

# Get Ready to RELOAD!

## It's Easy to Assemble Your New RL 550B Reloader



**1**



**2**

**3 a.**  
RL 550B  
Instruction  
Manual



**3 b.**  
Low  
Primer  
Alarm



**3 c.**  
Primer  
Tube  
Pack



Your RL 550B  
Reloader  
includes all  
of the items  
shown in this  
photo/inset.



**3 d.**  
Powder  
Measure with  
Small Powder  
Bar Installed



**3 e.**  
Operating  
Handle Assembly  
with washer and  
lock nut



**3**



**3 f.**  
Accessory Box:

Contains a Loaded-Cartridge Bin, Spent Primer Cup, Bin Bracket, Large Powder Bar, Large Primer Slide Assembly, Index Sprocket, Index Ball, Index Ball Spring, Brass-Tipped Set Screw, Set of Hex Wrenches and 3 Die Lock Rings.

**3 g.**  
Caliber Conversion Kit  
*(Note: May be shipped in a separate box.)*



Part #62287



4

If you are mounting your RL 550B directly to your bench, use the mounting holes in the frame as a template. Use 1/4" diameter bolts (not included) to attach your machine to your bench. (Dillon offers a Universal Mounting Hardware Kit, stock # 14355.) Use washers on the top and bottom. Use a 5/16" drill (aka "drill bit") to drill the holes in your bench. Do not use wood screws to secure the machine to your bench. If you are using the RL 550B Strong Mount accessory, refer to the instructions that came with it.

(Note: From this point on, we will be using an RL 550B Strong Mount for ease of photography.)



5

Remove the washer and lock nut from the handle assembly. Hold the washer over the hole in the right side of the crank and insert the handle. Start the lock nut on the handle with your fingers.



6

Place a 5/32" hex wrench or a screw driver through the hole in the handle to hold it while you tighten the lock nut using a 7/8" (or an adjustable) wrench.



7



8

Place the Spent Primer Cup onto the wedge-shaped mounting point on the Right Link Arm.

**ATTENTION:**  
Now is the time to determine whether you must change your primer system before proceeding.

The RL 550B comes ready to dispense and seat small primers. If you're loading a caliber that requires large primers, skip forward to photo 45 for instructions on changing over to the large-primer system. All the necessary parts have been included with your RL 550B. (See item 3 f. in photo 3.)



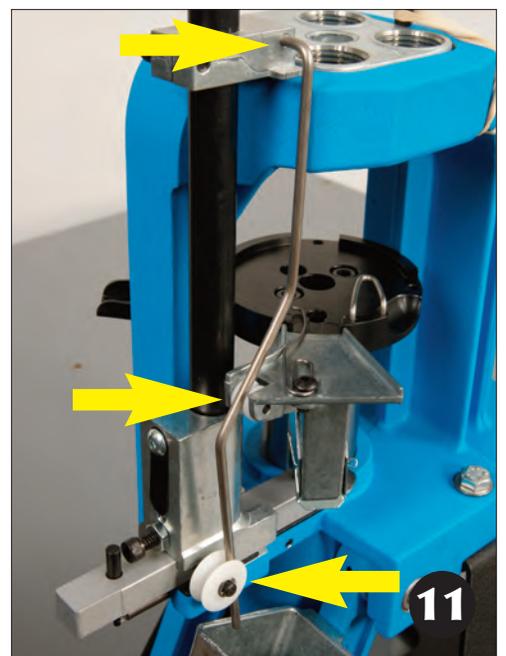
9

Place the angled end of the primer system Operating Rod into the hole in the Operating Rod Bracket (top arrow, photo 11), then...



10

Pull the Operating Handle part way down and pull out on the Primer Slide. Align the Operating Rod so it runs between the small white roller on the Roller Bracket (middle arrow, photo 11) and the larger white Roller on the Primer Slide (bottom arrow, photo 11).



11



Place the Index Ball Spring into the hole to the left of center on the Platform. Place the Index Ball into the same hole. Then place the Shellplate (from the RL 550B Caliber Conversion Box) **numbered side up** onto the platform so it aligns with the center hole.



