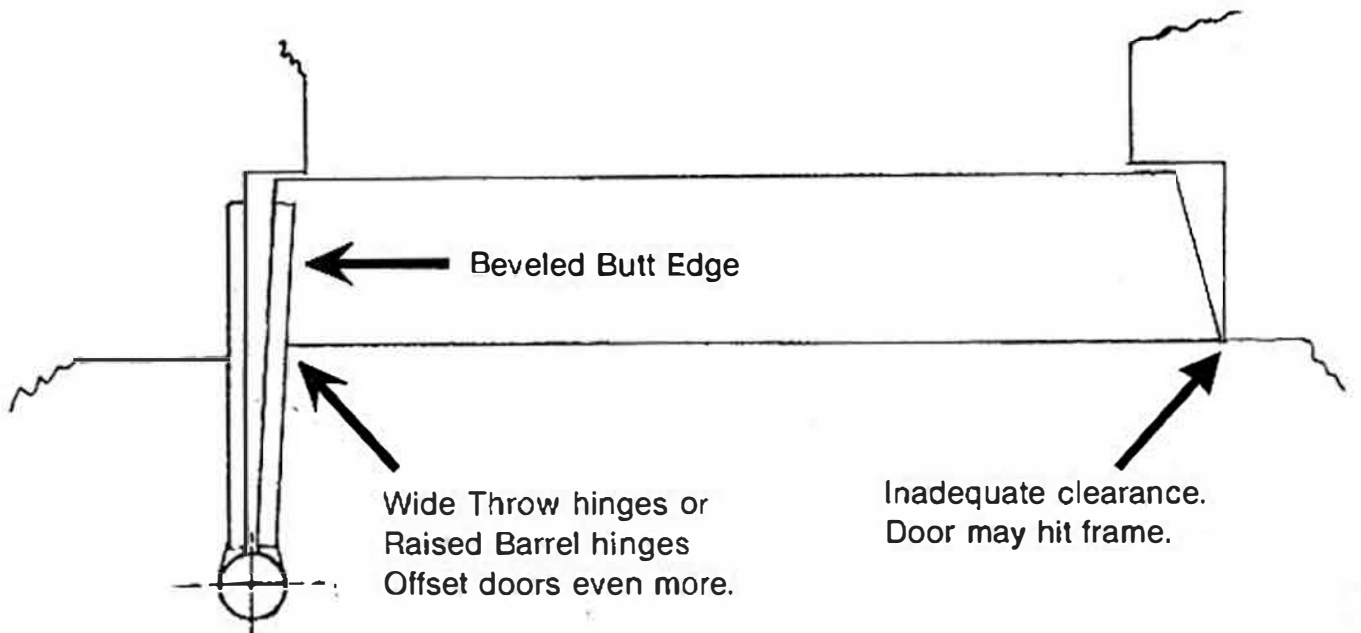
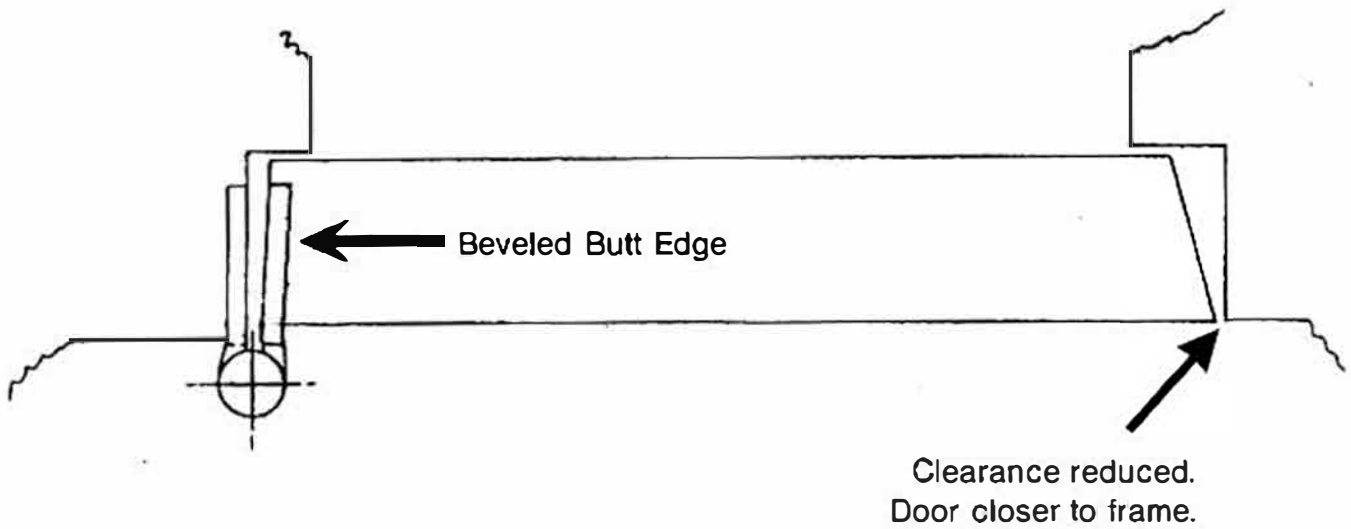
