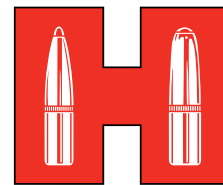




OWNER'S MANUAL

# LOCK-N-LOAD<sup>®</sup> AP<sup>™</sup> PRESS

Instructional and troubleshooting videos for this product are available on the Hornady website.



**Hornady**<sup>®</sup>  
*Accurate. Deadly. Dependable.*

Item No. 095100

# Table of Contents

## ASSEMBLY

**AP Press** ..... Page 3  
**Powder Measure** ..... Page 10

## OPERATIONS

## CHANGE-OVERS

Refer to this section when changing calibers on the Lock-N-Load® AP™ Press

**AP Press** ..... Page 19  
 Shell Plate  
 Die Set  
 Primer Components  
*Primer Slide*  
*Primer Tube*  
*Primer Punch*

**Powder Measure** ..... Page 21  
 Changing Powder  
 Metering Insert/Rotor  
 Powder Sleeve/PTX Expander

## TROUBLESHOOTING

**Lock-N-Load® AP Press** ..... Page 26  
**Shell Plates** ..... Page 26

## APPENDIX

**APPENDIX A**  
 Dies & Reloading Essentials Chart ..... Page 27

**APPENDIX B**  
 Lock-N-Load® AP Press Mounting Template ..... Page 31



# Lock-N-Load® AP Reloading Press

## OVERVIEW

Your new Lock-N-Load® Auto Progressive (AP) Reloading Press has been packaged to insure minimal vibration during transportation.

Remove all the parts from the packing box (see page 2) and spread them out over a large flat surface. **Refer to the Lock-N-Load® AP™ Reloading Press parts list and exploded view on the next two pages** and check to make sure all necessary parts are identified.

The manual provides step-by-step instructions and suggestions that make set-up and operation easy and understandable.

*If at any time during operation you feel like you are forcing the press, stop and identify the problem. Do not force anything, or damage could occur. Powders and primers are explosive if handled carelessly! Always work slowly and carefully without distractions and wear eye protection. Try to avoid touching primers with oily fingers. The oil on your fingers may contaminate the primers and cause them to misfire.*

### Tools needed for assembly and set-up:

- 7/16" End Wrench
- (2) 1/2" End Wrenches
- 15/16" End Wrench
- 3/32" Hex Wrench (included)
- 1/8" Hex Wrench (included)
- 5/32" Hex Wrench
- Needle Nose Pliers
- Electric Drill
- 5/16" Hex Wrench

### ***Hand loading is very safe, but before reloading any case please read the following warnings.***

- Primers may explode if subjected to impact or heat.
- Keep away from the opening end of the Primer Tube at all times.
- Variations may occur with different brands and condition of cartridge cases, which can cause inconsistent primer and bullet seating. Sort and inspect all of your cases before reloading.
- Verify your powder charges at frequent intervals to insure consistency.
- Careless or improper hand loading techniques can result in serious personal injury. Make sure there are no distractions while you are reloading.
- Before operating this press, be sure you have read and understand all the instructions contained in this manual, and that you understand the principals of hand loading.



# Lock-N-Load® Auto Progressive (AP) Reloading Press

## PARTS LIST

Item No.	Production Part No.	Qty.	Description
1	398318	1	Support Primer Tube
2	398356	1	Tube Primer Pickup, Large
3	398355	1	Tube Primer Pickup, Small
4	398358	1	Tube Primer, Large
5	398357	1	Tube Primer, Small
6	398322	1	Housing Tube Primer
7	392220	1	Screw, BHCS 1/4-20 X 1/2
8	399686	1	Lock-N-Load® AP Bracket
9	392342	1	SHCS SS 3/8-16 X 3/4
10	398359	1	Primer Follower
11	392338	1	Screw, SHCS 10-24 X 1/2
12	–		Shell Plate (Sold Separately)
13	392455	1	Bracket Box Cartridge
14	398319A	1	Housing Body Primer Tube
15	392218	1	Primer Slide, Large Assembly
15	392219	1	Primer Slide, Small Assembly
16	392336	1	Spring Primer Slide
17	392363	1	Spring Case Retainer
18	398695	1	AP Breakaway Cam Wire
19	398698	1	Nut, 8-32
20	190216	1	Frame
21	392368	6	Clip C, C-50
22	480039	1	Box Catcher
23	392408	2	Lock-N-Load® AP™ Link
24	398309T	1	Sub Plate
26	398505	1	Primer Seater Punch, Small
26	398507	1	Primer Seater Punch, Large
27	392467	1	Counter Balance Spring

Item No.	Production Part No.	Qty.	Description
28	392345	1	3/8 Flat Washer SS
29	392355	1	Drive Hub
30	392356	1	Drive Shaft
31	392231	2	Screw, BHSCS 8-32 X 3/8
32	392344A	2	Pawl
33	392423	2	Spring Pawl
34	392306	2	Dowel Pin 1/8 X 1/2
35	392221	2	Screw, FHCS 1/4-28 X 3/8
36	290029	1	Spent Primer Tube
37	398163	1	Ram Assembly
38	398422	3	Grease Zerk™
39	392343	1	Toggle
40	392340	1	Pin Yoke
41	392424	5	Spring Washer
42	392417	2	Pin Link Toggle
43	390027	1	Nut Jam, 5/8-18
44	390657	1	Handle
45	480003	1	Knob
47	392358A	1	Index Wheel
48	390081	2	Clip E 1/2
49	392302	5	Lock-N-Load® Bushing, Male
50	392303	5	Lock-N-Load® Bushing O-Ring
51	392365	1	Spent Primer Tube, Plastic
52	392301	5	Lock-N-Load® Bushing, Female
54	398697	1	Breakaway Cam Plunger
55	398696	1	Breakaway Cam Wire Spring
–	9987	1	DVD

## No-Risk Lifetime Warranty

All Hornady reloading tools and accessories are warranted against material defects and workmanship for the life of the product. Simply stated – if it breaks, we'll repair it or replace it at no charge (at Hornady Manufacturing Company's option).

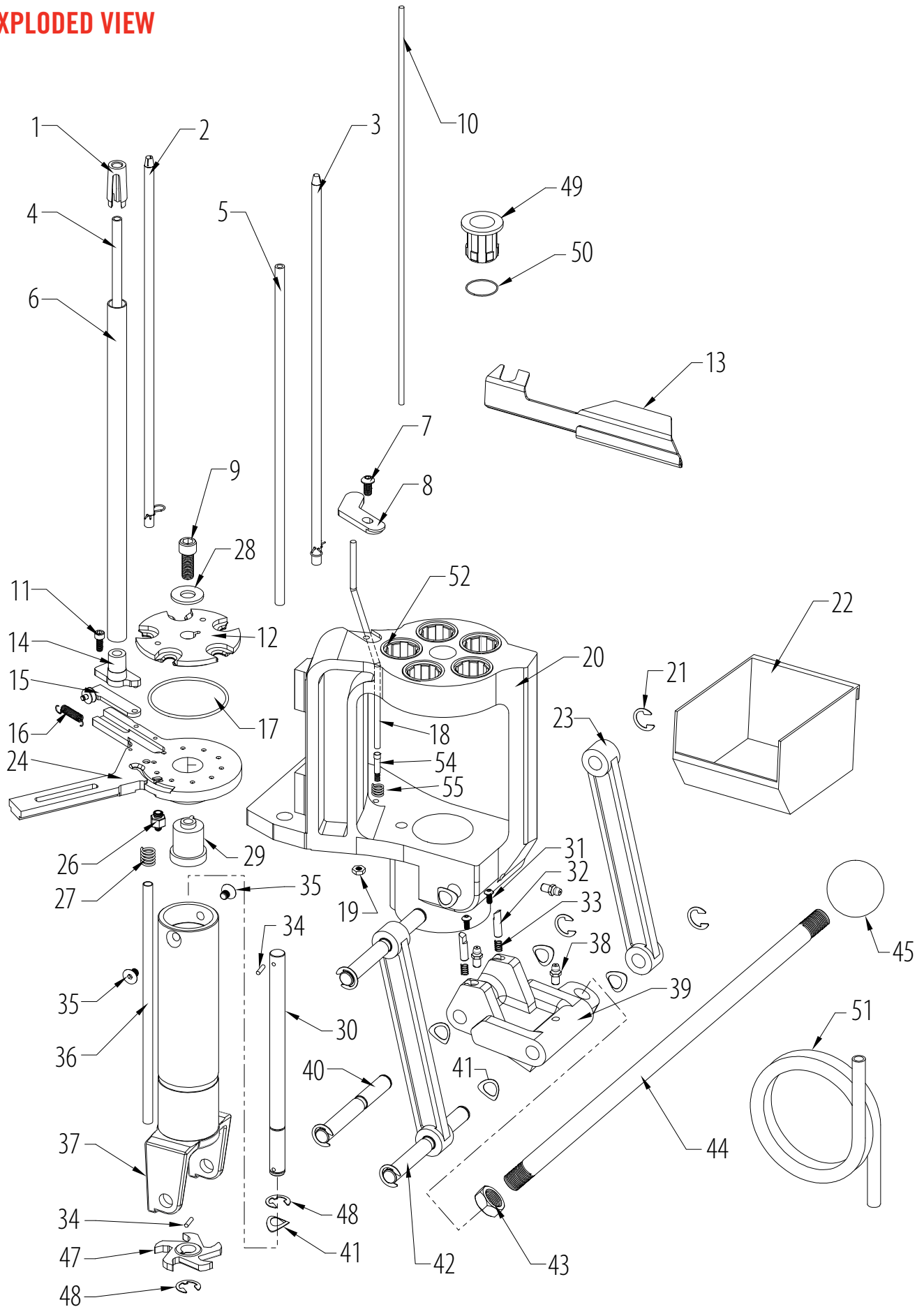
Hornady reloading tools and accessories are warranted against defective materials and workmanship only. This warranty is void if the product (1) has been damaged by accident or unreasonable use, neglect, improper service or other causes not arising out of defects in material or workmanship; or (2) has been altered or repairs have been made or attempted by other than authorized factory personnel; (3) is used commercially; or (4) has been altered or defaced in any way.

This warranty supersedes all other warranties for Hornady products either written or oral. No other warranty is expressed or implied.



# Lock-N-Load® AP Reloading Press

## EXPLODED VIEW



ASSEMBLY

## Mounting the Lock-N-Load® Auto Progressive

- 1 Your work area should be well lit and have plenty of room for your reloading accessories. Your Hornady Lock-N-Load® AP™ should be mounted securely 2 1/4" from the edge of a solid level bench and 3.75" apart and at least 16" from the nearest wall.

**Use the template found on the last page and a hole punch to help locate each hole.** (Check for obstructions on or below the bench before you drill any holes.)



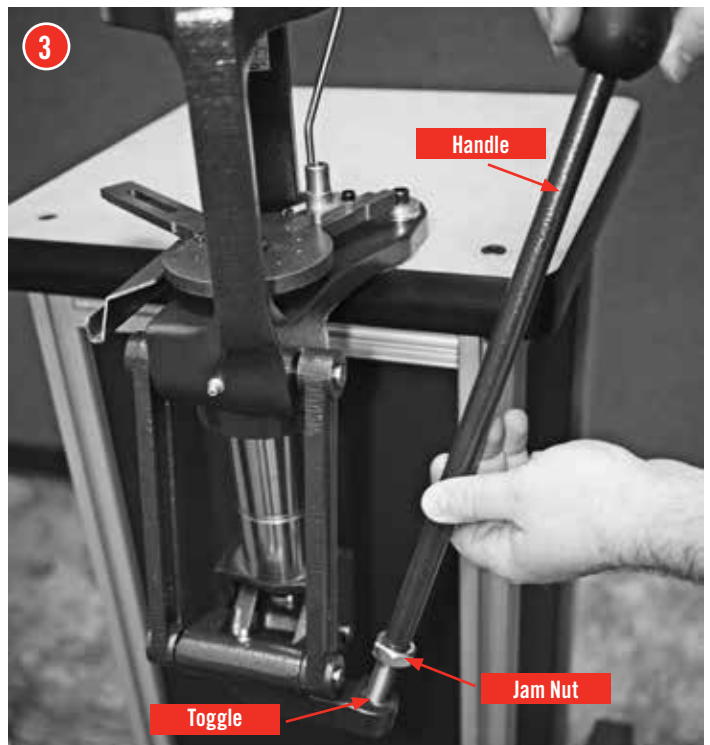
- 2 Place cartridge catcher bracket under press, line up holes in press with holes in bracket. Insert and firmly tighten both bolts.

Mount the press using two 5/16" bolts that are long enough to secure the press to the bench with plenty of clearance for the nuts. (Due to variation of benches, these bolts are not provided.) We also recommend using 5/16" flat washers top and bottom, in addition to lock washers on the bottom side.

Insert and firmly tighten both bolts.



