

Shotshell reloading with the MEC 700 VERSAMEC

The Single Stage Ultimate

All the desirable features of the 600 jr. have been retained. Now add the following features and you have the finest single stage reloader ever developed. The exclusive Platform Cam which provides the longer ejection stroke necessary to eject existing field shells at the resize station. No adjustments or part changes are required, regardless of brass length. The Pro-Check, which programs the charge bar and wad guide. This ingenious device programs the measure assembly to position the charge bar in the correct sequence. The paper crimp starter which assembles into the Spindex Crimper. Only seconds are required to change from the 6 to 8 point plastic crimp spinner to the smooth cone for fired paper shells.



LET'S START RELOADING

Your Model VERSAMEC 700 is completely assembled and tested at the factory, and is ready to provide long, troublefree service. Just follow these simple instructions.

UNPACKING

Examine the contents of the shipping carton for damage or shortage. In addition to the assembled reloader, the carton will contain two shot and powder containers with caps, three 1/4-20 machine screws and wing nuts for mounting and a primer catcher. Immediately report any shortage or damage to your dealer or delivering carrier.

MOUNTING

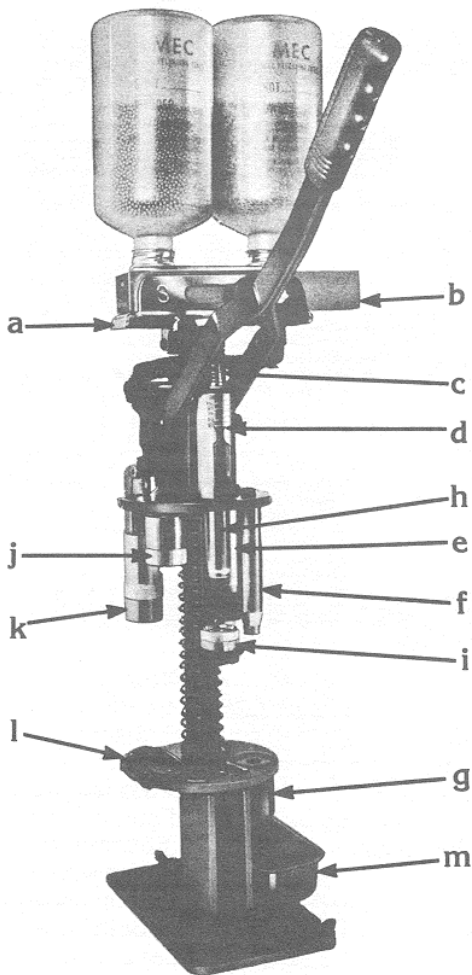
Place reloader in desired position on bench and mark base mounting holes. Drill at marks, using a 9/32 bit. Then secure reloader, using screws and wing nuts supplied. Note that a bench is desirable but not required. The reloader can be fastened to a wood or metal base and be completely portable. A very nice mounting base can be made from 3/4 inch plywood approximately 12 inches wide and 18 inches long with the reloader being mounted somewhat back of center on the 18-inch length.

LUBRICATION

Use machine oil on main column and friction points before use. If desired, charging bar may be lubricated using a dry powdered graphite.

Let's Take A Look At The VERSAMEC 700

Before you actually try reloading, it might be well to look over your reloader, comparing it with the photograph which identifies all the parts and dies you'll be using.



NOTE: For view of opposite side of reloader see back page.

- a Note that the MEASURING ASSEMBLY pivots back for easy charging or changing of loads. This assembly is hinged by a machine screw with stop nut, which should be tightened to a point where some drag or resistance is felt when the MEASURING ASSEMBLY is pivoted.
- b The CHARGING BAR is located just under the powder and shot containers. Moving the bar to the left charges the powder. Moving the bar to the right charges the shot.
- c WAD HEIGHT INDICATOR used to disclose improper wadding. See below.
- d WAD PRESSURE INDICATOR gives exact amount of pressure actually being applied to wad column at bottom of handle stroke. See below.
Now going from right to left, the dies and their functions are as follows:
- e RECONDITIONING DIE...The spent primer is ejected, the shell mouth is ironed and the metal base is resized with one stroke of the handle.
- f REPRIMING PUNCH...seats new primer into shell from PRIMER SEATING ASSEMBLY G.
- h RAMMER TUBE...through which powder and shot are dropped into the shell. This tube is used also to seat the wad column.
- i ADJUSTA-GUIDE WAD FEED...permits quick and accurate seating of wad column.
- j CRIMP STARTER... 8-point, 6-point, smooth cone.
- k CRIMPING STATION...containing the exclusive cam-operated two-stage crimping apparatus. Die is completely adjustable for depth of crimp.
- l SHELL HOLDER...holds shell down on handle upstroke.
- m PRIMER CATCHER...secure in position by tilting so that notched edge slips under the tab provided in the base.

