



P.O. Box 2309  
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# DOVETAIL JIG D2796 OPERATING MANUAL

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# **WARNING!**

**Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm. Some examples of these chemical are:**

- **Lead from lead-based paints.**
- **Crystalline silica from bricks, cement and other masonry products.**
- **Arsenic and chromium from chemically-treated lumber.**

**Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.**

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## INTRODUCTION

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Woodstock International, Inc. is proud to offer the Model D2796 12" Dovetail Jig. Suitable for production work or small scale dovetail joinery, the Model D2796 enables you to simultaneously cut  $\frac{5}{8}$ " half-blind dovetails and pins with a router,  $\frac{7}{16}$ " guide bushing, and  $\frac{1}{2}$ ", 14° dovetail bit. The dovetail jig handles stock up to  $1\frac{1}{4}$ " thick and 12" wide and mounts easily to your bench top. Heavy, stamped steel construction provides excellent rigidity and strength, while the horizontal and vertical cam action clamps securely hold your wood in place. Two optional templates are available for making  $\frac{1}{2}$ " and  $\frac{3}{4}$ " half-blind dovetails and pins.

Woodstock is committed to offering top quality products and supporting them through customer service and technical documentation. The manual you are reading represents our latest effort to produce the best documentation possible. If you have any criticisms or comments you feel we should consider for our next printing, please write us at the address below.

Manager, Technical Documentation  
Woodstock International, Inc.  
P.O. Box 2309  
Bellingham, WA 98227

If you have any parts problems or requests, please contact the dealer where the Model D2796 Dovetail Jig was purchased or call Woodstock International at 1-800-840-8420 between 8am and 5pm Pacific Standard Time, Monday through Friday.

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## COMMENTARY

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To operate this or any tool safely and efficiently, it is essential to become as familiar with its characteristics as possible. Take as much time as necessary to become acquainted with the Model D2796 Dovetail Jig. The time you invest before you use it will be time well spent. Also, read and follow all of the safety procedures noted in this manual. If you do not understand any of the operations or safety guidelines discussed in this manual, please get answers to all your questions before attempting to use this jig. The specifications, drawings, and photographs illustrated in this manual represent the Model D2796 as supplied when the manual was prepared. However, owing to Woodstock's policy of continuous improvement, changes to the Model D2796 may occur at any time with no obligation on the part of Woodstock. Should you receive a manual update, please keep it with the manual for future reference.

The information in this manual has been obtained from sources we believe to be as reliable and up-to-date as possible. We have included some important safety measures which we believe to be essential to this tool's safe operation. While most safety measures are generally universal, Woodstock reminds you that each work environment is different and safety rules should be considered as they apply to your situation.

We also believe additional sources of information are important to realize the full potential of this tool. Trade journals, woodworking magazines, and your local library are good places to find such information.

### **WARNING**

**The Model D2796 was designed for making precise dovetails. It must never be modified and/or used for any other purpose. Modifications or improper use of this tool will void all warranties and may cause serious personal injury. If you are confused about any aspect of the jig, DO NOT use it until you have resolved any questions you might have.**

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## SAFETY RULES FOR ALL TOOLS

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- 1. KNOW YOUR POWER TOOL.** Read the owner's manual carefully. Learn the tool's applications and limitations, as well as its particular hazards.
- 2. KEEP ALL GUARDS IN PLACE** and in working order.
- 3. GROUND ALL TOOLS.** If an adapter is used to accommodate a two-prong receptacle, the adapter plug must be attached to a known ground. Never remove the grounding prong.
- 4. REMOVE ADJUSTING KEYS AND WRENCHES.** Make it a habit to check that keys and adjusting wrenches are removed from the machine before turning it on.
- 5. KEEP WORK AREA CLEAN.** Cluttered areas and benches invite accidents.
- 6. AVOID DANGEROUS ENVIRONMENTS.** Do not use power tools in damp or wet locations or expose them to rain. Keep your work area well lighted.
- 7. KEEP CHILDREN AND VISITORS AWAY.** All children and visitors should be kept a safe distance away from your work area.
- 8. MAKE WORKSHOP CHILD-PROOF** with padlocks, master switches, or by removing starter keys.
- 9. DO NOT FORCE TOOL.** Tools work better and more safely when they are allowed to work at their own speed.
- 10. WEAR PROPER APPAREL.** Do not wear loose clothing, gloves, neckties, or jewelry that might get caught in moving parts. Non-slip footwear should be worn. Wear a hat or other protective head wear if your hair is long.
- 11. NEVER STAND OR LEAN ON TOOL.**
- 12. USE SAFETY GLASSES AND EAR PROTECTION.** Also use a **DUST MASK** if the cutting operation is dusty.
- 13. DO NOT OVERREACH.** Keep proper footing and balance at all times.
- 14. MAINTAIN TOOLS IN TOP CONDITION.** Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
- 15. DISCONNECT TOOLS FROM POWER** before servicing and when changing accessories, such as blades, bits, and cutters.
- 16. AVOID ACCIDENTAL STARTING.** Make sure the switch is in the "OFF" position before plugging in the cord.
- 17. CHECK DAMAGED PARTS.** Do not operate the machine until you are certain it is in perfect running condition.
- 18. NEVER LEAVE THE TOOL RUNNING UNATTENDED - TURN POWER OFF.** Do not leave the tool until it comes to a full stop.
- 19. DO NOT OPERATE THE TOOL IF USING DRUGS, ALCOHOL, OR MEDICATION.**
- 20. DO NOT WORK IN HASTE** or operate machine if you are mentally or physically fatigued.
- 21. IF THERE IS SOMETHING YOU DO NOT KNOW OR UNDERSTAND, DO NOT OPERATE MACHINE!** Ask for help first. Confusion can be dangerous.
- 22. BAD HABITS ARE DANGEROUS.** Review all safety procedures often.
- 23. IF AT ANY TIME YOU ARE EXPERIENCING DIFFICULTIES** performing the intended operation, stop using the machine! Then contact our service department or ask a qualified expert how the operation should be performed.

## UNPACKING

Remove the items packed in the carton. It may be a good idea to save the carton and packing material in case they might be needed in the future. Upon removal of all items from the package, you should have:

1. Dovetail Jig
2. Hand Levers (2)
3. Manual

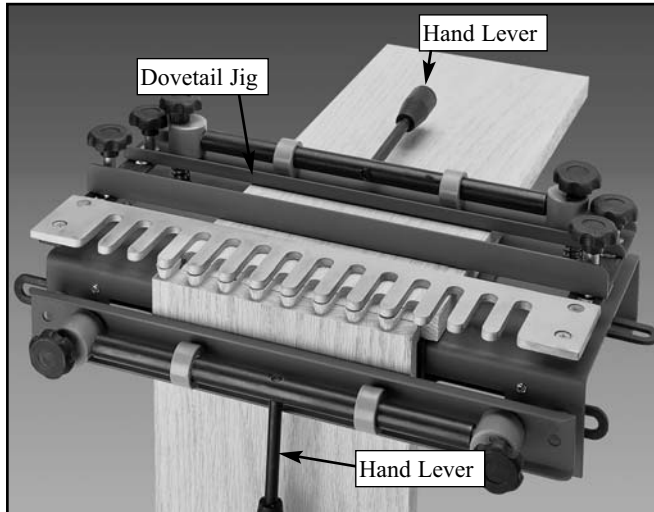
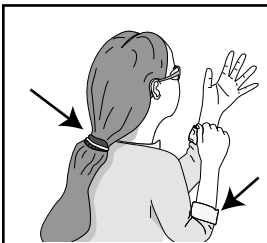


Figure 1 shows the dovetail jig with handles.

## NOTICE

Save all containers and packing materials until you are satisfied that your Model D2796 has arrived in good condition. Freight company adjusters will want to inspect those materials in the event that a freight claim must be made.

## ASSEMBLY



## WARNING

Keep loose clothing rolled up and out of the way of machinery and keep hair pulled back.



## HAND LEVERS

The jig is shipped fully assembled except for the two hand levers.

1. Screw the threaded end of each hand lever into the clamping rods located on the top and front of the dovetail jig as shown in **Figure 1**. Tighten until secure.

## BENCH MOUNTING

1. Place the jig on your bench top so the front lap rests against the front of the bench top.
2. Locate the mounting holes in the rear and front of the jig. Scribe the hole locations and determine whether to use nuts and bolts, or screws. Drill the appropriate size holes.

