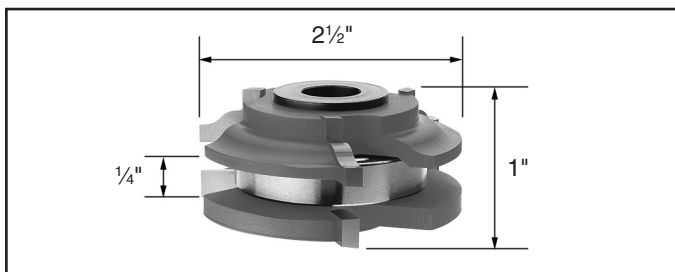




## INSTRUCTIONS FOR C2314-C2317 REVERSIBLE STILE AND RAIL SET

### Introduction

The Model C2314-C2317 Reversible Stile and Rail Sets allow you to shape  $\frac{3}{4}$ " material into door stiles and then simply reverse the cutter components to shape the door rails. This set comes complete with a ball bearing guide and shims.



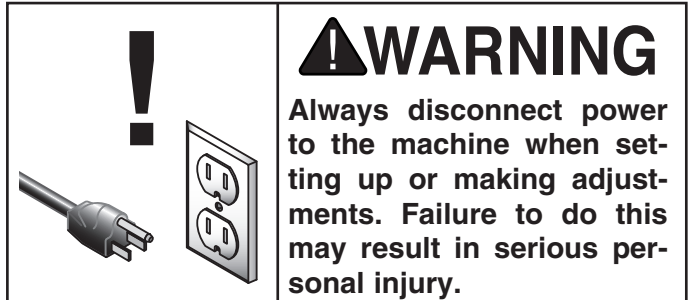
Reversible Stile and Rail Set

### ! WARNING

- Failure to follow these guidelines will result in serious personal injury.
- Follow the safety guidelines set forth by the manufacturer of the shaper.
- DO NOT remove guards and anti-kickback devices from the shaper.
- ALWAYS WEAR ANSI APPROVED EYE AND EAR PROTECTION when using this bit.
- Unplug shaper before installing or adjusting cutter.
- Always inspect workpiece for cracks, knots, or other imperfections that could cause the workpiece to kick or shatter while milling.
- Always feed the workpiece against the cutter rotation.

### ! CAUTION

These shaper bits have sharp edges. Use care while removing the waxy protective coating. Never turn on the shaper with the protective coating still on the bit.



### Cutting Rails

For safety and best results, we recommend using a shaper with adjustable fences and a miter gauge. These instructions are only intended for setting up the cutter for counterclockwise rotation.

To cut the rail ends:

1. UNPLUG THE SHAPER!
2. Slide the flat cutter, bearing side up, over the spindle as shown in **Figure A**.

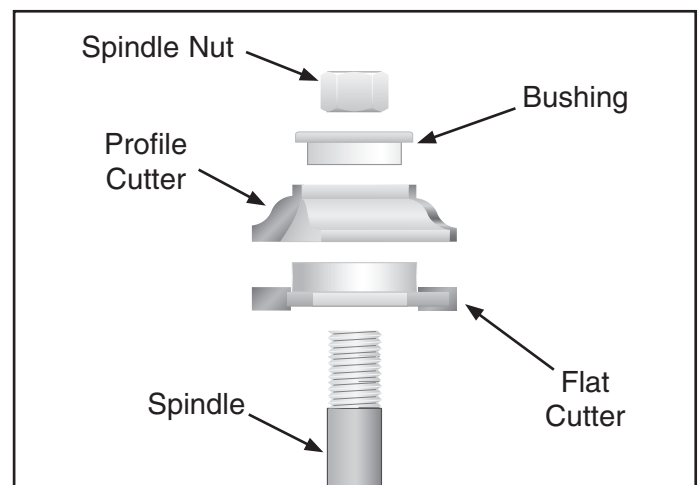


Figure A. Set-up for cutting rails.

3. Place the bushing into the hole in the profile cutter and slide both onto the spindle.
4. Thread the spindle nut against the bushing and tighten it with a wrench.

5. Use a straightedge to align the fences with the edge of the guide bearing.
6. Align the bottom edge of the shaper cutter with the top, or slightly below the top of the table.
7. Before turning the shaper *ON*, place a test rail on against the miter gauge finished face up and slide it against the fence.