Common sense precautions are advised, careless handling of flammables and explosives can result in serious injury. We endorse checking charges with a reliable scale, adhering to loads recommended by the powder manufacturer and suggest the use of safety glasses. We disclaim any liability for damage or injury resulting from reloading shot shells.

A WORD ABOUT THE WAD PRESSURE AND HEIGHT GAUGES

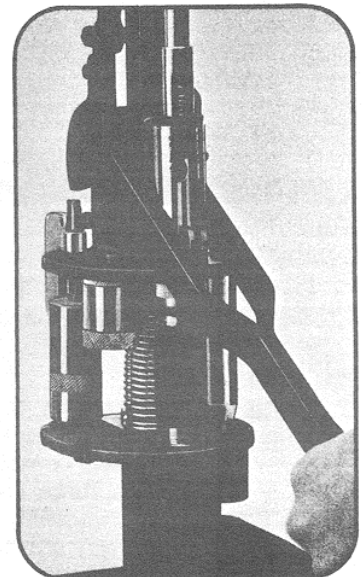
Direct Reading Pressure Gauge

Pointer indicates the exact amount of pressure actually being applied to the wad column at the bottom of the handle stroke. The reading is always positive regardless of any other adjustments. While your reloader has been pre-set at the factory for average pressure required, you may find it desirable to increase or decrease the pressure. Pressure can be changed by simply adjusting the rammer tube as described on page 7.

Wad Height Gauge

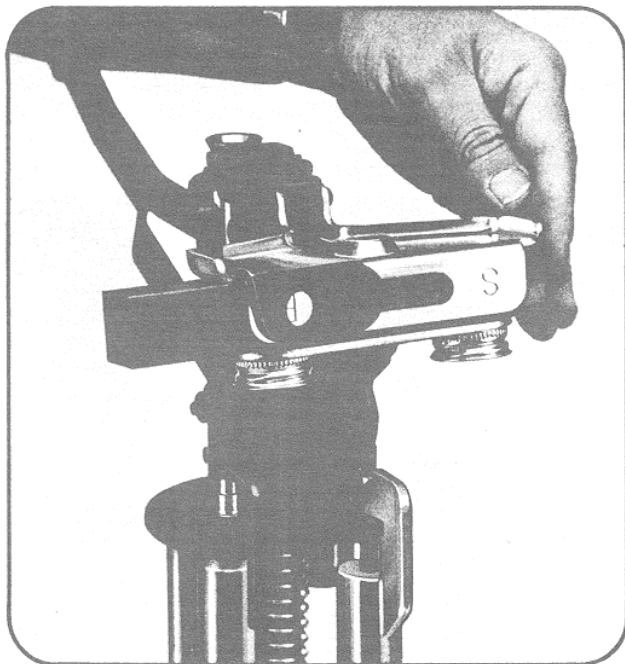
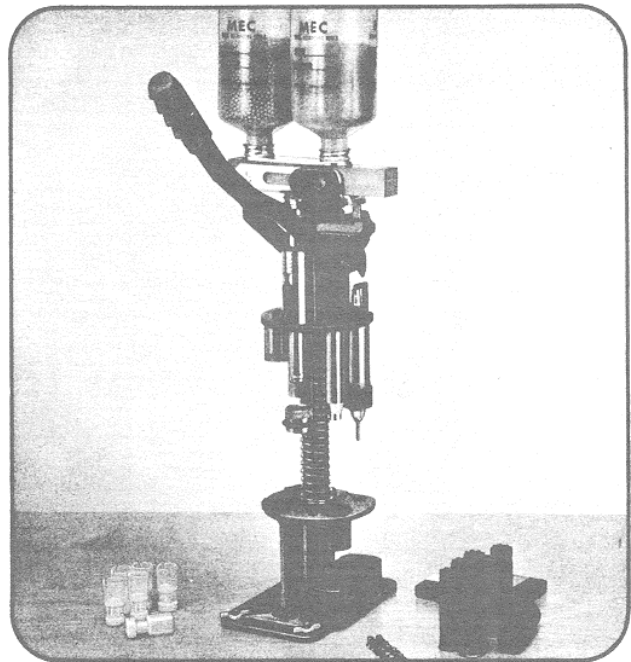
This gauge is used to disclose improper wad height which may be due to either insufficient or too much wadding, foreign material in the shell, a partially blown out base wad or missing cup wad. Indicator marks are read only when handle is in full down position and proper wad column is in place. Generally speaking, when loading standard target shells with 1½ ounce loads and standard wad columns, proper wad height is indicated by reading at the third and fourth finer graduation on Rammer Tube "A". However, single unit plastic wads usually require different pressure settings. Check wad manufacturers recommendation for pressure. The two coarser graduations "B" are used as a visual aid in making Rammer Tube adjustment for pressure.

See page 7.



