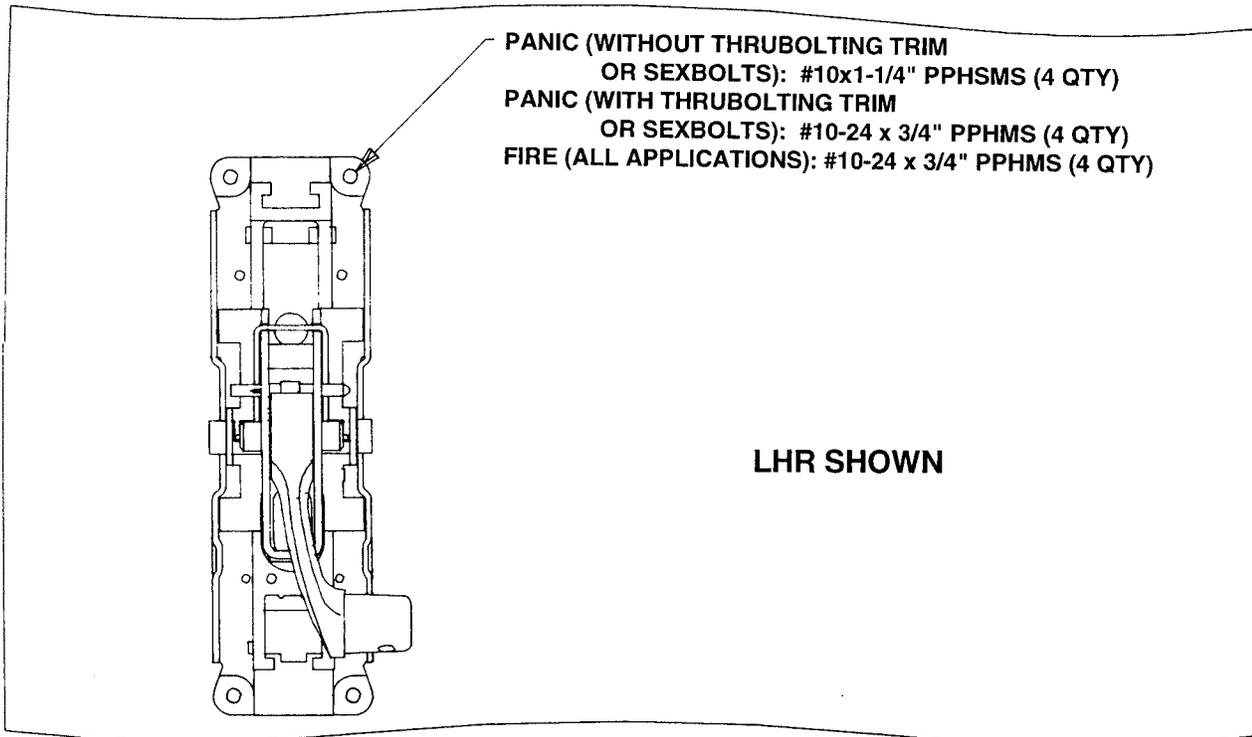
**MORTISE LOCK
CAVITY PREP**

4 HARDWARE INSTALLATION

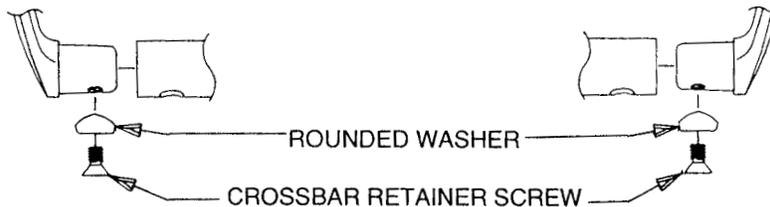
1) INSTALL MORTISE LOCK WITH 2 #12-24x1/2" UFPHMS SCREWS.

NOTE: LEAVE SCREWS LOOSE FOR EASIER DEVICE AND TRIM INSTALLATION.

- 2) IF USING OUTSIDE TRIM OR SEXBOLTS, MOUNT TRIM PER DIRECTIONS IN TRIM BOX, OR INSTALL OUTSIDE SEX BOLTS.
 3) EITHER SURFACE MOUNT DEVICE, OR THROUGH BOLT DEVICE TO TRIM OR SEXBOLTS (NOTE: FOR LOCKING TRIM, SEE PAGE #15 FOR LOCKING CAM AND LOCKING CAM OPERATOR POSITION).



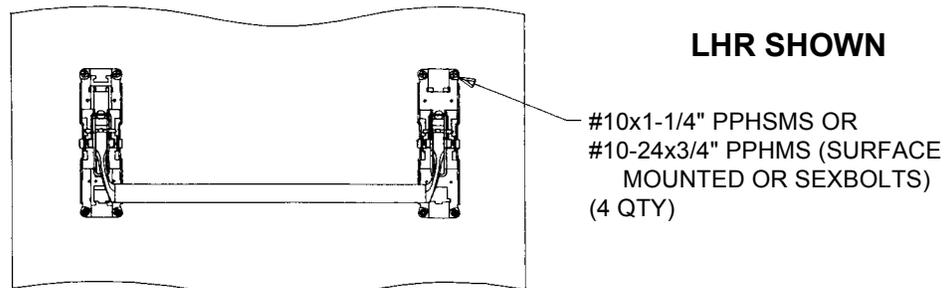
4) REMOVE CROSSBAR RETAINER SCREW AND ROUNDED WASHER FROM XX CROSSBAR ARMS. SLIDE THE CROSSBAR OVER BOTH THE ACTIVE AND INACTIVE ARMS AND ATTACH WITH CROSSBAR RETAINER SCREW AND ROUNDED WASHER.