- 3 Thread the press Handle into the Toggle at the bottom of the press and tighten the Jam Nut using a 15/16" wrench.



## Determine which shell plate is required for your application

Refer to Appendix A to determine the correct shellplate.

### 4 Installing the Shell Plate

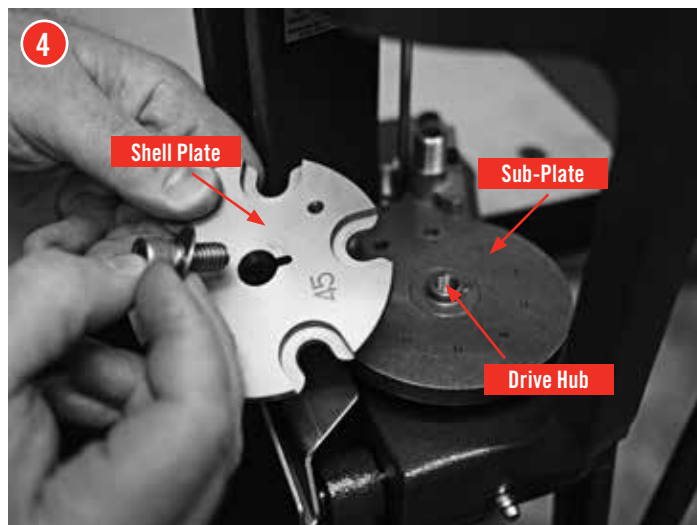
Put a small amount of general-purpose grease on the Shell Plate Ball Detents located on bottom side of Shell Plate, and on the top surface of the Sub-Plate.

Align the Shell Plate (12) with the keyed Drive Hub.

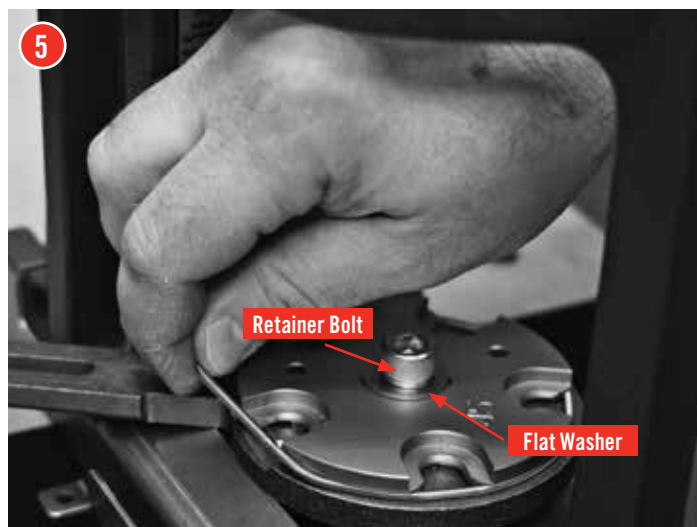
Place the 3/8" Shell Plate Retainer Bolt (9) thru the 3/8" Flat Washer (28), (large end up) and thread the bolt into the Drive Hub (29).

Gently tighten the bolt using a 5/16" Allen wrench.

**DO NOT** over-tighten bolt, as It may damage Drive Hub or Pawls.



### 5 Stretch the Case Retainer Spring (17) around the Shell Plate (12).



### 6 While cycling the Press, push the Case Retainer Spring into the relieved area on the Sub-Plate.

You will have to cycle the press a couple of stations to achieve these results.



### Removing the Shell Plate

Use a 5/16" Allen wrench to remove the Bolt and shell plate. If the bolt is over tightened, use the Hornady Lock-N-Load® Deluxe Die Wrench (*Item No. 396495 sold separately*) to hold the shell plate while loosening the Bolt. This will prevent damage to the Drive Hub and/or Pawls.



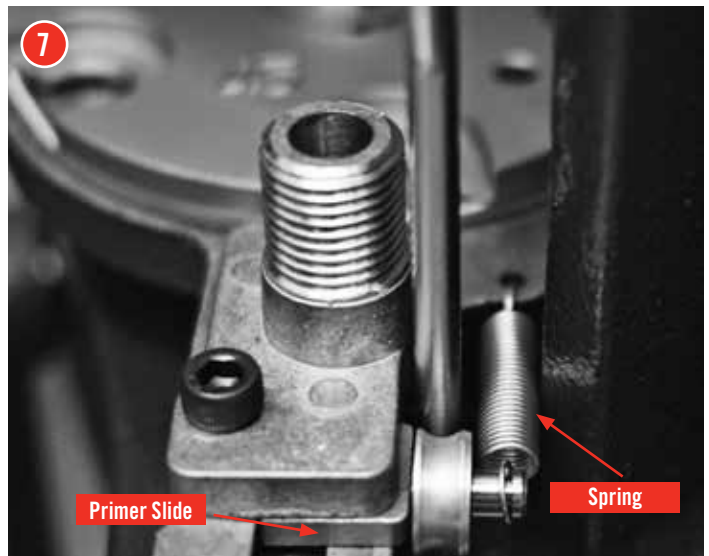
## Automatic Primer Feed Assembly

### 7 Installing the Primer Slide, Large or Small

Lower the handle.

Place the Primer Slide (15) flat side up in the groove on the Sub-Plate (24) and slide forward. *The bump on the bottom side of the slide is the travel stop as well as an alignment guide while the slide is in the retracted position.*

Attach the Spring to the Sub-Plate with the open end up (you may need to use needle nose pliers). Attach the other end of the Spring to the pin on the Primer Slide.

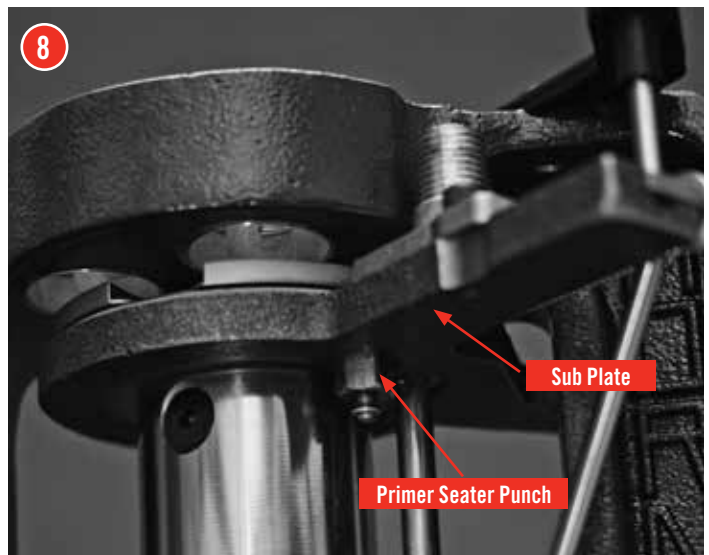


### 8 Installing the Primer Punch Assembly, Large or Small

Raise the Ram to the top of the stroke.

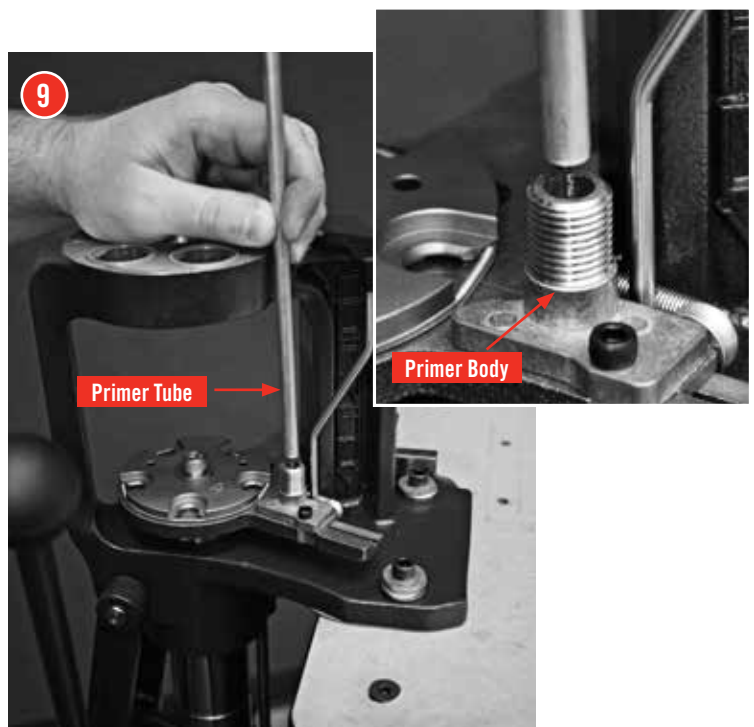
Screw the Primer Seater Punch (26) into the Sub-Plate from the bottom side.

Tighten the Primer Seater Punch assembly until it is snug using a wrench. (Do not over-tighten the Primer Punch).



### 9 Installing the Primer Tubes

Place the tube of your choice (large or small primers) in the center hole of the Primer Body with the shoulder section of the tube facing down. Make sure the tube is fully seated in the Primer Body (14).

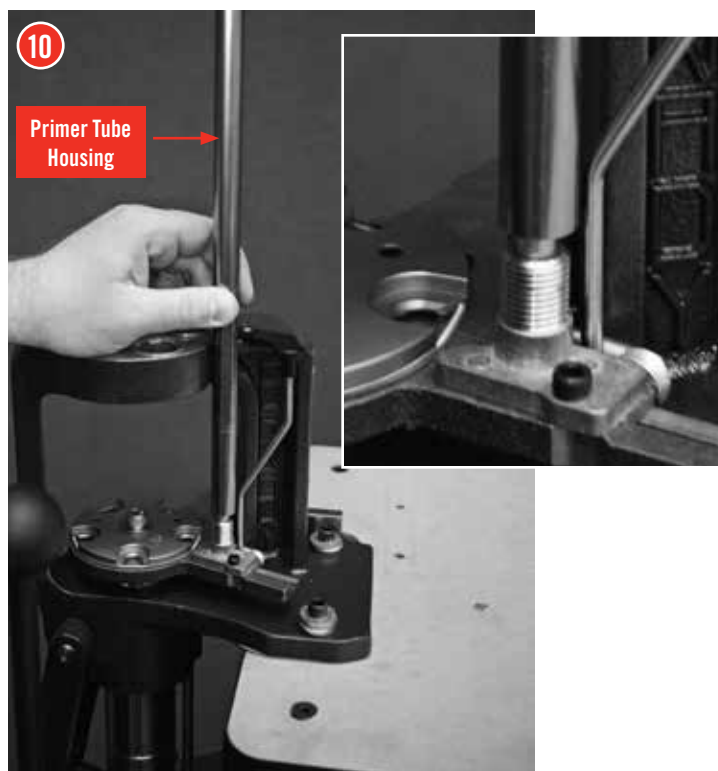




## 10 Installing the Primer Tube Housing

Slip the threaded end of the Primer Tube Housing (6) over the Primer tube and onto the Primer Body.

Screw the Primer Tube Housing on to the Primer Body (14) clockwise: tighten very lightly. Lower the handle.



## 11 Primer Tube Support installation

Place the Primer Tube Support (1) over the Primer Feed Tube and slip the three tapered “fingers” inside the Primer Tube Housing. This will create a recess that allows the Primer Filler Tube to properly align with the Primer Feed tube during refillings.



