5 REVERSING INSTRUCTIONS

NOTE: THE (F)19-V-LBR DEVICE IS HANDED.

NOTE: RETRACTOR CAM D AND DRAWBAR LEVER C SHOULD POINT IN THE SAME DIRECTION AND TOWARDS THE TOP OF THE DOOR WHEN DEVICE IS INSTALLED WITH TRIM.

TO CHANGE RETRACTOR CAM POSITION:
1) REMOVE CHASSIS COVER (2 SCREWS, COVER IS NOT SHOWN).
2) REMOVE HOUSING A (2 SCREWS).
3) REMOVE SLIDEBAR LEVER B, DRAWBAR LEVER C AND SLIDEBAR F.
4) ROTATE RETRACTOR CAM D TO CORRECT POSITION, SEE FIGURE 1 (RHR) OR FIGURE 2 (LHR).
5) REINSTALL SLIDEBAR F AND DRAWBAR LEVER C. SEE FIGURES BELOW.
6) INSTALL SLIDEBAR LEVER B MAKING SURE TEETH ARE ENGAGED WITH DRAWBAR LEVER C AND THAT NUB ON B FITS WITHIN SLOT IN F.
7) REASSEMBLE HOUSING A (2 SCREWS).
8) PROCEED WITH DEVICE INSTALLATION.

NOTE: A RHR DEVICE REQUIRES RHR TRIM, SEE TRIM INSTALLATION SHEET FOR TRIM REVERSING PROCEDURES.

PIVOT PIN FOR LHR E
PIVOT PIN FOR RHR E
CHASSIS
SLIDEBAR B LEVER
SLIDEBAR C LEVER
DRAWBAR LEVER C
HOUSING A
RETRACTOR CAM (BLACK PLASTIC) D
SLIDEBAR B LEVER
SLIDES OFFSET TO EDGE OF CHASSIS AS SHOWN

FIGURE 1: RHR

FIGURE 2: LHR

1) (F) 19-V-LBR DEVICE
4) SCREW PACK FOR PANIC DEVICE
   DOGGING KEY (1 QTY.)
   MOUNTING BRACKET (1 QTY.)
   SEX BOLT – 1/4" - 20 THREAD (3 QTY.)
   1/4" - 20 x 3/4" TPHMS (1 QTY.)
   1/4" - 20 x 3/4" FPHMS (2 QTY.)
   #10 x 1-1/4" FPHMS (3 QTY., 2 FINISHED)
   1/4" - 20 x 3/4" FPSMS (2 QTY.)
   #10 - 24 x 3/4" FPHMS (4 QTY.)
   CHANNEL END CAP (1 QTY.)
   #10-24 x 3/8" UFPHMS w/NYLON PATCH (2 BLACK)
   #10 - 24 x 3/8" UFPHMS w/NYLON PATCH (2 BLACK)
   #10 - 24 x 3/8" UFPHMS w/NYLON PATCH (2 BLACK)
   1/8" x 3/4" COTTER KEY (1 QTY.)
   ROD GUIDE (1 QTY.)
   ROD GUIDE (2 QTY.)

2) STRIKE
4163/3788

3) TOP LATCH
PANIC 4163

6) VERTICAL RODS (LENGTHS FOR 7'0" OPENINGS)
   TOP ROD = 36-7/8"

4) 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 Ç AND DEVICE REF Ç ON DOOR AND FRAME (SEE FIGURES & CHARTS BELOW).

A) VERTICAL Ç:

<table>
<thead>
<tr>
<th>INSTALLATION</th>
<th>1-3/4&quot; MIN.</th>
<th>3&quot; MIN.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PAR. (F/19-V)</td>
<td>&quot;B&quot;=1-5/16&quot;</td>
<td>&quot;B&quot;=2-1/16&quot;</td>
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</tbody>
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B) DEVICE REF Ç (HORIZONTAL)

10) APPLY STRIKES & COVERS (NOTE: ALL SCREWS ARE BLACK).
   A) ATTACH COVERS TO CHASSIS AND LATCH.
   B) INSTALL ROD GUIDE.
   C) INSTALL CHANNEL END CAP.
   D) INSTALL STRIKES TO TOP OF DOOR FRAME.
   E) CHECK FOR SMOOTH OPERATION.
   F) FOR FIRE RATED DEVICES ONLY, INSTALL SPRING BOLT ASSEMBLY, SEE D-5494