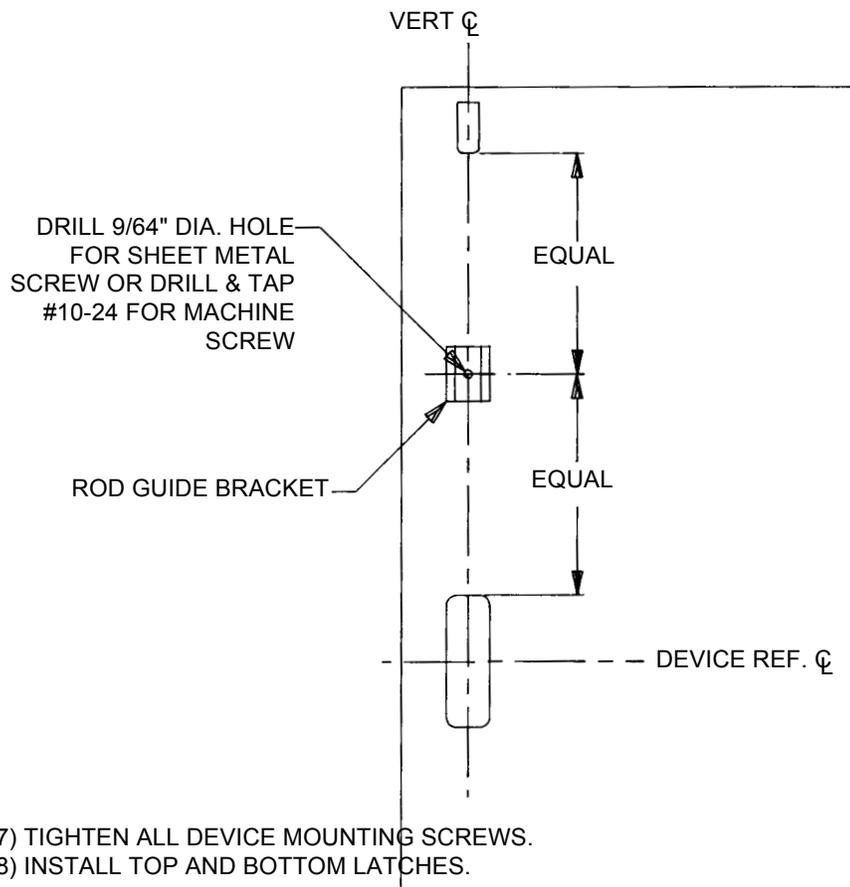
5) LOCATE, MARK, AND DRILL INACTIVE HEAD MOUNTING HOLES.

A) LEVEL CROSSBAR ON DOOR AND MARK CENTER OF FOUR MOUNTING HOLES.

B) DRILL 9/64" DIA. HOLES IF USING SHEET METAL SCREWS OR DRILL & TAP #10-24 IF USING MACHINE SCREWS OR DRILL 1/4" DIA. HOLE INSIDE AND 3/8" DIA. HOLE OUTSIDE FOR SEXBOLTS.



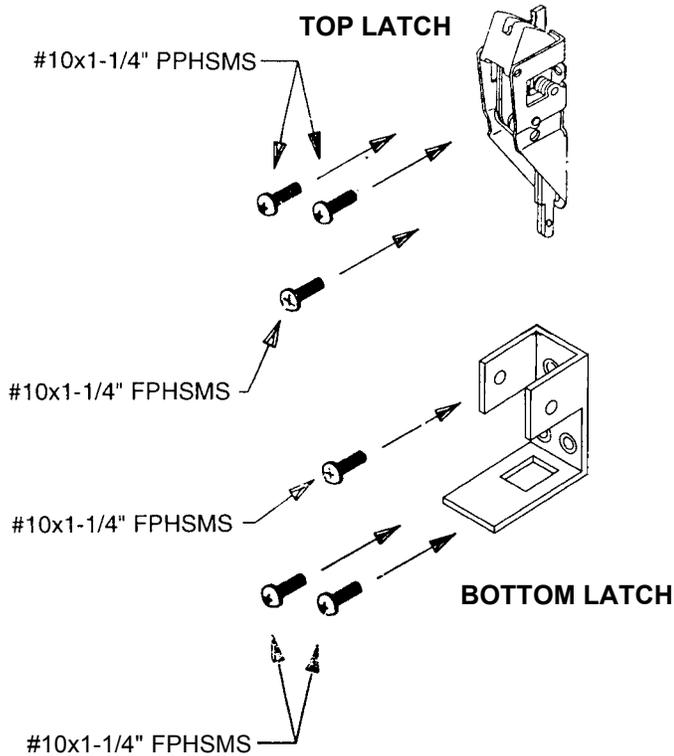
6) ATTACH ROD GUIDE BRACKETS TO DOOR ON VERTICAL \bar{C} EQUIDISTANT BETWEEN THE LATCHES AND DEVICE HEAD.



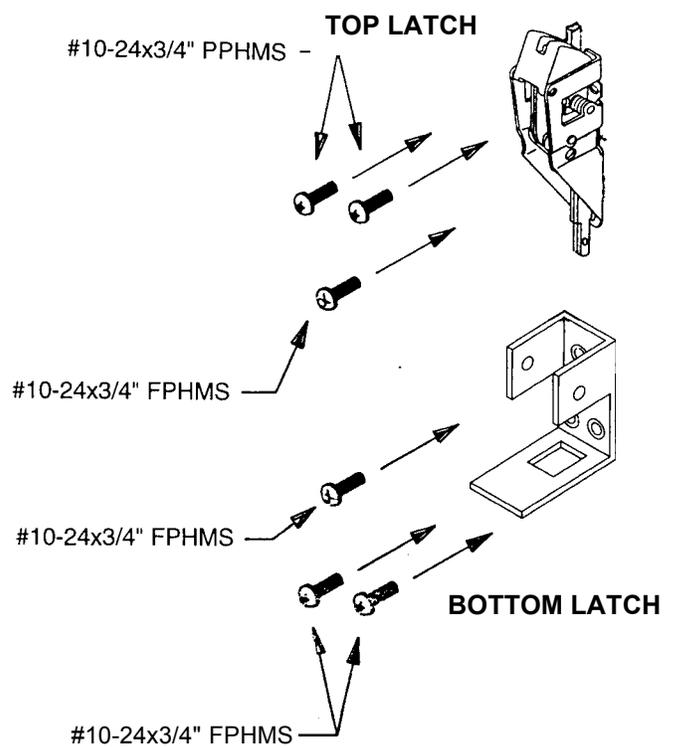
FOR DEVICES ON DOORS OVER 8'0" TALL, TWO ROD GUIDE BRACKETS SHOULD BE PLACED EQUALLY BETWEEN THE TOP LATCH AND DEVICE HEAD.

7) TIGHTEN ALL DEVICE MOUNTING SCREWS.
8) INSTALL TOP AND BOTTOM LATCHES.