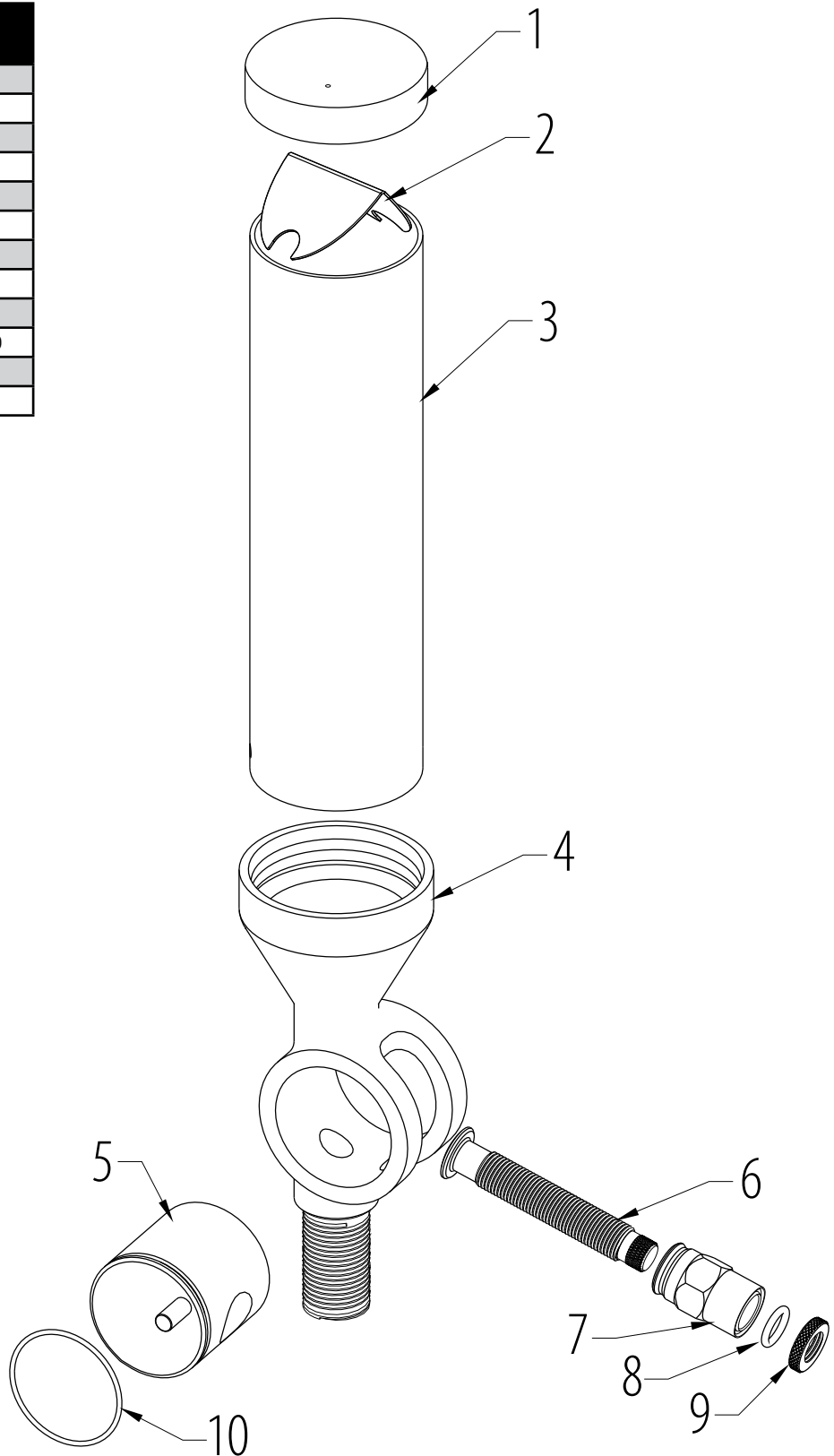
**Assembly of the Lock-N-Load® AP Press is now complete. Please proceed to the Powder Measure assembly section on the next page.**

# Lock-N-Load® Powder Measure

## PARTS LIST

Item No.	Production Part Number	Qty.	Description
1	170405	1	HOPPER CAP
2	480027	1	BAFFLE
3	398520	1	HOPPER
4	392740	1	BODY
5	392741	1	ROTOR
6	392743	1	METERING PLUNGER
7	392742	2	SLEEVE
8	480083	2	O-RING 1/2 ID X 1 11/16 OD
9	392764	2	NUT LOCK METERING UNIT
10	392766	2	O-RING 1 1/2 ID X 1 5/8 OD
-	398743	1	SMALL PISTOL ROTOR
-	398746	1	SMALL METERING ROTOR

## EXPLODED VIEW



## Precautions for the Powder Measure:

- Always change the metering units with the handle and the metering unit in the horizontal position, and after you have dropped the charge. If you allow the Handle to fall while changing units, you will drain the Hopper.
- Always verify your charges with a scale before loading.
- Any moisture in the unit will cause powder to stick, and charge weights will vary dramatically.

# Lock-N-Load® Case Activated Powder Drop

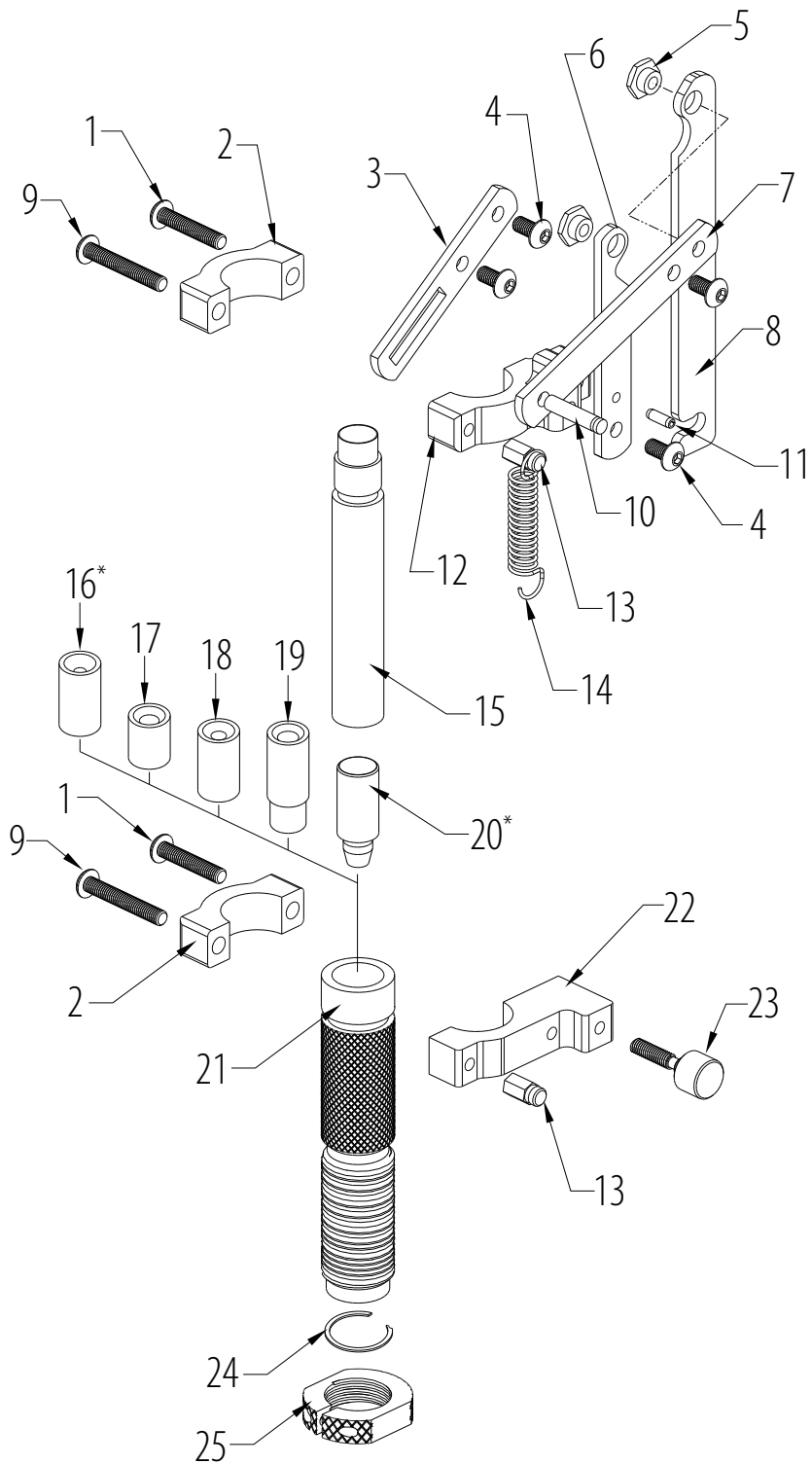
## PARTS LIST

## EXPLODED VIEW

ASSEMBLY

Item No.	Production Part Number	Qty.	Description
1	392721	2	BHSCS 10-32 X 1.00
2	392708	2	MOUNTING CLAMP
3	392710	1	ROTOR ARM
4	392719	5	BHSCS 10-32 X 3/8
5	392723	2	SHOULDER NUT
6	398735	1	PIVOT
7	398737	1	DRIVE LINK
8	398736	1	MEASURE LINK
9	398742	2	BHSCS 10-32 X 1.25
10	392717	1	GROOVE PIN 3/16 X 7/8
11	392718	1	SPRING PIN 1/8 X 3/8
12	392707	1	UPPER BRACKET
13	398739	2	SPRING NUT
14	398738	1	RETURN SPRING
15	392705	1	DROP TUBE
16*	392703	1	17 CAL. SLEEVE
17	392701	1	#1 POWDER SLEEVE
18	392702	1	#2 POWDER SLEEVE
19	392700	1	PISTOL POWDER SLEEVE
20*	290030	1	.355 POWDER THRU EXPANDER
20*	290031	1	.357 POWDER THRU EXPANDER
20*	290032	1	.400 POWDER THRU EXPANDER
20*	290033	1	.430 POWDER THRU EXPANDER
20*	290034	1	.451 POWDER THRU EXPANDER
20*	290035	1	.452 POWDER THRU EXPANDER
20*	290037	1	.475 POWDER THRU EXPANDER
20*	290038	1	.500 POWDER THRU EXPANDER
21	392704	1	MEASURE ADAPTER
22	392706	1	LOWER BRACKET
23	398741	1	LOCKING BOLT
24	392722	1	RETAINING RING
25	044000	1	LOCK RING

\* (Sold Separately)



## Assembly of Lock-N-Load® Case Activated Powder Drop

The Case Activated Powder Drop helps make reloading faster and easier than ever before. It automatically activates and dispenses a charge with every pull of the handle, but only when a case is present in the station. Plus, it works with Lock-N-Load® bushings. *(You can remove and change Hornady powder measures with a quick turn, without changing adjustments.)* The Case Activated Powder Drop unit can be used ONLY on the Hornady Lock-N-Load® Powder Measure.

The Lock-N-Load® Powder Measure comes with the Standard Rotor & Standard Metering Insert installed, with the Pistol Rotor & Pistol Metering Insert packaged separately.

Your Lock-N-Load® Powder Measure has been treated with a rust preventative that must be removed prior to use. We recommend that you clean and degrease all metal parts with Hornady One Shot Gun Cleaner and Lube.

### To Disassemble for Cleaning:

- 1 Set the Rotor with the Metering Unit perpendicular to the axis of the Body, press the Push Button and hold it down while removing the Metering Unit.

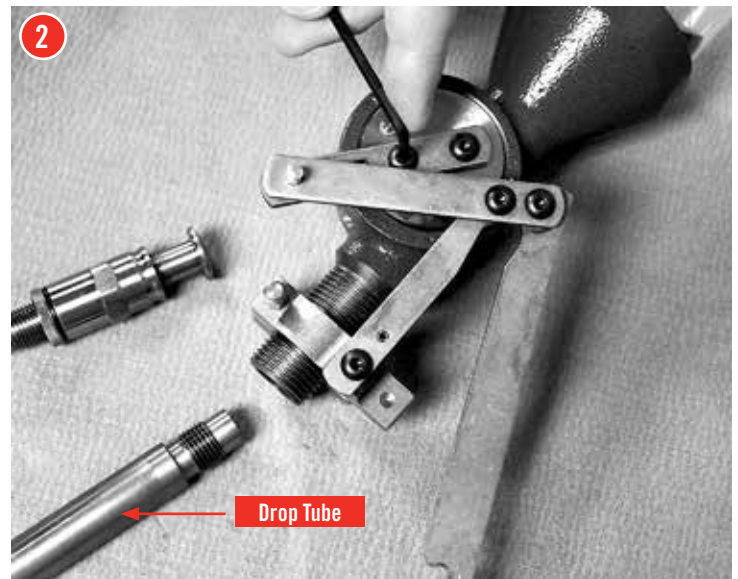
**NOTE:** Do NOT remove push button. It is permanently installed and does not need cleaning.

- 2 Unscrew the Drop Tube (15) from the bottom of the Powder Measure.

Remove the Handle, or Rotating Arm from the Powder Measure, by removing the two attaching screws with a 1/8" hex wrench.

- 3 Slide the Rotor out of the Body by pressing gently on the handle side of the Rotor.

**NOTE:** Be careful not to drop or otherwise damage the Rotor while it is out of the Body.



- 4 Remove the Lock Nut, O-Ring and Sleeve from the Metering Plunger.

Spray all metal parts liberally with Hornady One Shot® Gun Cleaner and Dry Lube. Be sure all rust preventative has been removed.

Allow it to dry thoroughly before reassembling.

### To Re-Assemble After Cleaning:

- 5 Reverse the procedure in the first five steps above.

Due to the tight machining tolerances of the Rotor and Body, they must be properly aligned to reassemble.

**NOTE:** Make sure the rotor is inserted with the push button on the left (assuming powder dispenser body is facing you).

