

**SHOTSHELL RELOADING WITH THE**



# Grabber

Mayville Engineering Company, foremost manufacturer of reloading equipment in America, is widely respected for its continuing dedication to precision engineering.

This precision is incorporated into every one of MEC's "New Generation" reloaders rendering truly innovative and efficient engineering designs.

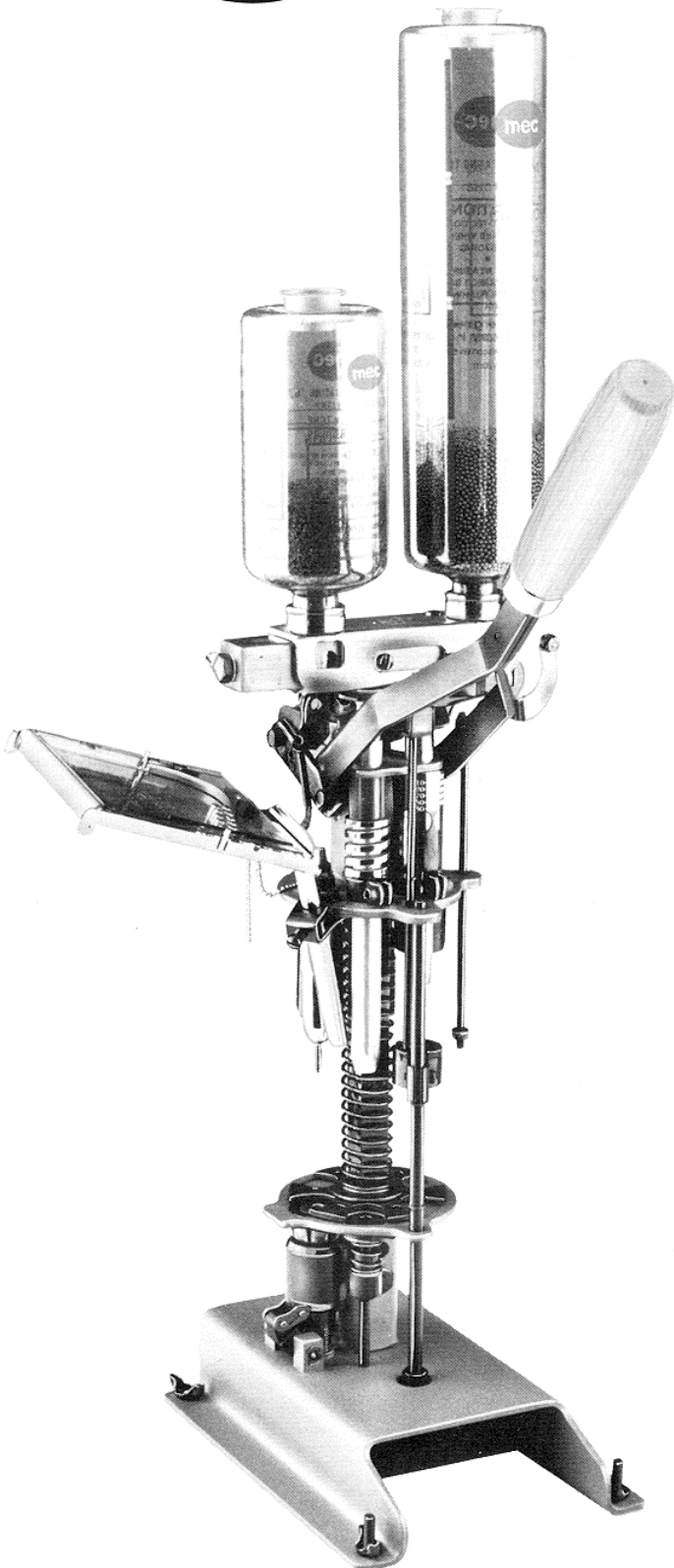
The MEC Grabber is no exception. It has everything you need for high speed, efficient operation and unbeatable precision.

Featuring progressive action, this is MEC's top-of-the-line model at an affordable price.

The twelve different operations at six individual stations speedily produce a finished shell with every stroke of the handle.

The Grabber is remarkable in that it performs each of the basic reloading steps with a mere pull of the handle — depriming, priming, resizing the metal base, measuring the correct amount of powder, firmly seating the wad column, measuring the precise amount of shot and forming a tightly sealed crimp. The Grabber does all this and gives a finished shell with each stroke of the handle.

Quality features make the Grabber the standard of the industry such as the Adjusta-Guide wad feed device, new one piece Spindex crimp starter, power ring collet resizer, automatic primer feed, auto-cycle charging and three stage crimp. With all of these features it is not difficult for an experienced operator to load 500 rounds per hour.



# LET'S LOOK INSIDE A SHOTSHELL...

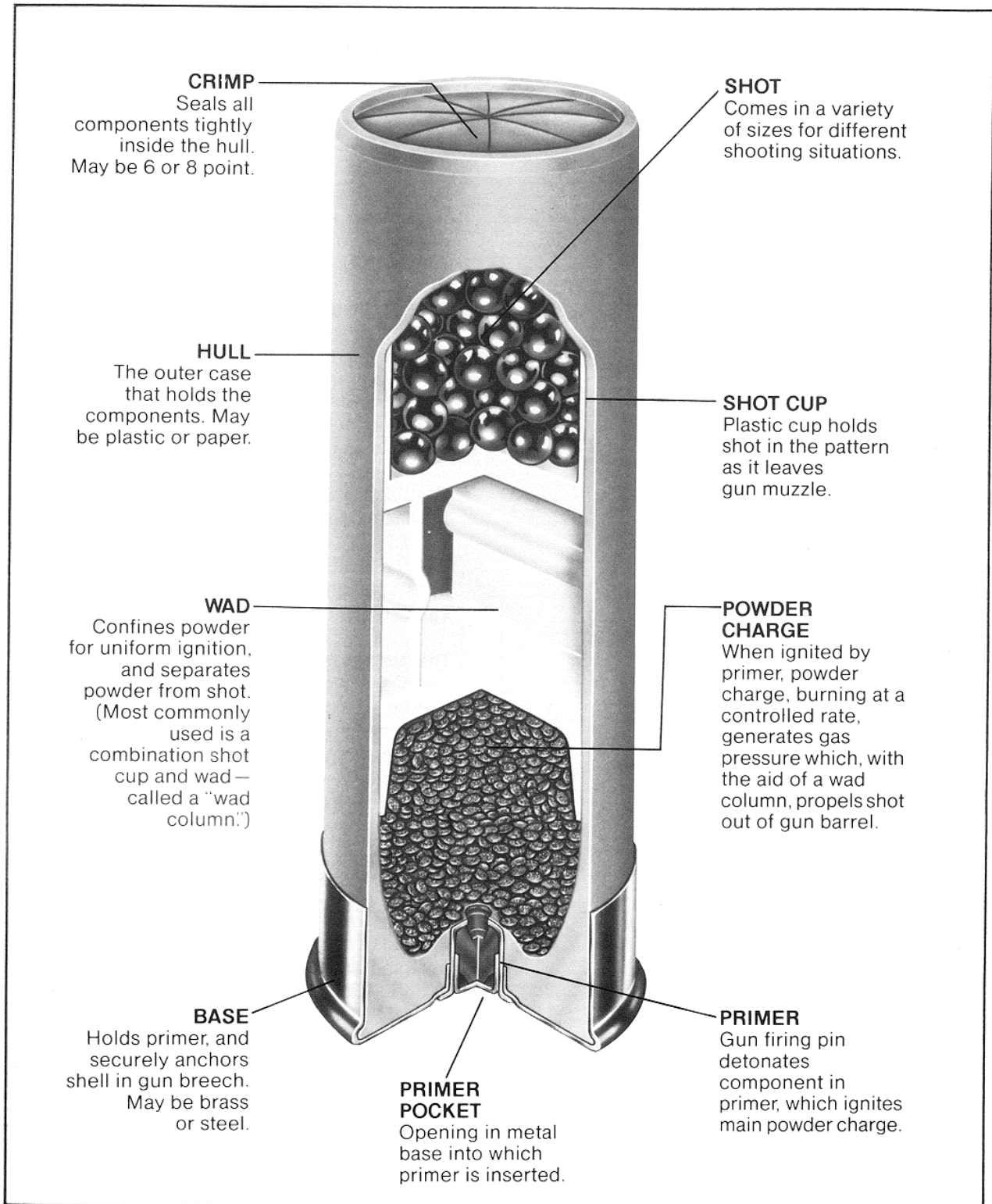


Photo No. 1

# HOW TO SELECT COMPONENTS

As we saw on the previous page, a shotshell is made up of several different components. There are many different variations of each component.

Packed with every MEC reloader are brochures supplied by leading component manufacturers. A study of this literature will show you numerous combinations of primer, powder charge, wad and shot you should use with each empty hull, for waterfowl, small game, or trap and skeet. Each combination of components has been carefully tested by ballistics experts for maximum effectiveness and safety. ***Experimenting with combinations not recommended by a component manufacturer is foolhardy and dangerous!***

## Choosing the Hull.

Proper choice of empty hulls is one of the most important choices you must make to keep your reloading simple.

The problems encountered by trying to use any and all of the hulls you may find are usually quite discouraging. Not all hulls have the same capacity. Not all hulls have the same crimp. Each time that you use a hull with a different capacity (usually caused by different base wad height) you must assemble a different set of components to properly fill this case.

We are not recommending that you throw away all the nonstandard hulls that you have but are advising you to keep it simple until you have gained the experience necessary to assemble the different components.

## Selecting the Right Wad.

The wad is that part of the shotshell between the powder and the shot. A tight seal permits the expanding gas from the burning powder to push the shot column out of the gun barrel with maximum velocity.

Modern "wad columns" combine both the shot cup and the wad in one piece. These one-piece wad columns are the easiest to use, and therefore are most popular — especially with beginning reloaders. There are many different kinds. Use only the specific wad column recommended for the other components you are using.

## The Shot.

There are two kinds of shot — lead and steel. **Lead and steel shot are not interchangeable.** Reloading with steel shot requires special wads. Using wads designed for lead shot will not only ruin your gun, but could cause high pressures that could burst the gun causing injury or death to the shooter or bystander.

When loading with steel shot, it is imperative that steel shot components be used and the instructions for these components be followed to the letter. MEC does not design, manufacture or approve any reloading component. It is the responsibility of the individual to select components that they feel are suited for steel shot reloading.

As the size of the shot increases, fewer pellets can be loaded into the hull. The smaller sizes are used for trap and skeet, doves, varmints, small game, etc. The larger shot sizes are for heavier game — ducks, geese, turkeys, etc.

## SHOT SIZES

(Shown Actual Size)

Lead Shot		Buckshot	
No.	Dia.		
9	● .08"	4	● .24"
8½	● .085"	3	● .25"
8	● .09"	1	● .30"
7½	● .095"	0	● .32"
7	● .10"	00	● .33"
6	● .11"		
5	● .12"		
4	● .13"		
2	● .15"		
Air			
Rifle	● .175"		
BB	● .18"		

## All Powder Is Not Alike.

Different powders have different burning speeds, which make them useful for different jobs. The heavier the shot load, the slower the powder must burn. It takes longer to accelerate a heavy shot load than it does a light one.

