2) TO CHANGE FROM STANDARD LOCKING TRIM TO EITHER NIGHTLATCH FUNCTION OR BLANK ESCUTCHEON (BE)
   FOLLOW THE PROCEDURES BELOW.

   A) FOR NIGHTLATCH FUNCTION:
      1) REMOVE BACKPLATE ASSEMBLY (4 SCREWS) FROM ACTIVE CHASSIS.
      2) REMOVE RETAINING RING (ON BACK OF 'BA' BACKPLATE - FIGURE 1).
      3) REMOVE LOCKING CAM OPERATOR (PART 'A') AND TURN UNTIL POST ON LOCKING CAM OPERATOR
         FITS INTO SQUARE SLOT ON LOCKING CAM (PART 'B') AND RE-ATTACH RETAINING RING (SEE FIGURE 2).
      4) THEN TURN LOCKING CAM OPERATOR FULLY ONE DIRECTION OR THE OTHER (SEE PAGE 8) FOR
         PROPER CYLINDER TIMING.
      5) REINSTALL BACKPLATE ASSEMBLY ONTO THE ACTIVE CHASSIS (4 SCREWS).
      6) CONTINUE WITH DEVICE INSTALLATION.

   B) FOR BLANK ESCUTCHEON (BE) TRIMS:
      1) REMOVE BACKPLATE ASSEMBLY (4 SCREWS) FROM DEVICE CHASSIS.
      2) REMOVE RETAINING RING (ON BACK OF 'BA' BACKPLATE - FIGURE 1).
      3) REMOVE LOCKING CAM (PART 'B') AND LOCKING CAM OPERATOR (PART 'A') (SEE FIGURE 3).
      4) REINSTALL BACKPLATE ASSEMBLY ONTO THE DEVICE CHASSIS (4 SCREWS).
      5) CONTINUE WITH DEVICE INSTALLATION.

"A"
LOCKING
CAM
OPERATOR

"B"
LOCKING
CAM

STANDARD LOCKING
BACKPLATE
FIGURE 1

NIGHT LATCH (NL)
BACKPLATE
FIGURE 2

BLANK ESCUTCHEON (BE)
BACKPLATE
FIGURE 3
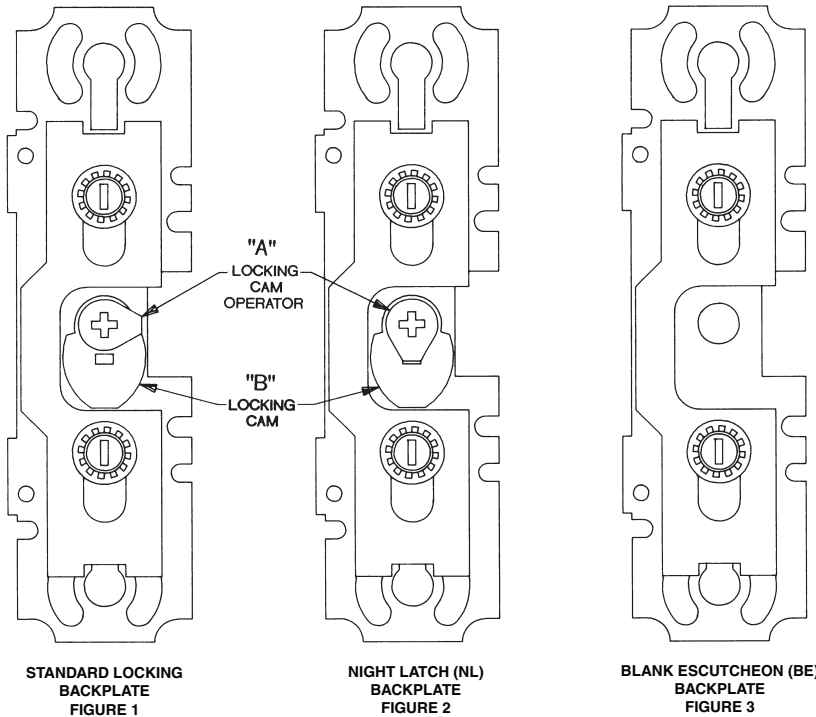
① PARTS CHECK

1) MAKE SURE THE CORRECT DEVICE AND TRIM (IF APPLICABLE) ARE BEING USED AND ARE THE
   CORRECT HAND. SEE PAGE 8 FOR REVERSING INSTRUCTIONS; SEE PAGE 9 FOR LOCKING FUNCTIONS.
2) MAKE SURE ALL NEEDED PARTS ARE ON HAND.