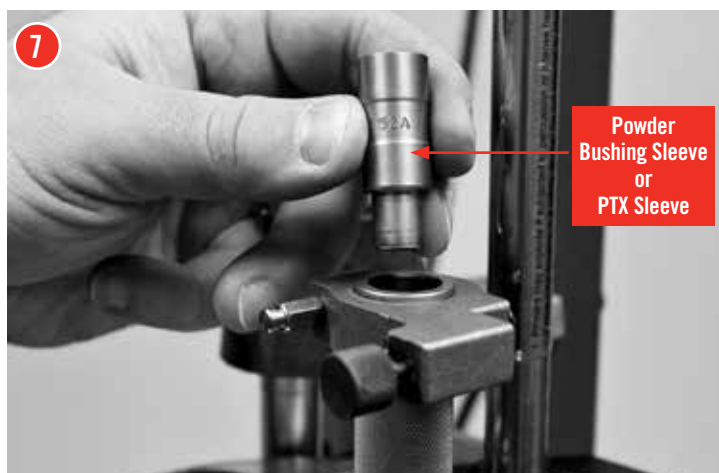
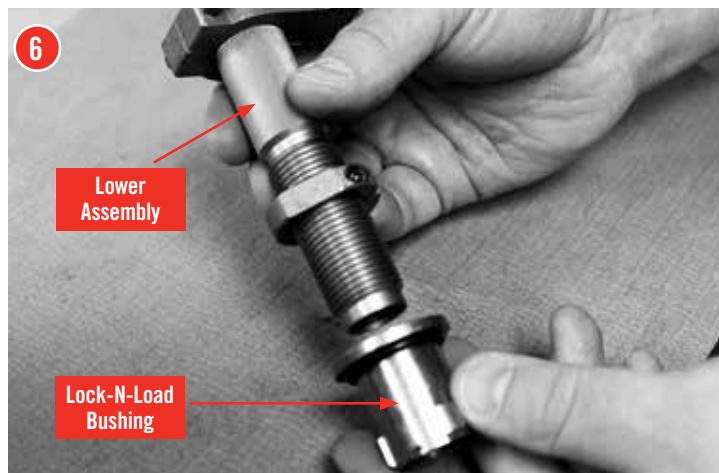
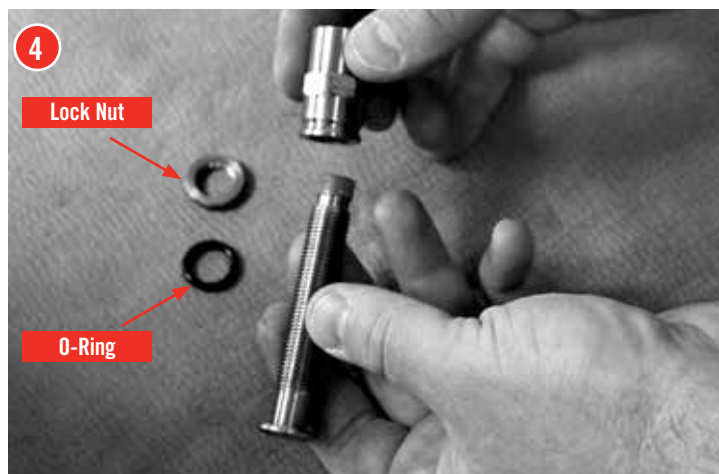
NOT FORCE IT OR PERMANENT DAMAGE WILL OCCUR.

### Installing the Case Activated Powder Drop (Lower Assembly)

- 6 Screw the Measure Adapter (21) (Lower Assembly) onto the Lock-N-Load® Bushing several turns. Place lower Assembly into top of press and rotate to lock into the Lock-N-Load® Bushing.

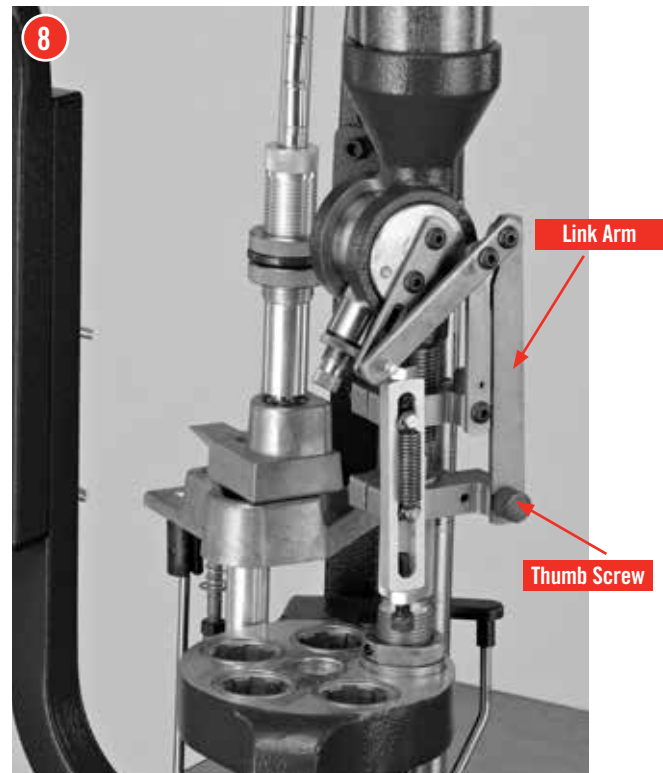
- 7 Select the appropriate powder bushing sleeve for your application (**Refer to Chart on page 22**). Insert the bushing, with the deep counter sink facing up, into the top of the measure adapter.

If using a Powder Through Expander Sleeve (PTX Sleeve), insert the PTX Sleeve with the deep countersink facing up, into the top of the Measure Adapter.



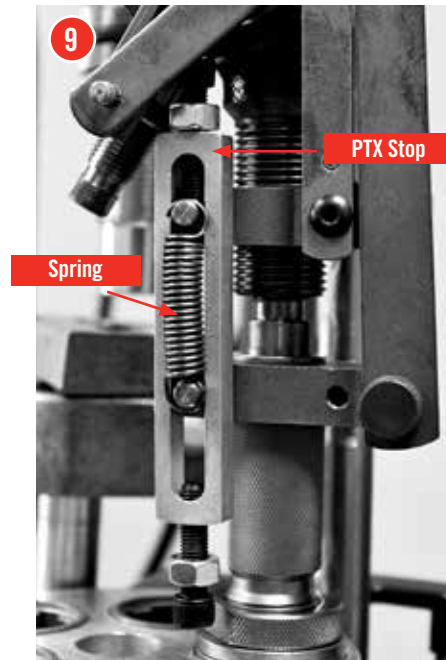
## Final Powder Measure Assembly

- 8 Insert the Powder Drop Tube into the lower assembly  
 Connect the Link (8) to Lower Assembly by sliding the Link over the Thumb Screw (23).  
 Tighten the Thumb Screw.

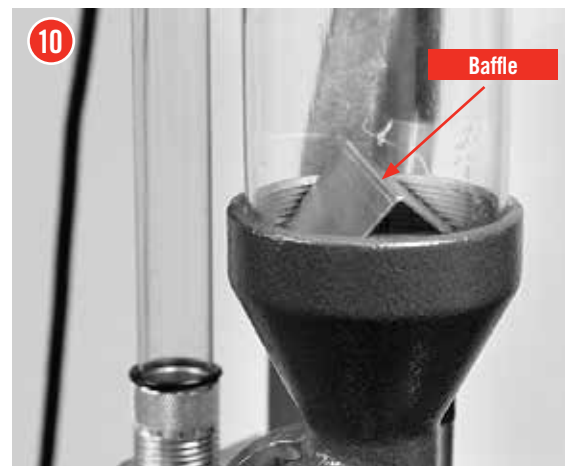


- 9 Attach Spring (14).  
 (For adjustment, refer to Chart on page 24).

**NOTE:** PTX Stop is only needed when using a powder through expander (PTX). See Page 22.



- 10 Drop Baffle into Powder Hopper to prevent powder bridging and help produce consistent charges.



## Operation of your Lock-N-Load® Auto Progressive Press

The Hornady Lock-N-Load® AP™ utilizes a high strength aluminum alloy frame with a compound linkage system which operates the 2" diameter cylindrical ram. The Ram houses a drive shaft that is attached to the shell plate at the upper end and the index wheel at the lower end. The toggle contains two spring actuated pawls which alternately engage the index wheel to advance the shell plate through the different reloading stations.

As the handle is lowered, the right Pawl contacts the Index Wheel, advancing the Shell Plate during the first 1 1/2" of upward travel of the Ram. With this upward travel, the cases become aligned with the dies at the top of the Press. As the Shell Plate comes to the top of the press, it guides the cartridge cases into the five die stations to perform the reloading operations except priming.

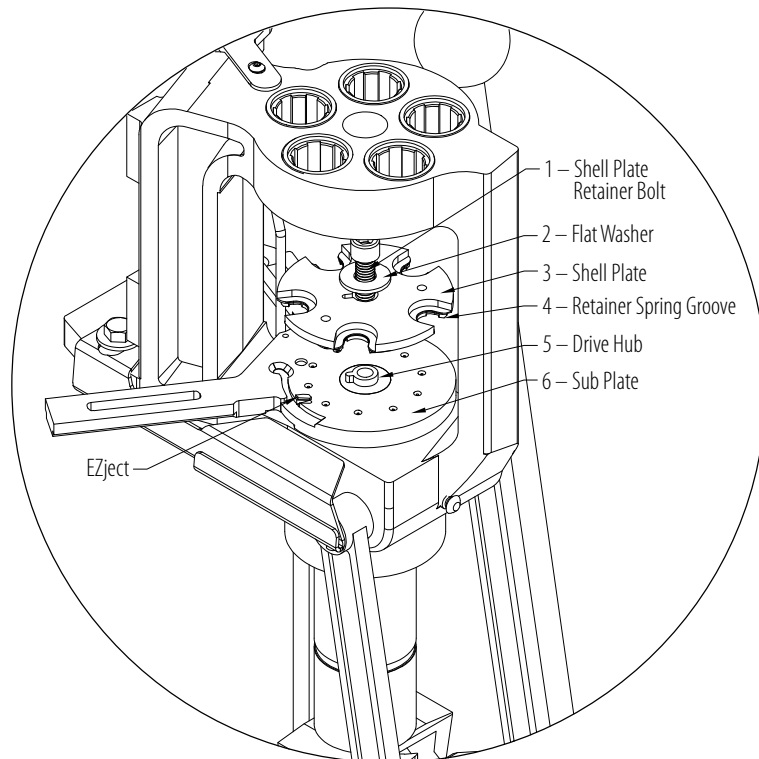
The handle is then raised to complete the stroke, lowering the Shell Plate. When the Shell Plate comes to within 1 3/4" of the bottom, the left Pawl engages the Index Wheel which advances the Shell Plate into position over the primer to seat it into the case that was just sized and de-primed. Pushing back on the handle with moderate force will seat the new primer into the case.

Once the dies are in place, and all stations are filled, the proper sequence for reloading is listed below.

- Place an empty case into station one. (Using the optional Lock-N-Load® AP™ Case Feeder, this step is automatically done for you.)
- Insert bullet into the powder charged case in station four (or use the optional Lock-N-Load® Bullet Feeder)
- Lower the handle.
- Powder drops into the newly primed case at station three.
- Raise the handle and seat a new primer in the de-primed case that has now moved to station two.
- Loaded cartridge is automatically ejected at station five when handle is raised.

## Installing the Shell Plate

- Put a small amount of general-purpose grease on the Shell Plate Ball Detents located on bottom side of Shell Plate (3), and on the top surface of the Sub-Plate (6).
- Align the Shell Plate (3) with the keyed Drive Hub (5).
- Place the 3/8" Shell Plate Retainer Bolt (1) through the 3/8" Flat Washer (2), (large end up) and thread the bolt into the Drive Hub (5).
- Tighten the bolt (1) using a 5/16" Allen wrench, only tight enough to prevent it from coming loose.
- Stretch the Case Retainer Spring over the top of the Shell Plate (3).
- While cycling the Press, push the Case Retainer Spring into the relieved area on the Sub-Plate (6). You will have to cycle the press a couple of stations to receive these results.



