

Removing a stuck bullet or jacket

First rule is NEVER to do these things under any circumstances:

NEVER try to melt the bullet out of a die. This ruins the careful heat treatment of the die.

NEVER try to drill, dig, file, scrape, or pick the bullet out of the die with cutting tools or sharp objects.

NEVER use acids or harsh chemicals to try and dissolve the copper or lead from the die.

If you try to drill out a bleed hole, a point forming die, or just about any other kind of swaging die, the odds are almost 100% sure that you will ruin the die. Drilling out bleed holes and ejector pin holes almost always results in breaking the drill off, in the hole, which can render it impractical to save the die (can be cheaper to make a new one than invest the time into trying to save the old one.)

Bear in mind that the dies are extremely hard, but also have a diamond lapped finish at an extremely precise diameter in their cavities. Extrusion holes in bleed type dies are usually venturi-shaped with a larger hole toward the outside and a smaller one joining the die bore to this larger hole. Putting a drill bit into what appears to be the straight-through hole means your bit will jam into extremely hard die steel as soon as it passes through the larger opening and hits the smaller one, snapping it off in the hole.

There is no need to do any of the above, fortunately. The much better way to remove a stuck bullet from a point forming die is to push it slightly further in, so the grip is broken, and then use a short piece of ejection pin wire to tap the stuck bullet out, or to poke a new hole in it so you can close it back up and try again, several times. Each time weakens the grip. Eventually it falls out, in most cases.

Caution: do NOT substitute other kinds of ejectors such as nails, hex keys, drill bits, ice picks, knitting needles or anything else for the correct size of spring temper ejection wire -- order a pack of 5 ejection pin wires for spares and use one of them, or just ask for a short piece to be sent to you in the mail.

The cause of a bullet sticking in a point forming die can be and usually is one of these:

1. Insufficient lubricant (wrong kind or none used).
2. Pushing a component into the die that started out larger than the hole in the die (oversized going in).
3. Debris, abrasive dust, other contamination on the surface of the bullets which pressure-weld to the die walls.

Always use Corbin Swage Lube for the point forming operation, make sure the seated core and jacket going into the point form die is at least 0.0001 inches smaller than the die bore, and keep the jackets and lead free from road dust, or the contamination of shipping containers or storage bins (which may have held other materials, which in turn may have left a film on the jacket, which in turn may deposit in the die under pressure).

When a bullet sticks to the point where the ejection pin penetrates the bullet, remove the pin by turning and pulling it straight out, and close the hole by pushing the bullet further into the die with no ejector installed. Use a short piece of the same size and kind of ejection pin wire to tap the bullet out.

If the wire penetrates the bullet, stop and pull it out before it is driven too far in to grasp. Then push the bullet back firmly, to close the hole. Repeat until the jacket fatigues and the bullet falls out. If it does not do so in 10-15 attempts, send the die back for removal of the stuck bullet. The only charge is shipping.

JACKETS STUCK ON PUNCHES

To remove a stuck jacket from a punch, place the punch and jacket on a steel surface (vise, small anvils, block of metal) and tap gently on the jacket as you rotate the punch and jacket around in a circle. After a couple of full revolutions with lots of gentle tapping, the jacket expands and releases from the punch.

Do not use vise jaw pliers, a propane torch, battery acid, dynamite, or other inappropriate means which will mar, mash, corrode or destroy the punch. If you cannot remove the stuck jacket easily by rolling and tapping the jacket just return it for free removal. The only cost is the shipping.

If the bleed holes in a core swage or other kind of bleed die seem to be "clogging", and you are not using dirty range lead or other lead that is contaminated with non-ductile elements, the problem is usually not really a "clog" but rather some portion of the bleed hole being blocked by one of the punches at the end of the stroke. Trying to make a bullet shorter than will position the punches away from the bleed hole area is usually the reason for this. One of the punches, normally the external punch, is pushed up to or past the area of the bleed holes, and the lead has no place to go. The holes are not "clogged" so much as blocked.

Lead normally flows through the venturi-shaped holes, which are small on the die bore side and open into a larger hole at the die OD. Everything about them is designed to release the lead flow easily. There is really nothing to "clog". If lead can go through them, it will. But the pressure has to be high enough to flow the lead, a minimum of about 2,500 psi and usually closer to 5,000 psi before this happens as it should.

If anything else is stopping the ram or the punch stroke so it cannot fully pressurize the lead, it won't flow, and may give the appearance of the holes being clogged. In fact, this never happens with clean soft lead. It can happen if hard particles of sand, grit, metal, etc., are mixed in with the lead and are driven into the bleed holes. This is avoided by using pure lead wire rather than melted range lead.

Drilling the bleed holes will invariably ruin the die and almost always break the drill off in the hole. Likewise, do not heat the die to melt out the lead. The sand, metal, or other object blocking a hole won't melt out but the temper of the die will be ruined. Send the die to us and we will fix it, just for the cost of return shipping.

When shipping dies and punches, be certain to wrap each component part by itself, in some kraft paper, bubble wrap, foam wrap, cloth, something other than just tossing them loose in a poly bag and letting them slam against each other with each vibration, toss and kick administered to the package during the long journey.

Bear in mind that the value in the hardened steel parts is primarily in their precision finish and size. If you whack two hard metal parts together over and over again, precision is one of the casualties. First to go is cosmetics, their appearance. Then accuracy. Eventually even the function is beaten out of them. Putting precision swage dies in a cement mixer and letting them bang around for an hour or two would have the same effect without the cost of postage.

When returning anything, please include a slip of paper inside the box with your name, address, and a hint of why you are sending the content. Please summarize any phone or email conversations. While you only had perhaps one or two such conversations, we have tens of thousands of them every month and hundreds of them in a day. It can be difficult to recall all the details.

A note that only says "Here's the stuff we talked about last Thursday" and signed "John" can be a problem. Last Thursday might stand out sharply to you, but might not be quite as memorable to the person opening the package two or three weeks later. Even the return address labels sometimes arrive in unreadable condition. If you write the date, name, address, phone number or email and specific details in a brief note, your mailing won't be a "head-scratcher" that sits on the shelf until we finally get your frustrated inquiry, allowing us to solve the puzzle of the mystery box.