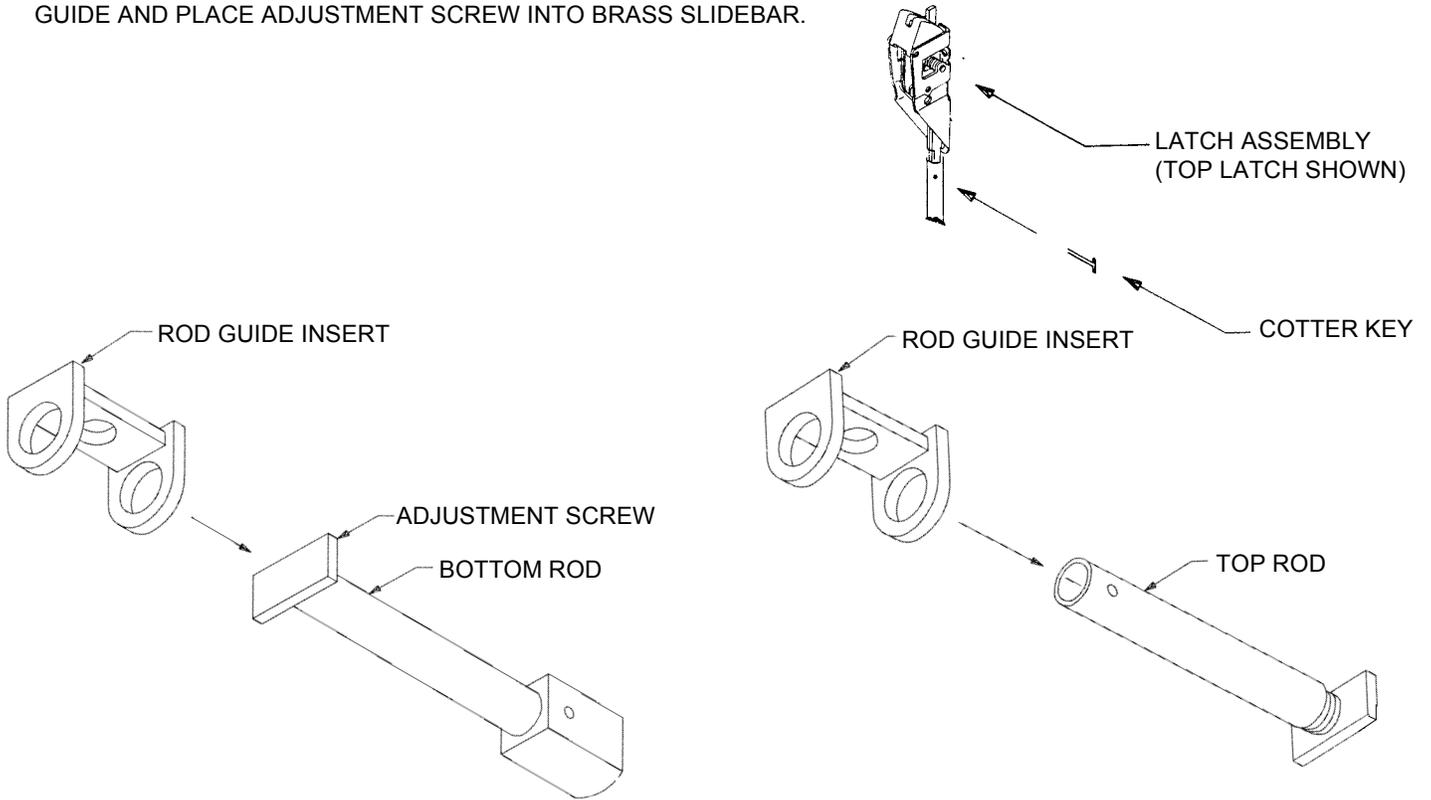
PANIC DEVICES



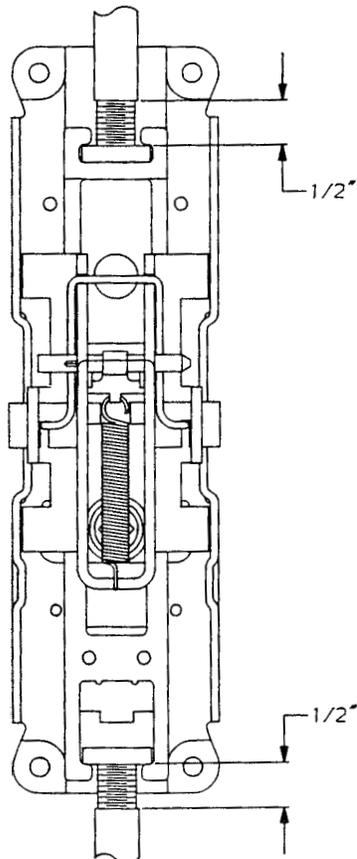
FIRE DEVICES



8) SLIDE TOP ROD THROUGH ROD GUIDE INSERT AND THEN ATTACH TO TOP LATCH USING 1/8"x1" COTTER KEY. BEND COTTER KEY. UNSCREW ADJUSTMENT SCREW FROM BOTTOM ROD WITH BOLT AND SLIDE ON ROD GUIDE INSERT, RE-SCREW THE ADJUSTMENT SCREW TO THE BOTTOM ROD, THEN INSERT BOTTOM BOLT THROUGH BOTTOM BOLT GUIDE AND PLACE ADJUSTMENT SCREW INTO BRASS SLIDEBAR.



9) TURN ADJUSTMENT SCREW UNTIL IT IS APPROXIMATELY 1/2" INTO THE VERTICAL ROD. SWING RODS SO THAT THE ADJUSTMENT SCREW IS IN THE BRASS SLIDEBAR IN THE ACTIVE HEAD AS SHOWN BELOW.



(F)XX-TPL DEVICE ACTIVE HEAD SHOWN WITHOUT CROSSBAR ARM FOR CLAIRITY.