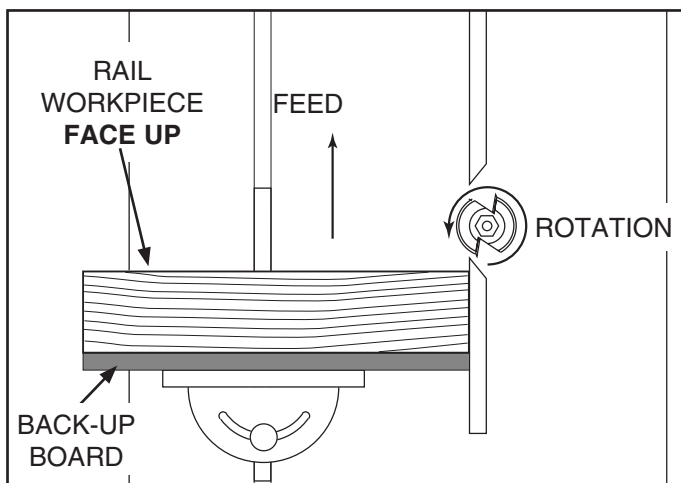
Note—*We recommend using a back-up piece of wood behind the rail to prevent tear-out.*

8. Turn *ON* the shaper and slide the miter gauge and test rail through the shaper cutter as shown in **Figure B**.

Note—*The workpiece must always be fed against the cutter rotation and the full depth of profile should be made in one pass to ensure a precise cut.*

**⚠ WARNING**

These instructions are intended for **COUNTERCLOCKWISE** spindle operation only. **DO NOT** operate the shaper in the clockwise direction to make a climb cut. If this warning is ignored, the workpiece can kick forward, and may pull the hand into the shaper cutter, causing severe injury or death!



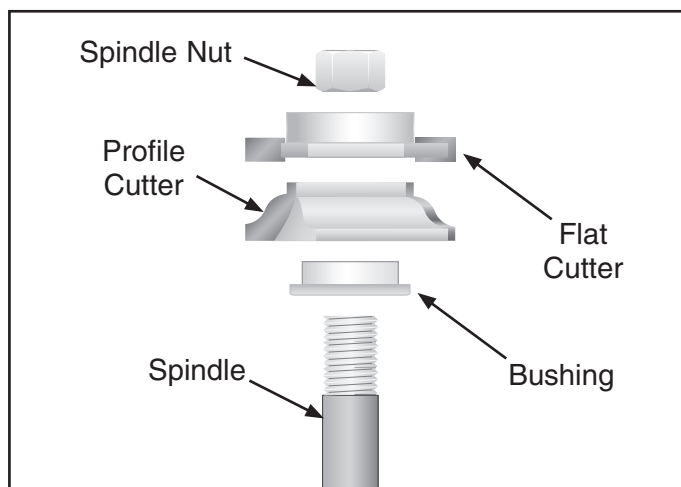
**Figure B.** Cutting the ends of rails.

9. Rotate the board and cut the edge, and then the other end, maintaining the face-up position.

## Cutting Stiles

**To cut the stile edges:**

1. **Unplug the shaper!**
2. Place the bushing into the hole in the profile cutter from the bottom, as shown in **Figure C**, and slide both onto the spindle.



**Figure C.** Set-up for cutting stiles.

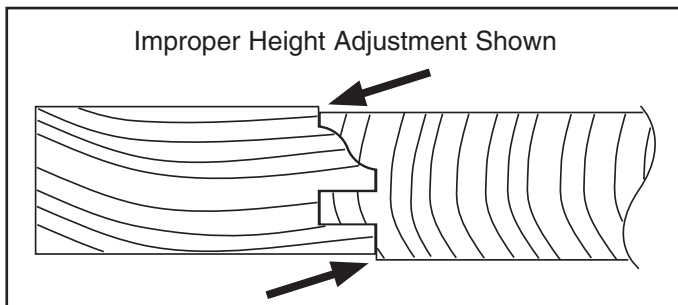
3. Slide the flat cutter, bearing side up, over the spindle as shown in **Figure C**.
4. Thread the spindle nut against the bushing and tighten it with a wrench.
5. Check the alignment of the fences with the edge of the guide bearing with a straightedge. This should already be aligned from **Step 5** of *Cutting Rails*.
6. Align the bottom edge of the shaper cutter with the top, or slightly below the top of the table.
7. Turn *ON* the shaper and slide a test stile, face up, through the shaper cutter.