SETTING UP FOR FAST RELOADING

In order to obtain maximum production speed it will be necessary for you to arrange components properly. Primers should be located on the right with base down. This can be accomplished by placing the carton of primers on bench surface upside down and then removing the cover. When the insert is lifted, all primers will be set base down, which will eliminate fumbling when placing them in the Primer Seating Assembly. Empty cases should also be positioned on the right side of the reloader.



CHARGING

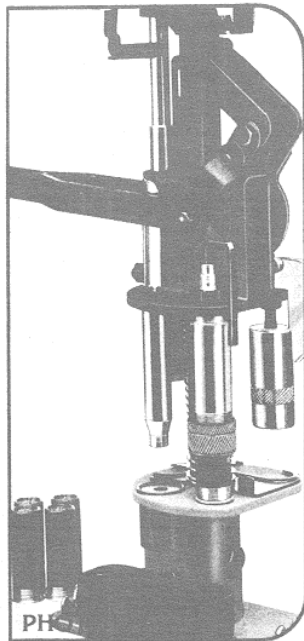
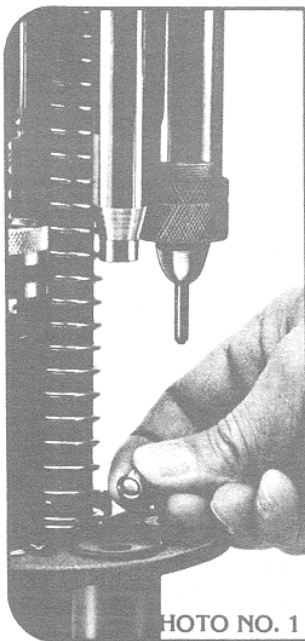
CHECK FOR CORRECT BAR &/ or BUSHING! As a precautionary measure, powder opening in optional, bushing type bar is closed with a disk. Remove charge bar, discard disk and insert proper bushing. **CHECK AGAIN** and continue.

Pivot measure down to charging position. Push the Charging Bar to the right as far as it will go (see photo). Fill containers with powder and shot. Before screwing shot and powder containers into place, be sure neoprene grommets are in place in the measuring assembly. The charge bar is assured of sliding



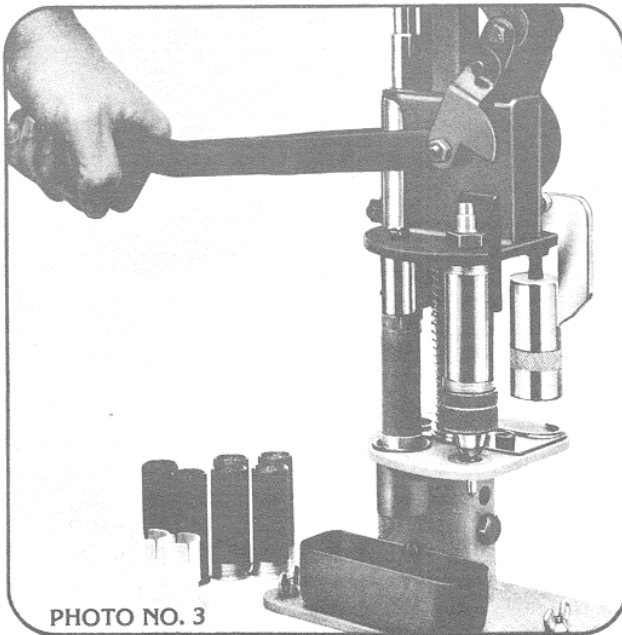
easily by the use of neoprene grommets. There is then no jamming or splitting of the shot. Place containers, powder container first, making sure it is mounted into the proper position (position "P" for powder, and "S" for shot). Next secure the shot container. Because of its weight, support the shot container with your hand while attaching so that there is no danger of its tearing loose under weight of the shot (approx. 9 lbs.) (see photo). While still supporting the shot container with your hand, pivot the Measuring Assembly to the upright position. Now you're ready to reload.

Pro-Check will allow pivoting the measure assembly only when charge bar is correctly positioned.



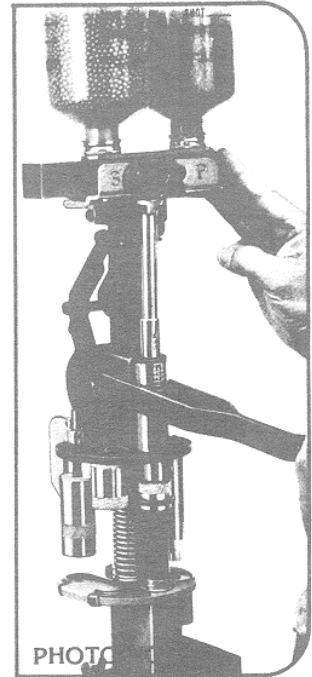
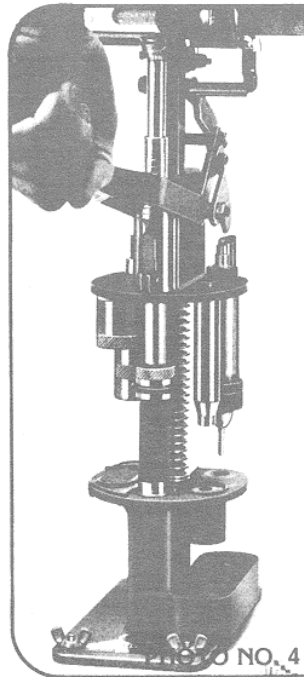
STEP ONE