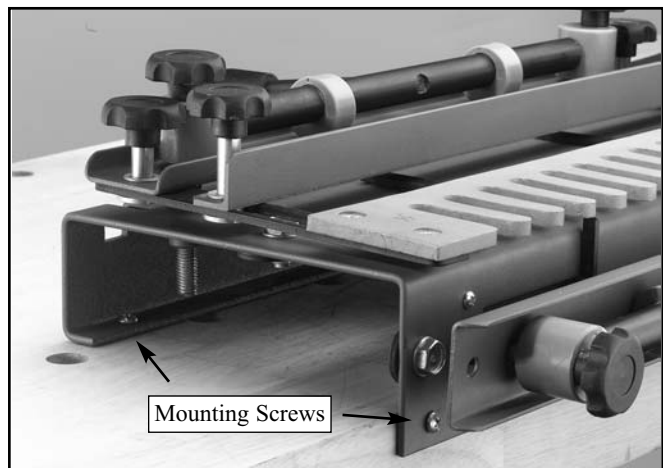


Figure 2 Jig secured to a benchtop.

3. Secure the jig to your bench top. See **Figure 2**.

*Hint: If you do not wish to permanently devote bench space to the dovetail jig, mount the jig to a piece of  $\frac{3}{4}$ " plywood that can be clamped to your bench top.*

# CAPACITIES

The Model D2796 is designed to produce  $\frac{5}{8}$ " half-blind dovetail joints with a router,  $\frac{7}{16}$ " O.D. guide bushing (Figure 3), and a  $14^\circ$ ,  $\frac{1}{2}$ " dovetail router bit. Two optional templates are available for making  $\frac{1}{2}$ " and  $\frac{3}{4}$ " half-blind dovetails and pins. Half-blind dovetails are very strong and are commonly used in fine drawer construction. The term "half-blind" refers to the fact that the pins and tails can only be seen from the side.

1. The Model D2796 is capable of handling material up to  $1\frac{1}{4}$ " thick and up to 12" wide.
2. It is designed to be used with  $\frac{1}{4}$ " shank,  $\frac{1}{2}$ ",  $14^\circ$  dovetail bits only. The bit should protrude exactly  $\frac{9}{16}$ " below the router base. See Figure 4.



Figure 3. Supplies needed for using the jig.

## NOTICE

The guide bushing must be purchased separately for your specific router.

3. The maximum router base size that can be used with this jig is 7" in diameter.
4. The guide bushing should protrude  $\frac{1}{8}$ " to  $\frac{3}{16}$ " below the base of the router and have a  $\frac{7}{16}$ " outside diameter (O.D.).

Figure 5 shows the pin widths produced by different sized templates. Your jig comes with a  $\frac{1}{2}$ " template. Other templates are available from your local Woodstock dealer.

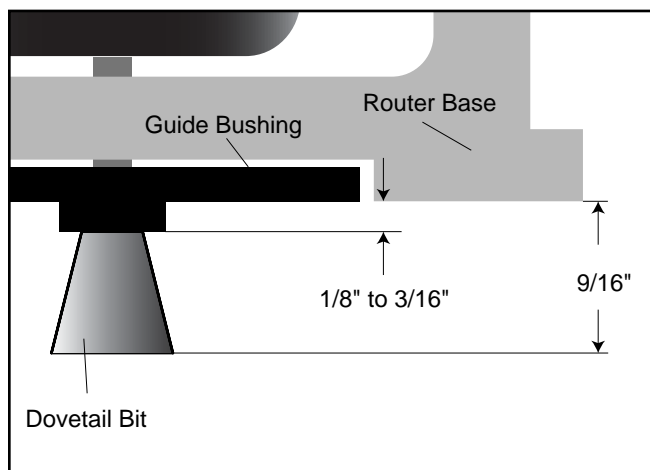


Figure 4. Depth of router bit cut is  $\frac{5}{8}$ " below router base.

Template Size	Bit Size	Bushing Size	Pin Width
$\frac{7}{16}$ "	$\frac{1}{2}$ "	$\frac{7}{16}$ "	$\frac{1}{2}$ "
$\frac{1}{2}$ "	$\frac{1}{2}$ "	$\frac{7}{16}$ "	$\frac{5}{8}$ "
$\frac{9}{16}$ "	$\frac{1}{2}$ "	$\frac{7}{16}$ "	$\frac{3}{4}$ "

Figure 5 gives a description of dovetail pins.

## PREPARATION

### It is important to plan your work before starting!

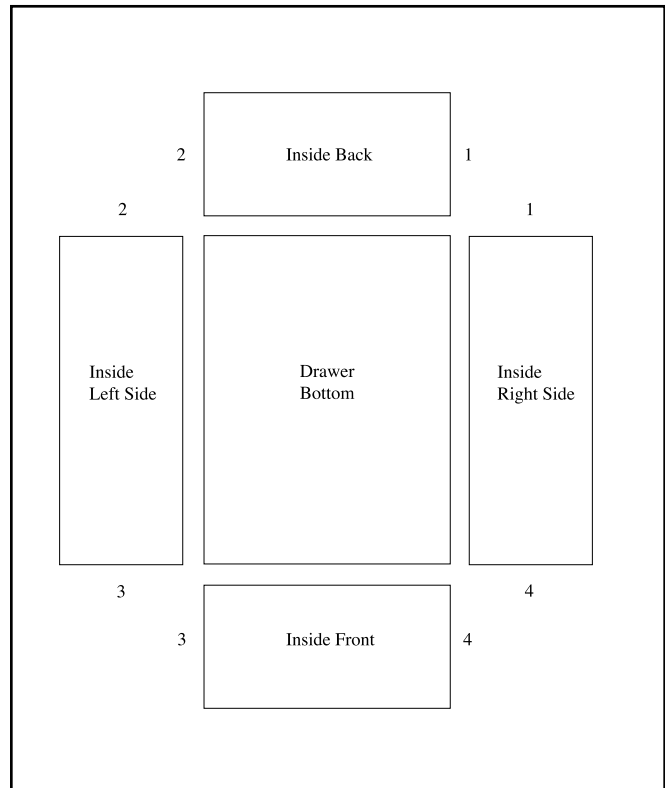
If joining multiple pieces for a drawer or series of drawers, it is best to label the pieces as front, back and sides and which face will be inside or outside. It is also best to label the ends so it is clear which end mates with another. Labeling will save setup time and avoid costly mistakes in the long run.

A typical drawer has a  $\frac{3}{4}$ " thick front with sides made of  $\frac{1}{2}$ " material. Your drawer fronts and backs must be at least  $\frac{5}{8}$ " thick to fully accommodate the length of the dovetails without compromising strength.

After all the pieces have been cut to size and checked to ensure squareness, set them on a bench in the order that they will be fitted together. Lay each piece down so the inside faces up. Label each piece on the inside as shown in **Figure 6**.

When planning the dimensions of your dovetail joints, it is important to consider how the tails and pins will be aligned across the joint. You want to avoid having very thin partial tails on either side of the joint. Follow these guidelines and you will be assured of having at least  $\frac{1}{2}$ " width tails and pins on each side of the joint.

