

Replacing ear mould tubes.

I have no glued in tubes to take photos of during a removal but the procedure is simple as long as the glue is not along the length of the tube.

The ear moulds I have originally had the ear canal side of the tube glued in around the tube end and the ear mould canal end, easy to pry the tube away from the mould with a pin. If needed, you can use silicon oil or similar and a needle to pry the tube away from the mould surface, then twisting the old tube a little bit until it gives so that it could be removed. If the tube snaps leaving some of the old tube in the ear mould, it should be easy enough to use an allen key, or a round piece of wire (suitable diameter) to work the remaining tube part out. The ear mould lumen can be cleaned out with a small brush and alcohol before the replacement tube is threaded through.

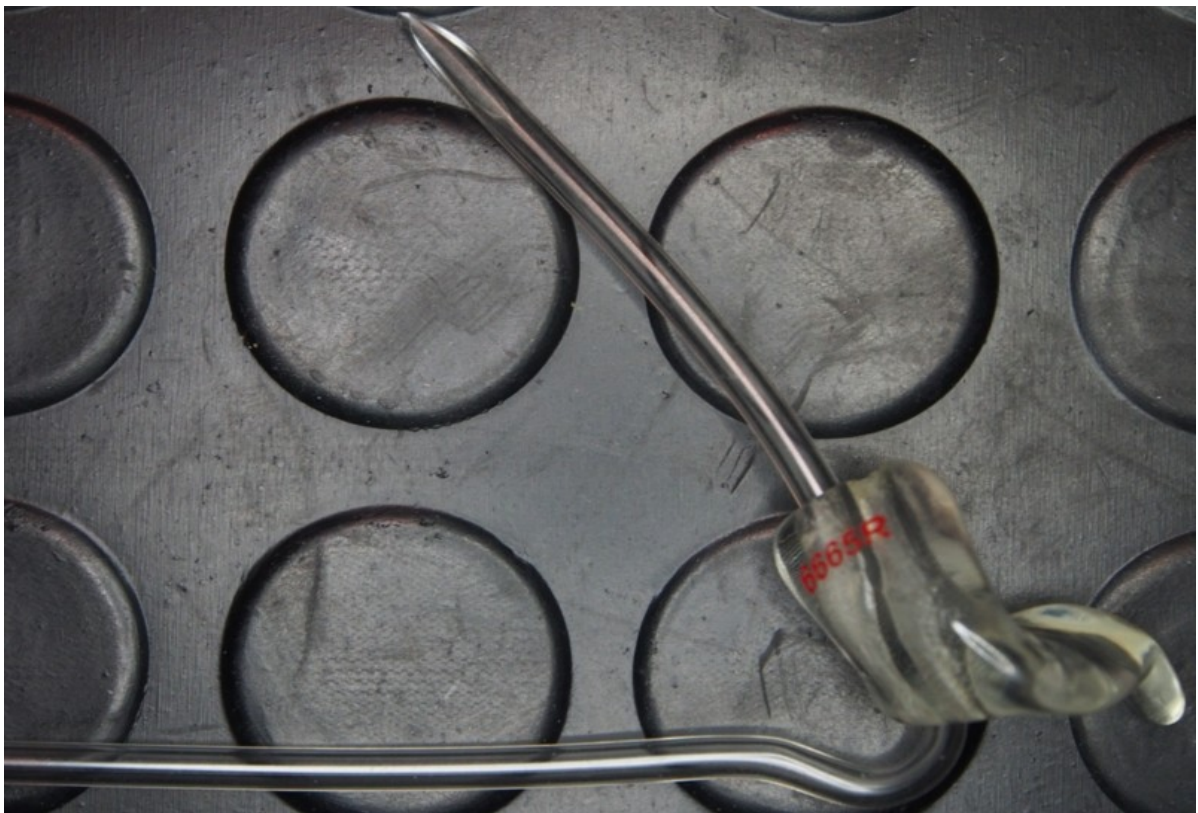


Fig 1: Ear mould tube insertion

Figure 1 shows the replacement tube inserted though the cleaned ear mould lumen, this tube was provided pre-cut so the pointy end goes through the lumen towards the canal end of the ear mould, the hooked end remains on the external surface of the mould.