Note—*The workpiece must always be fed against the cutter rotation and the full depth of profile should be made in one pass to ensure a precise cut.*

8. Turn *ON* the shaper and slide a test stile, face up, through the shaper cutter.
9. Place the test stile and rail together to check for a smooth fit.

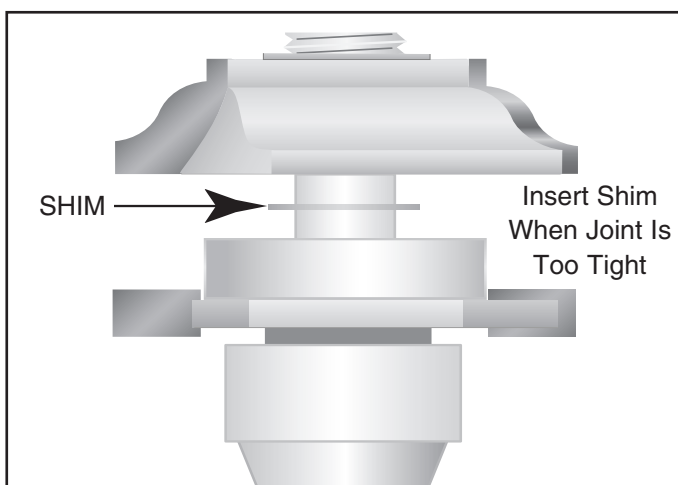
# Adjustments

If the test pieces are not flush (**Figure D**) then check the following:



**Figure D.** Improperly fitting stile and rail.

- If the bottom edge lines up, but the top does not, make sure the thickness of the stile material is the same as the rail material.
- If both the top and bottom edges do not line up as shown in **Figure D**, adjust the height of the shaper spindle, or fine tune the cutter height by placing the included metal shims between the bushing and the profile cutter.
- If the panel won't slide into the groove in the stile and rails, place a metal shim between the guide bearing and the profile cutter as shown in **Figure E**.



**Figure E.** Adjustment to fit panel.

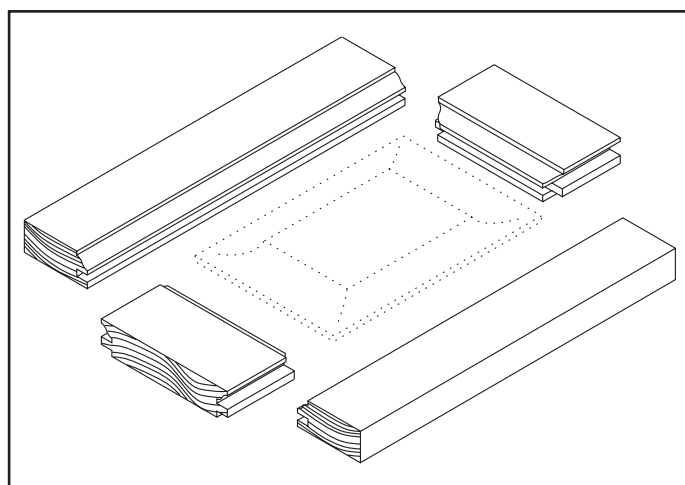
## NOTICE

If you have never used this type of machine or equipment before, **WE STRONGLY RECOMMEND** that you read books, trade magazines, or get formal training before beginning any projects. Regardless of the content in this instruction sheet, Grizzly Industrial will not be held liable for accidents caused by lack of training.

We stress the importance of working with good quality material and insuring that all pieces are machined the same and that all ends and edges are cut square. Follow all recommended safety procedures and always test your setup using sample pieces.

If this is your first time performing panel door construction, start simple by making a square door. Doors having more intricate designs, such as arched, tombstone or curved panels, should only be done when you are confident of your ability. If your project requires curved pieces then freehand shaping will be necessary. Remove the fence(s) and always incorporate the use of a starting pin or block to support the workpiece as it is initially fed into the cutter. Always use some type of jig or hold-down device to make the operation safer and to avoid having your hand in close proximity to the spinning cutter.

**Figure F** is a sample of how all the stile and rail pieces should fit together.



**Figure F.** Stile and rail assembly.

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