   NOTE: LIST DOES NOT REFLECT ALL POSSIBLE APPLICATIONS.

1) (F)XX-R DEVICE

NOTE: DEVICES ARE FIELD
      REVERSIBLE

2) CROSSBAR

3) SCREW PACK FOR PANIC DEVICE

DOGGING KEY (1 QTY)

#10x1-1/4" PPHSMS
(8 QTY)

#10x1-1/4" FPHSMS
(2 QTY)

4) SCREW PACK FOR FIRE DEVICE

#10-24x1" PPHMS
(8 QTY)

#10-24x1-1/2" PPHMS
(2 QTY)

#10-24x3/4" FPHMS
(3 QTY)

5) STRIKES

570 PANIC STD.   F-570 FIRE STD.

490 PANIC OPT.   F-490 FIRE OPT.

565 PANIC OPT.   579 PANIC OPT.

571 PANIC OPT.   571-A PANIC OPT.

② DOOR LAYOUT

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

1) DOOR MUST BE FITTED AND HUNG PROPERLY BEFORE PROCEEDING.
2) MULLION, IF BEING USED, SHOULD BE INSTALLED.
3) MARK VERTICAL ₡ AND DEVICE REF. ₡ ON DOOR AND FRAME. (SEE FIGURES & CHARTS BELOW)

A) VERTICAL ₡ : SINGLE DOOR APPLICATION

STRIKE	INSTALLED	MINIMUM STILE	"A" BACKSET
570	SURFACE	4"	2-1/4"
565	SURFACE	3-3/4"	2"
565	RECESSED	3-1/4"	1-1/2"
579	SURFACE	3-1/2"	1-5/8"
490	SURFACE	4 "	2-1/4"
F-570	SURFACE	4"	2-1/4"
F-490	SURFACE	4"	2-1/4"
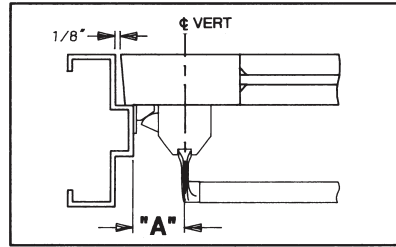
B) VERTICAL ₡ : DOUBLE DOOR APPLICATION WITH MULLION

STRIKE	INSTALLED WITH	MINIMUM STILE	"B" BACKSET	"C" WIDTH
570	2923 MULLION	4"	3"	1-1/2"
570	4023 MULLION	4-1/4"	3-1/4"	2"
565	2923 MULLION	3-3/4"	2-3/4"	1-1/2"
565	4023 MULLION	4"	3"	2"
579	2923 MULLION	3-3/8"	2-3/8"	1-1/2"
579	4023 MULLION	3-5/8"	2-5/8"	2"
490	2923 MULLION	4"	3"	1-1/2"
490	4023 MULLION	4-1/4"	3-1/4"	2"
F-570	F-4023 MULLION	4-1/4"	3-1/4"	2"
F-490	F-4023 MULLION	4-1/4"	3-1/4"	2"
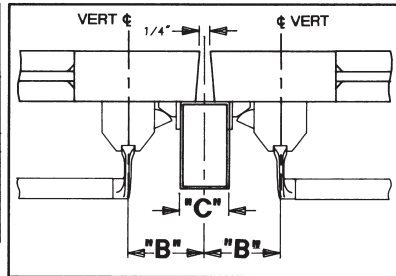
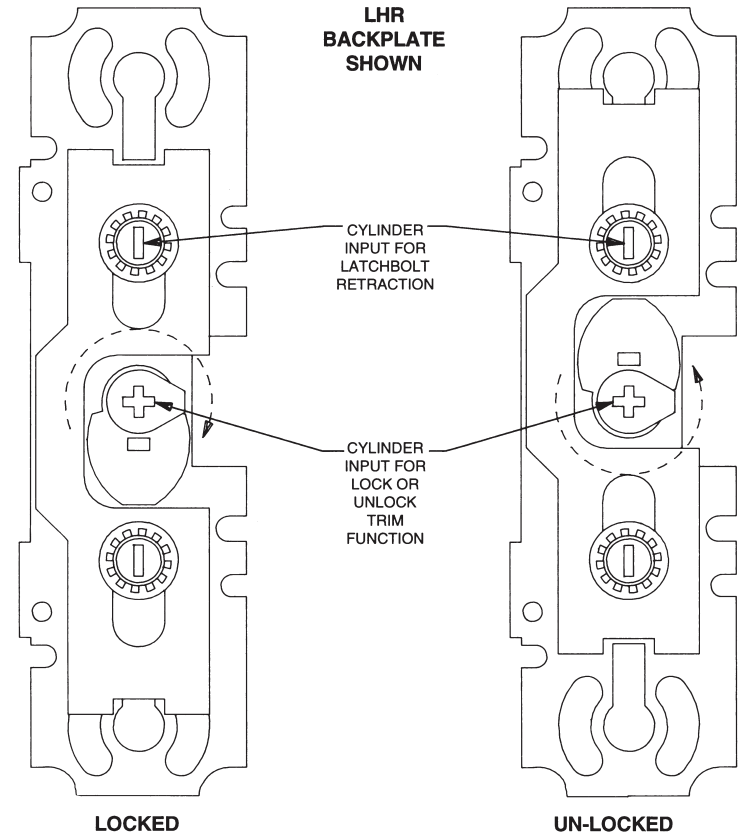
C) VERTICAL ₡ : DOUBLE DOOR APPLICATION WITH XX-R x XX-V