Now you can place the Index Sprocket into position on the Shellplate. The four protrusions on the bottom of the sprocket will fit into the four small holes on the Shellplate. You can now insert the Shellplate Bolt through the Index Sprocket/Shellplate assembly into the center hole in the Platform. Use the supplied 1/4" hex wrench to tighten the Shellplate Bolt just enough to hold the Shellplate snugly in place, while still allowing it to turn freely with only thumb pressure on the Index Sprocket.

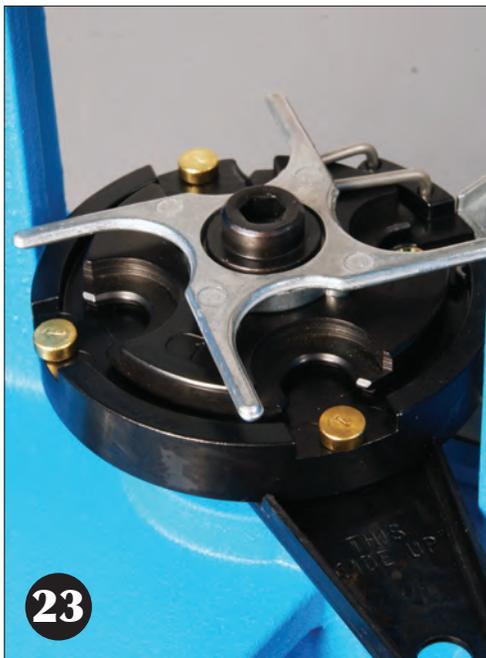
On the left side of the RL 550B's Main Shaft – just below the Platform – is a threaded hole for a Brass-Tipped Set Screw that keeps the Shellplate Bolt from tightening when you advance the Shellplate with the Index Sprocket. Insert the Brass-Tipped Set Screw and tighten it securely with a 1/8" hex wrench. *Note: If at some point in the future it becomes progressively difficult to turn your Shellplate, one thing to check is whether this set screw has come loose.*





22

You may now place the three brass Locator Buttons (from the RL 550B Caliber Conversion Box) into the remaining holes in the Platform. Their proper positions are shown at right in photo 23.

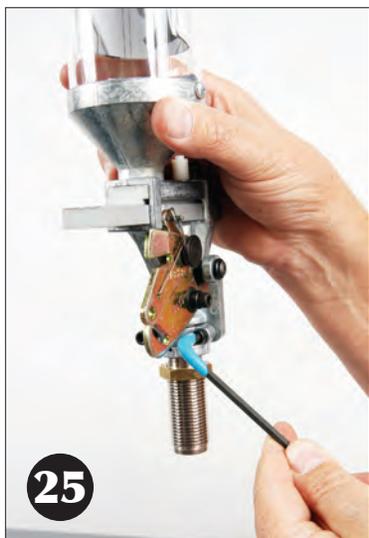


23



24

The rubber band intended to keep the Toolhead Pins in place during shipping may now be removed in preparation for installing the Automatic Powder System.



25



26

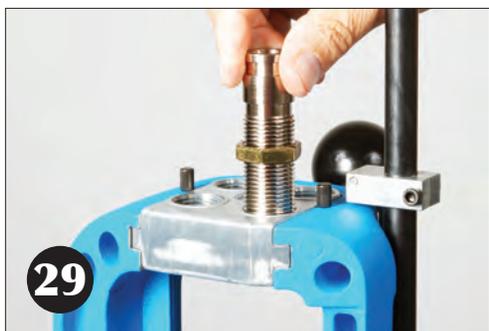


27



28

Use a 5/32" hex wrench to loosen the two collar clamp screws on the powder measure and remove the powder die. Place the powder funnel (packaged in the RL 550B Caliber Conversion Box) into the powder die with the grooved end toward the top of the powder die as shown. The powder funnel should move up and down freely.



