

-Patmarlins™ Checkmaker™ Gas Check Die Set Instructions-

Cutting Copper Strips:

A paper cutter is really needed for consistent cut disks, and quality uniform checks. I've been told Harbor Freight's version works well. If you are buying copper from me, it will come in sheets that are 8"x11" and 3 of those will make over 1000 gas checks. Cutting the strips on the 8" long side will most likely work the best.

Cut strips so they slide in smoothly. Here I made a measure gage by marking a line on cardboard, that will give me a quick guide to line up my (near 1/2" 30cal..check first) cut. I'm sure folks will come up with creative ways to do this, but this is easy and fast.



Dies as they come...

This left pic shows the die set as we will ship them with a ram ejector arm. The ram ejector arm shown is for a LEE classic cast. Your ram ejector arm will be for your model press. Next pic shows the die parts disassembled (shown with the LEE style Ram Ejector Arm).



Cutting Disks:

Slide the male die, in the lower female die as shown to make the male cutting tool. Only medium snug pressure is needed on the set screws. No need to crank down on them. Slide the male cutting tool in the shell holder.



Thread the upper 7/8-14 female disk cutting housing in your press with enough threads on top to get a nut on. **Carefully raise the male die up into the female housing and check for alignment-** ****If the male die does not clear the internal female cutter die, rotate threaded housing to correct, then tighten the nut-recheck.** May need to rotate male die also ****make sure the housing set screw is backed out of the way**** Snug tight is fine.



Check that your copper strip slides through easily from end to end, then insert your strip, and cut your disks. I love the LEE Classic Cast because there is ample headroom, and it's easy to adjust your arm where the leverage is comfortable. Level horizontal is about where I like the arm.



Cutting Continued...

When cutting disks- if the copper does not feed through easily, and is too wide at one point, trim it with scissors.

Also when cutting disks, if the previous hole bends the copper and hangs up some, send the ram back up and "kiss" the hole edge. Kissing it flattens out any problem bend, and makes it easy to slide for the next cut. This kissing, or tapping of the strip really works well.



Forming The Checks:

Insert the male die into the female 7/8-14 housing as shown, and tighten the set screw.



Set the ejector pin in the lower female forming die, and set the ram ejector arm in the ram's primer slot. Install the female forming die in the shell holder. ****make sure the lower female forming die set screw is backed out of the way****

Install the 7/8-14 female housing in the press as shown, and snug the nut. Bring the ram up and check for alignment.



Pic shows Lower female forming die with ejector pin, and ram ejector arm in press. The ejector pin's head is also the base that the check is formed against, providing a solid flat surface in the forming die.



Drop a disk into the forming die. ****The best way is to just drop it in**** Don't try to set it in there. If it doesn't fall dead center with the drop (most of the time it does), bring the ram up and just "kiss" the disk. 99 times out of 100, it will bump it in it's seat.

Forming continued...

With quick glance you will see the disk dead center in the forming hole, then send the ram up and form your check. As you bring the ram down, the ejector pin brings the newly formed check up out of the die, so you can remove it.



****Lube on the base of your boolits for aluminum gas checks, may cause the thin aluminum checks to slip. I've found better results with a dry base. Your mileage may vary****

It may take a little effort getting your moves together and getting used to the process, but when you do it goes very smooth.

The result is nicely formed concentric gas checks with a flat base.

Please do NOT hesitate to let me know if you have any problems whatsoever. I'm here to help.



Dear Shooters and Cast Boolit Brethren,

I would like to thank you for purchasing our Checkmaker™ gas check forming die set. Your dies should last years and years, and pay for themselves over and over again. As a thanks I have provided a sample of my great CFF casting flux to try out... -**Patmarlins™** "World Famous" California Flake Flux". **More** info about it can be found here:

<http://castboolits.gunloads.com/showthread.php?t=27972>

Your dies are backed by a "No BS" warranty, and are guaranteed to perform to your satisfaction or your money back. We will issue a refund within 30 days for your dies in undamaged condition.

My goal is to perfect the look and the performance of our Checkmaker dies for all calibers to come, and address any performance issues that might come up. All dies are guaranteed to be spot on.

To start- the standard base line metal designed to work with your dies is .010 copper.

Good results have been reported up to .018 and as thin as .006. If you're using a different metal such as aluminum and/or different thickness, there may possibly be some performance issues as a result, and this works hand in hand with the size of your check shank as well. Some aluminum is way to hard and needs to be annealed. Metal too hard tears, and does not form well. You may need to order the optional ejector pin for your different material. The optional pin helps with thin beverage can aluminum, and can be used with thicker material for loose fitting gas check shank molds.

Notes on our **Ram Ejector Arm**. This is the arm that sits in your ram's primer slot on your press, and brings your formed check out of the die. We have two basic designs- **the LEE style**, and **the RCBS style**. So far we have found that our rcbs style Ram Ejector Arm, works with all RCBS and other presses with a slotted rams as well as Redding, Lyman, and Hornady. We are working with users to perfect these arms and make sure.

Presses that will not work with our Ram Ejector Arm and Check Ejector Pin are the non- ram slotted presses such as the LEE Challenger press. The only way to get the check out of the female die is to remove each one manually. If you upgrade to a better press, I will provide a ram ejector arm at no charge.

You really need a paper cutter to make accurate cut strips of metal, as this makes the process easier with consistent cut disks, and uniform checks. Sliding an uneven strip through the punch housing can be a pain, and may not produce round disks, plus it wastes material.

You need a solid reloading bench with no flex, looseness, or wobble, and a strong press.

If you have any problems using your Checkmaker dies, please PM or email right away so I can help. Sometimes the simplest thing can make a world of difference in ease of operation, and if there's a problem with one of the components, we need to get it taken care of right away: **mail@patmarlins.com**

We are **NOW CNC!**, and working on sets for all caliber's and plain base mold bullets.
These instructions are also available as an Adobe PDF download.

Thank you for your business and support,

Pat

Patmarlins™ -Specialty Products for Casting and Reloading
West Coast Engineering
<http://www.Patmarlins.com>

RCBS style Ram Ejector Arm

1/4" bent square stock that sits like pictured, with the longer end sitting behind the Primer Arm pin that normally holds your primer arm. Most presses are like this, except for the LEE Classic Cast.

Please contact me if you have problems with the ejector arm.



Sharpening The Checkmaker male disk cutting die is hardened steel and fortunately VERY simple to sharpen unlike a conventional hole punch. Anyone can do it in a minute. You need to purchase an EZE-LAP flat diamond hone sharpener. I've bought these on sale for around \$7 here:

<http://www.use-enco.com/CGI/INSRIT?P...&PARTPG=INLMK3>

EZE-Lap Diamond Products Inc
Carson City, Nevada
Model LF
Made in the USA

These diamond laps also come in handy for a multitude of uses. I sharpen my own utility knife razor blades with these laps even over and over. Also carbide drills and lathe tooling right on the machine. Simply install your male die like you had just finished cutting a disk, and leave the ram fully extended. Hold the lap dead flat on top of the die as shown and pull into the edge with a few light strokes. It puts an edge on our hardened steel male die easily. Even after hundreds of disks cut, I still have not needed to sharpen the die.