STRIKE	INSTALLED WITH	MINIMUM STILE	"D" BACKSET
571	XX VERTICAL	4"	2-7/8"
571-A	XX VERTICAL	3-1/2"	2-3/8"

NOTE: 571 AND 571-A STRIKES ARE NOT
APPROVED FOR FIRE RATED
APPLICATIONS
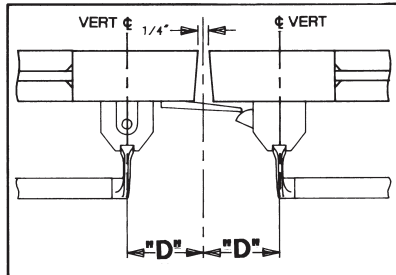
⑥ LOCKING FUNCTIONS

1) IF USING STANDARD LOCKING TRIM, ROTATE LOCKING CAM OPERATOR COMPLETELY TO EITHER FULLY-LOCKED (CLOCKWISE) OR FULLY-UNLOCKED (COUNTER-CLOCKWISE) POSITION AS SHOWN IN THE FIGURES BELOW. THIS WILL ENSURE PROPER TIMING BETWEEN THE LOCKING FEATURE AND THE CYLINDER.
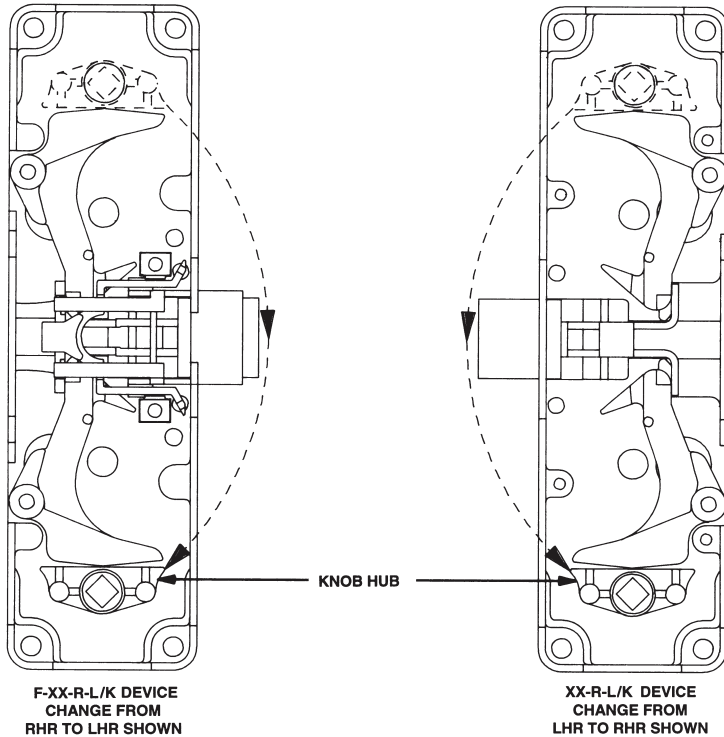

