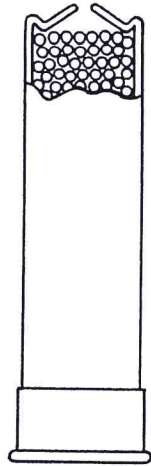
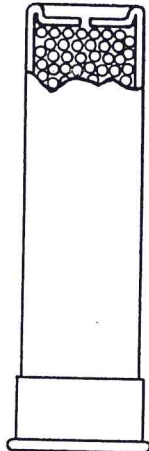


Trouble Shooting

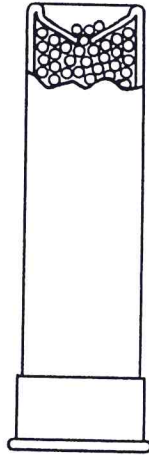
Correct and Incorrect Crimping



Plunger Set
Too High



Correct
Crimp



Plunger Set
Too Low

Maintenance

To keep your 100SL running smoothly we suggest you lubricate the following parts periodically:

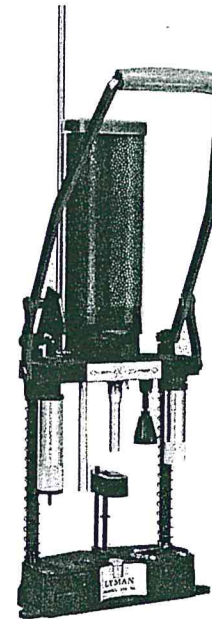
1. Wipe a film of light grease on the two posts and on the working edge of the ejector cam (above Station One).
2. Put a drop or two of light oil on the pivot points in the handle, toggle links and ejector rod.

Note: Covering the 100SL with a brown paper bag when not in use will protect it from accumulating dust and moisture.

Factory Service and Repairs

For factory service or repairs, please forward your 100SL to the Lyman Service Dept., Box 147, Middlefield, Conn. 06455. Attach a complete letter of information to the outside of the package. Please package securely when shipping to Lyman. Use sufficient cushioning material to prevent movement of press in package during shipment.

Lyman



**100SL
SHOTSHELL
PRESS**



Since
1878

**LYMAN PRODUCTS FOR SHOOTERS
MIDDLEFIELD, CONN. 06455**

A PRODUCT OF THE LEISURE GROUP

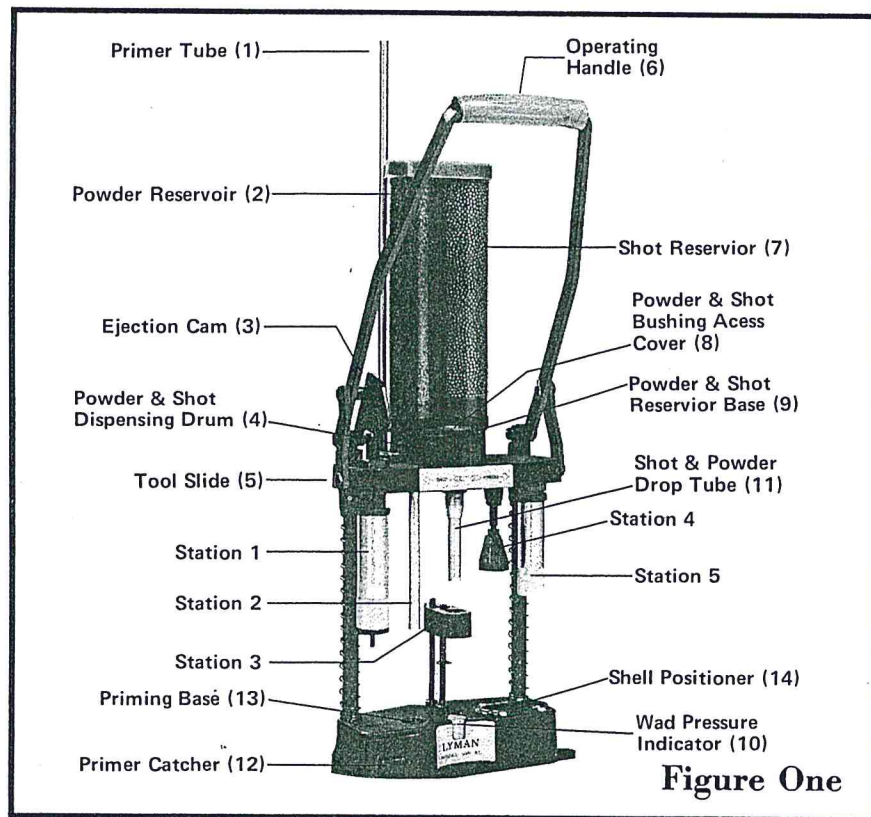


Figure One

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Please read the following instructions carefully before operating your new model 100SL.

