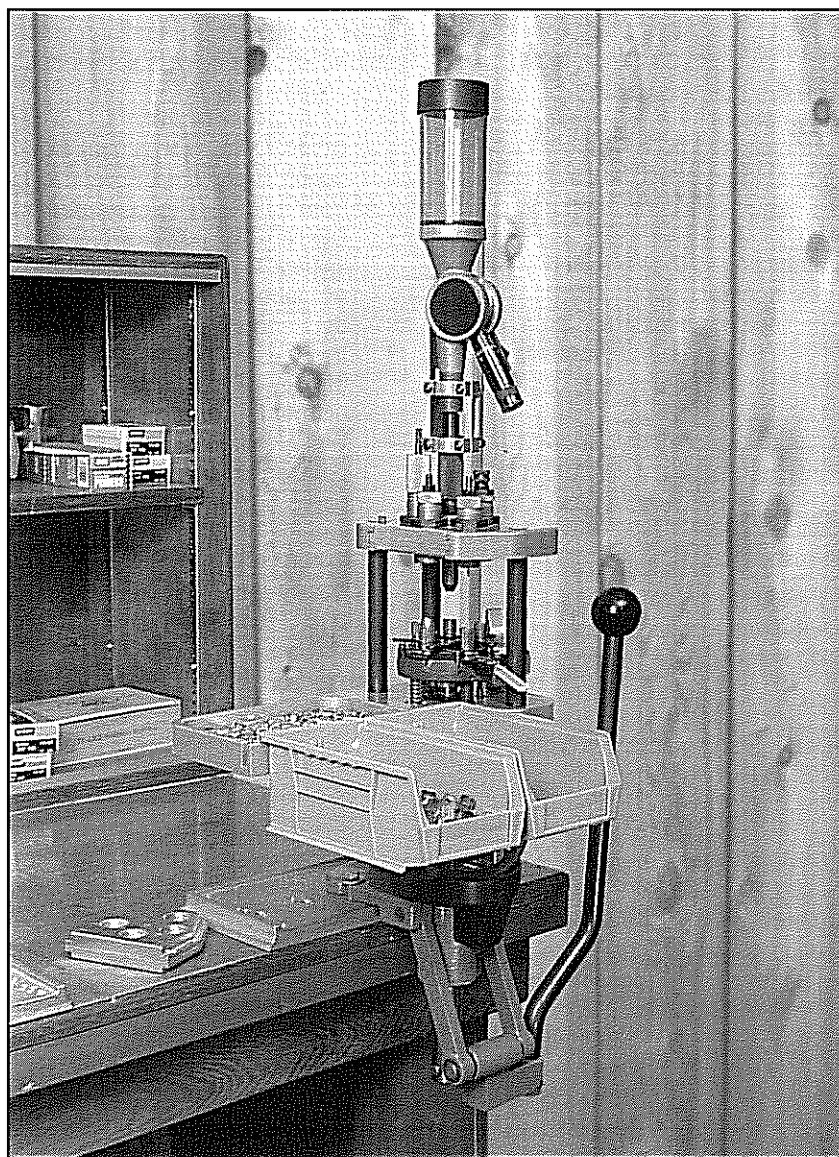


RCBS[®] Piggyback-3

PROGRESSIVE CONVERSION UNIT

FOR USE WITH RCBS ROCK CHUCKER,
RELOADER SPECIAL-3 AND RELOADER
SPECIAL-5 PRESSES



IMPORTANT

Before using the RCBS Piggyback-3 Progressive Conversion Unit, read these instructions carefully to fully learn how to safely operate the related reloading equipment. Failure to properly operate certain reloading equipment can result in severe personal injury and/or equipment damage.

**If you have any questions while assembling or operating this tool,
call us at 1-800-533-5000 or 1-530-533-5191
Monday–Friday 6:30 am–4:00 pm Pacific Time**

This instruction manual contains specific safety and operating information. It should be considered a permanent part of your reloading equipment and remain with the equipment at all times for easy reference.

SAFETY

Reloading is an enjoyable and rewarding hobby that can be conducted safely. But, as with any hobby, carelessness or negligence can make reloading hazardous. This product has been designed from the beginning with the user's safety in mind. When reloading, safety rules must be followed. By observing these rules, the chance of a hazardous occurrence causing personal injury or property damage is minimized.

GENERAL

- Use all equipment as the manufacturer recommends. Study the instructions carefully and become thoroughly familiar with the operation of the product. If you do not have written instructions, request a copy from the equipment manufacturer.
- Don't take short cuts. Attempting to bypass established procedures is an invitation to an accident.
- Observe "good housekeeping" in the reloading area. Keep tools and components neat, clean and orderly. Promptly and completely clean up primer and powder spills.
- Reload only when you can give your undivided attention. Do not reload when fatigued or ill, or under the influence of medications or alcohol.
- Develop a reloading routine to avoid mistakes which may prove hazardous. Don't rush—load at a leisurely pace.

Always wear adequate eye protection to protect your eyes from flying particles. You assume unnecessary risk when reloading without wearing safety glasses.

LOADING DATA

- Use only laboratory tested reloading data. We highly recommend the current SPEER Reloading Manual.
- **OBSERVE ALL WARNINGS ABOUT THE USE OF MAXIMUM LISTED LOADS**

PRIMERS AND POWDER

- Store primers and powder beyond the reach of children and away from heat, dampness, open flames and electrical equipment. Avoid areas where static electricity is evident.

- Do not use primers of unknown identity.
- Dispose of unknown primers in accordance with applicable regulations.
- Keep primers in the original factory container until ready to use. Return unused primers to the same factory packaging for safety and to preserve their identity. Primer packaging is designed to provide safe storage.
- **DO NOT** store primers in bulk. The blast of just a few hundred primers is sufficient to cause serious injury to anyone nearby.
- **DO NOT** force primers. Use care in handling primers.
- **DO NOT** have more than one can of powder on the bench at one time. Powder cans should be stored away from the bench to avoid picking up the wrong one.
- **DO NOT** use any powder unless its identity is positively known. The only positive identification is the manufacturer's label on the original canister. Discard all mixed powders and those of uncertain identity.
- If you use a powder measure, replace the lids on both the powder hopper and powder can after the powder hopper has been filled.
- When using a powder measure, settle the powder in the powder hopper before charging any cases. Throw and check the weight of at least ten charges. This will assure you that the correct powder charge is being thrown.
- When you finish a reloading session, pour any remaining powder back into its original factory container. This will preserve the identity and shelf life of the powder.
- **DO NOT** smoke while reloading.

RECORD KEEPING

* Keep complete records of reloads. Apply a descriptive label to each box showing the date produced, and the primer, powder and bullet used. Labels for this purpose are packed with SPEER bullets.

Because RCBS has no control over the choice of components, the manner in which they are assembled, the use of this product, or the guns in which the resulting ammunition may be used, we assume no responsibility, expressed or implied, for the use of ammunition reloaded with this product.

UNPACKING

Refer to the list below to identify parts as you unpack your new Piggyback-3.

1. APS Strip Loader

2. APS Strip Loader Handle

3. Press Assembly

4. Handle Assembly

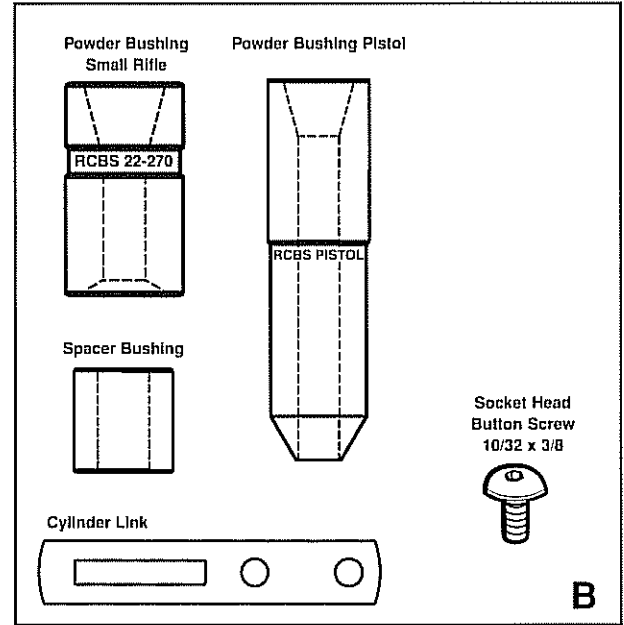
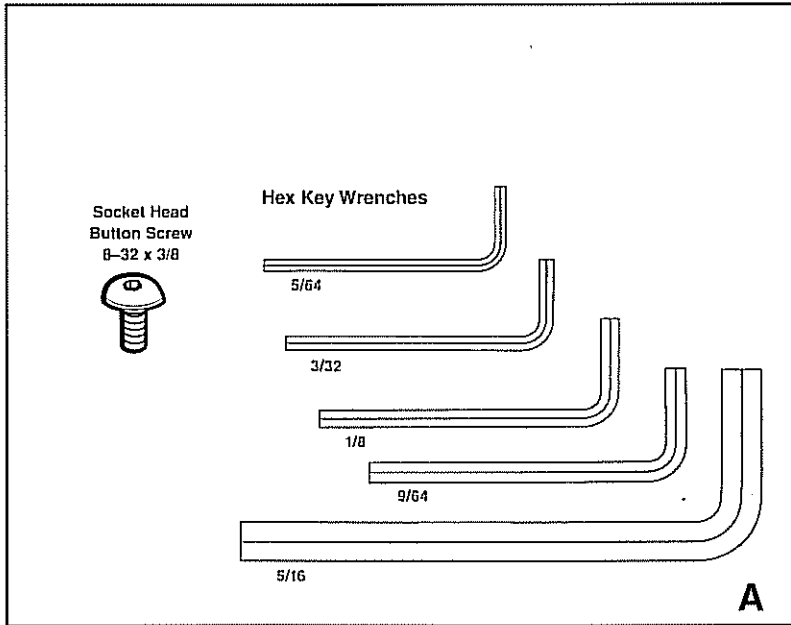
5. Bin #1 (Contains the following parts)

