Care and Feeding of Brass Rats

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Brass rates require really no routine care. However, the complex shapes of them sometimes require cleaning. Many brass rates were made with a “patina” – a chemical treatment that darkens some areas. Over aggressive cleaning may remove the patina that you may want to keep and turn the ring into a solid gold color without the color variation from the patina. For some people tis may be desirable, for other not so. Thus whenever cleaning rings, do so carefully and check that you haven’t removed too much patina.

Many people need ring size changes in the decades after graduation. Some brass rats were sold with lifetime service guarantees that cover resizing. Contact the manufacturer through the information at https://alum.mit.edu/benefits/BrassRat to see if you rat is covered by such a guarantee. If so that may be the least expensive and most reliable way to resize a ring.

Decreasing the size of a ring must be done by cutting the shank, removing a segment of the ring, and then soldering the shank back together. Gold solders come in many varieties and it is difficult to match the color of the solder joint perfectly with the original gold. The manufacturer may be able to do a better job than a local jeweler, but do not be surprised if there is a thin line of a slightly different color where the cut was made.

Increasing the size of the ring is a more common need. Many wedding rings have rotational/radial symmetry and are usually increased in size by a jeweler with a “mandrel” – a metallic conical shape. The ring is placed on the mandrel and hit with a rawhide mallet to move it to a section of the mandrel with a large diameter. NEVER DO THIS WITH A BRASS RAT! Brass rats not have rotational/radial symmetry and expanding them this way is likely to result in making the flat surface of the face concave. Indeed, if you meet a lot of older alumni you may notice that a few of them have concave rats from having subjected their rats to this abuse.

Increasing the size of a brass rate must be done by cutting the shank, inserting a segment of gold, and then soldering the segment in. Note that the inserted segment is much larger than the solder joint needed for decreasing the size. It is difficult to match the original gold color perfectly, so expect a minor change in color where the joint is. The original manufacturer might be able to match colors better than a local jeweler.

Replacing Brass Rats

For recent year brass rates, the original provider of the brass rates are probably willing and able to replace them. Unfortunately, there have been a lot of mergers in the class ring business and manufacturing techniques have changed so manufacturers of older rings may not be able to make duplicates of the original rings.

For its 40th reunion, the Class of 1968 conducted a ring replacement program that was successful. These techniques could be used by other classes to replace rings that are no long available through the manufacturers.

The first step was to collect rings in several sizes that could be used as models for the replacement rings. By "sizes" here we mean not the finger size, but rather the overall dimensions of the ring. Brass rats have been made in several sizes/weights , using 3-5 different ones. These vary from a small size for petite coeds to sizes more appropriate for large guys. Class of 1968 has only 3 sizes and classmates who had not word their rings much were asked if they would loan them for the replacement project. This resulted in a group of 3 rings that were near mint condition. (Many grads wear their ring every day, some don't wear them at all, so it is likely you can borrow rats in near mint condition.)

Next we identified a jeweler who was skilled in the "lost wax" process. This involves making a molding of the rat, and then using that molding to make a wax model of the new ring desired. The wax model is then sized for the finger size needed and used for casting the final ring with whatever carat is desired.

Note that after the original molding was made from the rings, our jeweler suggested that he could easily make pendants and cufflinks form the beaver part of the ring. This was offered to classmates and several ordered them.

With the jeweler we came up with a price list for different ring sizes and offered them to classmates. About 10 ordered rings. The molds are still available, so rings can not be ordered at any time.

What was the quality of the rings produced? They do not have all the details of the rings in mint condition, the lost wax process results in a minor loss of detail, a slightly smaller size and occasional small pits in the ring due to air bubbles introduced in the casting process. But these were made for the 40th reunion and brass rates worn every day for 40 years are not in mint condition either. It is fair to say that the rings produced were comparable.

Here is proof of the quality that can be achieved

The leftmost rat is a 1968 rat worn nearly every day for 46 years. The middle rat is a lost wax process replica of the first. The owner wanted a lot of patina, so it is darker. On the right is a cufflink made the same way as the ring copies.