10) VERTICAL ROD ADJUSTMENT

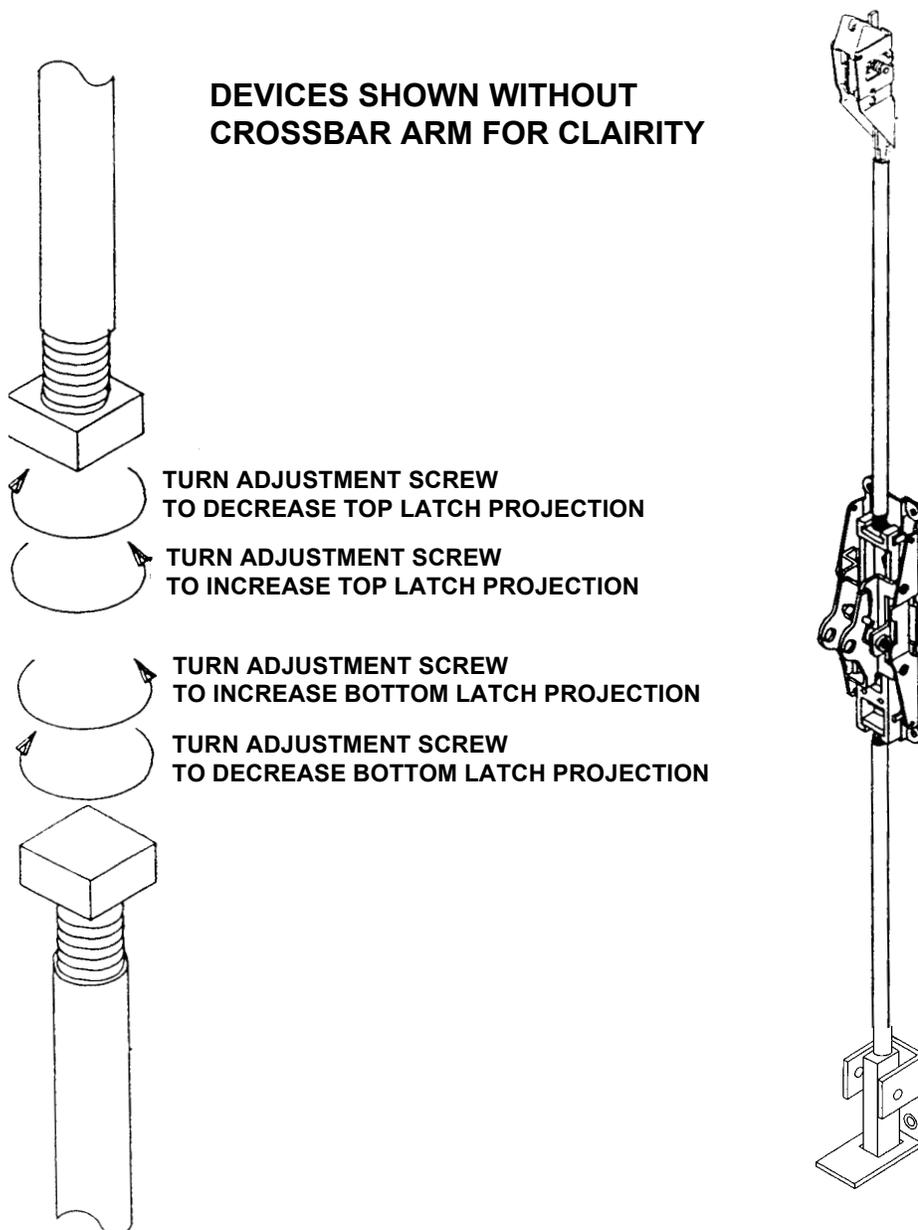
A) TOP ROD ADJUSTMENT WITH DOOR OPEN.

- 1) RELEASE TOP LATCH BOLT USING RELEASE TRIGGER.
- 2) CHECK TOP LATCHBOLT PROJECTION, LATCHBOLT PROJECTION SHOULD BE 5/8" TO 3/4".
- 3) IF THE TOP LATCH BOLT DOES NOT PROJECT THIS MUCH, SWING OUT THE TOP ROD FROM THE BRASS SLIDEBAR AND TURN THE ADJUSTMENT SCREW ONE FULL TURN (SEE BELOW). RETURN THE ROD TO THE SLIDEBAR AND RECHECK THE LATCH BOLT PROJECTION. REPEAT UNTIL TOP LATCH BOLT PROJECTION IS 5/8" TO 3/4".
- 4) SLOWLY DEPRESS THE TOUCHBAR AND RELEASE, THE LATCH BOLT SHOULD REMAIN IN THE RETRACTED POSITION.
- 5) IF THE LATCH BOLT DOES NOT REMAIN RETRACTED, DECREASE TOP LATCH BOLT PROJECTION BY ROTATING THE ADJUSTMENT SCREW ONE-HALF TURN (SEE BELOW).
- 6) REPEAT PROCESS UNTIL LATCHBOLT REMAINS IN RETRACTED POSITION.

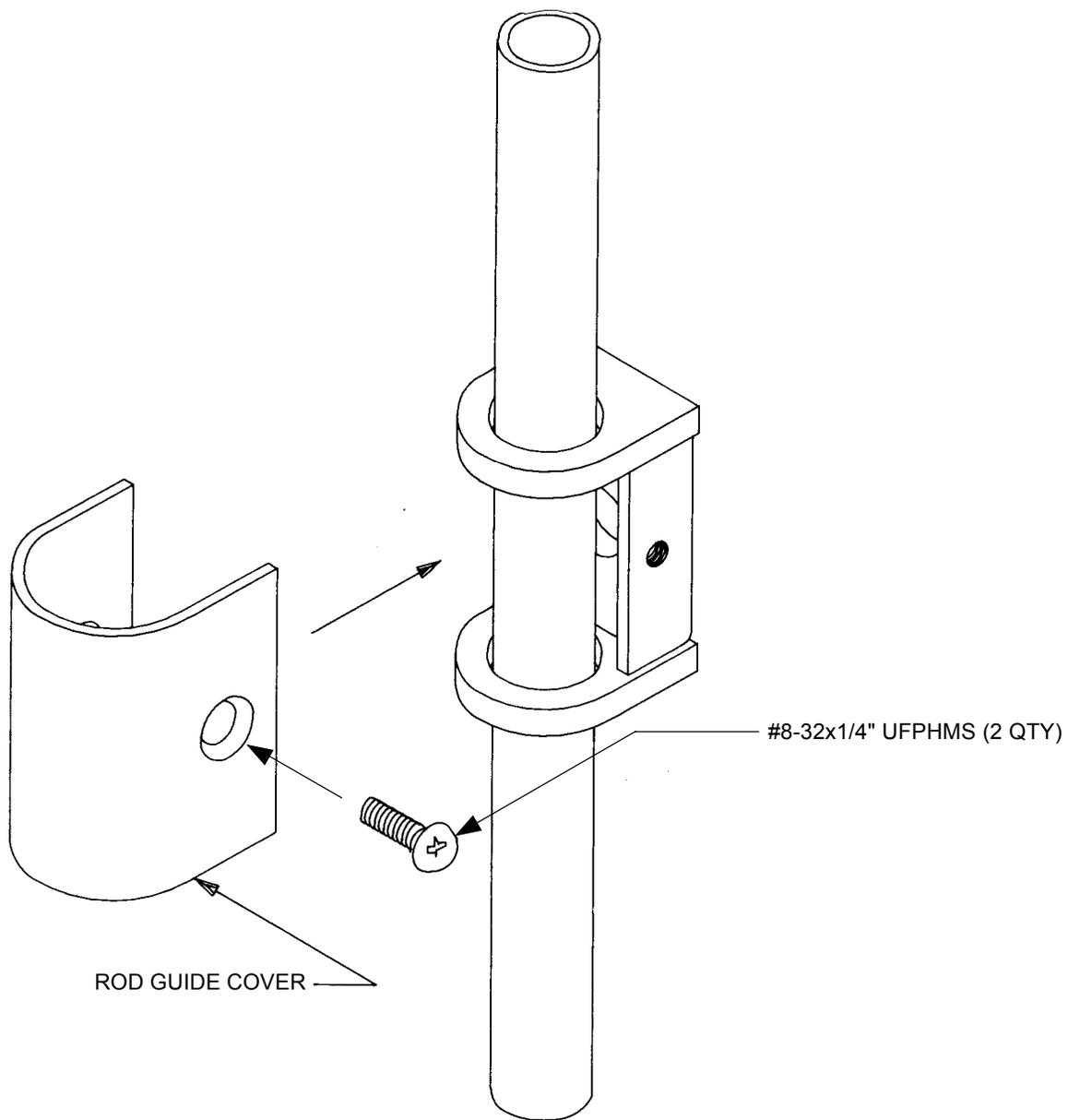
B) BOTTOM BOLT ADJUSTMENT WITH DOOR OPEN AND TOP LATCH BOLT SHOULD REMAIN IN THE RETRACTED POSITION.

