



MARKAR HS103 HINGE INSTALLATION

Note: Do not install Snap-On cover until installation is 100% complete, and all aspects of the assembly are correctly fastened and properly fitted. The cover is impossible to remove without damage, and replacement may be necessary.

The Universal Screw Pack contains sheet metal, machine, and self-drilling Tek screws for the frame. This allows three different installations options. If mounting on a wood or unreinforced door, follow option (A) in the instructions. Follow option (B) if the door is reinforced or at least 1/8" thick. If you use the self-drilling Tek screws (recommended for grout-filled frames), follow option (C). If the grout is hard, drilling a pilot hole can help.

- Perform each step of these instructions unless specifically labeled (A), (B), or (C).
- (1) Place hinge on frame as shown in Figure 1 on the other side of these instructions.
 - Allow 1/8" between top of hinge and underside of header.
 - Allow 1/16" between stop and edge of hinge.
 - (2) Mark all the hole locations on the door jamb with the hinge held firmly in place.
 - (3) Center punch each hole. The use of the Markar MT-806 center punch can help center the hole so that the fasteners will enter straight. The taper on the tool sits in the countersunk hole on the hinge.
 - (4) (A)&(B) Drill all the holes using a #25 bit.
 - (5) (B) Tap the holes for a 10-24 thread.
 - (6) (A) Attach the hinge to the door with #10x1 1/4" flat head undercut sheet metal screws. OR
 - (6) (B) Tap the holes for a 10-24 thread. Attach the hinge to the door with 10-24x3/4" flat head undercut machine screws. OR
 - (6) (C) Attach the hinge to the door with #10x1/2" flat head undercut self-drilling Tek screws.

- (7) Fold the door leaf back over the frame leaf and place the door in the door frame.
 - Place shims under the door to provide 1/8" clearance between the frame and top of the door.
 - Add shims at both the hinge and latch side of the door so that 1/8" clearance will be maintained on the lock side of the door.
- (8) With the door held firmly in place, return the door leaf to the face of the door.
- (9)(C) Mark the position of the top and bottom holes with a center punch, then drill and fasten with 1/4-20x3/4" self-drilling Tek screws.
- (10) After the top and bottom screws are installed, permanently install the frame leaf with 1/4-20 pan head self-drilling Tek screws. Check alignment.

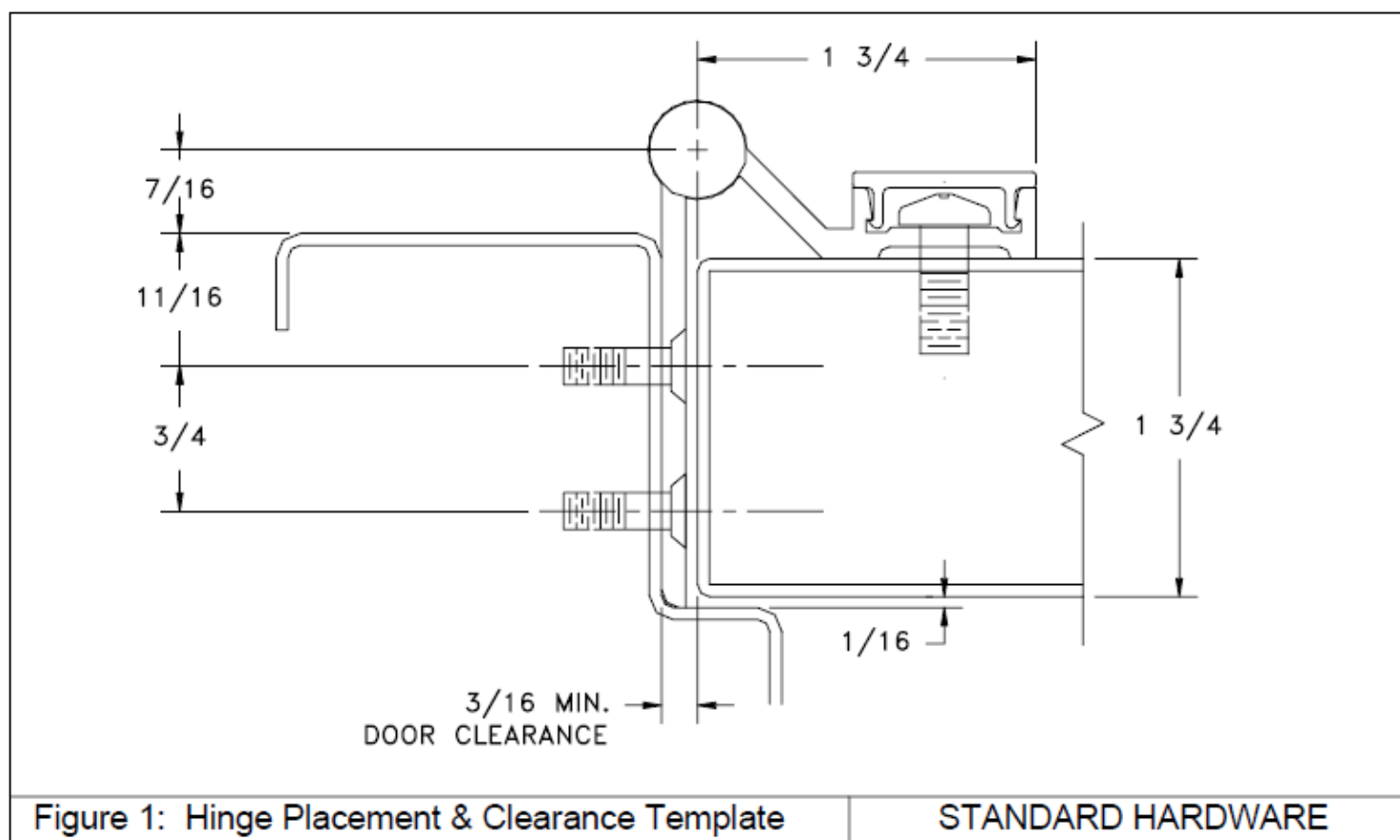
Note that the stress on the hinge is much greater at the top. Markar recommends that all holes at the top of the hinge be drilled and fasteners be installed. At the bottom, only three of the last five holes require fasteners unless the door weighs over 200lbs.

 - Molly Jacknuts and aluminum sleeve bolts (Markar part numbers MP-20 and MP-22) are available from your hardware supplier as an optional means of attaching the door leaf.
- (11) When installation is complete (see **Note** at the start of the instructions), hold the Snap-On cover squarely on the hinge leaf.
- (12) Starting at the top and working downward until the entire length of the cover is firmly engaged, tap the cover firmly using a softwood block to protect the finish from hammer blows.
- (13) With the cover firmly in place, secure it using the #8 sheet metal screw. The screw will be either at the top or bottom of the cover, depending on the handing of the door. (See Figure 2.)



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