

## INSTRUCTIONS FOR USING WILSON INSIDE NECK REAMERS

These reamers were designed for use in conjunction with the WILSON Case Trimmer, the trimmer acting as a jig for obtaining correct alignment between cartridge case and reamer and providing a substantial support during the reaming operation.

In use, the trimmer cutter is removed and the reamer inserted in its place. The case is "bumped" lightly into the shell holder, the same as for trimming. The stop should be adjusted, if many cases are to be reamed, so that it will take the thrust of the reamer.

These reamers are made from .002" to .003" larger than standard bullets in each caliber and if the case necks have thickened so as to reduce the chamber clearance below that figure the reamer will remove the excess metal.

If bullets are used that are larger than standard, the amount of neck clearance assured by these reamers will be reduced by the amount which these bullets exceed standard diameter. For instance, if you are using .224" bullets and the reamer measures .2265" the neck clearance will not be less than .0025". If you use .225" bullets, the same reamer will assure a neck clearance of not less than .0015". And again, if you should use .223" bullets you would be assured of a minimum clearance of .0035". The important point to remember is that the minimum neck clearance assured through the use of these reamers is the amount that the bullet you are using is smaller than the reamer used.

It might be well to mention that the use of these reamers will not assure that the neck clearance is not MORE than a certain amount. The reamers will remove metal, but will not put it on. They merely assure, for the sake of safety, that the neck clearance in the chamber is not LESS than a certain amount.

These reamers should be used on cases just as they come from the chamber, and then only if they have been fired with maximum loads or loads sufficiently heavy to fully expand the brass to chamber diameter. It is not advisable to use neck reamers on cases work hardened by repeated resizings to such an extent that they spring back after firing and don't measure full chamber diameter or close to it. If used on cases not fully expanded, too much metal may be removed and bullets may not fit tightly in case necks after resizing. There is no danger to the shooter in connection with using these reamers on resized cases or on cases fired with squib loads, but you are pretty sure to ruin some very good brass in doing so.

Our standard stock sizes of neck reamers are too large to use on cases as they come from the sizing die when making one caliber of case from another. Special sizes are required for these jobs and the price of specials is over that of standards.

The bearing portion of these reamers is purposely made short and ground slightly undersize to allow a slight universal joint effect. This permits the cutting end to align itself with the case mouth in spite of variations, which may be present in the cases themselves.

It should be understood that these are not "line" reamers, that they are not designed for the purpose of correcting case necks, which are thicker on one side than on the other. These reamers are centered and guided by the inside of the case neck. If the inside is not concentric with the outside, it will remain that way. They are primarily a safety item, having to do with clearance and not alignment. The fact that they contribute to accuracy by eliminating loads which otherwise would give excessive pressures is incidental to the main purpose.

Line reaming of cartridge cases calls for much different and much more expensive and elaborate equipment, which we are not in a position to furnish at this time.

## FEATURE ADDED TO THE WILSON INSIDE NECK REAMER (Not available on special Neck Reamers)

A feature has been added to the Wilson Inside Neck Reamer so it can do an extra job for you. Many reloaders, especially bench rest shooters, have been reaming a short tapered section at the mouth of their resized cases after trimming and deburring. When they are ready for bullet seating, they insert the bullet by hand into the shallow taper which grips it firmly whether it has a boat tail, flat, cupped or any other shaped base. This prevents fumbling and dropping of bullets during handling, makes the seating start easier, and leaves a uniform length of neck gripping each bullet. The taper need not be reamed again until trimming is once more needed.

THE CUTTING PART OF THE WILSON INSIDE NECK REAMER HAS BEEN LENGTHENED AND A SHORT TAPERED CUTTING SECTION HAS BEEN GROUND ON THE OUTER END TO DO THIS JOB.

The reamer's regular job of assuring adequate clearance between the neck of a loaded cartridge and the neck part of the chamber is still done exactly as before... on cases that have been fired with heavy enough loads to expand them to the full size of the rifle chamber. The reamer is run in about 9/16" until its shoulder stops against the neck of the case.

This new job, however, must be done with care on cases at a later stage in the regular reloading procedure. Once set up it can be done quickly and it makes the bullet seating operation simpler and more accurate. Please read all the directions before using the new feature.

The case neck must be in the resized and neck-expanded condition to ream this short tapered section properly. The neck expander normally will leave the inside diameter of the case neck .001 to .002" smaller than bullet diameter. If an unguided reamer is used, or if the case neck has not been expanded, it is possible to leave the case mouth so thin it would be sharp or at least so thin it could be easily damaged in use. With the Wilson reamer used on the resized and expanded case necks, this cannot happen.

Place the resized and neck-expanded case in the holder in the Wilson Case Trimmer as you would place a fired case for the regular neck-reaming job. Since this new tapered section on the neck reamer is on the end that enters the case neck first, adjust the trimmer stop screw so the neck reamer can enter the case only about 1/16" before the neck reamer handle stops against the trimmer bearing. Ream gently to the stop and remove the case. Inspect the case to see how deep you have reamed. If the mouth of the case shows more than about 1/16" of newly reamed section, the neck reamer is going in farther than necessary for this new job. To see if you have reamed deep enough, check by taking one of the bullets you will be using and pressing it into the newly reamed case neck with your fingers. It should stay in position even when shaken gently.

Since the base of the case is against a positive stop on one end and the neck reamer comes against a positive stop on the other, the length of the neck part gripping the seated bullet will be the same regardless of case length, another contribution toward uniformity.

Please remember, do not run this reamer into a resized case up to the shoulder as you would on a fired case. It will remove too much brass and the neck will not grip the bullet at all.



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