Description

The model 100SL is a straight line shotshell reloader capable of reloading 2-3/4" or 3" plastic and paper shotshells.

When reloading shotshells on the model 100SL the casing must be processed through each of the following five stations to achieve a reloaded shell:

- Station One — Full length sizing and decapping
- Station Two — Priming
- Station Three — Powder charging, automatic primer feeding, wad insertion and shot charging
- Station Four — Crimp starting
- Station Five — Final crimping

Mounting Your Loader

Mount your 100SL on a flat bench, or table, of convenient height. Before drilling your mounting holes, be certain your press is positioned close enough to the front edge of the bench to allow full UP and DOWN movement of the operating handle. Three 3/8" bolts, with washers, are adequate to firmly anchor the press. These bolts are not supplied with your loader but may be purchased in any hardware store. Mounting bolts must be at least 3/4" longer than the top thickness of your bench or table.

Pre-loading Instructions

Before filling your powder and shot hoppers and attempting to load, it is wise to spend a few minutes in familiarizing yourself with your new loader.

The given amount of powder, or shot, dispensed by your 100SL is regulated by means of two bushings located in the powder and shot drum, located directly under the powder and shot reservoirs. Loads may be varied by simply changing these bushings for others of a larger, or smaller, size. Illustration 2 shows how to check or change these bushings.

To change a powder or shot bushing, remove the plastic snap cover (figure 1, pc 8) located on the reservoir base (pc 9). Using the eraser portion of a pencil, fingers, or wooden dowel wedge, pull out the bushing and insert replacement. After the bushing change is made, reinstall the plastic snap cover.

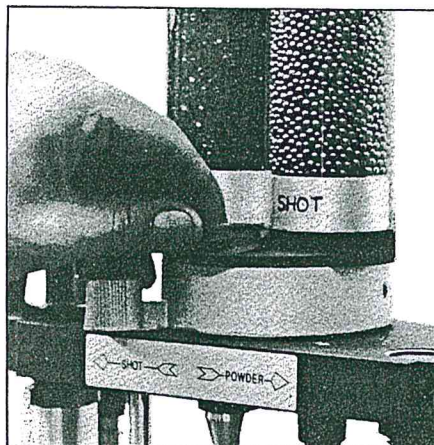


Figure Two

Selecting a Load

Before you begin to reload on your 100SL, decide upon the exact loading you wish to use in your fired case. To help you with this, we have listed a few suggested loads on the data page of this booklet (see page 13). These loads generally correspond (depending on gauge) with the standard bushings that are factory assembled in your loader. If you wish to make use of these loads, use the components (cases, primers, wads and powder) listed. **Never alter or substitute components** for this can drastically alter the effectiveness and safety of the load. A wide variety of other loads can also be loaded on your new 100SL. For data on these loads, plus a wealth of information on shotshell reloading, we recommend you purchase the Lyman Shotshell Reloading Handbook.

Check Your Components

1. Make certain you have the exact powder your reloading data calls for. **Check your powder bushing to assure it is correct for the powder and load.**
2. Be sure you have the proper case, primer, and wad column.
3. Be sure you have the proper shot bushing for the shot charge weight.
4. Check your cases carefully. Be certain they are dry. They must be of the exact brand and style called for in your data. Discard cases which are bent or badly deformed. Wipe off the selected cases with a soft dry cloth and be certain the base wad is intact in each.

Operating Instructions For Your 100SL

Your 100SL contains five basic loading stations. The following instructions relate the required operations to each of these five stations.

Until you become thoroughly familiar with the functions of each station, do not try to obtain speed. Loading speed will come naturally as you develop a rhythm to your movements. Perform the operations slowly and strive for a consistent uniformity of motion. Now, if all your components have been checked out, let's fill up the powder and shot reservoirs and start to load.

Station 1 Full length sizing and decapping

The model 100SL is preset at the factory to full length resize and eject the majority of hi or low brass cases currently manufactured.

Select a fired shotshell casing and place it in position on Station 1. Lower the handle for its full stroke. This operation will decap and full length resize the shell. Raising the handle will engage the cam (pc 3a) with the ejecting rod (pc 3b). Continued upstroke will cause the cam to eject the resized shell from the resizing die. A light application of Lyman case lube to brass bases will ease difficult case ejection.