- Ammo Bin
- Die Plate
- Piggyback-3 parts bag #1
 - Hex key wrench 5/64" (Diagram A)
 - Hex key wrench 3/32" (Diagram A)
 - Hex key wrench 1/8" (Diagram A)
 - Hex key wrench 9/64" (Diagram A)
 - Hex key wrench 5/16" (Diagram A)
 - Handle Nut
 - 8-32 X 3/8" Button Head Cap Screw (2) (Diagram A)

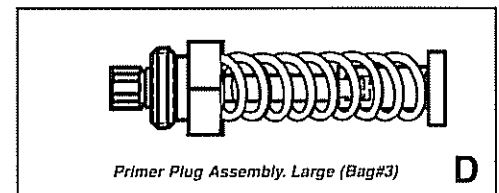
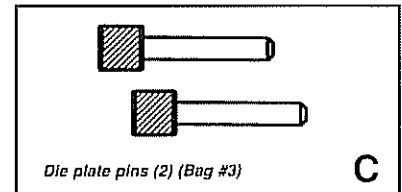
6. Bin #2 (Contains the following parts)

- Ammo Bin
- Spent Primer Tube Assembly
- CAPM* Linkage
- Wrench
- CAPM* Powder Drop Tube
- Star Wheel
- Piggyback-3 parts bag #2
 - CAPM* spacer bushing (Diagram B)
 - CAPM* powder bushing, Pistol (Diagram B)
 - CAPM* powder bushing, Sm. rifle (Diagram B)
 - Cylinder Link (Diagram B)
 - 10-32 x 3/8" Button Head Cap Screw (2) (Diagram B)
- Piggyback-3 parts bag #3
 - Die Plate Pins (2) (Diagram C)
 - Detent ball 3/8" diameter (Shown in photo 7, page 5)
 - Detent spring (Shown in photo 7, page 5)
 - Primer Plug Assembly Large (Diagram D)
 - Shell Plate Bolt

*CAPM: Case Activated Powder Measure



We're here to help!
If you have any questions,
call RCBS Customer Service
1-800-533-5000
Monday-Friday
6:30 am - 4:00 pm Pacific Time



PIGGYBACK-3 REFERENCE TABLE

The Piggyback-3 uses a five-station shell plate that has the same numbering system as RCBS shell holders. Shell plates are available for a variety of popular calibers. Consult the chart below for the proper shell plate number and primer size.

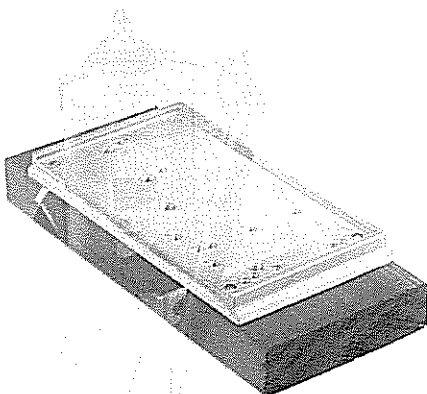
| Caliber | Five Station Shell Plate | Primer Size | Caliber | Five Station Shell Plate | Primer Size |
|--------------------------|--------------------------|-------------|-----------------------|--------------------------|-------------|
| .17 Remington | 10 | Small | 9mm Luger | 16 | Small |
| .218 Bee | 1 | Small | 9mm Makarov | 16 | Small |
| .22 Hornet | 12 | Small | 9mm x 21 | 16 | Small |
| .22 K-Hornet | 12 | Small | 9mm x 23 Winchester | 16 | Small |
| .22 Remington Jet | 6 | Small | .38 Casull | 3 | Large |
| .221 Remington Fire Ball | 10 | Small | .38 Colt Super Auto | 1 | Small |
| .222 Remington | 10 | Small | .38 Smith & Wesson | 6 | Small |
| .223 Remington | 10 | Small | .38 Special | 6 | Small |
| .25-20 Winchester | 1 | Small | .380 Automatic Pistol | 10 | Small |
| .30 M-1 Carbine | 17 | Small | .38-40 Winchester | 26/28* | Large |
| .30 Herrett | 2 | Large | .40 S&W | 27 | Small |
| .30 Luger | 16 | Small | 10mm Auto Colt | 27 | Large |
| .30 Mauser | 16 | Small | .41 Remington Magnum | 30 | Large |
| 7.62mmx39-.308/.311 | 32 | Large | .44 Magnum | 18 | Large |
| .32 Automatic | 17 | Small | .44 Special | 18 | Large |
| .32 H&R Magnum | 23 | Small | .44-40 Winchester | 26/28* | Large |
| .32 S&W Long | 23 | Small | .45 Automatic | 3 | Large |
| .32-20 Winchester | 1 | Small | .45 Colt | 20 | Large |
| .356 TSW | 16 | Small | .454 Casull | 20 | Small |
| .357 Herrett | 2 | Large | .475 Linebaugh | 40 | Large |
| .357 Magnum | 6 | Small | .480 Ruger | 40 | Large |
| .357 Remington Magnum | 6 | Small | .50 Action Express | 33 | Large |

The Piggyback-3 will also reload other cartridges that do not exceed 2.260" in overall length. The .25 Auto case is too short to reload on the Piggyback-3.

** When two shell plates are listed, the most popular is shown first. It may be necessary to use the alternate depending on the manufacture and/or lot of cases being used.*

PRESS ASSEMBLY

Be sure your Rock Chucker, Reloader Special-3 or Reloader Special-5 Press is securely mounted to a sturdy bench. If an Automatic Primer Feed was previously installed on the Rock Chucker, it must be removed before proceeding. For benches with limited space, or to increase the rigidity of your bench, try our Accessory Base Plate (# 09280), available through your local dealer. See photo below.



RCBS Accessory Base Plate #09280

The first step in assembling and installing your Piggyback-3 is removing the existing bushing from the top of your reloading press. A 15" adjustable wrench (or 1-1/2" socket) is required for this step. DO NOT use the Piggyback wrench to remove the reloading press bushing. This wrench does not have enough strength or leverage to remove the bushing. See Photo 1. The bushing in many older presses is extremely tight. If you have trouble removing the bushing, seek the help of a gunsmith or mechanic.

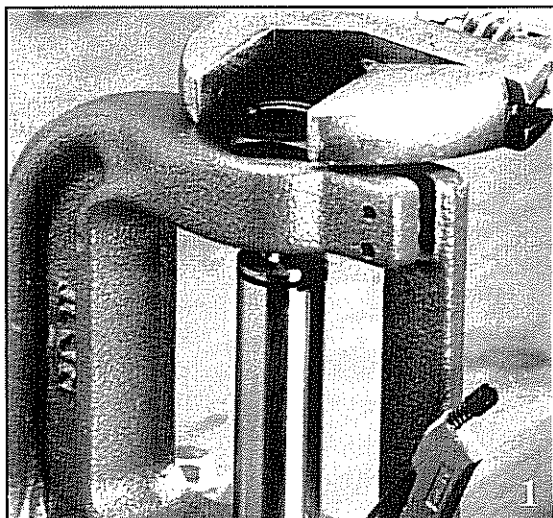
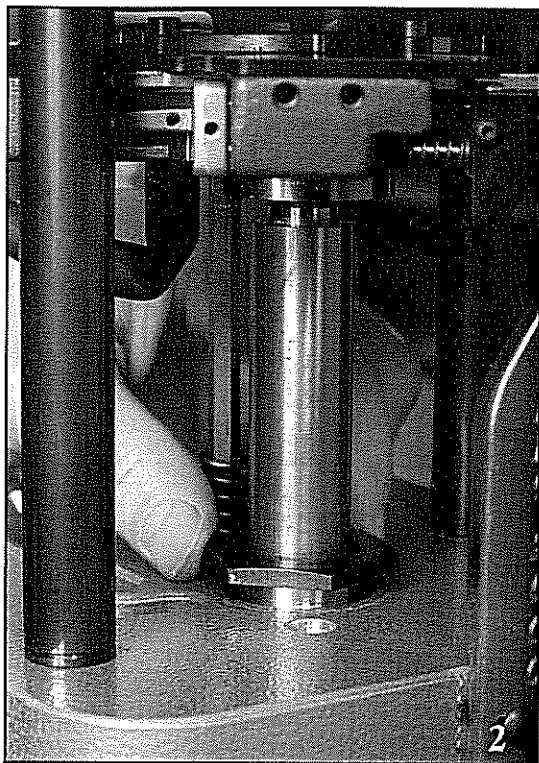


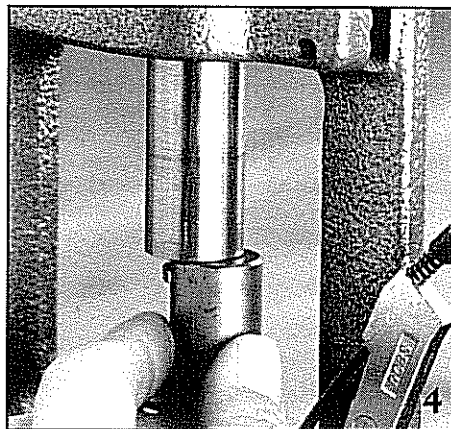
Photo1: Remove the bushing from the press with a 15" adjustable wrench.