Place primer in Primer Seating Assembly, base down (see photo No. 1). Start shell into Reconditioning Die and depress handle (see photo No. 2). The spent primer will drop in the Primer Catcher below and the die will resize the metal base of the shell for diameter and head space and reconditions mouth. Avoid excessive flexing of the rim. Expanded rims could cause failure to feed from the magazine tube or chamber properly. Reconditioned shell is ejected from die by exclusive cam-acutated ejecting mechanism on upstroke of handle. (Note: DO NOT SNAP HANDLE UP).



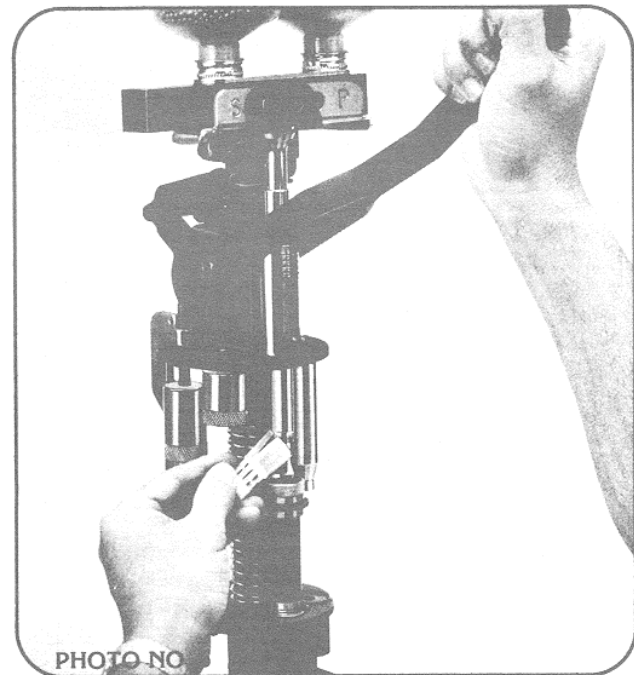
STEP TWO

Slip shell on Repriming Punch and depress handle until new primer is seated properly in base of shell. Use only the pressure required to seat the primer to avoid distortion of the base wad or expansion of the head.



STEP THREE

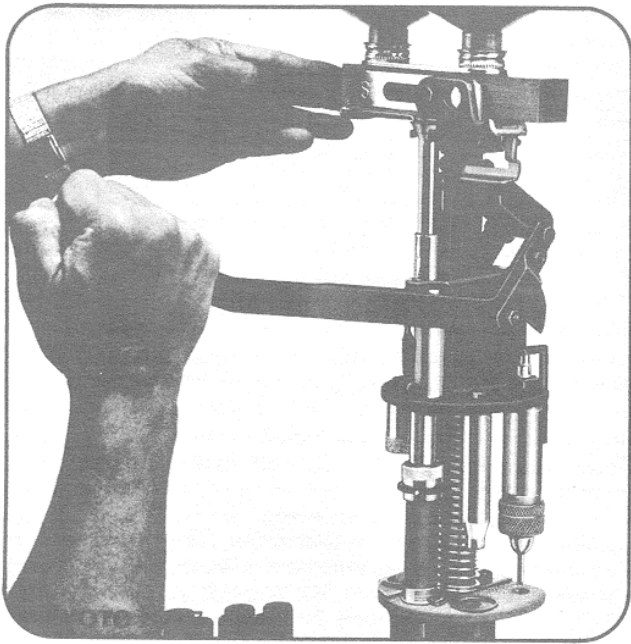
Place shell under Rammer Tube with shell rim under the shell holder. (see photo No. 4). Depress handle, lowering Rammer Tube into shell. Charge powder by moving Charging Bar to left.



STEP FOUR

Raise handle to clear Rammer Tube from shell. With the left hand, pick up and place a wad column in the Adjusta-Guide wad starter (see photo No. 6). With the right hand, depress handle to positive stop.

