

## Modern Aurora 88 Piston: Exploded View

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The piston filler unit backed out of my Gold Plated modern 88. I took this opportunity to capture a few pictures of the mechanism.

The filler unit is extracted using a tool that fits to the slots on the filler unit. This arrangement is very similar to what is used in the modern MB piston fillers. In fact, the MB tool can be used on the Aurora with some minor modifications. The filler's extract-retract mechanism follows the Pelikan principle, however, unlike Pelikan or MB, no backlash is provided between the filler knob movement and the spindle actuation.

The major difference between MB/Pelikan(M800/M1000) and Aurora in their filler units is that the Aurora Filler is entirely made of plastic. On MB/Pelikan, the critical parts like the threaded area and the filler extraction slots/flats are made of brass.

The 88 filler, exploded view:



Piston seal with spindle:



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Elastomer seal showing the "magic reservoir" volume:



Anti Rotation slot, at the bottom of the connector:





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Top view of Connector, showing the extraction slots:



Filler knob married to the spindle nut:



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Filler assembled, ready to be re-fitted to barrel using the MB tool:



The filler unit requires the application of some type of a thread locker to retain it in the barrel. I used the rosin based section sealant from Tryphon. You may use currently available equivalents. I used a light coat of pure silicone oil on the piston seal for lubrication.

### **Magic reservoir:**

This is achieved by the nozzle that you can see from the ink view window of Aurora pens. In the writing position, as the ink level falls, ink will enter the nozzle only when its level is greater than that of the nozzle height, as the ink level falls below this height, the ink flow will be interrupted. Now to write further, you fully extend the piston. There is an annular projection on the piston seal, this surrounds the nozzle and thus the reserve ink level now rises above the nozzle's height, allowing you to write a few more pages and the open knob acts as a reminder to refill the pen. The only problem now is that flushing the pen fully becomes more laborious.

Cheers!

Hari

First posted on FPN by Hari317 on 21<sup>st</sup> May 2011 at the following link:

<http://www.fountainpennetwork.com/forum/topic/196415-modern-aurora-88-piston-exploded-view/>