Zen and the Art of Splitter Shim Making

By Mark Guglielmana – A.K.A. “Gugie”

I'm a proud owner of a Ryobi BT3000 table saw. When I saw the Ryobi BT3100 update for the first time, I looked carefully for changes. One of the small but useful improvements is the use of splitter guides along with shims for the splitter/blade guard assembly.

The stock BT3000 splitter shims

The improved BT3100 splitter shims

For non-through cuts, one has to remove the factory-made part. On my BT3000, aligning the assembly and guessing which shims went on what side is rather difficult. I found that using a cut-down splitter made this job a bit easier, but I still had to remove it for my dado cuts. Splitter removal is unavoidable in this instance, but reinstallation is made easy with the BT3100 shim guides. It looked like the splitter guides would easily retrofit onto my saw. I thought about getting a set, but then figured why not make my own? Here's how I did it.

Materials:

- one used aluminum can
- two pieces scrap wood with right angle edges
- 4 deck screws

Tools:

- razor knife
- 23/64" brad point drill bit (you could use a 3/8" standard bit and probably get away with it).

Step 1: Drink beverage in can. I recommend using a can filled with non-alcoholic beverages, since alcohol can dull your senses and you might not know your finger has been cut.

Step 2: Cut out a 2" circular section from the middle of the can. Cut the circle to make it a strip. Be careful, the aluminum is very thin and sharp. The knife can be dangerous, too.

Step Two

Step 3: Roll the strip of aluminum "inside out" and release so it will lay flat on its own. About my thumb's diameter worked for me. If requested by email, I will send a full-scale picture of my thumb back.

Step Three

Step 4: Use a straightedge to trim the width of the strip to the same as the length of a stock shim. Note that I finally found a good use for the stock throat plate.

Step Four

Step 5: Cut two pieces from the strip 1 1/2" (3.8 cm) wide. The top piece I'll call a stock shim. The bottom two pieces are shim stock. Top, stock shim. Bottom, shim stock. Got it?

Step Five

Step 6: Stack and align the corners of the two pieces of shim stock on one corner of scrap wood. Align a second piece of scrap wood on top so that the two outside edges of all pieces line up.

Step Six

Step 7: Screw four deck screws through the scrap wood, but missing the shim stock. Align and clamp the stock shim with the outer edges of your wood/aluminum/wood sandwich. Using a 23/64" brad point drill bit centered on the stock shim holes, drill through both holes and through the shim stock. Alternatively, mark the center of the holes, remove the clamp, and drill down through the shim stock.

Step Seven

Step 8: Remove clamp and screws. align the stock shim over the shim stock so that the excess shim stock hangs over the scrap board, bend the shim stock at a 45 degree angle to the stock shim. I can't think of another way to use shim stock and stock shim in another sentence, so go on to step 9.

Step Eight

Step 9: Place the stock shims and new alignment shims over the two assembly screws as shown. Stack the stock shims and new shims so that the splitter is centered on the blade when tightened. Compare the picture of my "counterfeit" guides to the BT3100 shim guides near the top of this page. Now when you replace your splitter, it won't be like defusing a bomb. Just slide it in between the two guides, and tighten it up. Make sure you have a 1/8" gap between the splitter and the blade.

Step Nine

Do you have questions or comments about this article? Contact the author, Mark Guglielmana at mgugie@yahoo.com.