11) CHECK DOGGING OPERATION: (PANIC APPLICATION ONLY)
   A) DEPRESS TOUCHBAR, INSERT AND TURN DOGGING KEY CLOCKWISE TO DOG DEVICE.
   B) REMOVE DOGGING KEY, TOUCHBAR WILL REMAIN DEPRESSED.
   C) REINSERT DOGGING KEY AND TURN IT IN OPPOSITE DIRECTION (COUNTER-CLOCKWISE). PUSH ON TOUCHBAR AND IT WILL "POP OUT."
   D) FOR CYLINDER DOGGING, REFER TO INSTALLATION INSTRUCTION D-4080.

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

ALL SCREWS ARE BLACK FINISH

#10-24x3/4" PPHMS or #10x1-1/16" PPHSMS (2 QTY.)

#10-24x3/4" PPHMS (2 QTY.)

#10-24x3/8" UFPHMS (2 QTY.)

#8-32x5/16" UFPHMS (2 QTY.)

#8-32 x 1/4" UFPHMS (2 QTY.)
9) VERTICAL ROD ADJUSTMENT.
   A) TOP LATCH ADJUSTMENT.
      1) RELEASE TOP LATCHBOLT USING RELEASE TRIGGER.
      2) CHECK TOP LATCHBOLT PROJECTION. LATCHBOLT PROJECTION SHOULD BE 5/8” TO 3/4”.
      3) IF THE TOP LATCHBOLT DOES NOT PROJECT THIS MUCH, REMOVE THE COTTER KEY FROM THE TOP
         ROD AND TURN THE TOP ROD ONE FULL TURN (SEE BELOW). RE-INSERT THE COTTER KEY.
         RECHECK THE INCREASED LATCHBOLT PROJECTION. REPEAT UNTIL TOP LATCHBOLT PROJECTION
         IS 5/8” TO 3/4”.
      4) SLOWLY DEPRESS TOUCHBAR; LATCHBOLT SHOULD REMAIN IN RETRACTED POSITION.
      5) IF LATCHBOLT DOES NOT REMAIN IN RETRACTED POSITION, REMOVE COTTER KEY. DECREASE TOP
         LATCHBOLT PROJECTION BY ROTATING ROD 1/2 TURN (SEE BELOW).
      6) RE-INSERT COTTER KEY, REPEAT PROCESS UNTIL LATCHBOLT REMAINS IN RETRACTED POSITION.
      B) IF TRIM IS BEING USED, OPERATE TRIM AND CHECK FOR FULL LATCHBOLT RETRACTION. IF TOP LATCHBOLT
         DOES NOT REMAIN IN RETRACTED POSITION, DECREASE TOP AND BOTTOM LATCHBOLT PROJECTION (SEE
         BELOW).
      C) BEND COTTER KEYS AROUND RODS AND RELEASE TOP LATCHBOLT USING RELEASE TRIGGER.

3) DOOR & HARDWARE PREPARATION

1) CHOOSE CORRECT DRILLING TEMPLATE FROM CENTER OF BOOK.

2) TAPE DRILLING TEMPLATE ON DOOR AND FRAME USING VERTICAL, AND REF. OF DEVICE (REFER TO)
   CENTERPUNCH AND DRILL HOLE FOR DEVICE AND STRIKE MOUNTING AFTER DRILLING HOLE.
   REMOVE DRILLING TEMPLATE.

3) 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).
4) DETERMINE DEVICE LENGTH.
   A) LOCATE VERTICAL CL ON DOOR.
   B) MEASURE DISTANCE "Y" FROM VERT. CL TO STOP SURFACE ON HINGE SIDE.
   C) SUBTRACT 1" FOR RECOMMENDED CLEARANCE (FOR DOOR STILES LESS THAN 2-3/4" WIDE: SUBTRACT 3/4").
   D) LENGTH OF DEVICE FROM VERT. CL TO CUT-OFF LENGTH IS "X".

