

1. Location Of The Hinges

Assuming that you are installing a new wood screen door in a new wood jamb, plan to install the hinges on the door first. Unless you are matching the location of hinges with other doors in your home, use the following standard: The top of the upper hinge should be 7 inches below the top of the door; the bottom of the lower hinge should be 11 inches above the bottom of the door; and the middle hinge should be centered between the top and bottom hinge. (If the hinge mortises are already cut in the jamb go to The 4th Step. Below.

Tip:

Although a middle hinge is generally not necessary for lightweight or 1 1/8 thick wood screen doors, it will give added strength to a heavier, solid-wood door installation. It will also help to straighten any door that is bowed at the middle.

2. Mark Your Hinge Outline

Use a butt marker to score the hinge location on the door and jamb. Available for standard hinge sizes, a butt marker assures that the size of the mortise is exact and that it is located at precisely the right distance in from the face of the door and the edge of the jamb. Locate the marking tool on the door or jamb, and strike it sharply with a hammer a couple times. Then mark the mortise depth on the side of the door (or edge of the jamb) by tracing the hinge thickness; or use a combination square to scribe your mark by setting the blade to extend a distance equal to the butt thickness. Refer to this depth mark when cutting the mortise.

3. Cut the Mortise

Use a chisel that is equal to the width of the mortise, if possible. Cut the top and bottom of the mortise first. (Hold the chisel perpendicular to the surface with the tip on the line scored by the butt marker and the beveled side facing toward the mortise. Strike firmly.) Then cut a V-channel across the mortise anywhere within the mortise. (Hold the chisel at a 45-degree angle with the bevel facing downward, making two cuts at opposite angles.) Next make a series of cuts, spaced about 1/8-in. apart, starting at the V-channel and working toward the outside edge of the mortise. Finally, use the chisel to scrape out the chips; smooth the bottom of the mortise; and clean up the perimeter with perpendicular strokes.

Tip:

Working with a very sharp chisel makes all the difference. A sharp tool requires lighter taps with a hammer. It allows you to make paring cuts with less effort and, therefore, with greater control. And you get a nice clean line between the hinge and the edge of the mortise.

Caution:

Be very careful in the final stages. Use the palm of your hand, rather than a hammer, to tap the chisel when cleaning out debris. When you are cleaning up the long edge of a mortise on a door, be gentle or you might damage the relatively thin strip of material that remains between the mortise and the edge of the door.

4. Attach the Hinge Leaf

Use a self-centering drill bit accessory or a self-centering punch to create a pilot hole that assures that the screw will be centered and on mark. An improperly placed screw can shift the hinge position slightly or force the screw to tilt so its head does not sit flush. Place the hinge leaf in the mortise and position the self-centering tool in the countersink recesses of the hinge. Drill or strike with a hammer, depending on which accessory you are using. When all pilot holes are done, install the screws.

Tip:

If the mortise is a little too deep, cut a thin piece of cardboard the same dimension as the mortise and insert it in the mortise before you install the hinge leaf.

5. Locate the Mating Hinge Leaves

With the hinge leaves installed on the door (or in jamb, as they would be if you were replacing a door in an existing frame), position the door in the opening. Insert shims under the door until there is an even 1/8th-in. gap between the top of the door and the head jamb. Then very carefully mark (transfer) the hinge locations on the jamb directly opposite their location on the door (or onto the door if the jamb hinge leaves were installed first). Cut the mortises and install the hinges as previously described.

6. Install the Door

For a heavy wood screen door, it is wise to install at least one 3-in. screw to secure the top hinge to the jamb. This long screw will penetrate the jamb and anchor the hinge to the framing. The weight of a heavy door can make smaller screws work loose over time, causing the door to sag. That, in turn, may adversely affect a weather-stripping seal or cause the door to rub or stick in the opening. Longer screws at every hinge will make any exterior door more secure.

Tip:

If despite your best efforts a slight misalignment prevents mating hinge leaves from interlocking, make a note of which direction a hinge leaf would need to move so as to correct the problem. Then tap the leaf in that direction with a hammer and a block of wood. And, rather than trying to move one leaf the entire distance, split the difference by tapping the mating leaf in the opposite direction. Be careful - a couple of gentle taps usually is all you need to "persuade" the hinge.