

UniqueTek "Tips" File #14:

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"Using a Dillon Powder Check on an RL 550 Press"

By Lee Love

The Dillon Powder Check is a handy accessory. But it only fits on Dillon XL 650 and RL 1050/Super 1050 presses, because those presses have the extra die station needed for the Powder Check. It would be nice if the Powder Check could be used on an RL 550 press, but there is no empty die station where it can be installed.

There actually is a way to install the Powder Check on an RL 550 but you need to be willing to do two things.

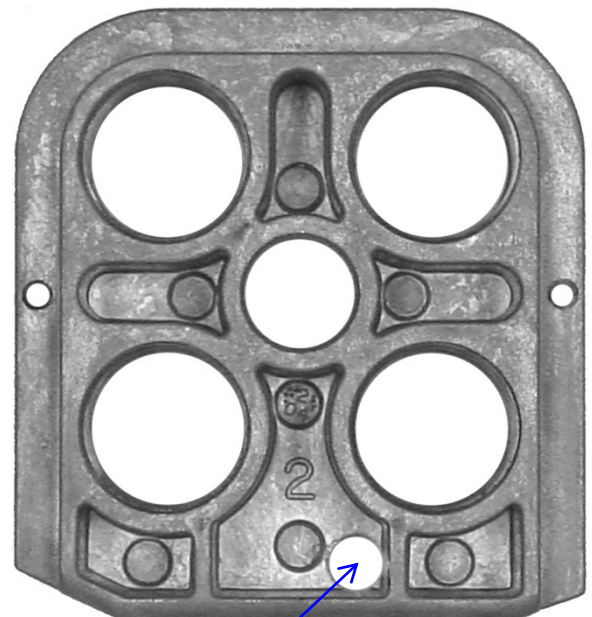
1. Drill a hole through the 550 toolhead to accommodate the Die Push Rod (#13603).
2. Use a combination Seat/Crimp die (instead of separate Seat and Crimp dies), freeing up Station 3 to hold the Powder Check.

It fact, this modification has been done before by many RL 550 owners, but modifying the cast Dillon toolhead is difficult, messy, and if done incorrectly, may excessively weaken the toolhead. This "Tips" file includes precise measurements and instructions that alleviate these risks and will work on BL 550, AT 500, RL 550B and RL 560C.

You also now have the option to use one of the currently available CNC Machined Toolheads that are solid aluminum instead of hollow castings. Because they are solid aluminum, there is no fear of weakening the toolhead.

Modifying an Original Dillon 550 Toolhead

At right is a photo of an original Dillon cast toolhead that has been modified to use a Dillon Powder Check. When modifying a cast toolhead, you must locate and drill the 5/16" hole from the bottom of the toolhead. This is the best way to be certain that it is in exactly the correct position to avoid compromising the stiffening and support structures cast into the toolhead. Simply position the drill bit tightly into the corner and drill the hole. If the drill bit wanders away from the corner during drilling, just clean up the hole with a round file (a 7/32" chain saw sharpening file works great) to make it as close into the corner as possible without cutting deeply into the walls. Don't worry about making a few scrapes on the walls, as this will not affect the strength of the toolhead.