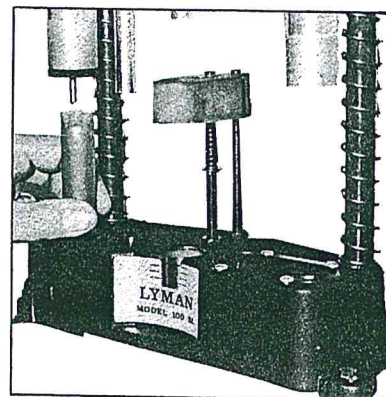
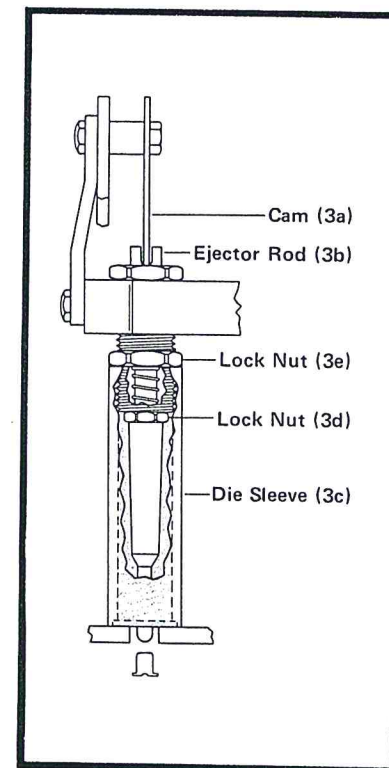


Figure Three



Station 2 Priming

Note: To load the first shell, select a new primer of the correct size and place it (FLANGE DOWN) into the priming base as shown in illustration 4. Then load the primer tube with primers (FLANGE DOWN) to insure automatic primer dropping for the ensuing reloading sequences. Place the head of your shotshell (over the primer) in the circular recess of the priming base. This base is adaptable to the different diameter shotshell heads of the 12 and 20 gauge shell.

Pull your Press Handle down carefully until you feel the primer seat. Use care and do not crush the primer. Your model 100SL press has been designed to place a primer into the reloading position during each complete reloading sequence. This is done as follows:

Fill the primer tube (figure 1, pc 1) with primers, insert each primer base down. The primer carrier (integral with the shot and powder drum) will transport a new primer to the primer drop tube. Each time powder is charged the new primer will drop into position in the priming base ready to prime the next casing. Always make sure a primer is available in the station before dropping powder. This process will continue automatically as long as primers remain in the primer tube.

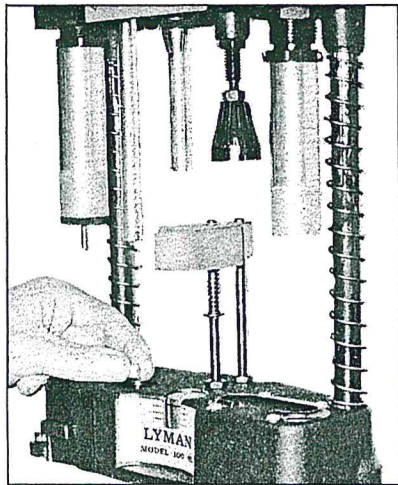
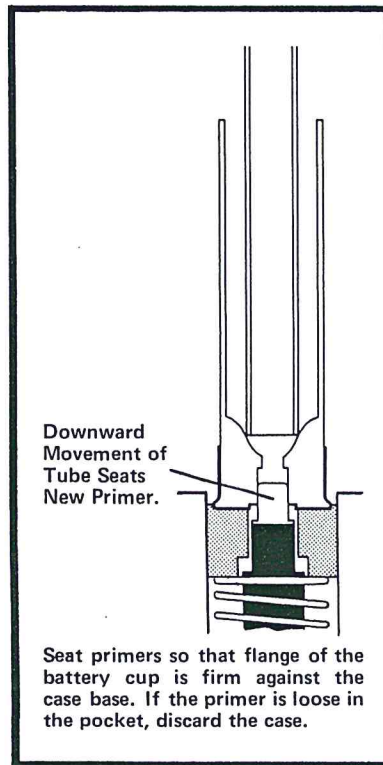


Figure Four



Station 3 Powder and Shot Charging

Note: Powder and shot are to be charged only with the handle in the down position.

Powder charging, wad insertion and shot charging are all accomplished while the casing is in the Station 3 position, illustration 5.

