

How to Repair Doors

HOW TO REPAIR DOORS

A door that doesn't fit or close properly is usually the result of:

- Changes in humidity that cause the door to shrink, swell or warp.
- Hinges that are not correctly set or aligned.
- Settling of the house that shifts the door frame out of square.

When one or more of these conditions occur the door may sag, stick or bind, or fail to latch when closed. Some of these problems are easily corrected by adjusting the hinges, while others may require removing the door for sanding or planing.

Tools and Materials Needed

- Hammer
- Screwdriver
- Sandpaper and sanding block
- Block plane, jack plane
- Electric drill 3/8-inch and 1/8-inch drill bits
- Flat metal file
- Wood chisel
- Carpenter's glue
- Wedge
- 3/8-inch hardwood dowels
- Cardboard
- Replacement parts

Repairing a Door that Sticks or Binds

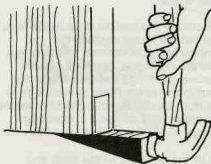
Determine where the door is sticking and how large the area is by sliding a thin cardboard strip along the top, bottom and sides of the door. Mark the spots lightly with a pencil or chalk.

What to do when the door binds at the top or bottom of the latch edge:



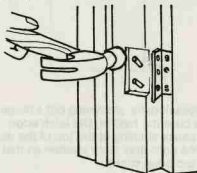
1. Check to see if the top or bottom hinges are loose. If they are, you should be able to make the repair without removing the door.

Open the door fully so that it lies flat against the wall. Support the door by tapping a wedge of wood under the door on the latch side.



Remove the old screws from the hinge. If the screw holes are not too worn or enlarged, you may be able to replace them with larger-diameter screws. Check to see that they will fit through the hinge leaves. Install new screws, and retighten the hinge.

If this won't work, drill out the old screw holes, using a 3/8-inch drill bit. Cut a 3/8-inch hardwood dowel into several short pieces to fit the holes. Apply carpenter's glue to the screw holes and hammer the dowel piece into the hole. When the glue has set, cut off any excess dowel with a chisel. Reposition the hinge leaf and mark the center of the screw holes. Drill new holes in the dowel using a 1/8-inch drill bit. Screw the hinge back in place, using the same screws that you removed.

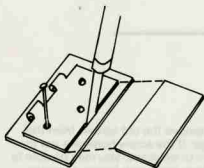


2. If the hinges aren't loose, you may need to reseat the top or bottom hinge by shimming it out.

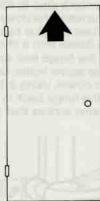
If the door binds at the top of the latch edge, shim out the bottom hinge. If the door binds at the bottom, shim out the top hinge.

Open the door fully and tap a wooden wedge under the latch side of the door. Remove only the screws and hinge leaf that attach the door to the jamb.

Cut a thin piece of cardboard to fit within the hinge mortise on the door jamb. Then, insert the cardboard shim into the mortise, and screw the hinge leaf back onto the jamb.



What to do when the door binds or sticks at the top:

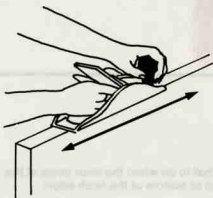


Occasionally shimming out a hinge may cure the bind on the latch edge but cause sticking at the top of the door. Or the door may have swollen so that the top edge sticks.

Open and close the door, marking the area where the door binds. You should not have to remove the door to correct the problem unless the door sticks near the hinge side.

After you've marked the door, open it about halfway and tap a wooden wedge under the latch edge, to hold the door steady.

Since you want to remove as little wood as possible from the door, first try sanding the spot that sticks. If this doesn't solve the problem, use a block plane to smooth down the high spot on the door. Plane in the direction of the wood grain.



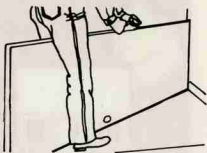
What to do when the door binds or sticks at the bottom or toward the hinge edge:



To make this repair, the door must be taken off its hinges for planing. Be sure to mark the area or spots where the door binds.

Remove the bottom door hinge first. Tap out the hinge pin, using a screwdriver and hammer. If the hinge pins are not loose, you may have to remove the hinge leaf that holds the door to the jamb. Have someone hold the door as you remove the bottom and top hinge pins, or use a supporting wedge under the latch edge of the door.

Lift the door out of the jamb and brace the door before you start to work. Wedge one end of the door in a corner and then straddle the door.



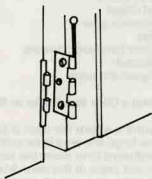
Try sanding the high spots first. If the area to be smoothed is large, you'll need to use a plane for the repair.

When planing the hinge side, you may have to first remove the hinge leaves from the door. If you're planing only a short area on the hinge side, this may not be necessary.

Use a jack or bench plane, if you have one, on the side. The blade should be wider than the door edge, so that the planed surface will be level. Plane in the direction of the wood grain, and be careful not to remove too much wood. If you plane the entire side, the hinge mortises may have to be deepened (see below: **Cutting a Mortise**) before the door is re-hung.