***A fast-burning powder ignited behind a heavy shot load could cause excessive "breech pressure" which might cause damage to the gun and even injury to the shooter or bystander.*** (Breech pressure is the pressure of the gas which is created by the burning powder. It is this breech pressure which forces the shot through the barrel.)

On the other hand, using a slow-burning powder to propel a light load of shot will not work effectively. Without the proper pressure buildup, many powders will not burn uniformly and impart sufficient velocity to the shot. *Never* interchange powders for reloading steel shot. A powder that generates acceptable pressures on 1½ oz. of lead shot cannot be used to propel 1½ oz. of steel shot. The pressures will raise to dangerous levels.

## Which Primer to Use?

The primer ignites the powder. When you pull the trigger, the hammer falls on the firing pin, denting the primer cup. This causes the component in the primer to detonate, igniting the main powder charge.

Different primers have different characteristics depending on their purpose. Use only the primer that is recommended by the component manufacturer for the hull, powder, wad, and shot load you are using.

To make reloading safe, all it takes is common sense and the ability to read and follow the directions of the various component manufacturers.

When you purchase your powder, get a copy of the "SAAMI" (Sporting Arms and Manufacturers Institute) pamphlet on the properties and storage of smokeless powder. Read this literature and abide by it. Generally speaking, powder is safer than gasoline, because unlike gasoline, it does not give off explosive fumes. If ignited, powder will burn until it consumes itself. Modern smokeless powders must be confined to cause an explosion. The containers that powder is purchased in are designed to burst without causing an explosion if the powder is accidentally ignited. Your powder should be kept in these containers until it is used up. It is unsafe to put powder in a glass jar or bottle or any other container which could cause pressure buildup. Store your powder where there is no chance of sparks, fire or flame, where it is cool and dry, and where children cannot reach it.

Primers also require care in handling. Never take primers from the container that they come in until ready for use. Storage of primers in anything but

the container that they were purchased in is unsafe. Exposing a primer to excessive heat, or to fire, flame or rough handling will cause it to explode. Do not store primers near your powder or where children can get at them.

When a manufacturer tells you to use a particular set of components in a shell it means precisely that. You cannot indiscriminately experiment with or substitute components without experiencing problems. At best, you will get a shell which fails to give the performance you expect. At worst, you may inflict serious injury upon yourself or someone else who fires your reloaded shells. The manufacturer has extensively tested recommended loads and knows how they perform. Always follow these recommendations exactly.

It is also highly recommended that safety glasses be worn when reloading.

When finished reloading, remove the containers from your machine and seal them with caps and put them in a safe place. Also return all primers to their original container and store them in a safe place. It is important that these materials are kept out of the reach of children and other unauthorized persons.

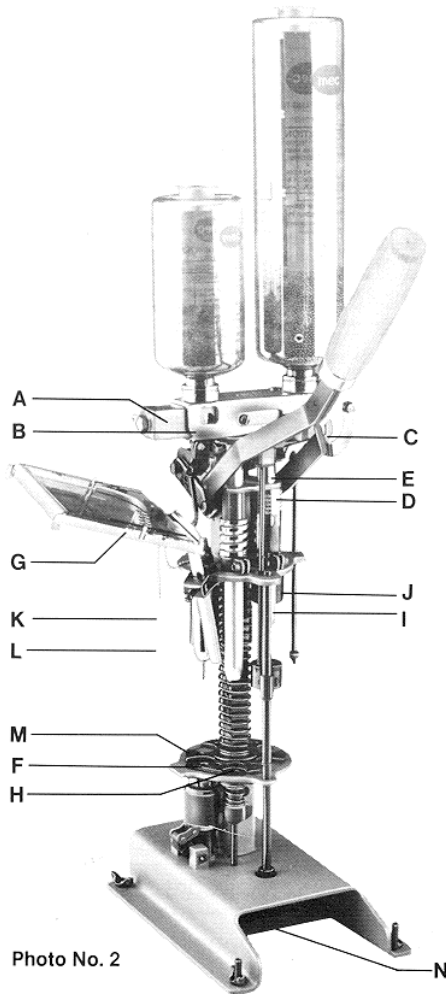


Photo No. 2

**After removing your new reloader from its carton, inspect it carefully for damage. In addition to the reloader itself, you should have these additional parts shown in Photo #3.**

Before you actually try reloading, we recommend that you look over your loader and compare it with this diagram identifying all the parts and dies you'll be using.

- A. CHARGING BAR is located just under the powder and shot containers.
- B. MEASURING ASSEMBLY pivots back for easy changing of loads.
- C. AUTOMATIC-CYCLE MECHANISM. Each stroke of the handle automatically moves the charge bar to left or right measuring and charging precise amounts of powder or shot into the shells.
- D. WAD PRESSURE INDICATOR gives exact amount of pressure actually being applied to the wad column at the bottom of the handle stroke.
- E. WAD HEIGHT INDICATOR used to disclose improper wadding.
- F. DEPRIMING STATION at which the shell mouth is ironed and shell head is truly resized to industry standards for minimum diameter.
- G. AUTOMATIC PRIMER FEED positions primers in shell carrier with each stroke of the handle.
- H. REPRIMING STATION at which shell is also charged with powder. Spring tension automatically applies the proper pressure and compensates for variations in height of base wad while seating primer.
- I. RAMMER TUBE issued to seat the wad column and through which shot is also dropped into the shell.
- J. SPINDEX™ CRIMP STARTING with swivel action to correctly align with the original shell creases. Can be changed from 6-8 pt. in seconds.
- K. CRIMPING STATION with the exclusive cam-operated two stage crimping apparatus. Die is adjustable for depth of crimp.(Not showing)
- L. RESIZING AND FINISHING STATION radius may be adjusted to suit individual taste.(Not showing)
- M. SHELL CARRIER into which shells are placed and which automatically position each shell at the proper station.
- N. PRIMER CATCHER which is placed into position under the base.

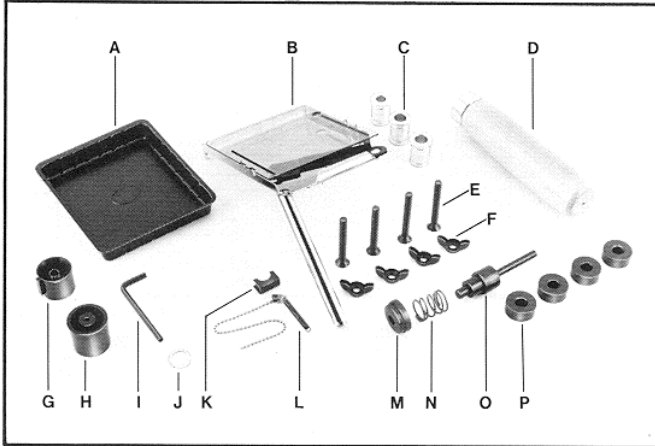


Photo No. 3

**Contents of Parts Bag**

- A. Primer Catcher
- B. Primer Feed
- C. Bushings (3)
- D. Handle
- E. Bolts (4)
- F. Wing Nuts (4)
- G. Wad Guide
- H. Spindex Crimp Starter
- I. Allen Wrench
- J. Brass Washer — smooth side down under grommet, on the powder side only.
- K. Retaining Clip
- L. Primer Feed Spring/Chain
- M. Spring Pad
- N. Spring
- O. Primer Seating Post
- P. Spacer Pads used on 16, 20, 28 and .410 to raise the base for more clearance.

(M, N, O) Assemble as shown in Photo 18.  
 (J) Brass washer is used with fine grain powders (Winchester) to prevent leaking. Install on the powder side of the measure by removing the grommet Photo 8. Spacer pads (P) are used between base and bench/board for gauges other than 12 ga. to give added clearance.

## MOUNTING YOUR RELOADER

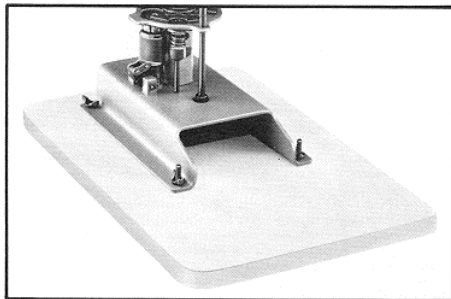


Photo No. 4

Although it is desirable to have your reloader mounted permanently to a bench, it is not a necessity. If you cannot mount your reloader permanently to a bench, we recommend placing your reloader on a piece of 3/4 x 12 x 18" plywood. Photo #4 shows the ideal location for your loader on a piece of plywood. Install your loader by placing it in the proper location, marking through the holes with a pencil, then remove your reloader and drill a 9/32 hole at these locations. Put the reloader back in position and fasten securely with the 1/4 x 20 x 2" countersunk stove bolts with wing nuts. Place the bolts in from the bottom up and draw them up tight enough so the heads are slightly depressed so that they will not scratch the bench or table.

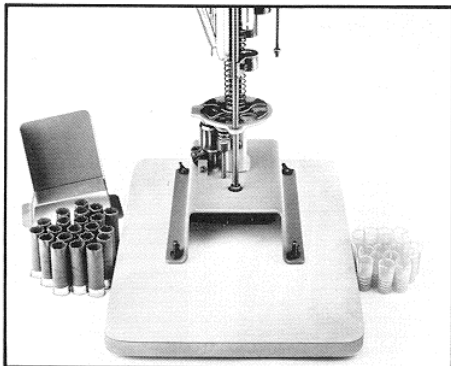


Photo No. 5

By this time you should have made your choice of components. Photo #5 shows how these components should be placed for the most efficient operation of your Grabber.

You will note that the measure will tilt to the rear for easy removal of shot and powder containers, Photo #6. Note: The screw on which the measure pivots should be kept tight enough so that some resistance is felt when tilting the measure.

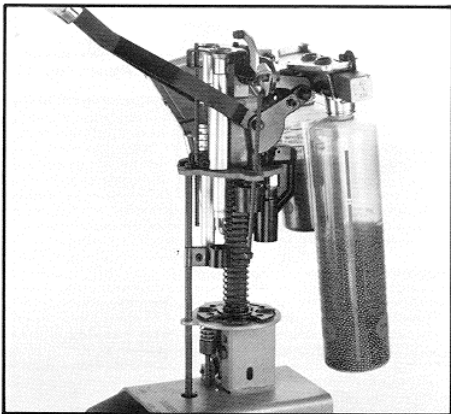


Photo No. 6

Installing the wood handle grip.  
 Drive handle onto lever up to the mark on the side of the handle, Photo #7.