Place the casing under the wad guide (pc 5a) and lower the handle full stroke and keep it there. With the handle held down, rotate the powder and shot drum handle to the right. A new primer will be transported into position and powder will be dropped into the casing. **Do not return the drum handle to the left side.**

Raise the Press Handle and insert a wad into position under the powder and shot drop tube (pc 5b). Now lower the handle and press the wad into the casing. When the Press Handle is in the full down position, rotate the drum handle to the left to charge the casing with shot. **Do not return drum handle to the right!**

Your casing is now fully charged and ready to be moved to Station 4, for crimp starting.

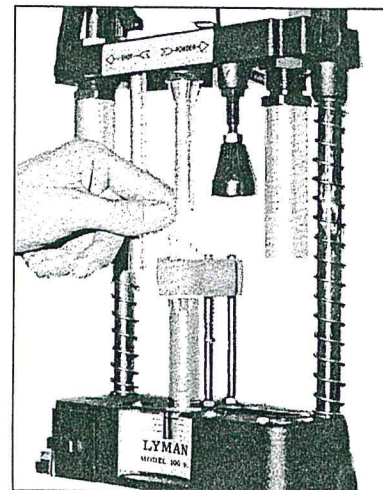
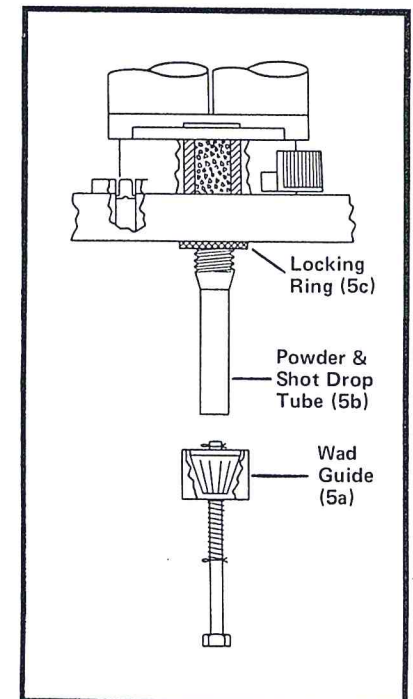


Figure Five



Station 4 Crimp Starting

Crimp starting begins the folding process of the case allowing the final crimp to be more uniform and precise. Insert the casing into the shell guide, slide it to the left until it stops at Station 4. Lower the press handle full stroke to achieve crimp start. Raise the handle and slide the shell right to Station 5. Your 100SL is set at the factory for eight-fold crimps on Winchester AA shells.

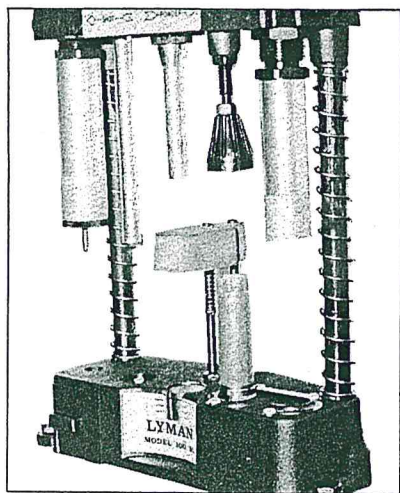
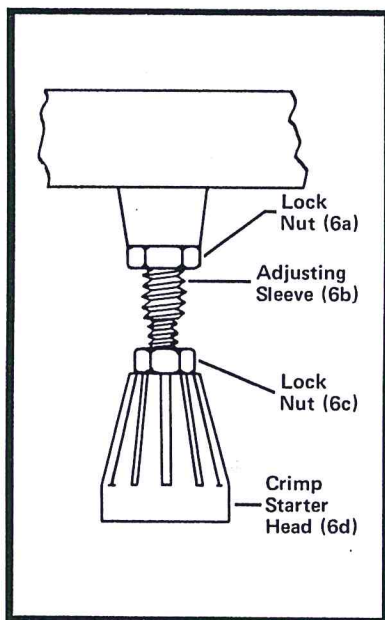


Figure Six



Station 5 Final Crimp

The model 100SL is preset at the factory to give a uniform tight crimp on 2-3/4" shells.

Quickly place the shell into position at Station 5. Too long a pause between 4 and 5 may allow the started crimp to unfold since the plastic shell's "memory" will cause the case mouth to open—a tendency common to all plastic shotshells. Lower the handle full stroke and raise again to uppermost position. The fully crimped and completed shell is ready for removal and use.