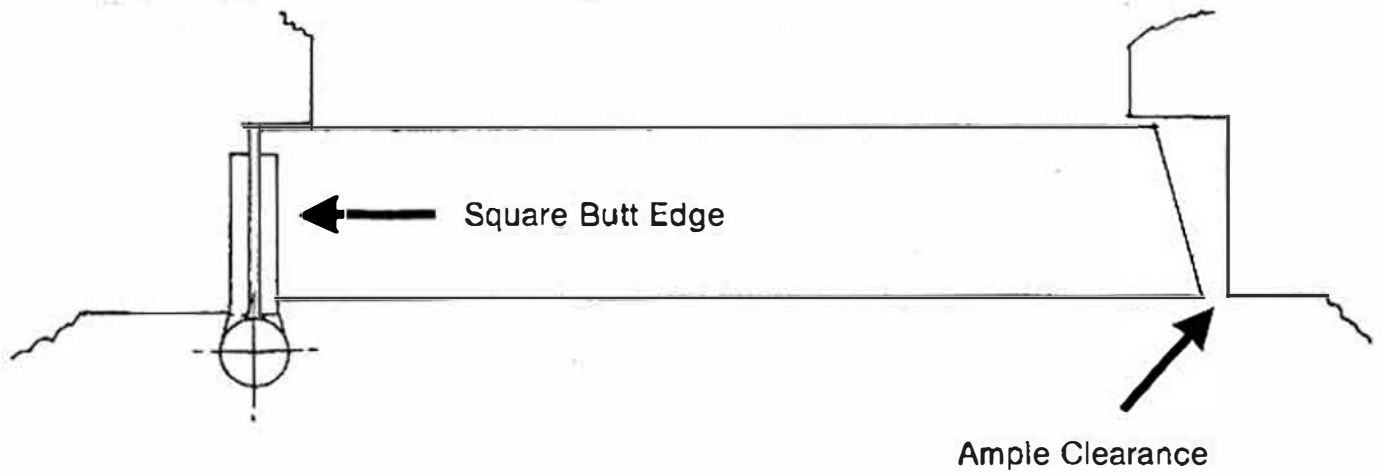


