

# Installing an External Bolt Stop/Release on a Remington 700



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The factory bolt stop/release mechanism on Remington 700 rifles is sometimes considered a weak point in the design. If the stop mechanism binds in the narrow slot that houses it, the shooter can accidentally remove the bolt under stressful situations like competitions and afield hunting. Adding an heavier duty, external bolt stop provides a rugged upgrade to the system.

While we were able to find examples of installations by some high end gunsmiths online, we were unable to locate instructions, or even measurements on installation. We did have access to a custom receiver equipped with one so we took a look at a Blackheart International Short Action for inspiration. The BHI action has the bolt stop at approximately 10 o'clock to prevent interference with the stock. While we liked the location away from the stock, we didn't like the part of the bolt lugs it impacted.

The stop used here is a **“Lawton/Nosler” style bolt stop** from Pacific Tool and Gauge.

The action is held in a specialized sine bar/ lug drilling fixture from **Holland's Gunsmithing**. This fixture allows the action to be milled at the 9 o'clock position and the step to be milled and pin drilled from the top. Alternatively, the action could have a flat, zero cant, rail or scope base attached to the top of the action to index it in the vise. This would also allow the step cut to be made in the bottom of the action, which may be preferred.

We ordered the following supplies from **Brownells** (part #):

- **3/16" Solid carbide 4 flute center cut end mill (317-111-312WB)**
- **1/16" drill bit (891-201-160WB)**
- **#1 Solid carbide center drill (317-402-001WB)**
- **Do-Drill cutting oil (083-007-016WB)**
- **1/16" x 3/8" roll pin (080-519-375WB)** (for test fit of bolt stop)
- **1/8" detent spring(080-820-125WB)**

An ample amount of time was spent planning the installation. Planning is necessary to ensure that the bolt stop has ample room on each end to function (we used .040" on the front, .060" on the back), stop doesn't impede functioning by stopping the bolt too early, pivots in the correct location, and has appropriate support on the front and rear. Some of the measurements we used will be shared, however, if you plan on installing one, you should develop your own calculations and proceed with caution. Keep in mind, if the bolt stops too short it may not extract a loaded cartridge or feed from the magazine.

The following documents our installation of external bolt stop and is should not be considered instructional advice.

This is one of two methods we devised for external bolt stop installation on a Remington 700. The method shown here involves milling a 3/16" diameter cut into the side of the receiver. In another post, we will show a method that doesn't require the step cut.



Bottom view of the bolt stop.



The tenon (left) engages the bolt lug, preventing the bolt from being retracted. The assembly pivots on a 1/16" roll pin (hole, center right) and is kept under tension with a 1/8" detent spring housed in the blind hole (right).



We spent a lot of time calculating the location of the bolt stop and then laid out the locations of the appropriate cuts on some painters tape to ensure everything would work as planned. We wanted to stop bolt travel at the same location of the factory

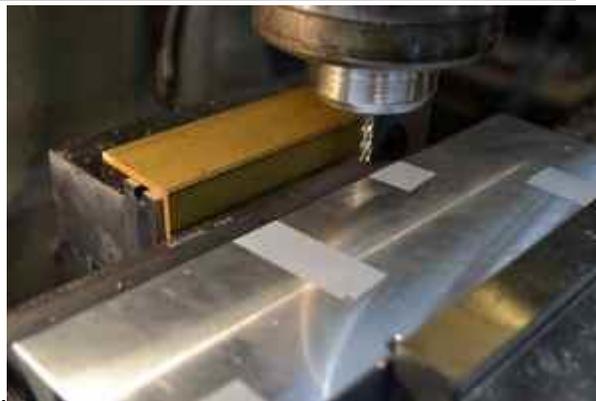


stop. We decided to hold our action in a Holland Sine bar/ lug drilling fixture. Alternatively, a flat, zero cant, scope base secured to the top of the



action could serve a similar function.

Two screws



firmly secure the action to the sine bar.