Mark the tube at the ear canal end with a marker, then pull the tube further though the ear mould lumen towards the canal end as shown in Figure 2a, to cut the excess off with a small pair of sharp scissors or workshop snips as shown in figure 2b.

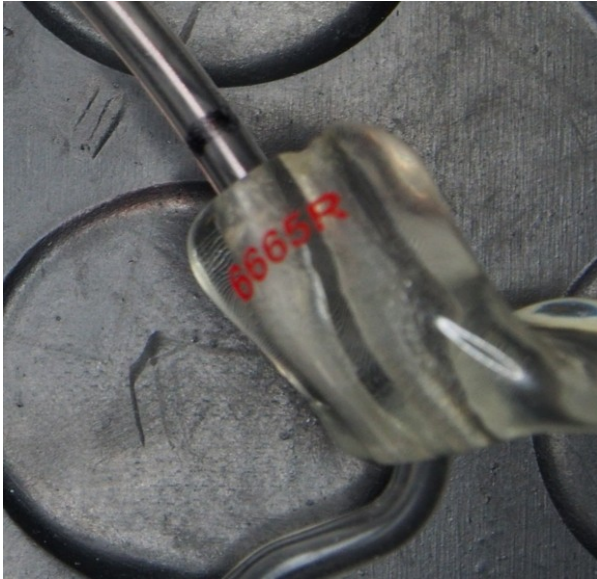


Fig 2a: Trimming the tube, **2b:** cutting excess off

The first of two options to secure the tube in the ear mould lumen is to run a small amount of glue with a toothpick around about 1mm of the outside edge of the tube end, then pull the tube through so that it is slightly inside the berm of the ear mould lumen as in Figure 3 so the glue can set between the tube end and the ear mould lumen. **Ensure that the hooked part of the tube on the external surface of the mould is pointing the correct way before the glue dries.**