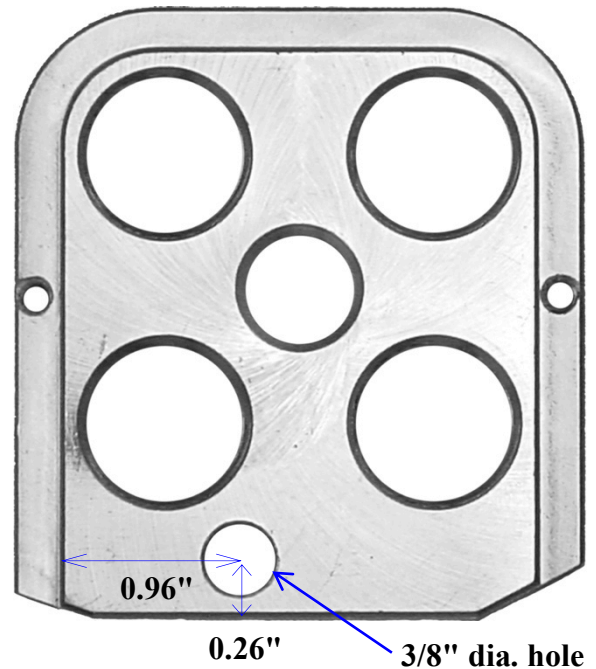
Drill 5/16" dia. hole here

You will notice that this hole is smaller than the hole in a 650 toolhead. Since the Die Push Rod is only 1/4" diameter, there will be sufficient clearance for smooth operation.

Modifying a Solid Aluminum 550 Toolhead

At right is a photo of a CNC Machined 550 Toolhead from UniqueTek, Inc., that has been modified to use a Dillon Powder Check. Since the toolhead is solid aluminum, there is no fear of weakening the toolhead by drilling a hole this close to the edge of the toolhead. The hole can also be larger (3/8") because there is no need to avoid drilling through any internal structures.

Although the photo at right is approximately full size, changes in image size can occur in the conversion to PDF format, as well as when printing. Therefore it is unlikely to be a good fit over your toolhead. Rather than use it as a template, I recommend that you use your calipers to locate the hole. If your drill bit does wander off center when drilling the hole, and the Die Push Rod ends up rubbing the side of the hole, you can always drill the hole a bit larger. After all, the hole in the 650 toolhead is 7/16". Just don't go so large that you break out the side of the toolhead.



Installing and Setting Up Your Dies

Install and set up the dies as per the instructions in your Dillon RL 550 press manual. Instead of separate Seat and Crimp dies, you will need to use a combined Seat/Crimp die installed in Station 4, leaving Station 3 open for the Powder Check. Combination Seat/Crimp dies are available from Hornady, LEE, Lyman, Redding, RCBS and possibly others.

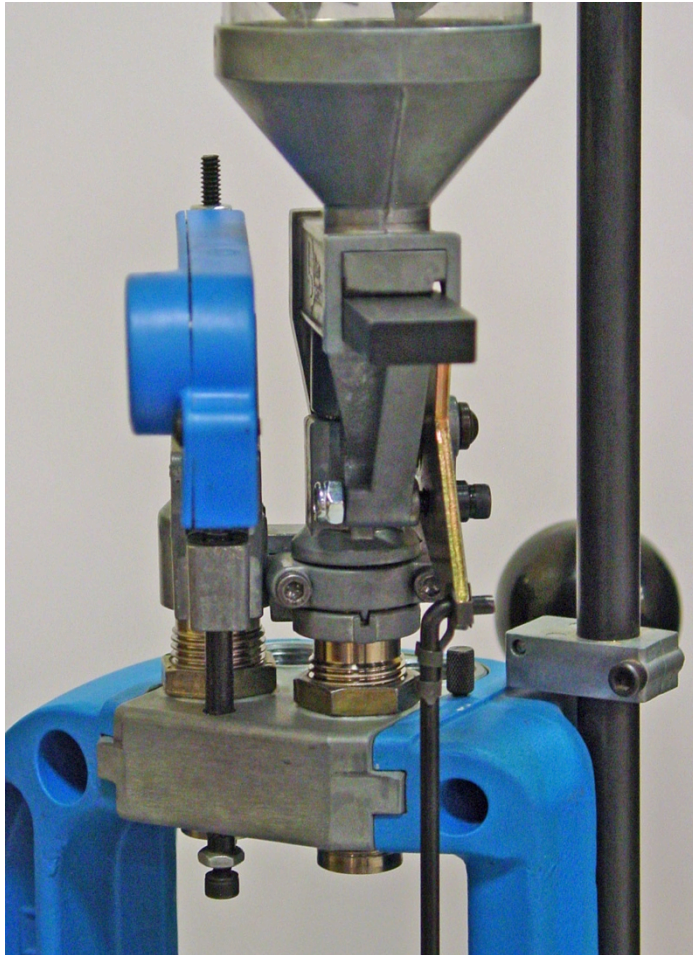
Installing and Setting Up the Powder Check