- $\frac{1}{2}$ " template; stock width should be 1" increments
- $\frac{7}{16}$ " template; stock width should be  $\frac{7}{8}$ " increments
- $\frac{9}{16}$ " template; stock width should be  $1\frac{1}{8}$ " increments



*Figure 6 shows the pieces laid out for labeling.*

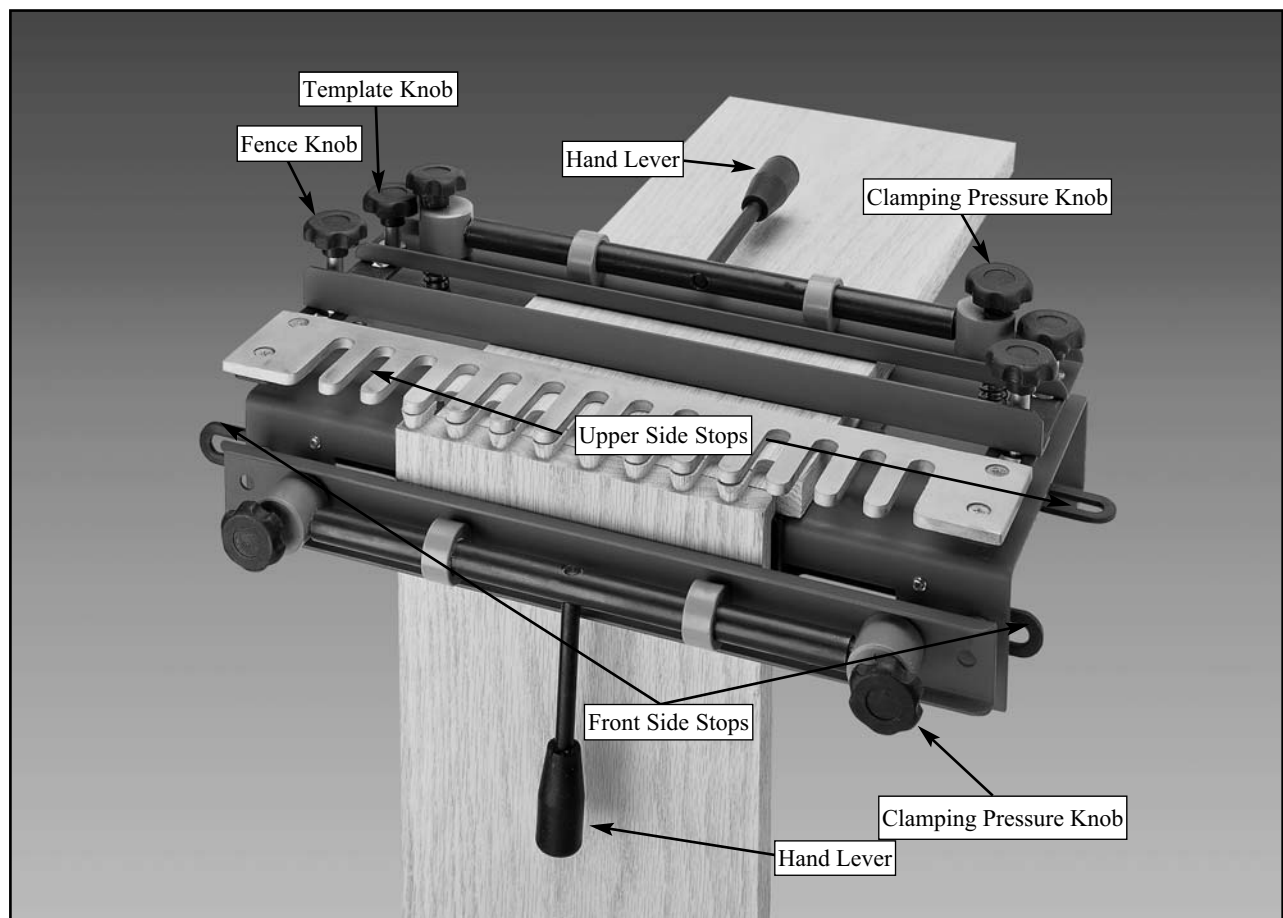


## ADJUSTMENT LOCATIONS

1. The **hand levers** clamp your workpiece in place.
2. The **fence knobs** hold the fence in place. Loosen these knobs to adjust fence position.
3. The **upper side stops** align the workpiece horizontally under the template.
4. The **front side stops** align the vertical workpiece to the horizontal workpiece.
5. The **template knobs** hold the template in place. Loosen these knobs to adjust template position.
6. The **clamping pressure knobs** control the height of the clamping bar and adjust cam clamping pressure.

### NOTICE

When describing adjustments and operations in this manual, reference is made to the pieces being joined as fronts, backs or sides. These pieces indicate drawer fronts, backs, and sides. Front and back pieces mount horizontally on top of the jig and side pieces mount vertically in the front of the jig. The insides of the boards always face out!



*Figure 7 shows the adjustment locations for the dovetail jig.*

## CLAMP ADJUSTING

The clamping pressure should be adjusted so the work-piece can be easily slid under the bar when the hand lever is up. Push the hand lever down to hold the work-piece in place. See **Figure 8**. Do not use excessive force when pushing the lever. If the lever will not lock firmly under average pressure, loosen the clamping pressure knobs slightly and try again.

### NOTICE

**If the clamping pressure knobs are set too tight, the template will slightly lift up off the workpiece. This will reduce the accuracy of the joint dramatically. Make sure to watch the template when clamping down. If the template flexes up, reduce the clamping pressure knobs and try again.**



*Figure 8 shows correct alignment when clamping pressure is properly adjusted.*

## SIDE STOP SET UP

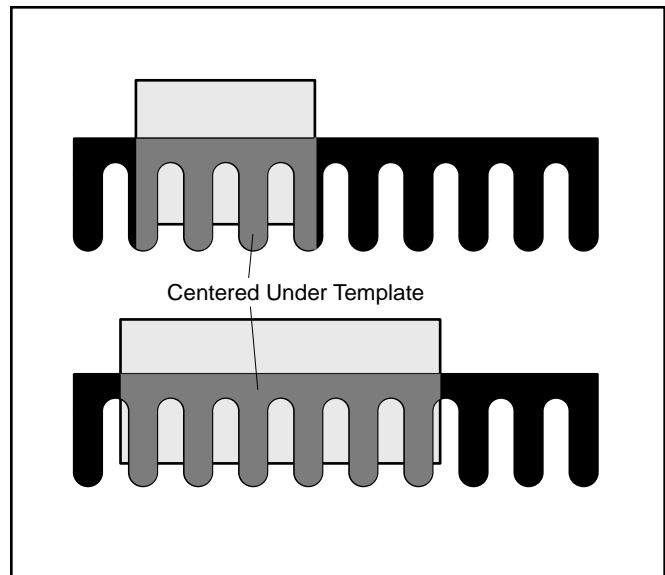
The side stops serve three purposes: (1) they position each work piece square to the fence and one another, (2) they offset each work piece the correct amount, and (3) they provide lateral support to each work piece while performing the routing operation.

## NOTICE

**All work pieces must be cut perfectly square for the dovetail joints to fit properly.**

### To Adjust:

1. Loosen the fence and slide to the rear. Slide the drawer piece horizontally under the top clamp and the template. Place the drawer against either the left or right side stop.
2. Loosen the adjustment screw on the side stop and shift the side stop and the work piece until the wood is centered under the template fingers. See **Figure 9**. Centering ensures that the pins and tails on the ends will be identical to one another. Re-tighten the side stop screws but do not over tighten.
3. Grasp the jig template from behind and gently pull it forward. When the template is tight in its full forward position, clamp the work piece in place. Repeat this procedure each time you clamp your top workpiece to ensure that subsequent cuts are consistent.

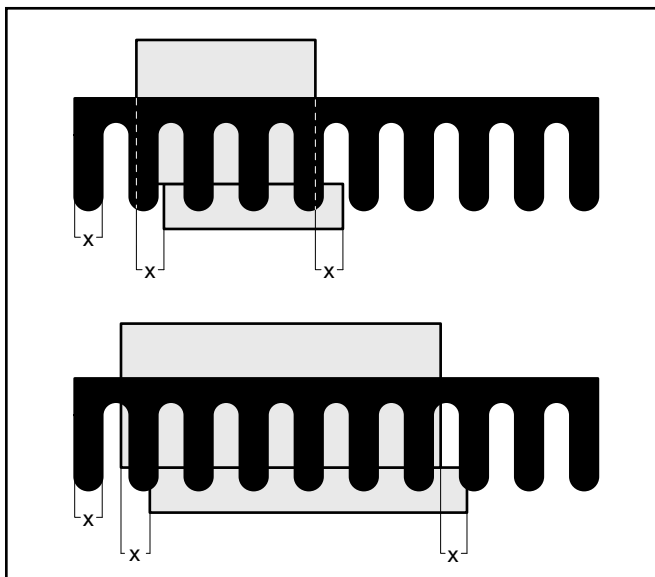


*Figure 9. Center drawer piece under the template fingers.*

## NOTICE

**Since tails and pins are routed in one operation, drawer sides must be offset. The amount of offset is equal to the width of one template finger.**

