

Shively Bolt Shim Test

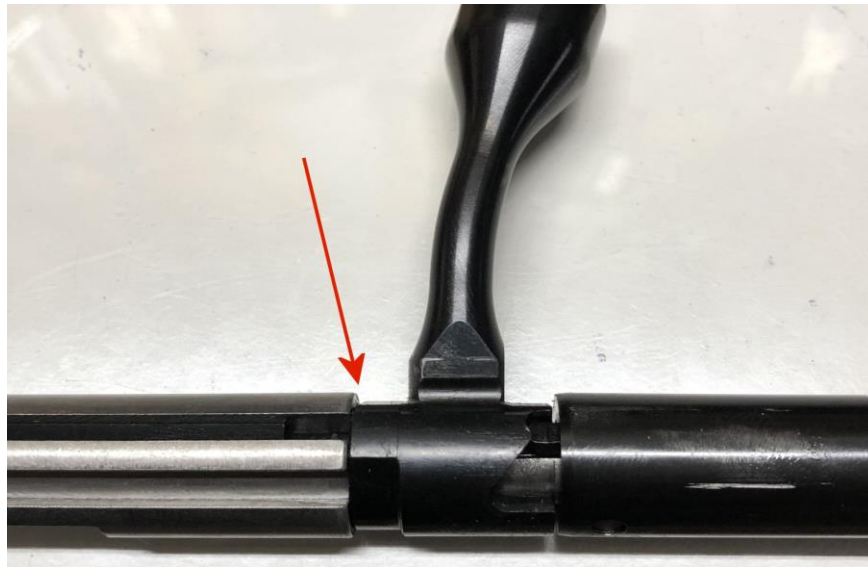
My .22 WMR Ruger American Rimfire Target (Model 8349) is glass bedded and has Shively Trigger Shims installed which, along with the cleanup demonstrated on your video, smoothed the adjustable factory trigger's 3.0 lb pull. I also mounted a Hawke Vantage 4-12x40 scope on Vortex rings.

It likes Federal Small Game 50 grain jacketed hollow points, but even in the best cherry-picked 100 yard groups shot on my best days I still saw fliers like these:



I didn't know if the fliers were caused by me or the rifle, or if it was just the nature of .22 WMR ammo, but wanted to try a bolt shim to see if it would help.

First I measured the gap between the bolt and the bolt handle where the shim would go:



Using a shim gauge, I measured .004" at its tightest (just before the bolt handle was fully opened).



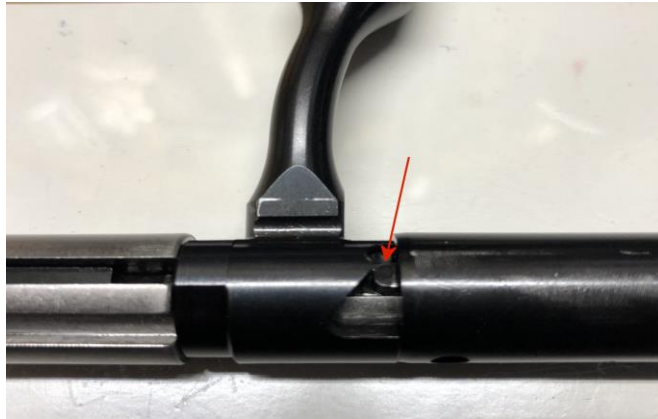
The shims arrived promptly. There were five different thicknesses included for me to try.



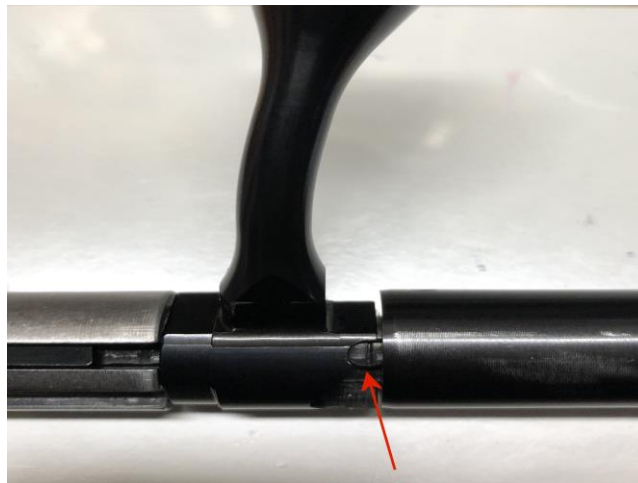
I disassembled my bolt and slipped the thickest of the five shims (.005") over the firing pin and then into place on the bolt (I'd measured the gap at .004" but decided to try the thicker shim "just in case").



As expected, after I reassembled the bolt I found I couldn't open the bolt handle all the way because the .005" shim was too thick:



I tried again with the .004” shim. This time the bolt handle opened easily.



Next I put the bolt back into the rifle and attempted to close the bolt on a spent .22 WMR case. I could close the bolt—but had to push pretty hard.

I removed and disassembled the bolt: I could see where the .004” shim was marked from my attempts to force the bolt closed.

Next I tried the .003” shim: the bolt handle lifted easily and, once installed, closed on the fired case firmly but without requiring unusual pressure on the handle. So for function, it turned out the correct thickness was the next size thinner than I'd measured with my shim gauge.

Here you can (barely) see the .003” shim installed in the assembled bolt:



I sprayed some gun lube on the bolt assembly and decided it was time to go out and shoot.

It may be my imagination, but the bolt feels more “solid” with the shim installed. The flyers were reined in some: my absolute best groups are now around 3/4” at 100 yards without those big flyers. The less impressive, more common groups—the kind I don't take pictures of—are also more consistent, so I'd call the bolt shim experiment a success.