## Loading the Primer Tube

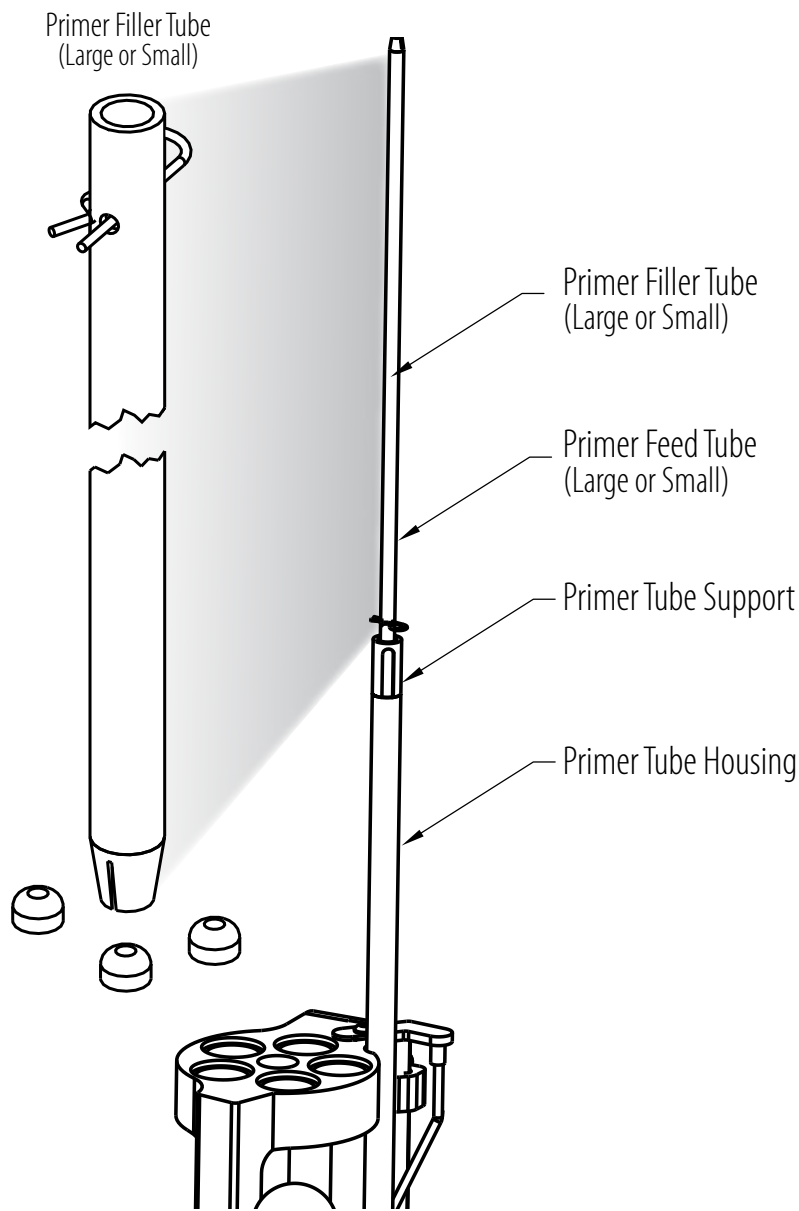
Carefully transfer the primers out of their factory package into a Hornady Primer Turning Plate and orientate them “shiny side up.” Then holding the Primer Filler Tube (large to small) like a pencil bring the plastic primer pick up tip over each primer and gently press it over the primers. The primers will be pushed into the filler tube one on top of another. Continue loading the primer filler tube until you have picked up approximately 100 primers.

**Make sure the cotter pin is in place;** turn the Primer Filler Tube upside down. At the top of the exposed Primer Filler Tube, there may be several primers still held and visible. Gently shake the tube to release the primers.

Align the Primer Filler Tube (large or small) to the Primer Feed Tube (large or small) using the Primer Tube Support. Remove the cotter pin from the Primer Filler Tube (large or small) and fill the Primer Feed Tube (large or small). The capacity of the primer tube is 100 primers.

**Do not over fill the primer tube.**

Insert the Primer Follower into the Primer Tube (large or small). This will help the primers feed more reliably.





## Preparing to Load

To begin reloading, start with a single empty cartridge case and run it through all of the loading stations. This will allow you to check your adjustments. *Refer to instructions provided with the die set for set up and proper adjustment.*

### Sizing a case

- Make sure the sizing die is adjusted properly, and the de-priming pin knocks out the old primer.

### Seating a primer

- Check and make sure the Primer Slide picked up a primer from the Primer Tube (large or small).
- When you cycle the press and the handle comes to a stop, you will have to push the handle away from you past the stop to seat the primer. Push until it stops but don't force it. Seating the primer requires a firm push.
- Lower the handle of the press slowly to rotate the shell plate to start the next operation. If there is resistance on the shell plate, the primer is improperly seated and not allowing the Shell Plate to rotate.

### Drop powder in the case using the case activated powder drop

- Verify the weight on a properly calibrated scale.

### Seat a bullet in the powder charged case

- Begin lowering the handle to rotate the shell plate to this station.
- Place a bullet on top of the case and lower the handle the rest of the way. (You may need to position the bullet over the case neck between your thumb and forefinger until the bullet enters the alignment sleeve).

### Station 5

- This station can be used for a Taper Crimp Die when reloading pistol cartridges that headspace off the case mouth.
- \* *Any manufacturer's Taper Crimp Die will work in Station 5 with the AP's EZject™ System.*
- Properly adjusted, a taper crimp die removes all case-flare from the expander die without damaging or squeezing into the bullet.

Next, lower the handle to advance the shell plate to the next station. The loaded round will rotate and contact the EZject™ System underneath the shell plate. This EZject™ System will automatically eject the loaded round from the press. Never force the handle. Measure the case for proper length and check it against the data in your reloading book.

Once you are satisfied with the first completed cartridge, repeat the process with another single case, advancing slowly from station to station until you eject the finished cartridge from the press with the case ejector.

After you are comfortable, load the press with consecutive cases for reloading. **Do not rush!** After you advance the cases through each station, inspect everything to insure proper function at each station. If anything looks out of place, or if you lose track of what you are doing, **STOP!** Remember, it's safer to begin slowly than it is to assume you need to reload a large number of cartridges during each session. Don't force the handle at any time, and be sure that all mechanical parts are properly lubed.

**SAFETY NOTE: Be safe! Double check your powder loads at frequent intervals to insure the powder charge is working properly.**

## Adjusting the Auto Advance Mechanism

The Auto Advance Mechanism is fully adjusted at the Hornady factory and should not require further adjustment. In the event that you feel your shell plate is not advancing properly, check all other options listed in this manual before attempting to adjust the mechanism's pawls.

All adjustments should be made in extremely small increments.

Through everyday use, the pawls on your press may gradually wear and may need to be adjusted to compensate for this wear. Before making adjustments, you should understand what each pawl does.

As the operating handle is lowered and raised through a complete cycle, each pawl in turn engages the index wheel at the bottom of the press. The index wheel is connected through the driveshaft to the shell plate. As each pawl engages the index wheel it advances the shell plate either at the top or bottom of the cycle.

The right pawl (as you face the press) advances the shell plate as the ram travels up when the handle is pulled down. The left pawl advances the wheel on the down stroke of the handle and should advance the shell plate to the detent holes in the sub-plate. If the shell plate doesn't advance enough on the down stroke of the ram, only the left pawl needs adjustment.

The right pawl is too low if the shell plate stops short of the detent, which can be felt as you rotate the shell plate into place by hand in a clockwise direction. If the pawl is too high, you will feel a slight double click on the handle as the pawl disengages and the shell plate is locked into place by the detents.

The same is true for the left pawl which indexes on the up stroke of the handle (down stroke of the ram.) Likewise, if the plate doesn't advance far enough on the up stroke of the ram, only the right pawl needs to be adjusted. Don't assume that both pawls need adjusting.

***Do only one pawl at a time to keep from becoming confused.***

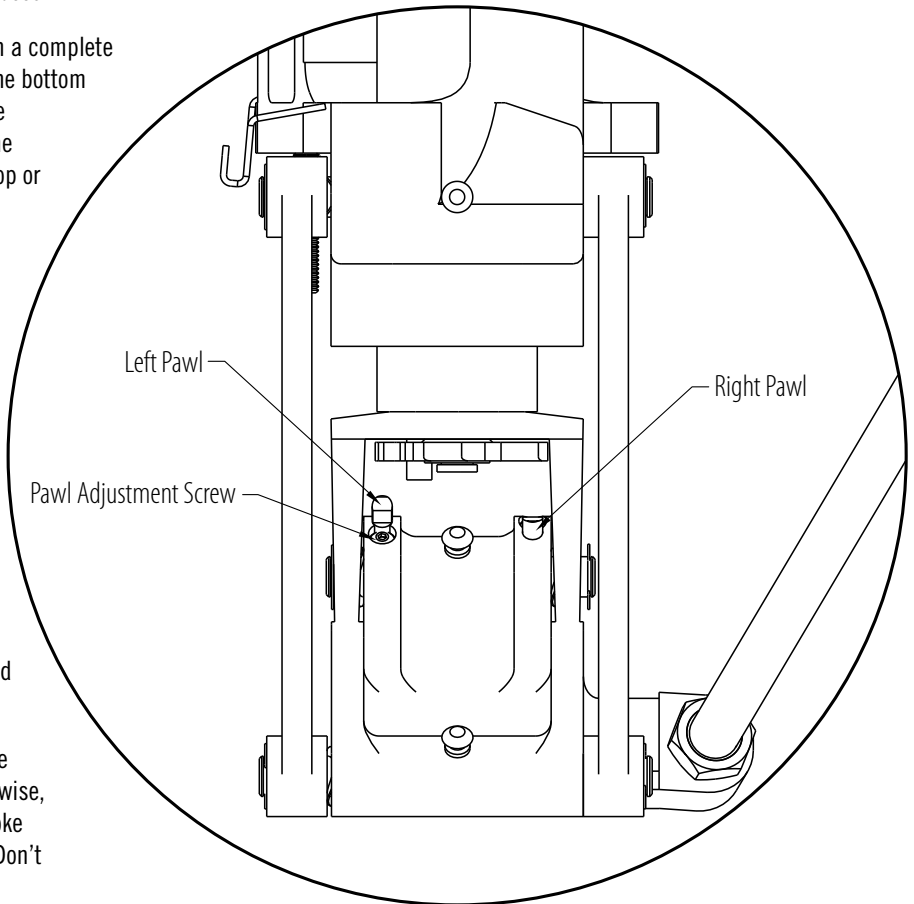
The height of each pawl determines how far the shell plate will advance when that pawl comes in contact with the indexing wheel. To adjust the pawls, increase the height of the chosen pawl to increase the advancement of the shell plate. Or decrease the height of the pawl to decrease the shell plate advancement.

There is a set screw on each pawl. (3/32 Allen wrench)

- Turn the set screw clockwise to lower the pawl.
- Turn the set screw counterclockwise to raise the pawl.

Become familiar with these pawls from the onset and see how they operate. You will then find it much easier to adjust the pawls, should you need to do so in the future.

For additional assistance, please contact our technical service staff at 800-338-3220 or email [webmaster@hornady.com](mailto:webmaster@hornady.com).



# Setup / Changeover of Auto Progressive Reloading Press

When changing calibers on the Lock-N-Load® AP™ Press, three components may need to be changed or verified.

- Shell plate
- Dies
- Primer Components
  - Primer Slide
  - Primer Tube
  - Primer Punch



Shell Plate

## Determine which shell plate is required for your application

Refer to Appendix A for proper Shell Plate selection.

**NOTE:** Hornady shell plates that are sold in the plastic boxes are the only ones that will fit the AP Press with EZject™ System. These shell plates (which are sold separately) are manufactured with a groove on the bottom side.

Refer to ASSEMBLY: AP PRESS Page 7 for instructions on removing and installing the Shell Plate

## Determine the dies needed.

The Hornady Lock-N-Load® AP™ Press is designed to use Hornady dies as well as most other dies with a 7/8"-14 threaded body. However, the characteristics of each die is different and will determine the setup and capabilities of the press. For example, using the Hornady Pistol Taper Crimp/Seating Die will free up a station on the press so that a Powder Cop Die may be used. Please see the various layout options below to help locate your dies on the press.

## Die Mounting Instructions

For initial die cleaning and individual die adjustment instructions, please refer to the instruction sheet that came with your die set.

## Lock-N-Load® quick change bushing system

The Lock-N-Load® system is based on the positive locking action of the bolt action rifle. Just like the bolt action rifle, the locking action is incredibly strong and simple.

Once the dies and the powder measure are adjusted for loading, these settings are locked in place by tightening the Lock Ring that is provided with all Hornady dies and powder measures.

## How the Lock-N-Load® works:

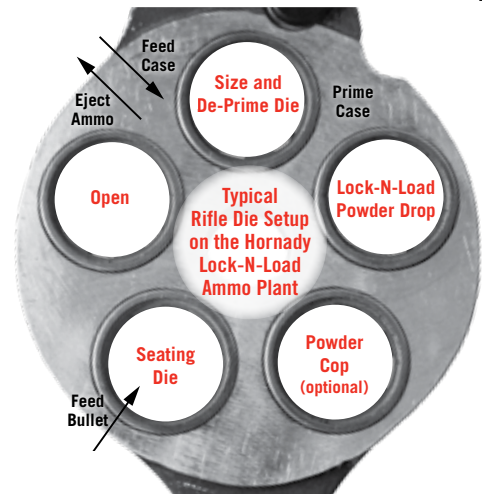
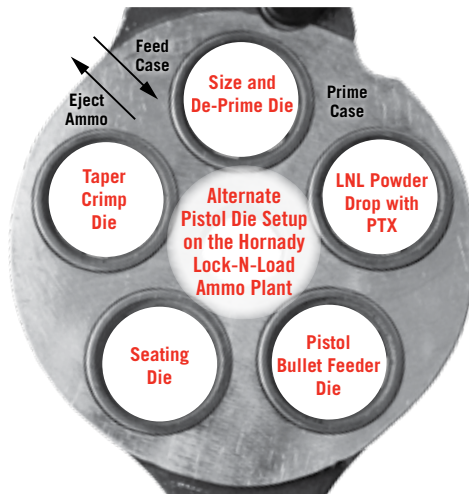
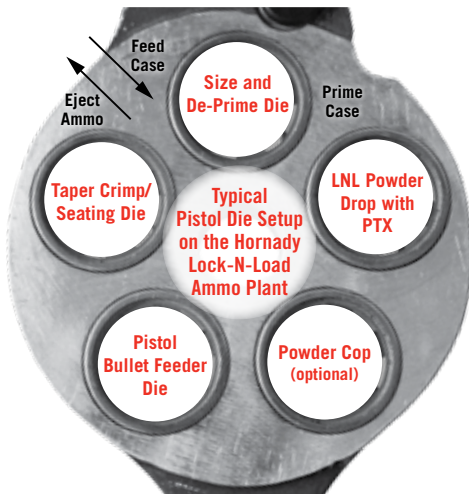
- Insert the Lock-N-Load® bushing into the press and turn it clockwise to lock it in place.
- Adjust the die to the desired position and lock the setting in place with the die's lock ring.