29

Find station two on the RL 550B Toolhead and insert the Powder Die/Powder Funnel assembly, screwing it down about half way. Final adjustments will be made when you are adjusting your powder charge just prior to reloading. For now, the Powder Die/Funnel assembly should look similar to photo 30 at right.



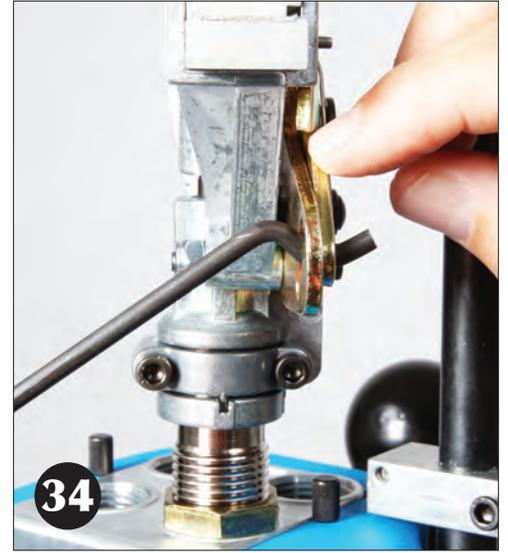
30

*NOTE: Pistol-caliber powder funnel shown. Rifle-caliber powder funnels will not protrude from the powder die.*



31

You may now replace the Powder Measure onto the Powder Die in station two.



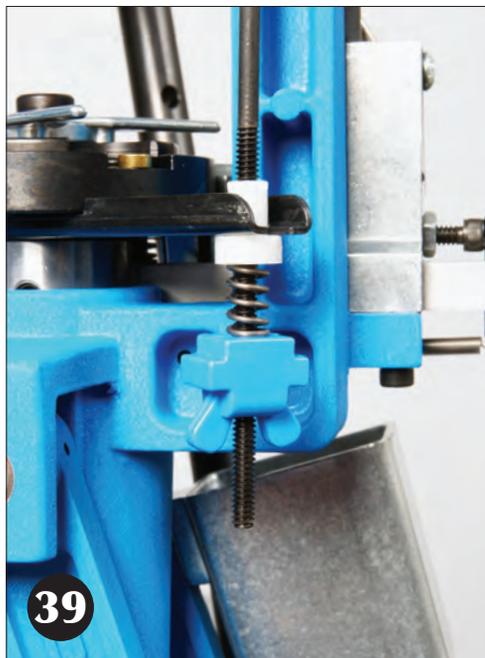
Use a 5/32" hex wrench to snug the collar clamp screws on the powder measure. (Note: For now, they need only be tightened a little as you may need to adjust the powder die when you are setting the powder measure.) Now you may install the Failsafe Rod through BOTH openings in the Powder Measure Fail-Safe Mechanism as shown in photos 33 and 34.

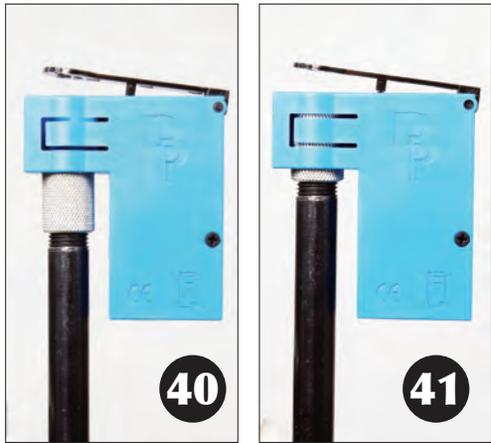


When the Powder Measure and Fail-Safe Rod are properly positioned, the rod should hang in close proximity to the Return Bracket in which it will be installed. Place the white bushing into the notch in the Return Bracket and press it into place as shown in photos 36 and 37.



Properly installed, the Fail-Safe Rod should look like it's pictured in photo 38.





Place the AAA battery that came with the Low Primer Alarm into the housing positive end up. Then, push the Low Primer Alarm onto the knurled Primer Shield Cap at the top of the primer shield as shown in photos 40 and 41.

