

Tau-7 & Tau-7 Jr Dry Fire Adapters

Doug White 2/11/2012

The adapters are designed to permit dry firing Tau-7 and Tau-7 Jr CO2 pistols without releasing CO2, and to reduce wear to the firing valve and seal. They are constructed from Ultra High Molecular Weight (UHMW) polyethylene, and should last nearly indefinitely.

There are two sizes of adapters. The ones with the red dots are slightly larger, and will work best in the regular Tau-7 pistols. The ones with the yellow dots are for the Tau-7 Jr pistols (Figure 1).

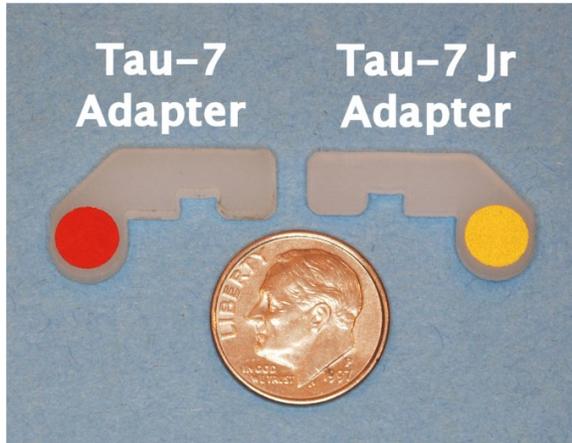


Figure 1: The two dry fire adapter sizes

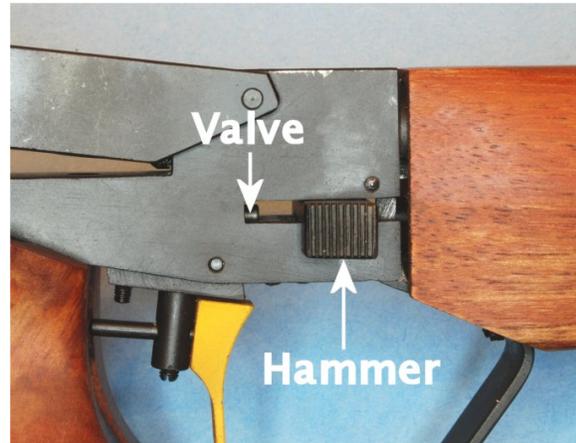


Figure 2: Tau-7 Firing system

How They Work: Cocking the pistol's hammer (see Figure 2) compresses a spring. When the hammer is released, it hits the end of the firing valve, which is a small round rod visible in the hammer slot. The notch in the dry fire adapter fits over the valve pin, preventing the hammer from hitting the valve. The length (front to back) of the adapter is designed to slide in over the valve when the hammer is pulled ALL the way forward. This helps hold the adapter in place when the hammer is in its normal cocked location.

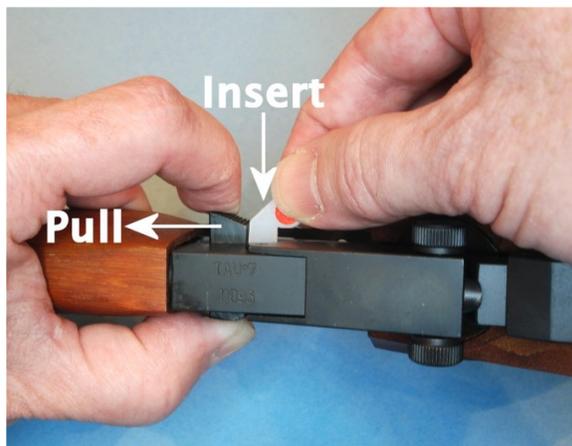


Figure 3: Installing the dry fire adapter



Figure 4: Dry fire adapter installed

Installing and Using The Adapter: Make sure the pistol is unloaded and keep the muzzle pointed in a safe direction. The adapter can be inserted from either side. Grasp the barrel and forend with one hand so that you can easily pull and hold the hammer all the way forward past the point where hammer normally latches (see Figure 3). This should provide enough room to slip the adapter in over the tip of the firing valve. Do not force it, or it may be difficult to remove! Slide the adapter all the way in, and release the hammer (Figure 4). The hammer will hold the adapter in place, and you can proceed to dry fire, cocking the hammer normally after each shot.