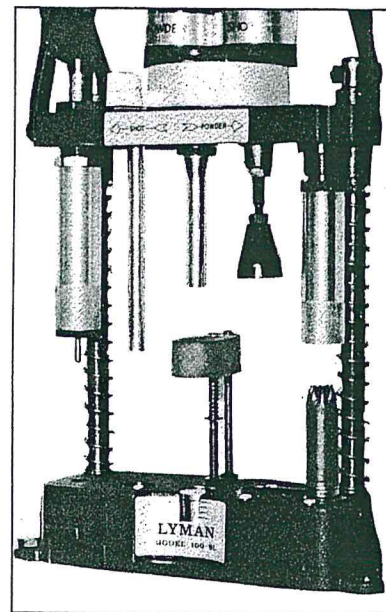
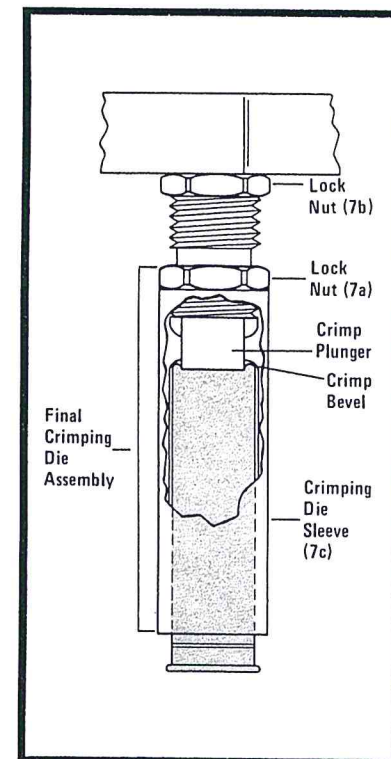


Figure Seven



Powder and Shot Reservoir Dumping

Important! Please read carefully!

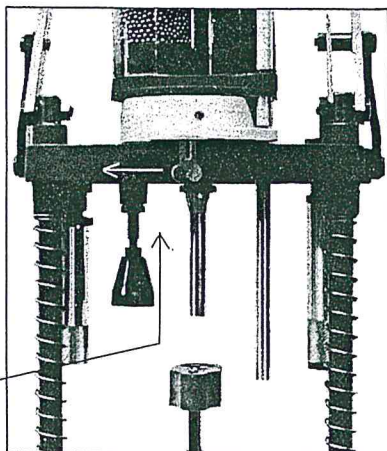
The model 100SL has a quick dump valve to allow rapid changing of powder or shot. The valve operating handle is located at the rear of the press on the tool slide figure 8. Proceed as follows to empty either the shot or powder reservoirs.

1. Place an empty casing on Station 3 to catch powder or shot charges when the drum is rotated to the dump position for either powder or shot.

Shot Dumping:

Move the powder and shot drum control handle to the right (as if you were charging powder). Place a container under the tool slide, directly below the shot reservoir (you will note a dump hole in the slide at this position). Gently lift the lock handle of the dump valve and rotate the valve to the right (when facing the front of the press). Shot will now empty from the reservoir.

Shot Dump Hole

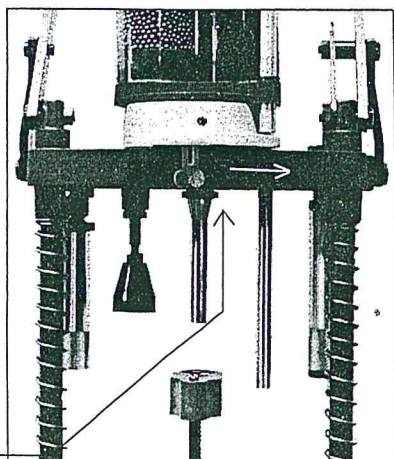


Powder Dumping:

Don't forget to put a casing under Station 3 in case a charge of shot remains in the bushings. Move the powder and shot drum control handle to the left (as if you were charging shot). Place a container under the tool slide behind Station 2. (You will note a dump hole in the slide at this position).

Gently lift the lock handle of the dump valve and rotate the valve to the full left hand position. Powder will now empty from the reservoir.

Powder Dump Hole



Note: Before filling reservoirs insure that the dump valve is locked into its center position.

Adjusting The Model 100SL

The model 100SL is factory preset to reload most commonly encountered 2-3/4" cases without adjustment. Occasionally you may encounter high internal base wads or 3" cases which require special adjustment.

High Internal Base Wads

High internal base wads of some cases engage the ejection rod prematurely and prevent the press from traveling its full downward stroke. To adjust for such cases, loosen lock nut pc 3e and remove the die sleeve pc 3c fig. 3, unlock the lock nut pc 3d on the decapping rod, and raise the decapping rod until the desired travel is achieved. Reassemble the press and continue to reload.

