



AR Series reloading dies

PREPARING THE DIES

Most Sizer Dies for bottleneck type cases have a tiny vent hole through which trapped air escapes during resizing. Sometimes the vent hole will plug up with factory polishing compound. This compound will scratch and dent cases unless it is removed. The dies are also coated with a rust inhibitor which must be removed prior to use.

Unscrew the Expander-Decapping Assembly from the die. Insert a needle, straightened paper clip or similar object into the vent hole. This will push the compound into the die body and can be removed by cleaning the inside of the die using the RCBS Die Maintenance Kit. Disassemble and clean the Seater die as well.

Important: We find that most scratching of the interior of a die is caused by grit on the brass surface. The best method for cleaning brass cases of grit is to tumble them. Tumbling the cases will clean the surface and prevent scratching the internal die surface. Your cases should be cleaned periodically to protect both your dies and the chamber of your firearm. The RCBS Sidewinder Case Tumbler or Vibratory Case Cleaner are recommended for cleaning cases.

As soon as you detect scratches on a resized case, we recommend cleaning and lightly polishing the interior wall of the Sizer Die in a lathe – using #320 (fine) emery cloth to remove dirt and other foreign particles.

CASE PREPARATION

Clean and inspect cases before lubricating and sizing. Discard any cases with indications of a split neck or partial head separation. Check cases for the correct overall length and trim if necessary. If bullets are to be crimped, it is imperative that cases be trimmed to the same overall length. Trimmed case mouths should be deburred and lightly chamfered inside and out with an RCBS Deburring Tool.

Cases must be properly lubricated before sizing. The bottom 1/3 of the case towards the primer pocket must have lubricant. Over-lubrication will result in a dented case shoulder. Improper or no lubrication will result in a case stuck in the Sizer Die. For best results use only RCBS Case Lube-2 applied to an RCBS Case Lube Pad or RCBS Case Slick spray lube. The inside of case mouths should be very lightly lubricated with an RCBS Case Neck Brush. These accessories are available from your retailer as individual items or combined in the RCBS Case Lube Kit.

Do not lubricate the shoulders of bottle-neck type cases. Spray lubes will coat the shoulders but will not cause problems unless too much spray lube is applied. After the cases are properly lubricated they are ready to go through the reloading steps.

SMALL BASE RESIZING

Screw the AR Series Small Base Sizer Die into the reloading press until the sizer die touches the standard shell holder with the ram at the top of the stroke. Lower the ram and set the die $\frac{1}{4}$ turn further down so the press cams over center. Set the large Die Lock Ring and tighten the setscrew with a setscrew wrench. The end of the decapping pin holder must be at least $\frac{3}{16}$ " above the bottom of the die. The decapping pin should protrude below the bottom of the die just enough to knock out the spent primer. The Decap Rod is adjusted by loosening the small lock ring at the top of the die and turning the unit to the desired setting.

BULLET SEATING AND TAPER CRIMPING

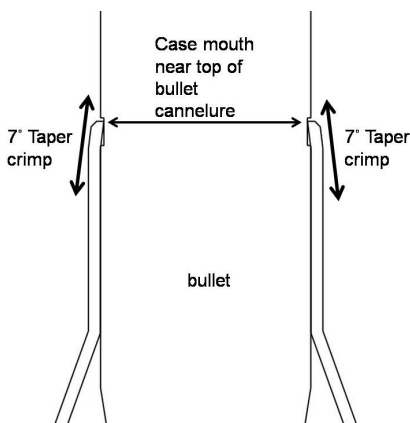
The AR Series Seater die features a TAPER Crimp shoulder rather than the ROLL crimp that is found on hunting cartridges. The Taper Crimp is a bit more forgiving to the handloader who does not always trim their bottleneck cases. Rifle bullets with a CANNELURE are best used with this type of crimp.

Ideally you will have trimmed all of your bottleneck cases to the same length for consistent crimp pressure. If not, measure a few of your sized cases and find the ones that represent the longest in the batch.

Place a "long" case into the shell holder, lower the handle, raising the ram and screw the Seater die into the press until you feel slight resistance. This will be the Taper Crimp shoulder in the body of the die contacting the case mouth. Back the die up and away from the case mouth one full turn. Temporarily lock the die lock ring.

Raise the handle and place a bullet on the case mouth and get the bullet seated part way into the case mouth. Adjust the Bullet Seat Plug so that the top of the cannelure of the bullet is seated to just above the case mouth(see photo). If using bullets without a cannelure, seat to your desired Cartridge Over All Length (C.O.A.L.)

Leave the handloaded cartridge in the Shell Holder. Unscrew the Bullet Seat Plug several turns to prevent it from contacting the bullet as you adjust the Seater Die body. Loosen the Die lock ring, lower the handle, raising the cartridge into the Seater Die, screw the Seater Die body down until you feel resistance. The Taper Crimp angle is 7 degrees, you may not be able to see the amount of crimp being applied but you can measure it. Using the fine blade section of your calipers, measure the loaded round near the base of where the bullet is seated in the case neck. Then measure the case neck right at the case mouth. The case mouth measurement should be .001-.002" smaller in diameter. Adjust the Taper Crimp Seater Die Body down until you get this measurement (see photo). This is a trial and error method.



Once satisfied with the amount of Taper Crimp being applied, run the Bullet Seat Plug down to the seated bullet to reset for cartridge length. Lock the Bullet Seat Plug Lock Nut. Take the next case, insert into the Shell Holder and place a bullet over the mouth of the case and cycle the handle. You are now seating the bullet and Taper Crimping the case mouth at the same time.

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