Once Lock-N-Load® bushings are installed, Dies and Powder Drop can be removed from the press with a quick counterclockwise turn. Since the Lock-N-Load® bushing is locked in place, the dies and the Powder Drop remain set exactly as you left them.

For added speed and convenience, Hornady offers inexpensive Quick Change Powder Dies for use with the Case Activated Powder Drop.

CHANGE-OVER

## Die Setup Configurations



## Changing Primer Components

1 When changing from a large primer to a small primer (or vice versa), you need to change the Primer Feed Tube Primer Slide and Punch Assembly.

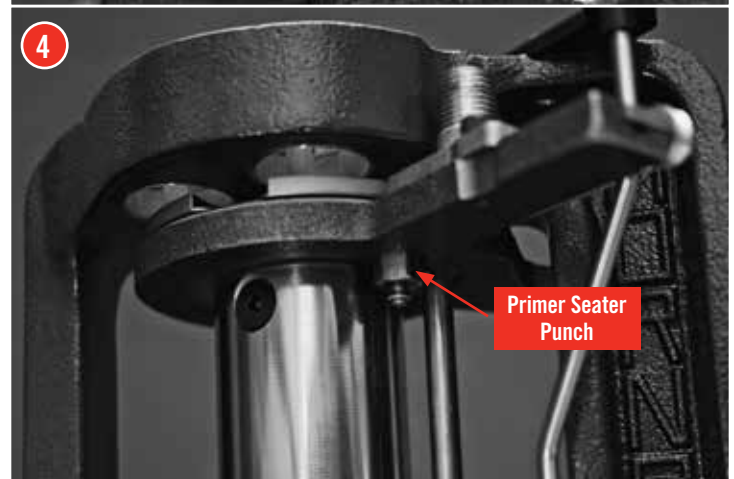
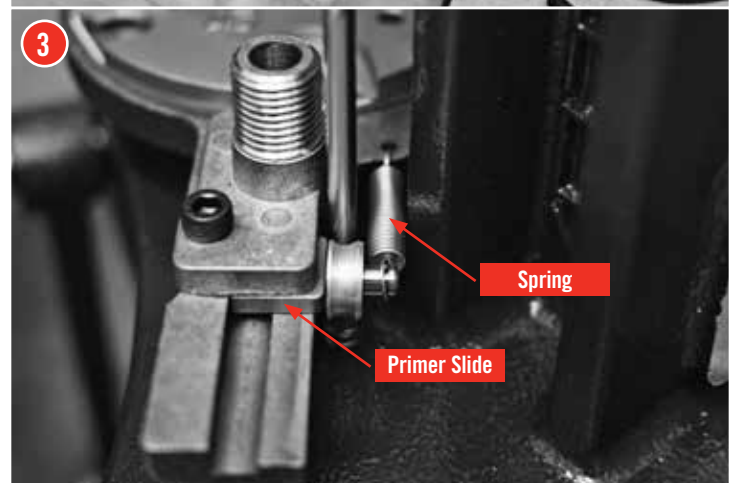
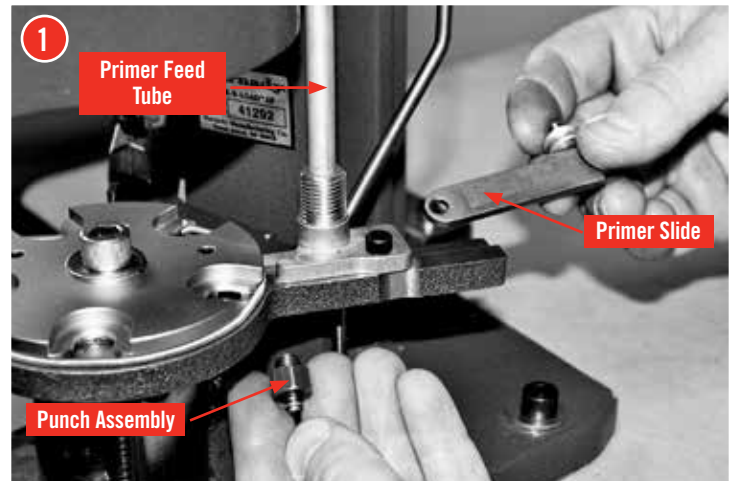
2 If there are primers in the Primer Feed Tube, you will need to empty it before changing the tubes. If the Primer Feed Tube is already empty, skip to next step.

Remove the Cap Screw, cup your hand under the Primer Tube and rotate the Primer Feed Body Assembly clockwise to catch the primers. After the tube is empty, rotate the body back in place and re-install the mounting screw.

3 Disconnect the Spring from the roller pin and remove the Primer Slide. Remove the Primer Tube Support and the Primer Feed Tube.

Fill the primer tube as described in the Operations Section.

4 The Primer Seater Punches are installed from the bottom side of the Sub-Plate. Raise the Ram to the top of the stroke. Use a wrench to loosen the Primer Seater Punch and unscrew it from the Sub-Plate. When installing a new Primer Seater Punch, tighten it snug with a wrench. Do not over tighten the Primer Punch.



## Setup / Changeover of Powder Measure

When changing cartridges, three components on the Powder Measure may need to be changed or verified.

- Powder type in the hopper.
- Metering Insert and/or Metering Rotor
- Powder Sleeve or PTX Expander

### Emptying Powder in Hopper

**NOTE:** The Lock-N-Load® Powder Measure should be emptied of all powder prior to storage. Prolonged exposure to powder may cause the plastic tube to become cloudy, discolored, or even brittle.

To remove powder from the Lock-N-Load® Powder Measure hopper, either use the Hornady Powder Measure Drain Insert (sold separately 050125) or remove the entire Powder Measure assembly from the press, remove the cap, and pour back into the original powder container. Cycle the rotor a few times while holding the powder over a container to remove the powder from the rotor. Finally remove the Metering Insert to inspect for any residual powder.

### Changing Meter Insert and Rotor

The Lock-N-Load® Powder Measure ships with two sets of Rotors and Standard Inserts. The Pistol Rotor and Insert are for powder charges from approximately 0.5 grains to 17 grains. The Rifle Rotor and Standard Insert are for powder charges from approximately 15 grains to 100 grains.

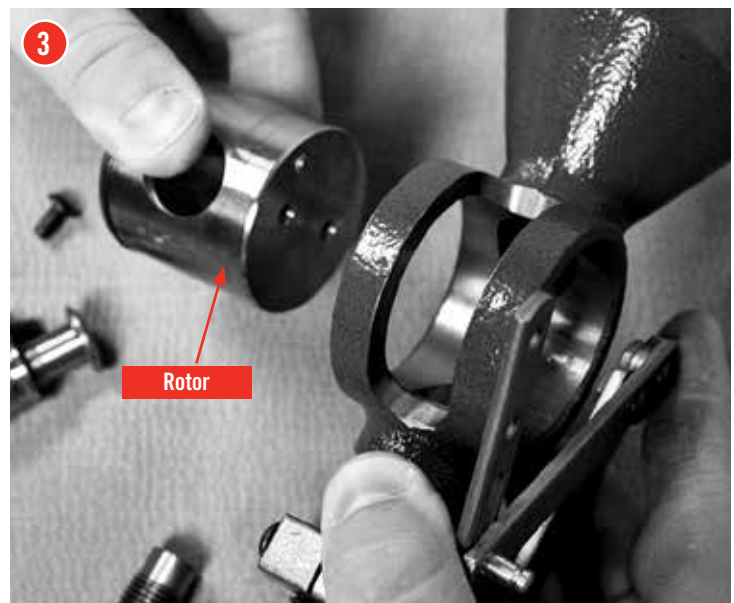
Additional inserts are available and sold separately to make change overs and reloading quicker and easier by storing the Metering Insert with the die set so minimal adjustments are needed when changing cartridges.

- 1 To change the insert, press the button on the side of the rotor. While pressing the button, pull and wiggle the Metering Insert out of the Rotor body. To install the new Metering Insert, press and hold the button on the side of the rotor, align the flats on the Metering Insert with the body of the Powder Measure, and press the insert into the Rotor. Verify the insert is fully inserted by firmly pulling on the Metering Insert.

**NOTE:** If there is powder in the hopper and the Metering Insert is on the bottom of the stroke, removing the Metering Insert will cause powder to empty out of the Powder Measure hopper and onto your work area.

If you are changing from a pistol cartridge to a rifle cartridge (or vice versa), you will need to change the Rotor in the Powder Measure.

- 2 To remove the Rotor, first remove the Metering Insert following the Instructions above. Next, remove the two screws from the side of the Rotor. Slide the Rotor out of the Powder Measure body.
- 3 Insert the correct Rotor by gently sliding it into the Powder Measure body. The manufacturing tolerances are very tight on the both the rotor and Powder Measure body, so caution should be used to prevent causing damage to the either component. Insert the correct Metering Insert and reattach the linkage with the two screws.



## Changing Powder Sleeve or PTX Expander

As a general rule, rifle cartridge cases will use either the #1 or #2 Powder Sleeve. Pistol cases will need to use the PTX sleeves when the Hornady Lock-N-Load® Bullet Feeder is being used. Otherwise the Universal Pistol Powder Sleeve will be used.

**Refer to the chart below to select the proper Sleeve or Expander.**

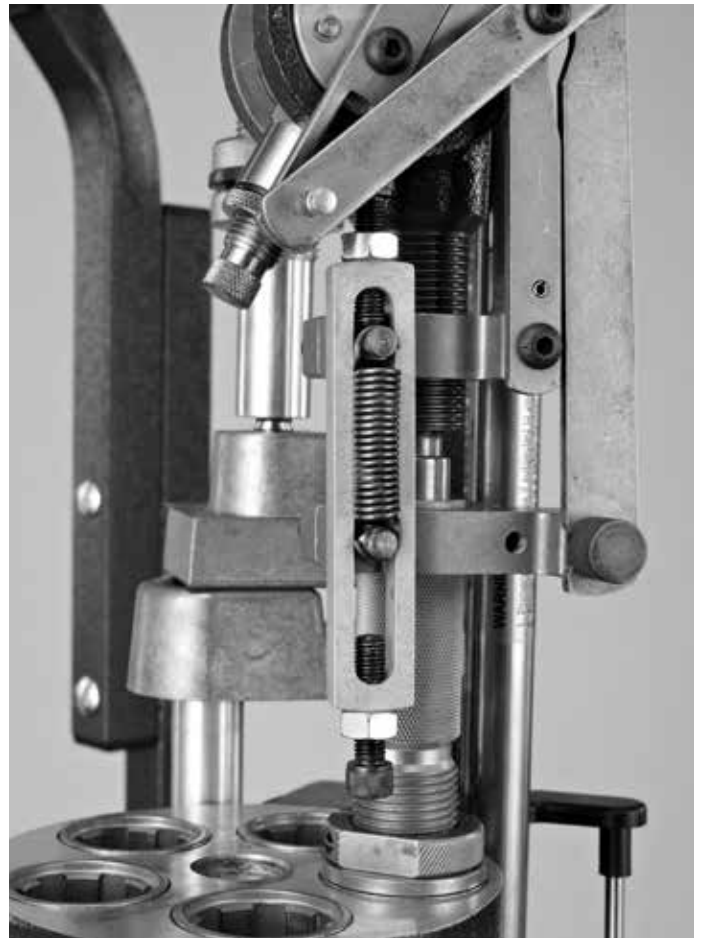
Remove spring, PTX Stop and loosen thumb screw.

Remove Powder Measure body from lower assembly.

Turn lower assembly over so powder sleeve drops out.

Replace with proper Powder Sleeve or PTX Expander.

Reverse steps above to reassemble.



