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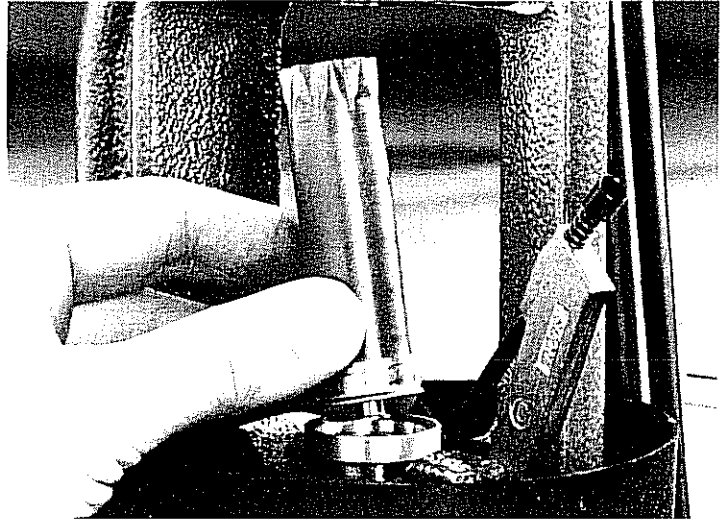
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FEDERAL • CCI • SPEER • RCBS • OUTERS • WEAVER
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RCBS

SHOTSHELL DIE SET



PRODUCT INSTRUCTIONS

SAFETY

Reloading is an enjoyable and rewarding hobby that is easily conducted with safety. But carelessness or negligence can make reloading hazardous. This product has been designed from the beginning with the user's safety in mind.

As with any reloading operation, some safety rules must be followed. By observing these few rules, the chance of a hazardous occurrence causing damage or injury becomes extremely remote.

GENERAL

- Use the reloading equipment as the manufacturer recommends. Study the instructions carefully and become thoroughly familiar with the operation of the product. Don't take short cuts.
- 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. Develop a reloading routine to avoid mistakes. Avoid haste — load at a leisurely pace.
- Always wear adequate eye protection. You assume unnecessary risk when reloading without wearing safety glasses.

LOADING DATA

- Use only laboratory tested reloading data.
- 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.
- DO NOT use primers of unknown identity. To destroy unwanted primers, soak in oil for a few days and then bury.
- Keep primers in original factory container until ready to use. Return unused primers to the same factory packaging for safety and to preserve their identity.
- 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 use any powder unless its identity is positively known. Discard all mixed powders and those of uncertain or unknown 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.
- Before charging cases, settle the powder in the powder hopper. Throw and check the weight of at least ten charges. This will assure you that the correct powder charge is being thrown.
- After a reloading session ends, pour the remaining powder back in its original factory container. This will preserve the identity and shelf life of the powder.
- DO NOT smoke while handling powder or primers.

RECORD KEEPING

- Keep complete records of reloads. Apply a descriptive label to each box.

Since 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, no responsibility, either expressed or implied, is assumed for the use of ammunition reloaded with this product.

IMPORTANT

Please read these instructions very carefully in order to obtain optimum results. Save these instructions for future reference.

INTRODUCTION

The RCBS Shotshell Die Set is designed to be used in the RS-3 press, the Rock Chucker reloading press, or any other press which has a 1¼-12 threaded bushing and utilizes RCBS type removable shell holders. It is designed to reload modern compression formed plastic hulls such as the Winchester AA, Remington RXP, Remington Premier, Peters Blue Magic and Federal Gold Medal with the appropriate plastic wad column for each hull. Loading data is available from the various powder manufacturers which are listed at the end of these instructions. The loads should be carefully adhered to, without changing any components, as dangerous pressures could result.

In addition to the press, you will also need a powder scale to check the powder charge weight, and an RCBS powder funnel. A powder measure is a desirable accessory to speed up the loading process. The powder funnel works better for adding the shot if it is drilled to ⅜ inch inside diameter. See additional information at the end of these instructions for modifying your powder funnel. It should be noted, however, that this modification will make the funnel unusable on small caliber rifle and pistol cases. A shotshell loading block is another desirable accessory to keep from spilling powder and shot.