**Do not put primers in until after you have read the manual.**

Placement of the Primer Follower Rod can wait until the tube is filled with primers. Now that your machine is on your bench and fully assembled, you may refer to page 10 of the RL 550B instruction manual to set up your toolhead for reloading.



If you're not using the RL 550B Strong Mount accessory, you may now mount the Cartridge Collection Bin Bracket to your bench, allowing approximately 1/8" clearance between the Platform and the Ejected-Cartridge Chute.

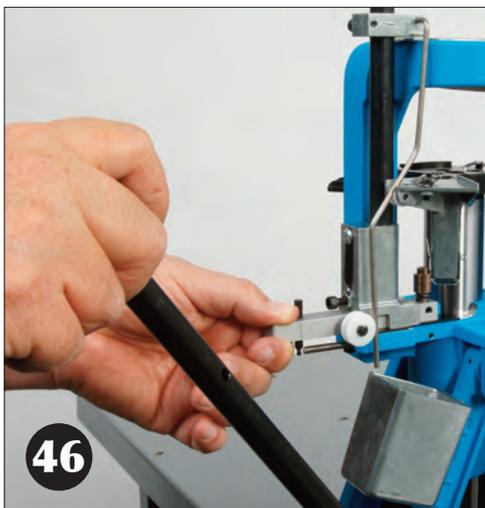


Use two screws or bolts to attach the bracket to your bench. The Cartridge Collection Bin simply slides onto the bracket and will be in the proper position to catch loaded rounds.

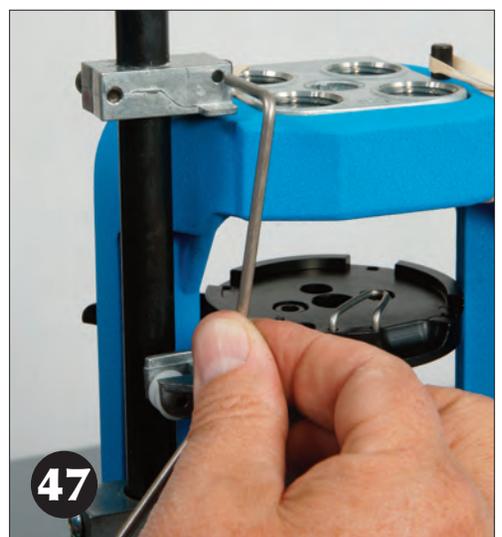
**ATTENTION:**  
**If you need to change from the small-primer system to the large-primer system, use the following instructions. If you don't need to change, you may ignore these instructions for the time being.**



The RL 550B comes equipped to feed small pistol/rifle primers. If you are loading a cartridge that takes large primers, you'll need to change the primer system.



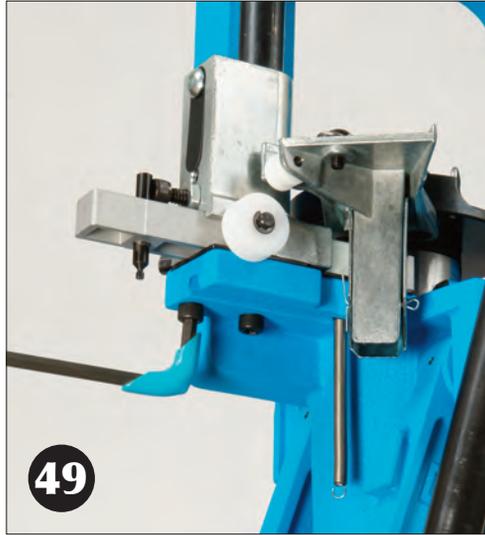
To change the primer system you must first remove the Operating Rod by raising the platform slightly and pulling back on the primer slide.