LHR BACKPLATE SHOWN

CYLINDER INPUT FOR LATCHBOLT RETRACTION

CYLINDER INPUT FOR LOCK OR UNLOCK TRIM FUNCTION

LOCKED   **UN-LOCKED**

D) DEVICE REF. ℄ (HORIZONTAL)
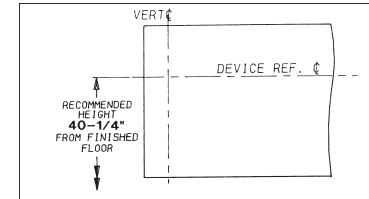

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⑤ REVERSING INSTRUCTIONS

TO REVERSE THE HANDING OF A FALCON (F)XX-R DEVICE

NOTE: DOUBLE CYLINDER DEVICES ((F)XX-R-L 2, (F)XX-R-K2, OR (F)XX-R-TP2) CANNOT BE REVERSED

1) REMOVE CHASSIS COVER FROM BOTH ACTIVE AND INACTIVE HEADS.
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) IF DEVICE IS (F)XX-R-L OR (F)XX-R-K, PERFORM THE FOLLOWING STEPS;
   OTHERWISE, PROCEED WITH DEVICE INSTALLATION
    A) TURN ACTIVE HEAD OVER AND REMOVE BACKPLATE SUB-ASSEMBLY AND 4 SCREWS (NOT SHOWN).
    B) REMOVE KNOB HUB FROM ACTIVE HEAD.
    C) PLACE KNOB HUB IN OPPOSITE HOLE AS SHOWN BELOW.
    D) REPLACE BACKPLATE SUB-ASSEMBLY WITH 4 SCREWS (NOT SHOWN).
   E) PROCEED WITH DEVICE INSTALLATION.

KNOB HUB

**F-XX-R-L/K DEVICE
CHANGE FROM
RHR TO LHR SHOWN**

**XX-R-L/K DEVICE
CHANGE FROM
LHR TO RHR SHOWN**

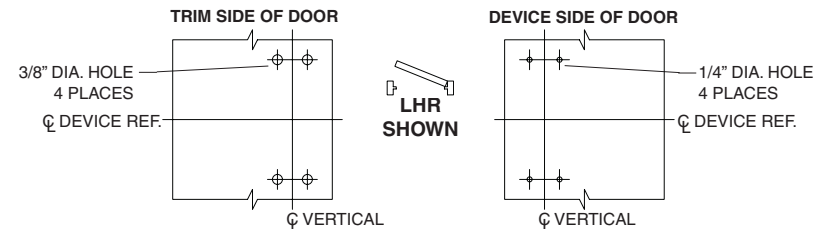# ③ DOOR & HARDWARE PREPARATION

1) TAPE DRILLING TEMPLATE (FROM CENTER OF THIS BOOK) ON DOOR USING MOUNTING ℄ AND DEVICE REF. ℄ FROM "2 DOOR LAYOUT" (PAGES 2 AND 3).

2) PREPARE HOLES: **A)** PREPARE HOLES PER TABLE BELOW.
                 B) TAP HOLES AS REQUIRED.
                 C) REMOVE TEMPLATE.

| DEVICE FUNCTION	PREPARE HOLES ON TEMPLATE
(F-)XX-R-N	NONE
(F-)XX-R-C (CYLINDER ONLY)	A
(F-)XX-R-NL	A
(F-)XX-R-TP	B, C (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-TP2	A, C (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-TP(2O.C.)	A, B, C (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-K	B, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-K2	A, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-K(2O.C.)	A, B, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-K-BE	D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-K (NL)	B, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-K DT	D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-NL x K DT	A, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-L	B, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-L2	A, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-L(2O.C.)	A, B, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-L-BE	D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-L(NL)	B, D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-L DT	D (ALL DOORS) + E (WOOD DOORS)
(F-)XX-R-NL x L DT	A, D (ALL DOORS) + E (WOOD DOORS)

LHR
SHOWN

℄ DEVICE REF.
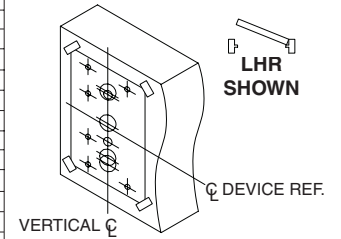
VERTICAL ℄

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


TRIM SIDE OF DOOR

DEVICE SIDE OF DOOR

3/8" DIA. HOLE
4 PLACES

1/4" DIA. HOLE
4 PLACES

℄ DEVICE REF.

℄ DEVICE REF.

LHR
SHOWN

℄ VERTICAL

℄ VERTICAL

4) DETERMINE CROSSBAR LENGTH.

    A) MEASURE DISTANCE BETWEEN VERTICAL ℄ AND HINGE SIDE STOP (DIMENSION "Y" BELOW)
    B) CALCULATE CROSSBAR LENGTH "X" USING FORMULA BELOW.