For easier installation and removal, lightly lubricate (with gun oil) the large lock nut on the Piggyback-3.

Place the Piggyback-3 on top of the press. Guide the lock nut into the bushing hole on top of the press and finger-tighten the lock nut down. See photo 2.



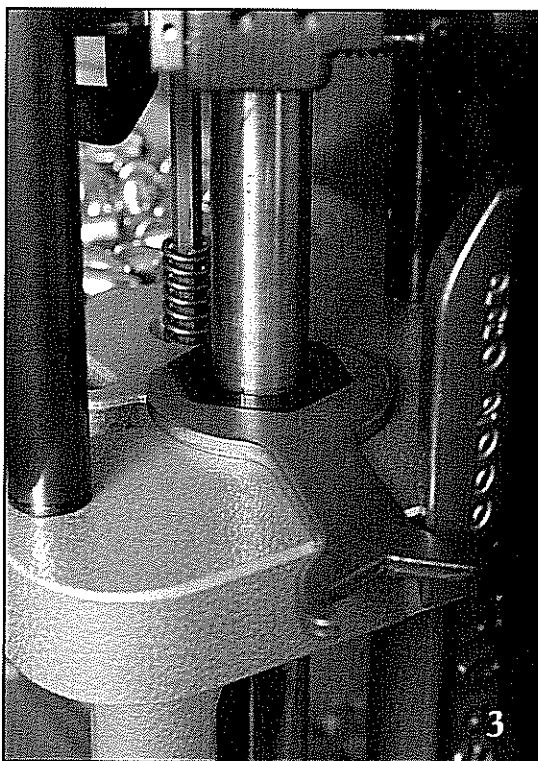
Mate the ram adaptor with the press ram and the Piggyback-3 ram at the same time. The ram adaptor slides in like a shell holder. Rotate the adaptor about 1/2 of a turn to keep it from slipping loose. See photo 4.



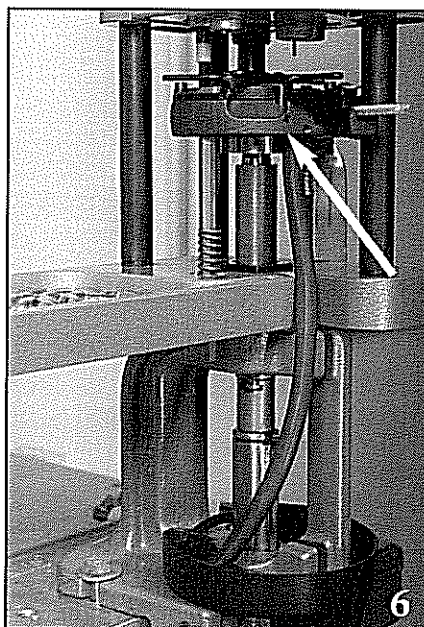
Install Piggyback-3 handle and tighten the handle and nut. Attach two ammo bins to the front of the bullet tray. See photo 5.



Use the large end of the special wrench that is supplied with the Piggyback-3 to securely tighten the lock nut. See photo 3. Remember, do not use this wrench to remove the existing bushing from the top of your reloading press.



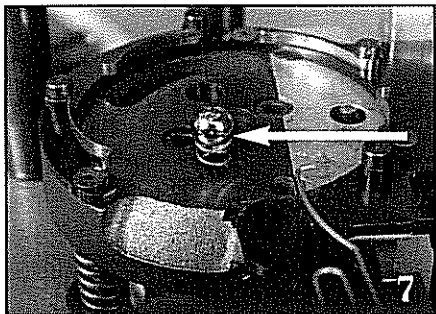
Install Spent Primer Tube as shown in photo 6. Secure with 5/64 Hex wrench provided.



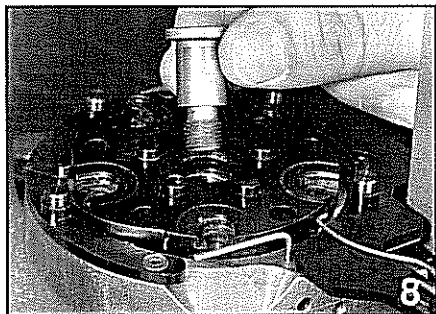
CALIBER SET-UP

The following steps should be completed for every caliber changeover. Refer to Shell Plate Chart on page 3 to select proper shell plate.

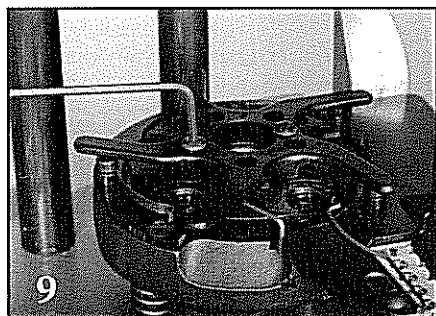
1. Install detent spring and ball into shell plate holder. *See photo 7.*



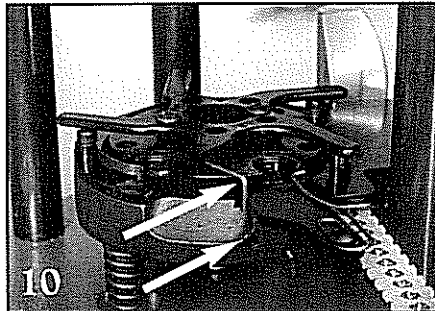
2. Install shell plate and shell plate bolt to shell plate holder. Tighten shell plate bolt with 5/16" hex key wrench. *See photo 8.*



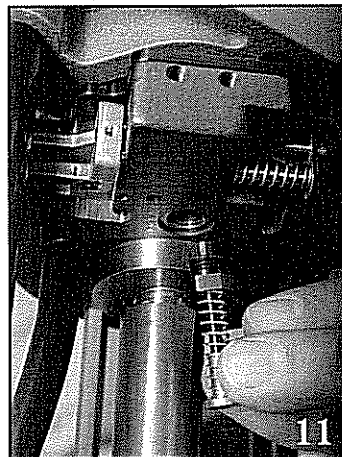
3. Install Star Wheel to the Shell Plate using two 8-32x3/8" socket head button screws. *See photo 9.* (Star Wheel can be attached before installation of shell plate using 3/32" hex key wrench).



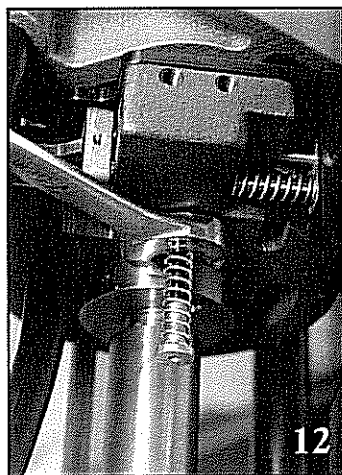
4. Adjust case eject wire and tighten setscrew using the 5/64" hex key wrench. Position eject wire under Star Wheel and as close to the Star Wheel hub as possible. *See photo 10.*



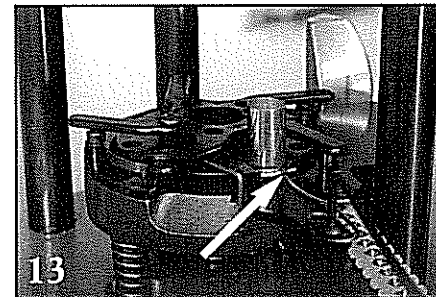
5. Install large or small primer plug assembly, depending on need, into the bottom of the shell plate holder. **NOTE:** The small primer plug assembly is installed at factory. *See photo 11.*



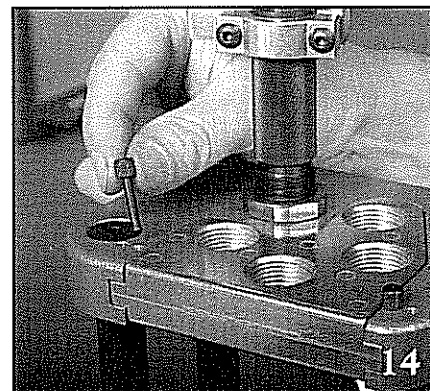
6. Tighten the primer plug assembly with a 7/16" open-end wrench (not included). *See photo 12.*



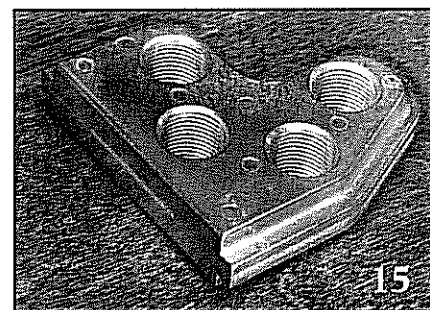
7. Adjust Station 1 case holder spring to barely touch the rim of the case. Use 3/32" hex key wrench. *See photo 13.* **NOTE:** This adjustment must be made each time you change calibers.