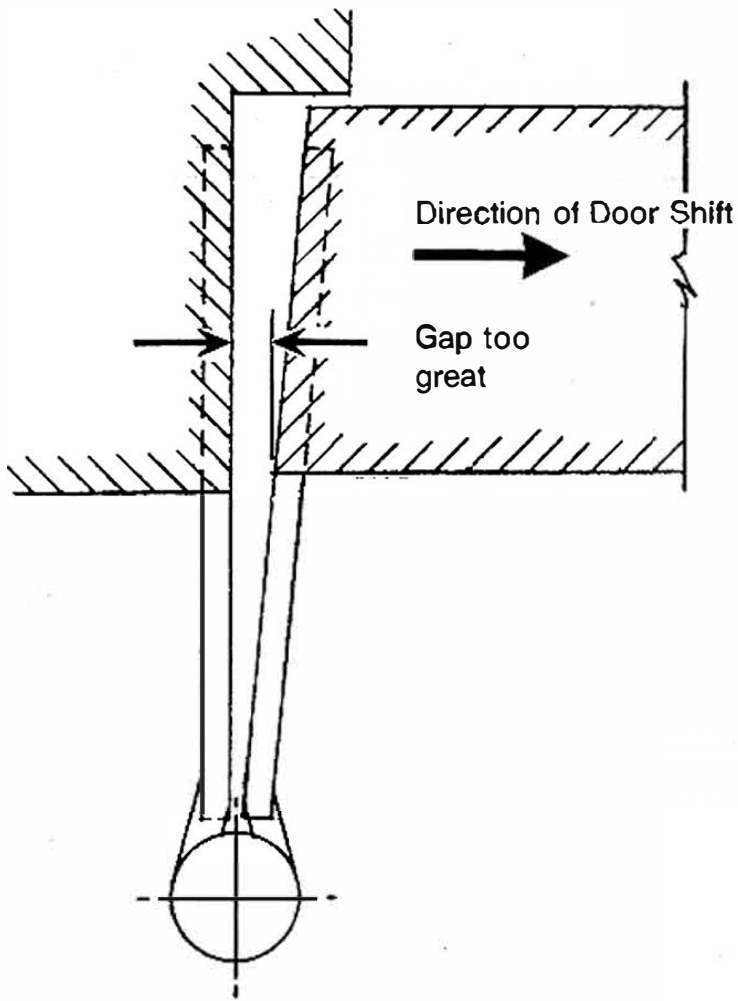
Shimming Instructions



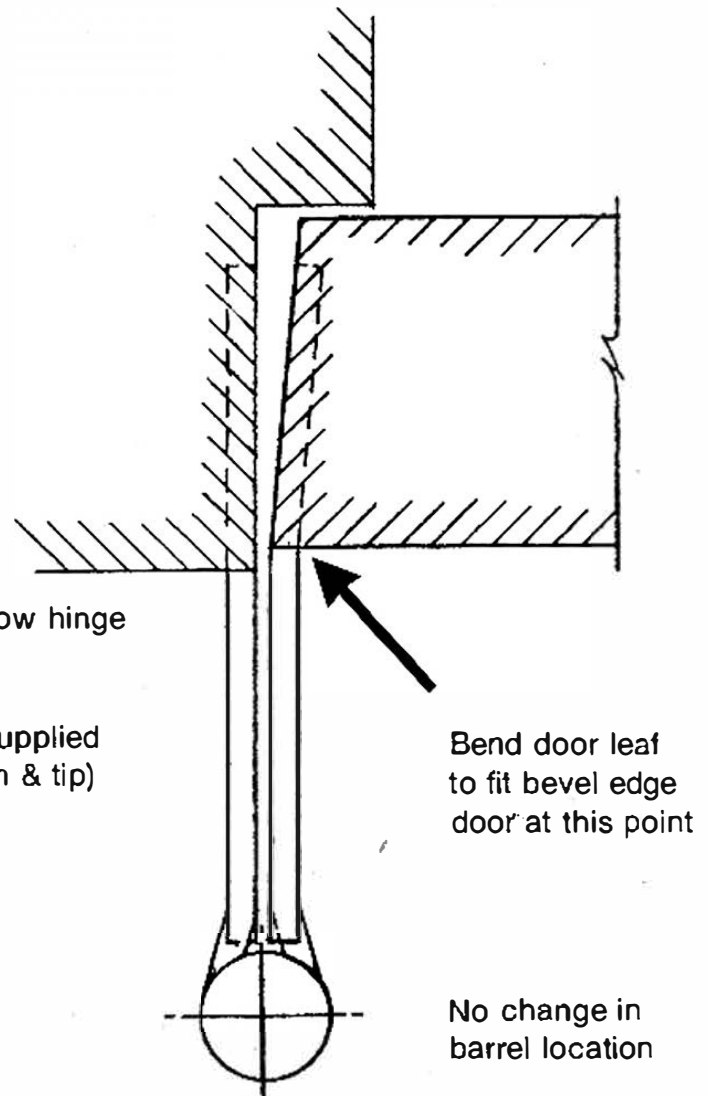
EFFECT OF BEVEL AT HINGE EDGE



CORRECTING BEVEL SHIFT EFFECT AT WIDE THROW OR RAISED BARREL HINGES



Typical wide throw hinge



Effect of wide throw hinges
 on beveled edge doors.

THE BASIC PRINCIPLE

APPLICATIONS SHOWN USING A NARROW SHIM
($\frac{1}{4}$ " WIDE BY LENGTH EQUAL TO HINGE HEIGHT.)