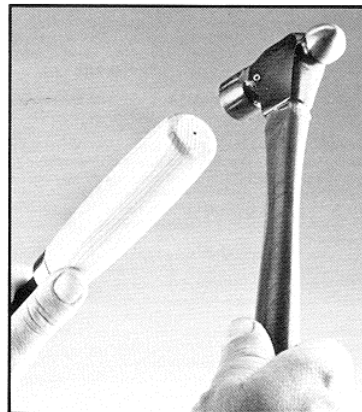


Photo No. 7

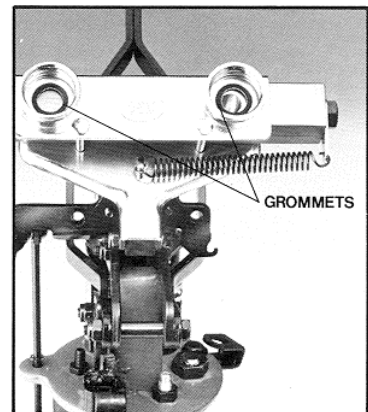


Photo No. 8

### Installing the Primer Feed

Remove the primer feed tray from the parts box along with the spring/chain and retaining clip.

Place retaining clip in place, Photo #9. Insert tube into the tube clamp. Now depress handle so that primer tube will rest on the hole provided in the shell carrier, Photo #10. Now tighten screw to hold tube and tray in position. Now hook the spring/chain in position, Photo #11. The spring actuates the primer feed when you depress the handle, adjust the chain position to achieve a positive feed every time. The primer should drop about 1/4-inch from the bottom of the stroke, Photo #12.

As you face the loader, you will see the measure, Photo #2. On this measure you will see (powder) on the left and (shot) on the right. Remove the charge bar by first disconnecting the spring, Photo #13, and remove the bar screw. Now remove the charge bar by sliding it to the left, Photo #14, remove the disc covering the powder bushing hole. Now place the proper bushing into the charge bar, and replace bar, spring and screw.

After making sure that the neoprene grommets are in place in the measure, Photo #8, you may turn a plastic shot and powder container into each of the threaded cups. The charge bar should be locked in position as per Photo #15 and after removing the cap plugs, fill with proper powder and shot. Replace the cap plugs.

Note: Use the large container for shot and the small container for powder.

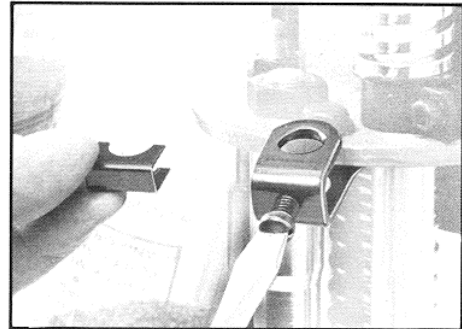


Photo No. 9

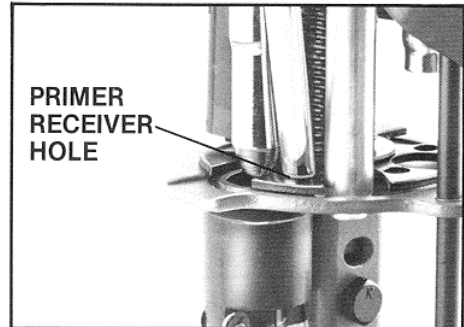


Photo No. 10

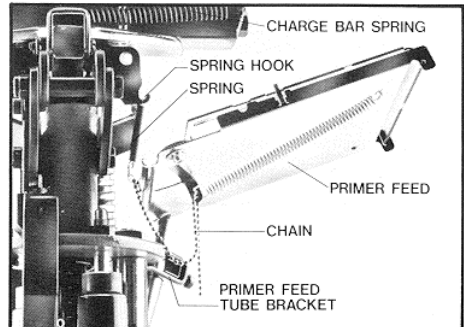


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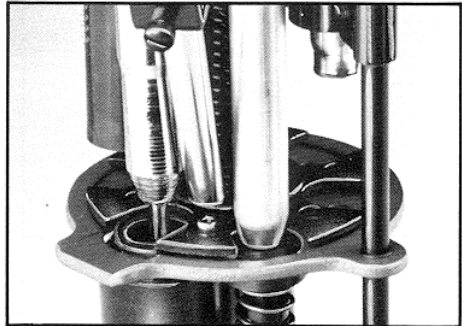


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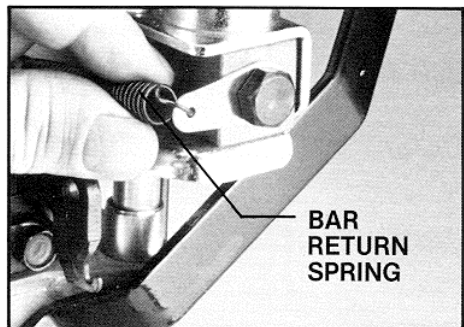


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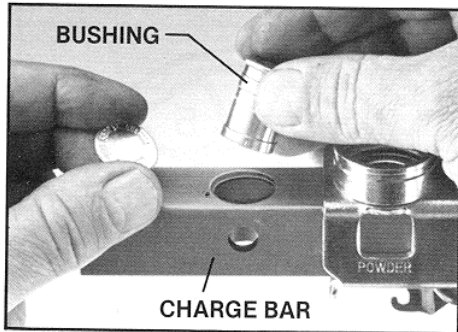


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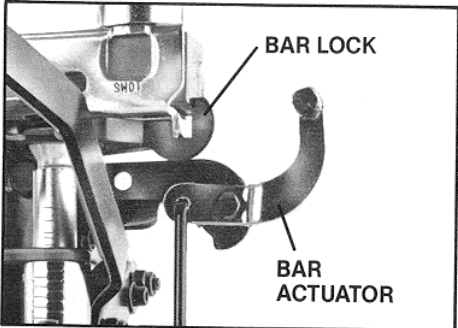


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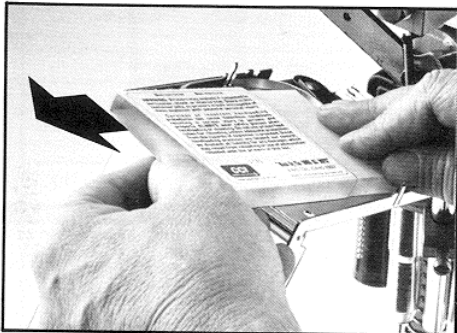


Photo No. 16

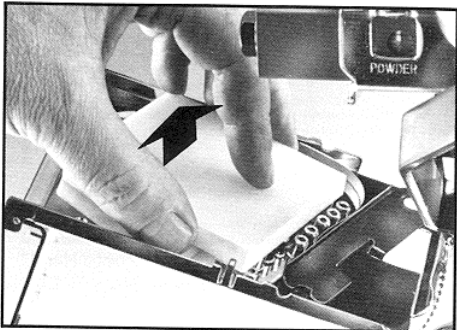


Photo No. 17

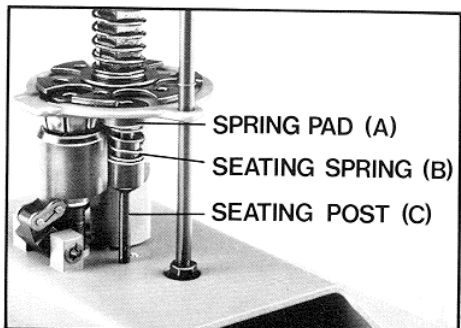


Photo No. 18

### Loading the automatic primer feed.

Lower handle and open primer feed cover. Place box of primers on tray. Slide box cover off slowly, leaving liner and primers on tray, Photo #16. Carefully lift the liner, leaving the primers on the tray, Photo #17. Close primer tray cover.

### Installing the Primer Seating Assembly

Your Grabber is equipped with the exclusive self-cleaning primer seating assembly. It consists of 3 parts. Spring pad (A), seating spring (B) and seating post (C). Photo #18.

To Install: Hold spring pad in place on underside of base with left hand. Place spring on seating post and insert into pad using upward pressure. Seat pointed base of seating post in detent provided for this purpose.

To Remove: Simply grasp seating post, lift and pull toward you.

# LET'S START RELOADING

This drawing clearly shows a top view of the six shotshell reloading stations. You will note that your shells are processed in a counterclockwise rotation. In order to explain the reloading sequence step by step using only one shell, and going through each reloading station, we purposely detached the automatic primer feed spring from the hook. Note: Manual loading of primer will be necessary while spring is disconnected.

Move the charge bar to the left as far as it will go and lock it in this position with the bar lock. Photo #15. Now we're ready to completely reload a single shell.

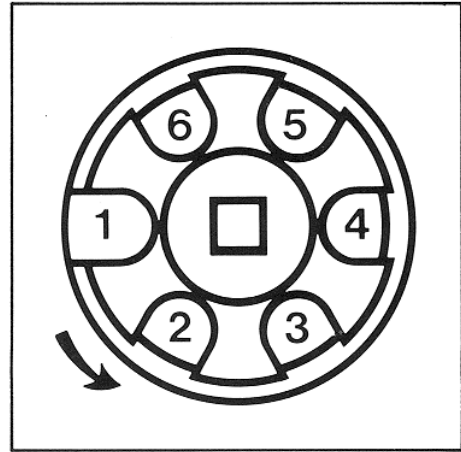


Photo No. 19

## STEP ONE

Place empty shell into the carrier at the deprime Station #1, Photo #20 and pull down on the handle, lowering the shell into the resize collet where it is resized and the spent primer is removed. Place a fresh primer into the primer cup. Next, rotate the six-stage carrier counterclockwise with your left hand. This is a two-stage motion with click stop positioning. Then position the shell under the reprime tube Station #2, Photo #21.

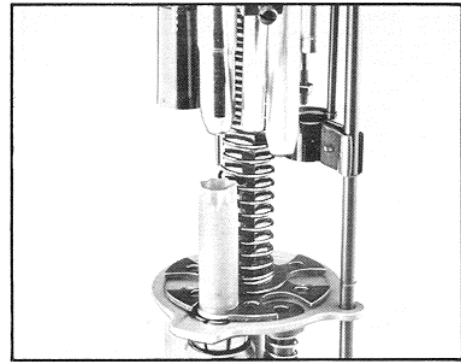


Photo No. 20

## STEP TWO

Again, with your right hand, depress the handle fully to the bottom of the stroke which reprimers the shell. On the down stroke, the charge bar lock lever will automatically unlock the bar *and* on the up stroke the bar will move to the right releasing the proper powder charge into the shell casing. Now move the carrier counterclockwise two clicks to the next station. Station #3

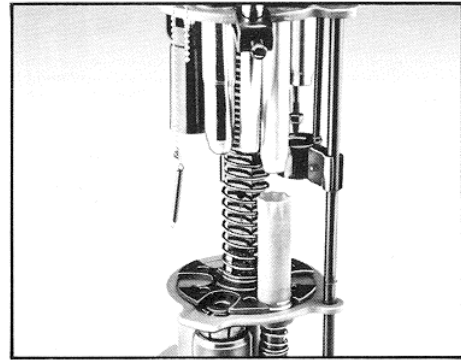


Photo No. 21

## STEP THREE

Using your right hand, place the proper wad column on the wad ram Photo 22. Important: Do not force wads into the guide as this spreads the fingers, preventing the wad guide from dropping into position on the shell. By depressing the handle, the wad will be firmly seated, the charge bar will automatically move to the left position and the pre-determined shot charge will drop into the shell.

