

Figure-1 below is the bottom view of a factory assembled Pilot Custom 743 section, plastic feed, and #15 size FA semi-flexible nib.



Fig.-1, An original Pilot #15 743/FA nib, feed, and section (bottom view).

Figure-2 shows a new Pilot 743 compatible Ebonite replacement feed from the Flexible Nib Factory LLC (www.flexiblenib.com) beside an original 743 plastic factory feed. The plastic feed was originally clear with a matte finish, but after cleaning we can see it has been stained slightly by ink. The pen used in this example is always inked with Pilot/Namiki Blue or Blue-Black ink.



Fig.-2, The new replacement Ebonite feed (left), and the original 743/FA plastic feed (right).

When working with nibs and feeds, cleanliness is very important. Wash your hands, tools and work surface thoroughly and do not let any oils come in contact with any of the parts. Ink is almost all water. Oil and water don't mix. Contamination by oils can lead to difficult problems caused by poor and/or inconsistent ink flow.

The nib is removed with the feed by pulling them together straight out from the section. Grip the nib and feed firmly on the top and bottom close to the section with two fingers. Do not twist the feed and nib when removing them. There are no flat spots or key-ways in the section that mate with the feed. Avoid putting any serious stress on the nib or feed fins. If the nib and feed do not come out fairly easy, then something is wrong. Try soaking the section, nib, and feed in warm soapy water to loosen any dried ink.

Note how two flat spots at the rear of the nib mate with two matching flat spots on the rear of the feed. One of these flat spots is shown in the top image of Figure-3 below. You must mate these two flat spots up before reinserting the nib and feed into the section. Failure to do so may permanently damage the nib, feed, and/or section during reassembly. Remember: Pilot does not sell replacement parts!

In the top image of Figure-3 below note the removable clear rubber seal-washer on the rear of the feed. If the rubber seal does not come out with the feed when the feed is pulled, then the seal is still inside the section and must be removed before reassembling the pen. The reason for removing the seal is to ensure it is not crushed during reassembly due to misalignment. In any case, it is a good idea to inspect and clean the seal and section thoroughly before reassembly. A toothpick or similar probe may be used to remove the seal. Do not use a tool that will scratch the inside of the section.

Note how the rubber seal has its smaller diameter step pointing toward the feed stem. This orientation is critical if the nib and feed are to be reinstalled correctly. You can verify that the smaller diameter end of the seal should point toward the rear by probing inside the section from the nib end and feeling for the step that receives the necked-down part of the seal. If the seal is installed backwards it probably won't seal properly, and at-worst it will be permanently damaged.



Fig.-3, Top: The original FA nib and rubber seal-washer installed on the new Ebonite feed. Bottom: The original bare plastic feed.

Referring to Fig.-4 below, before reinstalling the nib install the feed and seal-washer alone into the section without the nib. Make sure the seal-washer is properly seated against the step inside the section; you can feel this when the feed stands erect by itself in the section.

Next count the number of exposed feed fins protruding above the end of the section and write it down for future reference. In the example shown in Figure-4 below there are thirteen (13) fins exposed (this number may vary by example). Knowing how many fins are exposed when the feed is properly installed without the nib, will allow verification that the feed is properly installed after the nib is included.



Fig.-4, The assembled feed and seal-washer (without the nib) properly inserted into the section. Note there are thirteen (13) exposed feed fins above the end of the section in this particular example.

Assemble the nib, feed, and seal-washer together making sure the two flat parts of the nib and feed are mated as described above and shown in the top image of Figure-3. You must mate these two flat spots up before reinserting the nib and feed into the section. Failure to do so may permanently damage the nib, feed, and/or section during reassembly.

The nib should be seated on the feed and slid as far back away from the feed stem as the mating flat parts on the feed will allow. Again, look at the top image of Figure-3. (Later on you can reinstall the feed and slide the nib forward to increase flow a little if need be, but it probably won't be needed.)

Now reinstall the nib, feed, and seal-washer together by gently pushing them straight into the section. Again, grip the nib and feed firmly on the top and bottom close to the section with two fingers. Do not twist the feed and nib when inserting them. There are no flat spots or key-ways in the section to mate with the feed. Do not force the nib and feed into the section, otherwise you may cause permanent damage. The nib and feed should slide in with firm but yielding friction. Carefully count the number feed fins that remain exposed as you insert the nib and feed into the section and stop when you reach the same number found previously when the feed was inserted without the nib; thirteen (13) in this example.

If after inserting the nib and feed there are more feed fins exposed than expected, then something is wrong. The feed has not gone far enough into the section to allow the seal to seat properly. Disassemble the pen and inspect all the parts for problems. If everything looks good but you still can't fully insert the nib and feed, you may want to try some soapy water as a lubricant. Just remember to clean the pen afterwards.

Figure-5 below shows a bottom-view of the fully assembled nib, new Ebonite feed, seal-washer, and section used in this example. Note there are thirteen (13) exposed feed fins above the end of the section, the same number as before when the assembly was done without the nib.



Fig.-5, The fully assembled nib, new Ebonite feed, and seal-washer.
Note the thirteen (13) exposed feed fins, the same number as seen in Fig.-4.