LHR SHOWN

BACKSET 3/4"   BACKSET 3/4"

"X" (LENGTH OF CROSSBAR)

"Y"

"X" = "Y" - BACKSET - 1-1/2"
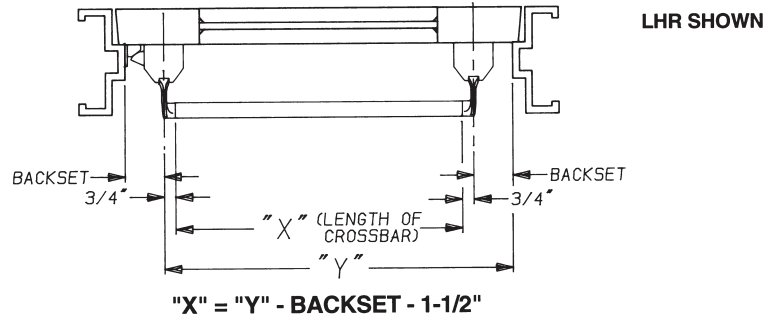
5) IF CROSSBAR LENGTH IS LONGER THAN "X", CUT THE CROSSBAR TO THE CORRECT LENGTH
    A) MARK CROSSBAR TO LENGTH "X".

"X" (SEE ABOVE)
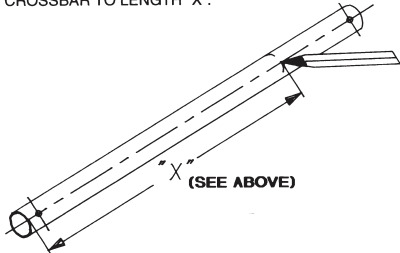
   B) CUT CROSSBAR TO MARKED DIMENSION AND REMOVE BURRS.
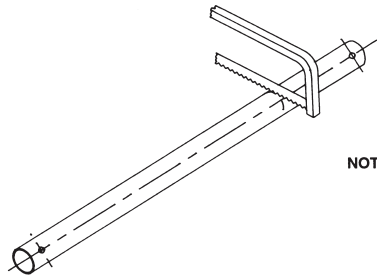
NOTE: FACTORY RECOMMENDS SAWING RATHER THAN GRIND CUT TO SIZE. GRINDING CAN DAMAGE THE FINISH OF THE DEVICE AND SAWING RESULTS IN LESS DAMAGE TO THE DEVICES'S FINISH.

9) STRIKE PREPARATION:
    A) TRANSFER DEVICE REF. ℄ TO DOOR STOP.
    B) CENTER STRIKE ON DOOR STOP ACROSS DEVICE REF. ℄ AND FLUSH TO DOOR SURFACE.
    C) MARK SCREW LOCATIONS, THEN CENTERPUNCH AND DRILL (AND TAP IF REQUIRED) FOR MOUNTING SCREWS.
    D) APPLY STRIKE TO DOOR STOP.

570 STRIKE SHOWN   **LHR SHOWN**

DEVICE REF. ℄

"A"

"B"

PANIC: #10x1-1/4" FPHSMS (2 QTY)
FIRE: #10-24x3/4" FPHMS (3 QTY)
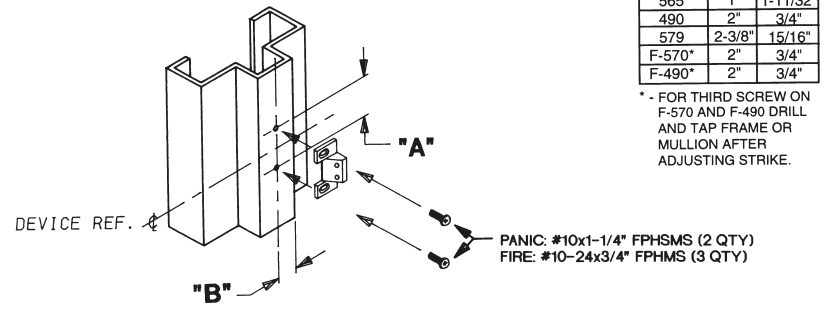
STRIKE	'A'	'B'
570	2"	3/4"
565	1"	1-11/32"
490	2"	3/4"
579	2-3/8"	15/16"
F-570*	2"	3/4"
F-490*	2"	3/4"

* - FOR THIRD SCREW ON F-570 AND F-490 DRILL AND TAP FRAME OR MULLION AFTER ADJUSTING STRIKE.