NOTE: FOR STANDARD DOGGING: 3" MIN.
   FOR CYLINDER DOGGING: 4-1/2" MIN.
   FOR EXIT ALARM AND ELECTRIC DOGGING: 7" MIN.

5) IF DEVICE IS LONGER THAN "X", CUT THE DEVICE.
   A) MARK DEVICE CHANNEL AND COVER TO LENGTH "X".
   B) CUT BOTH CHANNEL AND COVER 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 DEVICE'S FINISH.

6) DRILL MOUNTING HOLE.
   REMOVE CHANNEL COVER AND DRILL 5/16" DIA. HOLE ON DEVICE REF. CL 5/16" FROM END OF CHANNEL.

5) INSTALL END CAP MOUNTING BRACKET USING SEX BOLT AND SCREW

6) TIGHTEN ALL DEVICE MOUNTING SCREWS.
   7) INSTALL TOP & BOTTOM LATCHES.

8) THREAD RODS ONTO DEVICE CENTERSLIDE. INSERT ROD CONNECTORS FROM TOP LATCH INTO OPPOSITE END OF TOP ROD AND INSERT (BUT DO NOT BEND) COTTER KEY THROUGH ROD AND ROD CONNECTOR. INSERT BOLT ASSEMBLY INTO OPPOSITE END OF BOTTOM ROD AND INSERT (BUT DO NOT BEND) COTTER KEY THROUGH ROD AND BOLT ASSEMBLY.
8) IF DOOR OPENING IS NOT 7’0”, DETERMINE TOP ROD LENGTH BASED ON A 40-5/16” DEVICE REF. C 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 36-7/8” TO DETERMINE TOP ROD LENGTH. 
   (EXAMPLE: 6’8” DOOR OPENING - 7’0” - 6’8” = 4” 36-7/8”-4”= 32-7/8” TOP ROD)

**B) FOR DOOR OPENINGS ABOVE 7’0”:**
1) SUBTRACT 7’0” FROM DOOR OPENING. 
2) ADD ANSWER FROM PART 1 TO 36-7/8” TO DETERMINE TOP ROD LENGTH. 
   (EXAMPLE: 8’10” DOOR OPENING - 8’10”-7’0”=22” 36-7/8”+22”=58-7/8”)

9) MODIFY TOP ROD TO REQUIRED LENGTH.

**A) FOR RODS THAT ARE TOO LONG, FOLLOW PROCEDURE BELOW TO CUT ROD TO SIZE.**
1) MARK RODS TO REQUIRED LENGTH. 
   NOTE: ROD MUST BE MEASURED FROM THREADED PORTION OF ROD.
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.

4) INSTALL CHANNEL COVER.

7) PREPARE ACCESS SLOT IN CHANNEL COVER. DRILL AN 11/16” DIA. HOLE 5/16” FROM JUST CUT END OF CHANNEL COVER. REMOVE REMAINING MATERIAL TO COMPLETE SLOT USING A SAW OR FILE.

8) IF DOOR OPENING IS NOT 7’0”, DETERMINE TOP ROD LENGTH BASED ON A 40-5/16” DEVICE REF. C FROM FINISHED FLOOR.

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1) MARK RODS TO REQUIRED 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.

LHR SHOWN

DEVICE MOUNTING SCREWS (1/4”-20 x 3/4” FPHS)
4-1/2" BACKSET

SEE PAGE 2 OF D-1115

5/8" (REF)

A

B

REF 161 PREP (2-1/8" DIA.)

FOR KIL, KIK & CENTRON TRIM:
DRILL 9/32" DIA. HOLE FOR THRU-BOLTING AT LOCATION "A" (2 HOLES)

FOR ALL OTHER APPLICATIONS:
DRILL 9/32" DIA. HOLE FOR THRU-BOLTING OR DRILL & TAP FOR 1/4"-20 TPHMS AT LOCATION "B" (2 HOLES)

3/4" DIA. HOLE (x 3/4" DEEP ON EXIT ONLY WOOD DOORS)

DEVICE REF C

VERT C

TOP LATCH

DRILL 9/64" DIA. HOLE FOR SHEET METAL SCREW OR DRILL & TAP FOR #10-24 MACHINE SCREW

FOLD HERE

1-1/2" 1-3/4" 9/16"

5/16" 1-1/2" 2-1/2"