Detailed instructions for installation and adjustment of the Powder Check, complete with photos, is in the Instruction Manual for the XL 650, RL 1050 and Super 1050 presses. If you do not have an Instruction Manual for one of these presses, it can be downloaded in PDF format from the Dillon Precision web site at:

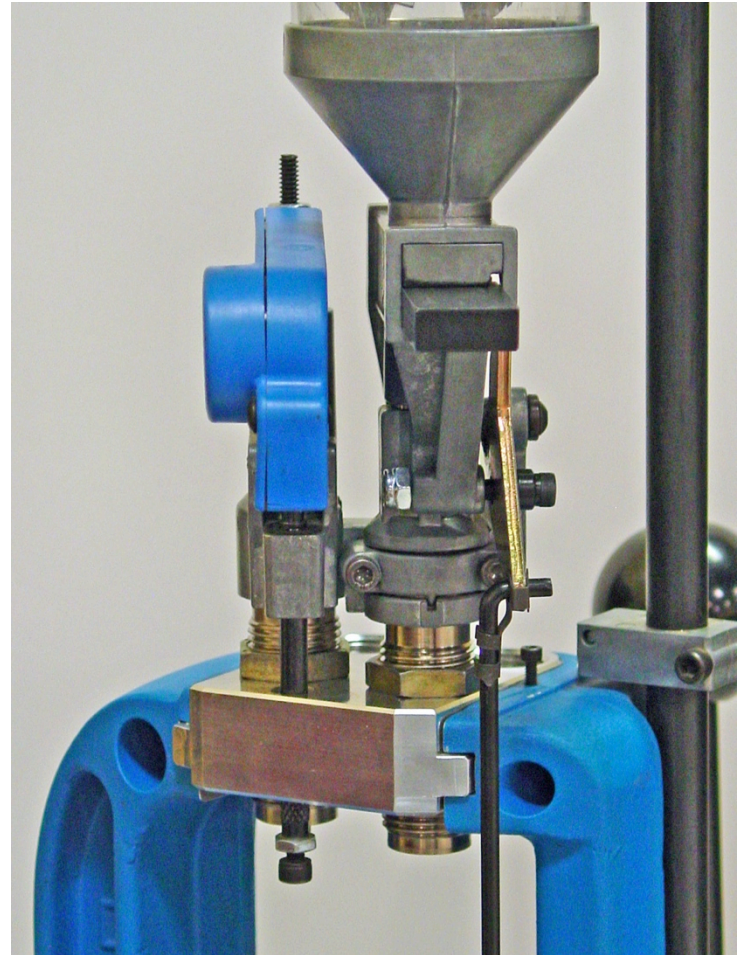
<https://www.dillonprecision.com/manuals.html>

When installing the Powder Check you will notice that there is very little clearance between it and the Powder Measure. It helps to leave the Powder Measure slightly loose on the powder die while getting the Powder Check installed and adjusted.

Below are photos of an RL 550 press with the Powder Check installed. One photo shows an original Dillon toolhead and the other shows a CNC Machined Toolhead from UniqueTek, Inc.



Powder Check on Original Dillon Toolhead



Powder Check on CNC Macnined Toolhead

Disclaimer: UniqueTek, Inc. assumes no liability for damages or personal injury that may be incurred as a result of making this modification. It is your responsibility to ensure that your reloading equipment is properly assembled, is maintained in proper working condition, and is used according to the manufacturer's instructions and safe reloading practices.