



Dismantling pen kits for repair

In the next part of this series, **Walter Hall** looks at a number of useful methods for disassembling common pen kits for repair

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One thing for certain if you make pens is that one day you will need to dismantle a pen you have made, either to repair it or to replace worn out components. Pens get dropped or careless owners do the most outlandish things with them, trying to fit the wrong refills or

carrying out inappropriate maintenance. Sometimes with wooden pens, the barrels just crack because of a change in temperature or humidity or, wood being wood, for no discernible reason at all. The cheaper platings or mechanisms may wear out before your handiwork on the blank does and finishes can peel, crack or go misty for a list of reasons as long as my arm. Whatever the reason, there will come a time when there is no option but to take a finished writing instrument apart.

Tools for dismantling

In the early days of pen making when there were only a handful of pen kit styles available and most people only made pens using the ubiquitous slimline kits, the 'pen dismantling kits' that were, and are still available, were adequate to meet most



The standard pen dismantling kit

maker's requirements for dismantling work. Consisting of two steel rods and a steel cylinder with a central bore to match the external diameter of a slimline mechanism,

they served their purpose well enough.

Nowadays, there is an astonishing variety of kits available to the pen turner and the range of tube sizes means that the simple dismantling kit alone is no longer sufficient for our needs. The most useful toolkit for anyone who needs to dismantle pens consists quite simply of a set of engineer's transfer punches. As you can see from the photo, mine, which are stored in a handy wooden block, get a lot of use and are starting to look a bit battered. Available in imperial and metric sizes, the imperial is perhaps the better choice as most pen tubes are designed for the American market and thus in imperial dimensions. As you can see from the photo, mine get a lot of use and are starting to look a bit battered. The smallest size especially gets used for all sorts of tasks its maker never



A set of engineer's transfer punches

intended. As I shall explain here, in certain circumstances, a tube is a more useful tool than a punch and over the years, I have collected a selection of various sizes. They



Various sizes of pen tube

have got me out of some tricky dismantling problems so I thoroughly recommend never throwing away a tube that is not immediately required. You will find a use for it one day.

Dismantling methods

While not the best option, sometimes gripping, pulling and twisting can be the only way to remove a component. To do so requires care and a restrained and measured amount of force. Fibre jaw inserts for your vice are useful if you need to grip plated components. Unprotected jaws will destroy the plating, so do not be tempted to proceed without adequate protection. If fibre or nylon jaw inserts are not available, then improvise!

Likewise, any grips or pliers used for pen dismantling should have soft jaws. The ones in the photo are designed for plumbers to dismantle plated bathroom or kitchen fittings, but do a good job on pens too if used with care.

To dismantle a slimline pen using either a proprietary dismantler kit or transfer

punches, after removing the refill and centre band, the thinner rod, or a suitably sized punch, is passed through the mechanism until it contacts the writing tip and is then tapped gently with a hammer until the tip is freed from the tube.

The pen is then inverted and the mechanism inserted into the bore of the steel cylinder. If you don't have a dismantler kit, then a suitably sized hole drilled in a block of hardwood will do the job just as well. The thicker rod, or a suitable punch, is then used with light hammer blows to drive the mechanism out of the tube.

The same rod or punch is then used to gently tap the clip from the other tube. A builder's gripper glove is useful to help prevent the blank slipping from your grip.

Now you have a set of components that

are ready for the barrels to be refinished as required, or, if the wood is irreparably damaged, the tubes can be returned to the lathe and the old wood turned away ready to start again with a new blank. Do take care to clean up the blanks properly and remove all the old adhesive to avoid problems on reassembly.

Having spent many frustrating hours searching the workshop floor for components that have ricocheted off into far corners or under machinery only to find they have suffered impact damage to the plating as a result of their unscheduled flight, I can highly recommend placing a soft cloth – microfibre car polishing cloths are ideal – into a suitable container and aiming the, soon to be detached, component into a safe receptacle.



Removing a component using a combination of gripping and pulling



These plumber's pliers are ideal for pen dismantling, thanks to their soft jaws



Driving the mechanism out of the tube



Tapping the clip from the other tube, using a builder's gripper glove



A set of components, ready for the barrels to be refinished as required

❏ The split-tube method

With some kits, especially those with click mechanisms, it is not possible to remove the mechanism and associated clips, etc. with a punch without causing damage. There are, however, ways to get around this. If the writing tip can be removed from the other end of the tube, then a tube of suitable dimensions can be used to contact the metal surrounding the mechanism without touching the mechanism itself. Finding exactly the right diameter tube is essential, but a work around is to slit a slightly too large tube along its length so that it can be compressed into the pen tube.

In the photo here, you can see how a slit tube has been inserted into the open end of a click pen once the writing tip has been removed. This will slide up the tube, around the nylon parts of the mechanism and contact the metal body of the clip end components.

With a suitably sized transfer punch, the split brass tube is then used as a drift to drive the components out of the tube.

The close-up shows how the slit tube slips over the plastic parts but is still able to contact the end of the metal components, thus enabling the parts to be removed without damage to the mechanism.



Slicing a slightly too large tube along its length can help to match the diameter of your tricky pen



A slit tube has been inserted into the open end of a click pen once the writing tip has been removed



Using a suitably sized transfer punch to drive the components out of the tube



The slit tube slips over the plastic parts but is still able to contact the end of the metal components

Punch & hammer method

Sometimes, as with this sierra click pen, it is just not possible to remove the threaded insert from the tube without removing the mechanism first. In this case, it is not practicable to use the split-tube method so we need to find an alternative.

It is difficult to get a good photo of the inside of the pen tube, but it is just possible to see the outline of the brass components at the top of the pen surrounding the nylon click mechanism. We need to find a way of driving against the brass without damaging the mechanism.

By angling a suitably sized punch so that the end contacts the brass, tapping gently

with a hammer and then revolving the blank slightly and repeating, slow iterative progress can be made which will in the end release the mechanism without damage. Don't try to rush it and don't use too much force.

Gentle persistence results in an undamaged mechanism, which can be reused when the pen is refinished and reassembled.

If necessary for whatever repairs are proposed, the components at the other end of the tube can be removed using a punch as close as possible in size to the inside diameter of the brass pen tube.

Once again, the builder's glove is brought into play to help grip the barrel.



Here, it is not possible to remove the threaded insert from the tube without removing the mechanism first



The outline of the brass components at the top of the pen surrounding the nylon click mechanism



A suitably sized punch, a hammer and revolving the blank will allow it to release without damage



The undamaged mechanism can be reused and reassembled



The components at the other end of the tube can be removed using a suitably sized punch



To grip the barrel, use the builder's glove as before

Tip for fountain pens and roller balls

The methods outlined in this article may be used to dismantle most types of pen kit. I cannot remember an occasion in recent times when I have been defeated in my disassembly endeavours. As always, these are only the methods I use and I am sure there may be other techniques of which I am not aware. I am always happy to hear of other methods – we never know so much that we cannot learn from others. One final tip: if you are dismantling a fountain pen or rollerball with a decorative insert in the clip end of the cap, take care not to separate the insert from its seating. It may be wise to use a tube as a drift rather than a punch so as not to be striking directly onto the peg that retains the insert or directly onto the inside of the end of the component. ●



With fountain pens or rollerballs with a decorative insert in the clip, take care not to separate the insert from its seating