10) CHECK FOR SMOOTH OPERATION AND SECURE LATCH BOLT ENGAGEMENT. ADJUST STRIKE IF REQUIRED

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

ROUNDED WASHER

CROSSBAR RETAINER SCREW
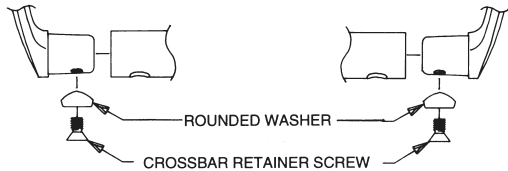
4) LOCATE, MARK, AND DRILL INACTIVE HEAD MOUNTING HOLES:
   A) LEVEL CROSSBAR ON DOOR.
   B) MARK CENTER OF FOUR MOUNTING HOLES
   C) DRILL 9/64" DIA. HOLES IF USING SHEET METAL SCREWS OR DRILL AND TAP #10-24 IF USING MACHINE SCREWS
      OR DRILL 1/4" DIA. HOLE INSIDE AND 3/8" DIA. HOLE OUTSIDE FOR SEXBOLTS
   D) MOUNT INACTIVE HEAD TO DOOR USING SCREWS SHOWN BELOW.
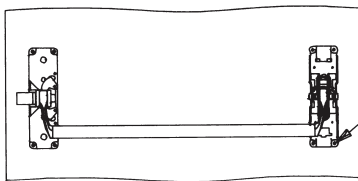
LHR SHOWN

#10x1-1/4" PPHSMS OR
#10-24x3/4" PPHMS (SURFACE MOUNTED) OR
#10-24x3/4" PPHMS WITH SEXBOLTS (4 QTY)

5) ATTACH CHASSIS COVERS.
   A) REMOVE AXLES FROM BOTH ACTIVE AND INACTIVE CHASSIS
   B) REMOVE CROSSBAR AND CROSSBAR ARMS FROM CHASSIS
   C) SLIDE CROSSBAR ARMS INTO RECTANGULAR CUTOUT 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 EACH CHASSIS AND ATTACH WITH 4 (PER CHASSIS) #8-23x1/4" UFPHMS
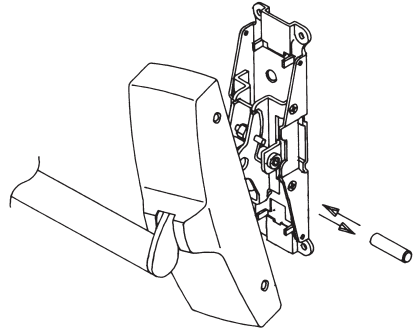
LHR INACTIVE SHOWN

**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)**

6) CHECK DOGGING OPERATION (PANIC APPLICATION ONLY)
   A) DEPRESS CROSSBAR, INSERT AND TURN DOGGING KEY IN BOTH OF THE HEADS.
   B) REMOVE DOGGING KEY. CROSSBAR SHOULD REMAIN DEPRESSED.
   C) REINSERT DOGGING KEY AND TURN IN OPPOSITE DIRECTION (IN BOTH HEADS). CROSSBAR WILL "POP UP".
   D) FOR CYLINDER DOGGING, REFER TO INSTALLATION D-4085.

C) DRILL A 5/16" DIA. HOLE 5/8" FROM THE JUST CUT END OF THE CROSSBAR
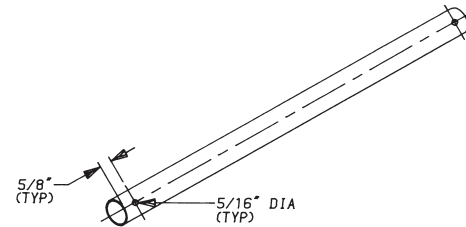
**NOTE: HOLE SHOULD BE IN-LINE WITH HOLE
AT OPPOSITE END OF CROSSBAR**

5/8"
(TYP)

5/16" DIA
(TYP)

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④ HARDWARE INSTALLATION

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1) IF USING OUTSIDE TRIM OR SEXBOLTS, MOUNT TRIM PER DIRECTIONS IN TRIM BOX, OR INSTALL OUTSIDE SEX BOLTS.
2) EITHER SURFACE MOUNT DEVICE, OR THROUGHBOLT DEVICE TO TRIM OR SEXBOLTS (NOTE: FOR LOCKING TRIM, SEE
   PAGE #9 FOR LOCKING CAM AND LOCKING CAM OPERATOR POSITION).