8. Install die plate and lock into place with the two plate pins. *See photo 14.* The two outside holes are for pin storage when die plate is removed.



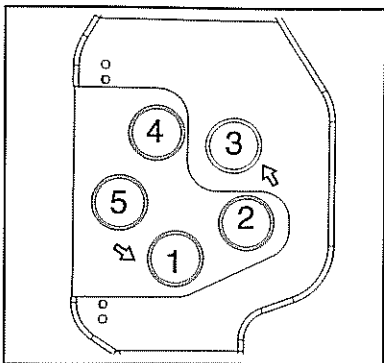
Additional die plates are available so dies can remain pre-set in die plate. (Part # 88877). *See photo 15.*



We're here to help! If you have any questions, call RCBS
Customer Service at 1-800-533-5000
Monday-Friday 6:30 am-4:00 pm Pacific Time

PRESS SETUP

Refer to Die instructions and Powder Measure instructions for individual adjustment and set-up. See diagram below for position and rotation.



Index in a counter-clockwise direction.

STATION SETUP OPTIONS

Station 1:

1. Size die
2. Lube die is optional when reloading bottleneck cartridges.
3. Decap die: Size and expand in Station 2 with elevated expander ball.

Station 2:

1. Expander die for straight wall cases.
2. No die for bottleneck cartridges.
3. Size die if using lube die at Station 1. This allows you to elevate decap rod and expander, which enhances the expanding operation.

Station 3:

1. Powder charging. Refer to Powder Measure instructions on page 8.

Station 4:

1. Lock-Out Die (optional for pistol calibers from 9mm and larger).
2. Powder checker die (optional for most pistol calibers and rifles up to .223).
3. Seat die.

Station 5:

1. Seat die or seat/crimp die
2. Crimp die (optional if you choose to seat and crimp separately).

DIE ADJUSTMENT

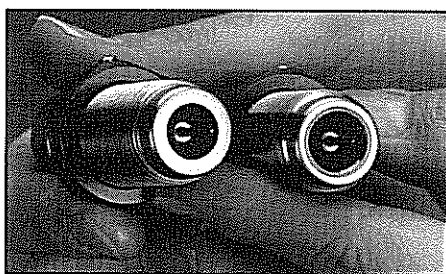
Standard die adjustments are listed in this section. Refer to PRESS SET-UP for die position. If you have questions after reading these instructions, please refer to the Die instructions included with your die set.

3-DIE SET FOR STRAIGHT WALL RIFLE AND PISTOL CASES

Reloading straight-wall type cases require a 3-die set instead of a 2-die set because it is not possible to size and expand the mouth of a straight walled case at the same time. In this 3-die set, the first die sizes and decaps the case. The second die expands and flares (bells) the case mouth to receive the bullet and the third die seats and, if necessary, crimps the bullet.

SIZING WITH CARBIDE SIZER DIES

NOTE: Case lubrication is not normally required when using a carbide sizer die. However, with the .30 M-1 Carbine, we recommend lubricating every fourth or fifth case. Screw the Sizer Die into the press until the die touches the top of the shell plate when the shell plate holder is brought up to the top of the press stroke. Tighten the large lock nut. DO NOT CAM OVER.



The standard RCBS steel die is shown on the left. The carbide insert is visible in the carbide sizer die on the right

SIZING WITH STANDARD STEEL SIZER DIES

CAUTION: Always lube cases before sizing cases when using a standard steel sizer die. Screw the Sizer Die into the press until the die touches the top of the shell plate when the shell plate is brought up to the top of the press stroke. Be sure all play is removed from the press leverage system. To do this, lower the shell plate and screw the die 1/8 to 1/4 turn further down so the press cams over center. Set the large lock nut and you are ready to size. Adjust the decapping unit so the bottom of the decapping pin holder is at least 3/16" inside the bottom of the die. The decapping unit is adjusted by loosening the small lock nut at the top of the die and turning the decapping rod until the desired setting is obtained. When the decapping unit is adjusted correctly, the decapping pin will protrude below the bottom of the die just enough to knock out the spent primer. IMPORTANT: Do not allow the decapping unit to contact the web of the case.

EXPANDING

Screw the expander die into the press until the die touches the top of the shell plate when the shell plate holder is brought up to the top of the press stroke. Place a sized case in the shell plate and run it into the expander die. The case mouth should be expanded and flared (belled) just enough to accept the bullet when placed on top of the case. The expander is tapered and may be adjusted for more or less flaring (belling) by loosening the lock nut on top of the die and turning the expander up or down.

BULLET SEATING WITHOUT CRIMPING

IMPORTANT: Please read instructions carefully. Do not adjust the seater die down against the shell plate, as it will distort or crush the case. Most rifle and pistol bullets for straight-wall type cases have a cannelure or crimping groove and the bullet may be crimped. However, there are a few calibers where the bullet should not be crimped. These instructions are for seating the bullet without crimping. To adjust the seater die, place a sized, primed and powder-charged case into the shell plate and run it to the top of the press stroke. Screw the seater die into the press until you feel it touch the mouth of the case. Back the die up one full turn and set the large lock nut. This will leave a gap between the bottom of the die and shell plate. Next, lower the case and insert the bullet in the case mouth. Slowly run the case into the seater die. Check the bullet for proper seating depth. If the bullet is not seated properly, adjust the seater plug until the proper depth is obtained. Once the proper seating depth is attained, tighten the seater plug lock nut.

BULLET SEATING AND CRIMPING For Roll Crimp

IMPORTANT: Please read instructions carefully. Do not adjust the seater die down against the shell plate as it will distort or crush the case. If the bullet you are using has a definite cannelure or crimping groove, the bullet can be seated and crimped using the following instructions. The crimping feature is machined into the seater die body. It is not a special attachment to the seater plug. The die must be moved up or down to obtain the proper crimp adjustment. To adjust, the seater die, place a sized, primed and powder-charged case into the shell plate and run it to the top of the press stroke.

(continue page 7)

BULLET SEATING AND CRIMPING For Roll Crimp—Cont.

Screw the seater die into the press until you feel it touch the mouth of the case. Back the die up one full turn and set the large lock nut. This will leave a gap between the bottom of the die and the shell plate. Next, lower the case and insert a bullet in the case mouth. Slowly run the case and bullet into the seater die. Check the bullet for proper seating depth. If the bullet is not seated properly, adjust the seater plug until the proper depth is obtained. Next, adjust the die to crimp. While the uncrimped cartridge is still in the seater die, unscrew the seater plug several turns. Screw the seater die downward until you feel it touch the mouth of the case. Lower the reloaded cartridge and adjust the seater die down about 1/8th of a turn. Run the reloaded cartridge into the die and then check the crimp. If more crimp is desired, repeat the preceding step by adjusting the die downward 1/8th of a turn at a time. Over-crimping of the cartridge will cause bulging and may affect chambering. After you are satisfied with the crimp, set the large lock nut and run the completed cartridge into the seater die, then lower the seater plug until it touches the bullet. Tighten the seater plug lock nut. Once the seater die is properly adjusted, the bullet is seated and crimped in one operation.

BULLET SEATING AND CRIMPING For Taper Crimp

IMPORTANT: Please read instructions carefully. Do not adjust the seater die down against the shell plate as it will distort or crush the case. Bullets for semi-automatic firearms are normally taper crimped because the cartridge head-spaces on the mouth of the case. This also assures proper feeding and functioning. The bullet can be seated and crimped using the following instructions. The crimping feature is machined into the seater die body. It is not a special attachment to the seater plug. The die must be moved up or down to obtain the proper crimp adjustment. To adjust the seater die, place a sized, primed and powder-charged case into the shell plate and run it to the top of the press stroke. Screw the taper crimp seater die into the press until you feel it touch the mouth of the case. Back the die up one full turn and set the large lock nut. (NOTE: Taper Crimp seater dies are marked "TC" or "Taper Crimp" for easy identification.) This will leave a gap between the bottom of the die and the shell plate. Lower the case and insert a bullet into the case

mouth. Slowly run the case up into the seater die. Check the bullet for proper seating depth. If the bullet is not seated properly, adjust the seater plug until the proper depth is obtained. Next, adjust the die to crimp. While the uncrimped cartridge is still in the seater die, unscrew the seater plug several turns. Then screw the seater die downward until you feel it touch the mouth of the case. Lower the reloaded cartridge and adjust the seater die down about 1/8th of a turn at a time. After you are satisfied with the crimp, set the large lock nut and run the completed cartridge into the seater die, then lower the seater plug until it touches the bullet. Tighten the seater plug lock nut. Once the seater die is properly adjusted, the bullet is seated and crimped in one operation.

