

## REPAIRING “SPIRAL” MECHANICAL PENCILS

Autopoint made an inexpensive series of pencils that collectors often refer to as “spiral” mechanical pencils. They were mass-produced to be sold primarily to telephone companies, and were utilized with very soft, “mark sensing” leads to annotate toll charge slips. They were also popular for marking the cards used to input data into early computers, and for the preparation of income tax returns. They were inexpensive to produce since they had only one moving part. Some “spiral” pencils were produced with pocket clips and erasers, like the example illustrated below, but many were also produced without pocket clips, and without erasers.

Note: Always read through all the instructions before beginning any repairs. Since this is a “pdf” file, just use the “+” button to enlarge the images, if you want to study them in more detail.

Here’s a typical dark green paneled “spiral” pencil, with the Autopoint logo inscribed on the pocket clip. Note that the metal writing tip has a knurled portion in the middle



Here’s the other side of the same dark green pencil, with the ubiquitous “Bell System Property” in raised lettering on one of the flats or panels.



To disassemble the “spiral” pencil, grasp the knurled writing tip in one hand, and the dark green barrel in the other, and gently pull the writing tip straight out of the pencil. The “innards” are held in place simply by friction, and usually come out easily. Be very careful to keep the “innards” in line with (aligned with) the barrel as you pull, so the “spiral” doesn’t get bent.

This picture illustrates the business end of the “innards”, as they’ll look when pulled out of the pencil. Note the brass colored “lead follower”. The curved part that is outside the “spiral” is the rear end of the “lead follower”. If you look closely, you can see that the brass colored metal piece also extends down through the center of the “spiral” toward the metal writing tip. This pencil is obviously just about out of lead.



To add more lead, the “lead follower” must be removed. Hold the “innards” by the knurled metal writing tip, with the tip up and the open end of the “spiral” down, and gently tap the open end of the “spiral” on a hard surface, like a desk. If the “lead follower” and the “spiral” haven’t been bent, the “lead follower” will spin right down the open channel in the “spiral”, and fall out the end, as illustrated below. At this point you can see that the “lead follower” is shaped much like a shepherd’s crook.



Assuming the pencil is completely empty, just slide a length of lead down the inside of the “spiral” (these usually require 0.046” or 1.1mm diameter leads). Then place the “lead follower” back into the “spiral”, long end first with the “crook” or curved end of the brass colored “lead follower” farthest away from the metal writing tip. If as you insert the “lead follower” you hold the “innards” with the metal writing tip down and the open end of the “spiral” up, and the “lead follower” and the “spiral” haven’t been bent, the “lead follower” will spin right down the open channel in the “spiral”, until the tip of the “lead follower” hits the back of the piece of lead inside the “spiral”. If the pencil isn’t quite empty, just add another piece of lead on top of the short piece that remains, and replace the “lead follower”.



Replacing the assembled “innards” into the barrel is also easy. The end of the barrel has a metal tip to guide the assembled “innards” into place, and the metal tip has a slot for the top part of the “lead follower” that sticks outside the “spiral” (picture of the slotted tip at left). Take the assembled “innards” in one hand and the dark green barrel in the other hand, and gently push the “innards” straight into the slotted tip of the barrel, until the metal writing tip is seated against the plastic barrel. Keep the assembled “innards” lined up with

the barrel as you push those parts together, to avoid bending the “spiral”. And when you get to the part of the “spiral” that has a short part of the brass colored “lead follower” outside the “spiral”, make sure to align that portion of the “lead follower” with the slot in the metal end of the barrel.

These “spiral” pencils are not highly collectible. Thus they remain readily available and usually inexpensive. It will frequently be easier to find another “spiral” pencil than to actually repair any broken, bent, corroded or missing parts. The most common ailment of these “spiral” pencils is that somewhere along the line the brass colored “lead follower” got lost. I’m sure that with some patience I could make a reasonable substitute out of a paper clip. However, the top “track” of the “spiral”, where the brass colored “lead follower” is inserted, has a small crimp so the “follower” doesn’t come out too easily. That makes it fairly difficult to make a “lead follower” from scratch. It’s far easier to simply purchase another “spiral” pencil, then strip out and reuse the brass colored “lead follower”.

Similarly, if you have a “spiral” pencil with a bent or corroded “spiral”, I sincerely suggest that you simply purchase another “spiral” pencil with a usable “spiral”, then pull out and reuse that good “spiral”.

Please don’t hesitate to forward constructive criticism and suggestions for improvement.