- 1) ROTATE ROD TO ALLOW BOTTOM BOLT TO CLEAR FINISHED FLOOR. (SEE BELOW).

C) IF TRIM IS BEING USED, RELEASE TOP LATCH BOLT USING RELEASE TRIGGER, OPERATE TRIM AND CHECK FOR FULL LATCH BOLT RETRACTION. IF TOP LATCH BOLT DOES NOT REMAIN IN RETRACTED POSITION, DECREASE TOP LATCH BOLT PROJECTION (SEE BELOW).



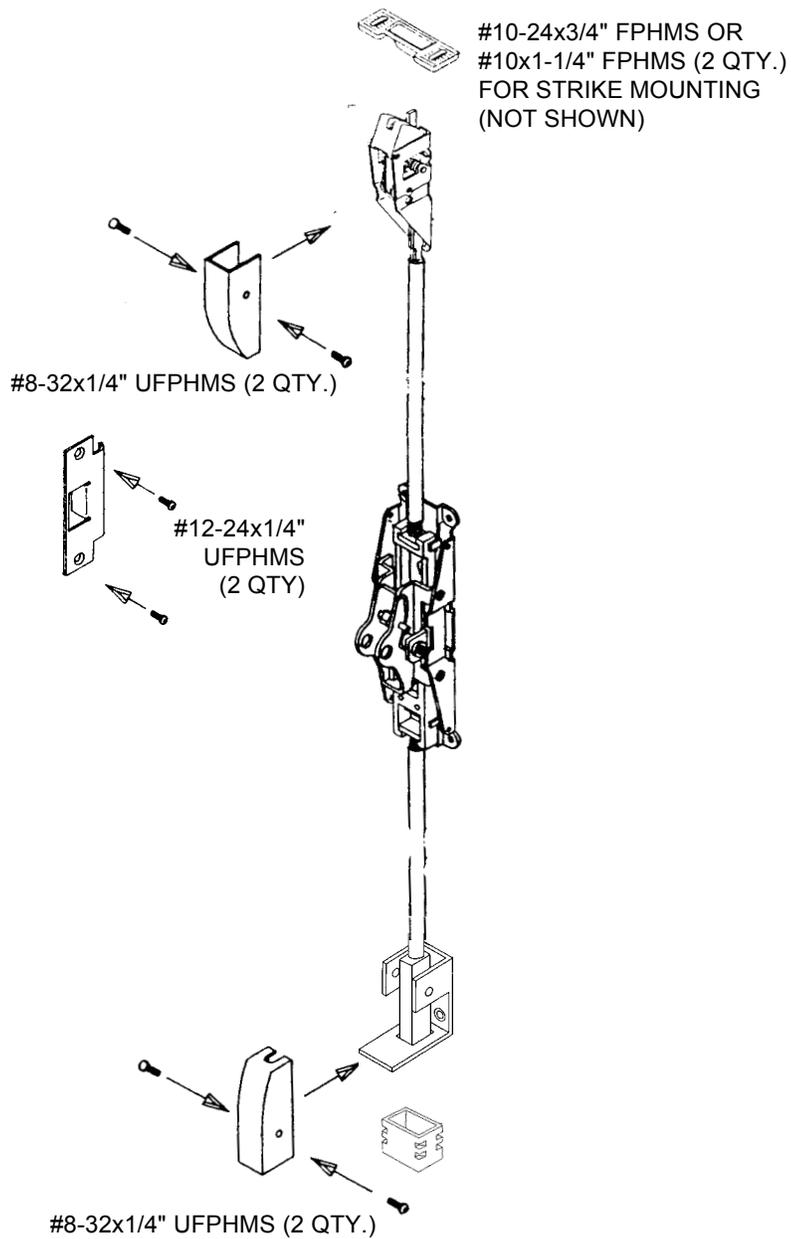
- 11) INSTALL ROD GUIDE COVER.
- A) SLIDE ROD GUIDE INSERT INTO ROD GUIDE BRACKET.
 - B) PLACE ROD GUIDE COVER OVER ROD GUIDE INSERT.
 - C) INSTALL ROD GUIDE COVER TO ROD GUIDE BRACKET USING #8-32x1/4" UFPHMS (2 QTY, PER ROD GUIDE).



11) APPLY STRIKES AND COVERS.

A) ATTACH TOP AND BOTTOM LATCH COVERS USING (2) #8-32x1/4" UFPHMS SCREWS.

B) INSTALL STRIKES TO TOP OF DOOR FRAME AND TO FLOOR OR THRESHOLD.