### Powder Sleeves

Item No.	392700*	392701*	392702*	392703
Caliber	Universal Pistol Powder Sleeve	#1 Powder Sleeve	#2 Powder Sleeve	17 Cal. Powder Sleeve
Description	Most Pistol Cases**	7mm to 45 Cal. Rifle Cases	20 to 270 Cal. Rifle Cases	17 Cal. Rifle Cases

\* Included with the Lock-N-Load AP™

\*\*Does not flare case

### PTX Expanders (optional)

Item No.	290030	290031	290032	290033
Caliber	.355 PTX	.357 PTX	.400 PTX	.430 PTX
Description	9mm Pistol Cases	38 Cal. Pistol Cases	10mm Pistol Cases	44 Cal. Pistol Cases

Item No.	290034	290036	290037	290038
Caliber	.451 PTX	.452 PTX	.475 PTX	500 PTX
Description	45 Cal. Pistol Cases	45 Cal. Pistol Cases	475 Cal. Pistol Cases	50 Cal. Pistol Cases

(PTX = Powder Thru Expander)

## Install the PTX Powder Measure Stop

The PTX Powder Measure Stop (*item no. 290049*) is designed to be used in conjunction with our PTX Expanders and the Case Activated Powder Drop. The PTX Powder Measure Stop serves as a way to precisely and positively stop the upward travel of the Lock-N-Load® Powder Measure which allows the PTX Expanders to deliver consistently flared case mouths.

- 4 Make sure that the powder measure, using the Hornady Case Activated Powder Drop, is set properly as per the instructions included with that unit – the powder measure should be cycling completely through its range of motion. Remove the vertical spring from Case Activated Powder Drop.

## Adjusting the PTX Stop

Place Powder Measure Assembly onto the Lock-N-Load® AP™ Press in the proper station.

Remove PTX Spring and Stop from Powder Measure.

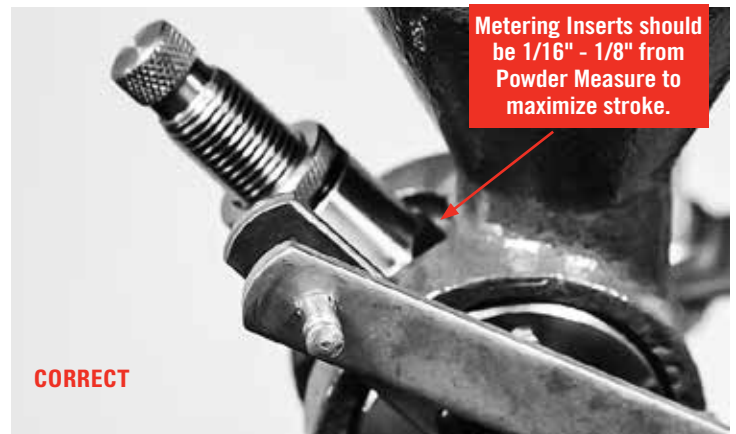
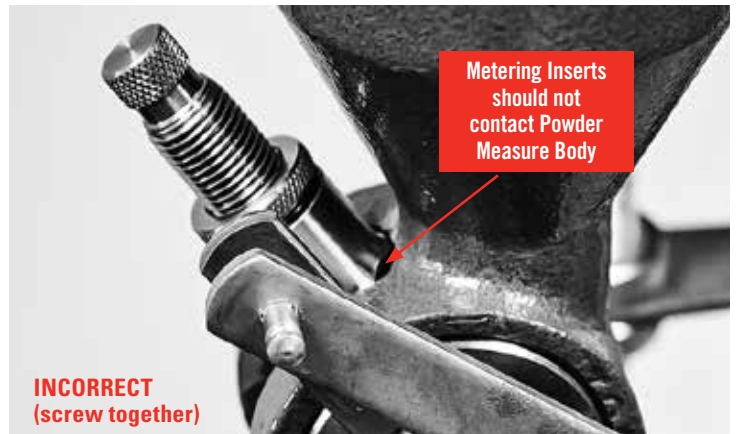
Insert a case into the shell plate under the powder measure and operate the handle to raise the ram to its highest position.

Lower the Powder Measure by rotating it clockwise into the press until the Powder Measure Rotor is fully rotated, but not contacting the end of the slot in the Powder Measure Body.

Lower the Ram and attach the PTX Stop and Return Spring between the two Spring Pins .

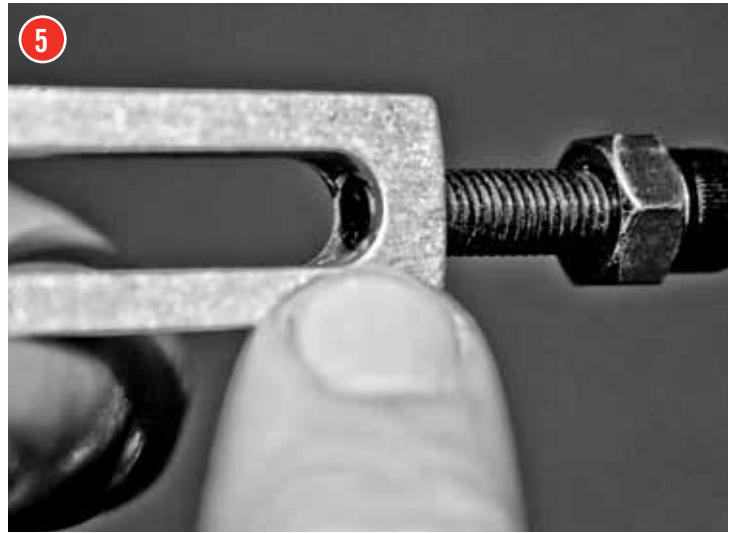
Check the Lock-N-Load® Powder Measure for correct positioning to avoid interference from other dies. Secure the Lock-N-Load® Powder measure to the Lock-N-Load® Bushing by tightening the lock ring.

**NOTE:** Clean the Case Activated Powder Drop at the end of each reloading session with a clean dry cloth to prevent a buildup of excess powder. This helps prevent the internal sleeve from sticking and spilling powder around the cartridge cases as they are loaded.

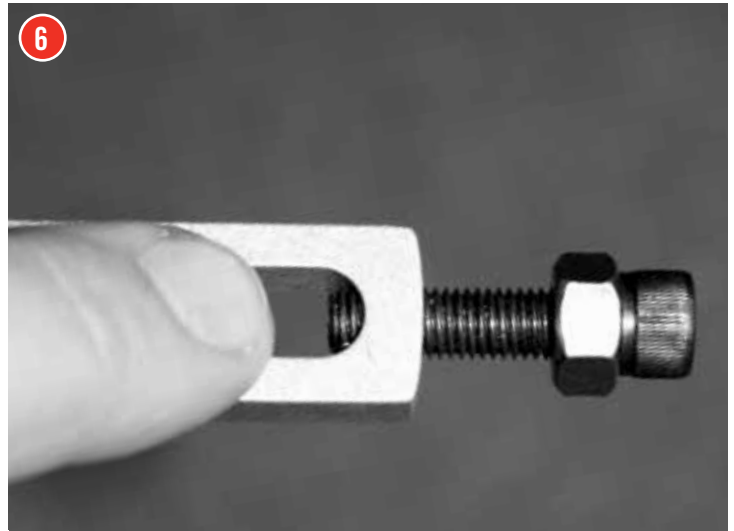


CHANGE-OVER

**5** Holding the PTX Powder Measure Stop, unscrew one of the cap screws until the threaded end of the screw is flush with the inside of the slot.



**6** Unscrew the other cap screw until approximately two threads are showing.



**7** Install the PTX Powder Measure Stop over the hex spring mount with the cap screw that is protruding on the top.

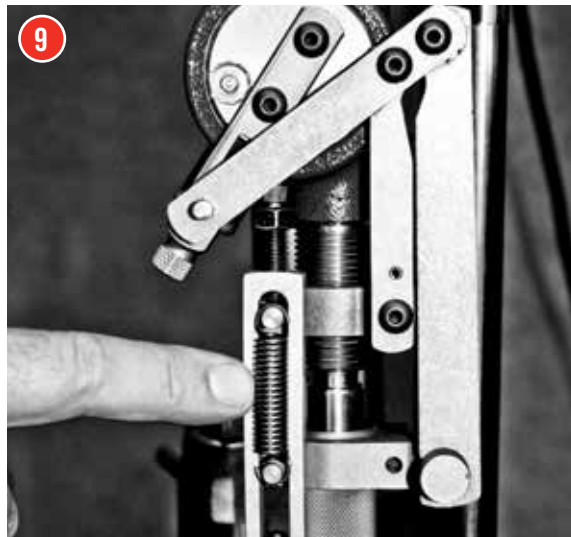




**8** Place an empty, primed case into the station of the shell plate that will rotate to the powder measure. Raise the ram which will cycle the powder measure to the top of its stroke. Thread the bottom cap screw in until the threaded end bottoms out on the lower hex spring mount.



**9** Lower the ram and replace the vertical spring on the hex spring mount.



**10** To adjust for more case mouth flare, continue to screw in the bottom cap screw, for less case mouth flare, back it out. Make small adjustments.

When adjusted as desired, tighten jam nuts to lock in adjustment.



# Troubleshooting the Lock-N-Load® Ammo Plant

## Tips for Trouble-Free Operation of the Lock-N-Load® AP™ Press

Problems	Solutions
Powder dropping around case	<ul style="list-style-type: none"> <li>• Correct bushing in place?</li> <li>• Powder drop tube and measure adapter clean?</li> <li>• Bushing installed deep counter sink side up?</li> </ul>
No primer in case	<ul style="list-style-type: none"> <li>• Primer slide properly adjusted?</li> <li>• Correct primer punch installed?</li> <li>• Primer slide spring in place?</li> <li>• Correct primer slide installed?</li> <li>• Primer body rotated counterclockwise when installed?</li> <li>• Primer housing tube too tight?</li> </ul>
Shell Plate will not advance or does not index on station	<ul style="list-style-type: none"> <li>• Primer not fully seated?</li> <li>• Pawls correctly adjusted?</li> <li>• Make sure you have the latest shell plate version with the groove on the bottom side.</li> </ul>
Cases do not feed into Dies	<ul style="list-style-type: none"> <li>• Die mouths beveled? (If not, return to manufacturer for repair.)</li> <li>• Pawls timed correctly?</li> </ul>
Gun powder is sticking in the powder measure, or inconsistent charge weights	<ul style="list-style-type: none"> <li>• Is the inside surface dry and clean?</li> <li>• Try pouring a little powdered graphite thru the powder measure for lubricant. Rub the outside of the powder hopper with a dryer sheet to eliminate static.</li> </ul>
Case retainer spring won't fall off the shell plate or it is getting kinked	<ul style="list-style-type: none"> <li>• Is there a burr on the shell plate where the spring groove and the case location meet?</li> <li>• Is there a burr on the sides of the slot on the sub-plate? (With a casefeeder, when you are setting up the timing, do not run the case into the spring if the spring is up on the shell plate.)</li> </ul>
Cases are hitting the back corner of the shell plate when feeding into the shell plate	Slow timing down or readjust V-Block location
Cases are not feeding into the shell plate far enough	Speed timing up or using the wrong V-Block
Cases are tipping when going into the shell plate	Readjust V-Block location
Cases are falling on top of the V-Block	Readjust the bracket, square tubing
Drop tube is tight against the AP frame; will not allow changing of tubes	Readjust the bracket, square tubing
Cases are falling mouth first out of the bowl	Close the door adjustment
Cases are getting caught in the open hole on the bowl	Open the door adjustment
The shell plate is hitting the V-Block when it's rotating	Lower the cam wire

## Shell Plate Troubleshooting

Problems	Solutions
Timing is severely out of adjustment	The Index Pawls may have been damaged
The Shell Plate does not rotate freely after mounting	<ul style="list-style-type: none"> <li>• You may be trying to use the wrong version of shell plate. Your shell plate must have a groove cut on the bottom side.</li> <li>• Dirt or debris between the shell plate and the drive hub</li> <li>• The Ball Detent bodies are not below flush on the underside of the Shell Plate.</li> <li>• The Shell Plate is warped or damaged</li> </ul>

\*If you reach a point where you cannot get the press to work, please call our technical service staff at 800-338-3220 or write us by visiting: [Hornady.com/contact\\_us](http://Hornady.com/contact_us).