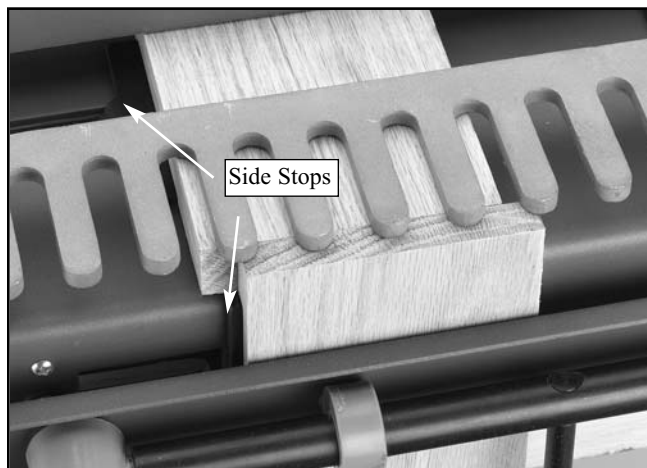
4. Insert a drawer side under the front clamp. This piece will be vertical. Adjust the height so the top end of the vertical piece overlaps the end of the horizontal piece. At this point, it is not critical that the pieces be flush.
  5. Clamp the side in place.
  6. Release the horizontal piece and butt it against the side piece mounted in the front of the jig. Ensure that the horizontal piece remains centered under the template fingers. Re-clamp in place.
  7. Release the side piece and slide it to the right so that the edges of the pieces are offset by one full width of a template finger. With the included template, the measurement of offset is  $\frac{1}{2}$ ". Re-clamp in place. See **Figure 9B**.
  8. Slide the front side stop against the side piece edge and tighten down. Be careful not to over tighten.
  9. Check to make sure the drawer front is centered under the template finger, the drawer side is offset from the drawer front by the width of a template finger, and that all edges are flush against one another. Also, make sure the drawer edges are flush against the side stops.
10. Your jig set up should look like **Figure 10**.



**Figure 9B.** Offset the two drawer pieces by width of a template finger.

## NOTICE

The dovetail jig is capable of processing (2) sets of joints at one time if the sum of the widths of both sets is less than 12". If you wish to make (2) sets of joints at one time, adjust both sets of side stops at each end of the jig. Refer to Steps 1-9 above.



**Figure 10.** Jig side stops correctly set up.

## IMPORTANT

For the best results, we recommend using  $\frac{3}{4}$ " (or thicker) material for drawer fronts and backs and material approximately  $\frac{1}{2}$ " (or slightly thicker) for drawer sides. Make sure there is no more than  $\frac{1}{4}$ " difference in wood thickness between the front/back and the sides. Make sure when preparing your lumber for dovetailing that all materials are squared uniformly to 90°. Lumber that isn't square will just about guarantee unsatisfactory results.

It is also essential that all adjustments of the jig be set exactly parallel. Before making a cut, inspect:

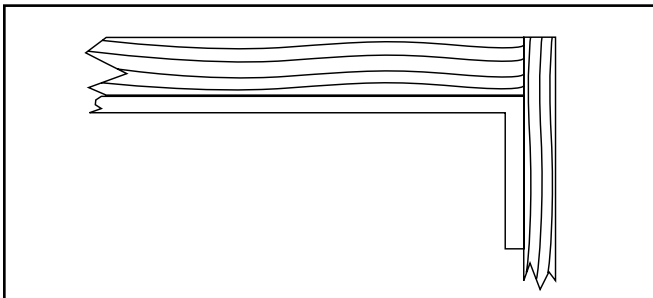
1. Alignment between front and side workpieces.
2. Alignment between the wood, the stops, and jig.
3. Alignment between the template and the front edge of the wood.
4. Alignment between the fence and the front of the template.

# TEMPLATE ADJUSTMENT

The template is adjustable from front to back so that the joint will be hidden when the dovetails are complete. Adjustment is made by loosening the two template lock knobs. Do not adjust the screws holding the template.

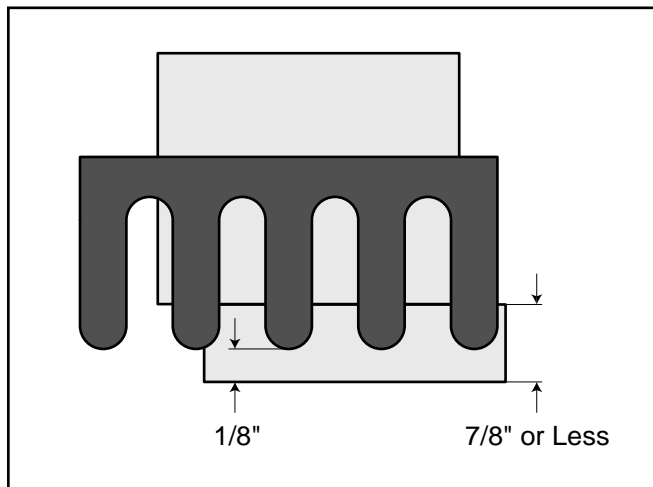
## To adjust the template to the proper position:

1. Mount your drawer pieces in the jig. The horizontal piece must be tight and flush with the top of the vertical piece. When mounted correctly, the top edge of the vertical piece sits flush with the top of the horizontal piece. See **Figure 11**.



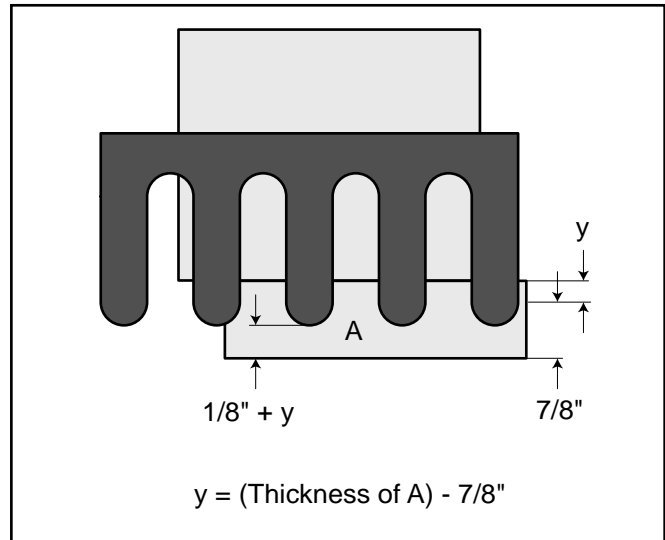
*Figure 11 shows the proper positioning between the horizontal and vertical workpieces when mounted in the dovetail jig.*

2. For side pieces that are  $\frac{7}{8}$ " thick and less, slide the template so the front edge of the template fingers are  $\frac{1}{8}$ " back from the top edge of the vertical piece. See **Figure 12**.

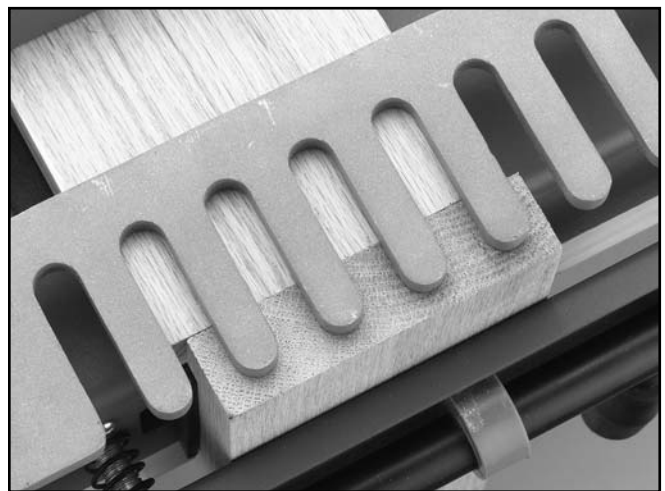


*Figure 12. Correct template adjustment for stock  $\frac{7}{8}$ " thick and less.*

3. For side pieces thicker than  $\frac{7}{8}$ ", add  $\frac{1}{8}$ " to the amount that the board exceeds  $\frac{7}{8}$ ". Then, set the front edge of the template fingers back from the edge by that sum. See **Figure 13 and 14**.