PREPARING AND SELECTING CASES

Before starting to load ammunition, the hulls have to be separated as to manufacturer and type. This die set was designed to work with compression formed hulls and plastic wads. Do not change or mix any of the components, including the hulls, as dangerous pressures may result. Use only approved loading data from the loading manuals.

SIZING & DECAPPING

The bushing at the top of the press must be removed before the shotshell die can be installed. See photo #1. For the RS-3 and Rock Chucker press, this requires a 1½ inch hex socket or a 15" adjustable wrench. Due to the rather thin hex portion of the bushing, take care not to allow the wrench to slip, as you may injure yourself or damage the bushing. If you have problems removing the bushing,

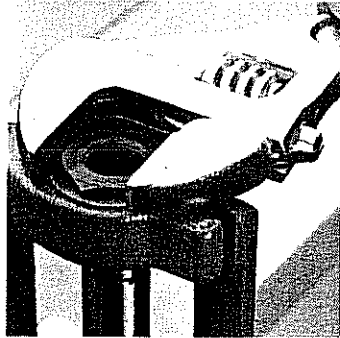


Photo #1

or do not have the proper tools, you may have to take the press to your gunsmith to have the bushing removed.

Once the bushing is removed you can proceed with installing the necessary parts for sizing and decapping. See illustration A for the parts required and the proper assembly for sizing and decapping.

The decapping rod should not extend more than ⅜" below the size ring or the primers will be forced into the ram slot on a Rock Chucker press. Install the shell holder and screw the die into the press. See photo #2. When installing the die, screw the die down until the die just touches the shell holder, but not further. This is the proper adjustment for the shotshell die because it does not take a great deal of force to resize the hulls. **DO NOT "CAM OVER" THE PRESS AS YOU MAY DAMAGE THE SHELL HOLDER.** Do not allow the expander to "bottom out" on the inside of the hull as you may damage the internal head of the hull. When using the Rock Chucker press, install the primer ejector spring (long end down) in the slot with the priming arm. See photos 3, 4 and 5. The die is now ready to size and decap hulls.

Place the fired hull in the shell holder. See photo #6. Note that for the Rock Chucker, the ram has to be raised slightly to clear the primer ejector spring. In some instances, it may require that the hull be started over the expander/decap assembly and then slid into position in the groove in the shell holder. Raise the ram to force the hull into the die, which sizes and decaps the hull. If difficulty is experienced starting the hull into the die, rotate the hull with your fingers while simultaneously raising the ram.

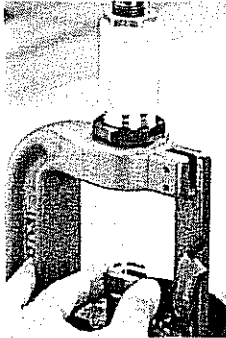


Photo #2

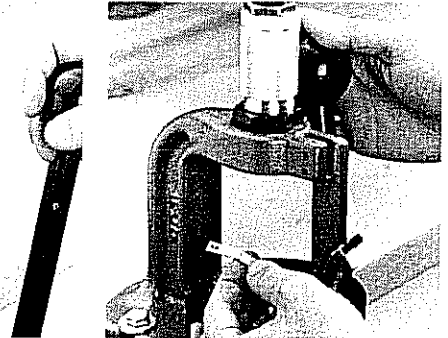


Photo #3

If using an RS-3 press, the spent primer will fall down through the hollow ram and into the plastic primer catcher on the side of the press. When using the Rock Chucker press the primer will remain in the ram. Lower the ram and the primer ejector spring will allow the primer to slide out of the ram. Again, when using the Rock Chucker press, the ram has to remain slightly above the rest position to allow the hull to be removed from the shell holder.