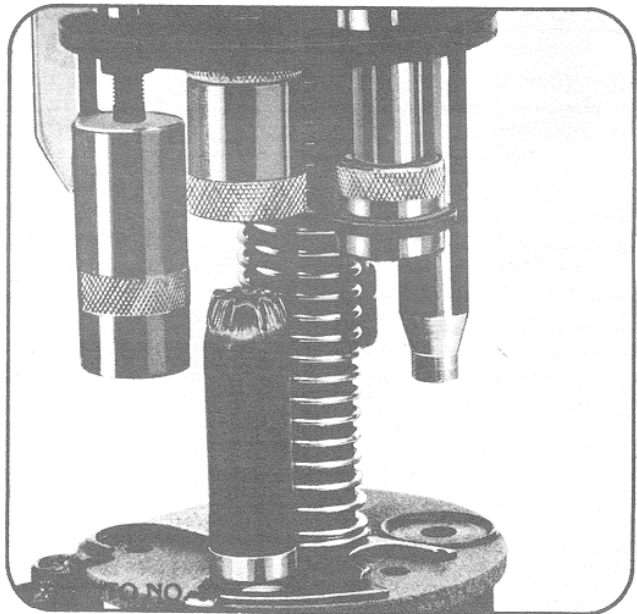
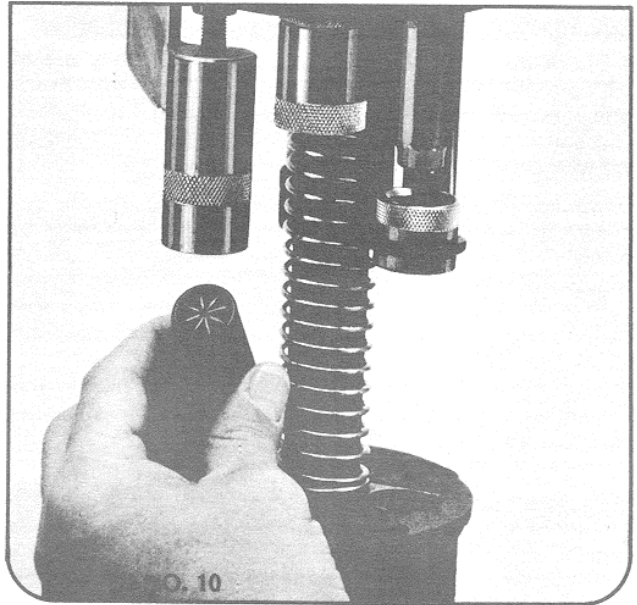
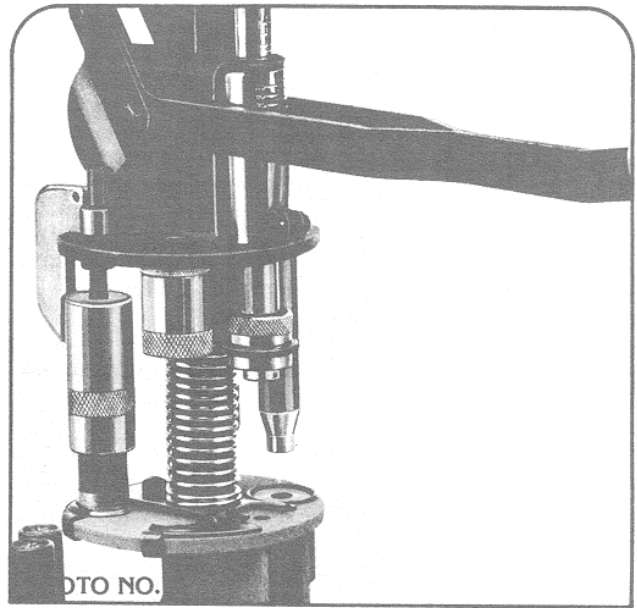
Pro-Check will automatically position wad guide to provide maximum clearance for easy wad entry.



STEP FIVE

With handle depressed, charge shot by pushing Charging Bar to right.

Pro-Check will release wad guide and upon raising the handle, shell will be free to be positioned at pre-crimp station.



STEP SIX

Place shell under Crimp Starter with shell rim under the holder (see photo No. 8). Depress handle. The self-aligning Crimp Starter will follow the original folds of the plastic shell. Close the shell to approximately one half its original diameter, partially depressing the handle may be adequate, depending upon the condition of the case mouth.

Choice of 6 point or cone insert included to start the folds on new cases or fired paper shells.

STEP SEVEN

Place shell under cam-operated crimping die with shell rim in shell holder. Depress handle all the way. This performs complete crimping operation in one stroke of the handle. NOTE: depth and radius of crimp is completely adjustable—see page 7.

IF YOU HAVE TROUBLE...

... with oversize paper shells

1. You may be using too many wads. If the crimp bulges when the shell is finished, or if bulging or crushing adjacent to the metal base is evident, your wad column is too high. If the crimp tapers inward and has an opening in the center, the wad column is not high enough. In either case, correct your wad column so that resultant crimp is tapered inward slightly. This insures that the shell contents will be firmly held in place since the toggle action will enable the shell to withstand considerably more abuse.