2-DIE SET FOR BOTTLE NECK RIFLE AND PISTOL CASES

The end of the expander ball must be at least 3/16" inside the bottom of the die. The expander ball and decapping pin are adjusted by loosening the small lock nut at the top of the die and turning the expander decapping rod until the desired setting is obtained. When the expander ball is adjusted correctly, the decapping pin will protrude below the bottom of the die just enough to knock out the spent primer. The case is sized (full length or neck), decapped and expanded in one operation. If cast lead bullets are being used, you will need an RCBS Neck Expander Die. This die expands a sized rifle case neck to the correct diameter and slightly flares (bells) the case mouth for easy bullet seating.

FULL LENGTH OR NECK SIZING

CAUTION: Always lube cases before sizing unless using a carbide size die for pistol calibers. Lower the handle and raise the ram to the top of the stroke. Screw the full length size die into the press until the die touches the shell plate. Be sure all play is removed from the press leverage system. To do this, lower the shell plate and screw the die 1/8 to 1/4 turn further down so the press cams over center. Set the large lock nut and you are ready to size.

BULLET SEATING WITHOUT CRIMPING

IMPORTANT: Please read instructions carefully. Do not adjust the seater die down against the shell plate as it will distort or crush the case. Most rifle and pistol bullets for bottle neck type cases do not have a cannelure or crimping groove and the bullet is therefore seated without crimping. To

adjust the seater die, place a sized, primed and powder charged case into the shell plate and run it to the top of the press stroke. Then screw the seater die into the press until you feel it touch the mouth of the case. Back the die up one full turn and set the large lock nut. This will leave a gap between the bottom of the die and the shell plate. Next, lower the case and insert the bullet in the case mouth. Now slowly run the case into the seater die. Check the bullet for proper seating depth. If the bullet is not seated properly, adjust the seater plug until the proper depth is obtained. Once the proper seating depth is attained, tighten the seater plug lock nut.

BULLET SEATING WITH CRIMPING

IMPORTANT: Please read instructions carefully. Do not adjust the seater die down against the shell plate as it will distort or crush the case. If the bullet you are using has a definite cannelure or crimping groove, the bullet can be seated and crimped, using the following instructions. The crimping feature is machined into the seater die body. It is not a special attachment to the seater plug. The die must be moved up or down to obtain the proper crimp adjustment. To adjust the seater die, place a sized, primed and powder charged case in the shell plate and run it to the top of the press stroke. Screw the seater die into the press until you feel it touch the mouth of the case. Back the die up one full turn and set the large lock nut. This will leave a gap between the bottom of the die and the shell plate. Next, lower the case and insert a bullet in the case mouth. Slowly run the case and bullet into the seater die. Check the bullet for proper seating depth. If the bullet is not seated properly, adjust the seater plug until the proper depth is obtained. Next, adjust the die to crimp. While the uncrimped cartridge is still in the seater die, unscrew the seater plug several turns. Screw the seater die downward until you feel it touch the mouth of the case. Lower the reloaded cartridge and adjust the seater die downward about 1/8 of a turn. Run the reloaded cartridge back into the seater die and check the crimp. If more crimp is desired, repeat the preceding step by adjusting the die downward 1/8 of a turn at a time. After you are satisfied with the crimp, tighten the seater plug lock nut. Once the seater die is properly adjusted, the bullet is seated and crimped in one operation.

POWDER MEASURE

A powder measure is basically a device which measures powder by volume, not weight. However, before you start throwing a given charge with this powder measure, the first charge must always be weighed on a powder scale to arrive at the desired charge. Accurate powder measure charges will also depend upon the size and uniformity of the powder kernels used.

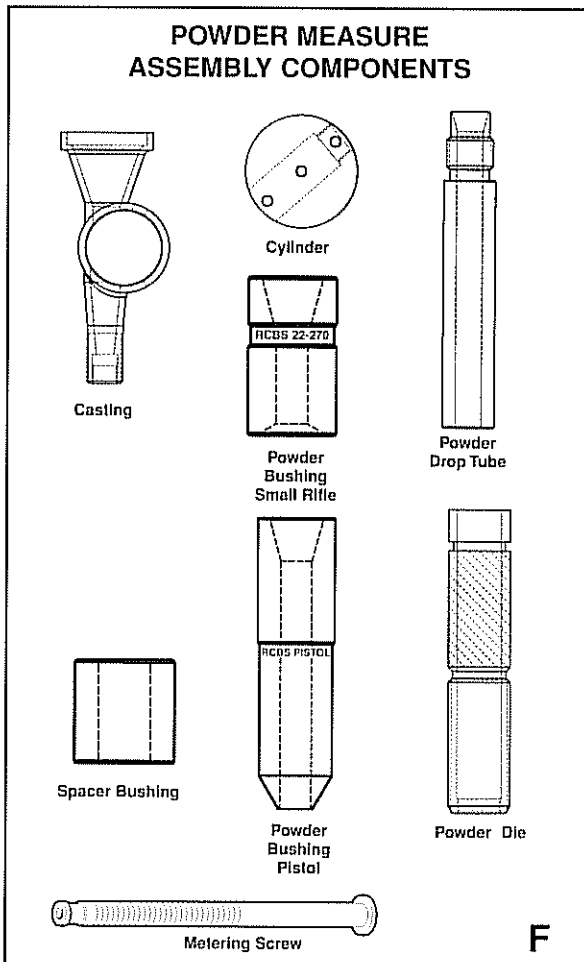
NOTE: DO NOT use the Uniflow Powder Measure with black powder.

Helpful Tip: The consistency of the powder and static electricity are two causes of erratic powder charges. Slowly roll the powder can several times to homogenize it before pouring it into the powder hopper. Static electricity can be reduced by wiping down the powder hopper with a clothes dryer sheet.

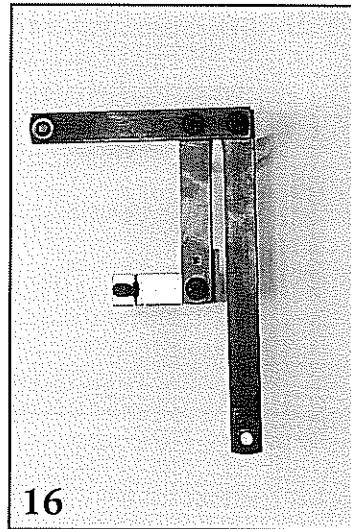
IMPORTANT: All internal components of the powder assembly must be thoroughly cleaned of rust preventatives applied at the factory. Failure to do this will cause powder charges to be inconsistent. See Diagram F for the following items that must be clean and dry before use:

- Casting
- Cylinder
- Metering Screw
- Powder Die
- Powder Bushings & Spacer
- Powder Drop Tube

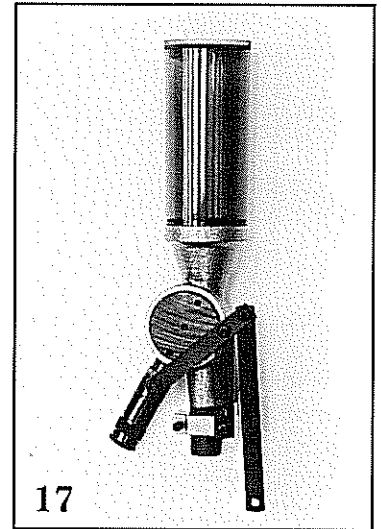
A dependable powder scale should be used to set the first charges in the powder measure. It is not necessary to empty the powder hopper each time you change charges unless a different powder is required.



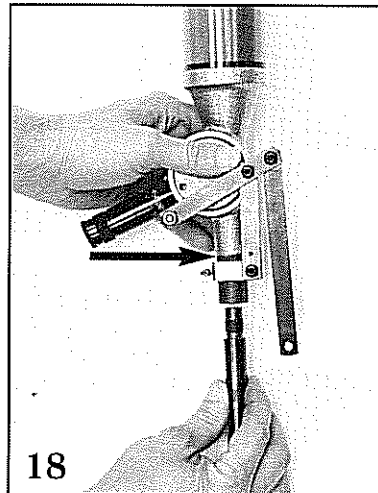
INSTALLING THE CASE ACTIVATED POWDER DROP (Upper Assembly)



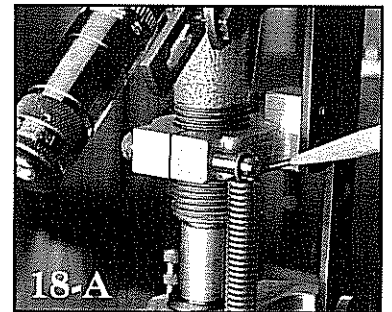
1. Install top assembly to Uniflow Powder Measure. See photo 16.



