DAVE MANSON Precision Reamers

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***The Best* in the Business**

Notes and Instructions for using the Win 70/Rem. 700 Receiver Reamer

You've just purchased a precision cutting tool, made to exacting specifications from the best available materials. Taking a few minutes to read and understand these instructions will help you realize the most profit from your investment.

Tool Design

The Manson Receiver Reamer was designed to remove the original 1"-16 barrel threads in Win Model 70 Classic receivers by reaming the I.D. to the proper diameter for tapping with the 1 1/16"-16 oversize Tap used in accurizing Rem 700 actions. During this operation, it will also recut the receiver lugs square to the axis of the action and to the same height.

Why Would You Want to Do This??

While many 'smiths like the controlled feed feature of the Win Model 70 Classic action, they feel that the interrupted barrel thread, caused by the bolt lugways, is not as strong as it could be. Further, a larger barrel shank is stronger than a small one and lends rigidity to precision rifles. Since the O.D. of the Winchester receiver is virtually the same size as that of the Rem 700, the problems of small barrel shank and interrupted thread can be eliminated by reaming and tapping the Winchester receiver to the same thread spec as the Rem 700. This also means that if you work on both types of rifles and convert the Win. Mod. 70 Classic receivers to the Rem-style thread, you only have to remember one thread spec when fitting barrels. **CAUTION: We have come across several of the older, push-feed receivers that are both very hard and springy. These receivers have tended to "grab" the Tap, in one case cracking it. Because of this we do not recommend this procedure for push-feed model 70s.**

Please Note: The Manson Receiver Reamer may be used in Rem 700 actions, prior to re-cutting the threads, to open the receiver I.D. to the proper diameter for the oversize tap, as well as cutting the lugs square and to the same height.

Additional Tools Required

The following tools are suggested for use during the receiver reaming and re-threading operation:

Large (5" min opening) Bench Vise
Large (12"-20") Tap Handle
Brownells Action Wrench p/n 080-800-700 for Rem 700; p/n 080-800-070 for Win Mod 70
¼" diameter x 4" Brass or Aluminum Rod
Good-quality Cutting Oil (Brownells Do-Drill)
Manson Tap/Mandrel and Bushings for Rem 700

Please Note: The operation can be done differently, with different tools. The tools and procedures described here are known to produce good results.

Preliminary Steps

Strip the receiver completely, removing the trigger, bolt stop, any sight bases, etc. Using finger pressure, insert the small end of one of the bushings into the tang end of the receiver, small end of the bushing pointing toward the front. Similarly, insert the other bushing into the front of the receiver from the magazine area, small end pointing toward the front. This differs from the threading operation--in that procedure the bushing is inserted from the front of the receiver, small end toward the rear.

Slide the pilot of the Reamer first through the bushing in the front receiver ring and then through the bushing in the rear receiver ring—you may have to wiggle the tap slightly to align with the bushing in the rear receiver ring. Once both bushings engage the pilot, seat the bushings into the action's I.D. by pushing them deeper with the brass rod. The reamer's pilot should slide through the guide bushings with minimal resistance.

Reaming the Receiver

With the guide bushings seated in place, clamp the receiver in the Brownells Action Wrench, and then clamp the Action Wrench/receiver assembly in your bench vise—front receiver ring up. Oil both guide bushings lightly and slide the reamer through the bushings until the cutting edges rest on the front receiver ring. Clamp the tap handle on the square of the shank, oil the cutting edges of the Reamer and begin turning in a clockwise direction with firm downward pressure. Take 5 or 10 turns and check to see if the threads and lugways are being removed. If the original thread was not concentric to the centerline of the action, a trace of thread may remain on one side of the I.D.

Resume reaming, periodically removing the reamer to clean chips and re-oil until the reamer just contacts the locking lugs. One lug will usually be higher than the other and this one will likely show witness of your having touched it. Clean away all chips again, re-oil, and carefully ream further until both lugs are cleaned up and smooth. The reamer is made to cut smoothly--even with an interrupted cut. Nonetheless, press it down and turn it with as even pressure as possible in order to produce the best finish. CAUTION: DO NOT CUT BEYOND THE POINT THAT BOTH LUGS CLEAN UP. DOING SO MAY AFFECT EXTRACTION.

Remove the reamer, clean off all chips and confirm that the receiver lugs have been cleaned up to your satisfaction. Remove the bushings and clean them and the rest of the receiver thoroughly. At this point, you're ready to tap the receiver to its new thread size. Please refer to the instructions for use of the Rem 700 Tap/Mandrel for procedures from this point on

The Win 70/Rem 700 Receiver Reamer, like all tools we manufacture is guaranteed against defects in material and workmanship. It will perform the job for which it was designed when used in accordance with accepted machining principles and these guidelines. If you have ANY QUESTIONS about its use, or suggestions as to how it might be improved, please call or write us. IT'S BETTER TO ASK A QUESTION THAN TO RUIN AN EXPENSIVE RECEIVER OR TOOL.

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