2. Paper shells may be moist. This is certain to cause trouble, and especially so, when oversize wads, or too much pressure, or a combination of both enter into your reloading operations. All makes of paper shells DO ABSORB MOISTURE, and their size is directly related to the moisture content of the paper. Hot weather, when high-humidity conditions are unnoticed, will give you your greatest trouble with oversize shells. Your cases may be as much as .015 inch larger than when working during the winter or during the season when your storage and working area are heated. Dehydrating your cases in the oven of your kitchen range at a temperature of approximately 200 degrees will give surprisingly good results.

3. Check the wads you are using to be sure they are of the correct diameter. Oversize wads will exert too much side pressure on the wall of the shell, causing it to expand. The same condition results from too much pressure on the wad column.

If immediately after loading, your shells drop into the gun chamber with no resistance whatever, but later must be forced into the chamber, your shells are growing after removal from the reloader. This means that internal pressure is stretching paper fibers to their original (fired) size. Soft or moist cases grow rapidly and are more sensitive to internal stresses.

Wad diameter is very important. A shell with a thicker wall requires smaller wads just as zinc or brass cases require oversize wads.

WITH LONGITUDINAL CREASE

This crease usually occurs in paper shell which are considerably oversize. Firing in a large chamber plus humid conditions tend to increase the problem. A quick crimping stroke does not allow time for the paper fibers to squeeze together and collapsing of the case results in the crease. Slowing the crimping operation improves results or may eliminate the crease entirely.

Remember, the results that you get from your reloader will, to a great extent, depend upon the condition of the crimping die. The bore of this die is made to exacting tolerances and should be protected between periods of operation. A light coating of oil is suggested as a rust and corrosion preventative. Be sure to remove all oil and check for possible rust and pitting before actual use.

IGNITION

Uniform ignition requires confinement of the powder. Loosely confined powder results in muzzle flash, a loud report, light recoil and little velocity. It is suggested that the wad exert some pressure on the powder after the crimp is formed.

Shells having a composition base wad should be inspected after the primer is seated to be assured that the flash hole is unobstructed. Use primers of the appropriate size.

CRIMPING

Although not mandatory with some types, a star crimp head is desirable to return the crimp folds to their original

locations, six or eight point, as the situation demands. On plastic shells, eight point closures predominate, although some are closed with six segments. Because of varying characteristics, the depth to which the folds are started will sometimes be reflected in the finish crimp.

The older SP cases, still available from dealer inventories, were unskived and required a friction or heat seal to close the opening at the center of the crimp. Upon firing the seal is torn away, and upon reloading, the area previously sealed appears as an opening. Thinning the mouth of the tube materially assists in reducing the size of the opening. A Bodkin arrowhead or plumber's reamer serves well as a chamfering or skiving tool.

Depending upon the condition of the case mouth, a crimp equal or superior to the original can be obtained by indexing the shell to form new folds exactly opposite of the original on previously heat sealed cases.

Some older compression formed cases will not satisfactorily accept standard size overpowder wads and it has been suggested that overpowder wads be one gauge smaller than the shell and that softer filler wads, such as Remington Mold Tite or Winchester Western molded fiber complete the wad column. We suggest you avoid 3 inch 12-20-410 and 3-1/2 inch 10 plastic shells which were previously roll crimped.

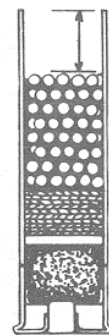
TIPS ON VERSAMEC 700 OPERATION

The Model VERSAMEC 700 is the simplest and speediest of the single-stage type presses. In order to achieve the maximum from your reloader, it is suggested that you organize the components before starting.

It is best, therefore, to segregate your shells as to make and type and to remove from your bench all but the components to be used in the particular type shell being reloaded. This will eliminate the possibility of accidentally using the wrong size primer or the wrong size wad, etc.

Be sure before starting, that you have chosen the correct or developed the proper wad column. If you must develop your wad column, you will find it helpful to lay out the wad combinations ahead of time.

WADDING



While wadding is primarily concerned with the sealing and cushioning of the rapidly expanding gasses given off by the explosion of powder, an important secondary function is performed. It is in connection with the volumetric capacity of the empty shell itself and that of the powder and shot charges used. Very simply, the quality of the crimp on the finished shell is very much affected by the space taken up by the components column. A rule of thumb relating to this calls for a difference between the level of the shot charge and the mouth of the open shell. The dimension should be approximately 1/2 inch for 12 gauge plastic shells (9/16 inch for paper shells). Use a dimension of 1/2 inch for 16 gauge, 7/16 inch for 20 gauge, 3/8 inch for 28 gauge, and 5/16 inch for .410

bore paper shells. Reduce approximately 1/16 inch for plastic shells. REMEMBER that this is an approximate dimension which may have to be adjusted slightly to suit the method of crimping used on your particular reloader.