MOUNTING HOLES (4 FOR PANIC, 6 FOR FIRE)

TRIM/CYLINDER HOLES

LHR SHOWN

"A"

"B"

"A"
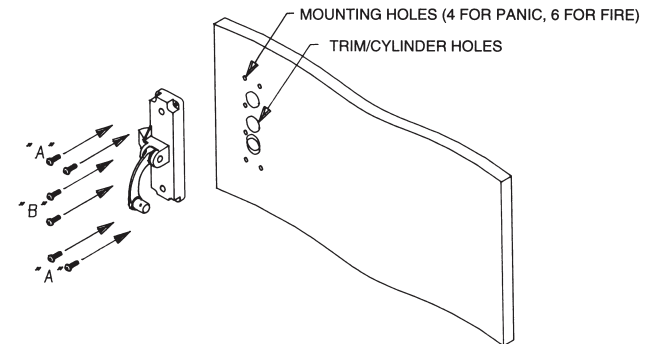
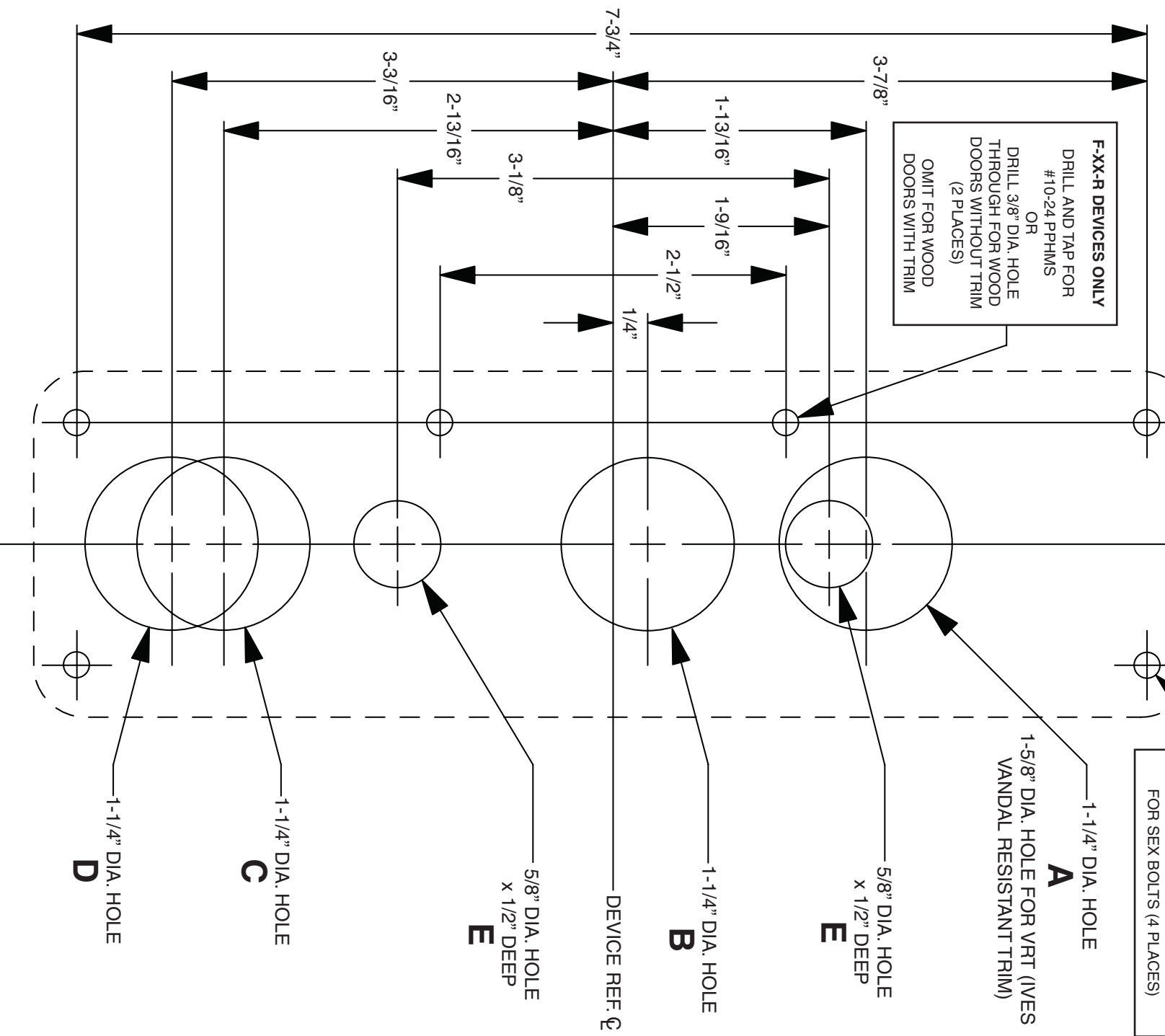| APPLICATION	"A"	"B"
FIRE - REINFORCED HOLLOW METAL DOOR	#10-24x1" PPHMS	#10-24x1-1/2" PPHMS
FIRE - SEXBOLTS OR THRUBOLTING TRIM	#10-24x1" PPHMS	#10-24x1-1/2" PPHMS ★
FIRE - WOOD DOOR	#10-24x1" PPHMS w/SEXBOLTS	#10-24x1-1/2" PPHMS w/SEXBOLTS ★
PANIC - REINFORCED HOLLOW METAL DOOR	#10x1-1/4" PPHSMS or #10-24x1" PPHMS	-
PANIC - NON-REINFORCED HOLLOW METAL DOOR	#10x1-1/4" PPHSMS or #10-24x1" PPHMS w/SEXBOLTS	-
PANIC - WOOD DOOR	#10x1-1/4" PPHSMS or #10-24x1" PPHMS w/SEXBOLTS	-
PANIC - SEXBOLTS OR THRUBOLTING TRIM	#10-24x1" PPHMS	-