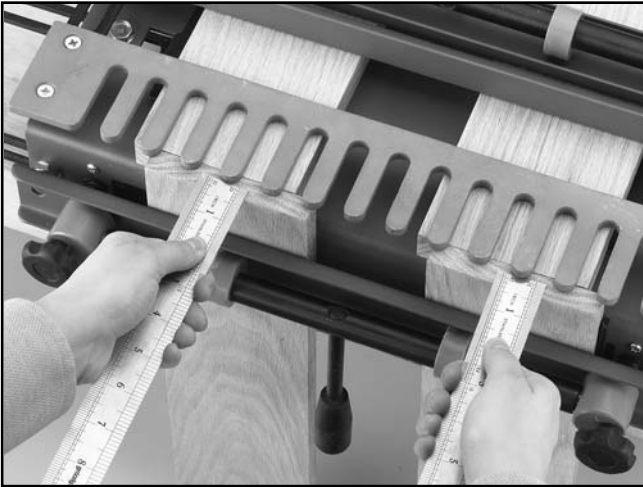


*Figure 13. Correct template adjustment for stock thicker than  $\frac{7}{8}$ ".*



*Figure 14 shows the template set back an additional  $\frac{1}{8}$ " for a 1" thick board. The inside faces are showing.*

4. To measure at both ends of the jig, try shifting the vertical piece to the other end of the jig or clamp two pieces at each end of the jig as shown in See **Figure 15**. *It is not necessary to simultaneously measure with two rulers. The two rulers only represent two measurement locations.*
5. Tighten the two template lock knobs and re-check your measurements.



*Figure 15. Make sure template is parallel to drawer edges.*

## NOTICE

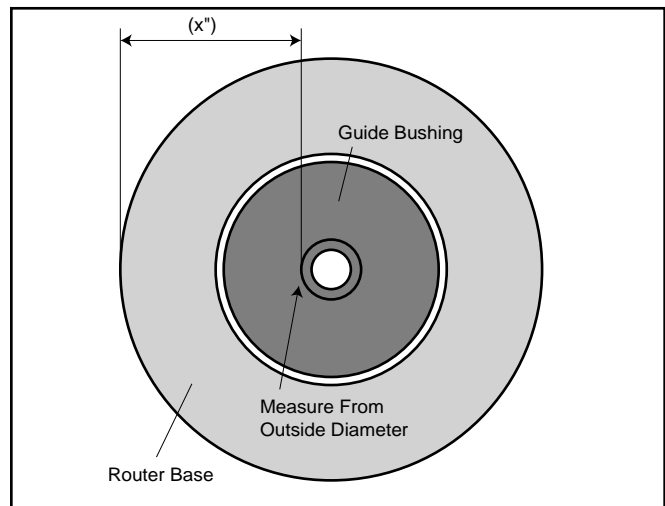
Ensure that the front edge of the template is parallel to the edge of the vertical workpiece. To maintain a high degree of accuracy when adjusting the template, measure at one end of the jig, then measure at the other end. Make adjustments to the template and re-measure both positions.

# FENCE ADJUSTMENT

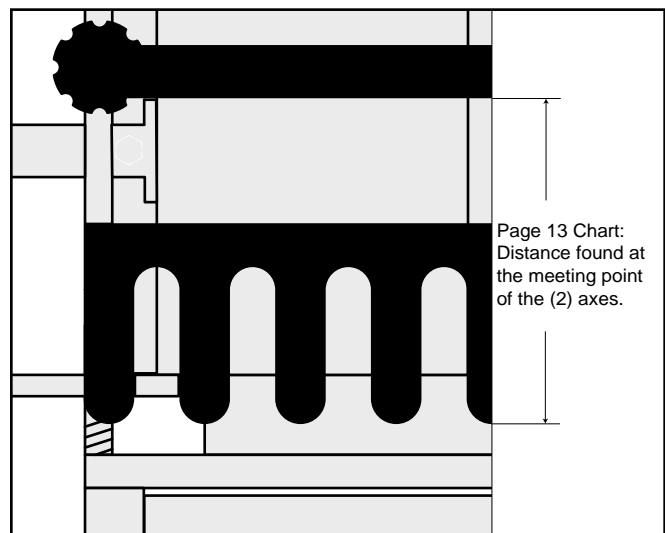
Once the side stops have been accurately set up, the fence needs to be properly adjusted. The fence is designed to control how far back into the template the router will cut. If the fence is not set back far enough, the drawer pieces will not fit all the way together. If the fence is set too far back, the drawer pieces will slide into one another too far leaving excess material on the joint.

On the next page is a chart used to determine how far back from the template to set the fence. Perform the following steps to determine the correct amount:

1. Measure the distance (x") from the edge of your router base to the outside edge of the guide bushing. See **Figure 16**.
2. Measure the thickness (in inches) of the vertical drawer piece in the jig.
3. Use the chart on the next page. Find where the two axes meet for your specific measurements. This is the distance (in inches) that should be between the fence and the front edge of the template fingers.
4. Adjust the fence accordingly. See **Figure 17**.



**Figure 16. (Bottom)** Measure distance from edge of router base to the outside edge of guide bushing.



**Figure 17.** Fence adjustment away from front of template fingers.

# FENCE ADJUSTMENT TABLE

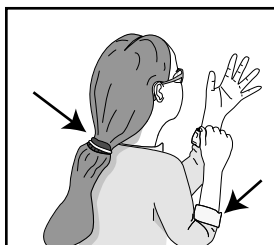
Thickness of Vertical Piece (Measurement x" from Fig.16)

Distance from Edge of Bushing to Edge of Router Base

	1/2	17/32	9/16	19/32	5/8	21/32	11/16	23/32	3/4	25/32	13/16	27/32	7/8
2	2 13/16	2 7/8	2 15/16	3	3 1/16	3 1/8	3 3/16	3 1/4	3 5/16	3 3/8	3 7/16	3 1/2	3 9/16
2 1/32	2 27/32	2 29/32	2 31/32	3 1/32	3 3/32	3 5/32	3 7/32	3 9/32	3 11/32	3 13/32	3 15/32	3 17/32	3 19/32
2 1/16	2 7/8	2 15/16	3	3 1/16	3 1/8	3 3/16	3 1/4	3 5/16	3 3/8	3 7/16	3 1/2	3 9/16	3 5/8
2 3/32	2 29/32	2 31/32	3 1/32	3 3/32	3 5/32	3 7/32	3 9/32	3 11/32	3 13/32	3 15/32	3 17/32	3 19/32	3 21/32
2 1/8	2 15/16	3	3 1/16	3 1/8	3 3/16	3 1/4	3 5/16	3 3/8	3 7/16	3 1/2	3 9/16	3 5/8	3 11/16
2 5/32	2 31/32	3 1/32	3 3/32	3 5/32	3 7/32	3 9/32	3 11/32	3 13/32	3 15/32	3 17/32	3 19/32	3 21/32	3 23/32
2 3/16	3	3 1/16	3 1/8	3 3/16	3 1/4	3 5/16	3 3/8	3 7/16	3 1/2	3 9/16	3 5/8	3 11/16	3 3/4
2 7/32	3 1/32	3 3/32	3 5/32	3 7/32	3 9/32	3 11/32	3 13/32	3 15/32	3 17/32	3 19/32	3 21/32	3 23/32	3 25/32
2 1/4	3 1/16	3 1/8	3 3/16	3 1/4	3 5/16	3 3/8	3 7/16	3 1/2	3 9/16	3 5/8	3 11/16	3 3/4	3 13/16
2 9/32	3 3/32	3 5/32	3 7/32	3 9/32	3 11/32	3 13/32	3 15/32	3 17/32	3 19/32	3 21/32	3 23/32	3 25/32	3 27/32
2 5/16	3 1/8	3 3/16	3 1/4	3 5/16	3 3/8	3 7/16	3 1/2	3 9/16	3 5/8	3 11/16	3 3/4	3 13/16	3 7/8
2 11/32	3 5/32	3 7/32	3 9/32	3 11/32	3 13/32	3 15/32	3 17/32	3 19/32	3 21/32	3 23/32	3 25/32	3 27/32	3 29/32
2 3/8	3 3/16	3 1/4	3 5/16	3 3/8	3 7/16	3 1/2	3 9/16	3 5/8	3 11/16	3 3/4	3 13/16	3 7/8	3 15/16
2 13/32	3 7/32	3 9/32	3 11/32	3 13/32	3 15/32	3 17/32	3 19/32	3 21/32	3 23/32	3 25/32	3 27/32	3 29/32	3 31/32
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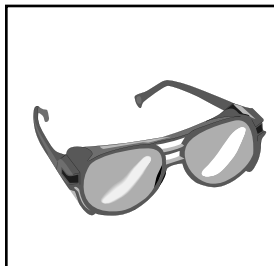
**ADJUSTMENTS**

# OPERATIONS



## **!WARNING**

Keep loose clothing rolled up and out of the way of machinery and keep hair pulled back.