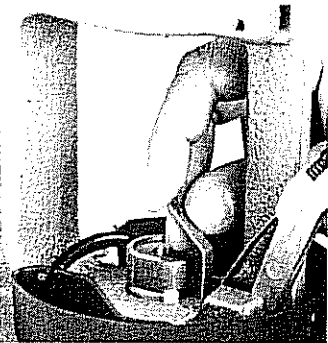


Photo #4

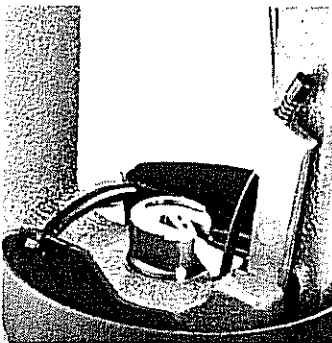


Photo #5

PRIMING

To proceed to the second step of the shotshell loading sequence the die will need to be changed into a primer seater. See illustration B for the parts required and the proper assembly for priming. Remove the die bushing and expander/decap assembly from the die body. Remove the die bushing from the expander/decap assembly, and set the expander/decap assembly aside. Remove the shell holder from the press. Remove primer ejector spring if used.

Drop the drop/priming tube assembly into the die body with the tube down. Thread the die bushing into the die body. Install the priming cup in the shell holder slot. The die is now ready to seat primers in the sized hulls. Start by inserting a primer into the primer pocket of a hull with your fingers. See photo #7.

Do not force or pound on the primer. The primer should remain in the hull as shown in photo #8. Place the hull with primer on the priming cup (see photo #9) and guide the mouth of the hull over the drop/priming tube assembly. With uniform force, seat the primer until the flange of the primer is flush with the head of the hull. See photo #10. The hull should not "rock" when placed on a table or other flat surface. Do not slam the primer into the hull as it may detonate. Use a smooth motion as the primer is seated.

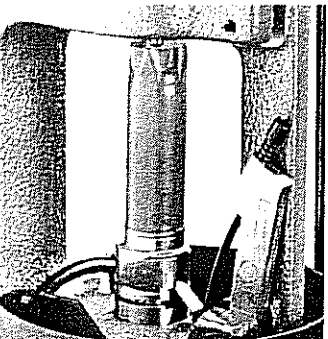


Photo #6

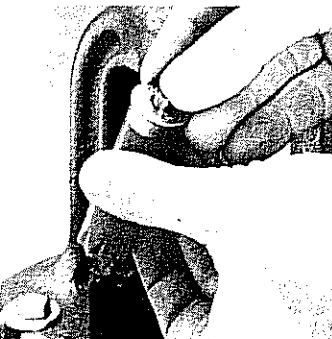


Photo #7

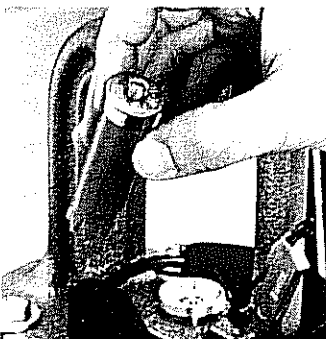


Photo #8



Photo #9

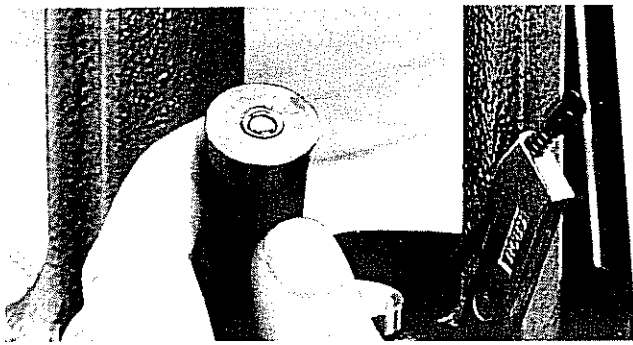


Photo #10

POWDER CHARGING

Determine the powder type and charge required from the loading data supplied in shotshell reloading manuals or provided by powder manufacturers. Adjust your powder measure and check it on an accurate reloading scale. Charge the hulls with powder (see photo #11) and when through, visually inspect the hulls for uniform charging.

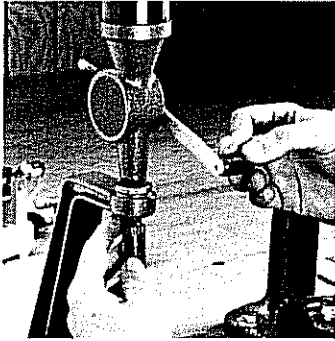


Photo #11

WAD SEATING/SHOT CHARGING

To seat the wads in the powder charged hulls, it is necessary to set up the die body for wad seating. See illustration C for the parts required and the proper assembly for wad seating/shot charging. Remove the die bushing and the drop/priming tube assembly from the die body. Remove the priming cup from the shell holder slot. Install the shell holder in the slot and drop the wad guide support (with the lettering right-side-up) and the wad guide into the die.