2. With links pointed upward, slide assembly over the threaded portion of the Powder Measure. See photo 17. *



3. Leave two threads showing above top bracket, then tighten bracket with 1/8" hex key wrench. See photo 18. *



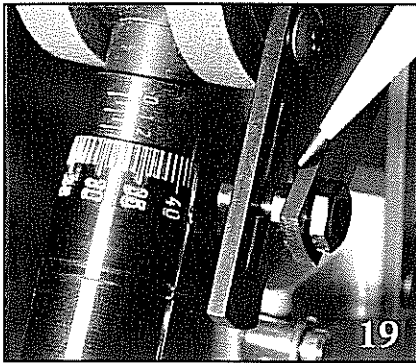
4. Install top spring anchor cap on to the threaded portion of the top bracket. See photo 18-A.

5. Screw powder drop tube into bottom of Powder Measure. See photo 18.

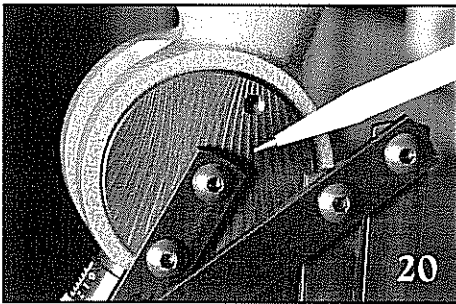
* Shown with optional (not included) Micrometer Adjustment Screw.

POWDER MEASURE INSTALLATION

Slip slotted portion of cylinder link over drive pin. See photo 19. *



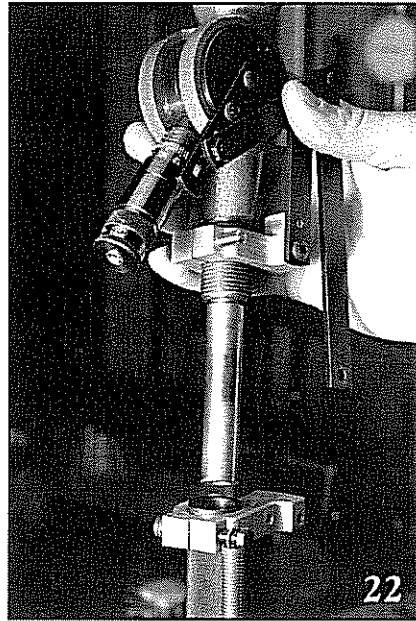
Now install cylinder link with two 10-32x3/8" socket head button screws using the 1/8" Hex Key Wrench. See photo 20.



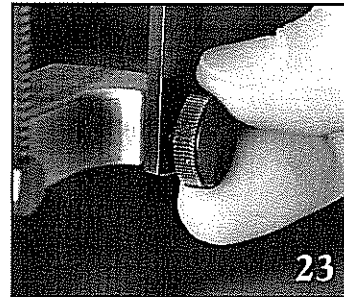
Screw the powder die (identified in Diagram F on page 8) 3 full turns into Station 3. Select the correct powder bushing small rifle 22-270 or pistol. Install bushings with funnel end up. See photo 21. See Powder Bushings in Diagram F on page 8 for correct orientation.



Install powder measure to powder die. See photo 22. *

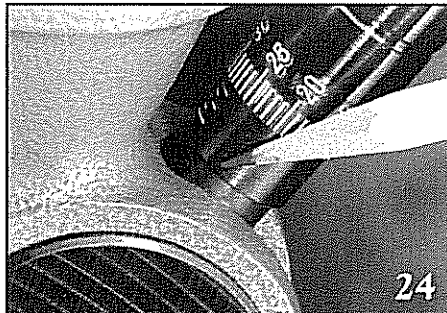


Connect powder measure linkage and tighten thumb screw. See photo 23.



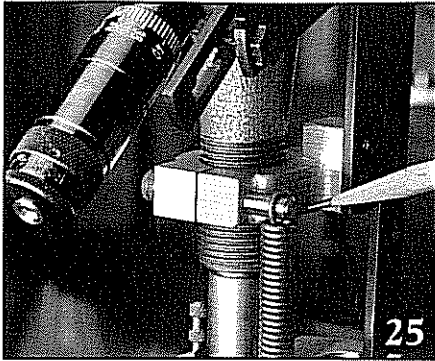
Do not install spring. Insert case in Station 3 and raise ram. Adjust powder dump in relation to case height by screwing powder measure assembly down on the case until full stroke of the powder measure is achieved.

NOTE: Full stroke is within 1/16" to barely touching the top of the slot in the Uniflow Powder Measure casting. See photo 24. * This allows the powder measure to turn one full turn to orient the powder measure to a convenient position.



* Shown with optional (not included) Micrometer Adjustment Screw.

Should the powder die hit the shell plate before the full powder measure stroke is achieved, back off the powder die 9 turns and install the spacer on top of the powder bushing. Screw powder die down until full stroke on the powder measure is achieved. Lower the ram and attach the return spring. See photo 25.*



Tighten the 7/8-14" lock ring on the powder die. Powder Measure installation is complete. **CAUTION: Do not over stroke.** See photo 24 on page 9.

To remove the powder measure from the press simply remove thumb screw and return spring, then lift off the Uniflow Powder Measure.

NOTE: Check thumb screw for tightness during loading session.

HANDLE SWING vs. POWDER BRIDGING

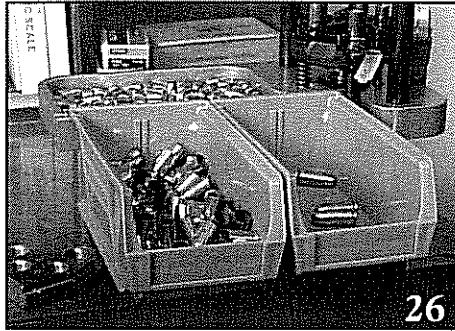
Helpful Tip: When using some extruded (long grain) or large flake powder, bridging can occur. This happens when the powder jams (bridges) together and stops the flow of powder. This is caused by the powder dumping too quickly from the powder measure cylinder into the drop tube. To eliminate this possible problem, the reloader can slow down the press handle swing, which slows the cylinder rotation and pours the powder from the powder measure cylinder. Otherwise, a fast dump may cause the powder to bridge in the powder bushing. To prevent bridging, slow down the press handle swing halfway through its stroke.

NOTE: This problem exists only with some long grain extruded or large flake powders.

PRESS OPERATION

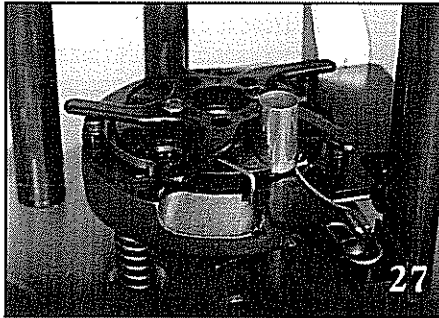
We recommend that several cases be completely reloaded one at a time before proceeding with full operation. This will help you become familiar with the process.

NOTE: Place bullets in bullet tray, empty cases in the ammo bin on the left front of the bullet tray. Loaded rounds will fall into the ammo bin on the right front of bullet tray. See photo 26.



Step 1:

Place case in Station 1 and pull handle. The case will be sized and the spent primer will be decapped. Now lower the shell plate. Push the handle all the way back. See photo 27.



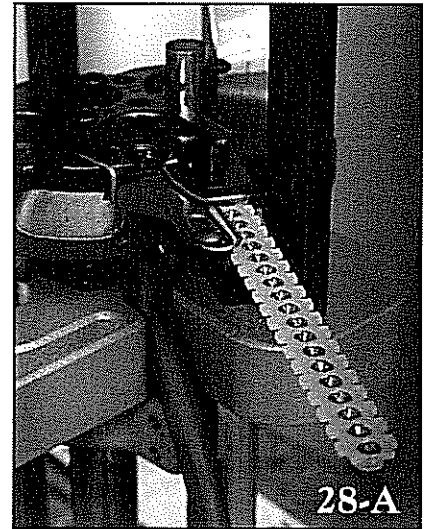
Install primer strip. With the handle in the full back position, feed the strip, *hook end first* and anvil side up, until it stops firmly against the Primer Plug. See strip in photo 28. Advance strip one click to contact primer plug.



Release handle and index Star Wheel by pulling the Star Wheel with your left index finger.

NOTE: Use full stroke with each cycle of the press.

Photo 28-A shows correct orientation of primer strip.



