

Pivot Washer Construction

By Roadworthy

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Tools: Drill (or Drill Press)
Flat File
Dial, Digital, or Vernier Caliper
Bolt with Nut
1/8" drill bit (optional)

Parts: Two Washers, 3/8" bronze thrust bearings or 5/16" brass

Note: Brass washers may come from Lowe's or Home Depot.
I get bronze thrust bearings at Ace.
Both are 3/4" outside diameter. Bronze washers 1/16" or 1/8" thick

Procedure: Put bronze or brass washers onto appropriate bolt and tighten nut.
Chuck bolt into drill or drill press.
While bolt is spinning press file to edge of washers.
Measure regularly and continue until 0.68" outside diameter.
When diameter is reached apply bevel top and bottom to 45 degree angle.
(Optional) Drill several shallow divots on each side of each washer.

Remove stock from gun.

Remove pivot screw (This is a large common screw, probably very tight.)

Remove barrel from action. This may be very tight and need worked out. If it will not move ensure the pivot sleeve has not moved to one side. When centered barrel may be removed as it is held only by pressure from plastic washers.

Measure distance between forks – front and rear. Measure the barrel thickness.
Measure the depth of recess on each side of barrel.

Add distance between forks and both recess depths. Subtract barrel thickness. Divide by two. The resulting number is the theoretical optimum thickness of the washers. On my gun it is something like 0.054"

The washers start out at 1/16" or 0.062". Sand them to a couple thousandths thicker than optimum number. I use 150 grit wet or dry paper on a flat under water.

It is now time to install them. I like to put a little moly in there. Note which side is beveled and place that side toward the barrel.

Slip the barrel into the fork. Keep working it until the holes line up. When close I like to use a number 2 and then a number 3 Phillips screwdriver to work them into place.

With everything in alignment install the pivot screw. I like to put a bit of moly under the head for smoother tightening.

Move the barrel. Tighten the screw until the barrel doesn't quite stay where you put it but falls naturally due to gravity. When you get to that point close the action.

Grab the muzzle and move from side to side while holding the action. There should be no lateral movement at the breech.

If there is any movement try tightening the pivot screw a quarter turn. Open the action and see that the barrel still moves freely. If it does not move freely the washers are too thin. A new set should be made.

You may reassemble and continue to use the gun this way but soon the barrel will be moving freely again and will require regular tightening until you can no longer get it tight enough when the threads bottom out.

Under pressure brass and bronze tend to migrate a bit so the washer will get progressively thinner. That is why I do not recommend a tight screw initially.