Wad Pressure

To adjust for wad pressure, simply unlock the locking ring pc 5c, fig. 5 on the shot drop tube and screw the tube UP or DOWN. Lengthen the tube for more pressure. Shorten the tube for less pressure.

Your pressure reading is shown on the pressure gauge pc 10. Each scribed line pushed BELOW THE NOTCH indicates 20 lbs. of pressure on the wad. Any adjustments from 20 to 100 lbs. may be reached. After your required adjustment is made, turn up tight on the locking nut.

Crimp Starting

Your 100SL is factory preset for most cases. If you desire more or less fold during crimp starting, loosen lock nut pc 6a, fig. 6. Rotate the adjusting sleeve pc 6b upward for less crimp start or downward for more crimp start fold. Relock the lock nut when the desired fold is achieved.

To change the Crimp Starter from the factory set eight fold head to the six fold head hold lock nut 6c above the Crimp Starter head pc 6d with a wrench and spin off the starter head. Substitute the six fold head and assemble by reversing the foregoing.

Final Crimping Adjustment for 2-3/4" or 3" Shells

Refer to figure 7.

The plunger adjusts the degree of depth of the final crimp. The crimp bevel is used to adjust the degree of bevel applied to the case mouth during crimping. To adjust for crimp depth loosen lock nut 7a and move crimping plunger by turning right or left — up or down to obtain desired crimp depth. Tighten lock nut 7a once this depth is determined.

To increase or decrease the desired degree of bevel for the case mouth loosen lock nut 7a and rotate the aluminum crimping die sleeve 7c up for less bevel or down for more bevel. Caution: Rotate the crimping die sleeve with the Press Handle in the down position. Stop rotating when the sleeve is slightly above the shell positioner (pc 14, fig. 1).

Press Set-Up for 3" Shells

Station 1: Normally no adjustment is required to full length resize 3" cases. Occasionally you may find a high brass case which does not fully eject from the die. If such a condition exists, adjust your press for the specific cases on hand by:

1. Remove the die sleeve.
2. Loosen the lock nut on the decapping/ejecting rod. Unscrew the decapping rod 2 to 4 turns to lengthen the ejection stroke.
3. Reassemble and continue loading.

Station 2: No change.

Station 3: No change. When loading 3" shells, tuck the case mouth under and into the recess in the wad guide and load in a normal manner.

Station 4: Loosen the lock nut pc 6a and screw up the adjusting sleeve approximately 1/4". When the desired crimp start is achieved relock the lock nut.

Station 5: The relationship between the plunger and crimping bevel on the die should remain constant for most shells. To adjust for crimping 3" shells, loosen top lock nut pc 7b and raise the entire crimping die assembly 1/4" and relock the top crimping die lock nut.

12 GAUGE 2-3/4" TARGET LOADS — 1-1/8 Oz. SHOT (H9 and HG bushing)

POWDER	PRIMER	WADS*	VELOCITY	PRESSURE	
Hi-Skor 700X 18.5 grs.	Win. #209	One Winchester AA Wad #WAA12	1210 F.P.S.	10,300 L.U.P.	Use with Winchester/Western AA plastic target cases only. (FOLD CRIMP)
Hi-Skor 700X 18.5 grs.	Rem. 57*	One Remington Power Piston #W29924	1195 F.P.S.	9,600 L.U.P.	Use with Remington/Peters All American plastic target cases only. (FOLD CRIMP)
Hi-Skor 700X 18.5 grs.	Federal #209	One Federal Pellet Protector 7/8" Size	1200 F.P.S.	9,600 L.U.P.	Use with Federal new plastic target case only. (FOLD CRIMP)
473AA 23.5 grs.	CC1 #109	One Winchester Wad #WAA12	1200 F.P.S.	8,900 L.U.P.	Use with Winchester/Western Compression formed cases only.
473AA 28.0 grs.	W-W #209	One Winchester Wad #WAA12	1330 F.P.S.	10,100 L.U.P.	(H12* and HG bushing) *not supplied with std. loader Winchester/Western Compression formed cases only.

20 GAUGE 2-3/4" TARGET LOADS — 1 Oz. SHOT (H5 and HF bushing)

POWDER	PRIMER	WADS*	VELOCITY	PRESSURE	
W-W 540 23.0 grs.	W-W #209	One Remington Wad #W29944	1165 F.P.S.	10,000 L.U.P.	(H5 and HF* bushing) *not supplied with std. loader Winchester/Western Compression cases only.