The wad guide must be inserted into the top end of the wad guide support #1 with the fingers down. Thread the die bushing into the die to secure the wad guide and wad guide support.

Install the funnel into the large end of the drop-priming tube assembly. This is a slip fit, and can be pushed on and removed by hand.

Place a charged hull in the shell holder, raise the ram to the top of the stroke and insert a wad as shown in photo #12, pushing it into the hull with the drop/priming tube assembly as shown in photo #13. The wad must be properly placed with no air space between the wad and the powder. Leave the funnel and drop/priming tube assembly in the die/hull.

Scoop up a dipper of shot and pour it into the funnel. If you did not modify your funnel, shake the funnel slightly to keep the shot from "bridging" and to be sure that all of the shot has gone into the hull. Continue to insert wads and shot into the rest of the hulls.



Photo #12

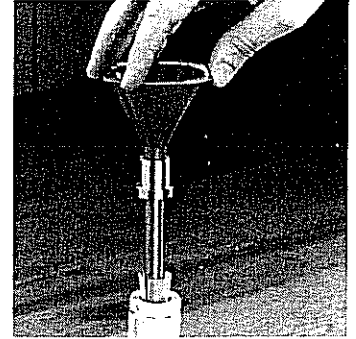


Photo #13

CRIMP STARTING

To prepare the die body for the crimp start operation, remove the die bushing, wad guide, wad guide support and sizer ring from the die body. Install the #4 bushing into the crimp starter for the proper crimp starting of 20 gauge hulls. Depending on the type of hulls used (either six or eight segment crimp folds), place the crimp starter in the die body with either the six or eight segment end down. Thread the die bushing into the top of the

SOURCES OF LOADING DATA

Hercules
Hercules Plaza
Wilmington, DE 19894

Winchester
Shamrock Street
East Alton, IL 62024

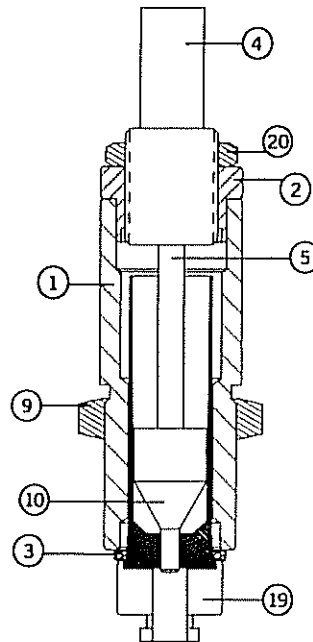
Hodgdon Powder Co.
P.O. Box 2932
Shawnee Mission, KS 66201

DuPont
Wilmington, DE 19898

HELPFUL HINTS

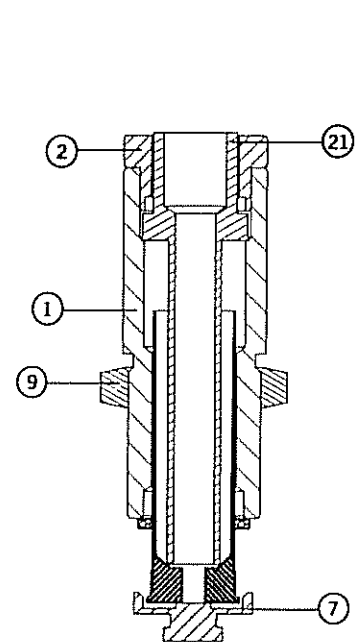
- When using ACTIVE brand hulls, the sizing ring should be removed prior to the final crimp operation.
- Refer to a factory loaded shell to check the proper crimp depth of the brand being loaded.
- If using #6 shot or larger, watch to be sure the shot does not "bridge" in the drop tube.