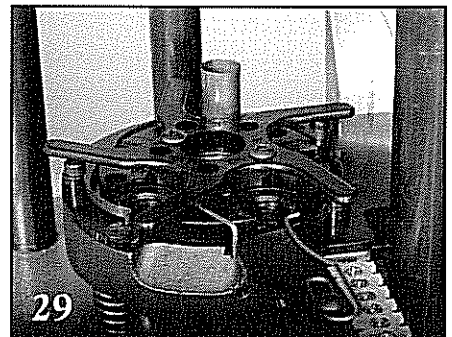
Step 2:

Pull handle and raise case into Station 2. **NOTE:** Station 2 is for the expanding of pistol calibers and is an optional station for rifle calibers. Lower case and seat primer. The primer is seated in the last 1/2" of the handle stroke below the shell plate neutral position. Firmly press the handle forward, toward the bench to seat the primer. Remove case and inspect primer depth.

When satisfied, index Star Wheel.

Step 3:

Pull handle and raise case into Station 3 (Powder Measure). Charge the sized and primed case. Verify powder charge and check charge every fifty rounds. See photo 29.



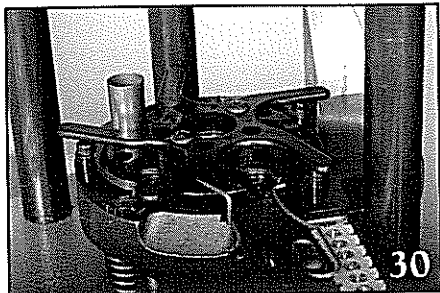
NOTE: Refer to Powder Measure instructions for adjustment.

* Shown with optional (not included) Micrometer Adjustment Screw.

Step 4:

Pull the handle and raise the case into Station 4. Lower the case and index the Star Wheel. See photo 30.

NOTE: This is an extra station that allows options such as Powder Checker Die or Lock-Out Die. You may choose to have this as an empty station.



Step 5:

Now your reprimed case, with powder, is in Station 5. Insert bullet, pull the handle and raise the case and bullet into the seater die. Lower the ram, index the Star Wheel and the loaded cartridge will be ejected into the cartridge box. See photo 31.



NOTE: Strips can be hooked together for continuous loading. See photo 32.



APS STRIP LOADER

The APS Strip loader is designed for those who may have a supply of primers not pre-loaded into APS Primer Strips. This tool makes fast easy work out of loading conventionally packed primers into the APS Primer Strips. Whenever loading primers into the APS Strips, be sure to refer to the color code chart in the enclosed APS instruction booklet, to prevent any confusion and misidentification. For complete instructions on how to operate the APS Strip Loader, refer to the instruction booklet included with your APS Strip Loader inside your Piggyback-3 box.

NOTE: A far more convenient way to prime on your Piggyback-3 is to buy your primers already pre-packed in APS Strips. CCI offers pre-packaged primers in APS Strips. Be sure to ask your local dealer for these conveniently packaged primers. This will completely eliminate having to load each primer individually into a primer tube or 25 at a time into an empty strip. Best of all, these conveniently packaged primers cost the same as conventionally packaged primers.

PIGGYBACK-3 OPERATING PROCEDURE

Now that you have read the instructions and are familiar with your Piggyback-3, you are ready to reload! Based on our experience, we will explain the most efficient way to use your new Piggyback-3. You may choose to change your technique as you become more accustomed to the function of this tool, but for now we strongly suggest you use the following operating procedure.

Place your bullets in the bullet tray and your empty cases in the left ammo bin. The right ammo bin will be used to catch the loaded ammunition as it is ejected from the press. With your right hand on the handle ball, pick up an unsized case with your left hand and place it into Station 1. At this point be sure the case holder spring is adjusted to barely touch the rim of the case. Now smoothly pull the handle down. This will size and deprime the case in Station 1. Raise the handle and push it all the way back. With the handle in the up and full back position, insert the primer strip into the APS Priming System. Push the primer strip in (**hook end first and anvil side up**) until it stops firmly against the Primer Plug. Now release the handle and it will return to the neutral position. With your left hand reach up and manually index the Star Wheel in a counter clockwise direction.

You now have a sized and deprimed case in Station 2. Insert another unsized case into Station 1 and lower the handle. Again, this will size and deprime the case in Station 1, while at the same time, expand the case in Station 2. Raise the handle to the top of the stroke and smoothly push the handle forward, you will be able to feel the primer being seated. Release the handle and it will return to the neutral position. Next, index the Star Wheel.

You now have a sized, unprimed case in Station 2 and a sized and reprimed case in Station 3. Insert another case into Station 1 and lower the handle. Station 1 and 2 will repeat the same operation while the powder charge is being thrown in Station 3. Next, raise the handle and seat the primer at the top of the handle stroke. Release the handle and it will return to the neutral position. Next, index the Star Wheel.

You now have a sized and unprimed case in Station 2, a sized and reprimed case in Station 3, and a sized reprimed and powder charged case in Station 4. Insert another case in Station 1 and lower the handle. Stations 1, 2 and 3 will repeat the same operations.

Station 4 may perform a variety of operations, depending on your preferred reloading technique. In the case of rifle calibers, this may be an empty station or you may use a Powder Checker Die. In the case of pistol calibers, you may select to seat in Station 4 and crimp in Station 5. As another option, you may use an RCBS Lock-Out Die in Station 4, then, seat and crimp in one operation in Station 5.

Whichever method you choose is fine. Versatility is a big advantage of owning a five station progressive press.

By now you should be getting the hang of the sequence of operating your Piggyback-3. Once the Shell Plate has a case in all five stations, the basic operating procedure remains the same time after time. Always follow this same loading procedure: Bullet, Case, Size, Prime, Index.

It may help when first learning the operating procedure to think about the indexing of the Star Wheel as the last step in each cycle. It will also help you to repeat these words to yourself each time you cycle the press:

Bullet, Case, Size, Prime Index:

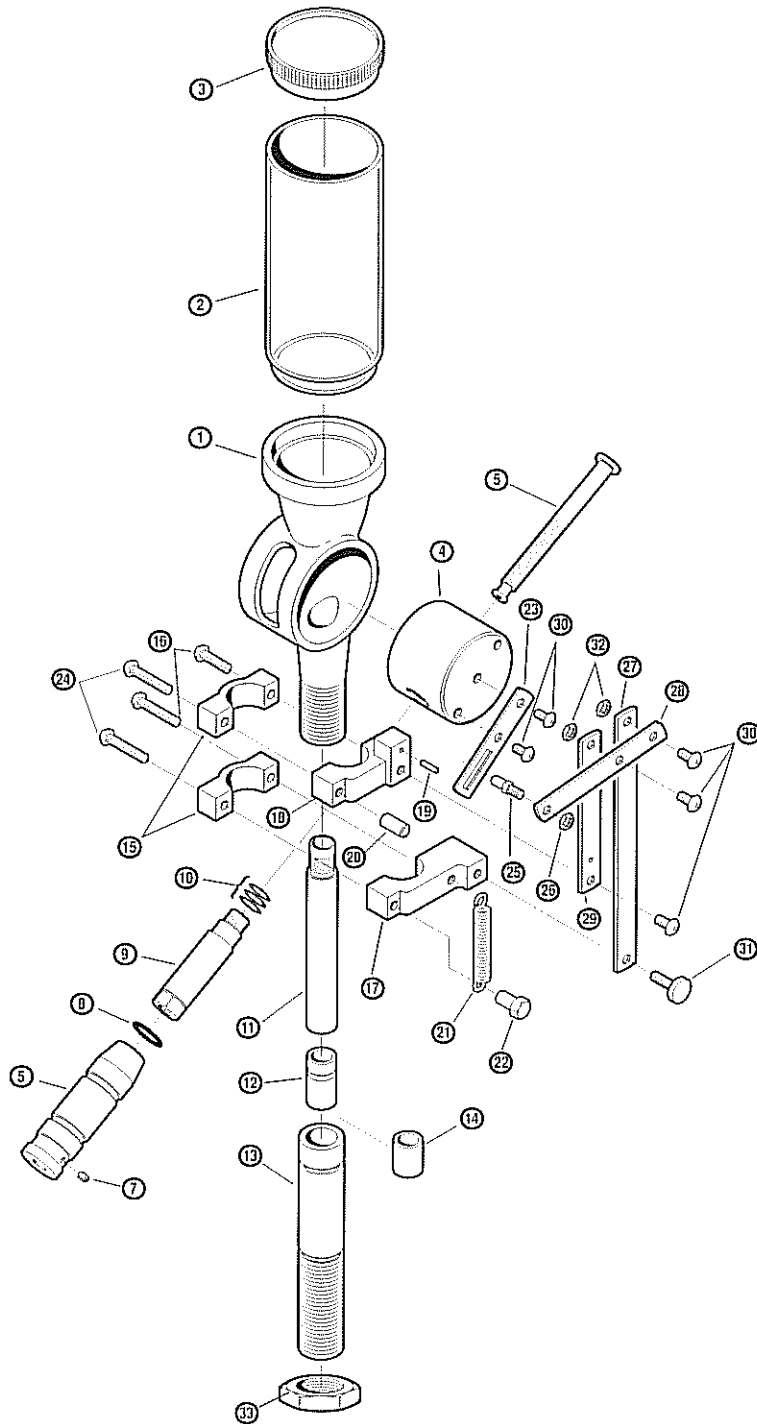
1. **Bullet:** Place bullet on case under seat die.
2. **Case:** Place unsized case in Station 1.
3. **Size:** Pull handle and size case.
4. **Prime:** Prime case in Station 2.
5. **Index:** Index shell plate using Star Wheel.