**DEVICES SHOWN WITHOUT
CROSSBAR ARMS AND COVER FOR
CLAIRITY.**

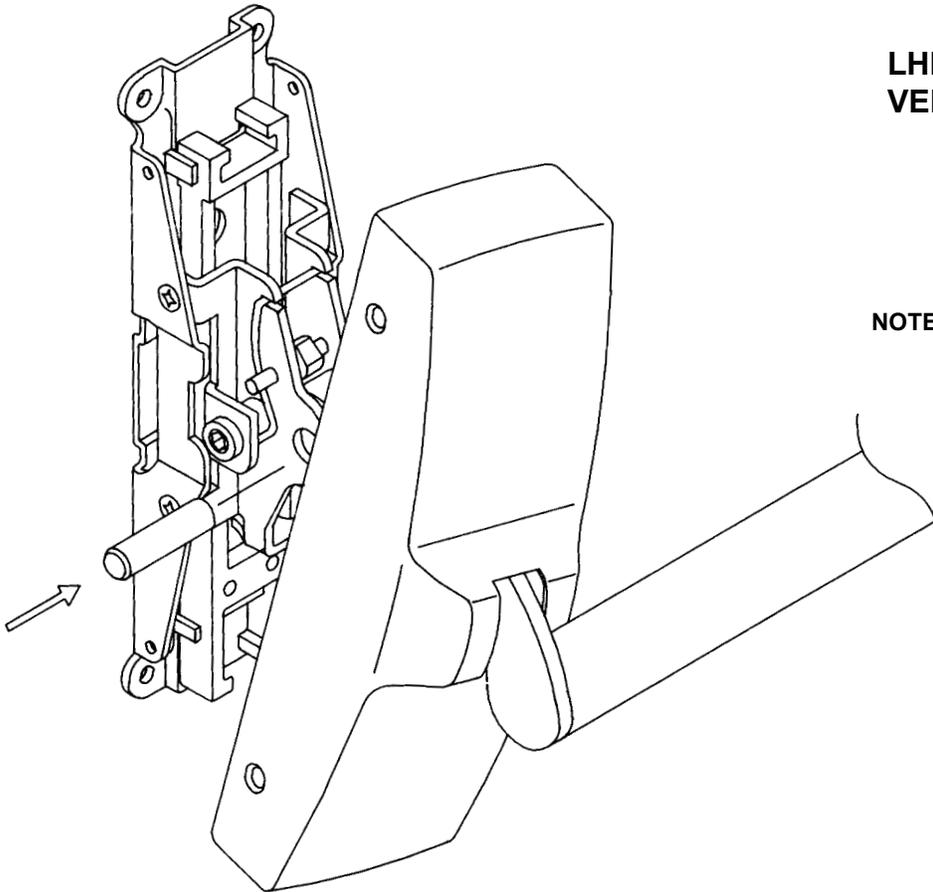
LHR SHOWN

12) ATTACH CHASSIS COVER.

- A) REMOVE AXLES FROM BOTH ACTIVE AND INACTIVE CHASSIS.
- B) REMOVE CROSSBAR AND CROSSBAR ARMS FROM BOTH CHASSIS.
- C) SLIDE CROSSBAR ARMS INTO RECTANGULAR CUT-OUT IN TOP OF CHASSIS COVER.

NOTE: THE 1/2" DIA. HOLE IN THE CHASSIS COVER ON BOTH COVERS SHOULD FACE EACH OTHER.

- D) INSERT CROSSBAR ARMS INTO CHASSIS AND INSERT AXLES.
- E) SLIDE CHASSIS COVER OVER CHASSIS AND ATTACH WITH 4 (PER HEAD) #8-32x1/4" UFPHMS.



LHR ACTIVE HEAD SHOWN WITHOUT VERTICAL RODS FOR CLAIRITY.

NOTE: 1/2" DIA. HOLE IN EACH CHASSIS COVER SHOULD FACE AWAY FROM DOOR STOPS WHEN ASSEMBLED TO CHASSIS (HOLES WILL FACE TOWARDS EACH OTHER).

13) CHECK DOGGING OPERATION (PANIC OPERATION ONLY).

- A) DEPRESS CROSSBAR, INSERT AND TURN DOGGING KEY IN BOTH ACTIVE AND INACTIVE HEADS.
- B) REMOVE DOGGING KEY, CROSSBAR SHOULD REMAIN DEPRESSED.
- C) REINSERT DOGGING KEY AND TURN IN OPPOSITE DIRECTION (BOTH HEADS). CROSSBAR WILL SWING OUT.
- D) FOR CYLINDER DOGGING, REFER TO INSTALLATION D-4085.

14) CHECK FOR SMOOTH OPERATION AND SECURE LATCHBOLT ENGAGEMENT. ADJUST STRIKE IF REQUIRED.

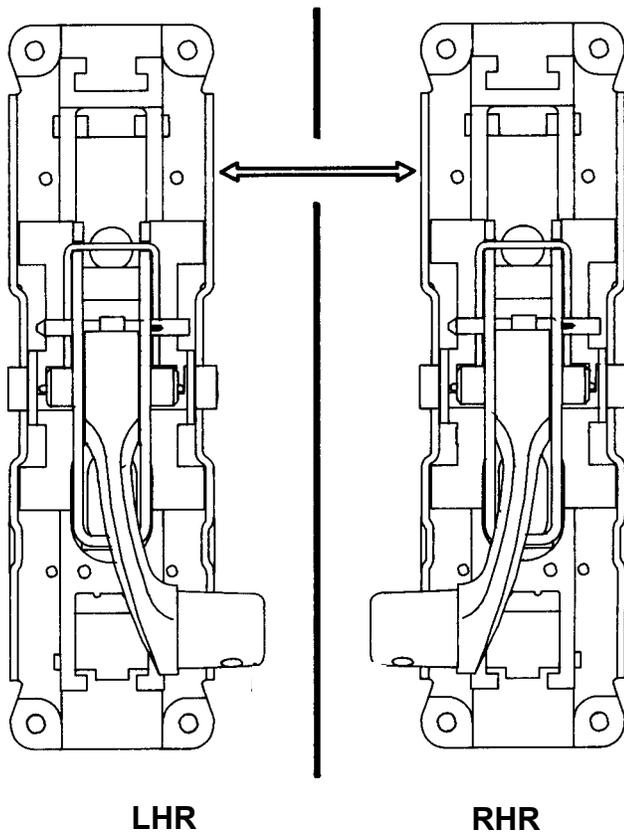
5 REVERSING INSTRUCTIONS

TO REVERSE THE HANDING OF A MONARCH (F)XX-TPL DEVICE

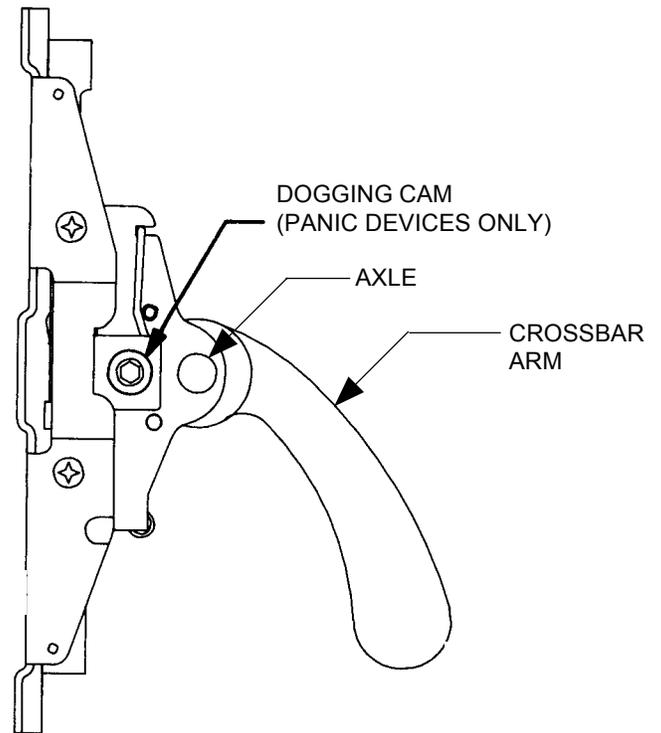
NOTE: TO REVERSE THE HANDING OF THE MORTISE LOCK, REFER TO INSTALLATION D-4010.