ILLUSTRATION #1



Key	Part #	Description
3	99007	Size Ring
1	99005	Die Body
2	99006	Die Bushing
10	99015	Expander/Decap Assembly
5	99009	Decap Rod
4	99008	Crimp Closer
9	99014	Die Lock Ring
20	09021	1/2 Lock Ring
19	09239	Shell Holder
17	99025	Primer Ejector Spring (For Rock Chucker Only)

ILLUSTRATION #2



Key	Part #	Description
1	99005	Die Body
2	99006	Die Bushing
9	99014	Die Lock Ring
21	99016	Drop/Priming Tube Assembly
7	99011	Priming Cup

die. See illustration D for the parts required and the proper assembly for crimp starting.

Place a hull in the shell holder and carefully raise the ram. Lower the ram and check the opening in the partially closed crimp. The shell should look like the one in photo #14. Be careful that the shell is not crushed. Adjust the die upward slightly if necessary to prevent crushing. The die may need to be adjusted up or down to achieve the crimp start operation. The folds will relax and open slightly following crimp starting. If you are using 3" mag shells, the die body will have to be raised in the press approximately 1/2 inch before starting the crimp adjustment. The sizing ring should be removed and the die lowered during the crimp starting operation in 16 and 20 gauge sets. This will allow for a better crimp. Also, aligning the folds in the hull with the segments in the crimp starter will greatly improve the results of the crimp start.

CRIMP CLOSING

Remove the die bushing and crimp starter from the die body. Install the crimp closer sleeve #2, the lettering right-side-up. Install the spring (except for 10 gauge), die bushing, crimp closer and lock ring. See illustration E for the parts required and the proper assembly for crimp closing. Screw the crimp closer into the bushing approximately two turns.

Carefully; place a shell in the shell holder and guide it into the press. Crimp the shell and inspect. Adjust the crimp closer lower, as needed, until the proper crimp is obtained. If the crimp is not closed enough, the shot may leak out. If the hull is crimped too much (crimp closer adjusted too low), the shell may be "nail headed" or buckled.

A "nail headed" shell may not feed reliably into the gun. Final crimping will help remove this condition.

The proper crimp should be 1/16 to 1/8 inch below the mouth of the shell. See photo #15. Proceed with the rest of the shells.

FINAL CRIMP (Optional)

In most cases the shells are ready to be used, however, in some cases the shells require a sixth operation which is called final crimp. This operation is required if the mouth of the shell is "nail headed" and will not go into the gun. To set up the die to do this operation, remove the bushing, crimp closer, crimp closer bushing #2 and spring. See illustration F for the parts required and the proper assembly for final crimping. Install the final crimp bushing #3 (use bushing #2 and the spring for 10 gauge) in the die body with the lettering right-side-up. Install the die bushing to keep the final crimp bushing in place. Place a shell on the shell holder and slowly raise the ram. There should be a slight resistance near the top of the stroke as the bushing puts a slight taper to the mouth of

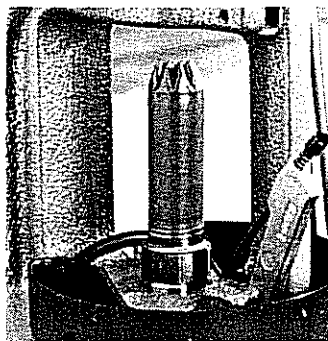


Photo #14

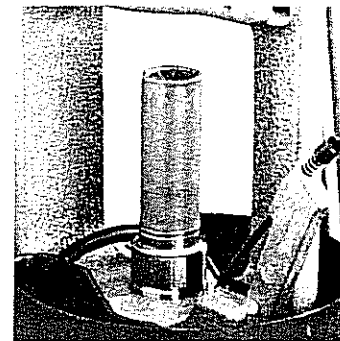


Photo #15

the shell. Adjust the die body if necessary to slightly taper the case mouth. This will insure easy operation in most guns.

As mentioned earlier in these instructions, your powder funnel will work better for adding shot if it is drilled to 3/8 inch inside diameter. See photo #16. This modification will make the funnel unusable for other reloading procedures.