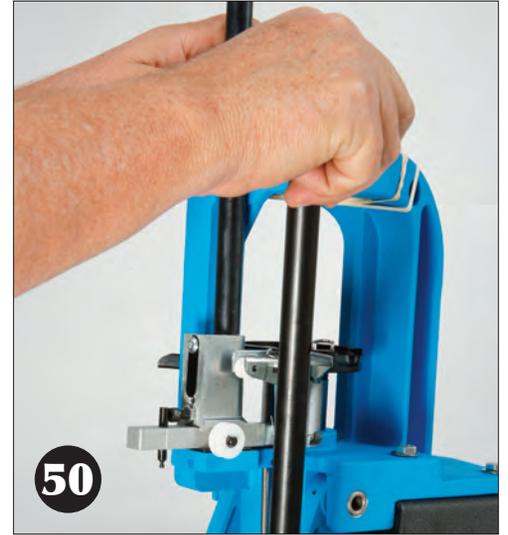
Then pull the Operating Rod out of the Operating Rod Bracket and set it aside.



**48**  
Unhook the Primer Slide Return Spring from the Primer Slide and let it hang in place.



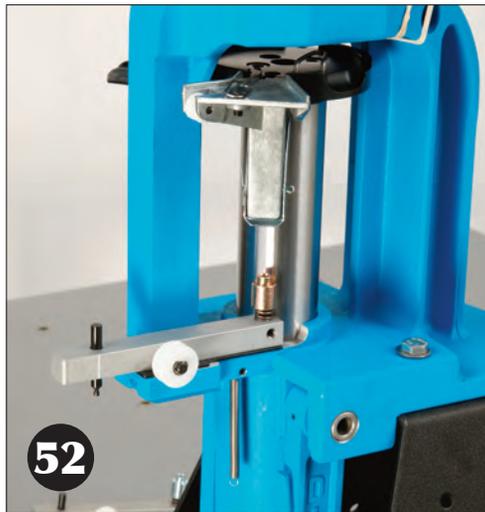
**49**  
Using a 5/32" hex wrench, remove the two Primer Housing Screws.



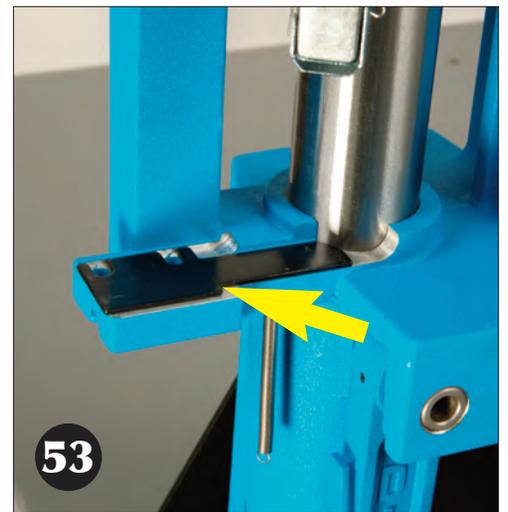
**50**  
Hold on to the Primer Housing and raise the Platform slightly by operating the handle.



**51**  
Lift the Primer Housing away from the machine and set it aside for the moment.



**52**  
Place the Operating Handle in the down position and note the position of the Primer Slide. Then, remove the Primer Slide and set it aside.



**53**  
Note the position of the Primer Track Bearing (see yellow arrow above) and keep in mind that it must remain in place for both large and small primers.



**54**  
Retrieve the Large Primer Slide Assembly from the accessory bag it came in and position it by placing the Primer Seating Punch/Primer Seating Cup assembly into the hole at Station One underneath the Platform.