NOTE: DEVICES WITH CYLINDER DOGGING CANNOT BE REVERSED.

- 1) REMOVE CHASSIS COVER FROM BOTH HEADS (4 SCREWS EACH).
- 2) REMOVE AXLES FROM BOTH ACTIVE AND INACTIVE HEADS.
- 3) SWAP CROSSBAR ARMS FROM ACTIVE HEAD TO INACTIVE HEAD.
- 4) REINSERT AXLES INTO BOTH ACTIVE AND INACTIVE HEADS.
- 5) PROCEED WITH INSTALLATION.



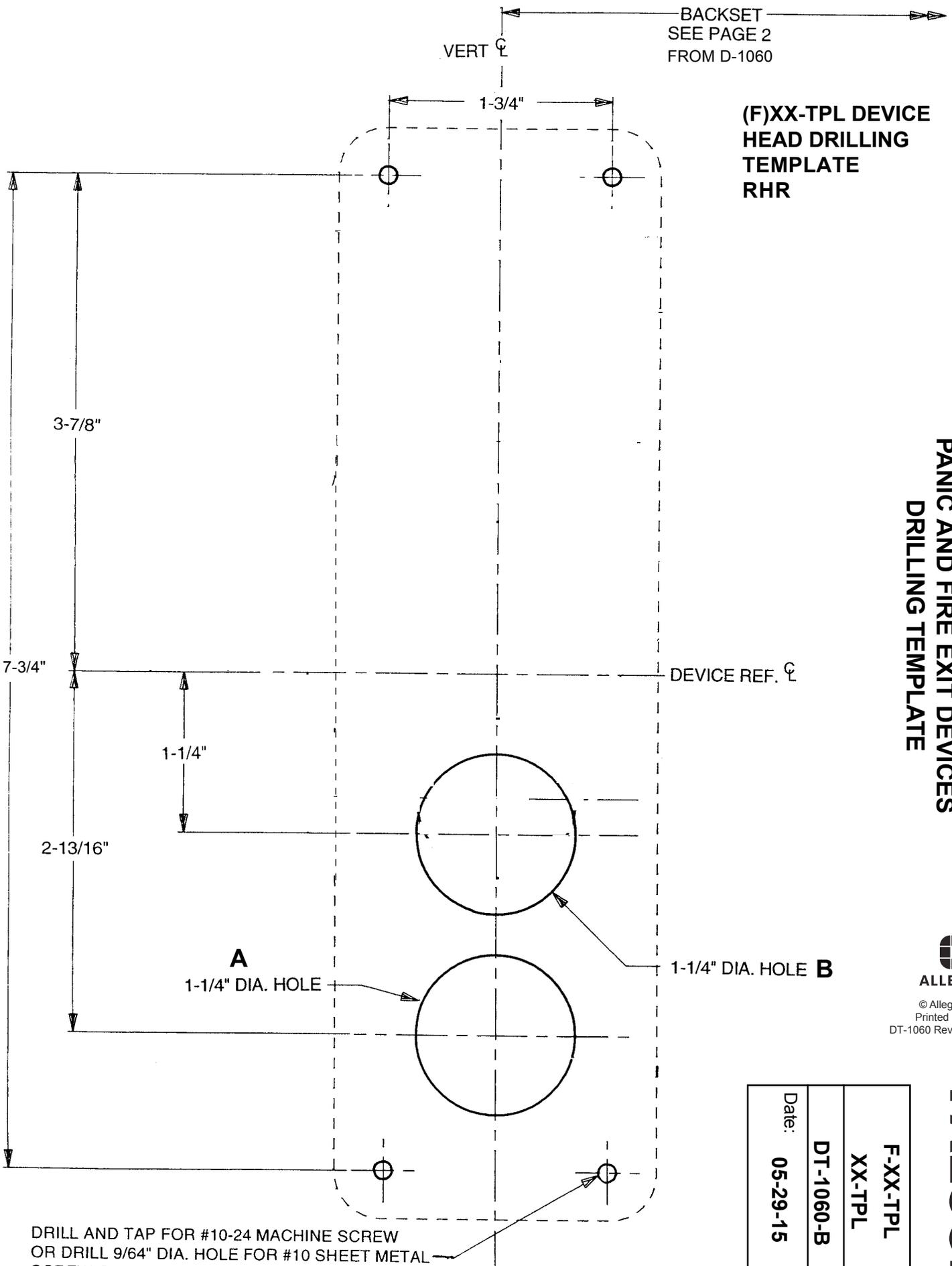
FRONT VIEW OF ACTIVE HEAD SHOWN



Customer Service

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**(F)XX-TPL DEVICE
HEAD DRILLING
TEMPLATE
RHR**