While visual checking is not necessary, the pointer indicates the exact amount of pressure being applied to the wad column when the handle is depressed. The reading is always positive regardless of any other adjustments. While tool has been pre-set at the factory for average pressure required, you may find it desirable to increase or decrease pressure. Photo 43.

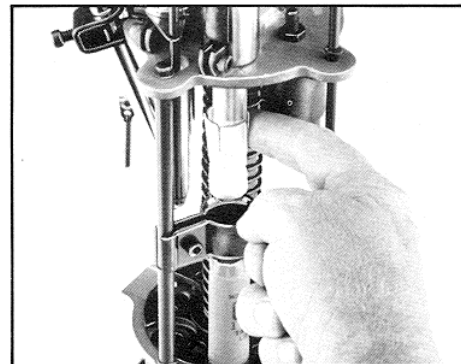


Photo No. 22



## STEP FOUR

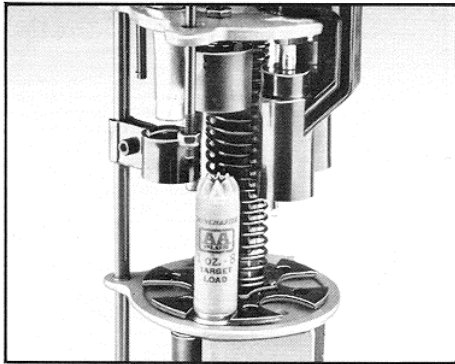


Photo No. 23

Index the shell to Station #4 where the downstroke of the operating handle, the crimp is started with the exclusive spindex crimp starter. Note that this crimp starter may be adjusted up or down by loosening the nut on the stud that retains the spindex and turning these for less or more crimp start.

To remove or change the spindex, simply pull down to remove and snap a new one in place. A properly started crimp should look like Photo #23. It is important that shells are crimped with the same crimp as original, 6 or 8 point.

## STEP FIVE

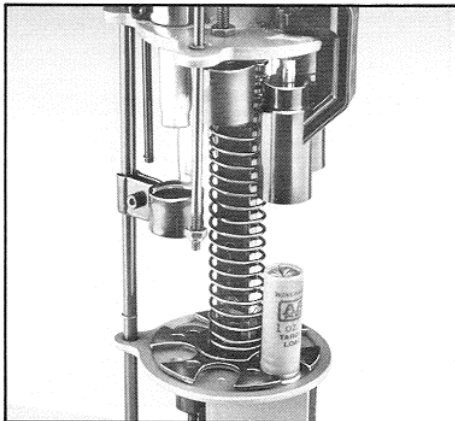


Photo No. 24

By rotating the carrier assembly counterclockwise two clicks to Station #5, we arrive at the closing station. As you depress the handle with your right hand, the crimp punch moves down on the casing and your reloaded shell begins to take on a factory appearance. Photo #24.

## STEP SIX

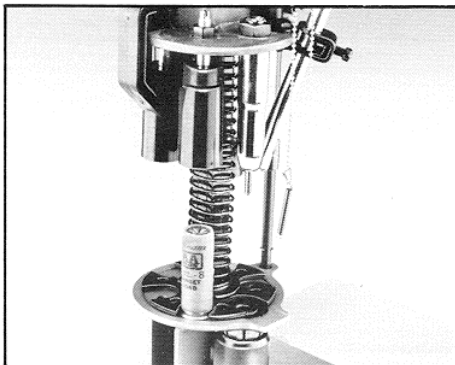


Photo No. 25

Advance to Station #6 where a pull of the handle resizes and puts a finished radius on the perfectly reloaded shell. Photo #25. Advance the finished shell and remove it from the machine. A properly loaded and crimped shell should look like the shell in Photo #26.

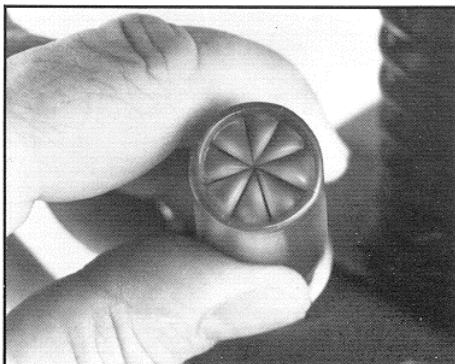


Photo No. 26

# AUTOMATIC SEQUENCE

Now that we have gone through the loading sequence with one shell, let's proceed with the setup of the automatic sequence that will give us a loaded shell with each pull of the handle. The Grabber is very easy to operate but attention must be paid to detail, the misloading of one shell may affect the characteristics of all shells in the press at that time.

First re-hook the primer feed spring. Place an empty shell in the deprime station No. 1. Make certain that the charge bar is locked all the way to the left position by the bar lock. Pull the handle to the down position. This will deprime, place a primer in position and resize the brass head.

Move shell carrier counterclockwise a full stop (2 clicks) and insert another empty shell in the No. 1 position. Repeat the handle pull procedure, again move the shell carrier one stop (2 clicks) counterclockwise, now insert a wad on the wad ram, and place empty shell in station No. 1. Repeat handle pull. Repeat this procedure each time to obtain a reloaded shell with each pull of the handle.

Follow these instructions exactly and you will develop the correct hand movements to load 10 to 20 boxes per hour.

First pick up the empty shell with your index and middle finger Photo #27. Now with your thumb and forefinger grab the finished shell, index the carrier by pulling the shell around to where it can be removed. Photo #28. Slide the empty shell into the carrier Photo #29 and place the loaded shell into the E-Z Pak. Now place the wad on the wad ram and pull the handle down, Photo #30.

## To Avoid Mistakes and Problems It Is Necessary to Watch for Certain Things:

1. That the shell has dropped to the full bottom of station #1. If the handle "bottoms" part way up in the stroke it is usually an indicator that the shell has not dropped to the bottom of the resize station. Refer to Station # 1 regarding problems in this station.
2. Make sure that a primer has dropped into the carrier and then into the primer seating assembly as the carrier is advanced.
3. Do not run out of shot, powder or primers. Develop a regular sequence for replacing these components. (Example: Every four boxes of shells, primers must be added — every eight boxes shot and powder must be replenished.) Also remove the spent primers from under the machine each 400 rounds.
4. Do not mix shells while loading. Process only one kind of shell with matching components at a time. Mixing shells is sure to cause trouble.
5. Check all shells before loading for defects, split plastic, cracked brass and foreign objects in shell. Each defective shell processed will probably cause trouble and trouble means "down time" not only to remove the defective shell but to clean up the mess that it may have caused.
6. **Always** be sure to make a full stroke of the handle. Get accustomed to where the handle "bottoms" and be sure to get a full stroke each time.
7. Anytime that you make a mistake — **stop**. Tip the measure back, lock the bar to the left, unload all shells from the machine, open them and remove the contents before starting over. Do not allow mistakes to get mixed in with good shells.
8. Never "double stroke" the handle because of an incomplete first stroke, without first checking to see whether any shot or powder has been dropped.