## **!WARNING**

Wear safety glasses during the entire operation process. Failure to comply may result in serious personal injury.

Your router base must accept a guide bushing with a  $\frac{7}{16}$ " outside diameter and an inside diameter large enough to accept a  $\frac{1}{4}$ " shank dovetail bit. Securely mount the guide bushing to your router.

Refer to your router's operating manual for further instructions.

Choose a  $\frac{1}{2}$ " 14° Dovetail router bit with a  $\frac{1}{4}$ " shank. Ensure that the router is unplugged. Securely mount the bit in the router collet.

Set the router bit to extend  $\frac{9}{16}$ " below the base plate of the router.

Before cutting tails and pins in a finish piece, it is important to test your adjustments with sample pieces to judge the quality of the joint. It may be necessary to make additional adjustments to the dovetail jig to improve the fit. With the jig completely adjusted, you should be ready to test it out. Review all safety guidelines on Page 2 if you are not sure about the risks associated with operating a router in conjunction with this jig.

## HALF-BLIND JOINTS

To use the dovetail jig:

1. Position the mated pieces in the jig so the insides face out and up. Each piece must be tight against the side stops. The back piece is positioned horizontally on top of the jig. The mating side piece positioned vertically in the front of the jig. Secure the drawer pieces with the clamps. The end of the side piece must be flush with the top face of the back piece. See **Figure 18**.
2. The router base and bit must be secure before plugging in your router. Hold the router firmly with both hands and support it on the template. Make sure that the bit is clear of the workpiece.



*Figure 18 shows the dovetail jig set up for use. The inside faces of the boards are showing.*



Turn the router on and gently ease the bit into the work, letting the guide bushing gently contact the template. Facing the dovetail jig, start at your left side and work to the right, following each template finger in and out. Ensure that the router base and guide bushing stay in firm contact with the template. See **Figure 19**.

**Hint:** If you are using material thicker than  $\frac{7}{8}$ ", cut it in two stages. First, remove the material *IN FRONT OF* the fingers. Second, remove the material *BETWEEN* the fingers. Use care when the router bit exits the workpiece to reduce the risk of tear-out.

3. Remove both pieces from the jig and join the dovetails. See **Figure 20**.
4. It may be necessary to tap the two pieces together with a hammer and wood block. If alignment is so poor that the two pieces will not fit together, line up each piece as much as possible and determine the direction and degree of fine adjustment.

If the two pieces do not fit, it is usually because they were not milled square or the pieces were not flush with each other in the jig.



*Figure 19* shows the dovetail jig in use.



*Figure 20* shows a finished drawer and 2 sides ready to be joined.

## TIPS FOR OPTIMUM RESULTS

Don't clamp your work down too tight. Over-clamping tends to lift the wood on the front side of the jig.

Maintain steady, even pressure on the router when cutting. Remove materials in several smaller passes, rather than one large pass. This will lessen the chances of damaging your project or your router bit.

Use pieces of scrap wood the same thickness as your workpieces to provide an even base for the template and clamping mechanisms. Place them at the opposite end of the template and clamps before tightening the jig.

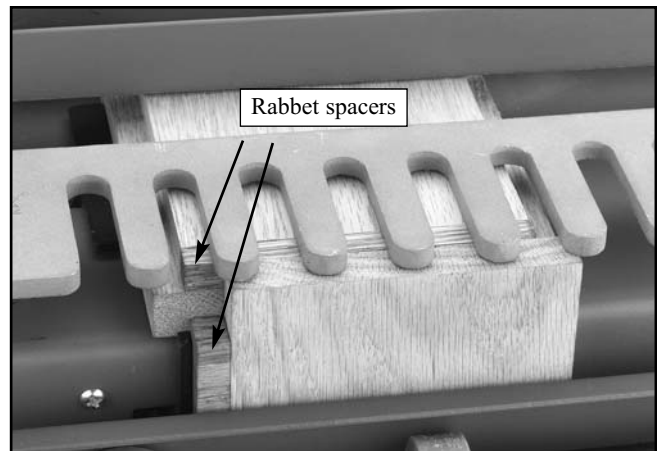
Be sure the template is sitting flat across the length of your workpiece before routing to ensure even cut depth.

## HALF-BLIND JOINTS ON RABBET-ED DRAWER FRONTS

Drawer fronts that have been rabbeted around the inside edge to create a lip to restrict drawer travel in the closed position require some additional setup.

### To produce half-blind dovetails on rabbeted drawer fronts:

1. A spacer must be added to the vertical side stop in the front of the jig to compensate for the rabbet. The width of the spacer must be the same width as the rabbet. See **Figure 21**.
2. The fence must also be set back an additional amount equal to the width of the rabbet.
3. Since the side piece is unsupported by the front piece (the rabbet created a void behind the side piece), it is likely that the router bit will cause tear out each time the bit exits the side piece. To prevent tear out, place a wood spacer cut to the same dimensions as the rabbet for back-up support behind the top edge of the side piece.



*Figure 21 shows lining up a rabbeted board and where to locate the spacers to prevent tear-out.*

# TROUBLE SHOOTING

## TEAR-OUT

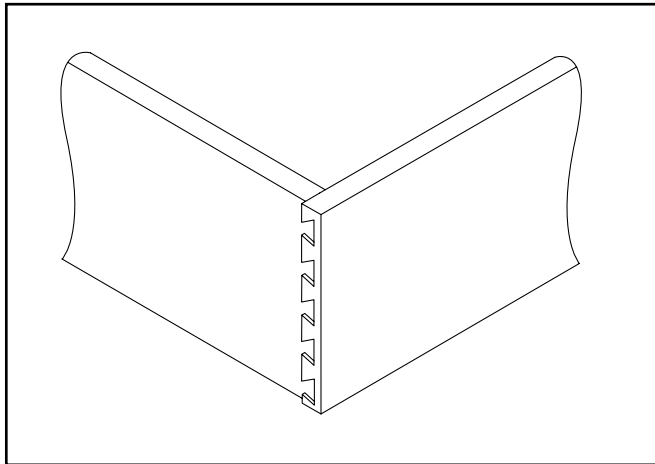
When cutting across the grain of the wood, tear-out or splintering may occur when the router bit exits the workpiece. To prevent tear-out, you may scribe a line on the side piece with a sharp knife or awl at the same distance down that router bit will cut. Tear-out can be eliminated or reduced by backing up the workpiece with a scrap piece or simply using extra care when operating the router.

## EXCESSIVE FIT

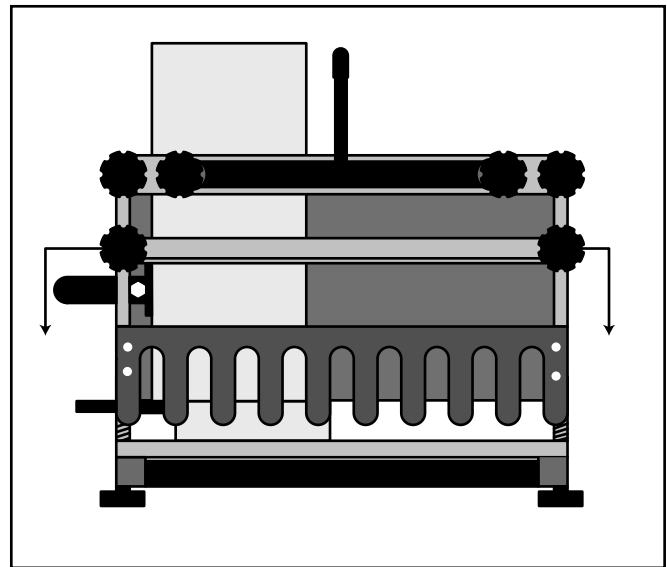
If the pins on the side piece fit too deeply in the tails of the front or back piece, the cut is too deep. See **Figure 22**.

