

## **A-Line "Bulls Eye Drill Jig & Tap Jig" Instructions**

The purpose of the "Bulls Eye Drill Jig & Tap Jig" is to repair, loose Athearn metal coupler box covers. These covers are used on many pieces of their rolling stock.

The "Bulls Eye Drill Jig" #11000 is used as a guide to drill a hole through the center of the coupler box-pin, so that it can be tapped for a 2-56 x 1/8 screw. The "Bulls Eye Drill Jig" is designed to be used with a #50 (.070) drill only, #11001. Be sure to measure the diameter of the drill with a micrometer or veneer calipers to make sure it is the correct size. To use the "Bulls Eye Drill Jig", press the small end over the center boss of the coupler pocket, all the way into the box. If correctly inserted, the jig will stay captured in the pocket at a 90-degree angle. While drilling the hole, it is important to clean out the waste chips frequently, as they can keep the drill from turning easily. After drilling the hole in the coupler box-pin, you can now tap the hole with a 2-56 tap. \*Make sure the tap is kept at a 90 degree angle to the box when tapping. This will ensure that the screw-head will make a flush contact with the metal coupler-box lid and pull it up tight to the box.

You may want to purchase the A-Line "Bulls Eye Tap Jig & Tap" #11002 if you are planning to repair a lot of equipment. The "Bulls Eye Tap Jig" will speed up the tapping process while ensuring a consistent 90 degree alignment to the coupler-box while tapping.

We recommend using a pin vise for holding the #50 drill and also the 2-56 tap. This allows the most hand-control over the tools. Electric drill or full size tapping handles do not allow you to feel what you are doing because of their weight and size.

You may also want or need to remove one of the truck-wheel sets closest to the coupler or remove the truck completely, if this makes the operation easier for you.

Suggestions for tapping through metal: Make sure that when you tap through metal you use a light oil on the tap. As you start tapping into metal use a slow, in & out, screwing motion to allow tap to cut and be able to clear cutting chips. About half way through you may want to back tap all the way out and clear the threads of the tap and tapped hole of chips, then finish the tapping operation.

Another suggestion would be: Although a little tricky to do without some practice, the drilled hole can be partially tapped, to allow the screw to tighten, on its own.

- #11000 Drill Jig & (6) 2-56 x 1/8 Black Screws (Requires #50 Drill)
- #11001 Drill #50
- #11002 Tap Jig & Tap
- #11003 Drill Jig, Tap Jig & Tap
- #11004 Screw Pack (pkg. 50) 2-56 x 1/8 (Black Oxide Color)
- #11005 Metal Coupler Box Covers (pkg. 25)

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