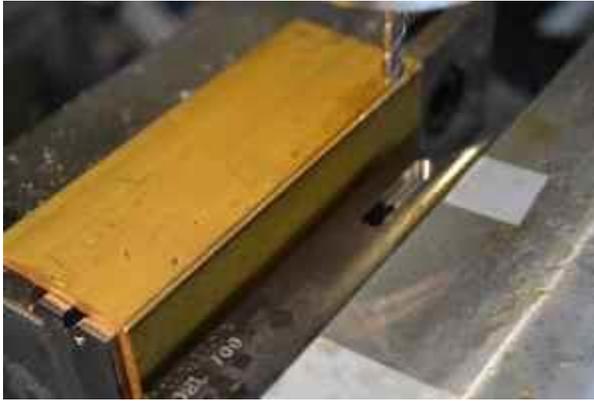
For the initial

cut, the sine bar is secured in the milling vise, positioning the left side of the receiver up.

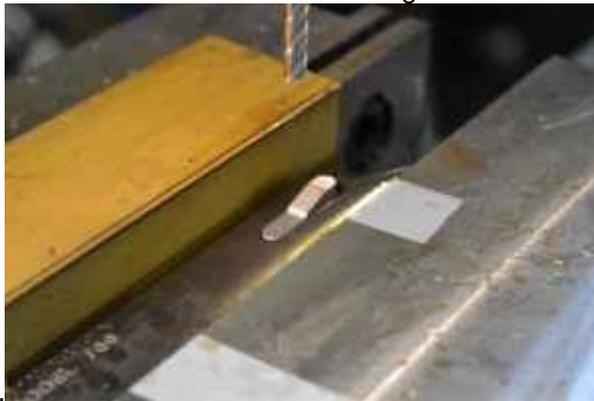


A 3/16" end mill is used to cut a slot .155" deep in the receiver. We used the flat edge of the receiver as a datum point for our cuts. If you would like

the dimensions we used here, email us from the contact page.



A through cut is made to allow the lug on the bolt



stop to engage the bolt.

We drop the bolt stop in

place to make sure everything works before we remove the receiver from the vise and reset out



digital readout.

The sine bar is now secured with the

receiver oriented upright, 90 degrees to the last position.



The 3/16" end mill is used to make a .120" notch,

leaving a .080" web above the bolt stop slot. The notch cannot be too deep or it will cut through to



the inside of the receiver.

.095" in, from the top edge of the bolt stop



slot, a #1 center drill is used to spot for the pin hole.

A 1/16" drill is used to drill the pin hole for the bolt stop. This is an interrupted hole and attempted with caution.



With the 1/8" detent spring in place, a 1/16"x3/8" roll pin is drifted through the top to secure the bolt stop in place. Note: Use a hardened steel drill rod or

stainless steel dowel pin for final assembly, the roll pin will shear. We have found the drill rod works



best.

Since the bolt release is located at 9 o'clock, the stock needs to be inleted. Note how the rear of the action isn't touching the stock. With a piece



of tape we mark where the cut will end.

The stock is secured in the vise and the same 3/16" end mill is used to remove the material blocking the bolt



release.

The external bolt release installed with the



notch in the stock.

The rear of the bolt stop needs to be contoured with a file and stone to allow the the bolt to be inserted without depressing it. The contoured stop (left) is shown next to a stop as supplied (right).



An 1/8" detent spring is inserted into the the rear of the bolt stop prior to final assembly. The part, and the barreled action have been coated in Olive Drab Cerakote prior to final assembly.



The installed bolt stop. Note the bolt release lever has been removed from the trigger since it is no longer needed.



Note how close the rear of the stop comes to the



edge of the cut out when it is depressed. Bolt stop in stock. To remove the bolt, simply depress the bolt stop and retract it from the receiver.



The bolt stop works great and replaces what some would argue is a weak point in the 700 design. We learned a lot from the installation and developed another method to install an external bolt stop on a 700. Our next installation will have less space on the front end of the stop and doesn't have a notch above the stop.