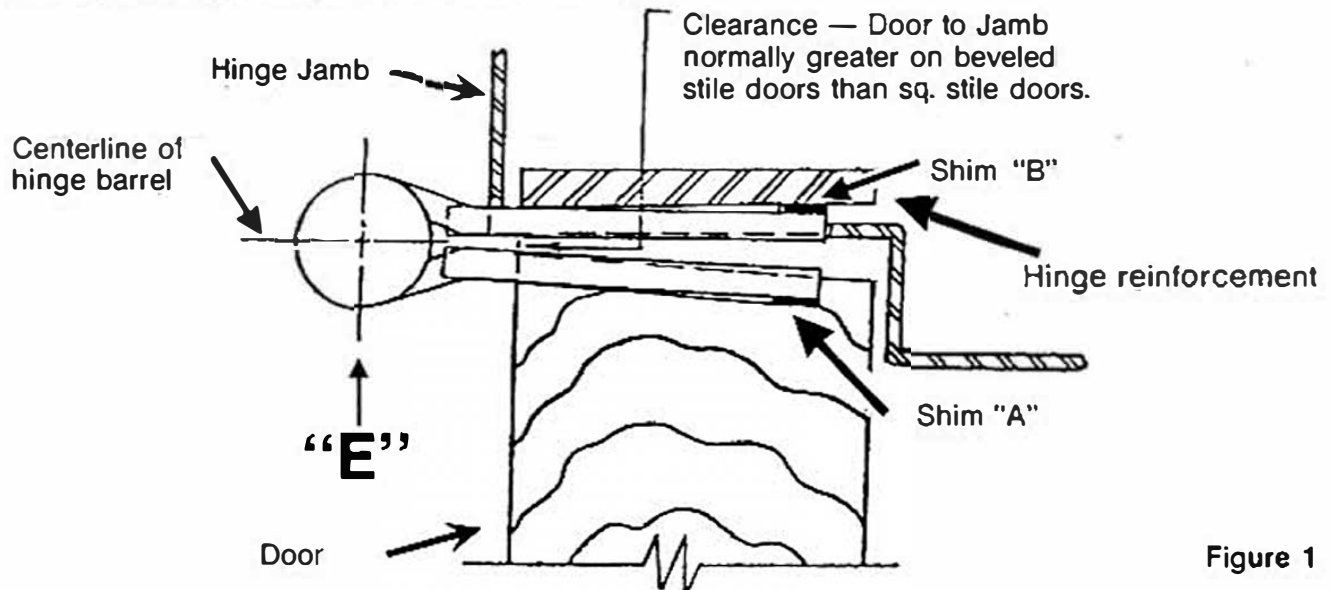


Figure 1

1. Using shim "A" only, door will be relocated in direction of Arrow "E".
2. Using shim "B" only will move both door and centerline of hinge barrel in direction of Arrow "E".
3. Using both shims "A" and "B" will relocate the door in direction of Arrow "E" by a greater amount than by using either "A" or "B" alone. The centerline of the hinge barrel will be relocated the same as by using shim "B" alone.

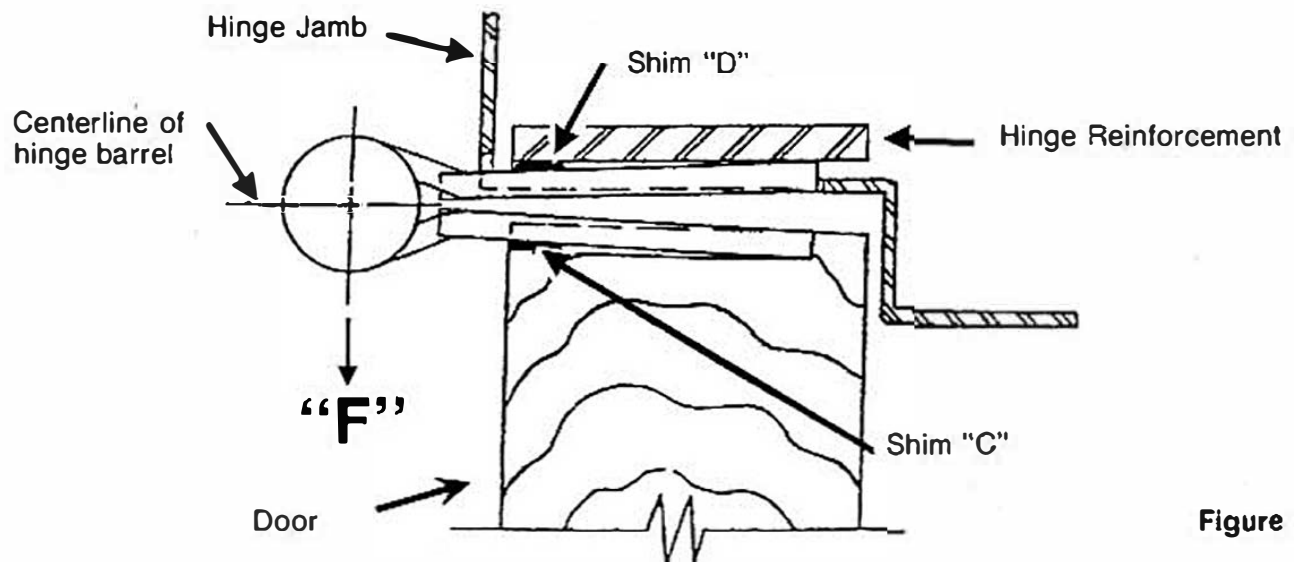


Figure 2

4. Using shim "C" only, door will be relocated in direction of Arrow "F".
5. Using shim "D" only, both door and centerline of hinge barrel will move in direction of Arrow "F".
6. Using both shims "C" and "D" will relocate the door in direction of Arrow "F" by a greater amount than by using either "C" or "D" alone. The centerline of the hinge barrel will be relocated the same as by using shim "D" alone.

NOTE: When Figure 1 is the top hinge and Figure 2 is the bottom hinge, the intermediate hinge (on a straight door and jamb) would not require a shim. All barrels will still line up.

SWING CLEAR HINGE

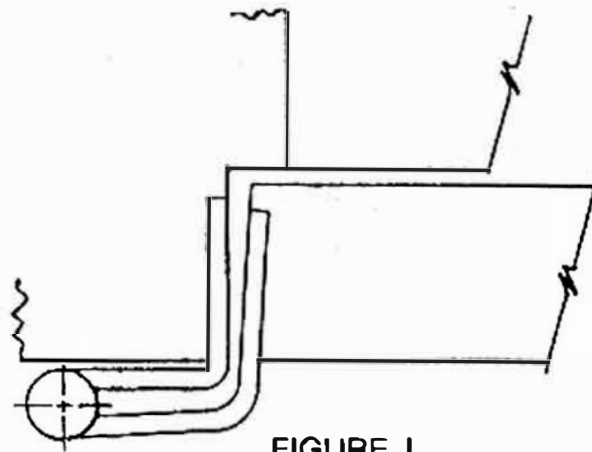


FIGURE I

FIGURE I

A standard full mortise swing-clear hinge, designed for square-styled doors, is shown misapplied to a 1/8" in 2" beveled-stile door.

