

Troubleshooting Silent Click Mechanisms

Silent click pens are becoming popular. Their self contained mechanisms can offer reliability than doesn't rely on as many factors as traditional multi-piece mechanisms. However, there are several issues to which they are prone. If you have assembled a pen already and need to repair the click assembly, it must be pulled out with vise-grips. You are advised to remove the clip to prevent scratching on the barrel. Call PSI for replacement.

Luckily, the issues are easily remedied. The first one is in regards to the assembly of the mechanism. The mechanism is threaded into the plastic sleeve which is attached to the clip assembly. If this section is not tightly secured, it can unthread when the plunger is screwed onto the opposite end, causing the internal parts to mis-align and jam. This is solved by a quick turn of the mechanism to make sure it is properly tightened. If you wish a small drop of CA glue at the seam will make sure it doesn't unlock. This is well away from any moveable parts, so with some care, it should be safe to glue.



It is also a good idea to thread the plunger on and test the mechanism with pressure from a small rod or ink refill to simulate the action of the spring. You can, if you wish, press the whole assembly with plunger on by simply using a scrap piece with a hole large enough to slip over the plunger. By applying the pressure to the scrap piece it will transfer to the assembly, not the plunger, and you are assured that the mechanism is installed as tested. Measure the outside of the plunger to make sure of size. Most plungers have been found to fit well in an 8mm hole.



Another problem can be found in the stem which can occasionally cause a great pen to become a problem. If you remove the plunger you will notice that the stem of the mechanism is hollow.

This can lead to breaks when the user drops the pen and it lands badly on the plunger. The hole does not go all the way through to the moving parts, so it is a fixable problem. This guide will show you how to use a nail as a core to reinforce the stem to help prevent breakage. For this guide, the click assembly used was from PSI's Stratus pen.

Step 1: Preparing a Nail for the Core.

First off, you will need a 15 gauge brad nail. Length is not as important as the gauge, but it should be longer than 5/8". A sanding disk was used to flatten down the head to keep it from interfering with plunger attachment. The whole length was cut to around 5/8" and the tip was touched to the sanding disk just to take the burrs from cutting it to length.

As you can see from the picture, the resulting core is exactly 5/8". It does not need to be this exact, just close to this length. If you want to check the fit, drop it into the stem and make sure it seats all the way to the head.



Step 2: Gluing the Core into the Stem

This is the tricky part. Please read the entire section before attempting, so you know what you'll have to do. You want to get glue into the stem without it spilling over and getting on the threads of the stem. This would possibly cause problems when putting the plunger on. To accomplish the gluing, use thick CA and a paper clip.



Make sure everything you are working with is close together so the glue doesn't dry before you're ready. Keep in mind that you will have about a minute to do this, so do it quickly, but there is no need to rush it and maybe make a mistake.

Make sure the stem is on a level surface. Put a drop of glue on the end of the paper clip and put the glue bottle down. Use the hand that was just holding the glue bottle to steady the click assembly. Now that the glue is on the paper clip, put the clip with the glue drop into the hole.



There will be a few moments when the air in the hole will not let the glue flow into it. Don't worry, just wiggle the paper clip slightly and the air bubble will break and you can spread the glue down into the hole. Just remember to not let the glue spill over onto the threads. Remove the paper clip quickly and set aside. Pick up the nail and drop it into the hole.

Set aside to let the glue cure. Once it is dry, you will be able to screw the plunger onto the stem and you are done. After going through this process, the example assembly was put together and banged sharply and repeatedly against the edge of a table and there was no breakage or evidence of cracking on the stem.