**XX SERIES THREE POINT LATCH
PANIC AND FIRE EXIT DEVICES
DRILLING TEMPLATE**



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DT-1060 Rev. 05/15-b

F-XX-TPL
XX-TPL
DT-1060-B
Date: 05-29-15

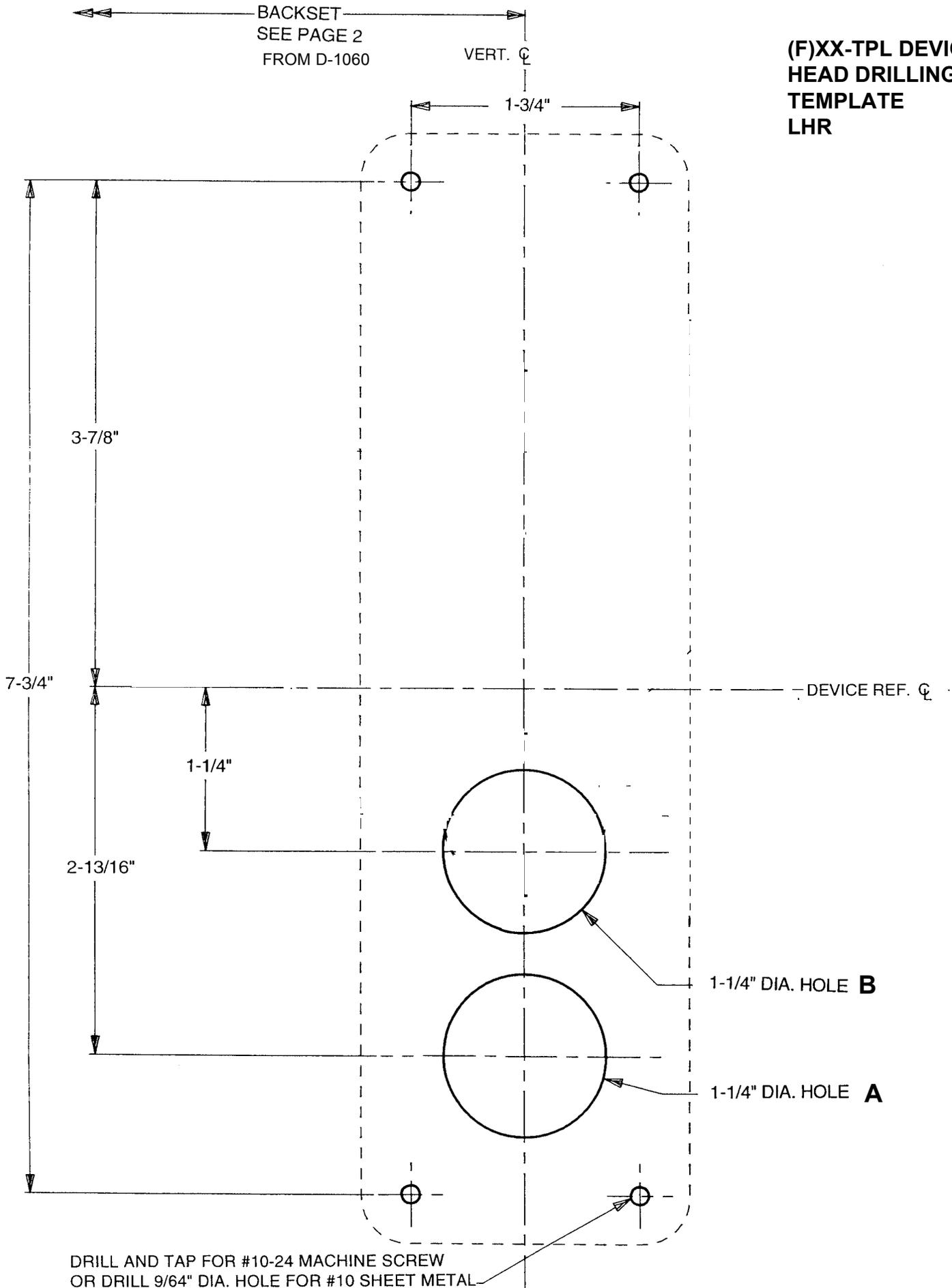
FALCON[®]

DRILL AND TAP FOR #10-24 MACHINE SCREW
OR DRILL 9/64" DIA. HOLE FOR #10 SHEET METAL
SCREW OR DRILL 1/4" DIA. HOLE INSIDE AND
1/2" DIA. HOLE OUTSIDE FOR THRU-BOLTED TRIM
OR DRILL 1/4" DIA. HOLE INSIDE AND 3/8" DIA. HOLE
OUTSIDE FOR SEXBOLT (4 HOLES)

BACKSET
SEE PAGE 2
FROM D-1060

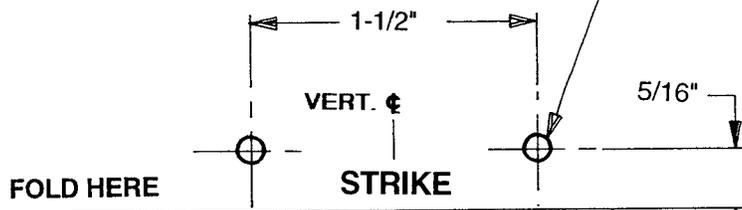
VERT. C

**(F)XX-TPL DEVICE
HEAD DRILLING
TEMPLATE
LHR**

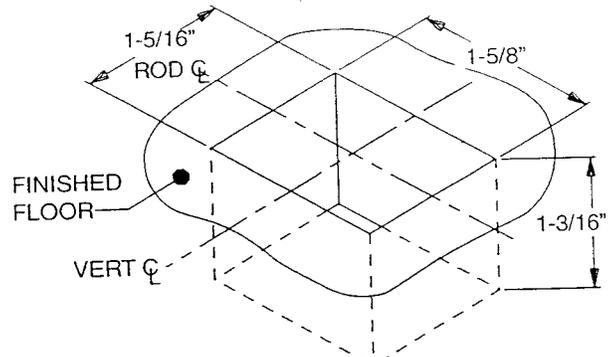
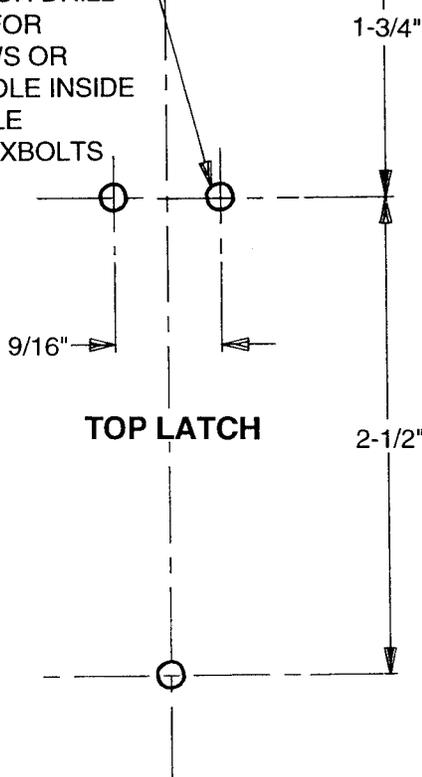


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OUTSIDE FOR SEXBOLT (4 HOLES)

DRILL 9/64" DIA. FOR SHEET METAL SCREWS OR
DRILL AND TAP #10-24 FOR MACHINE SCREWS
(2 HOLES)



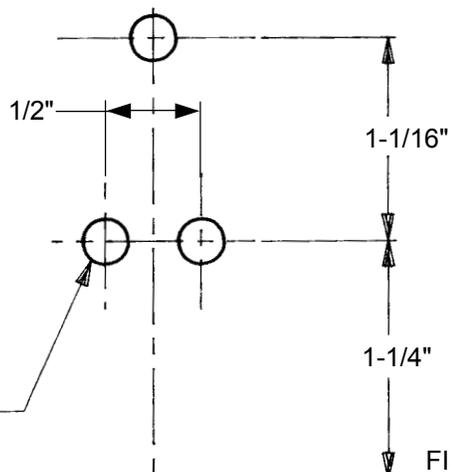
DRILL 9/64" DIA. FOR SHEET METAL SCREWS OR DRILL AND TAP #10-24 FOR MACHINE SCREWS OR DRILL 1/4" DIA. HOLE INSIDE AND 3/8" DIA. HOLE OUTSIDE FOR SEXBOLTS (3 HOLES)



CAVITY PREPARATION FOR 2130 STRIKE

VERT. C

BOTTOM LATCH



DRILL 9/64" DIA. HOLE FOR SHEET METAL SCREWS OR DRILL & TAP #10-24 FOR MACHINE SCREWS (3 HOLES)

FINISHED FLOOR