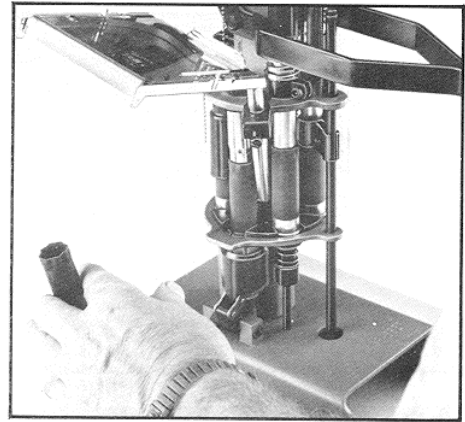


Photo No. 27

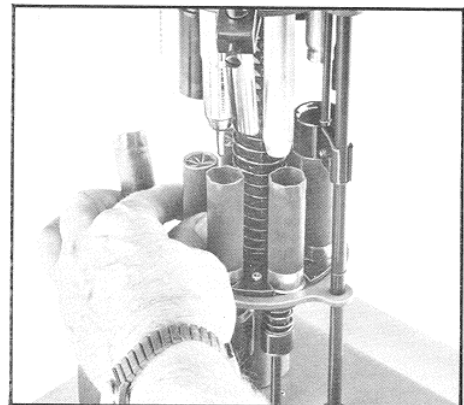


Photo No. 28

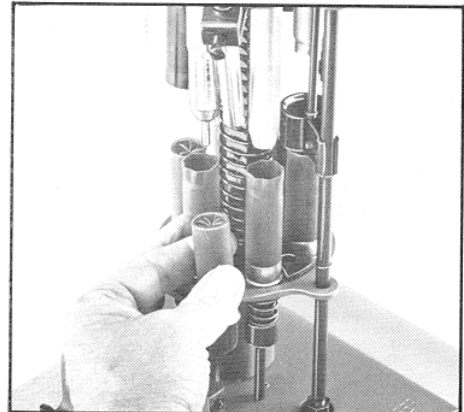


Photo No. 29

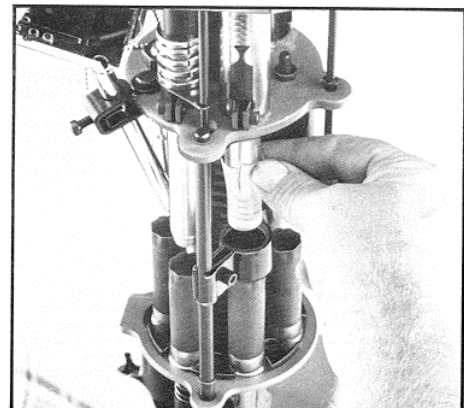


Photo No. 30

# ADJUSTMENTS

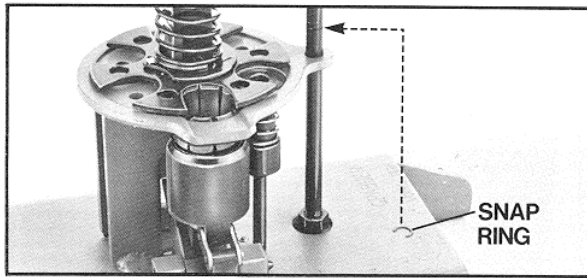


Photo No. 31

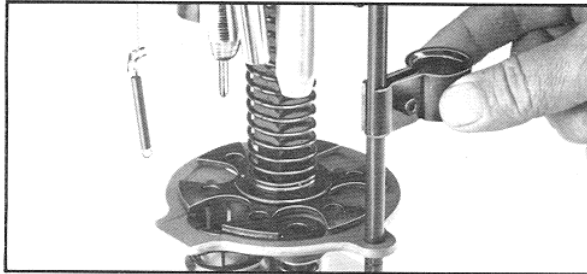


Photo No. 32

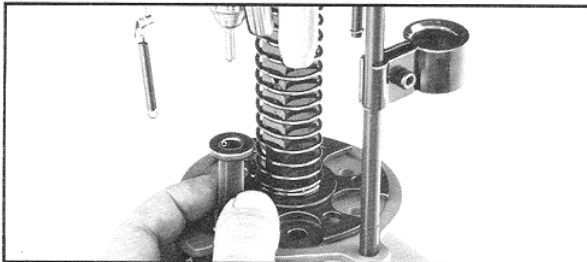


Photo No. 33

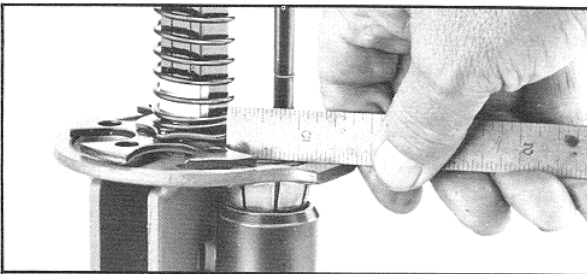


Photo No. 34

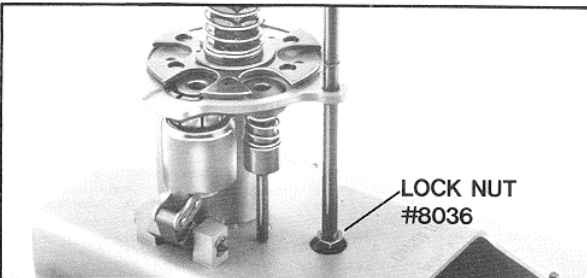


Photo No. 35

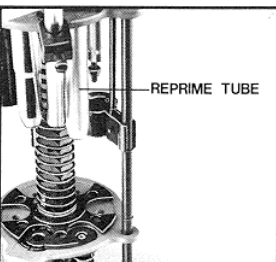


Photo No. 36

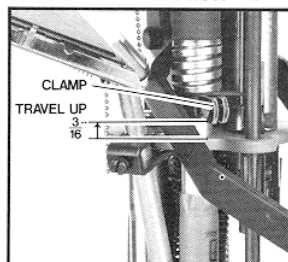


Photo No. 37

## STATION #1 Resize and Deprime.

The collet as it comes from the factory is adjusted to give a dimension that is the same as factory loads. After a period of time, this may require adjustment. To adjust the collet, follow these steps.

1. Remove the shot and powder from the machine. Also remove the loader from the bench or board on which it is mounted.
2. Remove the snap ring on the wad guide rod Photo #31.
3. Lower the handle about half way and swing the wad guide to the right Photo #32.
4. Remove the shell lifter from the collet by reaching under the machine and raising it with one hand while removing it with the other. Photo #33.
5. Now tip the machine on its side and using a  $\frac{13}{16}$  socket wrench, loosen the lock nut retaining the collet. The collet is now free to turn down or clockwise for a smaller shell or the opposite for a larger shell.  $\frac{1}{8}$  turn changes shell diameter about .001. It is best not to size the head any smaller than is necessary to fit the smallest chamber gun that you shoot.
6. Reverse the above procedure to reassemble.

It is necessary for the shell lifter to be level with the track in which the shells ride around the machine.

To adjust, raise the handle to the top of its stroke. Put a straight edge in the track Photo #34. To raise or lower the lifter, loosen the wad guide slightly (enough so you may turn it on the wad guide rod). Now loosen the lock nut #8036 Photo #35. You may now raise or lower the lifter as required by turning the wad guide rod in or out of the lifter yoke as required.

## STATION #2 Reprime.

The only adjustment is to raise or lower the tube #505 C, Photo #36 to accommodate different base wad heights. With a shell in this position, there should be about  $\frac{3}{16}$  inch of travel at the full bottom of the stroke, Photo #37. If you do not have enough travel at this point, the charge bar may not operate or the primer will not be fully inserted. (If this happens, the machine will not index.) Too much travel will raise handle pressure required or cause the clamp to slip. It can also cause the bar not to lock out. To adjust, loosen the clamp #507 Photo #37 and slide the tube up or down to the required position and retighten.

**STATION #3 Shot and Wad.**

The normal position for this tube when loading 1 1/8 oz. trap or skeet loads is as in Photo #42. When loading with modern one piece plastic wads it is not usually necessary to have wad pressure show on the indicator #306 F Photo #43, however the wad should be pushed down tight against the powder. There are some recommendations for wad pressure and the tube may be raised or lowered by loosening clamp #507 Photo #43. Move the tube to the desired position and tighten.

The wad guide is replaced by loosening screw Photo #43, removing the old, slide a new one into position and retighten.

**STATION #4 Crimp Start.**

It is important to crimp all shells with same crimp as they were originally crimped with either 6 point or 8 point. The crimp starter may be adjusted up or down by loosening the nut #8476 Photo #44, under the turret is another nut which may be turned either up or down to give more or less crimp start. If you are processing paper shells, a smooth cone crimp starter is available which will do the best job.

Remember — giving more or less of a crimp start will often improve a final crimp.

**STATION #5 Crimp Close.**

As your loader comes from the factory the adjustment should be correct for most shells. There are two adjustments that can be made in the final crimp station. They are the cam adjustment Photo #45 and the punch adjustment Photo #45. Four of the common problems which can be corrected by crimp station adjustments. Photos #38-41.

Shell #1 — Crimp punch not deep enough. Correct by loosening lock nut #461A and turn punch deeper.

Shell #2 — Crimp punch too deep. Correct by loosening lock nut #461A and raise crimp punch.

Shell #3 — Opening in center of shell. Correct by loosening cam adjustment bolt #507A and moving cam down about 1/32 of an inch and try again.

Shell #4 — Shell has a swirl in the crimp. Adjust by loosening cam adjust screw #507A and move the cam up or clockwise. Move about 1/32 and try again.

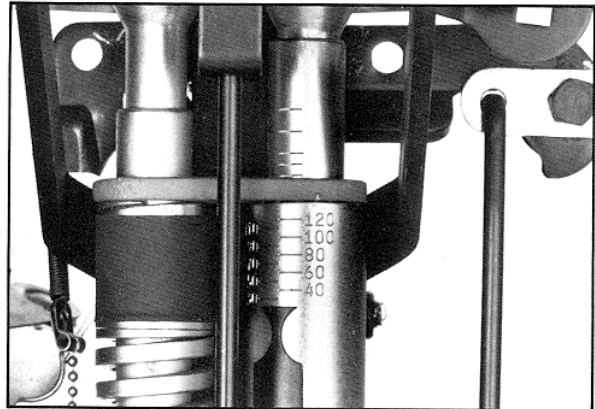


Photo No. 42

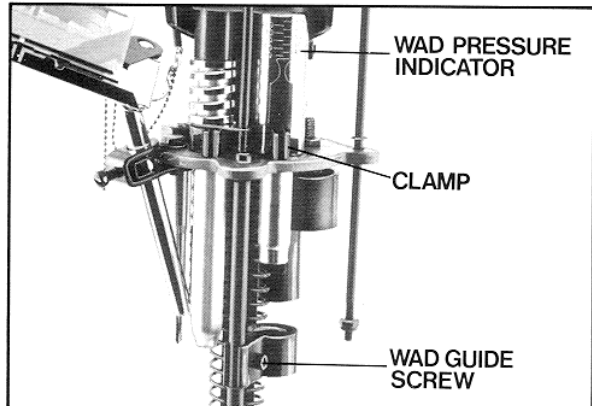


Photo No. 43

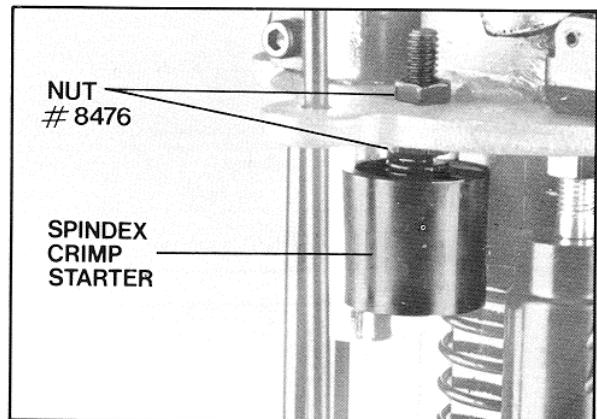


Photo No. 44

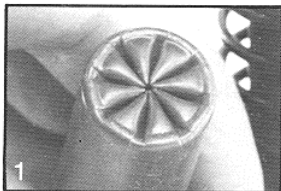


Photo No. 38

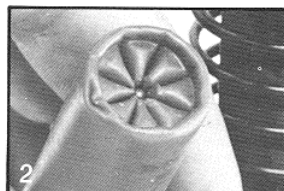


Photo No. 39

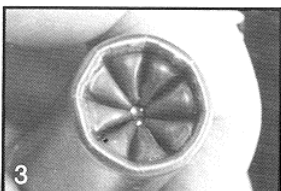


Photo No. 40



Photo No. 41

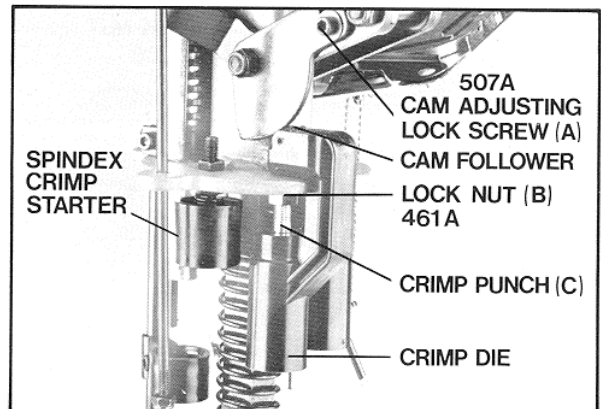


Photo No. 45

### STATION #6 Final Crimp.

This station puts the “lead” or radius on your shells for easy feeding especially in auto loaders and pumps. This can be lowered or raised to get the desired “lead.” It is important not to have this station adjusted too deep or you will crush the shell just above the brass. This is very critical with paper shells, and straight wall cases.

### Lodging and Jamming of Large Shot.

Your Grabber was designed as a high production machine primarily for shot sizes smaller than #6. This does not mean that you cannot load large shot, however. When loading shot larger than #6, it is best to disconnect the auto charge rod #8055 Photo #46. Also it usually works best to remove the grommet. Also remove the bar return spring. Now go through the loading sequence the same as usual only after raising the handle about ¼ of the way up, charge the shot and powder by moving the charge bar manually. Move the bar slowly so as not to drop the shot in one lump but rather let it flow out.