**Cause:** The distance between the edge of the side piece and fence is set too wide.

**Remedy:** Adjust the fence forward by the same amount that the pins are exposed. Refer to the procedure described above for fence adjustment. See **Figure 23**.



*Figure 22 shows excessive fit.*



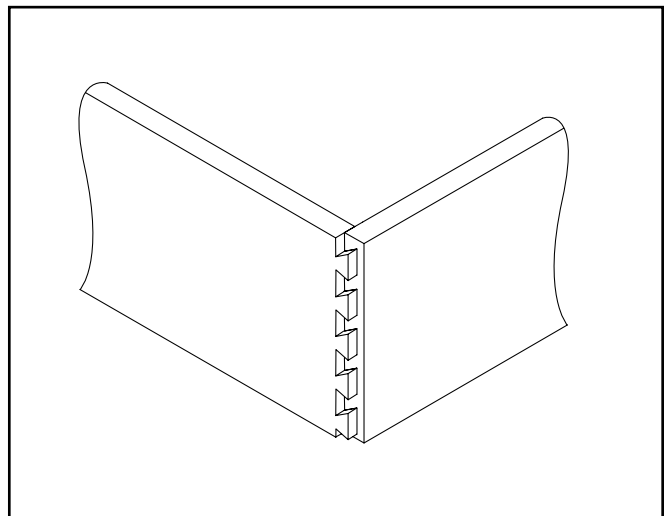
*Figure 23. Adjust fence towards template.*

## INCOMPLETE FIT

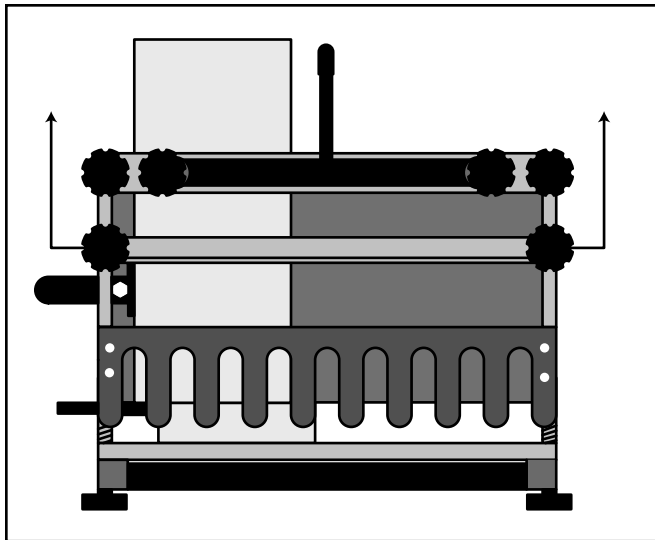
An incomplete fit occurs when the side piece protrudes from the end of the front or back piece. See **Figure 24**.

**Cause:** The distance between the edge of the side piece and fence is set too narrow.

**Remedy:** Adjust the fence toward the back of the jig by the same amount that the tails protrude out. See **Figure 25**.



*Figure 24 shows incomplete fit.*



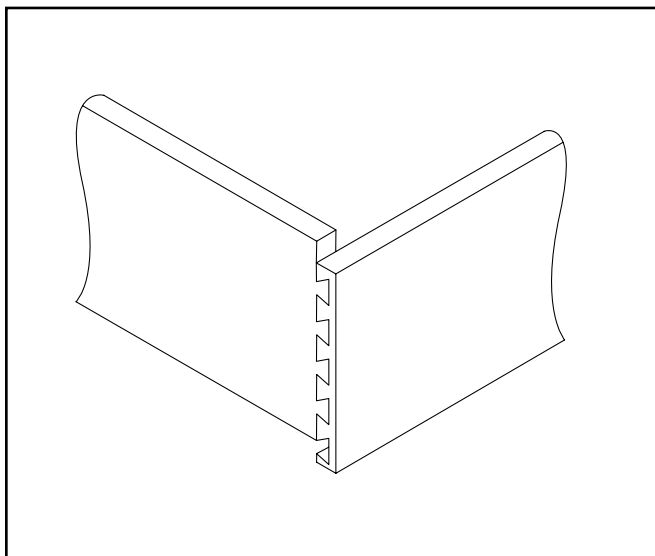
**Figure 25.** Adjust fence away from template.

## OFFSET EDGES

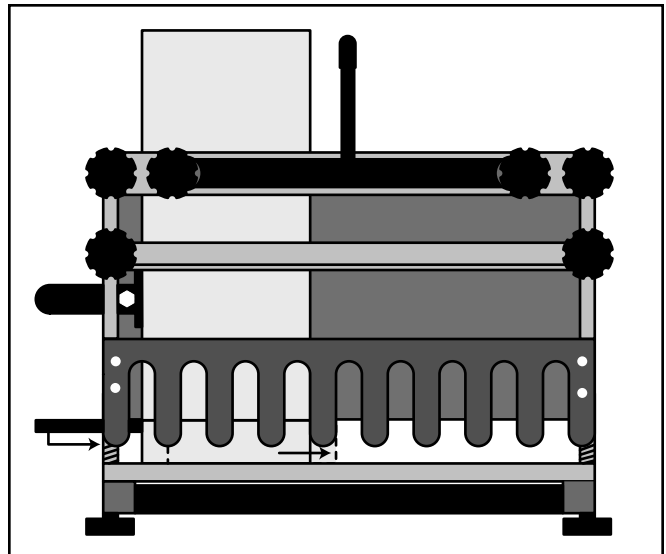
If the side piece edge is not aligned with the front or back piece edge, the edges are offset. See **Figure 26**.

**Cause:** The side stops are not set correctly.

**Remedy:** Measure the amount of offset on the two test pieces and adjust the front side stop accordingly. The front side stop must be offset from the top side stop by the exact width of the fingers on the template you are using. Ensure that the front side stop remains square to the workpiece mounted on top of the jig. See **Figure 27**.



**Figure 26** shows offset edges.

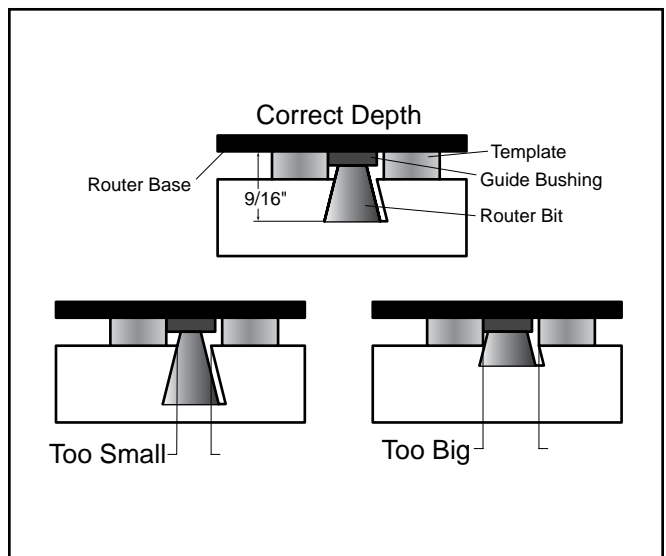


**Figure 27.** Edge of vertical piece must be offset from edge of horizontal piece by exactly the width of (1) template finger. Included template finger is 1/2".

## FIT TOO TIGHT OR TOO LOOSE

If you find the fit to be about right in every other aspect, but it is simply a little too tight or too loose, the depth of the router bit is probably maladjusted. See **Figure 28**

1. If the fit is too tight, decrease the protrusion of the router bit from the base.
2. If the fit is too loose, increase the protrusion of the router bit from the base.



**Figure 28.** Precise depth adjustment of router bit is crucial to tight fitting dovetail joints. Always use scrap wood to test set up before using expensive wood.