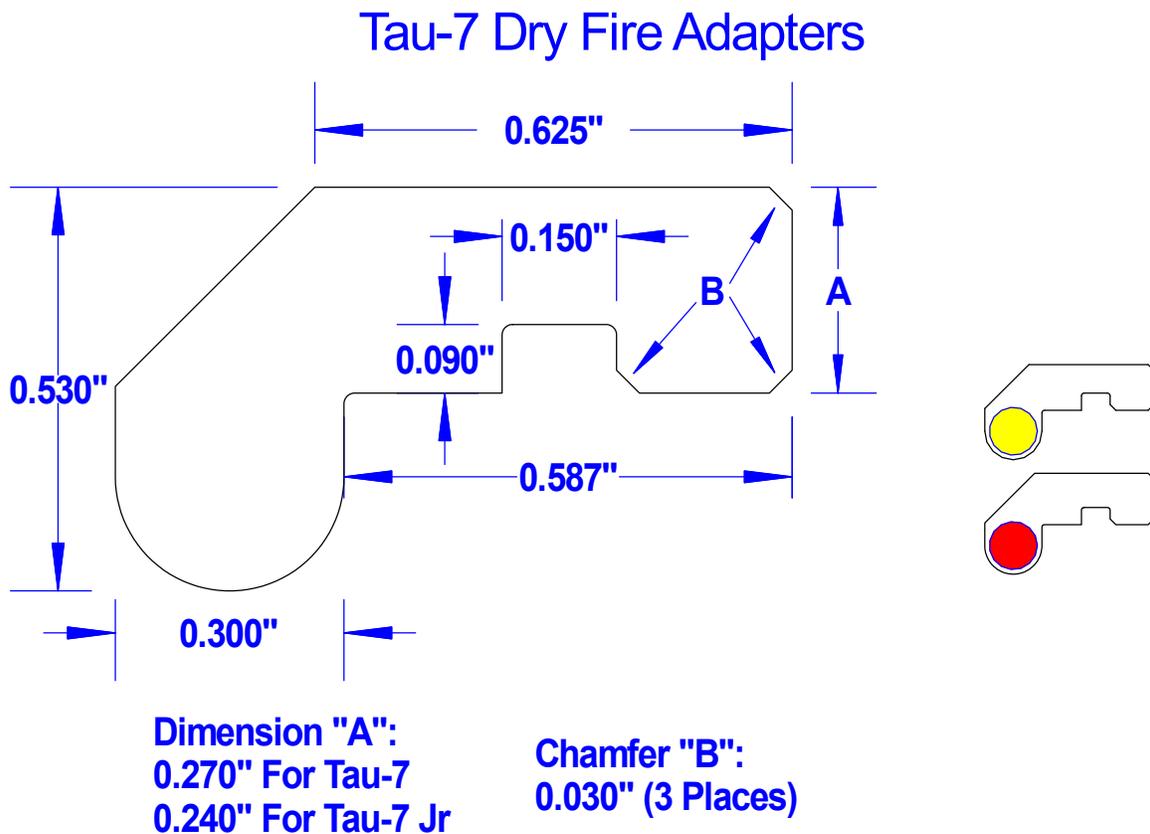
Removing The Adapter: The process for removing the adapter is roughly the reverse of the installation process. However, you must also push the adapter towards the muzzle (against the hammer) to ensure that the notch clears the tip of the valve. After that, it should slide out to the side.

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In Case of Trouble: The two designs have been tested in a wide range of Tau-7 and Jr pistols. However, there is considerable variation in the dimensions from pistol to pistol, and it's always possible that the fit in any one pistol may be less than optimal. The critical dimension is the distance from the front to the back of the adapter. There are two possible dimensional problems:

- 1) Adapter is too long: With the hammer held ALL the way forward, the adapter should slip easily into place. If it takes any sideways pressure, the adapter needs to be trimmed along the front edge. The polyethylene material is easy to cut with a SHARP thin knife, but it is also easy to remove too much material, so use a straight edge & go slow. Shortening the adapter will also make it easier to remove. There is a bevel cut on the outer corner of the notch to aid in removal, and you can also try widening this ramp slightly if the adapter installs OK, but you have trouble getting it back out.
- 2) Adapter is too short: This allows the adapter to fall out when the hammer is in the cocked position. It's very unlikely to happen with the larger Tau-7 adapters, but it could be an issue with the Tau Jr. adapters. Even if the adapter is loose, as long as you don't wobble the pistol about too much, the adapter should stay in place. The only good fix for this would be to go to the larger adapter.

Design Info: If you want to make one of your own, you can cut them out on a bandsaw and trim them with a sharp knife. The material is 3/32" thick UHMW polyethylene sheet (McMaster Carr # 4196A23). The dimensions are shown below, and there are two templates that should be ~ 1:1 scale that you can tape to the plastic as a cutting guide. For "production", I used an Omax abrasive waterjet machine, but that's serious overkill if you don't need to make dozens of them. The colored dots are punched from automotive reflective tape.



Questions or comments are welcome. Dry fire adapters are available for a \$10 minimum tax-deductible donation to the MIT Sport Pistol Team. Contact Doug White: gwhite@alum.mit.edu for details.