20 GAUGE 2-3/4" TARGET LOAD — 7/8 Oz. SHOT (H5 and HD bushing)

POWDER	PRIMER	WADS*	VELOCITY	PRESSURE	
AL-5 18.0 grs.	Rem. 57*	One Remington Power Piston #W23678	1130 F.P.S.	9,200 L.U.P.	Use with Remington/Peters plastic target cases only. (FOLD CRIMP)
AL-5 18.0 grs.	Alcan 220 Max-Fire	One Remington Wad #W23678	1130 F.P.S.	9,200 L.U.P.	Remington/Peters plastic target cases only.
SR 4756 19.5 grs.	Rem. 97*	One Winchester AA Wad #WAA20	1140 F.P.S.	9,200 L.U.P.	(H7* and HD bushing) *not supplied with std. loader Use with Winchester/Western AA plastic target cases only. (FOLD CRIMP)

NOTE — DO NOT ALTER OR SUBSTITUTE THE ABOVE COMPONENTS. FOR ADDITIONAL LOADS, OR OTHER COMPONENTS SEE LYMAN SHOTSHELL HANDBOOK.

*WAD PRESSURE — USE ONLY ENOUGH WAD PRESSURE TO SEAT THE WADS FIRMLY ON THE POWDER.

POWDER & SHOT BUSHINGS

12 gauge H9 and HG

20 gauge H5 and HD

100SL Shotshell Reloading and Conversion Kits are furnished complete with a set of shot and powder bushings. The listing H9 and HG shows those bushings which are furnished as standard with reloaders, and Conversion Kits.

A complete list of all available bushings is also shown below. Those who wish to vary their loads can purchase extra sets of these bushings. Loading data may be found in the Lyman Shotshell Handbook.

POWDER BUSHINGS (UNITS SHOWN IN GRAINS)