Note that when door is closed the stop clearance and hinge-side clearance are greater than normal. Door is no longer inset 1/8". There may be lockside interference. Greater door-edge bevels will amplify the described effects.

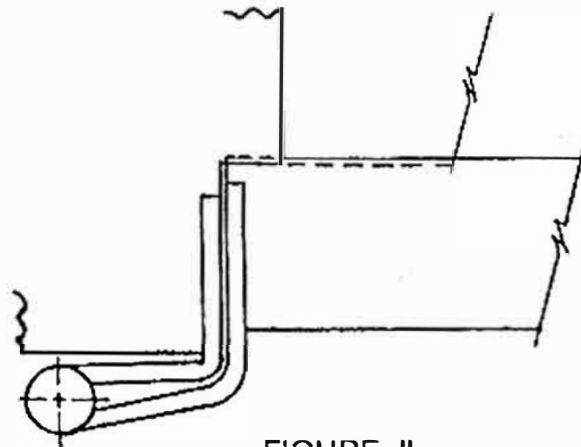
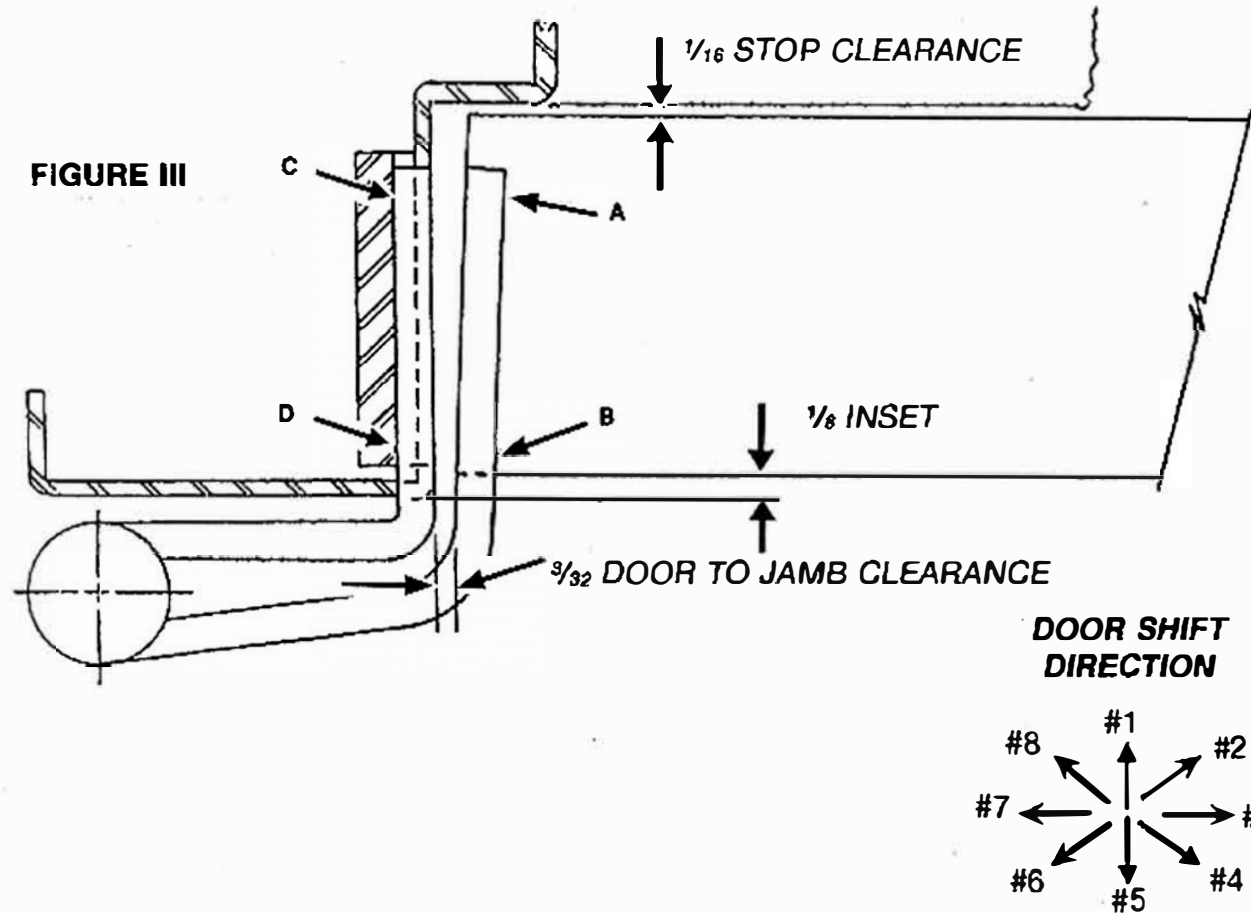


FIGURE II

FIGURE II

A modified full mortise swing-clear hinge, designed for doors beveled 1/8" in 2", is shown misapplied to a square-styled door.