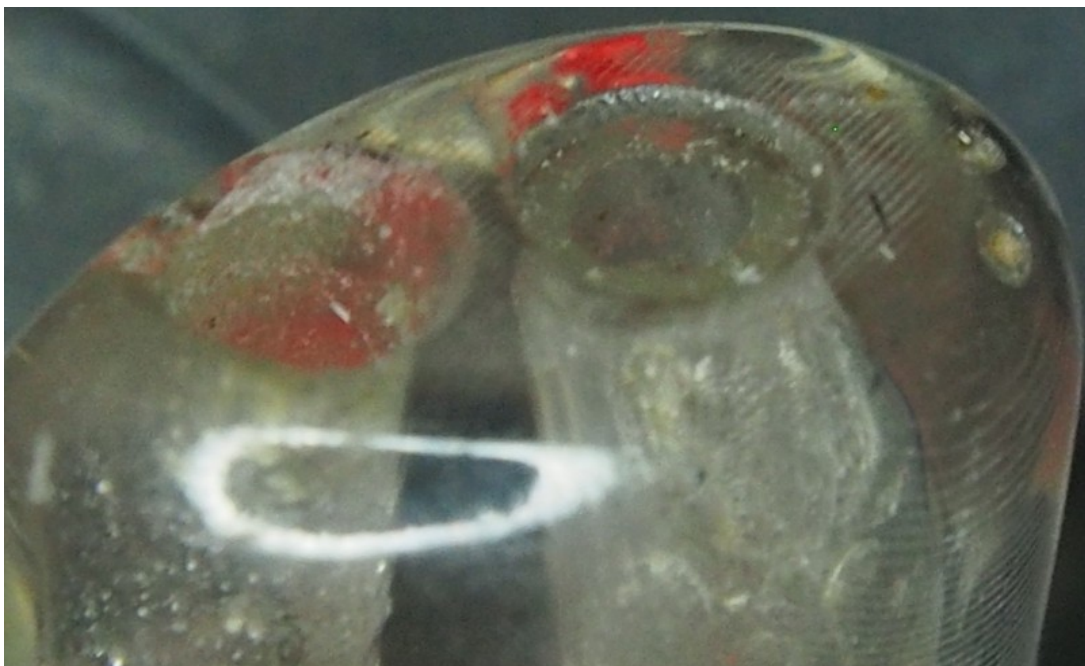


Fig 3: Tube seal in ear mould lumen on the right, the hole on the left side is the breather hole

I do not glue my own tubes but use a friction fit. This does not seem to work for others but I include it for completeness. The other option to secure the tube in the ear mould is to enlarge the tube to create a tight fit on the canal end of the ear mould lumen using a hole punch, rounded pliers, or similar object as a former such as in Figure 4a and 4b.

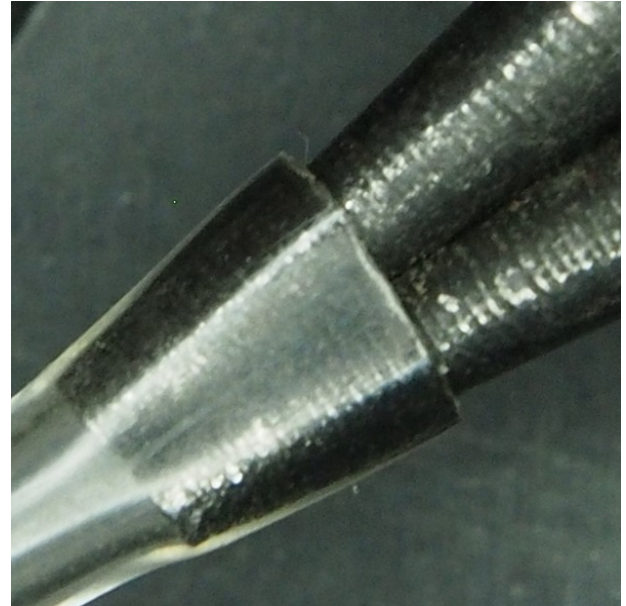


Fig 4a: Enlarging tube for a tight fit, **b:** Enlarging tube for an even tighter fit

Pouring some just boiled water over the tube end while it is still on the tube former, then allowing it to cool will help the end of the tube remain slightly bigger. Try this on some tubing not inserted through the mould lumen first to get a feel for heat, stretch and method. Once the tube is cooled, use your finger nail, flat edge or similar to push the tube off the tool used to enlarge the tube end as shown in figure 5. **Do not pull the tube off the former** unless the tool used is lubricated as you risk tearing the tube end. You do not want to stretch the tube to the extent that it doubles over in the ear mould lumen when it is pulled through, this will severely affect the audio frequency curve even if air can still flow through the tube.