ALCAN					DUPONT					HERCULES						HODGDON				WINCHESTER				
Bushing No.	AL-5	AL-7	AL-8	AL-120	HI-SKOR 700X	PB	SR 7625	SR 4756	IMR 4227	RED DOT	GREEN DOT	HERCO	UNIQUE	BLUE DOT	2400	TOP MARK	HS5	HS6	GRAY B	296	452AA	473AA	540	571
H1	12.5	12.5	11.5	10.0	9.0	9.0	10.0	10.5	15.0	8.0	8.0	10.0	11.5	12.5	14.5	14.0	16.0	15.5	9.5	17.0	9.5	11.5	16.5	16.5
H2	13.5	13.5	12.0	10.5	9.5	9.5	11.0	11.0	16.0	8.5	8.5	11.0	12.0	13.5	15.5	15.0	17.0	16.5	10.0	18.0	10.0	12.0	17.5	17.5
H3	14.5	14.5	13.0	11.0	10.0	10.0	11.5	12.0	17.0	9.5	9.5	11.5	13.0	14.5	17.0	16.0	18.5	17.5	11.0	19.5	10.5	13.0	18.5	19.0
H4	15.5	15.5	14.0	12.0	11.0	11.0	12.5	13.0	18.5	10.0	10.0	12.5	14.0	15.5	18.0	17.5	20.0	19.0	12.0	21.0	11.5	14.0	20.0	20.5
H5	18.0	18.0	16.0	14.0	12.5	12.5	14.5	15.0	21.0	11.5	11.5	14.5	16.5	18.0	21.0	20.0	23.0	21.5	13.5	24.5	13.0	16.0	23.0	23.5
H6	20.5	20.5	18.5	16.0	14.5	14.5	16.5	17.5	24.5	13.5	13.5	16.5	19.0	20.5	24.0	23.0	26.5	25.0	16.0	28.0	15.5	18.5	26.5	27.5
H7	23.5	23.5	21.0	18.5	16.5	16.5	19.0	19.5	27.5	15.5	15.5	19.0	21.5	23.5	27.0	26.0	30.0	28.5	18.0		17.5	21.0	30.5	31.0
H8	25.5	25.5	23.0	20.0	18.0	18.0	20.5	21.5	30.0	16.5	16.5	20.5	23.5	25.5	29.5	28.5	32.5	31.0	19.5		19.0	23.0	33.0	33.5
H9	26.0	26.0	23.5	20.5	18.5	18.5	21.0	22.0	31.0	17.0	17.0	21.0	24.0	26.0	30.5	29.0	33.5	32.0	20.0		19.5	23.5	34.0	34.5
H10	26.5	26.5	24.0	21.0	19.0	19.0	21.5	22.5	31.5	17.5	17.5	21.5	24.5	26.5	31.0	30.0	34.5	32.5	20.5		20.0	24.0	34.5	35.5
H11	28.5	28.5	25.5	22.0	20.0	20.0	23.0	24.0	33.5	18.5	18.5	23.0	26.0	28.5	33.5	31.5	36.5	34.5	22.0		21.0	26.0	37.0	38.0
H11A	30.0	30.0	27.5	23.5	21.0	21.5	24.5	25.5	35.5	19.5	19.5	24.5	27.5	30.0	35.0	33.5	39.0	36.5	23.0		22.5	27.5	39.0	40.0
H12	31.0	31.0	28.0	24.5	22.0	22.0	25.5	26.5	37.0	20.5	20.5	25.5	28.5	31.0	36.5	35.0	40.0	38.0	24.0		23.0	28.0	40.5	41.5
H13	33.5	33.5	30.0	26.0	23.5	23.5	27.0	28.0	39.5	21.5	21.5	27.0	30.5	33.5	39.0	37.0	43.0	40.5	25.5		25.0	30.0	43.0	44.5
H14	34.0	34.0	31.0	26.5	24.0	24.0	27.5	28.5	40.5	22.0	22.0	27.5	31.5	34.0	40.0	38.0	44.0	41.5	26.0		25.5	31.0	44.0	45.5
H15	35.0	35.0	31.5	27.0	24.5	24.5	28.5	29.5	41.0	22.5	22.5	28.5	32.0	34.5	40.5	38.5	45.0	42.5	26.5		26.0	31.5	45.0	46.0
H16	35.5	35.5	32.0	28.0	25.0	25.0	29.0	30.0	42.0	23.0	23.0	29.0	32.5	36.5	41.5	39.5	45.5	43.0	27.0		26.5	32.0	46.0	47.0
H17	36.5	36.5	33.0	28.5	25.5	26.0	29.5	30.5	43.0	23.5	23.5	29.5	33.5	37.0	42.5	40.5	47.0	44.5	28.0		27.0	33.0	47.0	48.5
H18	38.0	38.0	34.5	30.0	26.5	27.0	31.0	32.0	45.0	25.0	25.0	31.0	35.0	38.0	44.5	42.5	49.0	46.0	29.0		28.0	34.5	49.0	50.5
H19	39.5	39.5	36.0	31.0	28.0	28.0	32.0	33.5	47.0	26.0	26.0	32.0	36.0	39.5	46.0	44.0	51.0	48.0	30.5		29.5	36.0	51.0	52.5
H20	42.0	42.0	38.0	33.0	29.5	30.0	34.5	35.5	50.0	27.5	27.5	34.5	38.5	42.0	49.5	47.0	54.5	51.5	32.5		31.5	38.0	54.5	56.0
H21	43.0	43.0	39.0	33.5	30.5	30.5	35.0	36.5	51.0	28.5	28.5	35.0	39.5	43.5	50.5	48.0	55.5	52.5	33.0		32.0	39.0	56.0	57.5
H22	46.0	46.0	41.5	36.0	32.5	32.5	37.5	39.0	54.5	30.0	30.0	37.5	42.0	46.5	54.0	51.5	59.5	56.0	35.5		34.5	41.5	59.5	61.5
H23	47.0	47.0	42.5	36.5	33.0	33.5	38.0	39.5	55.5	30.5	30.5	38.0	43.0	47.0	55.0	52.5	60.5	57.0	36.0		35.0	42.5	60.5	62.5
H24	48.5	48.5	44.0	38.0	34.0	34.5	39.5	41.0	57.5	31.5	31.5	39.0	44.5	48.5	57.0	54.0	62.5	59.0	37.0		36.0	44.0	63.0	64.5
H25	54.0	54.0	48.5	42.0	38.0	38.0	44.0	45.5	63.5	35.0	35.0	43.5	49.5	54.5	63.0	60.0	69.5	65.5	41.0		40.0	48.5	69.5	71.5
H26	58.5	58.5	53.0	45.5	41.0	41.5	47.5	49.0	69.0	38.0	38.0	47.0	53.5	59.0	68.5	65.0	75.5	71.5	45.0		43.5	53.0	75.5	77.5

SHOT BUSHINGS

HA — 1/2 oz.
HB — 5/8 oz.
HC — 3/4 oz.
HD — 7/8 oz.
HG — 1-1/8 oz.
HH — 1-1/4 oz.
HJ — 1-3/8 oz.
HK — 1-1/2 oz.
HL — 1-5/8 oz.
HM — 1-3/4 oz.
HO — 1-7/8 oz.

EXTRA POWDER & SHOT BUSHINGS



When ordering extra powder or shot bushings, always specify the exact bushing number you desire. Each bushing is clearly marked to avoid confusion.

price \$1.50 each