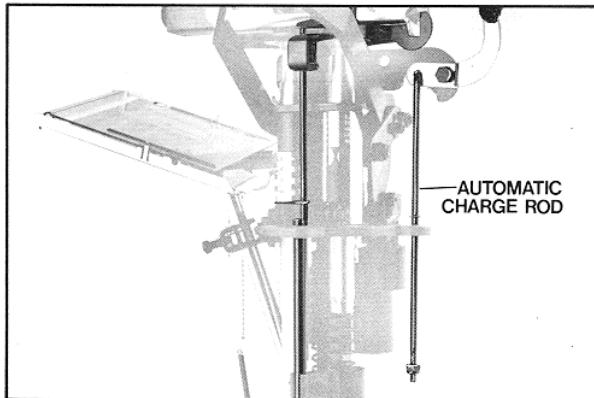


Photo No. 46

### Cannot Index the Turret.

Station #1 or #2 can cause the problem. In station #1 it would be caused by the machine not going to the top of its stroke with the shell remaining part way in the resize collet preventing the carrier from indexing. Another cause can be the primer not being fully inserted. If you can see that station #1 is not causing the problem, remove the primer seating assembly described earlier, drop the shell out the bottom and look if the primer is fully seated. If not, the problem is usually caused by foreign material (powder) in the primer seat assembly, or the tube not being adjusted low enough to push the primer all the way in. At times, oversize primers can cause the problem, but this can almost always be overcome by lowering the tube a little.

### Charge Bar Will Not Release and Drop Shot or Powder.

This is almost always caused by the reprime tube not being adjusted deep enough. It is necessary for the clamp #507 Photo #37 to raise off the turret about 3/16 of an inch. (Refer to adjustment.)

Another cause can be the measure not being tipped all the way down. Pull the measure down solidly and make sure the pivot screw is tight enough to keep it there.

Charge Bar will not lock without shell in station #2 (keeps charging shot and powder with no shells in the machine).

Check to see that the bar stop screw #303 Photo #2 is touching the left side of the slot, that it travels in with the handle down. If not, check for a bent return bracket #670C. It can usually be adjusted for by turning nut #304 J Photo #49 to shorten the rod.

Check the spring and bar lock #670 A Photo #15. When pushing the bar to the left, the spring should snap the lock up and keep the bar from moving to the right.

### Inaccurate Powder or Shot Charges.

Almost always caused by short travel of the charge bar. With a full carrier when the handle is depressed, the bar stop screw must travel to the full left side of the slot. Note: It is always recommended that powder and shot charges be checked with a reliable scale. When checking these charges, do it during the normal operation of the machine.

Primers do not drop into the primer seat assembly when the carrier is indexed.

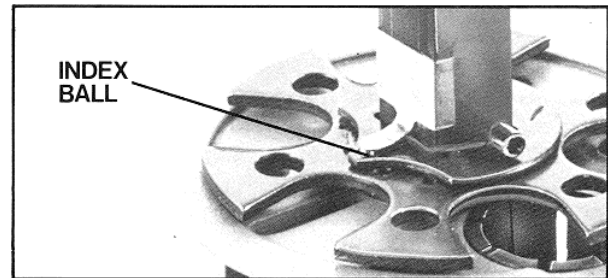


Photo No. 47

The most common cause for this is losing the index ball #515 D Photo #47. A bent spring can also cause the problem, Photo #47.

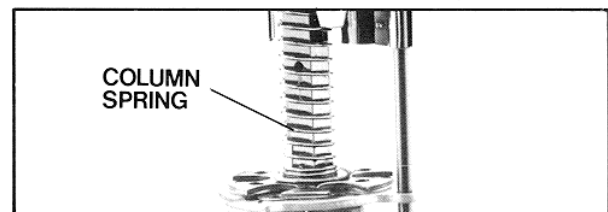


Photo No. 48

It is important that you feel a crisp index each time the ball drops into an indent. This is adjustable. To adjust, merely turn the column spring #612 Photo #48. Getting the free end of the spring right at the index ball gives the highest pressure, Photo #48. The maximum pressure is usually too much for good indexing and primer dropping. Having the free end of the spring about 90° from the index ball is usually about correct.

# MEC AUTO-CYCLE MECHANISM

Your MEC GRABBER is equipped with the exclusive Auto-Cycle Bar mechanism. This mechanism in no way affects the flexibility of the pivoting measure. Powder, shot or charge bar can be changed as easily as with any other MEC model.

## Adjustment.

While the unit was adjusted when the actuating rod was assembled, it may be necessary to readjust because of severe handling during shipment. To check, hold press handle at bottom stop position. Charge bar should now be all the way to the left. If charge bar is not as far left as it will go, use adjusting nut (A). Bar and handle must be synchronized so that charge bar will hit left hand stop as handle hits bottom on down position. It is best to check this with machine empty.

Auto-Cycle is activated by the compression of the reprime spring, # 8025 Photo #49 at the time that the primer is being seated. The containers need not be in position to check the action, and we suggest they be removed or that they be emptied. The measure assembly must be tipped forward in an upright and level loading position, the charge bar positioned to the left as illustrated with the carrier empty, the handle can be depressed and the bar will remain locked to the left in the illustrated position. With the handle depressed, the 670E, trip rod bracket, will engage the large diameter at the lower end of the trip rod, maintaining the compression of the 670D, trip spring. Upon inserting a shell in the carrier and moving it to the reprime station and depressing the handle, the spring, compresses and the 670E, trip rod bracket, no longer engages the larger diameter at the lower end of the trip rod. This relationship no longer holds the compression of the 670D, trip spring, and its expansion causes the bar lock to drop down and upon raising the handle the charge bar moves to the right to drop the powder. Upon moving the shell to the wad ramming station without a shell at the reprime station, the trip spring is again compressed by the engagement of the trip rod bracket with the large diameter at the lower end of the trip rod and the 670B, lock spring, lifts the 670A, bar lock, to again maintain the position illustrated.

The full travel of the charge bar is required to permit pivoting the bar lock. The travel of the charge bar is controlled by the adjusting nut A, and it should be positioned as described in the first paragraph. It is mandatory that the measure assembly be upright and level and that the reprime spring, compresses a minimum of  $\frac{3}{16}$  inch when a shell is in position to receive the powder charge. To position the bar for autocycling, the bar must be moved to the left either manually or by depressing the handle to allow the bar lock to hold the bar in the extreme left position.

Factory adjustment has positioned the reprime tube adequate to maintain charge bar operation and seat the primer in low base shells under normal conditions. Lowering the tube will provide increased primer seating pressure with increased handle load. If preferred, to reduce the handle load, the reprime tube may be raised when reloading is limited to only high base shells.

## Operating Manually.

Under some conditions, such as when abrasive powder or heavy shot is to be used, it may be desirable to operate charge bar manually. To do this, remove bar lock and return spring, and remove actuating rod.

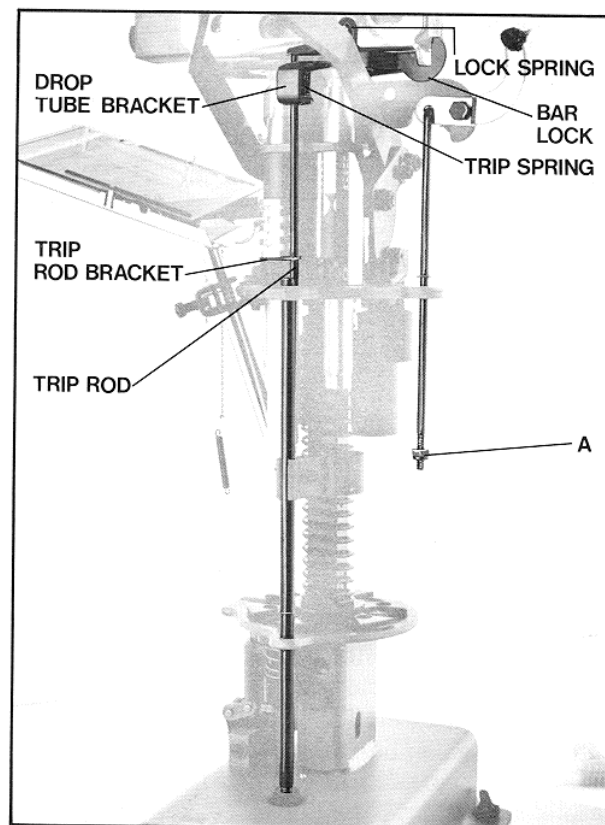


Photo No. 49

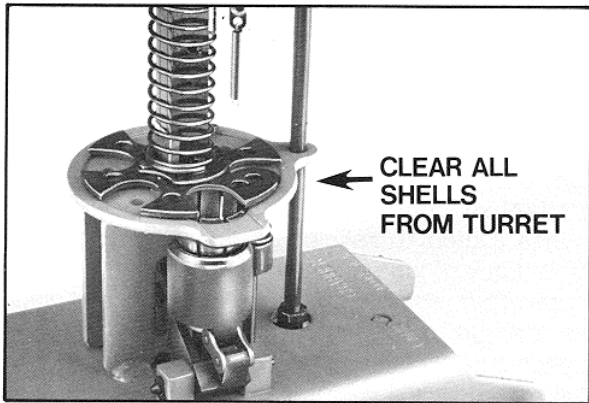


Photo No. 50

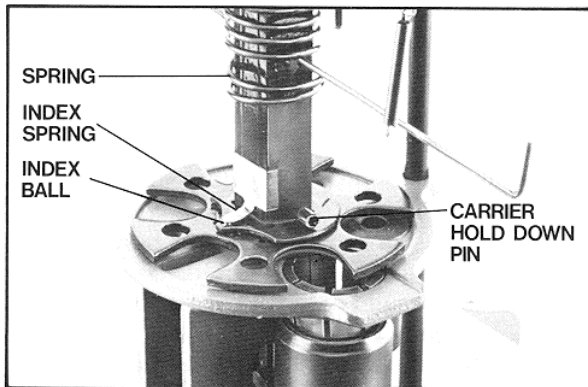


Photo No. 51

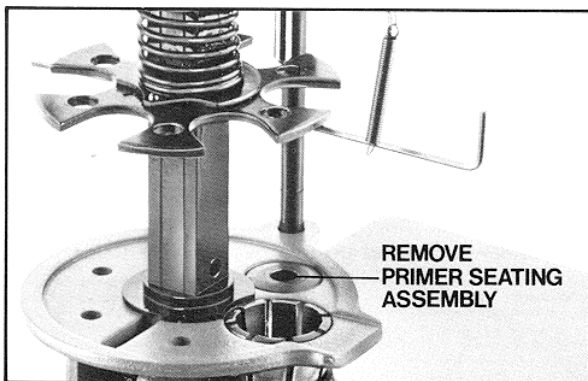


Photo No. 52

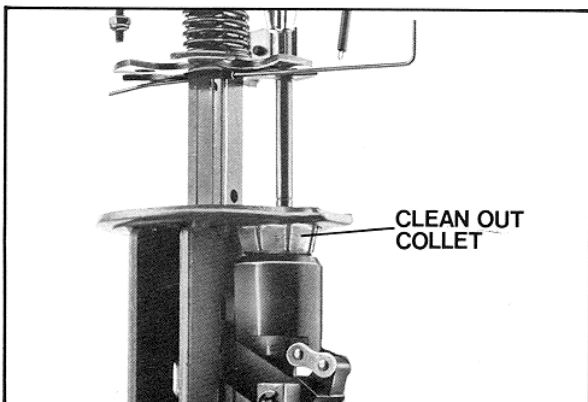


Photo No. 53

**If You Spill Shot:**

Remove all shells from the carrier immediately.