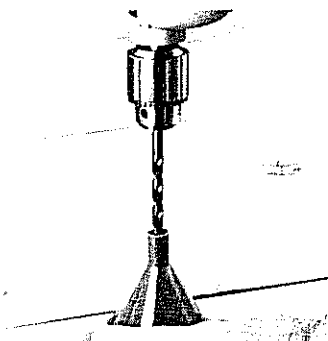


Photo #16

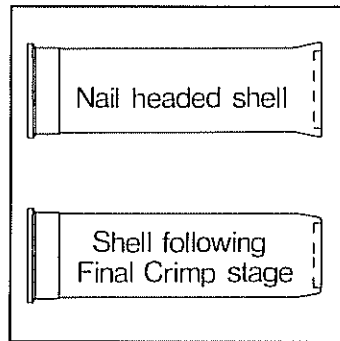
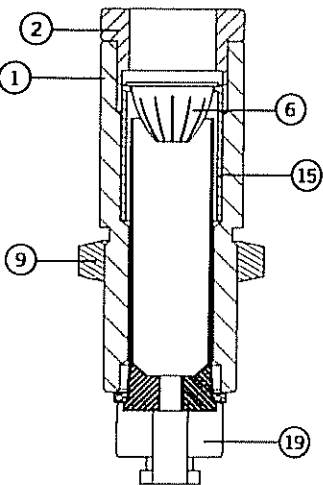
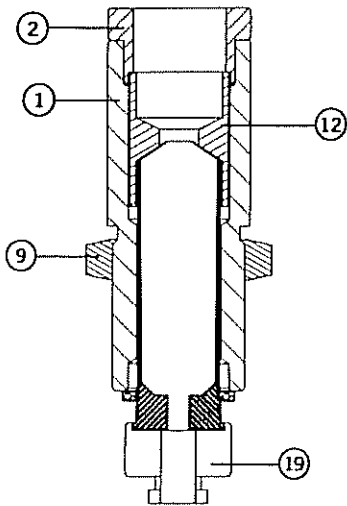


ILLUSTRATION #3



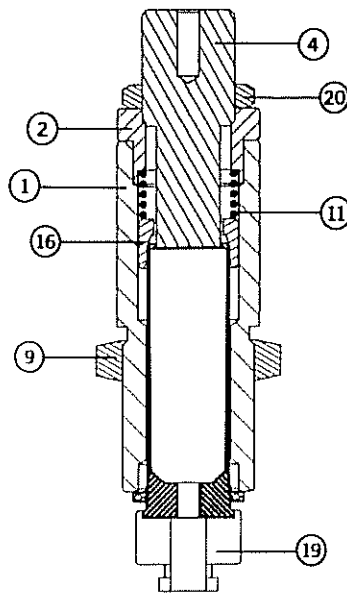
Key	Part #	Description
1	99005	Die Body
2	99006	Die Bushing
9	99014	Die Lock Ring
15	99023	Wad Guide Support # 1
6	99010	Wad Guide
19	09239	Shell Holder
21	99016	Drop/Priming Tube Assembly
	99013	Shot Dipper
	09087	RCBS Powder Funnel

ILLUSTRATION #4



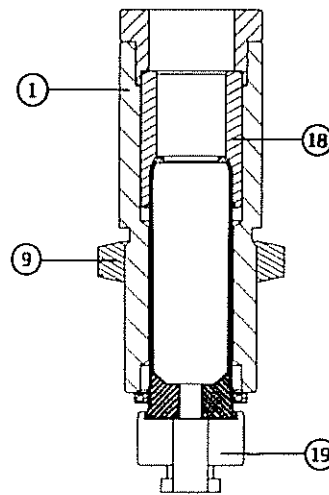
Key	Part #	Description
1	99005	Die Body
9	99014	Die Lock Ring
2	99016	Die Bushing
19	09239	Shell Holder
12	99020	Crimp Starter

ILLUSTRATION #5



Key	Part #	Description
1	99005	Die Body
2	99006	Die Bushing
9	99014	Die Lock Ring
19	09239	Shell Holder
16	99024	Crimp Closer Sleeve # 2
4	99008	Crimp Closer
20	09021	1/4 Lock Ring
11	99019	Spring

ILLUSTRATION #6



Key	Part #	Description
1	99005	Die Body
9	99014	Die Lock Ring
19	09239	Shell Holder
18	99026	Final Crimp Bushing # 3