TROUBLESHOOTING





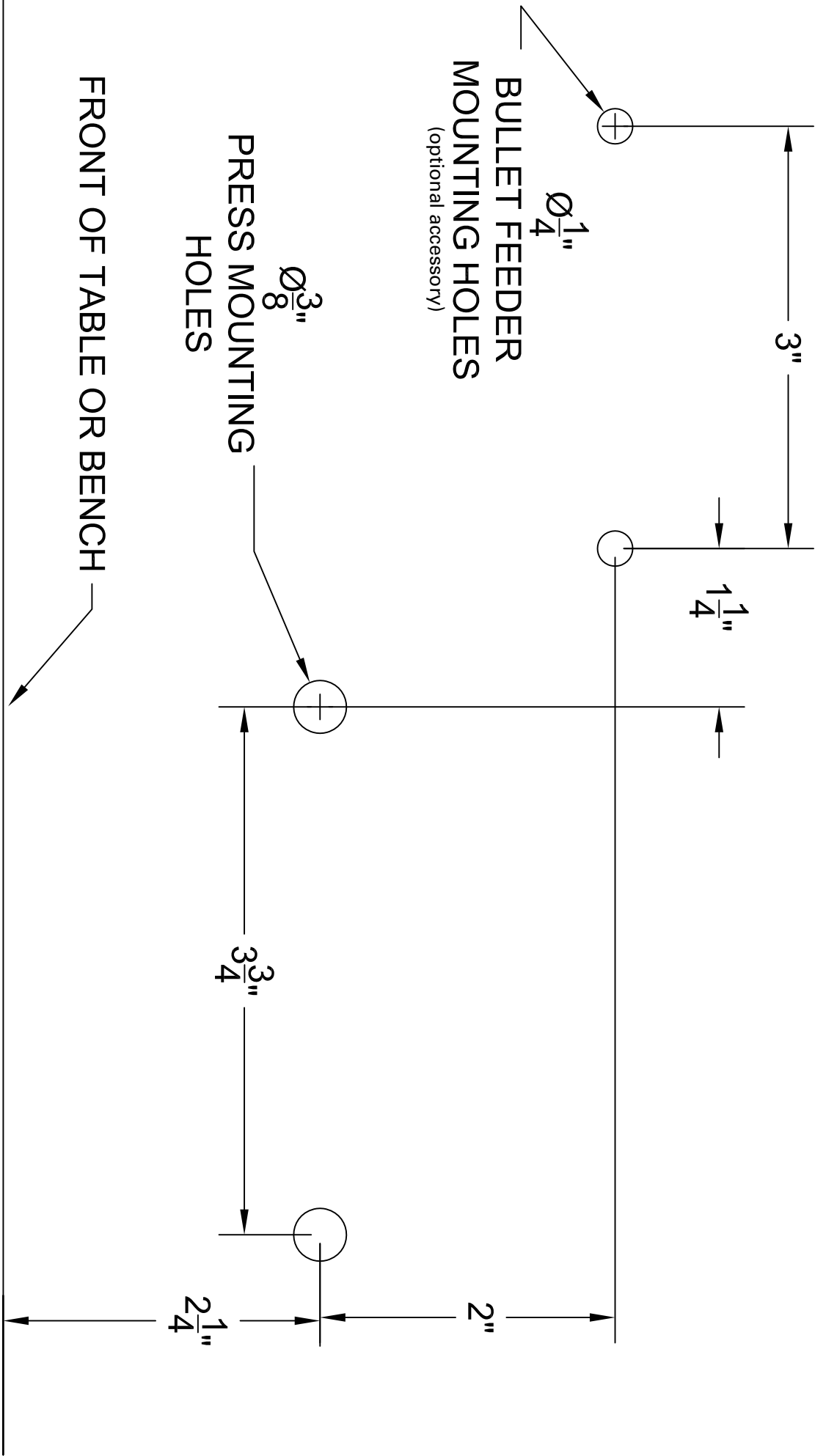


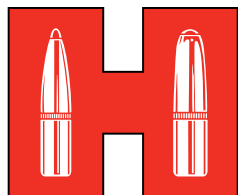
# APPENDIX A

## Pistol Dies & Reloading Essentials (Reference Chart)

### Pistol Cartridge

	Bullet Diameter (inches)	Die Set	Die Series	Full-Length Size Die	Seating Die	Expander Die	Taper Crimp Seater Die	Taper Crimp Die Only	Shell Holder # / Item No.	Shell Plate # / Item No.	Case Feeder Plate Size / Item No.	Bullet Feeder Die	Trimmer Pilot # / Item No.	Primer Punch
22 RCFM-JET	.224	546218	IV	—	—	—	—	—	#6 / 390546	#6 / 392606	Sm Pstl / 095310	N/A	#1 / 390943	Small
25 AUTO	.251	—	—	—	—	—	—	—	#37 / 390577	— / —	Sm Pstl / 095310	N/A	#4 / 390946	Small
30 LUGER	.308	546336	IV	—	—	—	—	—	#8 / 390548	#8 / 392608	Sm Pstl / 095310	N/A	#9 / 390951	Small
30 MAUSER	.309	—	—	—	—	—	—	—	#8 / 390548	#8 / 392608	Sm Pstl / 095310	N/A	#9 / 390951	Small
32 AUTO	.311	546506	II	046507	044113	044508	—	—	#22 / 390562	#22 / 392622	Sm Pstl / 095310	N/A	#10 / 390952	Small
32 S&W LONG/H&R/327 FEDERAL	.311	546509	II	046510	044143	044511	—	—	#36 / 390576	#36 / 392636	Sm Pstl / 095310	N/A	#10 / 390952	Small
7.5 SWISS ORDEN	.312	546504	IV	—	—	—	—	—	#48 / 390604	— / —	Sm Pstl / 095310	N/A	#10 / 390952	Small
8MM LEBEL REV	.326	546510	IV	—	—	—	—	—	#48 / 390604	— / —	Lg Pstl / 095312	N/A	#11 / 390953	Large
380 AUTO	.355	546518	II	046519	044144	044517	—	044170	#16 / 390556	#16 / 392616	Sm Pstl / 095310	095330	#15 / 390957	Small
TAPER CRIMP 9MM/9x21	.355	546516	II	046516	044177	044517	044177	—	#8 / 390548	#8 / 392608	— / —	N/A	#15 / 390957	Small
9MM LUGER/9x21	.355	546515	II	046516	044144	044517	—	044170	#8 / 390548	#8 / 392608	Sm Pstl / 095310	095330	#15 / 390957	Small
357 SIG	.355	546575	II	046576	044144	044577	—	—	#10 / 390550	#10 / 392610	Sm Pstl / 095310	N/A	#15 / 390957	Small
9x23	.355	546532	IV	—	—	—	—	—	#8 / 390548	#8 / 392608	Sm Pstl / 095310	N/A	#15 / 390957	Small
38 S&W	.357	546521	IV	—	—	—	—	—	#28 / 390568	#28 / 392628	Lg Pstl / 095312	N/A	#15 / 390957	Large
38 SUPER AUTO	.357	546524	II	046525	044144	044526	—	—	#8 / 390548	#8 / 392608	Sm Pstl / 095310	N/A	#15 / 390957	Small
357 HERRETT	.357	546396	IV	—	—	—	—	—	#2 / 390542	#2 / 392602	Lg Pstl / 095312	N/A	#15 / 390957	Large
357/44 B&D	.358	546404	IV	—	—	—	—	—	#30 / 390570	#30 / 392630	Lg Pstl / 095312	N/A	#15 / 390957	Large
38 SPECIAL	.357	546527	II	046528	044145	044523	—	—	#6 / 390546	#6 / 392606	Lg Pstl / 095312	095331	#15 / 390957	Small
357 MAGNUM	.357	546527	II	046528	044145	044523	—	—	#6 / 390546	#6 / 392606	Lg Pstl / 095312	095331	#15 / 390957	Small
357 REM MAX	.357	546527	II	046528	044145	044523	—	—	#6 / 390546	#6 / 392606	Lg Pstl / 095312	095331	#15 / 390957	Small
COWBOY 38-357-357 MAX	.357	546528	III	046528	044591	044591	—	—	#8 / 390548	#8 / 392608	Lg Pstl / 095312	N/A	#15 / 390957	Small
9x18 MAKAROV	.364	546512	II	046513	044154	044514	—	—	#8 / 390548	#8 / 392608	Sm Pstl / 095310	N/A	#15 / 390957	Small
40 S&W	.400	546533	II	046534	044146	044535	—	044171	#10 / 390550	#10 / 392610	Sm Pstl / 095310	095332	#21 / 390941	Small
TAPER CRIMP 40 S&W	.400	546534	II	046534	044178	044535	044178	044171	#10 / 390550	#10 / 392610	Lg Pstl / 095312	N/A	#21 / 390941	Small
10MM AUTO	.400	546533	II	046534	044146	044535	—	044171	#10 / 390550	#10 / 392610	Lg Pstl / 095312	095332	#21 / 390941	Large
TAPER CRIMP 10MM	.400	546534	II	046534	044178	044535	044178	044171	#10 / 390550	#10 / 392610	Lg Pstl / 095312	N/A	#21 / 390941	Large
38/40 WIN	.400	546536	IV	—	—	—	—	—	#9 / 390549	#9 / 392609	Lg Pstl / 095312	N/A	#21 / 390941	Large
400 COR-BON	.400	546538	IV	—	—	—	—	—	#45 / 390606	#45 / 392645	Lg Pstl / 095312	N/A	#21 / 390941	Large
41 AE	.410	546539	II	046540	044147	044541	—	—	#29 / 390569	#29 / 392629	Lg Pstl / 095312	N/A	#17 / 390959	Small
41 REM MAG	.410	546539	II	046540	044147	044541	—	—	#8 / 390548	#8 / 392608	Lg Pstl / 095312	N/A	#17 / 390959	Large
COWBOY 44/40 WIN	.429	546543	III	046460	044166	044593	—	—	#9 / 390549	#9 / 392609	Lg Pstl / 095312	N/A	#18 / 390960	Large
44 AUTO MAG	.430	546545	IV	—	—	—	—	—	#1 / 390541	#1 / 392601	Lg Pstl / 095312	095333	#18 / 390960	Large
44 REM MAG	.430	546548	II	046549	044148	044544	—	—	#30 / 390570	#30 / 392630	Lg Pstl / 095312	N/A	#18 / 390960	Large
44 SPECIAL	.430	546548	II	046549	044148	044544	—	—	#30 / 390570	#30 / 392630	Lg Pstl / 095312	095333	#18 / 390960	Large
COWBOY 44 SPCL	.430	546549	III	046549	044166	044166	—	—	#30 / 390570	#30 / 392630	Lg Pstl / 095312	N/A	#18 / 390960	Large
445 SUPER MAG	.430	—	—	—	—	—	—	—	#30 / 390570	#30 / 392630	Lg Pstl / 095312	N/A	#18 / 390960	Large
45 AUTO	.451	546554	II	046555	044151	044556	—	044172	#45 / 390606	#45 / 392645	Lg Pstl / 095312	095334	#19 / 390961	Large
45 AUTO RIMMED	.451	546554	II	046555	044151	044556	—	044172	#31 / 390571	#31 / 392631	Lg Pstl / 095312	095334	#19 / 390961	Large
45 WIN MAG	.451	546554	II	046555	044151	044556	—	044172	#1 / 390541	#1 / 392601	Lg Pstl / 095312	095334	#19 / 390961	Large
TAPER CRIMP 45 AUTO	.451	546555	II	046555	044179	044556	044179	—	#45 / 390606	#45 / 392645	Lg Pstl / 095312	095334	#19 / 390961	Large
COWBOY 45 COLT	.452	546581	III	046583	044168	044594	—	—	#32 / 390572	#32 / 392632	Lg Pstl / 095312	095334	#19 / 390961	Large
45 COLT	.452	546582	II	046583	044151	044556	—	—	#32 / 390572	#32 / 392632	Lg Pstl / 095312	095334	#19 / 390961	Large
45 SCHOFIELD	.452	546546	IV	—	—	—	—	—	#41 / 390581	— / —	Lg Pstl / 095312	095334	#19 / 390961	Large
454 CASULL	.452	546584	V	046584	044151	044556	—	044588	#32 / 390572	#32 / 392632	Lg Pstl / 095312	095334	#19 / 390961	Small
460 S&W	.452	546583	V	046720	044721	044719	—	044722	#46 / 390602	#46 / 392646	Lg Rfl / 095316	095334	#19 / 390961	Large
455 WEBLEY	.455	—	—	—	—	—	—	—	#51 / 390601	— / —	Lg Pstl / 095312	N/A	#19 / 390961	Large
480 RUGER/475 LINB	.475	546547	V	046585	044158	044586	—	044174	#14 / 390554	#14 / 392614	Lg Pstl / 095312	N/A	#23 / 390939	Large
50 ACTION EXP	.500	546580	II	046581	044155	044582	—	—	#40 / 390640	— / —	Lg Rfl / 095316	N/A	#50 / 390937	Large
500 S&W	.500	546585	V	046699	044700	044701	—	044702	#44 / 390584	#44 / 392644	Lg Rfl / 095316	N/A	#50 / 390937	Large
500 LINEBAUGH	.510	546587	IV	—	—	—	—	—	#25 / 390565	— / —	Lg Rfl / 095316	N/A	#50 / 390937	Large





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