Note that actual interference at the stop would in reality prevent fully closing the door without undue force. Clearance between jamb and door is dangerously reduced so that interference between hinge leaves is possible. Lockside door-to-jamb clearance will be greater than usual and door inset is much greater than normal.



SHIMMING FULL MORTISE SWING-CLEAR HINGES: Figure III show intended door-to-jamb relationship if the proper hinge has been specified. Often the bevel of the door edge is not exactly $1/8''$ in $2''$ or, in the case of square-stile doors, the hinge-mounting surfaces are not exactly parallel when the door is closed. This may cause improper location of door in the opening, as would improper specification (see Figure I and II). Described below are some commonly encountered door conditions, and results which might be expected from various shim placements. Shimming methods will have the same effect regardless of hand or hinge edge condition (beveled or square) of door. Shimming alone may not solve problems arising from incorrect hinge specification or inadequate construction of jamb, or its anchorage.

Too little stop clearance. Solution: A narrow shim ($1/4'' \times 5''$) at "B" will shift door in direction #4. A similar shim at "D" will shift both door and hinge barrel in that direction. See Page 6.

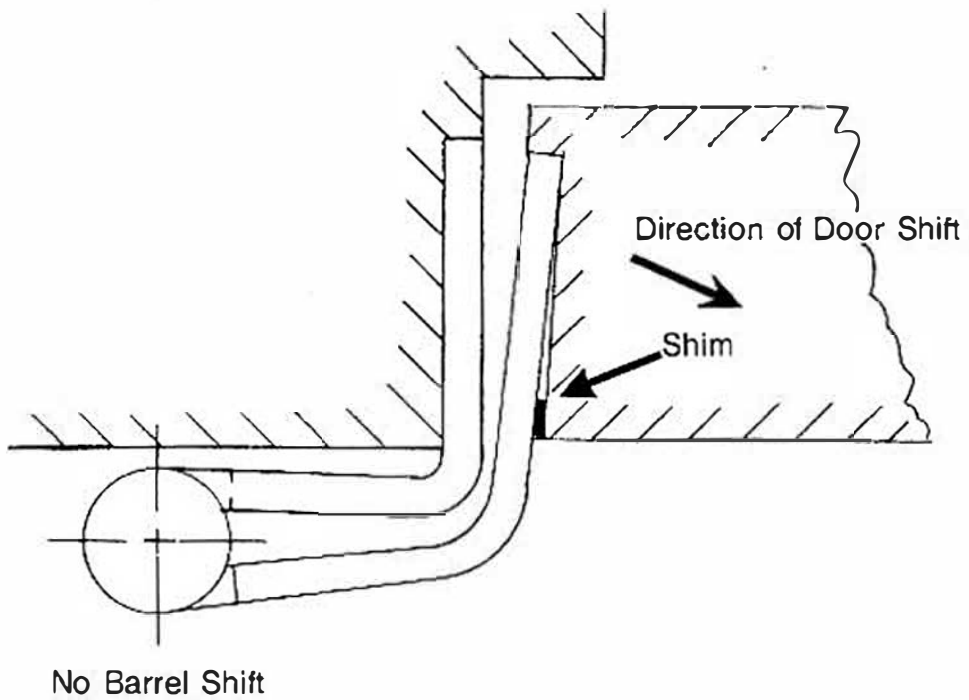
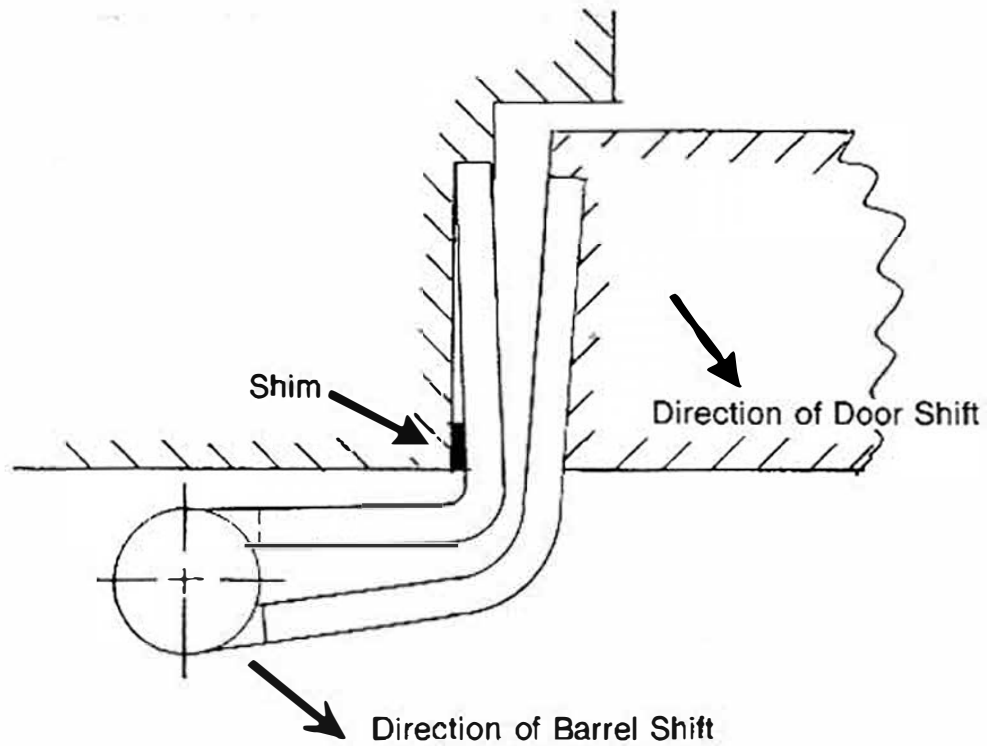
Too much stop clearance. Solution: A narrow $1/4'' \times 5''$ at "A" will shift door in direction #8. A similar shim at "C" will shift both door and hinge barrel in that direction. See Page 7.