DEVELOPING THE WAD COLUMN

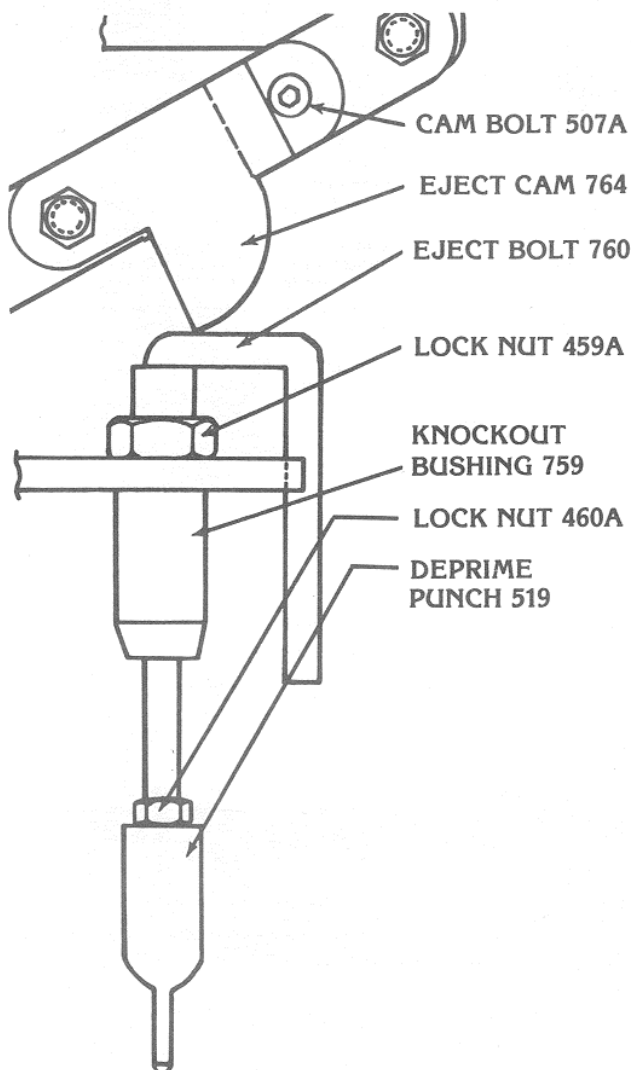
First check the MEC Charging Bar chart. The wad columns given for the particular loads are reasonably close, but must be altered depending upon conditions which vary with the individual. Make and type of wad, wad pressure and condition of the shell are some of the variables. Plastic cases usually require a slightly higher wad column, leaving less the the case mouth to crimp.

TO LOAD

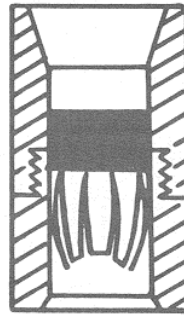
12 AND 20 GAUGE 3" SHELLS

1. Resize and deprime all shells.
2. Reprime all shells.
3. Adjust press by removing base bolt, align top hole in base with top hole in column. Replace bolt and secure.
4. Continue loading sequence as described in manual.

ALTERNATE METHOD: Apply 754-3 support tube and 720-3 spacer (available upon request). Adjust press per step no. 3 above, apply spacer to lengthen reprime punch. Complete operation as illustrated in manual.



... TO REPLACE WAD GUIDE FINGERS

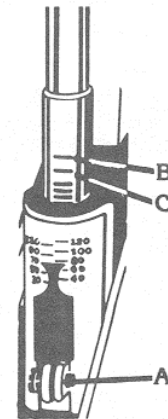


The fingers are held in position by a cap screwed to the body of the wad guide.

To replace damaged fingers:

1. Unscrew cap and discard damaged fingers.
2. Position replacement and tighten cap.

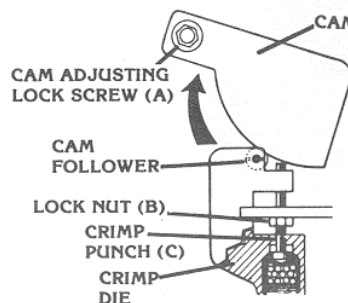
TO ADJUST THE RAMMER TUBE



The Rammer Tube is designed to provide any wad pressure from 30 to 120 pounds. Using the hex wrench provided, loosen adjusting clamp "A." Set Rammer Tube to desired pressure (lower it to increase pressure — raise it to decrease). Tube can be easily moved if clamp is spread slightly. When tightening clamp, do not overtighten. You may collapse the Rammer tube or strip the screw threads.

Indicator marks "B" should be used as a visual aid in making the adjustment. Check your setting by reading actual pressure on gauge face while applying pressure on correct wad column, with handle in full lowered position. This will always be the actual pressure being applied to wad.

TO ADJUST THE CAM-OPERATED CRIMP DIE



Cam is properly adjusted to give best overall results on all varieties of 2 3/4 inch shells. To obtain best possible crimps on certain types of cases, it may be necessary to adjust the cam slightly.

