

The McShim or David McCornack's Phantom Shim Technique (reproduced from AMNH techniques)

The shims described here refer specifically to the dividers placed directly on a specimen before it is molded to segregate apertures and undercuts. These "problem areas" if not properly attended to can damage or destroy a specimen upon demolding, or make casting of the mold virtually impossible. Once the basic principle of this technique is understood, you will find that there are many ways of integrating "phantom shims" into a mold. Ultimately they contribute to a more functional and elegant cast.

The applications of this method are many and include the following:

- A. Replaces either clay, metal, cardboard or paper shims which if permanently included within the mold can leave unsightly seam lines on the cast.
- B. Allows for easier removal of the original specimen from the mold by creating expandable divisions in problematic areas.
- C. Can simplify overall design of the mold by reducing the number of sections.
- D. Molds are simpler and more form-fitting which allows for better registration and reduction of seam lines.

This simple technique can be described as follows:

1. Carefully examine the specimen and determine the overall design of the mold; primarily the number of sections that the mold will be divided into. Identify areas that will require shims. These can be areas such as: large foramina or other openings that pass from one section into another, or below deep undercuts on the exterior of a specimen that would it be difficult to pull rubber over.
2. Create shims out of clay but smooth only one side of the shim-wall, making certain that the edge of the smoothed side (where the clay meets the specimen) is tight and neat. The other side need not be finished because the entire clay shim is temporary, hence the term "phantom" shim.
3. Apply molding material, either silicone or latex over specimen including the finished side of the clay shim. Omit molding compound on the other side leaving about 1/4" around this area.
4. As successive coats are applied build up the shim by adding extra coats of material. This can be reinforced with gauze or if making a latex mold, by latex with filler. The thickness of the shim will vary from mold to mold, depending on the size of the shimmed area. It needs only to be strong enough to hold itself up, and not to buckle.
5. When the shim is strong enough to stand on its own, remove the clay from the other side. If making a latex mold allow the newly exposed latex to air dry for an hour or so.
6. Apply a separator such as Butvar B76, Acryloid B72, or P.V.A. to the exposed shim and allow to dry.
7. Begin applying molding material to the newly exposed area integrating it into the overall mold. Build up the shim in the same manner as the rest of the mold.