Too much lockside door-to-jamb clearance. Solution: A full size $1\frac{1}{2}'' \times 5''$ shim under the door leaf will shift door in direction #3 only. Similar shim under the jamb leaf will shift both door and hinge barrel in that direction. See Page 8.

Too little lockside door-to-jamb clearance. Solution: While a narrow $1/4'' \times 5''$ shim at a "A" will shift door in direction #7, it will also shift the door in direction #1; result will be a door shift in direction #8. This may be acceptable if stop clearance exceeds $1/16''$ before shimming. Otherwise, a deeper mortise or different hinge shape may be required. See Page 7.

SWING CLEAR HINGE SHIMMING

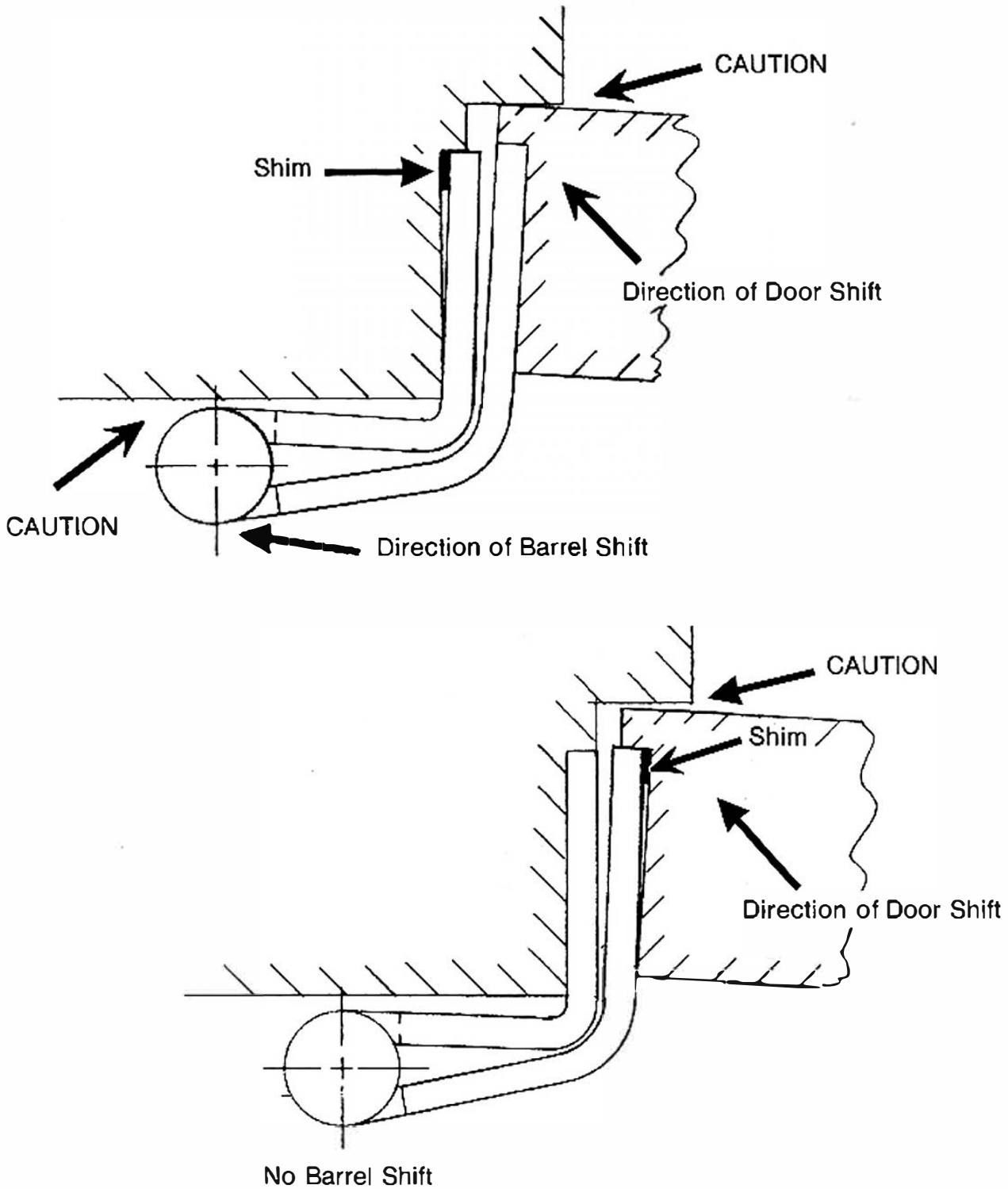
Shimming to move door away from stop.