To adjust: If crimp is not centered, or if crimp has a spiral configuration, loosen cam adjusting lock screw "A" and rotate

cam in direction of arrow. If opening at the center of crimp is evident, rotate cam in opposite direction.

NOTE: When adjusting, move cam only a fraction of an inch at a time, testing frequently. A 1/32 inch move may be sufficient.

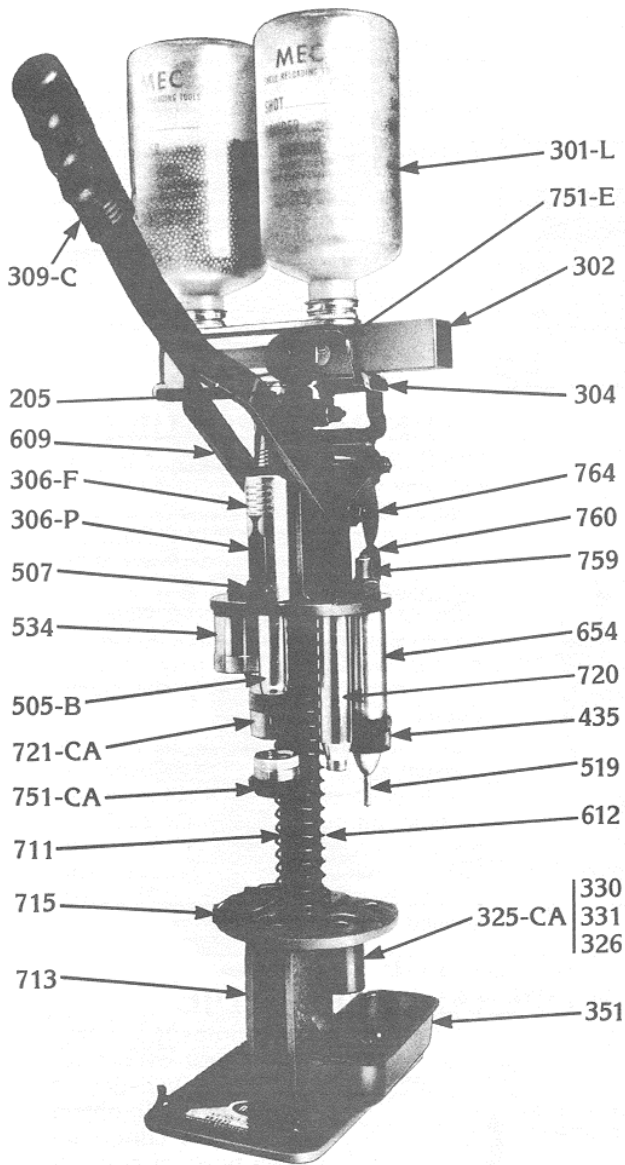
To increase depth of crimp, loosen locknut "B" and screw crimping punch "C" down.

Uniform crimp demands uniform shell length. Variations in length will demand compromised adjustment.

INSTRUCTIONS FOR REMOVING BAR

Remove bar stop screw, slide bar out, replace with bar or bar and bushing of your choice. Replace bar stop screw.

VERSAMEC 700 PARTIAL PARTS LIST

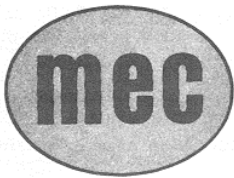


Part No.	Part Description
205	Drop Tube
301L	Container W/Cap
302	Charging Bar
303	Stop Screw
304	Measure Only
304CA	Measure W/Bar & Containers
304D	Measure Pivot Screw
304F	Measure Wing Nut
304G	Grommet
306F	Pressure Ind. Face
306P	Pointer
306T	Pressure Spring
309C	Handle Grip
720*	Reprime Punch
325	Primer Seating Assembly
330	Spring
331	Spring Pad
654	Support Tube
435*	Resize Ring
453	Fingers
459A	Lock Nut
505B*	Rammer Tube
507A	Screw
507B	Hex Wrench
519*	Deprime Punch
534	Spindex Star Crimp
759*	K.O. Bushing
709	Handle
610	LH & RH Link PR
612	Column Spring
723	Crimp Die Cam
623A	Cam Roller Bolt
623B	Cam Roller
704C	Measure Mt'g. Bracket
708	Turret Frame Assembly
711	Column
711B	Roll Pin
713	Base Assembly
715*	Shell Holder
721*	Cam Crimp Housing
721B*	Cam Crimp Punch
764	Eject Cam
751A	Wad Guide Bracket Assembly
751CA	Wad Guide Assembly
453	Wad Guide Finger
751E	Pro-Check

VERSAMEC 700 Accessory Equipment

741V-10-12-16-20-28-410	Die Set
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*Specify gauge.



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