Lift column spring to allow entry of retaining pin (nail or Allen wrench) into the hole in the column, beneath the last coil of column spring is preferred although between 2nd coil and into column will provide adequate clearance. Photo #51.

Remove index spring, remove carrier hold down pin, enter screwdriver blade between carrier hold-down and carrier, pry up slightly, alternating pressure from various points until hold-down is high enough to raise carrier.

Remove primer seating assembly.

Rotate carrier and brush shot thru ports in the base. Position carrier to clear rear hold-down and lift carrier.

Remove all pellets that may be trapped beneath carrier or between outer edge of collet and inside edge of opening in the base.

Enter small screwdriver or knife blade beneath flange, lift and withdraw elevator pad and remove all pellets.

Inspect collet slots to be assured that none have been overlooked.

Reposition carrier and carrier hold-down, replace index ball, reposition index spring. Withdraw retaining pin and ease column spring into position over flange of index spring. PIVOT MEASURE TO REAR AND MANUALLY LOCK CHARGE BAR TO THE LEFT, return measure to upright position.

Replace shell lifter. Turn wad guide rod to allow shaft to seat in socket at the end of arm attached to the wad guide rod beneath the base.

Reposition the last three shells in the carrier in the order in which they were removed, enter fired shell at the first station and proceed with normal reloading sequence after disposing of first three shells on which preliminary operations were performed.

# LUBRICATION POINTS

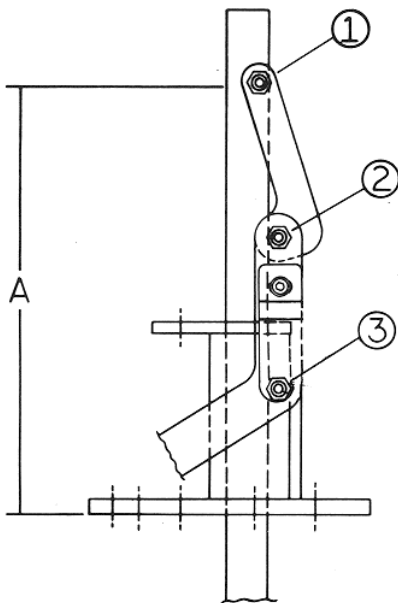
## Instructions for Collet Removal and Replacement

1. Remove the shot and powder containers from the machine.
2. Remove the loader from the bench or board on which it is mounted.
3. Remove snap ring from the wad guide rod, Photo #31.
4. Lower the handle about halfway and swing the wad guide to the right, Photo #32.
5. Remove the shell lifter from the collet by reaching under the machine and raising it with one hand while removing with the other, Photo #33.
6. Now raise the column spring and place a pin through the hole in the column, Photo #51. Also remove the index spring and ball along with the carrier hold down pin.
7. Enter a screwdriver under the carrier and raise the carrier alternating pressure from side to side until the carrier can be raised as in Photo #52.
8. Now tip the machine on its side and using a  $1\frac{3}{16}$ " socket, loosen the nut that locks the collet. Remove the nut, and the collet is free to turn up and out of the base. Normal collet adjustment is level with the top of the base, Photo #34.
9. Reverse the procedure to reassemble.

It is necessary for the shell lifter to be level with the track in which the shells ride around the machine, Photo #34.

To adjust, raise the handle to the top of its stroke, put a straight edge in the track, Photo #34, loosen the wad guide slightly (enough so you may turn it on the wad guide rod). Now loosen the lock nut #8036, Photo #35. You may now raise or lower the lifter as required by turning the wad guide rod in or out of the shell lifter.

Friction and pivot points (1-2-3) of the scissor linkage are to be oiled periodically, our choice is EP90 or its equivalent. (heavy oil)



The collet resizing requires your particular attention. (4-5-6) Chain link and pivot pin should receive an occasional drop of light oil. THE OUTSIDE OF THE EIGHT COLLET SEGMENTS, in the area where the collet closer bears against the collet, must be GREASED. We have not found an oil or spray lubricant satisfactory. We prefer Antisieze lubricant, a product of Loctite or a graphite impregnated grease. (Outers Gunslick or its equivalent) (GREASE AT 6.) Lack of lube on the collet will result in additional effort required on the down stroke and possible damage to the unit when the closer is forced away from the collet on the up stroke.

The column, in the area that the turret slides must be kept lubricated. (heavy oil at "A")

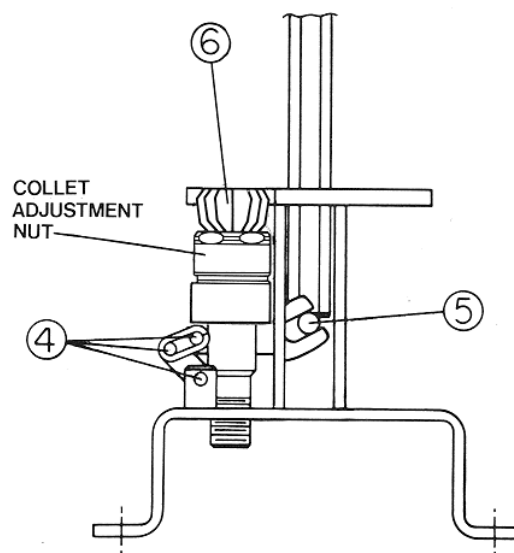
A drop of oil at the metal to metal contact of the operating rod and the bar actuator should be applied occasionally as well as to the shoulder bolt which pivots the bar actuator.

Cleanliness is not a virtue, it's a necessity for efficiency. Wipe the primer tray with tissue or a silicon cloth to allow the primers to slide freely. Powder residue is abrasive and inflammable, don't allow an accumulation. Shot should be in the container or in the shell. The results of loose pellets found under a bare foot, in your wife's shag rug or in the reloader mechanism will, in some manner, adversely affect your efforts.

A little care for a lot of service.

## COLLET CLOSER ADJUSTMENT

You will notice that the collet closer is a two piece unit. To adjust, the upper portion or nut is raised to make the shell smaller or lowered to make it larger. Use a wrench on the nut to turn it, always making sure that a flat side is always against the base support. Never make your shells any smaller than necessary to fit your gun.



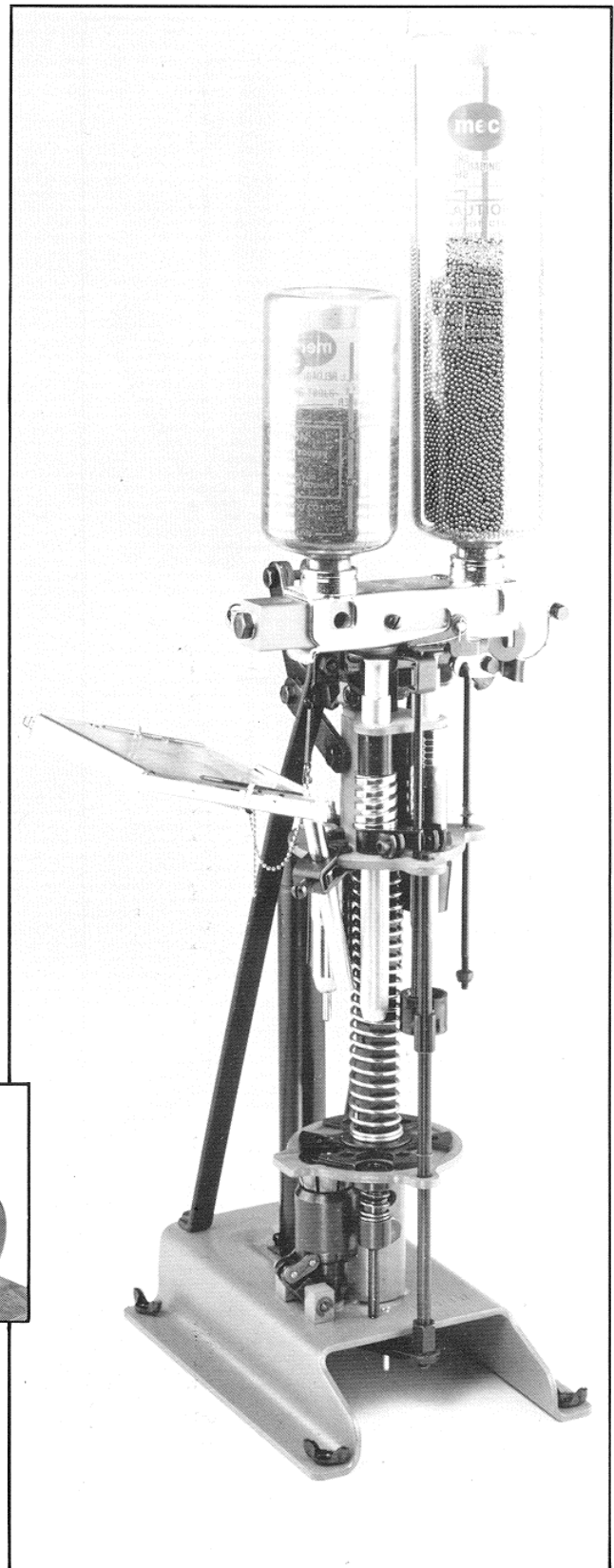
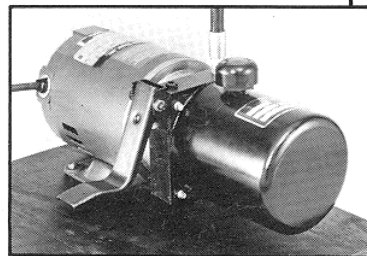


# HUSTLER

## Reloads and Resizes Hydraulically

The GRABBER with its revolutionary resize chamber, combined with the MEC hydraulic system, becomes the HUSTLER. All the advantages of the MEC GRABBER plus the trouble-free hydraulic system not only gives you your own miniature reloading factory, but one that resizes to under industry standards for minimum chamber. It's one super-fast way to reload with a quality never before available in a reloader. The hydraulic system is compact, lightweight and designed for long, trouble-free service. The motor operates on regular 110 volt household current and the pump supplies instant, constant pressure...no slowdown, no misses. The entire downstroke and upstroke functions are utilized and synchronized to allow continuous action. Every stroke of the cylinder piston is positive and performs all operations at six reloading stations. Every downstroke of the reloader produces one finished shell. The operator inserts empty shells and wads and removes finished shells...the HUSTLER does the rest...automatically.