RESULT: Doors are no longer inset at hinge side.

SWING CLEAR HINGE SHIMMING

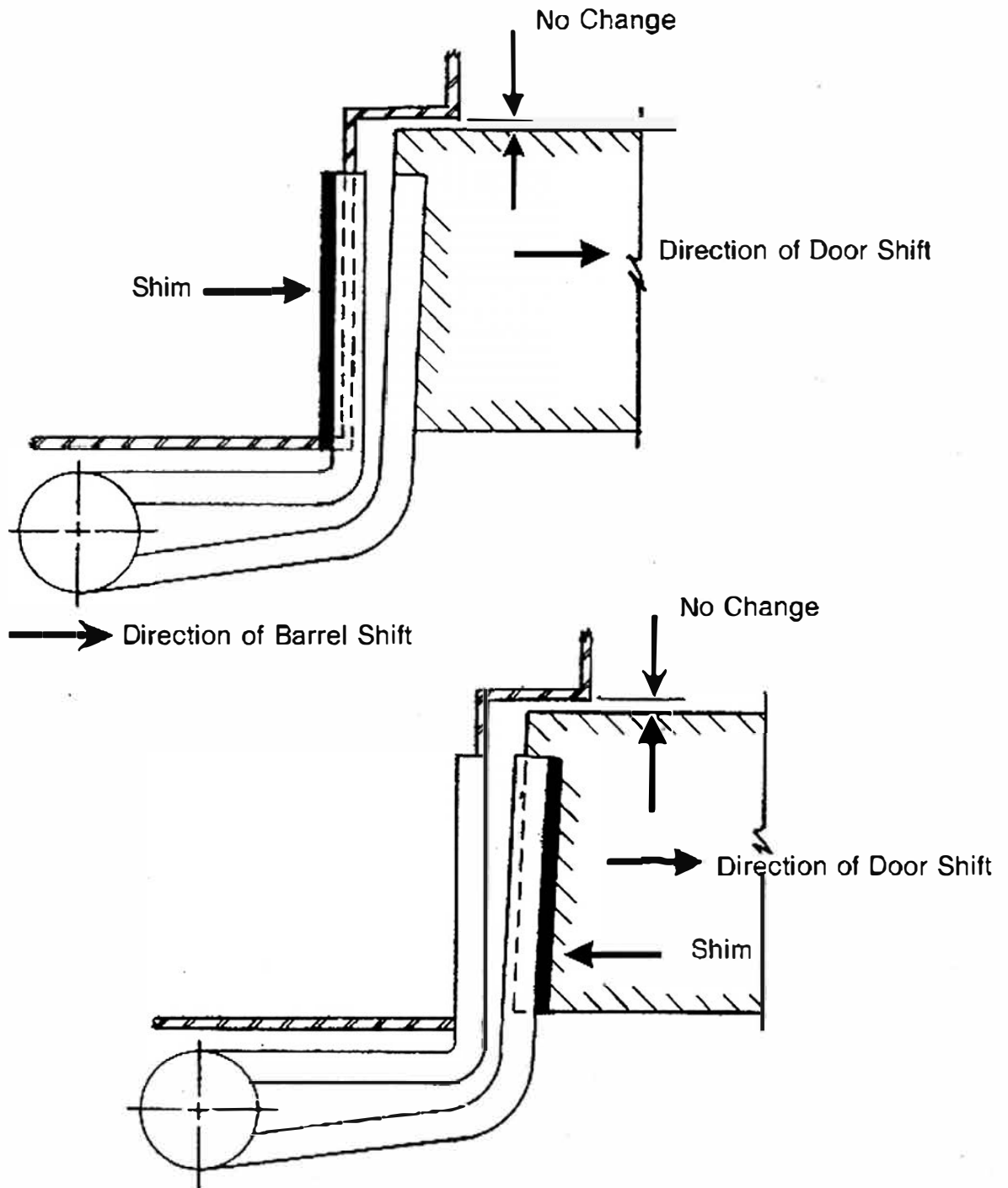
Shimming to move door back toward stop.



RESULT: Either type of shimming can cause door to interfere at stop unless adequate clearance has been provided initially.

SWING CLEAR HINGE SHIMMING

Shimming to move door toward latch side.



RESULT: Either type of shimming can cause door to shift toward lockside.