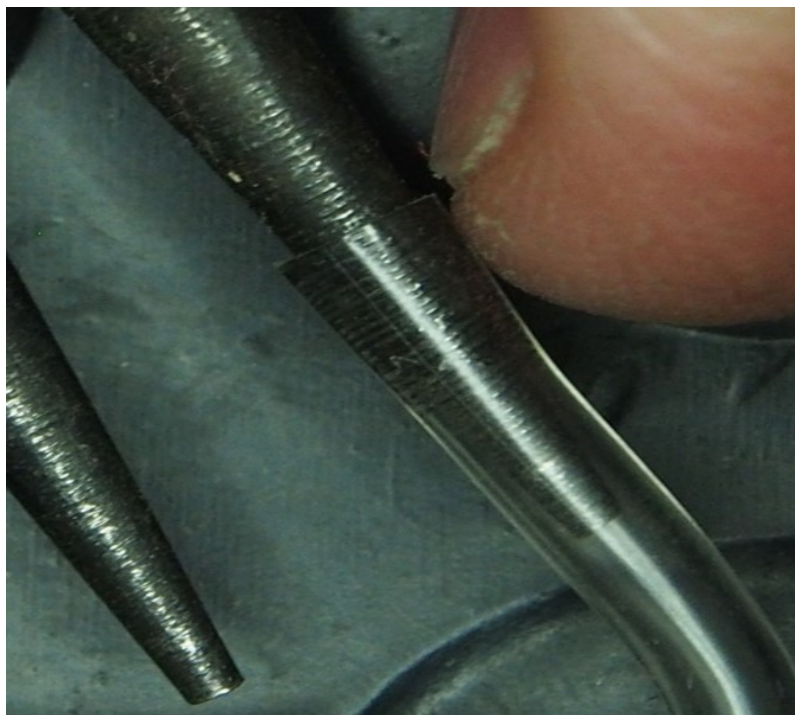


Fig 5: Removing tube from the former

Once the tube is pulled through to the correct position as in Figure 3, the tube on the external surface of the ear mould can be cut to size, remembering to leave some excess to go over the hearing aid pipe barb as shown in figure 6. Unless you have the old tubing to compare prior to cutting, it is recommended to cut the tube a bit longer to allow for error. Far easier to cut twice than to replace the tube again and a small bit of excess is easy to push further on the hearing aid pipe barb.

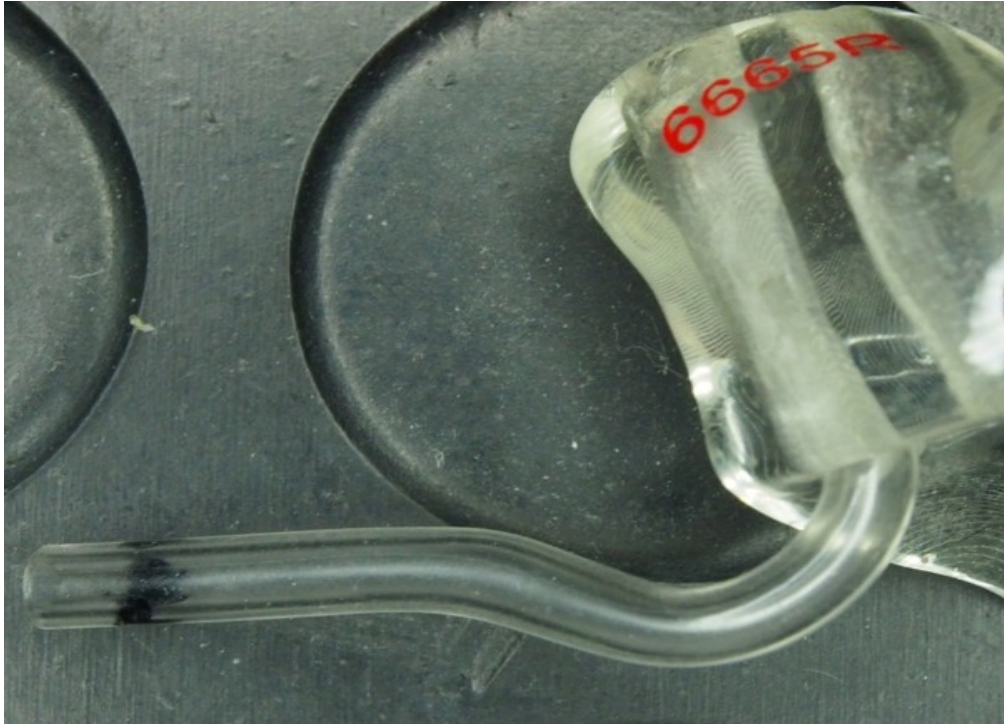


Fig 6: Finished product before fitting to hearing aid