To plane the bottom edge, use a block plane. Work from the top corner toward the center. You'll have to turn the door over on its other long side to plane from the second corner toward the center.

When you re-hang the door, insert the hinge pin in the top hinge first. Then seat the bottom pin. Check to see that the hinge leaves are correctly aligned before you drive in the pins.



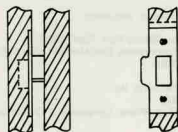
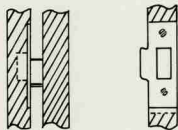
Door Latch and Strike Won't Engage

If the door shuts but won't stay closed, or rattles when closed, the strike plate probably needs adjusting.

Close the door to see whether the latch is striking too high or too low to fit in the strike plate. If the strike is off by 1/8-inch or less, you may be able to file down the top or bottom edge of the strike plate with a flat metal file.

When the latch and strike plate are misaligned by more than 1/8-inch, the entire plate must be raised or lowered on the jamb.

Remove the strike plate and mark a line for the new higher or lower position. Extend the mortise, cutting it higher or lower to the line you've marked (see below: **Cutting a Mortise**).



Replace the strike plate and fill in the exposed part of the old mortise with plastic wood or wood putty.

If the latch tongue doesn't extend into the strike plate, shim out the strike plate, using the same technique as for shimming a hinge. You can also shim out the plate by using two strike plates, one on top of the other.

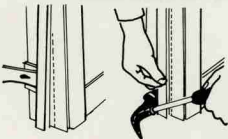
Note: If you've reset the hinges on the door, you may also have to shim out the strike plate.

Correcting Warped Doors

If a door is badly warped, it may have to be replaced.

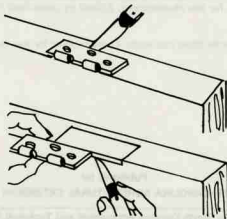
If the warp is not severe and occurs on the hinge side, a third hinge may be installed between the existing hinges. Use a wood chisel to mortise out the hinge-sized area on the door edge (see below: **Cutting a Mortise**). Then screw the new hinge in place.

When the warp occurs on the latch side, remove the door stop that's to the side of the strike plate. Close the door and draw a line on the jamb to show where the stop molding needs to be moved. Then re nail the stop along the line you've drawn. Paint or stain the bare wood that shows after you've moved the stop.



Cutting a Mortise

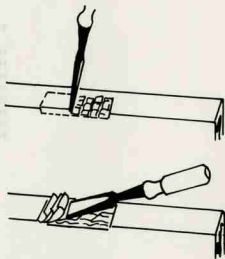
A mortise is the recess into which a hinge leaf or strike plate fits.



Use the hinge leaf or strike plate as a template. With a sharp knife, score an

outline around the hinge leaf or plate. Use the hinge leaf or plate to mark the depth that the cut should be.

Make a series of shallow parallel cuts to the depth you've marked using a wood chisel. To make the cuts, hammer the chisel with a rubber mallet. Hold the chisel nearly vertical or perpendicular to the wood. Keep the beveled side of the chisel away from you.



Then, angle the chisel to about 30 degrees and chip out the wood to the correct depth.

Smooth out the cuts by working the chisel from the side, holding it almost flat. If you cut the mortise too deep, shim it out with a thin piece of cardboard.

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The Home Repair Guides include:

- HE-267-1 How to Replace a Light Switch
- HE-267-2 How to Replace a Receptacle (Outlet)
- HE-267-3 How to Repair a Stem (Two-Control) Faucet
- HE-267-4 How to Repair a Single-Handle Faucet
- HE-267-5 How to Repair Toilets
- HE-267-6 How to Repair Doors
- HE-267-7 How to Repair Walls
- HE-267-8 How to Repair Windows

There are many excellent home repair books and references which may provide useful additional information including:

- Basic Home Repairs Illustrated*, Editors of Sunset Books and Sunset Magazine, Lane Publishing Company, Menlo Park, Calif. 1980
- Better Homes and Gardens Complete Guide to Home Repair*, Maintenance and Improvement, Meredith Corporation, Des Moines, Iowa 1980
- Better Homes and Gardens Step-by-Step Household Repairs*, Meredith Corporation, Des Moines, Iowa 1982
- Home Improvement, Home Repair*, Richard V. Nunn, Creative Homeowner Press, Passaic, N. J. 1980
- Home Repairs and Improvement Series*, Editors of Time-Life Books, Time-Life Books Publishing Co., Alexandria, Va.
- Reader's Digest Complete Do-It-Yourself Manual*, The Reader's Digest Association, Pleasantville, N. Y. 1973
- You Can Do It...The All New How-To-Do-It Book for the Homeowner*, Edited by Jean-Paul St. Michel, Deco-Plans, Longueuil, P.Q., Canada 1980

This list is not inclusive and the naming of books does not imply endorsement by the North Carolina Agricultural Extension Service or criticism of similar ones not mentioned.

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