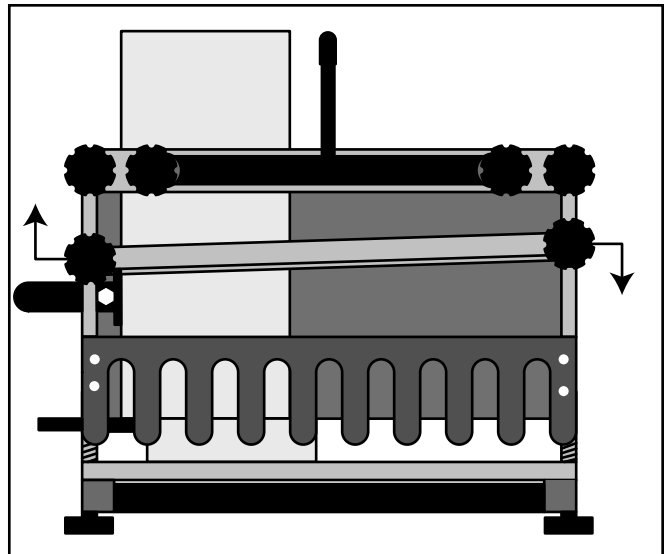
## UNEVEN FIT

If the side piece fits either excessively or protrudes at one edge and not the other, the fit is uneven. See **Figure 29**.

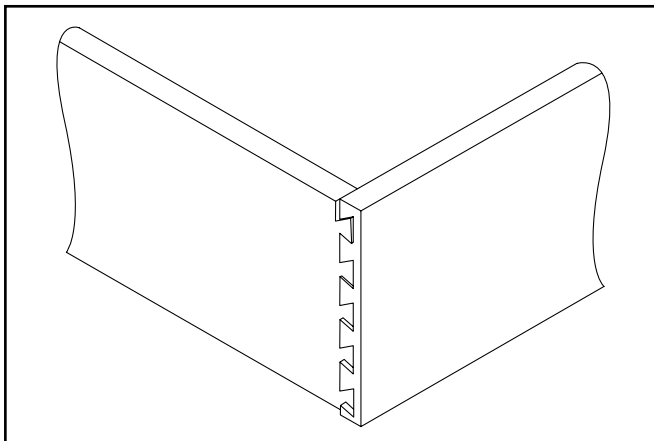
**Causes:** One or more of the following.

1. The drawer edges are not parallel to the front of the template. See **Figure 30**.
2. The fence is not parallel to the front of the template. See **Figure 31**.
3. The template is not parallel to the drawer edges. See **Figure 32**.

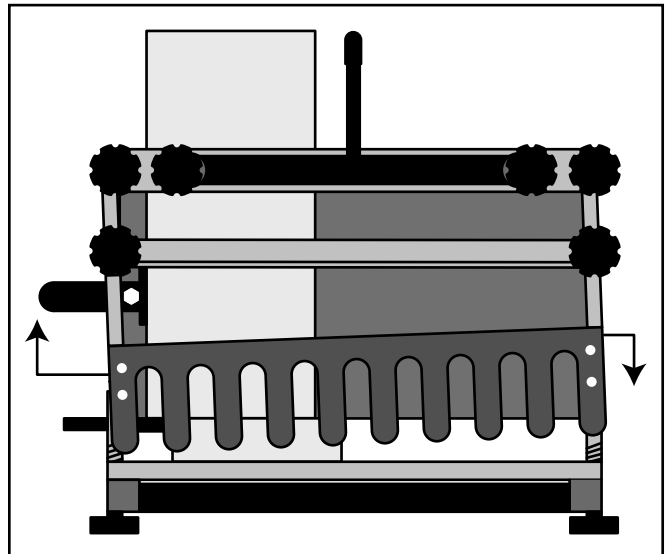
**Remedy:** Make sure that the drawer edges, fence, and template are all parallel to one another.



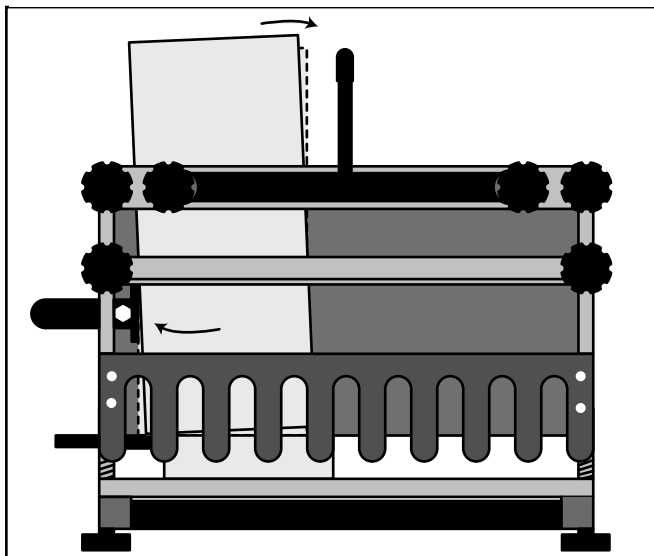
*Figure 31. Adjust the fence so that it is parallel to the front edge of the template fingers.*



*Figure 29 shows uneven fit.*



*Figure 32. Adjust the template so that it is parallel to the front edge of the drawer pieces.*



*Figure 30. The wood stock must be clamped parallel to one another and tight against the side stops.*

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## WARRANTY

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### LIMITED WARRANTY

Woodstock International, Inc. (Woodstock) warrants this product against defects in workmanship and materials under normal use and service for a period of one year. This warranty extends to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance.

This is Woodstock's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts. In no event shall Woodstock's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Woodstock shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special or consequential damages arising from the use of our products.

To take advantage of this warranty, the product or part must be returned to the original place of purchase. Proof of purchase must accompany the merchandise. Woodstock reserves the right to change specifications at any time since we constantly strive to achieve better quality equipment.

We make every effort to ensure that our products meet high quality and durability standards, and we hope you never need to use this warranty.

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## CLOSURE

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The following pages contain general specifications, a parts diagram and list, and index for your Model D2796 Dovetail Jig.

If you need parts or help in assembling your jig, or if you need operational information, we encourage you to contact your dealer. He will be happy to help you.

If you have any parts problems or requests, please contact the dealer where the D2796 Dovetail Jig was purchased or call Woodstock International at 1-800-840-8420 between 8am and 5pm Pacific Standard Time, Monday through Friday, or visit:

[tech-support@woodstockint.com](mailto:tech-support@woodstockint.com)

If you have any comments or concerns dealing specifically with this manual, please write to our Bellingham, Washington location using the address listed in the **Introduction**.



# PARTS LIST

REF#	DESCRIPTION	REF#	DESCRIPTION
1	BASE	12B	TEMPLATE $\frac{7}{16}$ "
2	FLAT WASHER $\frac{5}{16}$ "	12C	TEMPLATE $\frac{9}{16}$ "
3	CLAMP	13	SIDE STOP
4	TEMPLATE LOCK KNOB	14	HUB
5	LEVER	16	SPRING
6	TENSION LEVER ROD	17	CLAMPING ROD
7	TENSION KNOB	18	T-NUT
8	CAM	19	T-NUT
9	FENCE LOCK KNOB	20	FLAT WASHER
10	FENCE	21	FLAT HD SCREW M6-1.0 x 8
11	BRACKET	22	HEX HEAD BOLT
12A	TEMPLATE $\frac{1}{2}$ "	23	PHLP HD SCREW M5 - 0.8 x 12

# TOOL DATA

## D2796 DOVETAIL JIG

### Overall Dimensions:

Height .....6"  
 Width .....17"  
 Depth .....12"  
 Shipping Weight.....22 lbs.  
 Weight in Place .....20 lbs.

### Capacity:

Material Thickness, sides ..... $\frac{1}{2}$ " to  $1\frac{1}{4}$ "  
 Material Thickness, front and back ..... $\frac{5}{8}$ " to  $1\frac{1}{4}$ "  
 Maximum Width .....12"  
 Joint ..... $\frac{1}{2}$ " with  $\frac{7}{16}$ " Template  
 Joint ..... $\frac{5}{8}$ " with  $\frac{1}{2}$ " Template  
 Joint ..... $\frac{3}{4}$ " with  $\frac{9}{16}$ " Template

### Construction:

Jig .....Pre-Formed Steel  
 Clamps .....Single lever Adjustable Cam  
 Template .....Aluminum

### Router Specifications:

Maximum Router Base Size .....7"  
 Router Bit Required .....14°,  $\frac{1}{2}$ " Dovetail with  $\frac{1}{4}$ " Shank  
 Guide Bushing Required ..... $\frac{7}{16}$ " O.D.

*Specifications, while deemed accurate, are not guaranteed.*



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## NOTES

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