

## Cylinder Throat Reaming Instructions

The kit consists of a Manson .4525" reamer with a pilot bushing installed, a brass guide (cut off spent 45 Colt case), a drill chuck, and chuck key. The tricky plastic box just pulls apart. Make sure the cutter doesn't fall on the floor when you pop it open.

The purpose of reaming the cylinder throats is to make all six throats uniform in size, "round" any throats that were cut oval at the factory, and to make the throats the optimum diameter so lead bullets will obturate properly and enter the bore slightly oversized. This will improve accuracy and reduce lead or jacket fouling.



Insert the shaft of the cutter into the drill chuck and tighten with the chuck key. You will be applying quite a bit of pressure when reaming so make sure the chuck is nice and tight. Apply a liberal amount of oil to the cutter. Cutting oil is best but most any oil will work. Oil prevents the cutter from “chattering” and leaves a nice smooth throat surface.



Start by inserting the brass guide in a chamber, just like loading a cartridge.



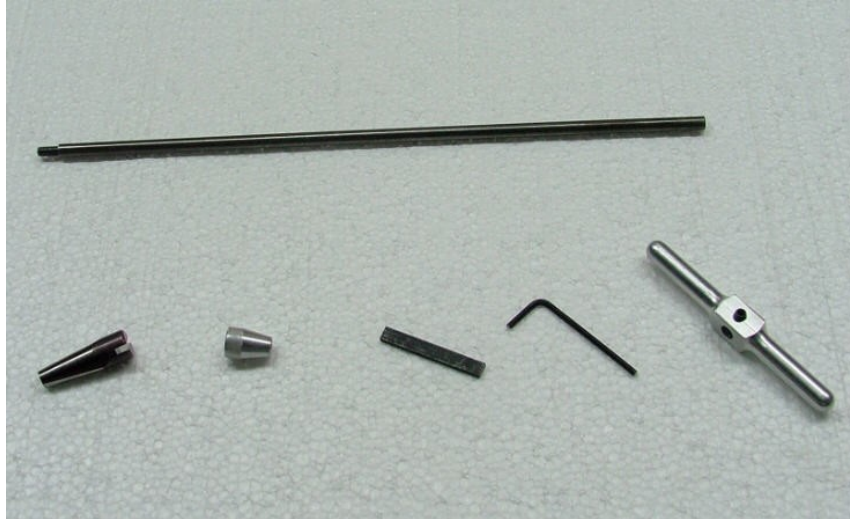
Insert the reamer in the chamber, again just like loading a cartridge. Grip the cylinder in one hand and the drill chuck in the other and begin to rotate the chuck **CLOCKWISE** while applying pressure. Never rotate CCW, it will leave nasty marks in the throat plus it will damage the cutter. Continue applying liberal pressure and rotating the reamer until it cuts all the way through the throat. Do not remove the cutter until you have finished reaming a throat. To remove the cutter, continue rotating the drill chuck clockwise and gently pull the cutter and brass shim from the cylinder.

Thoroughly clean off the cutter and shim after reaming each hole. Wipe down the outside of both the cylinder and chuck to prevent slippage. Make sure all the “crumbs” have been removed so they don’t scar the next hole. Compressed air works well. Apply more oil to the cutter, insert the brass shim, and ream the next hole. Repeat cleaning and reaming until all holes have been reamed. The brass shim is expendable so don’t get excited if it gets damaged.

After you finish all six holes, clean the cylinder just as you would do after shooting. Install the cylinder and you’re ready to go shooting.

## Instructions for Chamfering the Forcing Cone in a Revolver.

The Brownell's hand operated 11 degree reamer will work with any revolver from a 38/357 up to a 45 Cal. The purpose of reaming the forcing cone is to provide a nice smooth transition from the barrel's mouth to the lands. This will normally enhance accuracy and reduce bullet fouling.



The kit consists of a rod threaded on one end for the cutter and slotted on the other end for the handle. The "T" handle is on the right, with the Allen wrench next to it. The piece of flat steel in the center is a "breaker bar" used to unscrew the cutter from the rod. The centering cone is 2<sup>nd</sup> from the left and the 11 degree cutter is on the left and has a slot in the back where the breaker bar goes to unscrew it.



Assemble the tool by placing the T handle in position on the rod then tightening it with the Allen wrench. Slip the centering cone on the rod with the cone pointing at the revolver's muzzle. Insert the rod into the revolver's barrel until the threaded end is visible in the cylinder frame.



Thread the cutter onto the rod just finger tight. With the cutter pushed back against the recoil shield, apply a liberal amount of oil on the front surface of the cutter. Cutting oil is best but any oil will do. Gently pull the rod into position where the cutter is starting into the cone. With one hand, hold the centering cone in the revolver's muzzle while gently pulling the "T" handle and do a couple of twists **CLOCKWISE**. Go **SLOW** and **EASY** ... the cutter is very sharp and can over cut if you pull too hard.

Inspect your work by using the breaker bar in the rear slot of the cutter and unscrewing the cutter from the rod. What you are looking for is a "fresh cut" that extends from the mouth to the lands. **DO NOT** cut any deeper than you have to but make sure you go deep enough where you don't end up with a compound cut (two angles). It's best to take a few twists (always **CW**, never **CCW**) then inspect. The fresh cut area will be very obvious. Make sure there is a liberal amount of oil on the cutter to make it cut smooth instead of chipping or leaving nasty lines. It's impossible to ream the throat without leaving lines but they should be very light. Make sure you use the centering cone to keep the cutter "squared" with the barrel.

When you are satisfied with the cut, remove and disassemble the tool and clean off the oil and metal.