This is the sequence that will be repeated over and over as you operate your Piggyback-3. By now, everything should be working great. If not, reread this portion of the instructions. If you are still experiencing problems, give us a call, we'll be glad to help.

IMPORTANT: Your Piggyback-3 has been designed and manufactured to be a manually operated reloading press. Any alteration, or attempt to alter the function of this press will void any and all warranties offered by RCBS. We specifically warn against any attempt to convert this press to any automated or motorized method of operation.

UNIFLOW POWDER MEASURE PARTS LIST

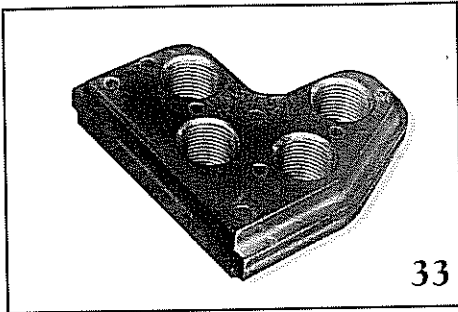
| # | Description | Part # | Qty |
|----|------------------------------------|--------|-----|
| 1 | UPM Main Casting II | 709025 | 1 |
| 2 | UPM Powder Hopper | 109026 | 1 |
| 3 | UPM Powder Hopper Cap | 109012 | 1 |
| 4 | UPM Cylinder Small | 709006 | 1 |
| 4 | UPM Cylinder Large | 709005 | 1 |
| 5 | Micrometer Metering Screw Small * | 788907 | 1 |
| 5 | Micrometer Metering Screw Large * | 788904 | 1 |
| 6 | UPM Metering Screw Thimble * | 788905 | 1 |
| 7 | 10-32x3/16" Cup Point Set Screw | 181004 | 1 |
| 8 | "O" Ring | 181015 | 1 |
| 9 | UPM Micrometer Screw Body * | 798903 | 1 |
| 10 | Compensation Washers | 198906 | 3 |
| 11 | CAPM Powder Drop Tube | 788935 | 1 |
| 12 | CAPM Powder Bushing Large Rifle | 788938 | 1 |
| 12 | CAPM Powder Bushing Pistol | 788939 | 1 |
| 12 | CAPM Powder Bushing Small Rifle | 789934 | 1 |
| 13 | CAPM Powder Die | 788928 | 1 |
| 14 | CAPM Spacer Bushing | 788936 | 2 |
| 15 | CAPM Back Bracket | 788949 | 2 |
| 16 | 10-32x1" Button Head Cap Screw | 187211 | 2 |
| 17 | CAPM Bottom Front Bracket | 788950 | 1 |
| 18 | CAPM Top Front Bracket | 788951 | 1 |
| 19 | 1/8"x3/8" Roll Pin | 186144 | 1 |
| 20 | CAPM Top Spring Anchor | 788941 | 1 |
| 21 | Powder Measure Linkage Spring | 187214 | 1 |
| 22 | CAPM Bottom Spring Anchor | 788941 | 1 |
| 23 | Cylinder Link | 788948 | 1 |
| 24 | 10-32x1 1/4" Button Head Cap Screw | 187210 | 2 |
| 25 | UPM Drive Pin | 788944 | 1 |
| 26 | 10-32 Hex Nut | 109603 | 1 |
| 27 | CAPM Long Link | 788946 | 1 |
| 28 | CAPM Pivot Link | 788947 | 1 |
| 29 | CAPM Drive Link | 788945 | 1 |
| 30 | 10-32x3/8" Button Head Cap Screw | 186144 | 5 |
| 31 | 10-32x1/2" Thumb Screw | 186146 | 1 |
| 32 | CAPM Linkage Nut | 788916 | 2 |
| 33 | Hex Lock Nut, 7/8-14 | 87505 | 1 |



* Shown with optional (not included) Micrometer Adjustment Screw.

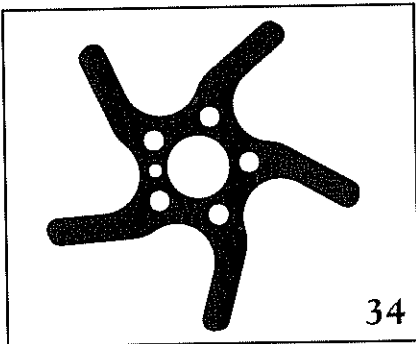
THESE OPTIONAL ACCESSORIES ARE AVAILABLE FROM YOUR RCBS DEALER

Die Plate 88877
 Make caliber changes quick and easy. Leave the reloading dies set up. Eliminates need to install and adjust dies for each reloading session. See photo 33.



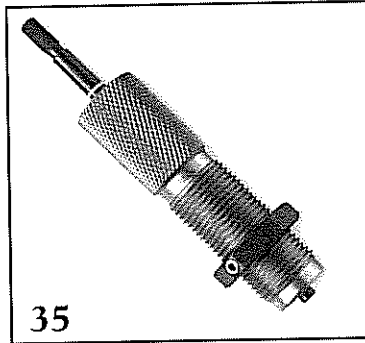
33

Star Wheel 88878
 Mounts to the 5-Station Shell Plate for indexing the Piggyback-3. Eliminates the need to change the Star Wheel each time the Shell Plate is changed. A great time-saver. Mounting screws included. See photo 34.



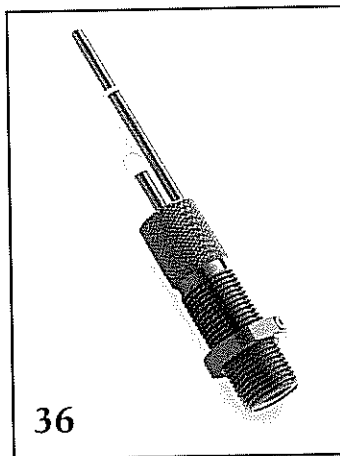
34

Lock-Out Die 87540
 Detects a "no powder" or a "double charge" when used with the Piggyback-3. Positively stops the ram travel until the improperly charged case is removed. For use with straight-wall pistol calibers 9mm and larger. Safety first for your piece of mind. See photo 35.



35

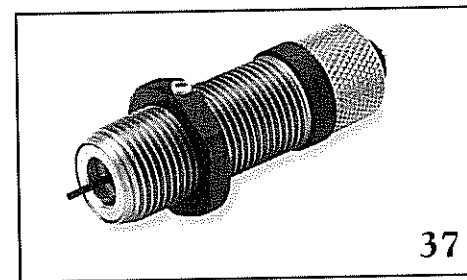
Powder Checker Die 87590
 A simple, effective way to visually check powder charges when using the Piggyback-3. In addition to detecting a "no-charge" condition, the Powder Checker shows low and high charges. Quick to set and easy to use. See Photo 36.



36

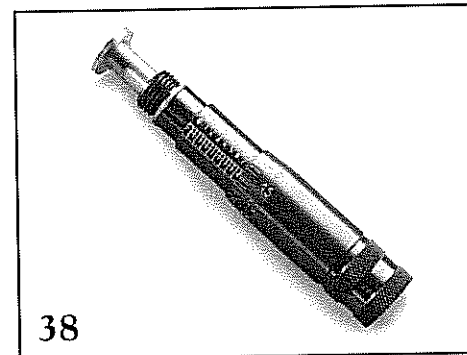
Lube Die
 Decaps and lubricates cases in one stroke. Eliminates handling lubricated cases in progressive presses. Felt lubricating ring lubes the body of the case prior to sizing. Four sizes for most popular bottle-neck cases. Reservoir in top of the dies stores lubricant before being released to the felt ring. 2-ounce bottle of RCBS Case Lube-2 included. See photo 37.

- 87551 Lube Die #1
- 87552 Lube Die #2
- 87553 Lube Die #3
- 87554 Lube Die #4



37

Progressive Press Dust Cover 86767
 Soft vinyl cover protects the Piggyback-3 from dust when not in use. Cover surrounds Press with Uniflow Powder Measure installed. Not shown.



38

Micrometer Adjustment Screw for Uniflow Powder Measure
 The secret to faster reloading—go by the numbers. Add the UPM Micrometer to your Uniflow Powder Measure, and you can record precise settings for your powder charges. Determine the load number and dial it in—time after time. An easy installation too; it simply replaces the Uniflow's standard metering screw. See Photo 38.
 98901 Large
 98902 Small

**Want a copy of our
 RCBS Reloading Catalog?
 Customer Service at 1-800-533-5000
 Monday-Friday
 6:30 am - 4:00 pm Pacific Time
 or see us on the web at www.rcbs.com**