★ - IF USING K, L, VANGUARD, OR APOLLO TRIM, OMIT THESE SCREWS

(F-)XX-R
DRILLING
TEMPLATE LHR

7-3/4"
3-7/8"
3-3/16"
2-13/16"
1-13/16"
3-1/8"
1-9/16"
2-1/2"
1/4"

F-XX-R DEVICES ONLY

DRILL AND TAP FOR
#10-24 PPHMS
OR
DRILL 3/8" DIA. HOLE
THROUGH FOR WOOD
DOORS WITHOUT TRIM
(2 PLACES)

OMIT FOR WOOD
DOORS WITH TRIM

SEE PAGE 2

VERTICAL ℄

1-3/4"

DRILL AND TAP FOR
#10-24 MACHINE SCREWS
OR
DRILL 9/16" DIA. HOLE FOR
#10 SHEET METAL SCREW
OR
DRILL 1/4" DIA. HOLE INSIDE
AND 1/2" DIA. HOLE OUTSIDE
FOR THROUGH-BOLTED TRIM
OR
DRILL 1/4" DIA. HOLE INSIDE
AND 3/8" DIA. HOLE OUTSIDE
FOR SEX BOLTS (4 PLACES)

1-1/4" DIA. HOLE
D

1-1/4" DIA. HOLE
C

5/8" DIA. HOLE
x 1/2" DEEP
E

DEVICE REF. ℄

1-1/4" DIA. HOLE
B

5/8" DIA. HOLE
x 1/2" DEEP
E

1-5/8" DIA. HOLE FOR VRT (IVES
VANDAL RESISTANT TRIM)

1-1/4" DIA. HOLE
A

DRILL AND TAP FOR
#10-24 MACHINE SCREWS
OR
DRILL 9/16" DIA. HOLE FOR
#10 SHEET METAL SCREW
OR
DRILL 1/4" DIA. HOLE INSIDE
AND 1/2" DIA. HOLE OUTSIDE
FOR THROUGH-BOLTED TRIM
OR
DRILL 1/4" DIA. HOLE INSIDE
AND 3/8" DIA. HOLE OUTSIDE
FOR SEX BOLTS (4 PLACES)

1-1/4" DIA. HOLE
A

1-5/8" DIA. HOLE FOR VRT
(IVES VANDAL RESISTANT TRIM)

5/8" DIA. HOLE
x 1/2" DEEP
E

1-1/4" DIA. HOLE
B

DEVICE REF. ℄

5/8" DIA. HOLE
x 1/2" DEEP
E

1-1/4" DIA. HOLE
C

1-1/4" DIA. HOLE
D

VERTICAL ℄

1-3/4"

SEE PAGE 2

1/4"

2-1/2"

1-9/16"

3-1/8"

1-13/16"

2-13/16"

3-3/16"

7-3/4"

3-7/8"

F-XX-R DEVICES ONLY

DRILL AND TAP FOR
#10-24 PPHMS
OR
DRILL 3/8" DIA. HOLE
THROUGH FOR WOOD
DOORS WITHOUT TRIM
(2 PLACES)

OMIT FOR WOOD
DOORS WITH TRIM

**(F-)XX-R
DRILLING
TEMPLATE   RHR**