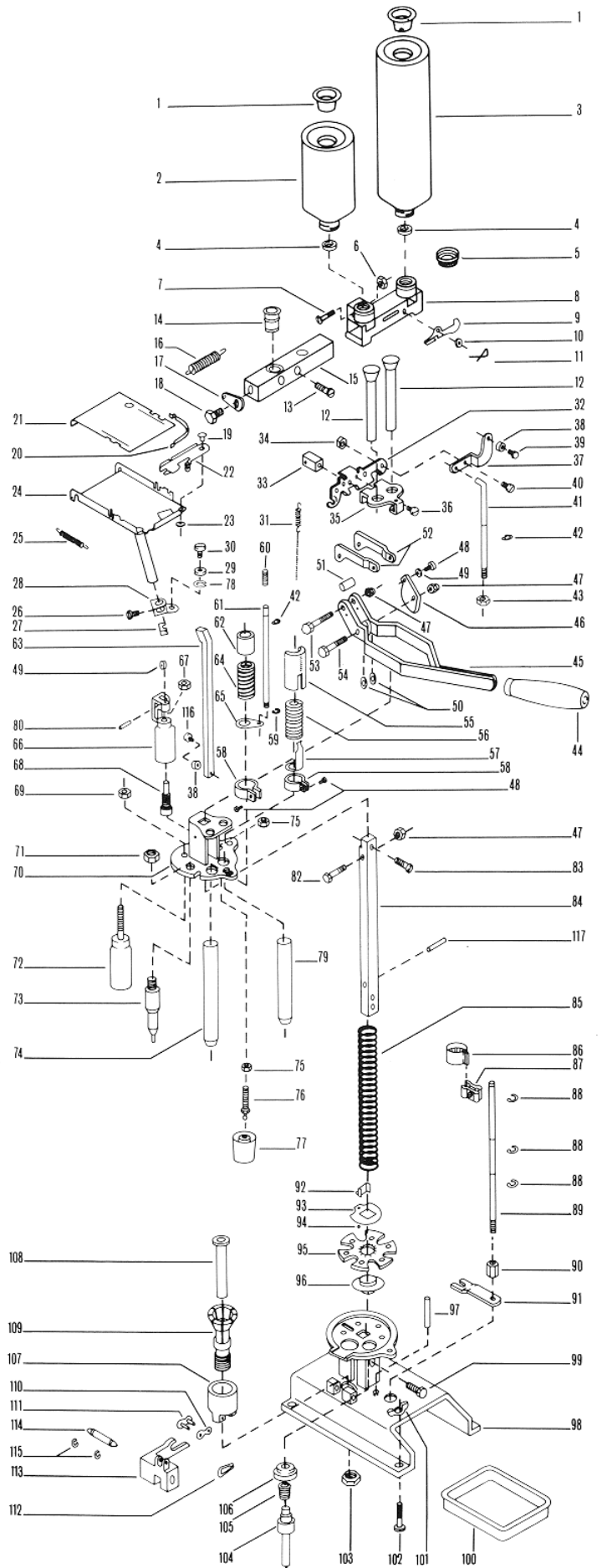
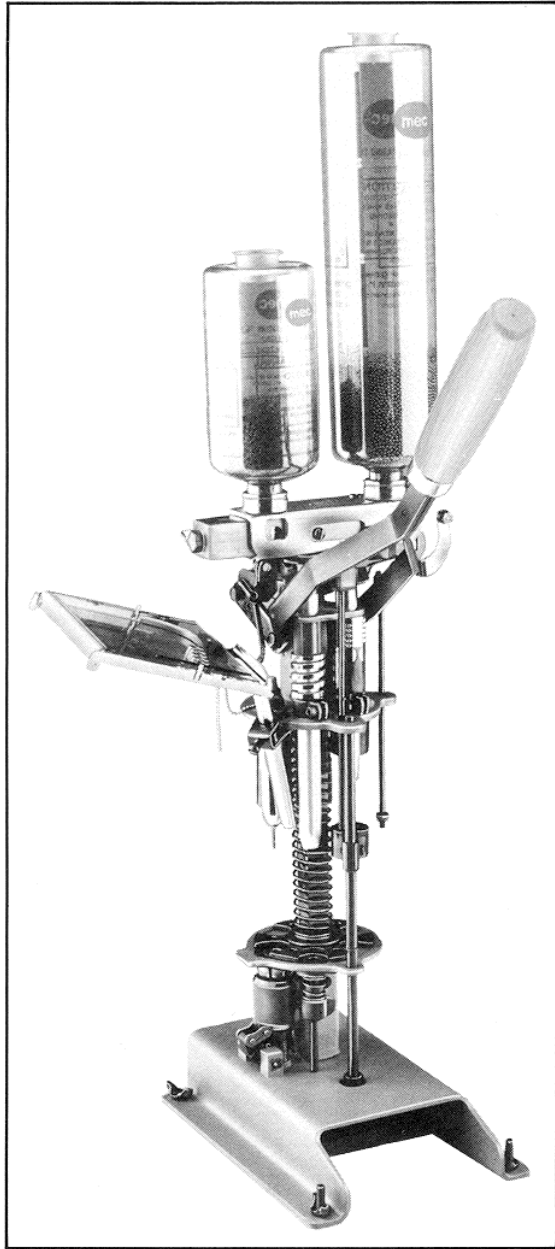
1. Oil — use straight 10W or 20W motor oil.
2. Attach Breather Cap.
3. Remove Outlet Plug and connect Hose to unit.
4. Install Swivel Fitting in top hole of cylinder.
5. Connect Hose.
6. Plug electrical cord into 110 volt outlet.
7. Due to air in the lines, it may be required that the foot pedal be operated a number of times to smooth the action. Should it become necessary or desirable to remove containers while full or partially full, depress foot pedal and hold. Be sure caps are inserted before pivoting measure for removal of containers. To hold Turret at a lowered position, insert length of  $\frac{3}{8}$  dowel between rear face of Cam and ahead of Tie Bars.



### CAUTION

While your HUSTLER Loader has been designed with your safety in mind, it must be remembered that it is a powerful tool and carelessly operated, can inflict serious injury to the fingers of the hands of the user. The following precautions should always be observed.

1. Clear hands before depressing foot pedal.
2. Disconnect power before making adjustments or clearing unit of damaged shells.
3. DO NOT ALLOW children to tamper with or operate the unit.



# PARTS LIST

REF. NO.	NAME OF PART	PART NO.
1.	Cap Plug	13X
2.	Powder Container	301L-13X
3.	Shot Container	8042
4.	Grommet	304G
5.	Cap	304C
6.	Nut	304J
7.	Measure Pvt. Screw	304D
8.	Measure Assembly	8059
9.	Bar Lock	670A
10.	Washer	670G
11.	Lock Spring	670B
12.	Drop Tube	8205
13.	Stop Screw	303
14.	Powder Bushing	050
15.	Charge Bar	502
16.	Spring Bar Return	573
17.	Spring Anchor	572
18.	Knob	502B
19.	Rivet	314A
20.	Primer Feed Spring	285P
21.	Cover w/Hinge	285ML
22.	Pickup Arm	285G
23.	Retaining Ring	285H
24.	Primer Tray	385A1
25.	Spring	385Q
26.	Screw	303
27.	Retaining Clip	385E
28.	Tube Clamp	385C
29.	Washer	685G
30.	Mounting Screw	685F
31.	Spring w/Chain	385RU
32.	Bar Act. Mtg. Brkt.	8045
33.	Measure Support Block	504C
34.	Lock Nut	460A
35.	Drop Tube Bracket	670C
36.	Screw	304L
37.	Bar Actuator	8053
38.	Cam Roller	623B
39.	Cam Roller Bolt	623 A
40.	Screw	570A
41.	Operating Rod	8055
42.	Retaining Ring	670J
43.	Nut	304J
44.	Handle Grip	8400
45.	Handle	609
46.	Cam	623
47.	Stop Nut	309E
48.	Screw (1)	507A
49.	Washer	8312
50.	Washer	609F
51.	Link Spacer	510B
52.	R.H. & L.H. Link (Pair)	610RH 610LH
53.	Link Bolt	610C
54.	Handle Bolt	609B
55.	Pressure Ind. Face	306F
56.	Pressure Spring	306T
57.	Pointer	306P
58.	Clamp	507
59.	Retaining Ring	670K
60.	Trip Spring	670D
61.	Trip Rod	670F
62.	Spacer	8341
63.	Actuator Rod	8310
64.	Lower Reprime Spring	8025
65.	Trip Rod Bracket	670E
66.	Cam Crimp Housing	621P Cap
67.	Lock Nut	461A
68.	Cam Crimp Punch	621B*
69.	Lock Nut	461A
70.	Turret Assembly	8035

\*Specify Gauge

REF. NO.	NAME OF PART	PART NO.
71.	Lock Nut	459A
72.	Finish Die	522P*
73.	Deprime Punch	8013*
74.	Reprime Tube	505C*
75.	Nut	8476
76.	Ball Pivot Pin	8419
77.	Spindex Star Crimp	8439*
78.	Lock Washer	685H
79.	Rammer Tube	505B*
80.	Cam Roller Pin	613D
82.	Link Bolt	610A
83.	Measure Pvt. Screw	504D
84.	Column	8010
85.	Column Spring	612
86.	Wad Guide Fingers	8300
87.	Wad Guide Clip	8377
88.	Retaining Ring	616A
89.	Wad Guide Rod	8007*
90.	Lock Nut	8036
91.	Shell Lifter Bracket	8008
92.	Index Spring	615C
93.	Carrier Holddown	615B
94.	Index Pin	515D
95.	Shell Carrier	615*
96.	Carrier Bushing	615A 8112—(12GA Plastic only)
97.	Roll Pin	8162
98.	Base Assembly	8041*
99.	Column Bolt	8024
100.	Primer Catcher	8067
101.	Wing Nut	713D
102.	Base Mounting Bolt	313C
103.	Collet Lock Nut	8017
104.	Guide Post	525A
105.	Spring	630
106.	Spring Pad	531*
107.	Collet Closer	8018—12GA 8106—Other Gauges
108.	Shell Lifter	8004*
109.	Collet	8009*—12GA 8080—Other Gauges
110.	Chain Line w/Keeper	8032
111.	Part of Item 110	8032
112.	Part of Item 110	8032
113.	Rocker Arm	8047
114.	Pivot Pin	8022
115.	Retaining Ring	8023
116.	Roller Bolt	8079
117.	Hold Down Pin	8348
<b>HUSTLER PARTS (Not Illustrated)</b>		
	Hydraulic Unit	690
	Hose Assembly	690A
	Pump Bkt.	690B
	Foot Pedal	690C
	Hyd. Cyl.	691
	Pivot Bkt.	691A
	Roll Pin	691B
	Bolt	110A
	Jam Nut	691D
	Formed Spacer	691E
	Base	8040
	Link Strap	694
	Truss Rod R.H.	8057
	Truss Rod L.H.	8058
	Link L.H.	8071
	Link R.H.	8072
	Actuator Rod	8147

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