**55**  
Slowly lower the platform and allow the Primer Slide to rest in its proper position as shown in photo 56.

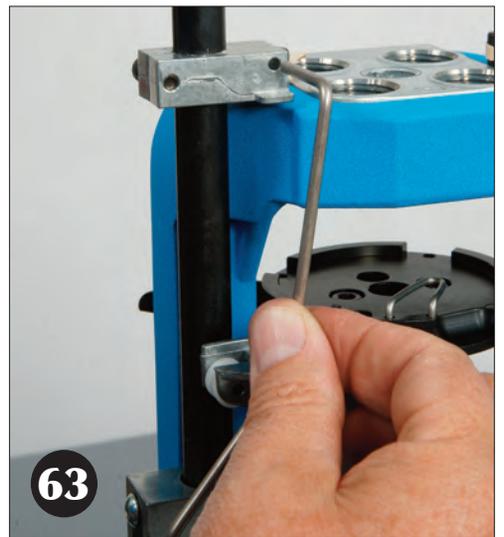
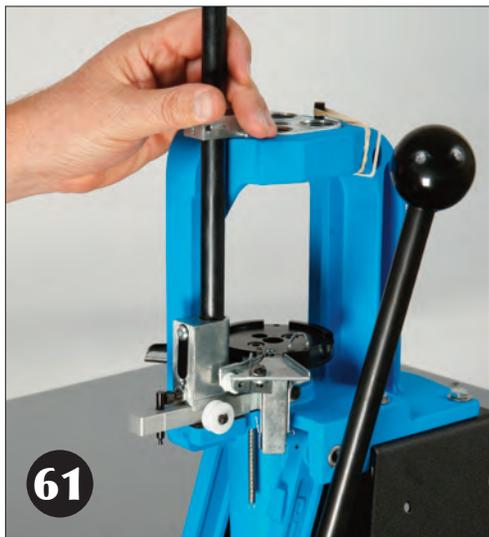


**56**





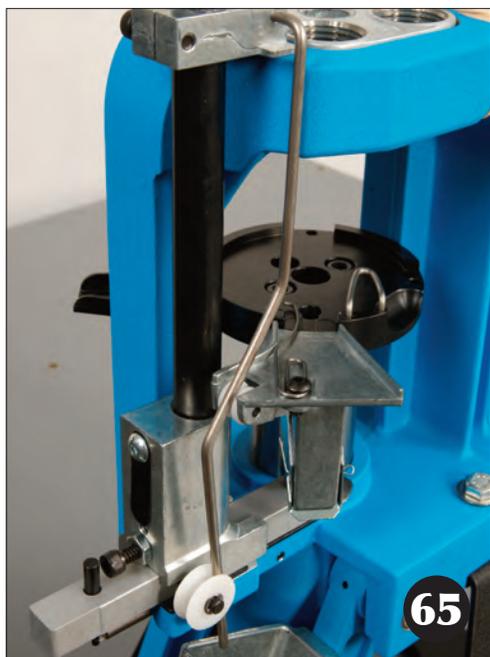
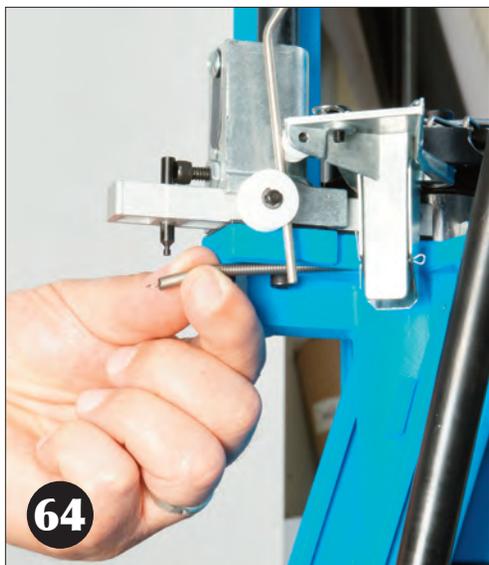
Before re-installing the Primer Housing, you must change from the Small to the Large Primer Magazine Tube Assembly. Unscrew the knurled Primer Shield Cap and withdraw the Small Primer Magazine Tube. Replace it with the Large tube and rotate it slightly until you feel the key on the Large Flexible Primer Orifice drop into place. You can see its proper position in photo 60. Replace the Primer Shield Cap and tighten it finger tight only. There's no need to overtighten.



Place the Primer Housing Assembly into its proper position.

Reinsert and tighten the Primer Housing Screws. Do not overtighten, as damage may result.

Replace the Operating Rod into position in the Operating Rod Bracket and between the two white rollers.



Replace the Primer Slide Return Spring.

65